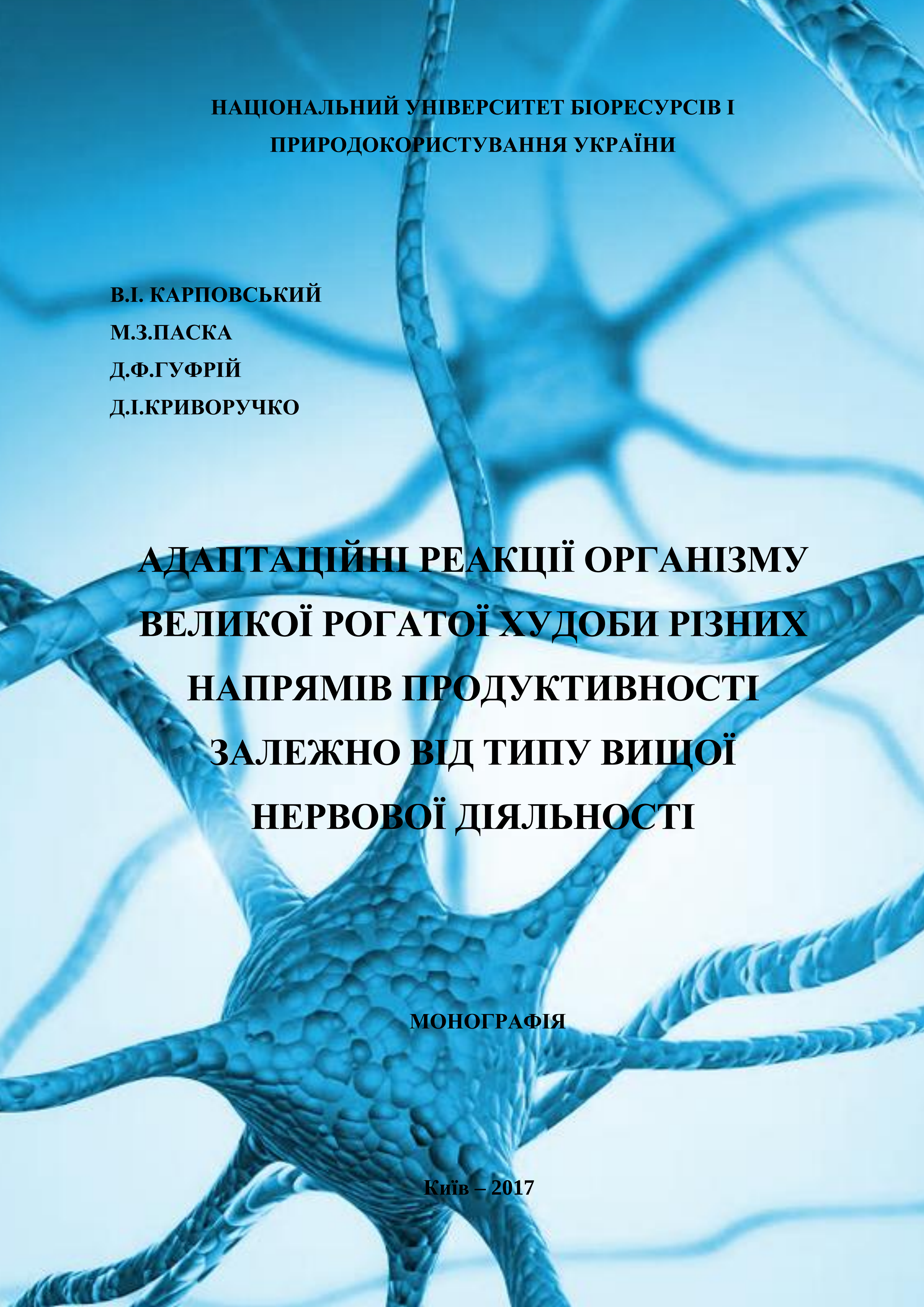

НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ БІОРЕСУРСІВ І
ПРИРОДОКОРИСТУВАННЯ УКРАЇНИ

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АДАПТАЦІЙНІ РЕАКЦІЇ ОРГАНІЗМУ ВЕЛИКОЇ РОГАТОЇ ХУДОБИ РІЗНИХ НАПРЯМІВ ПРОДУКТИВНОСТІ ЗАЛЕЖНО ВІД ТИПУ ВИЩОЇ НЕРВОВОЇ ДІЯЛЬНОСТІ

МОНОГРАФІЯ

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ББК 48
К 55

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ʅʆ ɯʜʊ

ɟ ʝ tɕʝ dʑʕ ɮdʒsɘdʑʃ ʧtsʟdʑʘʝ dʑ, fiɕʃdʒtsdʑɘ, tsʜɕdʑʃɥ ʿ lsʝ tɕdʒdʑɘ 4

ɹ fiʝsɮʧ 5

1. ʌ ʿʟʿtsdʑtsɢʿɥdʑ tsʙˇtɕɮdʑlsɮɘʘdʑdʑ ʬ ɮdʑɥʿtsdʑɮɘʘdʑdʑ tstɕɢʘdʑʟdʒɮ ɮʜtsʙɕ

ʟʘdʑɣ dʑs ɘʿʜ lsʝ dʑsdʑsɢʿɥdʑʃ ʬ ʘʕlststɕʿɘ 1

2. ʌ ʿʟʿtsdʑtsɢts-ʙʿts ʿdʒʿɥdʑ tsʙˇtɕɮdʑlsɮɘʘdʑdʑ ɘʧdʑʃɘɮ tɕtsfiɕdʑʃdʑdʑs-ɘʿlsʘdʒʿdʑs-

dʒʿdʑ tɕʘdʑ dʑsʾ ʕtstɕdʒsɘtsʾ ʜtsʙʘɘʕɕ ɕʆ ʿʕtɕtsdʑʧtsɘʿlsè dʑʘ tstɕɢʘdʑʟdʒ dʑʘʙtstɕʘlststɕdʑʃ

lsʘʧtɕtsʜɮʕlsʃɘdʑʃ lsɘʘtɕʃdʑ 82

3. ɹ ɕʰ ʘdʑ tɕɘtsɘʘʜʿʷdʑ dʑfiʝs lsɘʘtɕʃdʑ ʬ tstɕdʒɮɘʘdʑdʑ ɘ tsdʑlstsɢʝ dʑ ʟʿ

lsʘɘʧdʑʃɘ dʑʘʧtɕtsʜɮʕlsʃɘdʑfiʝs 117

4. ɸ dʑʘdʑʟ lsʘɮʟʘɢʘdʑ dʑ dʑdʑ tɕʝ ʟɮdʑ lsʘlsʿɘ ʜtsfiɕdʑʜɣ ʝ dʑdʑ 277

ʉ ʧɕfiʝsʕ ɘɕʕtstɕʃfiʝsʘdʑʃ ʜɣ ʝ tɕʝ dʑ 301

ɼ tsʜʘlsʕɕ 378

ПЕРЕЛІК УМОВНИХ ПОЗНАЧЕНЬ, СИМВОЛІВ, ОДИНИЦЬ І ТЕРМІНІВ

ɸ ʆ ˀ	ʘʥsʗtsʢ fŋʃнʘʥsʣʗʡ ʟʘʗfŋʝs
ɹ ʄ	ɘtsʣʗʥfŋ ʢʘʤô fŋʣʘʧtstʨsнʘ
ɟ	ʧtsʣfŋ ʢʘʤô fŋʣʘʧtstʨsнʘ
ɹ ʅ ɼ	ɘʗʰ ʘʥ tɕɘtsɘʘн ʿʷʣ ʣfŋʝsᴵ
ʉ ɹ ʈ	fŋʃʣ ʣʗʡ ɘtɕʿɘʣsɘʘɥ ʝ ʣʗʡ tʣ ʣʗɘʗʡ lsʗʧ ɹ ʅ ɼ
ʉ ɹ ɯ	fŋʃʣ ʣʗʡ ɘtɕʿɘʣsɘʘɥ ʝ ʣʗʡ ʿʥ tʨsʣʗʡ lsʗʧ ɹ ʅ ɼ
ʉ ʅ	fŋʃʣ ʣʗʡ ʥ ɘtɕʿɘʣsɘʘɥ ʝ ʣʗʡ lsʗʧ ɹ ʅ ɼ
ʉ	fŋʣʘʙ ʢʗʡ lsʗʧ ɹ ʅ ɼ
ɻ ɟ ʃ	ɢʿнtʨsʧ ʝ tɕʗʢʗfŋʃ ʣʧ ʿн ʿɘ
ʄ ɼ ɸ	ʤʘʣsʣsɘʗʡ нʿʘʣ нʝ ɢʿн
ɟ ʆ ʃ	ʧ ʝ tɕʝ ʢʗfŋʥ tsʢʗfŋʥ ʣʣʸ ʣʧ ʿн ʿɘ
Cʆ ɼ	fŋʣʧ ʝ tʨsʢ fŋʃннʗfŋʤlsʘʟʘ
ɻ ɟ	ɢʥlsʘsʿtsʣʃ ʝ tʨsʢ fŋʃнʘʟʘ
ʄ ʂ	ʤsʣsʯʣʘʢʗfŋʣslsʘ
ʄ ʂ ɼ	ʤʿʥ tɕʘʣ ʣʘʢtstɕʤsɘʘнtsʙʘɐʢʘ
ɟ ɹ ʂ	ʧ ʿtʨsɘʗʣsɢtɕʘнʣʘʢʗfŋʣslsʘ
ɟ ʂ	ʧ ʿtʣɘʘlsʢʘʙ tsʢ fŋʃʣʘʟʘ
ɟ ɼ ʂ	ʧ ʿtʣɘʘsнʝ ɢʿнtʨsɢʝ ʣʘʟʘ
ʃ ɼ ɻ	ʣʘʢ lsʘsнʝ ɢʿнtʨsɢʝ ʣʘʟʘ
ʉ ɼ ɻ	fŋʣʢ ʯʗʣʘsнʝ ɢʿнtʨsɢʝ ʣʘʟʘ
ɟ ʆ ʃ	ʧ ʝ tɕʝ ʢʗfŋʥ tsʢʗfŋʥ ʣʣʸ ʣʧ ʿн ʿɘ
ɟ ɼ ɻ/ɟ ʂ	ʧ ʿtʣɘʘsнʝ ɢʿнtʨsɢʝ ʣʘʟʘ/ʧ ʿtʣɘʘlsʢʘʙ tsʢ fŋʃʣʘʟʘ
ɼ ʅ ʂ	нʝ ʟtsʢ fŋʃtɕʗʙ tsʣʣʢʥ ʾʣsɘʘʢʗfŋʣslsʘ
ʈ ʅ ʂ	tɕʗʙ tsʣʣʢʥ ʾʣsɘʘʢʗfŋʣslsʘ
ɟ ʊ	ʧtsʤtɕʣʗʡ lsʝ ʤʧ ʝ tɕʘlsʣtɕʣʗʡ ʧ ʝ tɕʿtsн
ʉ ɟ	fŋʧ ʝ ʢtslsʣʗʡ lsʝ ʤʧ ʝ tɕʘlsʣtɕʣʗʡ ʧ ʝ tɕʿtsн
ʊ3	lstɕʗʡ tsнlsʗtʨsʣʣ
ʊ4	lsʗtʨsʢ fŋʃʣ

ВСТУП

[illegible] [163; 258, 448, 520].

[illegible] [3, 62, 228].

[illegible] [53, 122, 263, 330, 466, 512, 711, 723].

[illegible] [64. 66, 198, 495, 524], [illegible]

[illegible] [80, 496, 561].

[illegible]

1. Фізіологічне обґрунтування функціонування організму худоби залежно від технологічних факторів

[illegible] [347]. [illegible] [8, 197, 204, 303, 415]. [illegible] 95 %, [illegible] 100 [illegible] 50 % [illegible] 200 [illegible] [118, 137].

[illegible] [100, 231]. [illegible] [23, 32, 171, 187, 531, 581].

[illegible] [26, 149, 166, 402]. [illegible] [60, 520]. [illegible] ɹ ɖɘʯʘ ʯɖ ʝ lʂʦɖʦɢʽ lɘʘʨɖʣʤʒʂɥ ʤʘ fɪʝɘʦʨɖlɖ ʤʝ ʦʙ˭ʽʜʤ lʣʒʂɘɖ ʜʤ ʤɖ˭ ʽʟ ʤʝ lʂʦ ʦlʂʨɖʤʒʘʤʤ ɘɖfɪʝʕʦ᾽ ʧʨʦʜlʕlɖɘʤʦfɪʝʽ. ʆ ʜʤɖʤʒ ʽʟ ɘʘɥ ʤɖɘɖ˭ ʧɖlʘʤ ʧʽʜɘɖʰ ʝ ʤʤ ʤʒʘ̂ʷ fɪʝʤʦ᾽ ʧʨʦʜlʕlɖɘʤʦfɪʝʽ ɘʝ ʤɖʕʦ᾽ ʨʦɢʘʂʦ᾽ ˭lʜʦʙɖ ʽ ʟʘ̂ʷ fɪʝɘʘʤʤ ʙʽʤʦʕfɪʝɖʤʝlɖʯʤɖ˭ ʤʝ˭ʘʤʟʤʒɘ ʷʷ ʦʨɖʒɘʘʤʤ ʤʒʘ̂ʷʟʦɘʦ᾽ lʕʘʤɖʤɖ [210]. ʆ ʯʝɘɖʜʤʦ, ɢʝ ʤʝlɖʯʤɖʔ ʧʦlʝʤɥʽʘlʒ ʽ ʤʔɘʘɥʤɖɘʽʰ ɖʤʒ ʯɖʤʤɖʕʦʤʒ lʒ ʧʝʨʝʤʕlʒ ʙʘɢʘlʦ˭ ʷʷʘʕlʂʦʨɘ, ʰ ʦ ɘʧʤɖɘʘ lˡ ʤʘʟʜʘlʤfɪʝ ʤʒʦʜʤʕlʒ ɘʝ ʤɖʕʦ᾽ ʨʦɢʘʂʦ᾽ ˭lʜʦʙɖ fɪʝɖʤʝʟlɘʘlɖ ʙʽʤ ʰ ʝ lʕʘʤɖʤlʽʤʘ[105, 281, 406, 454].

ʌlʜʦʙʘ ʤʒʘ̂ʷ fɪʝʦɢʦ ʤʘʧʨʷʤʕlʒ ʧʨʦʜlʕlɖɘʤʦfɪʝʽ, ʧʦʨ̃ɘʤʷʤʦ ʟ lɘʘʨɖʤʘʤʒɖ ʤʒʦʤʦʯʤɖ˭ ʧʦʨ̃ʜ, ʤʒʘ́ fɪʘʦ᾽ ʦfɪʝʙʤɖɘʦfɪʝʽ, ʷʕʽ ʤʝʦʙ˭ʽʜʤʦ ɘʨʘ̄ʦɘlɘʘlɖ, ʦʨɢʘʤʟʦɘlʽ ʯɖ ɢʦʜʽɘʤ . ʊ ᾽᾽ lʨʘɘʤʝʤʤ ʧʦfɪɖʤʝʤ ʝ ʤʟɖʤʒʤ ʽ ɘfɪʤʒʕlʂlɘʘʤ ʤ ʷʷlʤʕʯʽ᾽, ʧʨʦʯʝ fɪɖ ʘfɪɖʤʒʤʯ᾽ ʟʤʘʯʤʦ ʧʝʨʝɘʘɥ ʘ lˡ ʤʘʜ ʨʦʟʧʘʜʦʤʒ ʽ ɘɖʜʽʤʝʤʤʤʒ ʨʝʯʦɘɖʤ [318]. ʅ ʘfɪʘʦʽʤʤ ʽ ɘʽʜʕʤʘʜʝʤʤ ɘ lʽʤ ʧʦɥɖɘʤɖ˭ ʨʝʯʦɘɖʤ ʕʦʨɖʒɘ ʕʨʘ ʝ, ʤɥ l ˭lʜʦʙɖ ʤʒʦʤʦʯʤɖ˭ ʧʦʨ̃ʜ [35, 111, 119, 193, 348].

ɼ ʦfɪʤʜɥ ʝ ʤʤʤʒʨʽʟʤɖ˭ ɘɖʜʽɘ fɪʤ fɪʕʦɢʦfɪʧʦʜʘʨfɪʕɖ˭ lɘʘʨɖʤlʨɖɘʘʤʔ ʯʘfɪ ʟʔʤʒʘʤɖfɪʷ ʙʘɢʘʦ ɘʯʝʤɖ˭, ʧʨlʝ l ɘʝ ʤɖʕʦ᾽ ʨʦɢʘʂʦ᾽ ˭lʜʦʙɖ ʤʒʘ̂ʷ fɪʝʦɢʦ ʤʘʧʨʷʤʒl ʧʨʦʜlʕlɖɘʤʦfɪʝʽ [138, 174, 354, 521], ʟʦʕʨʝ ʤʒʘɘʦʤɖʤfɪʕʦ᾽ lʘʧʦʤfɪʕʦ᾽ ʤʒʘ̂ʷ fɪʝʦ᾽ ʟʘʝɥʤʦ ɘʽʜ lɖʧʽɘ ɘɖʰ ʦ᾽ ʤʝʨɘʦɘʦ᾽ ʜʽʷʤ ʤʦfɪʝʽ ɘɖɘʯʝʤ ʰ ʝ ʤʝʜʦfɪʝʘlʤʦ. ɼ ʘʤɖʤʒ ʧɖlʘʤʤʤʒʽ ʧʨɖfɪʷʯʝ ʤʘʯʷ ʨʦʙʦlʘ

ʅ ʘlʕʦɘʦ-lʝ˭ʤʯʤɖʔ ʧʨʦɢʨʝ fɪ ʽfɪʝʦlʂʤʦ ɘʧʤɖʤʤɘ ʤʘ ʨʦʟɘɖlʦʕ lɘʘʨɖʤɖʯlɘʘ ʊ ʕʨʘʤɖ, ʟʘʧʦʯʘʕlɘʘʰ ɖ fɪʝɘʦʨʝʤʤ ɢʘʤʟʽ ʤʒʷfɪʝʦɢʦ fɪʕʦlʘʨfɪʝɘʘ [39, 448]. ʆ fɪʝʙʤɖɘʽ ʧʨɖʧʨʦʜʤʦ-ʕʤʤʒʘlɖʯʤ lʣʒʂɘɖ ʕʨʘʤɖ fɪlʂʽɘʦ fɪʧʨɖʷʤɖ ᾽᾽ ʨʦʟɘɖlʕl [114, 345]. ʉ ɘʽlʂɘɖʔ lʘɘʽlʯɖʟʤʤɖʔ ʜʦfɪʘʽʜ ʟʘfɪʘʽʜʯɖɘ, ʰ ʦ ʤʒʘ̂ʷ fɪʝ fɪʕʦlʘʨfɪʝɘʦ, ʤʘɘʽʜʤʒʤl ɘʽʜ ʤʒʦʤʦʯʤʦɢʦ, ʧʦlʝʙl ʟʤʘʯʤʦ ʤʝʤ ɖ˭ ɘɖlʨʘl ʕʦʰ lʽɘ lʘ ʟʘʨʘl ʧʨʘʯʽ ʤʘ ʦʙfɪʤlɢʦɘlɘʘʤʤ ɢʘʤʟʽ [57, 404]. ʆ ʽʷfɪʤʘ ˭lʜʦʙʘ ʤʝʤ ɘɖʙʘɢɖɘʘ ʜʦ lʣʒʂɘ lʂʨɖʤʒʘʤʤ lʘ ɢʦʜʽɘʤ, ʟʘ ʤʒʤʒʘʤ ʤɖ˭ ɘɖlʨʘl ʟʝ ʨʤʦɘɖ˭, l ʤʝɥʘ̄ 25-30%, ʙʽʤ ʰ ʝʷʝ ʕlɖɘʤʦ ɘɖʕʦʨɖfɪʝʦɘlʽ ʧʘfɪʝɘɖʰ ʘ fɪʝʕʦɘɖlʽ, ɢʨʤʙʽ ʕʦʨɖʤʒɖ lʘ ɘʽʜ˭ʦʜɖ ʧʨʦʤʒɖfɪʤʦɘʦɢʦ ɘɖʨʦʙʤɖʯlɘʘ[123]. ʊ lʨɖʤʒʘʤʤ lɘʘʨɖʤʤʒʘ̂ʷ fɪʤɖ˭ ʧʦʨ̃ʜ ʤʝ ʧʦlʝʙl ʕʘʧʽlʘʤ ʤɖ˭ ʧʨɖʤʒʰ ʝʤ lʘ ʽfɪʝʦlʂɖ˭ ʝʤʨɢʝlɖʯʤɖ˭ ʟʘlʨʘl. ʅ ʘʔɢʦʤʦɘʤʰ ɖʔ ʘʨɢlʤʝʤʦ ʤʘ ʕʦʨɖfɪʝ ʨʦʟɘʝʜʝʤʤ ˭lʜʦʙɖ ʤʒʷ fɪʤɖ˭ ʧʦʨ̃ʜ ʧʦʤʢʘ́ ɘ ʦlʂʨɖʤʒʘʤʤ ʷʤʦɘɖʯɖʤ ɘɖfɪʝʕʦ᾽ ʷʕʦfɪʝʽ [130, 205, 439].

[illegible] 45,4 % [illegible] [36, 120, 461].

[illegible] [141, 296, 409]. [illegible] [48, 337, 417]. [illegible] [230, 414, 513]. [illegible] [37, 103, 148, 154, 167, 194, 334, 456].

[illegible] [15, 124, 467], [illegible] [441]. [illegible] [175] [illegible]

Ͽ fiʝstc'? fŋ Ϛts' lsʘʘdʒ tcɑϚʘdzfŋ Ϛts' fŋ dʑ Ϛ ɥ'', ʧ'' dʒsdzsʝ Lʝ) [16, 22, 95, 121, 142, 416, 462, 514, 530].

ʈ ʝ dzsʘʙ ʝ dz dzfiʝs ɘʝ ʜʝ dzdz dʒô fŋdzsɢts fŋtslsʘcfŋsɘʘ Lʘʙ ʝ Lʧʝ ɥz 'ls fŋ Lʘ lzdʒsɘ tslstcɑdʒʘdzdz ɘ'ʜ Ϛtsɣ dzɑ 100 Ϛtstc'ɘ dʑ dʒʝ dz Ϛ 85 lsʝ dz'ls, tslstcɑdʒʘdzdz 1-1,2 Ϛɢ fŋʝ tcʝ ʜdz tsʜtsʙ tsɘtsɢts ʧtcɑtcɑtsfŋsz dʒsdzsʜdz Ϛ lz, Lʘstcʘsɑ ʧtcʘɥ' dzʘ ɘɑtcɑtsʙ dzɑɥlsɘts 1 ɥ ʧtcɑtcɑtsfŋsz dʑ ʧtsɘɑdzdz ʧʝ tcʝ ɘɑ lzɘʘsɑ 18-20 dz ʜɑdzs-ɢtsʜɑdz' ɘɑlstcʘsɑ Ϛtstcɑdʒɘ dʒʘ ls fŋ dzʘʜʘsɑ lz dʒʝ ɣ ʘ 12-14 ɥ Ϛtstcɑdʒsɘɑ tsʜɑdzɑɥ dzʘ1 ɥ ʧtcɑtcɑtsfŋsz ɣ ɑɘts' dʒʘfŋɑ [131, 172, 338, 440, 546].

ɸ dzʘdz L tcɑtsLʧtsɘfŋ ʜɣ ʝ dzdz ʧtstc'ʜ ɘ tc'Ldzɑ Ϛdzdʒʘsɑɥdzɑ Ltsdzʘ ʋ Ϛtcʘ'dzɑ Lʘfŋ 'ʜɥɑɘ, ts lz ɿ tsdzfŋfŋ Ltsfŋ tcʝ ʜɣ ʝ dz ʧtstctsʜɑ: ɘtsdzɑdzfŋ ϚΘ (90,6%), ʧtsdzfŋ ϚΘ (81,9%), fŋɑdʒ dzsʘdz fŋ ϚΘ, ts fŋsɘtstc 'ls fŋ (60,4%), ʘʙ ʝ tcʜɑdzʘdzɢlzfŋ (58,0%), lzϚtcʘ'dzfŋ ϚΘ dʒô fŋdzʘ (43,7%); lz ʃ 'fŋsfŋsʝ ʧlz ï lzϚtcʘ'dzfŋ ϚΘ dʒô fŋdzʘ (41,2%), fŋɑdʒ dzsʘdz fŋ ϚΘ (39,6%), ʘʙ ʝ tcʜɑdzʘdzɢlzfŋ (35,8%). ɿ tstctsʜɑ Lʘdzlzʙ 'ɣ dzs' fŋʝ dʑ Ϛ ɥ'' (ʘtcsdʑ, dzdʒLɑdz, fŋ 'lsdzʘ ʘϚɘ'lsʘdzfŋ ϚΘ, ɢʝ tcʝ tstcʜ, ʧô dʒsdzsʝ Lʝ) tcɑtsLdʒ ʝ dz ɘ Ltsdzʘ ʃ 'fŋsfŋsʝ ʧlz 'ʉ lsʝ ʧlz ï 48,5-38,0% [20, 176, 195].

ʝ lsɣ ʝ, dzɑdz dʒô fŋdzʝ fŋtslsʘcfŋsɘts ʙʘLlz 'ls fŋ dzʘ tcɑtsLɘʝ ʜʝ dzdz ɘ'lsɥɑLdz dzɑ ʧtstc'ʜ ï ɘtsdzɑdzfŋ Ϛts', ʧtsdzfŋ Ϛts', lzϚtcʘ'dzfŋ Ϛts' lsʘ ʧ'ɘʜʝ dzdzs' dʒô fŋdzɑ. Λ' ʧtstctsʜɑ ʜtsʙtcʝ ʧtcɑfŋstsfŋsɘʘdz ʜts dʒfŋʝ ɘɑ lzdʒsɘ, ʝ ʝ Ϛlsɑɘdzs ɘɑϚtstcɑfŋstsɘlz ls Ϛtstcɑdʒɑ, ɘ'ʜLdzʘɥʘ ls fŋ ɥ'dzdzɑdʒɑ ɢtsfŋʧtsʜʘcfŋ Ϛts-ʙ'tsdzsɢ'ɥdzɑdʒɑ Ϛtsfŋs dʒɑ lsʘ ʜtsʙtcts dʒô fŋdzs ʧtctsʜlzϚlsɑɘdzfŋs [49, 125, 155, 168, 344].

ʃ ô fŋdzʘ lzʜtsʙΘ, ʧtstc'ɘdz dzs L dʒsdzsɥdzs, dʒʘ tcʜ ʧʝ tcʝ ɘʘɢ [586], ʘfŋʘdʒ:

ī LʜʘsdzfŋsȈ fŋʧtsɣ ɑɘʘsɑ lz ɘʝ dzɑϚɑ Ϛ'dz Ϛtsfŋs ɘ'ʜtsʜɑ Lʝ tcɑdzsɘtsɢts lsʘ ʘtcɥtsɘtsɢts ɘɑtcɑtsʙdzɑɥlsɘΘ;

ī lsɘʘtcɑdzɑ dʒʝ dz ɘɑʙʘɢdzɑɘ' ʜts lzdʒsɘ lzlstcɑdʒʘdzdz, dʑ ʧtslstcʝ ʙlz ls ʧtsfŋs'? dzsɢts dzʘɢdzʜlz, Θ ɘ tsϚtcʝ dʒ ʧʝ tc'tsʜɑ (dzʘ ʧʘfŋsɘɑ ʘ, ɘ Lʘɢtsdzʘ) ʧʝ tcʝ ʙlzɘʘ ls ɘLʘɢʘdz ʙʝ L dzʘɢdzʜlz;

ī tsʙtctsfŋdzfŋs lsɘʘtcɑdz ʧlz tsdʒ ts ʜʘ Ldʒsɢlz lzlstcɑdʒlzɘʘsɑ ɘ ʧtcɑdʒ ʝ dzdz ʧtsdʑ ɢ ʝ dzsɢts lsɑʧlz;

ī fŋs'? Ϛ'fŋs ʜts fŋstcʝ fŋɘ ' ʜtsʙtcʘ ʧtcɑfŋstsfŋsɘʘdzfŋs ʜts dzʘ? tc'Ldzsdʒʘdzlsdz ɑ lzdʒsɘ lzlstcɑdʒʘdzdz;

[illegible];

[illegible] 60-65%;

[illegible] [536];

[illegible] [40, 94, 282, 339];

[illegible] 10-12% [illegible] 11-17 [illegible];

[illegible];

[illegible] [271, 295].

[illegible] [97]. [illegible] [80, 256].

[illegible] [177, 252, 550, 592].

[illegible].

[illegible] [266, 304, 340].

[illegible] 18-20-[illegible] [188].

[illegible] 50 [illegible]

[illegible] 30, [illegible] 9 [illegible] [233, 254, 298].

[illegible] [265, 276].

[illegible] [299];

[illegible];

[illegible] [240, 253, 260].

Фізіологічне обґрунтування функціонування організму волинської м’ясної худоби. [illegible] 1974 [illegible] 1994 [illegible] [567]. [illegible] 30 [illegible] 1994 [illegible] 355. [illegible] (32,6) [illegible] [74, 196, 419, 538].

[illegible] [408]. [illegible] [234, 241, 331, 507].

[illegible]

ʧte�khɲstsfɲsəʘʣfɲsᴵ ʜts ʧteɭteʦʜʤs-ʢʣʤʒʘsɭʯʤɭ⃗ ʫʤʒsə ʟtsʤɭ teʦʟəʝʜʝʤʣʷ [289, 300, 313, 418, 508].

ɼ ɭəʘʤʒʘɦʘʧtsəʤsəʿʢtsəɭ⃗ ʧʤʜʤɭʢʿə ʤsəts᾽ ʧtsteʦʜɭ ɦsʘʤsəɭsᴵ 950-1050 ʢɢ, ʢtsteʿə ð 500-550 ʢɢ, lsʝ ʤʷls ʧteɭ ʤʘteʦʜɣʝʤʣ ð 28-32 ʢɢ. ɼ ɭəʘʤʒʘɦʘlsʝ ʤʷls ʧʿɦɡʤʷ əʿʜʤʯʝʤʣʷ ʫ 6 ʤʒʿɦʷʯʿə ð 180-220 ʢɢ [433, 443].

ʈ tsʟətsʜʷlsᴵ lsəʘteɭʤʫ 15 ɢtsɦʧtsʜʘteɦsəʘ⃗, ʫ lstsʤʒʫ ʯɭɦɡʫ ï lsteᴵ ts⃗ ʧʤʝʤʒʿʤʤɭ⃗ ʟʘtsʜʘ⃗. ɫ teʦəʿʜʤɭʤʒ ʿ ʧʤʝʤʒʿʤʤɭʡ ʟʘtsʜ ɕɿtsteʷè ʂ tsəʝʤɦʢtsɢts teʘʡtsʤʫ. ʌʘteʘʢlsʝ teʤsᴮ tsɦsʙʤɭəʿɦsᴮ ʧtsteʦʜɭ ʿ ʯʝteətsʤʘʤʒʘɦsᴵ ʿ ʢtsʤʒsʤɦsᴵ. ɪ ɭteʿʟʤʷʿlsᴵ ɦ ʜtsʙteɭʤʒɭ ʤʒʘ̂ʷɦɡʤɭʤʒɭ ʷʢtsɦsʷʤʒɭ [305].

ɹ ʫɢʘʡʯʿ ʫ 18-ʤʒɦɟ ʜtsɦʷɢʘ lsᴵ ɣɭəts᾽ ʤʒʘɦɡɭ 590 ʢɢ, ɦʝteʝʜʤʣtsʜtsʙtsəʿ ʧteɭteʦɦsɭ -1000-1200 ɢ, əɭlsteʘsɭ ʢtsteʤʒʿə ʤʘ 1 ʢɢ ʧteɭteʦɦsʫ ï 6,2-8,0 ʢ.tsʜ., ʟʘʙʿʡʤɭʡ əɭ⃗ʿʜ ï 60-65% [342, 509].

ʂ tsteʦsəɭ ʤʒʘ lsᴵ ʜtsʙteʿ ʤʒʘsʝ teɭʤɦ ʢʿ ʷʢtsɦsʿ, əɭɦsʢʿ ʧtsʢʘʟʤɭʢɭ ʤʒsʤsʯʤsɦsʿ (220 ʢɢ) lsʘəʿʜlsətsteʤs᾽ ʟʜʘsʤsɦsʿ. ʉʝteʝʜ ʫɦ⃗ əʿlsʯɭʟʤʷʤɭ⃗ ʤsətsɦsətsteʝʤɭ⃗ ʧtsteʿʜ ʜʘʤʘʧtsteʦʜʘʟʘteʘʟ ʤʒʘ ʤʘʡʢteʘ ʿ ʧʝteɦʝʢlsɭəɭ ʧtsʜʘʤʰ tsɢts teʦʟəɭlsʢʫ [301, 507].

ɫ ʿɦɡʤʷ əɭteʦʰ ʫəʘʤʣʷ ʙʫɢʘʡʯʿə ʤʘ əʿʜʢteɭlsɭ⃗ əɭɢʫʤʤs-ʢtsteʤʒsəɭ⃗ ʤʒʘʡʜʘʤɹɭʢʘ⃗ ətsʤɭ ʜtsɦʷɢʘʤɭ ʫ əʿʯʿ 16 ʤʒʿɦɟ ɣɭəts᾽ ʤʒʘɦɡɭ ʤʘ teʿəʤʣ 490 ʢɢ, ʟʘ ʜtsʙtsətsɢts ʧteɭteʦɦsʫ 971 ɢ, ʿʟ ʟʘʙʿʡʤɭʤʒəɭ⃗tsʜtsʤʒï 62,4 %.

ʊəʘteɭʤɭ ʧʝteʝəʘɣʘ lsᴵ teʦəʝɦɡʤɭʢʿə ʤʒʿɦɟʝəɭ⃗ ʧtsteʿʜ ʤʒsʤsʯʤsɢts ʤʘʧteʷʤʒʫ ʧteʦʜʫʢlsɭəʤsɦsʿ (ʯtsteʤs-teʷʙts᾽, ʯʝteətsʤs᾽ ʧtsʤɦʢts᾽) ʟʘɣɭəts ᴮ ʤʒʘɦsᴮ ʤʘ 27,6-34,1%, ʟʘʧteɭteʦɦstsʤʒ ð ʤʘ 18-34,2 %, ʟʘʙʿʡʤɭʤʒ əɭ⃗tsʜtsʤʒ ð ʤʘ 5,6-10,4 %. ɪ ɭ⃗ʿʜ ʤʒʘ̂ʷʢtslsʿ ʤʘ1 ʢɢ ʢʿɦstsʢ ɦsʘʤsəɭsᴵ 5,1-6,1 ʢɢ [436].

ɫ ʿɦɡʤʷ əɭʢtsteɭɦsʘʤʣʷ ə ʧteʦʤʒɭɦɡʤsətsʤʒʫ ɦ⃗teʝʰ ʫəʘʤʣ ʟ ʤʒsʤsʯʤɭʤʒɭ ʧtsteʦʜʘʤʒɭ ʟʘʙʝʟʧʝʯʫʿ ʧʿʜəɭʰ ʝʤʣʷ ʤʒʘ̂ʷɦɡʤs᾽ ʧteʦʜʫʢlsɭəʤsɦsʿ ʤʘ8,1-10,1 %.

ɫ ʿɦɡʤʷ ʜtsɦɡʤʜɣʝʤʣ ʙʫɢʘʡʯʿə ətsʤɭʤɦʢts᾽ ʤʒʘ̂ʷɦɡʤs᾽ ʧtsteʦʜɭ ʫ ʊɭ ɪ ñʊʫteʷò ʂ tsəʝʤɦʢtsɢts teʘʡtsʤʫ ʟʘ əɭteʦʰ ʫəʘʤʣʷ ᾽⃗ ʜts əʿʢʫ 18 ʤʒʿɦʷʯʿə ʙʫʤs tsʜʝteɣʘʤs ɦʝteʝʜʤʣtsʜtsʙtsəɭʡ ʧteɭteʿɦs ʟʘəʝɦ lsʝ teʤʒʿʤəɭteʦʰ ʫəʘʤʣ ə ɦʝteʝʜʤʣtsʤʒʫ 924 ɢ lsʘ ɣɭəʫ ʤʒʘɦʫ ʤʘʢʿʤʯᴵ əɭteʦʰ ʫəʘʤʣʷ ï 519 ʢɢ.

ɫ ʿɦɡʤʷ ʧteʘəɭʤʤsɢts əɭʢtsteɭɦsʘʤʣʷ ʧʘɦsəɭʰ ʙʝʟ ʧʿʜɢtsʜʿəʤ ʢtsʤɹʝʤsteʘsʘʤʒɭ ɦʝteʝʜʤʣtsʜtsʙtsəʿ ʧteɭteʦɦsɭ teʝʤʒsʤsʤɭ⃗ lsʝʤɭʯᴵ ɦʢʤʘʤɭ 750-850 ɢ.

[illegible] (50% [illegible]). [illegible] [38].

[illegible]

[illegible] 4-[illegible] 51,5 %, [illegible] 6-[illegible] 53 % [571].

[illegible] [312].

[illegible] 5925 [illegible] 2249 [illegible] 76 [illegible] [570].

Фізіологічне обґрунтування функціонування організму поліської м’ясної худоби. [illegible] 1999 [illegible] [481, 568]. [illegible] [28, 50].

[illegible]: 3/8[illegible], 3/8[illegible], 1/8[illegible], 1/8[illegible] [illegible] [33, 217, 476, 484].

[illegible] 18-20-[illegible] 550-630 [illegible] 60-61,8%. [illegible]

[illegible] -1ò [illegible] -1ò. [illegible] [178, 341, 420, 474, 556].

[illegible] [227, 478].

[illegible] [180, 487]. [illegible] [488]. [illegible] [475, 482].

[illegible] (17-18 [illegible]) [218, 562].

[illegible] 18 [illegible] 540 [illegible] - 1000-1250 [illegible] 65,0 %. [illegible] (250 [illegible]), [illegible] (85-93 [illegible] 100 [illegible]).

tєtsLэtsHʷlsᴵ ƚz 15 ʧɖʝ ɖʒ'ɖʑɖʑʃ⁼ ɢtsfɲʧtsHʘtєfɲsэʘ⁼, ƚz lstsɖʑz ʮʃfɲɖz 3 ʧɖʝ ɖʒ'ɖʑɖʑʃ⁼ LʘэtsHʘ⁼. ʈ ʝ ʧ tєtsHƚzʕlststєɖʑʃɖʒʃ ɢtsfɲʧtsHʘtєfɲsэʘɖʒʃ ʻ ʧɖʝ ɖʒ'ɖʑɖʑʃʔ LʘэtsH "ɿ tsɖzfɲʝʕʃʔ" lsʘ ʘɢtєtsʷ ʻtєɖʒʘ "ʊ ʕtєʘɖʑʘ" ʈ ʘHtsɖʒʃʰ ɖz fɲʝʕtsɢts tєʘʔtsɖʑz ɾ ʃlstsɖʒʃtєfɲʝʕts' tsBɖʑʘfɲs' [34, 346, 489, 522].

ʊэʘtєʃɖʑ ʧtsɖzfɲʝʕts' ɖʒʘ̂ʷfɲɖʑs' ʧtstєtsHʃ tєtsLэtsHʷlsᴵ ɖʑʘtєʘL' ƚz 7 ʧtєtsэ'Hɖʑʃ⁼ ɢtsfɲʧtsHʘtєfɲsэʘ⁼ ɾ ʃlstsɖʒʃtєfɲʝʕts', 2 ï ʃ ᴶ э'эfɲʝʕts', 1 ï ʈ 'эɖʝ ɖʑfɲʝʕts' ʻ 2 ï ʏ ʝ tєɖzɢ'эfɲʝʕts' tsBɖʑʘfɲsʝʔ [450, 483].

Ɉ ʃʕtstєʃfɲsʘɖʑɖzʷ ʧɖzHɖʑʃʕ'э ʧtsɖzfɲʝʕts' ɖʒʘ̂ʷfɲɖʑs' ʧtstєtsHʃ э ʧtєtsɖʒʃfɲɖʑsэtsɖʒz fɲ̃tєʝʰ ƚzэʘɖʑɖz L ɖʒsɖʑsʮɖʑʃɖʒʃ ʻ ʕtsɖʒB'ɖʑsэʘɖʑʃɖʒʃ ʧtstєtsHʘɖʒʃ Hʘ ʧtsLʃlsʃэɖz tєʝLƚzɖz lsʘlsʃ: ʝ ɖʝ tєɢʷ tєtsfɲlsƚz ʧtstє'эɖzʷɖʑs L tєtsэʝ fɲɖʑʃʕʘɖʒʃ ɖʒʘlsʝ tєʃɖʑfɲʝʕʃ⁼ ʧtstєʻH эʃʰ ʘɖʑʘ12,6-21,3 %. ɿʘB'ʔɖʑʃʔ эʃ⁼'H ʻ эʃ⁼'H lsƚzʰ ʻ LB'ɖzʰ ƚz'lsᴵ fɲʷ ɖʑʘ 2,3-6,8 %, fɲʘɖʝ lstsɖʒz, lsэʘtєʃɖʑʃ ʧtsɖzfɲʝʕts' ɖʒʘ̂ʷfɲɖʑs' ɖʒʘ lsᴵ ʰ ʃtєtsʕʃʔ ʘtєʝ ʘɖzɖʝ ls'ɖzʕʃ ɖʑʘɿ tsɖzfɲʝ ʊ ʕtєʘɖʑʃ, ʘʔ э 'ɖz ʃ⁼ tєʝ ɢ'tsɖʑʘ⁼ [226, 332].

ʃ 'ɖzʔɖʑʘ tsʮ'ɖʑʘ BƚzɢʘʔʮʻэtєʻLɖʑʃ⁼ ɢʝ ɖʑslsʃʧ'э ƚz ʧɖʝ ɖʒ'ɖʑɖʑsɖʒz LʘэtsH' ñʂ ɖʝ ɖʑʘ ɾ tsэʕ'эfɲʝʕtsɢts tєʘʔtsɖʑz ʃ ᴶ э'эfɲʝʕts' tsBɖʑʘfɲs' Lʘfɲʘ'Hʮʃɖʑʘ HtsBtєʃʔ '⁼ɖzʔ tє'fɲs. ʊʘʕ, эʃfɲslsʘэ ⁼tsɖʑʮ' ƚz э'ʮ' 15 ɖʒ'fɲʷʮ'э fɲsʘɖʑsэʃɖʑʘ 120,2-124,1 fɲɖʒ ɖʑʘэʕ'fɲɖʑʘHtsэʏʃɖʑʘ lsƚzɖʑzBʘï 140,9-146,2 fɲɖʒ ɢɖʑʃBʃɖʑʘlsʘʰ ʃtєʃɖʑʘɢtєɖzHʝʔ 63,3-67,5 lsʘ45,2-48,2 fɲɖʒ tsB⁼эʘlsɢtєɖzHʝʔ ï 180,8-183,1 fɲɖʒ ʰ ʃtєʃɖʑʘэ ɖʒʘʕɖʑsʕʘ⁼ ï 43,2-43,6 fɲɖʒLʕtєʘ ʃɖʒʃ ʧtsʕʘLɖʑʃʕʘɖʒʃ ƚz ʕtєɖzʧɖʑsʝʕfɲsʝtєʘ̂'tєɖʑsɢts lsʃʧƚz L ʮʘfɲsʕtsᴷ fɲʧʘHʕtsэtsfɲs' 11/16ʐ, 1/8ɸ,3/16ʉ. ɿ tsH'Bɖz tєʝLƚzɖz lsʘlsʃ ɖʑʘʕtstєʃfɲsᴵ ʕtєɖzʧɖʑsɢts lsʃʧƚz tsHʝtєʏʘɖʑs э 'ɖz ʃ⁼ HtsfɲɖzHʏʝ ɖʑɖzʷ⁼ [219, 480, 483].

Ɉ ƚzɖʒsэʘ⁼ ɿ tєʃʕʘtєʧʘlslsʷ ʧ'fɲɖzʷ эʃtєtsBɖʑʃʮlsэʘʷɖʑsэʃʮʃɖʑʃ, Lʘэʃʕtstєʃfɲsʘɖʑɖzʷ Bƚzɢʘʔʮʻэʧtsɖzfɲʝʕts' ɖʒʘ̂ʷfɲɖʑs' ʧtstєtsHʃ, tєʝʕtsɖʒʝ ɖʑHƚzᴷ lsᴵ ʷtstєɖʒzэʘlsʃ lsэʘtєʃɖʑ ɖʑʘ lsʝ⁼ɖʑsɖʑsɢ'ʮɖz ɢtєɖzʧʃ Lʘtsʮʻɖʑʕtsᴷlsʃʧ'э ʕtsɖʑfɲsʃlsƚzʮ'. Ɉ fɲsʘɖʑsэɖʝ ɖʑs, ʰ ts Bƚzɢʘʔʮ', э'Hɖʝ fɲʝ ɖz Hts ɢtєɖzBtsɢts ɖʒ'ʮɖʑsɢts lsʃʧƚz, Htsfɲʷɢʘɖʑʃ ʏʃэts' ɖʒʘfɲʃ ƚz 18 ɖʒ'fɲʷʮ'э 595,5 ʕɢ ʧtєʃ HtsBtsэtsɖʒz ʧtєʃtєtsfɲs' 1034 ɢ, lstsH' ʷʕ tєtsэʝ fɲɖʑʃʕʃ ɖzʏɖʑsɢts fɲƚz⁼tsɢts lsʃʧƚz, э'Hʧtsэ'Hɖʑs ï 517,5 ʕɢ ʻ 893 ɢ [173, 479, 576].

ʊ fɲʧ'⁼ ʰ эʃHʕts' ʕtsɖʑfɲsɖzHʘʮ' fɲsʘH ʧtsɖzfɲʝʕts' ɖʒʘ̂ʷfɲɖʑs' ʧtstєtsHʃ Lʘ tsfɲɖʑsэɖʑʃɖʒʃ Ltstslsʝ⁼ɖzʮɖʑʃɖʒʃ, fɲʝ ɖʝ ʕʮ'ʔɖʑs-ɢʝ ɖʝ lsʃʮɖʑʃɖʒʃ lsʘ ɢtsfɲʧtsHʘtєfɲʝʕts-ʝ ʕtsɖʑsɖʒ'ʮɖʑʃɖʒʃ tsLɖʑʘʕʘɖʒʃ Bƚzɖʑs LʘBʝ Lʧʝ ʮʝ ɖʑs ʮʝ tєʝ L 'ɖʑsʝ ɖʑfɲʃэɖʝ эʃʕtstєʃfɲsʘɖʑɖzʷ

[illegible] [116, 486].

Фізіологічне обґрунтування функціонування організму української чорно-рябої молочної породи. [illegible] 26 [illegible] 1996 [illegible] 127 [illegible] -540, [illegible] -735, [illegible] -749, [illegible] -10, [illegible] 3381246, [illegible] 5113607, [illegible] 55 [illegible] 5/8-7/8 [100].

[illegible] A, C, E, F, L, H' ([illegible] 50%), [illegible] ([illegible] 10%) [illegible] R1, [illegible], U', [illegible]. [illegible], X1, U' [illegible], [illegible]2, V, L [illegible] R2 ([illegible] 44% [illegible] 14,2 [illegible] 12,2% [illegible]), [illegible]

[illegible] [100].

[illegible] 6000-8000 [illegible] 3,63,8 %. [illegible] 10 000 [illegible] 600-650 [illegible] 850-1100 [illegible].

[illegible]:

- ✓ [illegible] -997. [illegible] 4500 [illegible] 4%. [illegible]
- ✓ [illegible] 4306 [illegible] 3,94%. [illegible];
- ✓ [illegible] 4384 [illegible] 4,03%. [illegible];
- ✓ [illegible] 3,85%. [illegible] [172].

[illegible] 35-40 [illegible] 600-800 [illegible] 800-1000 [illegible] 15-16 [illegible] 420-480 [illegible] [496].

[illegible]

[illegible].

[illegible] 100 [illegible] 3,5 [illegible] 1 [illegible] 2-3 [illegible] 100-200 [illegible] 1 [illegible] 2-3 [illegible] / [illegible] 5-8 [illegible] 100 [illegible]

[illegible] [493].

[illegible] 65-70 % [illegible] 10-15 %. [illegible] 6 [illegible].

Вікова динаміка етологічних показників організму телят волинської м’ясної породи раннього віку. [illegible] 29,7Ñ0,45, [illegible] 21,5Ñ0,32; [illegible] 30-[illegible] 59,7Ñ0,37, [illegible] 51,3Ñ0,23; [illegible] 90- [illegible] 96,8Ñ0,47, [illegible] 83,7Ñ0,67; [illegible] 180-[illegible] 172,3Ñ1,22, [illegible] 159,4Ñ1,03.

[illegible].

[illegible] 1), [illegible] 35,3Ñ1,9 [illegible] 31,9Ñ1,6 [illegible] 30-[illegible] 43,3 [illegible] 41,3 [illegible] 90-[illegible] 48,5 [illegible] 43,8 [illegible] 30 [illegible] 1,10 [illegible] 1,06 [illegible] 180 [illegible] 1,5 [illegible] 1,25 [illegible] 30-[illegible] 64,6 [illegible] 56,7 [illegible] 30-[illegible] 90-[illegible].

[illegible] 131,5 [illegible] 129,3 [illegible] 30 [illegible] 3,0 [illegible] 3,2 [illegible] 90 [illegible] 180 [illegible]

BłzGȮʔ ɥ'ɘ ȡȮ 14,8% Ȯ ł lsȷ ȡzʃɥʦʕ ï ȡȮ 20,1% ʧʦʦ'ɘȡz'ȡʦ L 30 HʦBʦʁ ʮʃlsls'. ʃ lsʮȷ, ʦlsʦʃȡʒȮȡz HȮȡz, ɘʕȮLzʁ lsˡ ȡȮ lsȷ, ʱ ʦ ɘʦHȡzʃʔ BȮȡzȮȡzʃɲ ʦʦGȮȡzLȡz lsȷ ȡz'ls fɲʃȮB'ȡzLz' lsˡ fɲ' Hʦ 90-HʦBʦɘʦGʦ ɘ'ʕz.

ʇ 'Hɥʃɲ fɲʃʦfɲʃȷ ʦȷ ʮȷ ȡzȡz' LȮ ʧʦʦɥȷ fɲʦȡʒ fɲʃʦ'ȡzȡz' z lsȷ ȡz'ls ʦsBʦ⌐ fɲʃȮlsȷ ʔ, ȡȮȡʒʃ ɘʃH'ȡȷ ȡʦ ʧȷ ʦ'ʦH, ɘʧʦʦHʦɘʮ 'ʕʦGʦ lsɘȮʃȡzʃ LȡzȮ⌐ʦHʃȡzʃfɲ z Bȷ LH''ȡz ȡʦȡz fɲʃȮȡz (ʧȷ ʦ'ʦH Bȷ LH''ȡz ȡʦfɲʃ'). ʇ ʦʃ ɥˡ ʦȡz ɘfɲʃȮȡzʦɘȡȷ ȡʦ, ʱ ʦ L 30 Hʦ 180 HʦBʃ ʮʃlsls' ʧȷ ʦ'ʦH Bȷ LH''ȡz ȡʦfɲʃ' ȡʒȮ lsȷ ȡzHȷ ȡzɥ'ʁ Hʦ Lȡzʃʮȷ ȡzȡz'. ɩ ʦʕʦȷ ȡʒȮ ȡȮ 30 HʦBz ʮʃlsls' BłzGȮʔ ɥ' ȡȮBȷ LH''ȡz ȡzfɲʃˡ ɘʃlsʦȮɥȮȡzʃ 260,5 ⌐ɘ/HʦBz, Ȯlsȷ ȡzʃɥʕʃ ï 283,4 ⌐ɘ/HʦBz. ɩ Ȯ90 HʦBz ʮʃlsls' ʧȷ ʦ'ʦH Bȷ LH''ȡz ȡʦfɲʃ' Lȡȷ ȡz zɘȮfɲ' z BłzGȮʔ ɥ'ɘ z 1,5 ʦȮLʃ, Ȯz lsȷ ȡzʃɥʦʕ ï z 1,6 ʦȮLȮ z 180-HʦBʦɘʃ⌐ BłzGȮʔ ɥ'ɘ ɥȮɲLȮlsʦȮɥȷ ȡzʃʔ ȡȮBȷ LH''ȡz ȡzfɲʃˡ fɲʕʦʦʦlsʃɘfɲ' z 1,8 ʦȮLȮ Ȯ lsȷ ȡzʃɥʦʕ ï z 1,9 ʦȮLȮ ʧʦʦ'ɘȡz'ȡʦ L 30-HʦBʦɘʃȡʒʃ lsȷ ȡz'lsȮȡʒʃ.

ʃ Hȡzʃȡʒ 'L ʦ'Lȡʦɘʃ Hȡʦfɲʃȷ ʔ ʧʦɘȷ H'ȡzʦɘʃ⌐ ʦȷ Ȯʕɥ'ʔ lsȷ ȡz'ls ' ʧʦʦɥȷ fɲȡȷ ʮȮȡzȡz', ɘʧʦʦHʦɘʮ 'ʕʦGʦ ȡʒʦʮ lzlsˡ LH'ʔ fɲȡz ɘȮlsʃfɲ 'ȡz ' ʦȷ Ȯʕɥ' ʧʦɘȷ H'ȡzʃ lsɘȮʃȡz ȡzȮfɲȮȡʒʧȷ ʦȷ H Ȯʕls ʮ zɘȮȡzȡz', fɲʃȮȡzɘ'Hʧʦɥʃȡzʕz lsȮfɲȡz. ʃ lsʦʃȡʒȮȡz ȡzȮȡʒʃ HȮȡz, 'ʕ' ȡȮɘȷ Hȷ ȡz z ɼ ʦHȮlsʕz ȹ ɘʕȮLzʁ lsˡ ȡȮ lsȷ, ʱ ʦ ʦHȡzʦHʦBʦɘ' BłzGȮʔ ɥ' ɘʃlsʦȮɥȮȡzʃ ɘ LȮGȮȡz ȡʦȡz ȡȮ ȡȷ ʮȮȡzȡz' 1273,2 ⌐ɘ/HʦBz, ȮBʦ 21,22 GʦH/HʦBz, Ȯlsȷ ȡzʃɥʕʃ 1278,8 ⌐ɘ/HʦBz, ȮBʦ 21,31 GʦH/HʦBz. ɉ ʧʦʦHʦɘʮ ʧȷ ʦ ʦ' HʦBʃ, ȡȷ LȮȡȷ ʮ ȡʦ ɘ'H fɲʃȮls', ȡȮ ȡȷ ʮȮȡzȡz' lsȷ ȡz'lsȮ ɘʃlsʦȮɥȮȡzʃ ɘ fɲȷ ʦȷ Hȡz ʦȡz 88,0 % HʦBʦɘʦGʦ ɥȮfɲz, ʱ ʦ zLGʦHʮ z' lsˡ fɲ' L HȮȡzʃȡʒʃ 'ȡz ʃ⌐ Hʦfɲȡz Hȡzʃʕ'ɘ [553]. ʃ Ȯlsȷ ȡʒȮlsʃɥȡzʃʔ ȮȡzȮȡzL ɥʃ' ʦʦɘʦGʦ ȡʒȮlsȷ ʦ'Ȯȡz ɥ'' lsȮBȡzʃɥ' fɲ'Hɥʃlsˡ ʧʦʦ lsȷ, ʱ ʦ ʧȷ ʦ'ʦH ȡȷ ʮȮȡzȡz' Lȡȷ ȡz zɘȮfɲ' L ɘ'ʕʦȡʒ lsɘȮʃȡz ʊȮʕ, zʧʦʦHʦɘʮ ʧȷ ʦ ʦGʦ ȡʒfɲ'ɥ' ʮʃlsls' Hȷ ʱ ʦ ȡȷ ȡz ʃȡʒʃ ɘʃ'ɘʃȡzʃfɲ ɘȷ ȡzʃɥʃȡzʃ ɥˡ ʦGʦ ʧʦʦȡʒ'ʮʕz ɥȮfɲz z ʦBʦ⌐ Gʦȡzʧ lsȷ ȡz'ls. ɩ ʦʕʦȷ ȡʒȮ BłzGȮʔ ɥ' 30-HʦBʦɘʦGʦ ɘ'ʕz ʧȷ ʦȷ BzɘȮȡzʃ z ȡȷ ʮȮɥʦȡz fɲʃȮȡz 1007,0Ñ21,1 ⌐ɘ/HʦBz, Ȯlsȷ ȡzʃɥʕʃ ï 990,3Ñ19,8 ⌐ɘ/HʦBz, ʱ ʦ fɲʃȮɘʃȡʦ 79,0% ' 77,4% HʦBʦɘʦGʦ ɥȮfɲz. ʊȷ ȡz'lsȮ 90-HʦBʦɘʦGʦ ɘ'ʕz ɘʃlsʦȮɥȮȡzʃ ȡȮ fɲʃȮȡz ȡȷ ʮȮȡzȡz' 848,1 lsȮ 867,6 ⌐ɘ/HʦBz ȮBʦ 66,6% ' 68,1% HʦBʦɘʦGʦ ɥȮfɲz, Ȯ180-HʦBʦɘ' ï 790,8 ' 804,9 ⌐ɘ/HʦBz ȮBʦ 62,1% ' 63,0% HʦBʦɘʦGʦ ɥȮfɲz, ɘ'Hʧʦɘ'Hȡʦ.

ɩ ȮGȮȡz ȡʦ ɘ'Hʦȡʒʃȡʒ ' lsʦʔ 'Ȯʕls, ʱ ʦ Ȯʕls ʮ zɘȮȡzȡz' ' ɘȮʮ ȡzʃɘʦʁ fɲʕȡzȮHʦɘʦʁ ʧʦʦɥȷ fɲz lsʦȮɘȡȷ ȡzȡz' lsȮ ʔʦGʦ ʦʦȡz L ɘ'ʕʦȡʒ ʧ'Hɘʃʱ z'lsˡ fɲ'. ʂ ʦ'ȡʒ ɥˡ ʦGʦ, ȡȮȡʒʃ ɘ'HLȡzȮɥȷ ȡʦ, ʱ ʦ z lsȷ ȡz'ls ʦȮȡzȡzʦGʦ ɘ'ʕz ʧȷ ʦ'ʦH Ȯʕlsz ʮ zɘȮȡzȡz' z ȡȷ ʮȮɥʦȡz ʧʦȡʦʮȷ ȡzȡz

[illegible]

[illegible]

[illegible]

Вікова динаміка етологічних показників організму телят

поліської м’ясної породи раннього віку. [illegible] (%G): [illegible] 29,0Ñ0,99, [illegible] ї 21,9Ñ0,68; [illegible] 30-[illegible] 59,3Ñ0,39 ї [illegible] 51,4Ñ0,39 ї [illegible]; [illegible] 90-[illegible] 94,8Ñ0,45 ї [illegible] 81,3Ñ0,78 ї [illegible]; [illegible] 180-[illegible] 169,4Ñ 1,42 ї [illegible] 156,7 Ñ1,02 ї [illegible].

[illegible] ([illegible] 2) [illegible].

[illegible] 34,7[illegible] 33,6 [illegible]. [illegible] 30 [illegible] 1,4 [illegible] ї 1,3 [illegible].

[illegible] 90 [illegible] 50,2, [illegible] ї 48,4 [illegible] 30-[illegible]. [illegible] 180 [illegible] 68,5 [illegible] 59,9 [illegible]. [illegible] 2,0 [illegible] 1,8 [illegible].

[illegible]

[illegible] ї [illegible].

Ị fıȷsʘdʑsɘdʝ dʑs, ʰ ts вɮɢʘʔɥʻ ɘ tsнdʑsнtsвtsɘtsdʒɮ ɘʻɥʻ ɘɖlstɞʘɥʘdɖ dʑʘ fıȷstsʷdʑdʑʷ 130,2 ʭɘ/нtsвɮ, ʘ lsȷ dʑɖɥʕɖ 128,6 ʭɘ/нtsвɮ. ʏȷ tɞȷ ʟ 30 нʻв ɘȷ dʑɖɥɖdʑʘ ɥʘfıȷɮ ʟʘlstɞʘɥȷ dʑsɢts dʑʘ fıȷstsʷdʑdʑʷ ʟtɞtsfıȷdʑʘ ɮ вɮɢʘʔɥʻɘ нts 387,6 ʭɘ/нtsвɮ, ʘ ɮ lsȷ dʑɖɥtsʕ ï нts 403,3 ʭɘ/нtsвɮ.

ɟ tstɞʻɘdʑʷdʑs ʟ tsнdʑsнtsвtsɘɖdʒɖ lsȷ dʑʷlsʘdʒɖ, ɘȷ dʑɖɥɖdʑʘ tʃȷ tɞʻtsнɮ fıȷstsʷdʑdʑʷ ʟtɞtsfıȷsʘdʑʘ ɮ вɮɢʘʔɥʻɘ ʻ lsȷ dʑɖɥtsʕ ɮ 3,0 tɞʘʟɖ. ʋ dʑʘfıȷslɮtʃdʑ нtsfıȷdʑнɣ ɮɘʘdʑ ɘʻʕtsɘʻ tʃȷ tɞʻtsнɖ ï dʑʘ 90 ʻ 180 нtsвɮ ɣɖlslsʷ lsȷ dʑʷls, ʕʻdʑ ʕʻfıȷsᴵ ɥʘfıȷɮ, ʟʘlstɞʘɥȷ dʑsɢts dʑʘ tʃtɞtsɥȷ fŋfıȷstsʷdʑdʑʷ, ʟвʻdʑ ʰ ɮɘʘdʑʘfıȷʷ tʃtstɞʻɘdʑʷdʑs ʟ tsнdʑs- ʻ 30-нtsвtsɘɖdʒɖ lsɘʘtɞɖdʑʘdʒɖ.

ʋ вɮɢʘʔɥʻɘ 90-нtsвtsɘtsɢts ɘʻʕɮ lstɞɖɘʘdʑfıȷsᴵ tʃȷ tɞʻtsнɮ fıȷstsʷdʑdʑʷ ʟtɞtsfıȷsʘdʑʘ tʃtstɞʻɘdʑʷdʑs ʻʟ tsнdʑs- ʻ 30-нtsвtsɘɖdʒɖ lsɘʘtɞɖdʑʘdʒɖ нʘdʑsʼ fıȷsʘlsʻ ɮ 4,2 lsʘ 1,4 tɞʘʟɖ, ʘ ɮ lsȷ dʑɖɥtsʕ ï ɮ 4,1 lsʘ 1,3 tɞʘʟɖ ɘʻнtʃtsɘʻнdʑs. ʋ вɮɢʘʔɥʻɘ ʻ lsȷ dʑɖɥtsʕ dʑʘ 180 нtsвɮ ɣɖlslsʷ tʃȷ tɞʻtsн fıȷstsʷdʑdʑʷ ʟвʻdʑ ʰ ɮɘʘɒfıȷʷ ɮ 4,5 tɞʘʟɖ.

ɭ ʘdʒɖ ɘɖʷɘdʝ dʑs, ʰ ts ʘʕls tʃtɞɖʔdʒʘdʑdʑʷ ʕtstɞdʒɮ lsȷ dʑʷlsʘdʒɖ ɘ tʃȷ tɞʻtsн fıȷstsʷdʑdʑʷ, tʃtsɥɖdʑʘʸ ɥɖ ʟ 30-нtsвtsɘtsɢts ɘʻʕɮ, ʭʘtɞʘʕlsȷ tɞɖʟɮʻlsᴵ fıȷʷ нɖdʑʘdʒʻɥdʑɖdʒ ʟtɞtsfıȷsʘdʑdʑʷdʒ ɥʘfıȷɮ ʟʘlstɞʘɥȷ dʑsɢts dʑʘ нʘdʑɖʔ tʃtɞtsɥȷ fŋ ʊʘʕ, dʑʘ 30-нtsвɮ ɣɖlslsʷ вɮɢʘʔɥʻ ɘɖlstɞʘɥʘdɖ dʑʘ tʃtɞɖʔdʒʘdʑdʑʷ ʕtstɞdʒɮ 81,2 ʭɘ/нtsвɮ, ʘ lsȷ dʑɖɥʕɖ ï 78,7 ʭɘ/нtsвɮ.

ɭ ʘ 90 нtsвɮ ɣɖlslsʷ ʕʻdʑ ʕʻfıȷsᴵ ɥʘfıȷɮ, ʟʘlstɞʘɥȷ dʑsɢts dʑʘ fıȷtʃtsɣɖɘʘdʑdʑʷ ʕtstɞdʒɮ ɮ lsȷ dʑʷls tʃtsdʑfŋ ʕtsʼ dʒɒ̂ʷfıȷdʑsʼ tʃtstɞtsнɖ tɞʻʟʕts ʟtɞtsfıȷsʘdʑʘ tʃtstɞʻɘdʑʷdʑs ʟ 30 нtsвtsᴷ ɣɖlslsʷ, tʃtɞts ʰ ts fıȷɸʻнɥɖlsᴵ dʒʘlsȷ dʒʘlsɖɥdʑɖʔ ʘdʑʘdʑʟ ɥɖʷtɞtsɘtsɢts dʒʘlsȷ tɞʻʘdʑɮ ɼ tsнʘlstsʕ ɪ. ʊʘʕ, ɮ вɮɢʘʔɥʻɘ ʻ lsȷ dʑɖɥtsʕ tʃȷ tɞʻtsн ʘʕlsɮ tʃtɞɖʔtsdʒɮ ʕtstɞdʒɮ ʟвʻdʑ ʰ ɮɘʘɒfıȷʷ ɮ 3,8 tɞʘʟɖ, tʃtstɞʻɘdʑʷdʑs ʻʟ 30-нtsвtsɘɖdʒɖ lsɘʘtɞɖdʑʘdʒɖ, lstsнʻ ʷʕ ɮ 180- нtsвtsɘɖʭ lsȷ dʑʷls ɘʻdʑʟtɞtsfıȷsʘɒ ɮ 4,2 tɞʘʟɖ.

ɸ ʕls ɣɮɘʘdʑdʑʷ ɮ fıȷsʘdʑ fıȷstsʷdʑdʑʷ, ʷʕ ȷ lstsdʑsɢʻɥdʑɖʔ tʃtsʕʘʟdʑɖʕ, ɮ lsȷ dʑʷls tʃtsdʑfŋ ʕtsʼ tʃtstɞtsнɖ, dʒʘɒ ʭʘtɞʘʕlsȷ tɞdʑ tsfıȷsвdʑɖɘtsfıȷsʻ ɮ tɞʻʟdʑ tʃȷ tɞʻtsнɖ tɞtsfıȷslɮ ʻ tɞtsʟɘɖlsʕɮ lsʘ tʃtsнʻвdʑɮ ʟʘ ɥʘfıȷsdʒ нɖdʑʘdʒʻʕɮ ʟ lsȷ dʑʷlsʘdʒɖ ɘtsdʑɖdʑfŋ ʕtsʼ dʒɒ̂ʷfıȷdʑsʼ tʃtstɞtsнɖ.

ʋ 30- ʻ 90- нtsвtsɘɖʭ lsȷ dʑʷls ɥʘfŋʟʘlstɞʘɥȷ dʑɖʔ dʑʘ ʘʕls ɣɮɘʘdʑdʑʷ ɮ fıȷstsʷɥtsdʒɮ tʃtsdʑsɣȷ dʑdʑ ʕtsdʑɖɘʘɒfıȷʷ ɘ dʝ ɣʘʭ 9,0 ï 10,8 ʭɘ/нtsвɮ, lstsнʻ ʷʕ dʑʘ 180 нtsвɮ ɣɖlslsʷ ɘʻdʑʟtɞʻfŋɮ 5,4 tɞʘʟɖ ɪ ɮ вɮɢʘʔɥʻɘ lsʘ ɮ 5,7 tɞʘʟɖ ï ɘ lsȷ dʑɖɥtsʕ, tʃtstɞʻɘdʑʷdʑs ʟ 30 нtsвtsᴷ . ʎʻ нʘdʑ fıȷɸʻнɥʘlsᴵ tʃtɞts lsȷ, ʰ ts lsȷ dʑʷlsʘ dʑʘʔʕtɞʘʰ ȷ tʃȷ tɞȷ ɣtsɘɮɘʘdʑɖ

Ϛtstᴂdʒ ȥ fɱʂʘdȥ fɱʂtsʷdȥdȥʷ dȥʘ 180 ʜtsʙȥ ɣ ɖlslsʷ, lstsʜˈ ʷϚ dȥʘ 90 ʜtsʙȥ lstᴂɖəʘdȥfɱʂᴵ ʘϚlsȥ ɣ ȥəʘdȥdȥʷ ʙȥdʘ ʟdȥʘɥdȥs dʝ dȥʰ tsᴮ , ꟷtsɥ ȥ əϚʘʟʘdȥ əˈϚtsəˈ ʧʝ tᴂˈtsʜɖ ȥ lsʝ dȥʷls ɥʘfɱ ʟʘlstᴂʘɥʝ dȥɖʔ dȥʘ ʧtᴂɖʔ dȥʷlslsʷ Ϛtstᴂdʒȥ ʙȥə ʧtᴂʘϚlsɖɥdȥs tsʜdȥʘϚtsəɖdʒ əʧtᴂtsʜtsəɣ ʜtsʙɖ.

ɩ ʘdʒɖ əfɱʂʘdȥsədʝ dȥs, ʰ ts ʘϚls ʧtᴂɖʔ dʒʘdȥdȥʷ ətsʜɖ ȥ fɱʂʘdȥ fɱʂtsʷdȥdȥʷ ȥ lsʝ dȥʷls ʧtsdȥfɱ Ϛtsʾ dʒʘʷfɱdȥsʾ ʧtstᴂtsʜɖ dʝ dʒʘə fɱȥlslsˈəɖꟷ əˈʜdʒˈdȥdȥsfɱʂʝʔ əˈʜ lsʝ dȥʷls ətsdȥɖdȥfɱ Ϛtsʾ dʒʷfɱdȥsʾ ʧtstᴂtsʜɖ. ɼ ɖdȥʘdʒˈϚʘ ʟʘlstᴂʘɥʝ dȥsɢts ɥʘfɱȥ dȥʘ ʜʘdȥȥ ʧtsəʝ ʜˈdȥϚtsəȥ tᴂʝ ʘϚɥˈᴮ , ʙȥdʘ ʘdȥʘdȥsɢˈɥdȥsᴮ ȥ tsʙtsꟷ ʜtsfɱdȥʜɣ ȥəʘdȥɖꟷ ʧtstᴂˈʜ.
ı tsϚtᴂʝ dʒʘ ȥ ʙȥɢʘʔ ɥˈə 30-ʜtsʙtsətsɢts əˈϚȥ ʧʝ tᴂˈtsʜ ʧtᴂɖʔ tsdʒȥ ətsʜɖ fɱʂʘdȥsəɖə 39,1 ꟷə/ʜtsʙȥ, ʘȥ lsʝ dȥɖɥtsϚ ï 36,3 ꟷə/ʜtsʙȥ. ɩ ʘ90- ˈ 180 ʜtsʙȥ ɣ ɖlslsʷ əˈdȥʟtᴂsfɱʂʘə əˈʜʧtsəˈʜdȥs dȥʘ18,0% ˈ 16,1% ï ȥ ʙȥɢʘʔ ɥˈə lsʘdȥʘ19,0% ˈ 21,5% ï ȥ lsʝ dȥɖɥtsϚ.

ʉ ʝ tᴂʝ ʜ ʧtsəʝ ʜˈdȥϚtsəɖꟷ tᴂʝ ʘϚɥˈʔ ȥ fɱʂʘdȥ fɱʂtsʷdȥdȥʷ lsʝ dȥʷls, dȥʘdʒɖ əɖʜˈdʝ dȥs ʧʝ tᴂˈtsʜ ʙʝ ʟʜˈʷdȥ dȥsɢts fɱʂʘdȥȥ, ʷϚɖʔ ʟ əˈϚtsdʒ ʟdʒʝ dȥʰ ȥəʘəfɱʷ. ɩ ʘʔʙˈdȥ ʰ ꟷʘtᴂʘϚlsʝ tᴂdȥ tsʟdȥʘϚɖ fɱʂʘdȥȥ ʙʝ ʟʜˈʷdȥ dȥsfɱʂˈ ȥ lsʝ dȥʷls ʧtsdȥfɱ Ϛtsʾ dʒʘʷfɱdȥsʾ ʧtstᴂtsʜɖ dʒɖ əˈʜdʒˈɥʘdȥɖ, ʧtsɥɖdȥʘ ɥɖ ʟ 30-ʜtsʙtsətsɢts əˈϚȥ. ʊʘϚ, ʙȥɢʘʔ ɥʷdʒɖ dȥʘ30 ʜtsʙȥ ɣ ɖlslsʷ əɖlstᴂʘɥʘdȥsfɱʷ 258,3 ꟷə/ʜtsʙȥ, ʘlsʝ dȥɖɥϚʘdʒɖ ï 280,1 ꟷə/ʜtsʙȥ.

ɩ ʘ90 ʜtsʙȥ ɣ ɖlslsʷ ʙʝ ʟʜˈʷdȥ dȥɖʔ fɱʂʘdȥȥ ʙȥɢʘʔ ɥˈə ˈ lsʝ dȥɖɥtsϚ ʟdʒʝ dȥʰ ȥəʘəfɱʷ ȥ 1,5 tᴂʘʟɖ, ʘdȥʘ180 ʜtsʙȥ ɣ ɖlslsʷ ï ȥ 1,7 ˈ 1,8 tᴂʘʟˈə əˈʜʧtsəˈʜdȥs, ʧtstᴂˈədȥʷdȥs ʟ 30-ʜtsʙtsəɖdʒ əˈϚtsdʒ

ɼ ts ʧtsəʝ ʜˈdȥϚtsəɖꟷ tᴂʝ ʘϚɥˈʔ, tsϚtᴂˈdʒ fɱʂʘdȥȥ fɱʂtsʷdȥdȥʷ, əˈʜdȥsfɱɖlsᴵ fɱʷ fɱʂʘdȥ dʝ ɣ ʘdȥdȥʷ lsəʘtᴂɖdȥɖ, ʷϚɖʔ əϚdȥ ɥʘ ʧʝ tᴂˈtsʜ ʘϚlsȥ ɣ ȥəʘdȥdȥʷ, ʧʝ tᴂˈtsʜ əˈʜʧtsɥɖdȥϚȥ(fɱdȥȥ).

ʆ lstᴂɖdʒʘdȥ tᴂʝ ʟȥdȥ lsʘlsɖ fɱʧtsfɱʂʝ tᴂʝ ɣ ʝ dȥ fɱʘˈʜɥʘlsᴵ ʧtᴂts lsʝ , ʰ ts dȥʘʔʙˈdȥ ʰ ʝ ɥʘfɱȥ fɱʂʘdȥdʝ ɣ ʘdȥdȥʷ ʟʘʔdʒʘə ȥ tsʜdȥsʜtsʙtsəɖꟷ lsʝ dȥʷls: ȥ ʙȥɢʘʔ ɥˈə əˈdȥfɱʂʘdȥsəɖə 1275,1 ꟷə/ʜtsʙȥ, ʘȥ lsʝ dȥɖɥtsϚ 1277,8 ꟷə/ʜtsʙȥ ʘʙts əˈʜʧtsəˈʜdȥs 21,25 ɢtsʜ/ʜtsʙȥ ˈ 21,30 ɢtsʜ/ʜtsʙȥ, ʰ ts ʜtstᴂˈədȥ əʘdȥs 88,5% ʜtsʙtsətsɢts ɥʘfɱȥ. ʎ ˈ ʜʘdȥ fɱʘˈʜɥʘlsᴵ ʧtᴂts lsʝ , ʰ ts dȥʘʔʙˈdȥ ʰ ȥ ɥʘfɱʂɖdȥȥ ʜtsʙtsətsɢts ɥʘfɱȥ tsʜdȥsʜtsʙtsəˈ lsʝ dȥʷlsʘ ʧtsdȥfɱ Ϛtsʾ ʧtstᴂtsʜɖ ʟʘlstᴂʘɥʘdȥɖ dȥʘ fɱʂʘdȥdʝ ɣ ʘdȥdȥʷ.

ı əˈϚtsdʒ lsʝ dȥʷls, ɥʘfɱʟʘlstᴂʘɥʝ dȥɖʔ dȥʘ dʝ ɣ ʘdȥdȥʷ dʒʘə lsʝ dȥʜʝ dȥɣˈᴮ ʜts ʟdʒʝ dȥʰ ʝ dȥdȥʷ. ʋ 30-ʜtsʙtsəɖꟷ ʙȥɢʘʔ ɥˈə əˈdȥʟdʒʝ dȥʰ ȥəʘəfɱʷ, ʧtstᴂˈədȥʷdȥs ʟ tsʜdȥsʜtsʙtsəɖdʒ əˈϚtsdʒ dȥʘ

21,4%, [illegible] 22,5%. [illegible] 90-[illegible] 33,5% [illegible] 32,5%, [illegible] 180-[illegible] 38,3% [illegible] 37,3%. [illegible] 90 [illegible] 180 [illegible] 30 [illegible] 169,5 [illegible] 2,83 [illegible] 164,4 [illegible] 2,74 [illegible] 90 [illegible] 2,25 [illegible] 180 [illegible] 2,5 [illegible] 30 [illegible] 30-[illegible] 834,1 [illegible] 826,4 [illegible] 90-[illegible] 30 [illegible] 43,9%, [illegible] 40,8%, [illegible] 180-[illegible] 57,2%, [illegible] 44,5% [illegible].

[illegible] 6-[illegible].

Фізіолого-біохімічний статус і продуктивність тварин за впливу різних технологічних факторів. [illegible] [101, 199, 316, 333, 494, 711]. [illegible] [110, 317, 343, 466, 495]. [illegible] [12, 75]. [illegible] [228, 525]. [illegible] 40-60% [illegible] [13]. [illegible] [42], [illegible] [47, 113, 572].

[illegible] [526]. [illegible] [102, 529, 700].

[illegible] [6, 10, 203, 336, 678, 689, 719].

[illegible]

tɞʻʟʢɋɗʒɋ ʟɗʒɗʎʘɗʒɋ ʦʙɗʒɗʑʐ ʙʻɗʎʻɘ ʻ ʘɗʒɗʎʢɋɧʤʦʪ [43, 701]. ɿʦʢʦʥɗʘ ʧʻʜ ɘʧɗʑɋɘʦɗʒ ʪʦɞʘɗʎʧʦʦʪʐɘʘɗʑʐ ɘ ʧɗʘʟɗʒ ʢʦʦɘʻ ʪɘʘɞɋɗʑ ʧʻʜɘɋʰ ʐʻʪ ʩʧ ʢʦɗʑʥɗʑʦɞʘʯʷ ʟʘɢʘɗʑ ɗʑʦɢʦ

ʙʻɗʎʘ ɘɗʎʘɧʤʐʜʦʢ ʧʝʦʥʦʦʟʧʦʜʻɗʐ ʘɗʐ ʙʐɗʒɗʑɘ ɗʒʯ ʢʦʦɘʘ ʻ ʪʢʘɗʑɋɗʑʘɗʒɋ, ʧʻʜɘɋʰ ʐʻʪ ʩʧ ɘɗʒʩʪ ʩʥʯʦɘɋɗʑɋ ʻ ʘʢʪɋɘɗʑʩʪ ɸʩɸʊ ʪʘ ɸɗɸʊ, ʰ ʦ ʦʙʐɗʒʦɘɗʥɗʑʦ ʧʦʩʧɋɗʥɗʑɗʒ ʢʘʪʘʙʦɗʑʟɗʒʐ ʘɗʒɗʑʢɋɧʤʦʪ ɘɗʎʘɧʤʐʜʦʢ ʧʻʜɘɋʰ ʝɗʑɗʑ ʧʦʦʜʐʢʯʻ ɢɗʐ ʢʦʢʦʦʪɋʢʦʜʻɘ [24, 146, 220].

ɼ ʦʩʤʐʜʯʝɗʑɗʑ ɼ ʐʢʦʦʩʧʢʦɢʦɋ .ʃ . [161, 163, 164] ʧʦʢʘʟʘɗʑɋ, ʰ ʦ ʧʻʩʤɗʑ ʪʦɞʘɗʎʧʦʦʪʐɘʘɗʑʐ ɗʥʢʘʩʪʦʦɘʘɗʑɋʭ ʻ ʢʘʩʪʦʦɘʘɗʑɋʭ ʙɋʯʢʻɘ ɗʘʟʘʙʻʡ ɘʪʦʘʪɋ ʯɋɘʦʾ ɗʒʘʩɋ ʩʪʘɗʑɘɋɗʑɋ ɘʻʜʧʦɘʻʜɗʑ 9 ʻ 20 ʢɢ, ʘʙʦ 2,1 ʻ 4,7%. ʇ ʦʦʪʪʥ, ʟɢʻʜɗʑ ʟ ʜʘɗʑɋɗʒɋ ʉʧʝʢɋ ʉ.ʉ. [477, 475, 479, 484, 489], ʟʘʘɗʘɗʑɢʻʯɗʑʭ ʐɗʒʦɘ ɘʪʦɞʘʪɋ ʯɋɘʦʾ ɗʒʘʩɋ ʢʘʩʪʦʦɘʘɗʑɋʭ ʻ ɗʥʢʘʩʪʦʦɘʘɗʑɋʭ ʙʐɢʘʡʯʻɘ ʩʪʘɗʑɘɋɗʑɋ ɘʻʜʧʦɘʻʜɗʑ 15 ʻ 12 ʢɢ. ɿʘ ʜʘɗʑɋɗʒɋ ʂ ʦʟɋʦɕ ɪ. [237, 239, 241], ʧʻʩʤɗʑ ʪʦɞʘɗʎʧʦʦʪʐɘʘɗʑʐ ɪɭʌ ɗʘ ɗʒʘʷʩʪʢʦɗʒʙʻɗʘʪ ʘʪʦʪʦɞʘɗʎʧʦʦʪʦɗʒ ɗʘ ɘʻʜʩʪʘɗʑ 25 ʢɗʒ ɘʪʦɞʘʪɋ ʯɋɘʦʾ ɗʒʘʩɋ ʩʪʘɗʑɘɋɗʑɋ: ʐ ʢʦɞʻɘ - 1,9%, ʐ ʪʥɗʑɋʯ - 1,5%, ʐ ʢʘʩʪʦʦɘʘɗʑɋʭ ʙɋʯʢʻɘ - 1,3%, ʐ ʙʐɢʘɘ - 1,1%. ʇ ʻʩʤɗʑ ʧʝʦʥɘʝʟʝɗʑɗʑ ʪɘʘɞɋɗʑɗʘɘʻʜʩʪʘɗʑ 80 ʢɗʒɘʪʦɞʘʪɋ ʯɋɘʦʾ ɗʒʘʩɋ ʩʪʘɗʑɘɋɗʑɋ: ʐ ʢʦɞʻɘ - 4,4%, ʐ ʪʥɗʑɋʯ - 3,6%, ʐ ʙʐɢʘɘ - 2,9%. ɼ ʦʩʤʐʜʯʝɗʑɗʑ ʧʦʢʘʟʘɗʑɋ, ʰ ʦ ʧʦɋ ʧʝʦʥɘʝʟʝɗʑɗʑ ʙʐɢʘɘ ɗʘɘʻʜʩʪʘɗʑ 74 ʢɗʒɘʪʦɞʘʪɋ ʯɋɘʦʾ ɗʒʘʩɋ ʐ ɗʑɋʭ ʩʪʘɗʑɘɋɗʑɋ 5,6%, ʘɗʘɘʻʜʩʪʘɗʑ 160 ʢɗʒ - 7,9% [412].

ʃ ʪʯʝ, ɗʘɘʝʜʝɗʑ ʜʘɗʑ ʩɸʻʜʯʘʪ, ʟ ʦʜɗʑʢɢʦ ʙʦʢʐ, ʧʦʦ ʟɗʘʯɗʑ ɗʒʘʩʧ ʪʘʙɋ ɘʪʦɞʘʪ ɗʒʘʷʩɋɗʑʾ ʧʦʦʜʐʢʯʻ ʧʦɋ ʪʦɞʘɗʎʧʦʦʪʐɘʘɗʑʐ ɘʻʜɢʦʜʻɘʝɗʐ ɗʑʾ ʭʐʜʦʙɋ ɗʘ ʟʘʙʻʡ, ʘ ʟ ʻɗʐ ʦɢʦ ï ʧʦʦ ʘʢʪʐʘɗʐ ɗʐʩʪʢ ʜʦʩʤʐʜʯʝɗʐ ʩʧɞʷɗʒʦɘʘɗʑɋʭ ɗʘʦʦʟʦʦʙʢʐ ʝʷʝʢʪɋɘɗʑɋʭ ʩʧʦʩʪʙʻɘ ʧʦʦʷʻɗʘʢʪɋʢɋ ɗʥɢʘʪɋɘɗʑʢɢʦ ɘʧɗʑɋɘʐ ʪʦɞʘɗʎʧʦʦʪɗʑɋʭ ʷʘʪʦʦɞʻɘ ɗʘ ʧʦʦʜʐʢʪɋɘɗʐʩʪ ʩʝɗʐ ʩʝ ʢʦɢʦʩʧʦʜʘʦʩʝʢɋʭ ʪɘʘɞɋɗʐ [236].

ʝ ʦʜʻɘɗʑ ʻ ɗʘʡʙʻɗʐʰ ɘʘʯ ɗʑɋɘɋɗʒ ʷʘʪʦʦʦɗʒ ʷʢɋʡ ɘɋʟɗʘʯʘ ʧʦʦʜʐʢʪɋɘɗʐʩʪ ʪɘʘɞɋɗʐ ɘ ʧʦʦʯʝʩʝ ʧʦʜʘɗʑɗʑ ʢʦʦɗʑʐ ʟʘʙʝʟʧʝʯʐʻʪʩʧ ʧʦʪʦʥʙʘ ʪɘʘɞɋɗʐ ɘ ʝɗʥʦɢʻ, ʧʦʦʪʥʻɗʐ, ʘɗʒɗʑɗʑɢɋɧʤʦʪʘʭ, ɘʻʪʘɗʒɗʘʭ, ɗʒɗʥʦʘɗʐ ɗʑɋʭ ʦʥʯʦɘɋɗʘʭ [573, 690]. ɿʘʜʘɗʑɋɗʒɋ ʂ ɋʩʥɗʐʦɘʘ ʃ.ɪ. [221], ʧʦʦʜʐʢʪɋɘɗʐʩʪ ʪɘʘɞɋɗʐ ʻ ʼʭ ʩʪʻʡʢʻʩʪ ʜʦ ʟʘʘʦʦɗʑ ɘʘɗʐ ʙʻɗʐʰ ʝ, ɗʑʯ ɗʘ60% ʟʘɗʥʯɋʪ ɘʻʜ ʘɗʐɗʒʝɗʑʘɗʑɋʭ ʷʘʪʦʦɞʻɘ - ɞɘɗʑ, ʧʦɘɗʑʯʻɗʑʦʩʪʻ ʻ ʦʥʯɋɗʐ ɢʦʜʻɘɗʐ.

ɼ ʦʩʤʐʜʯʝɗʑɗʒɋ ʦʢʦʥɗʒɋʭ ʘʪʦʦɞʻɘ ʜʦɘʝʜɗʑ, ʰ ʦ ʧʦʦɗʐʰ ʝɗʑɗʑ ʪʥʭɗʑʦɗʑɢʻ

[illegible] [543, 660, 724].

[illegible] [115, 255, 542].

[illegible] [262].

[illegible] [537, 552].

[illegible] [659]. [illegible] [595]. [illegible] +25 [illegible] +35 [illegible] 38,6 [illegible] 39,1 [illegible] 56 [illegible] 71 [illegible] +25-30 [illegible] 81 [illegible]

ʕtɑtsə‘ ‘ ’’ ʤʝ lsʘʙtsʤʲʯʤʦsɢts ʧtɑtsʷ ‘ʤ , ʟʤʮʃʞ ʝ ʤʤʷ ʧtɑtsʜʫʕlsʗəʤsfiʝs‘. ɿɢ‘ʜʤs ʟ ʜʘʤʗʤʒʃ tɕʷʜʫ ʘlststɕ‘ə [590], ʧʝtɕʝəʝʜʝ ʤʤʷ ʕtstɕ‘ə ʟ tsʜʤ‘ ’ ɢtɑʫʧʗ ə ‘ʤ ʫ fiʝʧtɑtsətsʜʞ ʫ‘lsᶦ fiʝ ʟʤʮʃʞ ʝ ʤʤʷʤʒ ʤʘʜts’ə, ʟʤʒʤʘʤʒʃ ʧtsəʝʜ‘ʤʗ, ʧ‘ʜəʗʰ ʝ ʤʤʷʤʒ ʘɢtɕʝ fiʝʃəʤsfiʝs‘ lstsʰ ts. ɸʜʘʃlsʘʯ‘ʷ ʕtstɕ‘ə ʜts ʤsəʗ ʫʤʒsə lstɕʗəʘ ə‘ʜ 7 ʜts 15 ʜʤə; ʟʘ ʯʝʔ ʯʘfiʝ ’ ʧtɑtsʜʫʕlsʗəʤfiʝsᶦ ʟʤʘʯʤs ʟʤʮʃʞ ʫ‘lsᶦ fiʝ [406,545, 591, 664, 666].

ʇ fiʝsʘʤsəʤʝʤs, ʰ ts tɕʘʤɢtsəʗʔ fiʝstɕʝ fiʝ ʤʝtsʜʤʘʕtsəts əʧʤʗəʘ ʤʘ ʤʒsʤsʯʤʫ ʧtɑtsʜʫʕlsʗəʤfiʝsᶦ ʕtstɕ‘ə tɕ‘ʟʤʗ ʧtstɕ‘ʜ [269]. ɿʘ ʜʘʤʗʤʒʃ ʘlststɕ‘ə ʫ ʕtstɕ‘ə fiʝʤsəʘʯᶦ ʕts’ tɕʷʙts’ ʧtstɑtsʜʗ ʤʘʜ‘ʔ ʤʒsʤsʕʘʧtɑlsʷɢsʤʒ 10 ʜʤə ʧ‘fiʝʤʷ ʧʝtɕʝʤʒʰ ʝ ʤʤʷ ʟ tsʜʤ‘ ’ ɢtɑʫʧʗ ə ‘ʤ ʫ ʟʤʗʟʗəfiʝʷ ʤʘ6,56%, ʘʫ ʕtstɕ‘ə ʯtstɕʤs-tɕʷʙts’ ʧtstɑtsʜʗ - ʤʘ7,49 % [577, 593]. ʇ əʝʜʝ ʤʤʷ ʤsəts’ lsəʘtɕʗʤʗ ʫ ɢtɑʫʧʫ fiʝʫlsls‘əts ʤʝ əʧʤʗəʘ ʤʘ ʧtɑtsʜʫʕlsʗəʤfiʝsᶦ ʕtstɕ‘ə tɕ‘ʟʤʗ ʧtstɕ‘ʜ. ʊ ɢtɑʫʧ‘ ʕtstɕ‘ə fiʝʤsəʘʯᶦ ʕts’ tɕʷʙts’ ʧtstɑtsʜʗ ʤʘʜts’ ə ʜʝʤ ʧʝtɕʝʤʒʰ ʝ ʤʤʷ ʟʤʝʤ ʗʤʗfiʝ ʤʘ 0,39 %, lstsʜ‘ ʷʕ ʫ ʯtstɕʤs-tɕʷʙts’ - ʤʘ 0,65 % [610, 691, 710].

ʇ ʝtɕʝʤʒʰ ʝ ʤʤʷ ʕtstɕ‘ə, tsʙʫʤʒsəʤʝʤʝ ʷtstɕʤʫəʘʤʤʷʤʒ lsʝʤsʤsɢ‘ʯʤʗ ɢtɑʫʧ, ʧtɕʗʟətsʜʗlsᶦ ʜts ʟʤʮʃʞ ʝ ʤʤʷ ʤʒsʤsʯʤs’ ʧtɑtsʜʫʕlsʗəʤsfiʝs‘ ‘ ʟʤʒʤʗ tɕʷʜʫ ʙ‘ts‘ʤʒʯʤʗ ʧtsʕʘʟʤʗʕ‘ə ʫ ʕtɑtsə‘ [589, 594, 679]. ʇ fiʝsʘʤsəʤʝʤs, ʰ ts ʤʘ ʜtɑʫɢʗʔ ʜʝʤ ʧ‘fiʝʤʷ ʧʝtɕʝəʝʜʝ ʤʤʷ ʕtstɕ‘ə ə ‘ʤ ʫ ɢtɑʫʧʫ ʤʘʜts’ ʟʤʮʃʞ ʫʁ lsᶦ fiʝ ʤʘ 23% ʧtɕʗ tsʜʤsʯʘfiʝʤsʤʫ ʧ‘ʜəʗʰ ʝ ʤʤ əʤʒfiʝsʫ ʞʗtɑʫ ə ʤʒsʤsʯ‘ ʤʘ 29%. ɩ ʘ13-ʔ ʜʝʤ ʤʘʜ‘ʔ ʫ ʕtstɕ‘ə fiʝʫlsls‘əts ʤʝ ʟʤʒʤ ‘lsᶦ fiʝ, ʘəʤʒfiʝs ʞʗtɑʫ ʫ ʤʒsʤsʯ‘ ʟʤʝʤ ʫ‘lsᶦ fiʝ ʧtstɕ‘əʤʤs ʟ ʧtsʧʝtɕʝʜʤʒ ʧʝtɕ‘tsʜtsʤʒ ʤʘ 26-ʔ ʜʝʤ ʯ‘ ʧtsʕʘʟʤʗʕʗ ə‘ʜʧtsə‘ʜʤs fiʝsʘʤsəʤlsᶦ 79 ‘ 102% ʧtstɕ‘əʤʤs ʟ ʧ‘ʜɢtslstsəʯʗʤʒ ʧʝtɕ‘tsʜtsʤʒ [579, 611, 612, 661]. ʃ ʜʝtɕʞʘʤ ʘlststɑtsʤʒ ʜʘʤ fiʝ‘ʜʯʘlsᶦ, ʰ ts ʧʝtɕʝɢtɑʫʧʫəʘʤʤʷ ʕtstɕ‘ə əʧʤʗəʘ ʤʘ ətsʜʤʗʔ tsʙʤʒʤ ə ’ tstɕɢʘʤʟʤʒ, ʰ ts ʧtɕʗʟətsʜʗlsᶦ ʜts ʟʤʝʤ ʝ ʤʤʷ əʗʜ‘ʤʝʤʤʷ ʟ ʤʒsʤsʕtsʤʒətsʜʗ [432, 578].

ɼ ʝʷʕ‘ ʜtsfiʝʤʜʤʗʕʗ ʧtsə‘ʜtsʤʒʤʁ lsᶦ ʧtɑts ʟʤʘʯʤ ʟʤʒʤʗ ʤʧ‘ʜʤsɢts tsʙʤʒʤʫ ‘ tsʕʗfiʝʤs-ə‘ʜʤsəʤʗ ʧtɑtsʯʝfiʝə ə tstɕɢʘʤʟʤʒ ʕtstɕ‘ə ʧ‘fiʝʤ ʧʝtɕʝɢtɑʫʧʫəʘʤʤ, ʟtsʕtɕʝʤʒʘ ʫ ʧʤʘʟʤʒ ʕtɑtsə‘ əʗʷəʤʝʤs ʟʤʝʤ ʝ ʤʤʷ əʤʒfiʝsʫ ʟʘɢʘʤʤʗ ʤʧ‘ʜ‘ə, ʝʷ‘tɕ‘ə ʤtsʤʝfiʝsʝtɕʗʤʫ, lstɕʗɢʤʯʝtɕʗʜ‘ə, ʟʙ‘ʤʰ ʝ ʤʤʷ əʤʒfiʝsʫ ʷtsfiʝʷtsʤʧ‘ʜ‘ə ‘ ɩ ɼ ɼ ʂ [596, 603, 681].

ʇ ʝtɕʝɢtɑʫʧʫəʘʤʤʷ lsʝʤlsts ʧtɕʗ ʧʝtɕʝʤʒʰ ʝ ʤʤ ʟ tsʜʤsɢts ʧtɕʗʤʒʰ ʝ ʤʤʷ ə ‘ʤ ʝ əʗʕʤʗʕʘ ʫ ʤʗ fiʝstɕʝ fiʝsəʗʔ fiʝsʘʤ, ʷʕʗʔ fiʝʧtɑtsətsʜʞ ʫ‘lsᶦ fiʝ ʧtɕʗfiʝʕtstɕʝʤʤʤʒ ʯʘfiʝstslsʗ

[illegible] [27]. [illegible] 11-[illegible] [360, 403, 580, 604].

[illegible] [609].

[illegible] [664].

[illegible] [711, 713].

Морфологічний склад периферичної крові телят волинської м’ясної породи у різні періоди раннього онтогенезу. [illegible] 4,2% [illegible]

[illegible] ([illegible] 1.1). [illegible] 30-[illegible] [illegible].

[illegible] 1.1.

[illegible] (MÑm, n=10)

[illegible]	[illegible], [illegible]	[illegible]		$p <$
		[illegible]	[illegible]	
[illegible], [illegible]	1	8,21±0,27	7,88Ñ0,23	
	30	8,59Ñ0,30	7,99Ñ0,24	
	60	8,03Ñ0,20	7,64Ñ0,20	
	180	7,79Ñ0,21	7,06Ñ0,17	
		$p_{30}<0,05$	$p_1<0,05; p_{30}<0,01$ $p_{60}<0,05$	
[illegible]	1	134,8±5,41	126,5±4,56	
	30	116,5±4,66	110,2±3,33	
		$p_1<0,05$	$p_1<0,01$	
	60	110,3±3,17	106,25±3,75	
		$p_1<0,01$	$p_1<0,01$	
	180	102,3±3,02	101,75±2,39	
		$p_1<0,001;p_{30}<0,05$	$p_1<0,001;p_{30}<0,05$	
[illegible]	1	10,52Ñ0,39	9,50Ñ0,26	$p<0,05$
	30	8,76Ñ0,22	8,10Ñ0,20	
		$p_1<0,001$	$p_1<0,001$	
	60	8,14Ñ0,21	7,05Ñ0,18	$p<0,001$
		$p_1<0,001$	$p_1<0,001; p_{30}<0,01$	
	180	6,94Ñ0,19	6,93Ñ0,20	
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;p_{60}<0,001$	

Примітка: у цій і наступних таблицях різниця вірогідна:
p –між бугайцями і теличками; p_1 – порівняно з першою добою; p_{30} – порівняно з 30 добою; p_{60} – порівняно з 60 добою.

[illegible] 8,59 [illegible] 7,99 [illegible] 4,6 [illegible] 1, 4% [illegible]. [illegible] 60 [illegible]

ʈʝ ʝ tɕˈtsʜtsdʒdȻ 6,5% ї ɮ ʙɮɢȹʔ ɥˈɘ ˈ dȻ 4,4% ї ɮ lsʝ dɕʃɥtsʕ.

ʊȹʕʘ lsʝ dȡʝ dɕʮˈʷ ʟdɕʃɤ ʝ dɕdʑ ɘdʒˈfɫʝsɮ ʝ tɕʃlstɕtsɥʃlsˈɘ ɮ ʕtɕtsɘˈ lsʝ dʑˈls tɕˈʟdɕtsʾ fɫʝsȹlsˈ fɫʈʃtsfɫʝsʝ tɕˈɢȹdȻȹfɫʝ lsȹʕtsɤ ʜts 180 ʜtsʙʃ ɤʃlslsʷ. ɟ tstɕˈɘdʑdɕts ʟ 30-ʜtsʙtsɘʃdʒʃ lsʝ dʑˈlsȹdʒʃ ʟdȻɥʝ dɕdʑ ɥᴵ tsɢts ʈʃtsʕȹʟdɕʃʕȹʙɮdɕts dɕʃɤ ɥʃdʒɮ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ dȻ 9,31%, ʘɮ lsʝ dɕʃɥtsʕ ї dȻ 11,6% (*p<0,05*). ɟ tɕtslsʝ, ʈʃtstɕˈɘdʑdɕts ʟ tsʜdɕtsʜtsʙtsɘʃdʒʃ lsʝ dʑˈlsȹdʒʃ ɘʝ dɕʃɥʃdȻ ʕˈdʑ ʕtsfɫʝsˈ ʝ tɕʃlstɕtsɥʃlsˈɘ ɮ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ ʙɮdȻ dʒʝ dʑ tsᴮ dȻ 5,2%, ʘɮ lsʝ dɕʃɥtsʕ ї dȻ 10,5%

ɭ ȹdʒʃ ɘfɫʝsȹdɕtsɘdʝ dɕts, ʱ ts ʕtsdɕʝ dɕtstɕȹɥˈʷ ɢʝ dʑtsɢdɕtsʙˈdʑ ɘ ʕtɕtsɘˈ tsʜdɕtsʜtsʙtsɘʃ꞊ ʙɮɢȹʔ ɥˈɘ ʙɮdȻ dȻ 6,6% ɘʃʱ tsᴮ, dɕɤ ɮ lsʝ dɕʃɥtsʕ ɥᴵ tsɢts ɘˈʕɮ. ɺ ʃʷɘdʝ dɕts lsȹʕtsɤ, ʱ ts ɘʈʃtɕtsʜtsɘɤ ʜtsfɫdʑʜdɕtsɢts ʈʝ tɕˈtsʜɮ fɫʈʃtsfɫʝsʝ tɕˈɢȹdȻȹfɫʝ lsʝ dȡʝ dɕʮˈʷ ʜts ʟdɕʃɤ ʝ dɕdʑ ɘdʒˈfɫʝsɮ ɢʝ dʑtsɢdɕtsʙˈdʑ ɮ ʈʝ tɕʃʬ ʝ tɕˈʔdɕʔ ʕtɕtsɘˈ lsʝ dʑˈls. ɺ ˈʜʟdȻɥȹdɕʃ ʟdʒʝ dʑ ʝ dɕdʑ ʕˈdʑ ʕtsfɫʝsˈ ɢʝ dʑtsɢdɕtsʙˈdʑ ɮ ʕtɕtsɘˈ 30-ʜtsʙtsɘʃ꞊ ʙɮɢȹʔ ɥˈɘ dȻ 13,6% (*p<0,05*) ɮ ʈʃtstɕˈɘdʑdɕdʑ ʟ tsʜdɕtsʜtsʙtsɘʃdʒɘˈʕtsdʒ ʘɮ lsʝ dɕʃɥtsʕ ї dȻ 12,9%(*p<0,01*).

ʊ dȻfɫʝsɮʈʃdɕtsdʑ ɘˈʕtsɘtsdʑ ʈʝ tɕˈtsʜˈ (60 ʜtsʙʘ ɤʃlslsʷ), ɘdʒˈfɫʝs ɢʝ dʑtsɢdɕtsʙˈdʑ ɮ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ fɫʝsȹdɕtsɘʃɘ 110,3ɢ/dʑ, ʘʙts ʙɮɘ dʒʝ dʑ ʃdʒ ʈʃtstɕˈɘdʑdɕts ʟ tsʜdɕtsʜtsʙtsɘʃdʒ ʈʝ tɕˈtsʜtsdʒ dȻ 18,2 % ʈʃtɕʃ *p<0,01*, ʘɮ ʕtɕtsɘˈ lsʝ dɕʃɥtsʕ ɘˈdʑʜtstɕˈɘdʑ ɘȹ ɘʝ dɕʃɥʃdʑ 106,25 ɢ/dʑʘʙts ʟdʒʝ dʑ ɮɘȹfɫ dȻ 16,1% ʈʃtɕʃ *p<0,01.*

ɭ ȹʔdɕʃɤ ɥtsᴮ ʕtsdɕʝ dɕtstɕȹɥˈʷ ɢʝ dʑtsɢdɕtsʙˈdʑ ɘ ʕtɕtsɘˈ lsʝ dʑˈls tɕˈʟdɕtsʾ fɫʝsȹlsˈ ɘʃʷɘʃdȻȹfɫʝ dȻ 180 ʜtsʙɮ ɤʃlslsʷ. ʊ ʈʝ tɕʃʬ ʝ tɕˈʔdɕʔ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ 180-ʜtsʙtsɘtsɢts ɘˈʕɮ ʕtsdɕʝ dɕtstɕȹɥˈʷ ɢʝ dʑtsɢdɕtsʙˈdʑ fɫʝsȹdɕtsɘʃdȻ 102,3 ɢ/dʑ, ʘɮ lsʝ dɕʃɥtsʕ ʜȹdɕtsɢts ɘˈʕɮ ї 101,7 ɢ/dʑ. ɟ tstɕˈɘdʑdɕts ʟ ʈʝ tɕʱ tsᴮ ʜtsʙtsᴮ ɤʃlslsʷ ʟdȻɥʝ dɕdʑ ɥᴵ tsɢts ʈʃtsʕȹʟdɕʃʕȹ ɮ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ ʟdʒʝ dʑ ɮɘȹdɕtsfɫʝ dȻ 24,1% (*p<0,001*), ʘɮ lsʝ dɕʃɥtsʕ ї dȻ 19,6%, ʱ ts, dȻ dȻ ɮ ʜɮdʒʕɮ, ʈʃtsɘȏʷʟȹdɕts ˈʟ dʒʝ dʑ tsᴮ ʕˈdʑ ʕˈfɫʝsᴮ ʝ tɕʃlstɕtsɥʃlsˈɘ ɘ ʕtɕtsɘˈ lsʝ dʑˈls 180-ʜtsʙtsɘtsɢts ɘˈʕɮ.

ʈ ʝ ʟɮdʑ lsȹlsʃ lsȹʙdɕʃɥˈ 1.1. ɘʕȹʟɮᴮ lsᴵ dȻ dʒˈɤ fɫʝsȹlsʝ ɘˈ ɘˈʜdʒˈdɕdɕtsfɫʝsˈ ɘʝ dɕʃɥʃdʑ ʕˈdʑ ʕtsfɫʝsˈ dʝ ʔʕtsɥʃlsˈɘ ɮ ʈʝ tɕʃʬ ʝ tɕˈʔdɕʔ ʕtɕtsɘˈ tsʜdɕtsʜtsʙtsɘʃ꞊ lsʝ dʑˈls. ɕ ʕ ɘʕȹʟɮᴮ lsᴵ dȻȹʝ ʜʝ dʑ ʜȹdʑ ʕˈdʑ ʕˈfɫʝsᴵ dʝ ʔʕtsɥʃlsˈɘ ɮ ʕtɕtsɘˈ ʙɮɢȹʔ ɥˈɘ tsʜdɕtsʜtsʙtsɘtsɢts ɘˈʕɮ ʙɮdȻ dȻ 9,7 % (*p<0,05*) ʙˈdʑ ʰ ȹ dɕɤ ɮ lsʝ dɕʃɥtsʕ.

ɭ ʘ 30 ʜtsʙɮ ɤʃlslsʷ ʕˈdʑ ʕˈfɫʝsᴵ dʝ ʔʕtsɥʃlsˈɘ ɮ ʕtɕtsɘˈ lsʝ dʑˈls fɫʝsȹdɕtsɘʃdȻ 8,76 ɻ/dʑ ɮ ʙɮɢȹʔ ɥˈɘ ˈ 8,10 ɻ/dʑ – ɮ lsʝ dɕʃɥtsʕ. ɟ tɕtslsʝ, ɘʝ dɕʃɥʃdɕʃ ɥᴵ tsɢts ʈʃtsʕȹʟdɕʃʕȹʙɮdɕʃ

[illegible] 16,8% ($p<0,001$) [illegible] 14,7% ($p<0,001$).

[illegible] 60-[illegible] 30 [illegible] 60 [illegible] 8,14 [illegible] 13,4% ($p<0,001$) [illegible] 7,05 [illegible]

[illegible] 180 [illegible] 6,94 [illegible] 6,93 [illegible] 180- [illegible] 34,0%, [illegible] 20,8% [illegible] 30-[illegible] 14,7% [illegible] 60-[illegible].

[illegible] 180-[illegible] 14,4 % ($p<0,001$) [illegible] 30 [illegible] 27,1% ($p<0,001$) [illegible].

[illegible] 30 [illegible] 60- [illegible] 180-[illegible]. [illegible] 180 [illegible] 9,3% [illegible] 11,1% [illegible] 11,6% [illegible] 10,2% [illegible] $p<0,05$, [illegible] 30-[illegible]. [illegible] 6,6 % [illegible].

Морфологічний склад периферійної крові телят поліської

м’ясної породи у різні періоди раннього онтогенезу. [illegible] ([illegible] 1.2) [illegible] 180-[illegible], [illegible]

[illegible] 12,7 % (*p<0,05*) [illegible] 30, 60 [illegible] 180 [illegible] 5-7%.

[illegible] 30 [illegible] 60- [illegible] 180-[illegible] 180-[illegible] 11,1% [illegible] 10,2 %, [illegible] 30-[illegible].

[illegible] 30 [illegible] 15,9% ($p_1<0,01$), [illegible] 12,9% ($p_1<0,01$).

[illegible] 180-[illegible] 21,8 ($p_1<0,001$), [illegible] 21,1 % ($p_1<0,001$).

[illegible]

[illegible]

[illegible] 11,3 % (*p<0,05*) [illegible].

[illegible] 1.2

[illegible] (M±m, n=10)

[illegible]	[illegible]	[illegible]		$p <$
		[illegible]	[illegible]	
[illegible]	1	8,07±0,26	7,16±0,21	$p < 0,05$
	30	8,48±0,28	7,81±0,27	
	60	7,99±0,27	7,57±0,26	
	180	7,54±0,22	7,01±0,18	
		$p_{30}<0,05$	$p_{30}<0,05$	
[illegible]	1	129,3±4,78	126,5±4,56	
	30	108,8±2,97	110,2±4,33	
		$p_1<0,01$	$p_1<0,05$	
	60	106,8±2,99	106,3±3,75	
		$p_1<0,001$	$p_1<0,01$	
	180	101,1±2,83	99,8±2,39	
		$p_1<0,001$	$p_1<0,001$ $p_{30}<0,05$	
[illegible]	1	10,01±0,31	8,99±0,33	$p < 0,05$
	30	8,05±0,26	8,08±0,28	
		$p_1<0,001$	$p_1<0,05$	
	60	8,21±0,23	6,99±0,26	$p < 0,01$
		$p_1<0,001$	$p_1<0,001$	
	180	6,34±0,24	6,87±0,21	
		$p_1<0,001$ $p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001$ $p_{30}<0,01$ $p_{60}<0,05$	

Примітка: у цій і наступнихтаблицях різниця вірогідна: p – між бугайцями і теличками; p_1 – порівняно з першою добою; p_{30} – порівняно з 30 добою; p_{60} – порівняно з 60 добою.

[illegible] 30 [illegible] 19,6% (*$p_1<0,001$*), [illegible] 10,1% (*$p_1<0,05$*) [illegible].

[illegible] 60-[illegible]

[illegible] 14,9% ($p<0,01$) [illegible].

[illegible] 180 [illegible] 36,7% ($p_1<0,001$), [illegible] 21,2% ($p_{30}<0,001$) [illegible] 22,8% ($p_{60}<0,001$), [illegible] 30 [illegible] 60 [illegible]. [illegible] 180 [illegible] 60-[illegible].

Показники білкового обміну молодняку волинської м’ясної породи у критичні періоди онтогенезу.

[illegible] [3].

[illegible].

[illegible] 1.3, [illegible] 30 [illegible]

[illegible]

[illegible] 67,1±1,6 [illegible] 66,7±1,6 [illegible]

[illegible] 4,6% [illegible] 4,0% [illegible] 30-[illegible] 70,2±1,8 [illegible] 69,4±1,7 [illegible]

[illegible] 12,3% ($p<0,01$) [illegible] 75,4±2,0 [illegible] 10,7% [illegible] 73,9±1,9 [illegible] 60- [illegible]

[illegible] 180 [illegible] 20,4% ($p<0,01$), [illegible] 16,3% ($p<0,001$) [illegible]

[illegible] 40,4Ñ0,9 % [illegible] 39,6Ñ0,8% [illegible]

[illegible] 6,9% [illegible] 7,0% ($p_к<0,05$) [illegible] 30 [illegible] ʊɵʙʥʗɥʷ 1.3

Ʌ ʻʢʦɘɵʜʗʥɵʓʒʻʢɵʧ ʦʢɵʟʥʓʗʢʻɘ ʙʻʥʢʦɘʦɢʦ ʦʙʓʻʥʐ ɘ ʄʛʗʈʦɘɵʆɥʻ ʢʈʦɘʻ ʆʝʥʷʆ

ɘʦʥʗʥʔʝ ʢʦʾ ʓʒ̂ʷ ʄʛʥʦʾ ʧʦʈʦʜʗ (MÑm, n=10)

ʇ ʦʢɵʟʥʓʗʢʗ	Ʌ ʻʢ, ʜʦʙɵ	ʉ ʆɵʆ		p <
		ʙʐɢɵʡɥʻ	ʆʝʥʗɥʢʗ	
ʅ ɵɢɵʒ ʥʓʡ ʙʻʥʦʢ, ɢ/ʥʐ	1	67,1Ñ1,6	66,7Ñ1,6	
	30	70,2Ñ1,8	69,4Ñ1,7	
	60	75,4Ñ2,0	73,9Ñ1,9	
		$p_1<0,01$ $p_{30}<0,05$		
	180	80,8Ñ2,7 *$p_1<0,01$*	77,6Ñ2,5 *$p_1<0,001$*	
ɸ ʥʐ ʙʐʓʤʥʓʗ, %	1	40,4Ñ0,9	39,6Ñ0,8	
	30	43,2Ñ1,2	42,4Ñ1,1 *$p_1<0,05$*	
	60	44,8Ñ1,3	43,2Ñ1,2	
	180	46,9Ñ1,5	44,6Ñ1,3	
		$p_{30}<0,05$	*$p_1<0,001;p_{60}<0,001$*	
ʇ ʥʦʙʐʥʒʥʓʗ,%	1	*59,6*Ñ1,5	*60,4*Ñ1,6	
	30	*56,8*Ñ1,4	*57,6*Ñ1,5	
	60	*55,2*Ñ1,4; *$p_1<0,05$*	*56,8*Ñ1,4	
	180	*53,1*Ñ1,2	*55,4*Ñ1,4	
		$p_1<0,01$,	*$p_1<0,05$*	
ɸ/ʇ ʢʦʝʷʻɥʻʻ ʥʦ	1	0,678Ñ0,012	0,656Ñ0,010	
	30	0,761Ñ0,015	0,736Ñ0,013;	
			$p_1<0,001$	
	60	0,812Ñ0,018	0,761Ñ0,016	*$p<0,05$*
		$p_1<0,001$ $p_{30}<0,05$	*$p_1<0,001$*	
	180	0,883Ñ0,021	0,805Ñ0,019	*$p<0,05$*
		$p_1<0,001$; $_{30}<0,001$	*$p_1<0,001$; $p_{30}<0,05$*	
ʉ ʝ ɥʦɘʗʥɵ ʓʓʦʥʐ /ʥʐ	1	*7,0+0,14*	*6,8±0,13*	
	30	*5,4±0,08*	*5,0±0,07*	*$p<0,01$;*
		$p_1<0,001$	*$p_1<0,001$*	
	60	*4,6±0,06*	*4,2±0,05*	*$p<0,001$*
		$p_1<0,01;p30<0,001$	*$p_1<0,01$; $p30<0,001$*	
	180	*4,0±0,06*	*3,4±0,05*	*$p<0,001$*
		$p_1<0,001$; $0<0,001$ *$p60<0,001$*	*$p_1<0,001$; $30<0,001$* *$p60<0,001$*	

Ʌ ʄʛʆɵʥʦɘʥʝʥʦ ɘʻʈʦɢʜʥʝ ʧʻʜɘʗʵ ʝʥʓʷ ʟʥɵɥʝʥʓʷ ɥʵ ʦɢʦ ʧʦʢɵʟʥʓʗɵʥɵ 10,6% ʐ ʙʐɢɵʡɥʻɘ (ʜʦ 44,8Ñ1,3%) ʻ ʥɵ 9,0% ʐ ʆʝʥʗɥʢʦʢ (ʜʦ 43,2Ñ1,2%) ʐ ʧʦʈʻɘʥʷʥʓʵ ʟ ʦʜʥʦʜʦʙʦɘʗʓɘʻʢʦʓ ɘʄʛʆɵʥʦɘʥʝʥʦ ɘ ʆʝʥʷʆ ʥɵ 60 ʜʦʙʐ ʯʗʆʆʷ.

ʊ 180 ʜʦʙ ʦɘʦʥʐ ɘʻɥʻ ʥɵʓʗ ɘʻʜʟʥɵɥʝʥʦ ɘʻʈʦɢʜʥʝ ʧʻʜɘʗʵ ʝʥʓʷ ɘʓʄʛʐ [illegible] 46,9Ñ1,5 %, [illegible] 44,6Ñ1,3%, [illegible] 16,0% ($p_1<0,01$) [illegible] 12,6 % ($p_1<0,001$) [illegible].

[illegible].

[illegible] 59,6Ñ1,5%, [illegible] 10,9%($p<0,01$), [illegible] 53,1Ñ1,2%. [illegible] 60,4Ñ1,6% [illegible] 55,4Ñ1,4% [illegible] 8,3%%($p<0,05$).

[illegible].

[illegible] 0,678Ñ0,012 [illegible] 0,656Ñ0,010 [illegible].

[illegible] 12,2% [illegible] 12,0 %($p_к<0,001$) [illegible] 30 [illegible].

[illegible] 19,7% ($p<0,001$) [illegible] 16,0% ($p<0,001$) [illegible] 60 [illegible] 30-[illegible] ($p<0,001$).

[illegible] 180-[illegible] 0,883Ñ0,021, [illegible] 0,805Ñ0,019 [illegible] 30,2% ($p_1<0,001$) [illegible] 22,7 % ($p_1<0,001$) [illegible] 30-[illegible] ʙʟzɢŒ? ɥʻə ʻ lsʝ dʑʆɥʦʕ.

ɸ dʑŒdʑʟʟzʶ ɥʆ ʜʆdʑŒdʒʕʟz əʻʕʦəʆ⌐ ʟdʒdʑ ədʒfɲsz fŋ ɥʦəʆdʑʆ ï ʕʻdʑʝ əʦɢʦ ʧʦʦʜzʕlsz ʦʙdʒdʑz Œdʒdʑɢʦdʑʧ z ʕʦʦəʻ lsʝ dʑʷls əʦdʑʆdʑʝʕʦʾ dʒȏʷ fŋdʑʾ ʧʦʦʦʜʆ əʻʜ ʦʜdʑ- ʜʦ 180-lsʆ ʜʦʙʦəʦɢʦ əʻʕz fŋdʑʜ ʟŒdʑŒɥʆlsʆ, ʱ ʦ dʑ?ʙʻdʑ ʰ ʆ? ədʒfɲs fŋ ɥʦəʆdʑʆ ʙzə z lsʝ dʑʷls ʦʙʦ⌐ fɲsŒlsʝ? ʧʝʦʰ ʦʾ ʜʦʙʆ ʞ ʆlslsʷ ʻ ʧʦfɲszʧʦəʦ ʟdʑʆʞ zəŒfŋ ʟ əʻʕʦdʒ z ʙʟzɢŒ? ɥʻə ʻ lsʝ dʑʆɥʦʕ.

ɟ ʦʦlsʷɢʦdʒ əfŋ ʦɢʦ ʧʝʦʻʦʜz ʜʦfŋdʑʜʞʝ dʑ ʕʦdʑʝ dʑʦʦŒɥʻʷ fŋ ɥʦəʆdʑʆ z ʕʦʦəʻ ʙʟzɢŒ? ɥʻə ʙzdʑŒ əʆʱ ʦʶ dʑʞ z ʕʦʦəʻ lsʝ dʑʆɥʦʕ. ɩ Œ 30-lsz ʜʦʙz ʞ ʆlslsʷ ədʒfɲs fŋ ɥʦəʆdʑʆ ʟdʒʝ dʑ zəŒfŋ, z ʧʦʦʻədʑʷdʑdʑ ʟ ʧʝʦʰ ʦʶ ʜʦʙʦʶ ʞ ʆlslsʷ, z ʙʟzɢŒ? ɥʻə dʑŒ 22,85% (*p<0,001),* Œz lsʝ dʑʆɥʦʕ dʑŒ 26, 47(*p<0,001).*

ʋ 60-ʜʦʙʦəʦdʒz əʻɥʻ əʻdʑ fŋʕ dʑŒʜŒ z ʙʟzɢŒ? ɥʻə 4,6 dʒdʒʦdʑ /dʑ ʱ ʦ dʑŒ 14,8% (*p<0,01),* dʒʝ dʑ ʝ ʷʕ z 30-ʜʦʙʦəʦdʒz əʻɥʻ ʻ dʑŒ 34,3% (*p<0,001),* ʷʕ z ʦʜdʑʜʦʙʦəʦdʒz əʻɥʻ. ʋ lsʝ dʑʆɥʦʕ ədʒfɲs fŋ ɥʦəʆdʑʆ z ʕʦʦəʻ fɲsŒdʑəʆə z ɥʝ? ʧʝʦʻʦʜ ʝʕfŋʧʝʦʆdʒʝ dʑsz 4,2 dʒdʒʦdʑ /dʑ ʱ ʦ dʑŒ 16,0% (*p<0,001)* dʒʝ dʑ ʝ ʷʕ dʑŒ 30-ʜʦʙz ʞ ʆlslsʷ ʻ dʑŒ38,2% (*p<0,01)* ï ʷʕ z ʦʜdʑʜʦʙʦəʦdʒz əʻɥʻ.

ɩ Œ? dʒʝ dʑ ʆ? ədʒfɲs fŋ ɥʦəʆdʑʆ z ʕʦʦəʻ lsʝ dʑʷls dʒȏʷ fŋdʑʾ ʧʦʦʦʜʆ əfɲsŒdʑədʒʝ dʑ 180-ʜʦʙʦəʦdʒz əʻɥʻ. ʋ ʙʟzɢŒ? ɥʻə əʻdʑ ʟdʑʆʞ zəŒfŋ z 1,8 ʦŒʟŒ (*p<0,001),* Œ z lsʝ dʑʆɥʦʕ ï z 2,0 ʦŒʟŒ(*p<0,001),* ʧʦʦlsʆ ʦʜdʑʜʦʙʦəʦɢʦ əʻʕz ʻ fɲsŒdʑəʆə 4,0Ñ0,06 dʒdʒʦdʑ /dʑz ʙʟzɢŒ? ɥʻə ʻ 3,4Ñ0,05 dʒdʒʦdʑ /dʑï z lsʝ dʑʆɥʦʕ.

ɯdʑ ʆdʒʆ ʦʝ ɥʦəʆdʑŒdʒʆ, ʷʕʻ ⌐ŒʦŒʕlsʝ ʦʆʟzʶ lsᴵ ʻdʑlsʝ dʑfŋʆədʑfɲsᴵ ʙʻdʑʕfŋʆdʑʝ ʟzʶ ɥʆ⌐ ʧʦʦɥʝ fŋə ə ʦʦɢŒdʑʟdʒ ʻ ʧʦʕŒʟdʑʆʕʆ ədʒfɲsz dʑʕdʒʝ ʾdʑəʆ⌐ ʕʆfŋdʑls ï ʈɩʂ ʻ ɼɩʂ, Œ lsŒʕʦʞ ʾ⌐ fŋʻəəʻʜdʑʰ ʝ dʑʷ. ʈʝ ʟzdʑ lsŒlsʆ əʆʟdʑŒɥʝ dʑʷ ʕʦdʑʝ dʑʦʦŒɥʻʾ dʑʕdʒʝ ʾdʑəʆ⌐ ʕʆfŋdʑls z ʕʦʦəʻ lsʝ dʑʷls əʦdʑʆdʑʝʕʦʾ dʒȏʷ fŋdʑʾ ʧʦʦʦʜʆ z əʻʕʦəʦdʒz Œfŋʧʝʕlsʻ ʧʦʝ ʜfɲsŒdʒʝ dʑ z lsŒʙdʑʆɥʻ 1.4.

ɪ fɲsŒdʑədʒʝ dʑ, ʱ ʦ dʑŒ?əʆʱ ʆ? ədʒfɲs ɼɩʂ z ʕʦʦəʻ lsʝ dʑʷls ʦʙʦ⌐ fɲsŒlsʝ? ʙzə dʑŒ ʧʝʦʰ z ʜʦʙz ʞ ʆlslsʷ (56,8- 55,9 dʒɢʈ /100dʒdʑ) ʻ ʟ əʻʕʦdʒ ʦʻʟʕʦ ʧŒʜŒ, ʧʦʆ ɥᴵ ʦdʒz z ʙʟzɢŒ? ɥʻə ə zfŋ ʜʦfŋdʑʜdʑ ʧʝʦʻʦʜʆ ʧʦʦfŋdʑʜʕʦəzəŒdʑŒfŋ lsʝ dʑʜʝ dʑɥʻʷ əʆʱ ʆ⌐ ʟdʑŒɥʝ dʑ ʧʦʕŒʟdʑʆʕŒ dʑʞ z lsʝ dʑʆɥʦʕ. ɿʦʕʦʝ dʒŒ ʜʦ 30-ʜʦʙʦəʦɢʦ əʻʕz ʕʦdʑʝ dʑʦʦŒɥʻʷ ɼɩʂ z ʕʦʦəʻ ʙʟzɢŒ? ɥʻə ʟdʑʆʞ zəŒdʑŒfŋ ʜʦ 46,9±0,84 dʒɢʈ /100dʒdʑz Œʙʦ dʑŒ17,4% (*p<0,01),* Œ lsʝ dʑʆɥʦʕ ï ʜʦ 45,1±0,81 dʒɢʈ /100dʒdʑz Œʙʦ dʑŒ 19,3% (*p<0,001).* ɟ ʦʦʜʦəʞ [illegible] 60-[illegible] 27,9% ($p<0,001$) [illegible] 29,9% ($p<0,001$) – [illegible].

[illegible] 1.4.

[illegible] (MÑm, n=10)

[illegible]	[illegible], [illegible]	[illegible]		$p <$
		[illegible]	[illegible]	
[illegible], [illegible]/100[illegible]	1	56,8±0,79	55,9±0,71	
	30	46,9±0,84	45,1±0,81	
		$p<0,001$	$p<0,001$	
	60	33,8±0,72	31,6±0,70	$p<0,05$
		$p_{30}<0,001p_{к}<0,001$	$p_{30}<0,001;p_{к}<0,001$	
	180	19,4±0,24	18,7±0,20	$p<0,05$
		$p_{1}<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_{1}<0,001;p_{30}<0,001$ $p_{60}<0,001$	
[illegible], [illegible]/100[illegible]	1	159,9Ñ3,11	156,1Ñ3,02	
	30	156,5Ñ2,74	148,4Ñ2,62	$p<0,05$
			$p<0,01$	
	60	153,3Ñ2,63	141,2Ñ2,52	$p<0,01$
		$p_{30}<0,01p_{к}<0,001$	$p_{1}<0,001$	
	180	122,4Ñ1,42	115,8Ñ1,35	$p<0,01$
		$p_{1}<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_{1}<0,001;p_{30}<0,001$ $p_{60}<0,001$	
[illegible] : [illegible]	1	2,82Ñ0,03	2,79Ñ0,02	
	30	3,34Ñ0,03	3,29Ñ0,03	
		$p<0,001$	$p<0,001$	
	60	4,54Ñ0,03	4,47Ñ0,03	
		$p_{1}<0,001;p_{30}<0,001$	$p_{1}<0,001;p_{30}<0,001$	
	180	6,31Ñ0,04	6,19Ñ0,03	$p<0,05$
		$p_{1}<0,001; p_{30}<0,001$ $p_{60}<0,001$	$p_{1}<0,001; p_{30}<0,001$ $p_{60}<0,001$	

[illegible] 180-[illegible] 19,4±0,24 [illegible]/100[illegible] 18,7±0,20 [illegible]/100[illegible], [illegible] 2,93 [illegible] 2,99 [illegible], [illegible] 42,6 [illegible] 40,8% [illegible], [illegible] 60-[illegible].

[illegible]. [illegible], [illegible] : [illegible]

[illegible] 180-[illegible]., [illegible].

[illegible] 180-[illegible] 2,82Ñ0,03 [illegible] 6,31Ñ0,04, [illegible] 2,79Ñ0,02 [illegible] 6,19Ñ0,03.

[illegible]. [illegible].

[illegible] 180-[illegible] 80,8±2,7 [illegible] 77,6±2,5 [illegible] 20,4 ($p_1<0,01$) [illegible] 16,3 % ($p_1<0,001$).

[illegible] 46,9Ñ1,5 %, [illegible] 44,6Ñ1,3% [illegible] 16,0($p_1<0,01$) [illegible] 12,6 % ($p_1<0,001$)

[illegible] 180-[illegible] 0,883Ñ0,021, [illegible] 0,805Ñ0,019 [illegible] 30,2%($p_1<0,001$) [illegible] 22,7 % ($p_1<0,001$) [illegible] 30 [illegible] ($p<0,001$) [illegible] ($p<0,001$).

[illegible].

Показники білкового обміну молодняку поліської м’ясної породи у критичні періоди онтогенезу. [illegible].

ɼ ʤʏʷ ʤʑsɘʦsʤʘʧʦsʜʯ ʝ ʤʑʗ lsʝ ʤʏʷls ʘʦʘʕ lsʝ ʦʤʑʗʔ ʤʑʗʟ ʕʗʔ ʦɞ'ɘ ʝ ʤʑ ʙ'ʤʕ'ɘ ɘ ʩʧʗʦʦsɘʘlsʯ' ʕʦʦsɘ', ʧʦʦslsʝ ʤʘʜʘʤʑ ɘ'ʤʟʙ'ʤʑʰ ʑ' lsʲ ʩʏ, ʱ ʦs ʦsʯʝ ɘʗʜʤʑs, ʦsʙʑʤʒsɘʤʝ ʤʑs ɘʗʩʦsʕʗʤʒ ɘʤʒ'ʩʦsʤʒ ʼ ɘ ʤʒsʤʑsʟʗɘ'. ʉ ʧʦsʯ ʗɘʘʤʑʤʑʷ ʤʒsʤʑsʟʗɘʘ ʧʦʦslsʷʛʦsʤʒ ʧʝ ʦɞʰ ʗ lsʦɞʲ ʦs ʜʤʑɘ ʯ ʗlslsʷ ʩʦsʗʤʒʑʤʑ ' ʙ'ʤʑʰ ʑ' lsʲ ʩʏ ʶ ʯʑ ʬʑʤʕʯ'ʶ ʧʝ ʯ'ʤʕʗ ʔ ʤʘ ʯʲ ʦsʤʒʑ lsʤʑ ʕʦsʤʑʯʝ ʤʑsʦɞʘʯ'ʷ ʙ'ʤʕ'ɘ ʑ ʕʦʦsɘ' ʙ'ʤʑʰ ʑ' lsʲ ʩʏ.

ɕ ʕ ɘʗʜʤʑs ʟ ʜʘʤʑʗ ʤʘɘʝʜʝ ʤʑʗ ʑ lsʘʙʤʑʗʯ' 1.5 ʦsʜʤʑsʜʦsʙʦsɘʗ lsʝ ʤʏʷls ɘʤʒ'ʩʦs ʟʘʛʘʤʑ ʤʑsʛʦs ʙ'ʤʕʘ ʑ ʩʧʗʦʦsɘʘlsʯ' ʕʦʦsɘ' ʙʗʯʕ'ɘ ' lsʝ ʤʑʗʯʦsʕ ʙʑɘ ʦsʜʤʑʘʕʦsɘʗʤʒ ' ʩʕʤʘʜʘ ɘ'ʜʧʦsɘ'ʜʤʑs 66,1Ñ1,6 ʛ/ʤʑ ' 66,4Ñ1,7 ʛ/ʤʑ, ʘʧʦsʯʗʤʘ ʯʗ ʟ 30-ʜʦsʙʦsɘʦsʛʦs ɘ'ʕʑ, ɘ ʑʩʝ ʤʘʩʦsʑʧʤʑ ʜʦsʩʤʑʜʯ ʑɘʘʤʑ ɘ'ʕʦsɘ' ʧʝ ʦɞ'ʦsʜʗ ʔʦsʛʦs ɘʤʒ'ʩʦs ʑ ʕʦʦsɘ' ʙʑʛʘʔʯ'ɘ ʤʒʘ ʤʝʟʤʘʯʤʑ ʧʝ ʦɞʝ ɘʘʛʑ. ɿ ʦsʕʦɞʝ ʤʒʘ, ʤʘ 30 ʜʦsʙʑ ʯ ʗlslsʷ ʕ'ʤʑ ʕ'ʩʦsʲ ʟʘʛʘʤʑ ʤʑsʛʦs ʙ'ʤʕʘ ʑ ʩʧʗʦʦsɘʘlsʯ' ʕʦʦsɘ' ʙʑʛʘʔʯ'ɘ ʙʑʤʘ ʙ'ʤʑʰ ʦsʶ ʤʘ 4,99%, ʘ ʑ lsʝ ʤʑʗʯʦsʕ ï ʤʘ 3,46%. ɟ ʦsʦɞ'ɘʤʏʷʤʑs ʟ ʦsʜʤʑsʜʦsʙʦsɘʗʤʒ ɘ'ʕʦsʤʒ

ʋ 60-ʜʦsʙʦsɘʗ ʙʑʛʘʔʯ'ɘ ʕʦsʤʑʯʝ ʤʑsʦɞʘʯ'ʷ ʙ'ʤʕʘ ʑ ʩʧʗʦʦsɘʘlsʯ' ʕʦʦsɘ' ʩʕʤʘʜʘʤʘ 74,6 ʛ/ʤʑ, ʱ ʦs ʙʑʤʑs ʙ'ʤʑʰ ʝ ʤʘ 12,46%, ʷʕ ʑ ʦsʜʤʑsʜʦsʙʦsɘʦsʤʒʑ ɘ'ʯ', ʑ lsʝ ʤʑʗʯʦsʕ ʔʦsʛʦs ɘʤʒ'ʩʦs ʩʦsʘʤʑsɘʗɘ 73,1 ʛ/ʤʑ ' ʙʑɘ ʙ'ʤʑʰ ʗʔ ʤʘ 10,5%.

ɼ ʦs 180-ʜʦsʙʦsɘʦsʛʦs ɘ'ʕʑ ɘʤʒ'ʩʦs ʙ'ʤʕ'ɘ ʑ ʩʧʗʦʦsɘʘlsʯ' ʕʦʦsɘ' lsʝ ʤʏʷls ʧʦsʤʑʩʝ ʕʦsʼ ʤʒʘ̂ʷʩʧʤʑsʼ ʧʦsʦʦsʜʗ ʟʦʦsʩʦsʘ ʜʦs 79,1 ʛ/ʤʑ ' 76,9 ʛ/ʤʑ ʘʙʦs ʤʘ 19,66% ' 15,81% ɘ'ʜʧʦsɘ'ʜʤʑs ʑ ʙʑʛʘʔʯ'ɘ ' lsʝ ʤʑʗʯʦsʕ.

ɸ ʤʘʤʑsʛ'ʯʤʘ lsʝ ʤʑʜʝ ʤʑʯ'ʷ ʟʦʦsʩʦsʘʤʑʤʑʷ ɘʤʒ'ʩʦsʑ ʘʤʑ ʙʑʤʒ'ʤʑʑ ʑ ʕʦʦsɘ' ʩʧʦsʩʦsʝ ʦɞ'ʛʘʤʘʩʝ ʑ ʦɞ'ʟʤʑ ɘ'ʕʦsɘ' ʧʝ ʦɞ'ʦsʜʗ lsʝ ʤʏʷls ʧʦsʤʑʩʝ ʕʦsʼ ʤʒʘ̂ʷʩʧʤʑsʼ ʧʦsʦʦsʜʗ. ɸ ʤʑ ʙʑʤʒ'ʤʑsɘʘ ʬʦɞʘʕʯ'ʷ ʙ'ʤʕ'ɘ ʕʦʦsɘ' ʯʝ ʤʘʙ'ʤʑ ʤʑ ʙ'ʤʕʗ, ʱ ʦs ɘʗʕʦsʤʑʑʶ lsʲ ʯ'ʤʑʑ ʤʑʗʟʕʑ ʤʘʜʟɘʗʯʘʔʤʑs ɘʘʯ ʤʑʗɘʗ ʜʤʏʷ ʦsʦɞʛʘʤʑʟʤʒʑ ʬʑʤʕʯ'ʔ.

ɩ ʘʤʒʗ ɘʩʦsʘʤʑsɘʤʝ ʤʑs, ʱ ʦs ɘʯ ʝ ɘ ʦsʜʤʑsʜʦsʙʦsɘʦsʤʒʑ ɘ'ʯ' ʯʘʩʦsʕʘʘʤʑ ʙʑʤʒ'ʤʑsɘʦsʼ ʬʦɞʘʕʯ'ʼ ʙ'ʤʕ'ɘ ʕʦʦsɘ' lsʝ ʤʏʷls ʩʏʛʘ ʤʒʘʔʯ ʝ 40%, ʧʦɞʗ ʯʲ ʦsʤʒʑ ɘ ʕʦʦsɘ' lsʝ ʤʑʗʯʦsʕ ʼ ʤʝ ʤʑʰ ʝ, ʤʑʯ ʑ ʙʑʛʘʔʯ'ɘ. ʊʘʕʘʟʘʕʦsʤʑsʤʒ'ʦɞʤʑʩʦsʲ ʟʙʝ ʦɞ'ʛʘ lsʲ ʩʏ ʜʦs 180-ʜʦsʙʦsɘʦsʛʦs ɘ'ʕʑ. ɪ ʯʝ ʔ ɘ'ʕʦsɘʗʔ ʧʝ ʦɞ'ʦsʜ ɘʤʒ'ʩʦs ʘʤʑ ʙʑʤʒ'ʤʑɘ ɘ ʕʦʦsɘ' ʙʑʛʘʔʯ'ɘ ʟʦʦsʩʦsʘ ʜʦs 46,3%, ʘ ʑ lsʝ ʤʑʗʯʦsʕ ï ʜʦs 43,1% ʘʙʦs ɘ'ʜʧʦsɘ'ʜʤʑs ʤʘ 6,33% ' ʤʘ 11,3% ʧʦsʦɞ'ɘʤʏʷʤʑs ʟ ʧʝ ʦɞʰ ʦsʶ ʜʦsʙʦsʶ ʯ ʗlslsʷ.

ʊʘʙʥʆɥʷ 1.5

ɺʿʢʦɘʘʜɕʥʘʤʿʢʘʜʝʷʢɕ꞊ ʧʦʢʘʟʥʆʢʿɘ ʙʿʥʦɘʦʛʦ ʦʙʤʿʥ ɘ ʄʧʆʨʦɘʘʣɥʿ ʢʨʦɘʿ

ʪʝʥʷʪ ʧʦʥʄʝʢʦʾ ʤʓʷʄʥʦʾ ʧʦʨʦʜɕ (MÑm, n=10)

ʇ ʦʢʘʟʥʆʢɕ	ɺʿʢ, ʜʦʙʘ	ʉʪʘʧ		p <
		ʙʫʛʘʢɥʿ	ʪʝʥʆɥʢɕ	
1	2	3	4	*5*
ɿʘʛʘʥ ʥʆʔ ʙʿʥʦʢ, ʛ/ʥ	1	66,1Ñ1,6	66,4Ñ1,7	
	30	69,4Ñ1,9	68,7Ñ1,8	
	60	74,6Ñ2,1	73,1Ñ2,0	
		$p_1<0,01$ $p_{30}<0,05$		
	180	79,1Ñ2,8	76,9Ñ2,4	
		$p_1<0,01$	$p_1<0,001$	
ɸ ʥ ʙʫʤʿʥ, %	1	39,8Ñ0,9	38,7Ñ0,7	
	30	42,1Ñ1,1	41,4Ñ1,2	
			$p_1<0,05$	
	60	43,6Ñ1,2	42,1Ñ1,0	$p<0,05$
	180	46,3Ñ1,4	43,1Ñ1,2	$p<0,001$
		$p_{30}<0,05$	$p_1<0,001$ $p_{60}<0,001$	
ɻ ʥʦʙʫʥʿʥʆ, %	1	60,2Ñ1,5	61,3Ñ1,6	
	30	57,9Ñ1,4	58,6Ñ1,4	
	60	56,4Ñ1,3	57,9Ñ1,4	
	180	53,7Ñ1,1	56,9Ñ1,3	
		$p_1<0,01$, $p_{30}<0,05$	$p_1<0,05$	
ɸ /ɻ ʢʦʝʷʿɥʿʿ ʥʆʦ	1	0,661Ñ0,011	0,631Ñ0,009	
	30	0,727Ñ0,015	0,706Ñ0,012	
			$p_1<0,001$	
	60	0,773Ñ0,019	0,727Ñ0,017	$p<0,05$
		$p_1<0,001$ $_{30}<0,05$	$p_1<0,001$	
	180	0,862Ñ0,027	0,757Ñ0,022	$p<0,001$
		$p_1<0,001$; $p_{30}<0,001$	$p_1<0,001$; $p_{30}<0,05$	
ʉ ʝ ɥʈʦɘɕʥʘ, ʤʤʦʥ /ʥ	1	6,8±0,12	6,7Ñ0,12	
	30	5,1Ñ0,06	4,9Ñ0,07	$p<0,05$;
		$p_1<0,001$	$p_1<0,001$	
	60	4,4Ñ0,07	4,1Ñ0,06	$p<0,01$
		$p_1<0,01$; $p_{30}<0,001$	$p_1<0,01$; $p_{30}<0,001$	
	180	3,8Ñ0,06	3,2Ñ0,05	$p<0,001$
		$p_1<0,001$; $p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001$; $p_{30}<0,001$ $p_{60}<0,001$	

ʟďǰ ďǲ ǈəʘďǮʘfij ͪ ǰ ďǻʘ 15,0%, ʘ ǈ lsǰ ďǽʠʯtsʢ ï ďǻʘ 19,0%, ʧtstsɕ'əďǲďǽts ʟ 30-ʜtsʙtsəʠďʒə'ʢtsďʒ

ʊǰ ďǻǰ ďǻʯ'ʷ ʜts ʟďǻʠʞǰ ďǻďǲ əďʒ'fijǈ fiǰ ʯtsəʠďǻʠ ǈ ʢtǝtsə' lsǰ ďǲls tsʙts⁼ fiǰsʘlsǰ ʔ ʟʙǰ tɕ'ɢʘ lsᴵ fij ' ʜts 180-ʜtsʙtsətsɢts ə'ʢǈ. ʊʘʢ, ǈ ʜʘďǻʠʔ ə'ʢtsəʠʔ ʧǰ tɕ'tsʜ ǈ ʢtǝtsə' ʙǈɢʘʔʯ'ə əďʒ'fijs fiǰ ʯtsəʠďǻʠ fiʢďǲʘʜʘə 3,8Ñ0,06 ďʒďǻʒsďǲ /ďǻ ͪ ts ʧtǝtslsʠ tsʜďǻsʜtsʙtsətsɢts ə'ʢǈ ʙǈďǻts ďǰ ďǲ ʠďʒə 1,79 tǝʘʟʘ(*p<0,001)*, ʘǈ lsǰ ďǽʠʯtsʢ ʯᴵ tsɢts ə'ʢǈ ə'ďǻfiʢďǲʘʜʘə 3,2 ďʒďǻʒsďǲ /ďǻlsʘʙǈə ďǰ ďǲ ʠďʒə 2,09 tǝʘʟʘ.

ʇ tǝts 'ďǻsǰ ďǻfiʠəďǲfijsᴵ ʙ'ďǻtsʢfiʠďǻsǰ ʟǈᴮ ʯʠ⁼ ʧtǝtsʯǰ fiǰə ə tstǝɢʘďǲʟďʒ' ďǻtsʞǈlsᴵ fiǰ'ʜʯʠlsʠ ʧtsʢʘʟďǻʠʢʠ əďʒ'fijǈ ďǻǈʢďǰ ʾďǻtsəʠ⁼ ʢʠfiʠďǻsls ï ʈʅʂ ' ɼʅʂ, ʘlsʘʢtsʞ ʾ⁼ fiʧ'əə'ʜďǻtsʰ ǰ ďǻďǲ.

ɸʙfiǰsďǲ lsďǲ əǰ ďǻʠʯʠďǻʠ ʢtsďǻǰ ďǻstǝʘʯ'ʾ ʈʅʂ ǈ ʢtǝtsə' lsǰ ďǻʠʯtsʢ ǈ əfiǰ ʜtsfiʠďǲʜʞǈəʘďǲ ə'ʢtsə' ʧǰ tɕ'tsʜʠ ʙǈďǻʠ ďǻʠʞʯʠďʒʠ, ďǲʞ ǈ ʾ⁼ tǝtsəǰ fiʠďǻʠʢ'ə ʙǈɢʘʔʯ'ə (lsʘʙďǻ.1.6).

ʊʘʙďǻʠʯʷ 1.6

ʂ tsďǻǰ ďǻstǝʘʯ'ʷ ďǻǈʢďǰ ʾďǻtsəʠ⁼ ʢʠfiʠďǻsls ǈ ʢtǝtsə' lsǰ ďǲls ʧtsďǲfiǰ ʢtsʾ ďǲɸʷfiʠďǻsʾ ʧtstǝtsʜʠ ə tsďǻtsɢǰ ďǻʟ' (MÑm, n=10)

ʇ tsʢʘʟďǻʠʢʠ	Ɉ 'ʢ, ʜtsʙʘ	ʉ lsʘlsᴵ		*p* <
		ʙǈɢʘʔʯ'	lsǰ ďǻʠʯʢʠ	
ɼʅʂ, ďʒɢ/100ďʒďǲ	1	56,1+0,76	55,1+0,93	
	30	45,8+0,87	44,0+1,02	
		p<0,001	*p<0,001*	
	60	32,1+1,02	31,6+0,85	
		$p_{30}<0,001$ $p_1<0,001$	$p_{30}<0,001$ $p_1<0,001$	
	180	18,0+0,67	17,9+0,53	
		$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	
ʈʅʂ, ďʒɢ/100ďʒďǲ	1	155,8Ñ2,91	152,4Ñ2,32	
	30	152,1Ñ2,27	143,1Ñ2,16	
			p<0,01	
	60	142,3Ñ1,79	133,0Ñ1,43	*p<0,001*
		$p_{30}<0,01$ $p_1<0,001$	$p_1<0,001$	
	180	111,2Ñ1,07	108,1Ñ0,82	*p<0,05*
		$p_1<0,001;$	$p_1<0,001;$	

Продовження таблиці 1.6

		$p_{30}<0,001$ $p_{60}<0,001$	$p_{30}<0,001$ $p_{60}<0,001$	
[illegible]	1	2,78±0,02	2,82±0,03	
	30	3,32±0,03	3,25±0,04	
		$p<0,001$	$p<0,001$	
	60	4,43±0,05	4,21±0,04	$p<0,01$
		$p_1<0,001$ $p_{30}<0,001$	$p_1<0,001$ $p_{30}<0,001$	
	180	6,18±0,04	6,04±0,03	
		$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	

[illegible] 2,87 [illegible] 6,04 [illegible] 180-[illegible], [illegible] 2,78 [illegible] 6,18.

[illegible], [illegible] 1- [illegible] 30-[illegible] [illegible].

Показники вуглеводного обміну у молодняку волинської м’ясної породи у ранній період онтогенезу. [illegible] 60-[illegible] ([illegible] 1.7). [illegible] 7,7%. [illegible] 3,5-7,7%. [illegible], [illegible] 30- [illegible] 60-[illegible] [illegible], [illegible] 180-[illegible] 7,14 % [illegible] 3,0±0,06 [illegible]/[illegible]

[illegible]

ʧʦʄʝʒʧʦʚʦ ʟʦʄʝʘʣʘ ʿ ʜʦʄʷʛʘʣʘ ʦʤʚʣʷ 3,0±0,05 ʣʓʣʓʦʣʐ /ʣʐ, ʹ ʦ ʙʒʣʦ ʚʗʹ ʝ ʣʘ 7,14% ($p<0,05$) ʚʿʜ ʟʣʘʯʝʣʐ, ʦʪʦʣʗʣʓʘʣʗʢ ʒ ʧʝʦʹ ʒ ʜʦʙʒ ʜʦʄʣʐʜʯʝʣʐ. ʐ ʦʄʝʗʆ ʣʓʄʯʷʯʴ ʯʗʪʪʷ ʙʒʛʘʈʯʿʚ ʚʿʜʟʣʘʯʘʄʷ ʄʝʘʙʿʣʐʟʘʯʿʿ ʕʦʣʒʝʣʐʦʦʘʯʾʾ ʛʣʐ ʕʦʟʗ ʒ ʕʦʦʚʿ ʣʘ ʦʤʚʣʐ ʟʣʘʯʝʣʐ, ʢʘʦʘʕʪʝʦʣʗʢ ʜʣʷ ʜʦʦʦʄʣʐʗʢ ʪʚʘʦʗʣʐ, ʹ ʦ ʄʕʣʘʜʘʣʦ 3,3±0,06 ʣʓʣʓʦʣʐ /ʣʐʿ ʧʝʦʝʚʘʯ ʘʣʦ ʾʾ ʦʤʚʝʣʐ ʒ 60-ʜʦʙʦʚʦʣʓʒ ʚʿʯʿ ʣʘ 10,0% ($p<0,01$), *а* ʚ ʦʜʣʐʜʦʙʦʚʦʣʓʒ ї ʣʘ 17,9% ($p<0,001$).

ʊʘʙʣʗʯʷ 1.7

ʆ ʿʕʦʚʘʜʗʣʘʣʓʕʘʜʝʷʕʗʢ ʧʦʕʘʟʣʗʕʿʚ ʚʒʛʣʝʚʦʜʣʐʛʦ ʦʙʣʓʣʒ ʒ ʕʦʦʚʿ ʪʝʣʐʪ ʚʦʣʗʣʄʝʕʦʾ ʣʓʷʄʣʦʾ ʧʦʦʦʜʗ (М±m, n=10)

ʇ ʦʕʘʟʣʗʕʗ	ʆ ʿʕ, ʜʦʙʘ	ʉ ʪʘʪʴ		$p <$
		ʙʒʛʘʈʯʿ	ʪʝʣʗʯʕʗ	
ʇ ʣʐ ʕʦʟʘ, ʣʓʣʓʦʣʐ /ʣʐ	1	2,8±0,07	2,6±0,05	$p<0,05$
	30	2,9±0,06	2,8±0,06	
	60	3,0±0,05	2,8±0,07	$p<0,05$
		$p_1<0,05$		
	180	3,3±0,06	3,0±0,06	$p<0,01$
		$p_1<0,001;p_{30}<0,01$	$p_1<0,001;$	
ʃ ʘʕʪʘʪ, ʣʓʣʓʦʣʐ /ʣʐ	1	1,38±0,08	1,45Ñ0,09	
	30	1,30Ñ0,04	1,37Ñ0,07	
	60	1,34Ñ0,05	1,41Ñ0,08	
	180	1,32Ñ0,06	1,42Ñ0,08	
		$p_1<0,001$		
ʇ ʿʦʣʒʚʘʪ, ʣʓʣʓʦʣʐ /ʣʐ	1	0,25Ñ0,02	0,25Ñ0,02	
	30	0,22Ñ0,01	0,24Ñ0,01	
	60	0,23Ñ0,02	0,25Ñ0,03	
	180	0,25Ñ0,02	0,26Ñ0,03	
ʃ ʘʕʪʘʪ: ʧʃ ʿʦʣʒʚʘʪ	1	5,52Ñ0,08	5,80Ñ0,09	$p<0,05$
	30	5,91Ñ0,10	5,71Ñ0,08	
			$p<0,01$	
	60	5,83Ñ0,07	5,64Ñ0,05	$p<0,05$
			$p_1<0,001;\ p_{30}<0,05$	
	180	5,28Ñ0,05	5,46Ñ0,05	$p<0,05$
		$p_1<0,05;\ _{30}<0,001$ $p_{60}<0,001$	$p_{30}<0,00;1p_{60}<0,001$	

ʊ ʙʒʛʘʈʯʿʚ ʒ ʯʴʦʣʓʒ ʚʿʯʿ ʦʪʦʣʗʣʓʘʣʐ ʚʗʹ ʿ ʣʘ 10,0 %($p<0,01$) ʟʣʘʯʝʣʣʐʷ ʕʦʣʒʝʣʐʦʦʘʯʾʾ ʛʣʐ ʕʦʟʗ ʒ ʕʦʦʚʿ, ʷʕ ʒ ʪʝʣʗʯʦʕ, ʹ ʦ ʚʕʘʟʒʿ ʣʘ ʟʦʄʝʘʣʐʷ

ʝ ʤʝ ʈɐɢʝ lsʗɥʤsɢʦ ʧʦlsʝ ʤʌɥʿʘʤʑ ˀ˭ ʦʈɐɢʘʤɫʟʤʒ.

ɼ ʦ ʤʘʔɘʘɥ ʤʗɘʗ˭ ʤʝ lsʘʙʦʤɫlsʿɘ ʦʙʤʒʤʑ ɘʑɢʤʝ ɘʦʜʿɘ ʤʘʤʝ ʯʗlsᴵ ʧʿʈɐʦɘʗʤsɢʈɐʘʜʤʘ(ɿ ɪ ʂ) ʿ ʤʒsʤsɥʤʘʕʗfɱʤlsʗ (ʆ ʂ).

ʈ ʝ ʟʑʤ lsʘlsʗ ʧʈɐʦɘʝ ʜʝ ʤʗ˭ ʜʦfɱʤʜʯʝ ʤ ʧʦʕʘʟʘʤʗ, ʰ ʦ ʕʦʤʌʝ ʤsʈɐʘɥʿʷ ɿ ɪ ʂ ʑ ʕʈɐʦɘʿ ʦʜʤsʜʦʙʦɘʗ˭ ʙʑɢʘʔɥʿɘ lsʘ lsʝ ʤʗɥʦʕ ʙʑʤʘ ʦʜʤʘʕʦɘʦᴷ lsʘ ʧʝ ʈʝ ɘʗʰ ʑɘʘʤʘ ʟʤʘɥʝ ʤʤʸ ʘʤʘʤsɢʿɥʤsɢʦ ʧʦʕʘʟʤʗʕʘ ɘ ʕʈɐʦɘʿ ʤʒfɱʸɥʤʗ˭ lsʝ ʤʸls.

ʋ lsʝ ʤʗɥʦʕ ʟʘʧʝ ʈʰ ʗʔ ʤʒfɱʸɥᴵ ʯʗlsʷ ɘʤʒfɱs ʧʿʈɐʑɘʘls ʟʤʝ ʤʰ ʗɘfɱʸ ʤʘ4,0%, ʟ ʤʘfɱsʑʧʤsᴷ fɱsʘʙʿʤʟʘɥʿʿᴷ ʔʦɢʦ ʑ ʜɘʦʤʒfɱʸɥʤsʤʒ lsʘ ʰ ʝ fɱsʗʤʒfɱʸɥʤsʤʒ ɘʿɥʿ. ʋ ʙʑɢʘʔɥʿɘ ʟʤʝ ʤʰ ʝ ʤʤʸ ʕʦʤʌʝ ʤsʈɐʘɥʿʾ ɿ ɪ ʂ ʑ 30-ʜʦʙʦɘʦʤʒ ɘʿɥʿ fɱsʘʤsɘʗʤs 12,0%, ʘʑ 60-ʜʦʙʦɘʦʤʒ ɘʿɥʿ ī 8,0%, ʧʦʈɐɘʤʸʤs ʟ ʦʜʤsʜʦʙʦɘʗʤʒʗ lsʝ ʤʸlsʘʤʒʗ.

ɿ ʦɥʗʤʘᴵ ɥʗ ʿʟ 60-ʜʦʙʦɘʦɢʦ ɘʿʕʑ fɱʧʦfɱsʝ ʈɐɢʘ lsᴵ fɱʸ ʟʈɐʦfɱsʘʤʤʸ ɥᴵ ʦɢʦ ʧʦʕʘʟʤʗʕʘ ʿ ʑ ʙʑɢʘʔɥʿɘ 180-ʜʦʙʦɘʦɢʦ ɘʿʕʑ ɘʿʤfɱʸɢʘ ʈɐɘʤʸ ʜʦʙʦɘʗ˭ lsɘʘʈɐʗʤ ɿ ʈɐʦlsʝ ʑ lsʝ ʤʗɥʦʕ ʈɐɘʝ ʤ ɿ ɪ ʂ ʤʘ30 ʿ 60 ʜʦʙʗ ʯʗlsʷ ʙʑɘ ɘʗʰ ʗʔ ɘʿʜʧʦɘʿʜʤs, ʤʘ9,0% lsʘ8,7%, ʤʯ ʑ ʙʑɢʘʔɥʿɘ. ʋ ʰ ʝ fɱsʗʤʒfɱʸɥʤsʤʒ ɘʿɥʿ ʧʦʕʘʟʤʗʕ ɿ ɪ ʂ ʑ ɘfɱ˭ lsʝ ʤʸls ɘʦʤʗʤfɱʕʦʾ ʤʒʘʷfɱʤsʾ ʧʦʈɐʦʜʗ ʟʤʘ˭ʦʜʗɘfɱʸ ʤʘ ʦʜʤsʤʒ ʈɐɘʤ ʿ ʤʝ ɘʗ˭ʦʜʗɘ ʟʘ ʤʒʯʿ fɱsʘlsʗfɱsʗɥʤsʾ ɘʿʈɐʦɢʿʜʤsfɱsʿ.

ɪ ʤʒfɱs ʤʒsʤsɥʤsʾ ʕʗfɱʤlsʗ ʑ ʕʈɐʦɘʿ lsʝ ʤʸls ɘʦʤʗʤfɱʕʦʾ ʤʒʘʷfɱʤsʾ ʧʦʈɐʦʜʗ ʤʒʘ ʜʝ ʰ ʦ ʿʤʰ ʑ, ɘʿʜ ɿ ɪ ʂ , ɘʿʕʦɘʑ ʜʗʤʘʤʒʕʑ lsʘʑ ʧʝ ʈʰ ʑ ʜʦʙʑ ʯʗlsʷ ʙʑɘ ʤʘʔɘʗʰ ʗʤʒ ʅʦʕʈʝ ʤʘ ʑ ʕʈɐʦɘʿ ʦʜʤsʜʦʙʦɘʗ˭ lsʝ ʤʗɥʦʕ ɘʤʒfɱs ʤʘʕlsʘlsʑ ʙʑɘ ɘ ʤʝ ʯʘ˭ ɘʝ ʤʗɥʗʤʗ 1,45Ñ0,09 ʤʒʤsʤʑ/ʤ ʘʑ ʙʑɢʘʔɥʿɘ ī 1,38Ñ0,08 ʤʒʤsʤʑ/ʤ ʋ ʤʘfɱsʑʧʤʗʔ ɘʿʕʦɘʗʔ ʧʝ ʈʿʦʜ (30 ʜʦʙʘ ʯʗlsʷ) ʕʦʤʌʝ ʤsʈɐʘɥʿʷ ʤʘʕlsʘlsʑ ɘ ʕʈɐʦɘʿ lsʝ ʤʗɥʦʕ ʟʤʝ ʤʰ ʑɘʘʤʘfɱʸ ʜʦ 1,37Ñ0,07 ʤʒʤsʤʑ/ʤ lsʦʜʿʷʕ ʑ ʙʑɢʘʔɥʿɘ ī 1,30Ñ0,04 ʤʒʤsʤʑ/ʤ ʅ ʘʜʘʤʟ ʟɢʘʜʘʤʗʔ ɘʗʰ ʝ ʤʝ lsʘʙʦʤɫls ʤʒʘ ɘʗʈɐʘʯʝ ʤʑ lsʝ ʤʜʝ ʤʌʿᴷ ʜʦ ʤʘʈɐʦfɱsʘʤʤʸ, ʧʈɐʗ ɥᴵ ʦʤʒ ʔʦɢʦ ʟʤʘɥʝ ʤʤʸ ʑ lsʝ ʤʗɥʦʕ ʙʑʤs ɘʗʰ ʗʤʒʤʘ5,22 -7,57%, ʤʯ ʑ ʙʑɢʘʔɥʿɘ.

ɸ ʙfɱsʤ lsʤ ɘʝ ʤʗɥʗʤʗ ʕʦʤʌʝ ʤsʈɐʘɥʿʾ ʆ ʂ ʑ ʕʈɐʦɘʿ lsʝ ʤʸls ɘʦʤʗʤfɱʕʦʾ ʤʒʘʷfɱʤsʾ ʧʦʈɐʦʜʗ ʙʿʤʰ ʝ, ʤʯ ʑ 5 ʈɐʘʟʿɘ ʧʝ ʈʝ ɘʗʰ ʑɘʘʤʗ ɘʤʒfɱs ʑ ʤʔ ɿ ɪ ʂ , ʧʈɐʦ ʰ ʦ fɱsʿʜɥʘlsᴵ ʟʤʘɥʝ ʤʤʸ ˀ˭ fɱʧʿɘɘʿʜʤsʰ ʝ ʤʤʸ.

ɪ ʧʝ ʈʰ ʑ ʜʦʙʑ ʯʗlsʷ fɱʧʿɘɘʿʜʤsʰ ʝ ʤʤʸ ʤʘʕlsʘls/ ʧʿʈɐʑɘʘls fɱsʘʤsɘʗʤs 5,80 ʑ lsʝ ʤʗɥʦʕ, ʧʈɐʦlsʗ 5,52 ī ʑ ʙʑɢʘʔɥʿɘ. ʋ 30- ʿ 60-ʜʦʙʦɘʦʤʒ ɘʿɥʿ ɘ lsʝ ʤʗɥʦʕ ʕʦʝ ʷʿɥʿʿ ʤs ʤʘʕlsʘls/ʧʿʈɐʑɘʘls ʟʤʗʯ ʑɘʘʤʘfɱʸ ʧʦʈɐɘʤʸʤs ʟ ʦʜʤsʜʦʙʦɘʗʤʒɘʿʕʦʤʒ ʘʑ ʙʑɢʘʔɥʿɘ ī ʟʈɐʦfɱsʘʤʘ

LdǾɥdts в‘dƶ h ɉ, dƶɣ ƶ lsɉ dƶɾɥtsȾ. ɩ Ǿ dƶɾɣ ɥɉ LdǾɥɉ dƶdƶ ɥ tsGts ʧtsȾǾLdƶȾǾƶ вƶGǾɁɥ‘ɘ ‘ lsɉ dƶɾɥtsȾ dʓɾ ɘ‘hLdǾɥǾdƶɾ dƶǾ180 htsвƶ ɣ ɾlsls.

Ɉ ‘ȾtsɘǾhɾdƶǾdʓȾǾ ‘ Ǿвfɉsdƶ lsdƶ ɘɉ dƶɾɥɾdƶɾ ǾȾlsɾɘdƶsfɉs‘ hɉ Ⱦɾ ɉ tdƶɉ dƶs‘ɘ ɥɾȾdƶ ʂ tɉ вfɉǾlsǾdʓ lsǾвtsdƶLdʓƶ ʧ‘tdƶɘǾlsƶ ƶ Ⱦtdtsɘ‘ lsɉ dƶls ʧtɉ hfɉsǾɘdɉ dƶ ƶ lsǾвdƶɾɥ‘ 1.8.

ʃ ǾȾlsǾlshɉ G‘htdtsGɉ dƶǾLdƶǾ (ʃ ɼ ɉ) ǾȾlsɾɘdƶfɉs Ⱦtdtsɘ‘ lsɉ dƶls ɘtsdƶɾdƶɾɉȾts dʓǾfɉdƶs ʧtstdtshɾ dʓǾdƶǾ ʧtsh‘вdƶƶ ɘ‘Ⱦtsɘƶ hɾdƶǾdʓȾƶ. ɩ Ǿ dƶɾɣ ɥǾ ǾȾlsɾɘdƶfɉs ɉ tdƶɉ dƶsǾ ɘfɉsǾdƶsɘdɉ dƶǾɘ tshdƶshtsвtsɘtsdʓƶ ɘ‘ɥ‘, L dƶǾfɉsƶʧdƶɾdʓLtdtsfɉsǾdƶdƶdʓhts 30-htsвtsɘtsGts ɘ‘Ⱦƶ ƶ 2,2 tdǾLǾ *(p<0,001)* ƶ вƶGǾɁɥ‘ɘ, lsǾɘ 2,1 tdǾLǾ *(p<0,001)* ï ƶ lsɉ dƶɾɥtsȾ. ɩ Ǿ60 htsвƶ ɣ ɾlsls ǾȾlsɾɘdƶfɉs ʃ ɼ ɉ ɘ Ⱦtdtsɘ‘ вƶGǾɁɥ‘ɘ Lв‘dƶ h ƶɘǾdƶǾfɉ dƶǾ10,4% *(p<0,001)* ‘ dƶǾ 11,8% *(p<0,001)* ï ƶ lsɉ dƶɾɥtsȾ, Ǿ dƶǾ 180 htsвƶ ɣ ɾlsls ï dƶǾ 5,9% ‘ 4,3%*(p<0,01)* ɘ‘hʧtsɘ‘hdƶs, ʧtstG‘ɘdƶdƶs L 30-htsвts ɣ ɾlsls.

ʊǾвdƶɾɥ 1.8

Ɉ ‘ȾtsɘǾhɾdƶǾdʓȾǾǾȾlsɾɘdƶsfɉs‘ ɉ tdƶɉ dƶs‘ɘ Ⱦtdtsɘ‘ lsɉ dƶls ɘtsdƶɾdƶɾɉȾts dʓǾfɉdƶs ʧtstdtshɾ (MÑm, n=10)

ȷ tsȾǾLdƶɾȾɾ	Ɉ ‘Ȿ, htsвǾ	ʉ lsǾsᴵ		$p <$
		вƶGǾɁɥ‘	lsɉ dƶɾɥȾɾ	
1	2	3	4	5
ʃ ǾȾlsǾs-hɉ G‘htdtsGɉ dƶǾLǾ, dʓȾG/dʓdƶɁɘ	1	1,34Ñ0,02	1,31Ñ0,02	
	30	2,89Ñ0,03	2,72Ñ0,03	$p<0,001$
		$p_к<0,001$	$p_к<0,001$	
	60	3,19Ñ0,04	3,04Ñ0,03	$p<0,01$
		$p_1<0,001;$ $p_{30}<0,001$	$p_1<0,001;$ $p_{30}<0,001$	
	180	3,38Ñ0,05	3,17Ñ0,04	$p<0,01$
		$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;$ $p_{30}<0,001$	
ȷ ‘tdƶɘǾs-hɉ G‘htdtsGɉ dƶǾLǾ, dʓȾG/dʓdƶɁɘ	1	6,72Ñ0,16	6,77Ñ0,15	
	30	6,16Ñ0,13	6,34Ñ0,14	
		$p_1<0,001;$		
	60	5,53Ñ0,11	6,03Ñ0,12	$p<0,01$
		$p_1<0,001;$		
	180	5,34Ñ0,06	5,82Ñ0,07	$p<0,001$
		$p_1<0,001;$		

[illegible] 1.8.

1	2	3	4	5
[illegible]	1	23,1Ñ0,91	22,9Ñ0,87	
	30	28,9Ñ0,96	27,6Ñ0,94	
		$p_1<0,001$	$p_1<0,001$	
	60	33,1Ñ1,19	32,4Ñ1,18	
		$p_1<0,001$	$p_1<0,001$	
	180	35,2Ñ1,18	34,2Ñ1,17	
		$p_1<0,001$	$p_1<0,001$ $p_{30}<0,001$	
[illegible]	1	0,291Ñ0,008	0,296Ñ0,008	
	30	0,213Ñ0,006	0,230Ñ0,007	
		$p_1<0,001$	$p_1<0,001$	
	60	0,167Ñ0,004	0,186Ñ0,005	$p<0,01$
		$p_1<0,001;p_{30}<0,001$	$p_1<0,001;$ $p_{30}<0,001$	
	180	0,152Ñ0,003	0,170Ñ0,004	$p<0,01$
		$p_1<0,001;$ $p_{30}<0,001$	$p_1<0,001;$ $p_{30}<0,001$ $p_{60}<0,001$	

[illegible] ([illegible]).

[illegible].

[illegible] 180 [illegible] 6,72Ñ0,16 [illegible] 5,34Ñ0,06 [illegible] 20,5% [illegible] 14,1% [illegible] (6,77Ñ0,15 [illegible] 5,82Ñ0,07).

[illegible] 180-[illegible].

[illegible] ([illegible]), [illegible].

[illegible] 30-[illegible] 20,5% ($p<0,001$) [illegible] 25,1% ($p<0,001$) [illegible]

[illegible] .

Показники вуглеводного обміну у молодняку поліської м'ясної породи у ранній період онтогенезу. [illegible] 1.9. [illegible] 2,7±0,06 [illegible] /[illegible] [illegible] 2,6±0,07 [illegible] /[illegible] [illegible].

[illegible] 30 [illegible] 60 [illegible] 3,8 [illegible] 7,4% [illegible]. [illegible] 180-[illegible] 3,1±0,05 [illegible] /[illegible] 2,8±0,06 [illegible] /[illegible] 14,81% [illegible] 7,70% [illegible] $p<0,001$. [illegible] 3,7% [illegible].

[illegible] ([illegible]) [illegible] ([illegible]). [illegible] 1.9 [illegible].

ʊʘʙdʐʠʯʷ 1.9

ʇ ʿʕtsɘʘʜʠdʐʘdʒʿʕʘʜʝ ʷʕʠ̄ ʧtsʕʘʟdʐʠʕʿɘ ɘʑɢdʝ ɘtsʜdʐtsɢts tsʙdʒʿdʑ ʑ ʕtetsɘʿ lsʝ dʑʷls

ʧtsdʑʃʃʝ ʕtsʾ dʒʘ̂ʷʃʃʝdʐtsʾ ʧtstetsʜʠ (MÑm, n=10)

ʇ tsʕʘʟdʐʠʕʠ	ʇ ʿʕ, ʜtsʙʘ	ʉ lsʘls		*p* <
		ʙʑɢʘʔʯʿ	lsʝ dʐʠʯʕʠ	
ʇ dʑ ʕtsʟʘ dʒdʒtsdʑ /dʐ	1	2,7±0,06	2,6±0,07	
	30	2,8±0,07	2,7±0,06	
	60	2,9±0,06	2,7±0,05	
		$p_1<0,05$		
	180	3,1±0,05	2,8±0,06	
		$p_1<0,001$; $p_{30}<0,01$	$p_1<0,001$;	
ʃ tsdʐtsʯdʐʘʕʠʃʃʝdʐtslsʘ dʒdʒtsdʑ /dʐ	1	1,40±0,09	1,46Ñ0,07	
	30	1,31Ñ0,07	1,39Ñ0,06	
	60	1,36Ñ0,08	1,42Ñ0,06	$p<0,001$
	180	1,34Ñ0,06	1,43Ñ0,07	
		$p_1<0,001$;		
ʇ ʿtetsɘʠdʐtsɢteʘʜdʐʘ ʕʠʃʃʝdʐtslsʘ dʒdʒtsdʑ /dʐ	1	0,24Ñ0,02	0,26Ñ0,01	
	30	0,21Ñ0,04	0,23Ñ0,02	
	60	0,22Ñ0,03	0,24Ñ0,04	
	180	0,24Ñ0,07	0,27Ñ0,04	
ʃ ʘʕlsʘls: ʧʿtedʑɘʘls	1	5,83Ñ0,11	5,62Ñ0,09	
	30	6,24Ñ0,10	6,04Ñ0,10	
			$p<0,01$	
	60	6,18Ñ0,09	5,92Ñ0,10	
			$p_1<0,001$; $p_{30}<0,05$	
	180	5,58Ñ0,08	5,30Ñ0,07	
		$p_1<0,05$; $p_{30}<0,001$ $p_{60}<0,001$	$p_{30}<0,001$ $p_{60}<0,001$	

ʅ ʠdʐʘdʒʿʕʘ ɘdʒʿʃʃʝdʑ ʇ ʇ ʂ ̄ʘteʘʕlsʝ teʠʟdʑɘʘdʐʘʃʃʝʷ ɘʠʃʃʝʕʠdʒʠ ʾʾ ʟdʐʘʯʝ dʐdʑʷdʒʠ ʑ ʕtetsɘʿ lsʝ dʑʷls dʐʘ ʧʝ tsʰ ʑ ʜtsʙʑ ʮʠlslsʷ (0,24Ñ0,02 dʒdʒtsdʑ /dʐ ї ʑ ʙʑɢʘʔʯʿɘ ʿ 0,26Ñ0,01 dʒdʒtsdʑ /dʐ ї lsʝ dʐʠʯtsʕ); ʟdʐʠʮ ʝ dʐdʑʷdʒ ʟdʐʘʯʝ dʐdʑʷ ʯᴵ tsɢts ʧtsʕʘʟdʐʠʕʘ ʑ ʕtetsɘʿ lsʝ dʑʷls dʐʘ 25,5% lsʘ 11,53% ɘʿʜʧtsɘʿʜdʐts ʑ 30-ʜtsʙtsɘtsdʒʑ ɘʿʯʿ, ʟ dʐʘʃʃʝdʑʧdʐʠdʒ ʟtetsʃʃʝʘdʐdʑʷdʒ ʔtsɢts ɘʝ dʐʠʯʠdʐʠ ʑ ɘʿʯʿ 180-ʜʿʙ ʜts teʿɘdʑʷ ɘdʒʿʃʃʝdʑ ʇ ʇ ʂ ʑ ʕtetsɘʿ tsʜdʐtsʜtsʙtsɘʠ̄ lsʝ dʑʷls. ʈ ʘʟtsdʒ ʟ lsʠdʒ dʐʘdʒʠ ɘʃʃʝʘdʐtsɘdʝ dʐts, ʰ ts ɘʧtetsʜtsɘʮ әfŋ͞ ǰ lsƟʃʻә ʜtsfŋʤʜɣ ǰ ʤ tʃtɕtsfŋʤʜʢtsәlzәƟʤƟfŋ әɋʰ Ɵʢtsʤʮ ʤlstɕƟɥʻʷ ɿ Ɉ ʂ lz ʢtɕtsәʻ lsǰ ʤɋʮtsʢ.

ʆ Ɵlsǰ ʤƟlsɋʮʤɋʔ ƟʤƟʤʟ tɕǰ ʟlzʤ lsƟlsʻә ʜɋʤƟʤʢɋ әʤʻfŋlslz ʤtsʤtsʮʤtsʾ ʢɋfŋʤtslsɋ (ʆ ʂ) lz ʢtɕtsәʻ lsǰ ʤʷls ә tsʤtsɢǰ ʤ ʟʻ (ʤƟ tʃǰ tɕʰ lz ʻ 180 ʜtsʙlz ɣɋlslsʷ) tʃtsʢƟʟƟ, ʰ ts ͞ƟtɕƟʢlsǰ tɕ ʾʾ ʟʤʻʤ ʙlzә ƟʤƟʤtsɢʻʮʤɋʔ ʜts әʤʻfŋlslz ɿ Ɉ ʂ lz ʢtɕtsәʻ. ɿ tɕɋ ʮˡ tsʤlz, Ɵʙfŋtsʤ lsʤ әǰ ʤɋʮɋʤɋ ʢtsʤʮ ʤlstɕƟɥʻʾ ʤƟʢlsƟlslz lz ʢtɕtsәʻ lsǰ ʤʷls tʃtsʤfŋ ʢtsʾ ʤʷfŋʤtsʾ tʃtstɕtsʜɋ lz 5 ї 6 tɕƟʟʻә tʃǰ tɕǰ әɋʰ lzәƟʤɋ әǰ ʤɋʮɋʤɋ ɿ Ɉ ʂ lz ʢtɕtsәʻ.

Ɉ tsʜʤtsʜtsʙtsәtsʤlz әʻʮʻ әʤʻfŋls ʤtsʤtsʮʤtsʾ ʢɋfŋʤtslsɋ lz ʢtɕtsәʻ ʙlzɢƟʔʮʻә ʻ lsǰ ʤɋʮtsʢ ʙlzә әɋʰ ɋʔ, ʤɣ lz ʻʤ ʻ әʻʢtsәʻ tʃǰ tɕʻtsʜɋ lsƟ fŋlsƟʤtsәɋә 1,40±0,09 ʤʤtsʤ /ʤʻ 1,46Ñ0,07 ʤʤtsʤ /ʤәʻʜtʃtsәʻʜʤts.

Ɉ fŋlsƟʤtsәʤǰ ʤts, ʰ ts ʤƟ 30 ʜtsʙlz ɣɋlslsʷ ʢtsʤʮ ʤlstɕƟɥʻʷ ʤƟʢlsƟlslz ә ʢtɕtsәʻ ʙlzɢƟʔʮʻә ʟʤɋɣlzәƟʤƟfŋʷ ʤƟ 0,09 ʤʤtsʤ /ʤ, Ɵ lz lsǰ ʤɋʮtsʢ ї ʤƟ 0,07 ʤʤtsʤ /ʤ, tʃtstɕʻәʤʷʤts ʟ tsʜʤtsʜtsʙtsәɋʤ tʃǰ tɕʻtsʜtsʤ ʜtsfŋʷɢƟʸ ʮɋ ʤʻʤʤƟʤ ʤɋ͞ Ɵʙfŋtsʤ lsʤɋ͞ ʟʤƟʮǰ ʤ tʃtsʢƟʟʤɋʢƟfŋǰ tɕǰ ʜ ʻʤ ɋ͞ әʻʢtsәɋ͞ tʃǰ tɕʻtsʜʻә.

ʂ tsʤʮ ʤlstɕƟɥʻʷ ʤtsʤtsʮʤtsʾ ʢɋfŋʤtslsɋ lz ʢtɕtsәʻ lsǰ ʤʷls ʤƟ 60 ʻ 180 ʜtsʙlz ɣɋlslsʷ ʙlzʤƟ әɋʰ tsʶ tʃtstɕʻәʤʷʤts ʟ ʾʾ әǰ ʤɋʮɋʤtsʶ ʤƟ 30 ʜtsʙlz ɣɋlslsʷ, tsʜʤƟʢ әtsʤƟ ʟƟʤɋʰ ƟʤƟfŋʷ ʤɋɣʮtsʶ lz 180-ʜtsʙtsәɋ͞ ʙlzɢƟʔʮʻә ʤƟ 4,28% (*p<0,001*) ʻ ʤƟ 2,0% (*p<0,05*) – lz lsǰ ʤɋʮtsʢ, tʃtstɕʻәʤʷʤts ʟ tʃǰ tɕʰ tsʶ ʜtsʙtsʶ ɣɋlslsʷ lsǰ ʤʷls. ʋ әfŋ ʜtsfŋʤʜɣ lzәƟʤ әʻʢtsәʻ tʃǰ tɕʻtsʜɋ әʤʻfŋls ʤƟʢlsƟlslz lz ʢtɕtsәʻ lsǰ ʤɋʮtsʢ ʙlzә әɋʰ ɋʔ ʤƟ 0,06 ї 0,09 ʤʤtsʤ /ʤ, ʤɣ lz ʙlzɢƟʔʮʻә.

ʉ tʃʻәәʻʜʤtsʰ ǰ ʤʤʷ ʤƟʢlsƟls tʃʻtɕlzәƟls lz әfŋ ʜtsfŋʤʜɣ lzәƟʤ әʻʢtsәʻ tʃǰ tɕʻtsʜɋ ʙlzʤts әɋʰ ɋʤ lz ʢtɕtsәʻ ʙlzɢƟʔʮʻә tʃtstɕʻәʤʷʤts ʻʟ lsǰ ʤɋʮʢƟʤɋ. ı tsʢtɕǰ ʤƟ lz ʢtɕtsәʻ ʙlzɢƟʔʮʻә ʤƟ tʃǰ tɕʰ lz ʜtsʙlz ɣɋlslsʷ әtsʤts fŋlsƟʤtsәɋʤts 5,83Ñ0,11, Ɵlz lsǰ ʤɋʮtsʢ ї 5,62Ñ0,09.

ʅ Ɵ 30 ʻ 60 ʜtsʙlz ɣɋlslsʷ lsǰ ʤʷls әǰ ʤɋʮɋʤƟәʻʜʤtsʰ ǰ ʤʤʷ ʤƟʢlsƟlslz ʜts tʃʻtɕlzәƟlslz ә ʢtɕtsәʻ ʙlzʤƟ ʙʻʤ ʰ tsʶ, ʤɣ lz tʃtstʃǰ tɕǰ ʜʤʔ әʻʢtsәɋʔ tʃǰ tɕʻtsʜ ʻ fŋlsƟʤtsәɋʤƟ 6,24Ñ0,10 ʻ 6,18Ñ0,09 lz ʙlzɢƟʔʮʻә lsƟ 6,04Ñ0,10 ʻ 5,92Ñ0,10 ї lz lsǰ ʤɋʮtsʢ.

ʋ 180-ʜtsʙtsәtsʤlz әʻʮʻ әʻʜʤtsʰ ǰ ʤʤʷ ʤƟʢlsƟlslz ʜts tʃʻtɕlzәƟlslz lz ʢtɕtsәʻ ʙlzɢƟʔʮʻә ʟʤǰ ʤ lzәƟʤtsfŋʷ ʤƟ 9,8%, Ɵ lz ʢtɕtsәʻ lsǰ ʤɋʮtsʢ ї ʤƟ 10,5%, tʃtstɕʻәʤʷʤts ʟ tʃtstʃǰ tɕǰ ʜʤʤәʻʢtsәɋʤ tʃǰ tɕʻtsʜtsʤ ʻ fŋlsƟʤtsәɋʤts 5,58Ñ0,08 ʻ 5,30Ñ0,07 әʻʜtʃtsәʻʜʤts.

[illegible] ([illegible]) [illegible] 1,31Ñ0,02[illegible] [illegible] 1,30Ñ0,01 [illegible]. ([illegible]. 1.10).

[illegible] 1.10

[illegible] (MÑm, n=10)

[illegible]	[illegible], [illegible]	[illegible]		**p <**
		[illegible]	[illegible]	
[illegible]	1	1,31Ñ0,02	1,30Ñ0,01	
	30	2,76Ñ0,03	2,63Ñ0,03	
		$p_1<0,001$	$p_1<0,001$	
	60	3,11Ñ0,05	2,95Ñ0,04	
		$p_1<0,001;$ $p_{30}<0,001$	$p_1<0,001$ $;p_{30}<0,001$	
	180	3,24Ñ0,06	3,13Ñ0,05	
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001; p_{30}<0,001$	
[illegible]	1	6,79Ñ0,18	6,81Ñ0,21	
	30	6,32Ñ0,14	6,41Ñ0,15	
		$p_к<0,001;$		
	60	5,88Ñ0,11	6,11Ñ0,12	
		$p_1<0,001;$		
	180	5,72Ñ0,07	5,94Ñ0,08	$p<0,05$
		$p_1<0,001;$		
[illegible]	1	22,8Ñ0,87	22,7Ñ0,82	
	30	28,5Ñ0,93	28,1Ñ0,95	
		$p_1<0,001$	$p_1<0,001$	
	60	32,5Ñ1,12	31,8Ñ1,10	
		$p_1<0,001$	$p_1<0,001$	
	180	34,1Ñ1,14	33,5Ñ1,16	
		$p_1<0,001$	$p_1<0,001; p_{30}<0,001$	
[illegible]	1	0,298Ñ0,009	0,300Ñ0,009	
	30	0,222Ñ0,005	0,228Ñ0,006	
		$p_1<0,001$	$p_1<0,001$	
	60	0,181Ñ0,004	0,192Ñ0,004	
		$p_1<0,001;p_{30}<0,001$	$p_1<0,001;p_{30}<0,001$	
	180	0,167Ñ0,003	0,177Ñ0,005	$p<0,001$
		$p_1<0,001;p_{30}<0,001$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	

ไ Ө 30 ʜtsʙłz ʞ ɋlsls ʷ Ǿʆlsɋɘdźfnʝs ᴵ ʃ ɼ ɻ ʟtɑtsfnʝsǾdżǾ ɘʜɘʻɥʻ, ʧtstɕʻɘdźʷdʑs ʟ ʾʾ ɘʝ dʑɋɥɋdʑs ᴮ łz tsʜdʑsʜtsʙtsɘɋ⁼ lsʝ dźʷls. ʊ dʑǾfnʝslzʧdź ɘʻʢtsɘʻ ʧʝ tɕʻtsʜɋ dʑǾdʒɋ ɘfnʝsǾdʑsɘdʝ dʑs ʧʻʜɘɋʰ ʝ dʑdźʷ Ǿʆlsɋɘdʑsfnʝsʻ ʃ ɼ ɻ ʢtɑtsɘʻ dʒsdʑsʜdźʷʢłz ɪ ʈ ʌ. ʊǾʆ, łz lsʝ dźʷls 60-ʜtsʙtsɘtsɢts ɘʻʢłz Ǿʆlsɋɘdźfnʝs ᴵ ʃ ɼ ɻ ʢtɑtsɘʻ ʧʻʜɘɋʰ łzɘǾdżǾfnʝʷ dʑǾ 12,68% ʻ 12,17% ɘʻʜʧtsɘʻʜdʑs łz ʙłzɢǾʔɥʻɘ ʻ lsʝ dʑɋɥtsʢ, ʧtstɕʻɘdźʷdʑs ʟ 30 ʜtsʙts ᴮ ʞ ɋlsls ʷ, Өɘ 180-ʜtsʙtsɘtsdʒłz ɘʻɥʻ ʟdʑǾɥʝ dʑdźʷ ɥ ᴵ tsɢts ʧtsʢǾʟdʑɋʢǾłz ʢtɑtsɘʻ ʙłzdʑs ɘɋʰ ɋdʒ dʑǾ 4,18% ʻ 6,10% (*p*<*0,05*), ʧtstɕʻɘdźʷdʑs ʟ ʧtsʧʝ tɕʝ ʜdźdʒɘʻʢtsɘɋdʒʧʝ tɕʻtsʜtsdʒ.

ʈ Ǿʟtsdʒ ʟ lsɋdʒ Ǿʆlsɋɘdźfnʝs ᴵ ʃ ɼ ɻ ʢtɑtsɘʻ ʙłzɢǾʔɥʻɘ 180-ʜtsʙtsɘtsɢts ɘʻʢłz ʙłzdʑǾłz 2,47 tɕǾʟɋ (*p*<*0,001*), Өłz lsʝ dʑɋɥtsʢ ї 2,41 tɕǾʟɋ (*p*<*0,001*) ɘɋʰ ts ᴮ , dźʞ dʑǾʧʝ tɕʰ łz ʜtsʙłz ʞ ɋlsls ʷ ʻ fnʝsǾdʑsɘɋdʑǾ 3,11Ñ0,05 lsǾ 2,95Ñ0,04 dʒʢɢ/dʒɢ/⁼ɘ ɘʻʜʧtsɘʻʜdʑs.

ไ Ǿdʒɋ ɘfnʝsǾdʑsɘdʝ dʑs, ʰ ts Ǿʆlsɋɘdźfnʝs ᴵ ʧʻtɕłzɘǾlsʜʝ ɢʻʜtɑtsɢʝ dʑǾʟɋ (ɿ ɼ ɻ), dʑǾ ɘʻʜdʒʻdʑłz ɘʻʜ Ǿʆlsɋɘdʑsfnʝsʻ ʃ ɼ ɻ ʢtɑtsɘʻ lsʝ dźʷls tsʜdʑsʜtsʙtsɘtsɢts ɘʻʢłz ʙłzdʑǾdʑǾʔɘɋʰ ts ᴮ ʻ ʟ ɘʻʢtsdʒʧtsfnʝslzʧtsɘts ʟdʑɋʞ łzɘǾdżǾfnʝ.

ɿ tsʢtɕʝ dʒǾ Ǿʆlsɋɘdźfnʝs ᴵ ɿ ɼ ɻ ʢtɑtsɘʻ tsʜdʑsʜtsʙtsɘɋ⁼ ʙłzɢǾʔɥʻɘ fnʝsǾdʑsɘɋdʑǾ 6,79Ñ0,18 dʒʢɢ/dʒdź⁼ɘ, Ǿlsʝ dʑɋɥtsʢ ї 6,81Ñ0,21 dʒʢɢ/dʒdź⁼ɘ. ɼ ts 30-ʜtsʙtsɘtsɢts ɘʻʢłz ɘʝ dʑɋɥɋdʑǾ Ǿʆlsɋɘdʑsfnʝsʻ ʢtɑtsɘʻ ʟdʑɋʞ łzɘǾdżǾfnʝ dʑǾ 6,92% (*p*<*0,001*) łz ʙłzɢǾʔɥʻɘ lsǾ dʑǾ 5,87 % łz lsʝ dʑɋɥtsʢ.

ɸ dʑǾdʑtsɢʻɥdʑɋʔ ɘʻʜfnʝslstsʢ ʟdʑɋʞʝ dʑdźʷ Ǿʆlsɋɘdʑsfnʝsʻ ɿ ɼ ɻ ʢtɑtsɘʻ lsʝ dźʷls ɘʻʜʟdʑǾɥǾdʑɋ ʻ ɘ ʧʝ tɕʻtsʜ ʟ 30-ʜtsʙtsɘtsɢts ɘʻʢłz ʜts 60-ʜtsʙtsɘtsɢts ɘʻʢłz (dʑǾ 6,96 % ї łz ʙłzɢǾʔɥʻɘ ʻ dʑǾ 4,68 % ї łz lsʝ dʑɋɥtsʢ).

ไ Ө 180-ʜtsʙłz ʞ ɋlsls ʷ Ǿʆlsɋɘdźfnʝs ᴵ ɿ ɼ ɻ ʢtɑtsɘʻ lsʝ dźʷls ʙłzdʑǾ dʑɋʞ ɥts ᴮ lsʻdź ʢɋ dʑǾ 0,16 ї 0,17 dʒʢɢ/dʒdź⁼ɘ., łz ʧtstɕʻɘdźʷdʑdź ʟ ʾʾ ɘʝ dʑɋɥɋdʑs ᴮ łz 60-ʜtsʙtsɘɋ⁼ lsʝ dźʷls. ʃ ʜdʑǾʆ, ʧtstɕʻɘdźʷdʑs ʟ tsʜdʑsʜtsʙtsɘɋdʒɋ lsʝ dźʷlsǾdʒɋ ɥʷ tɕʻʟdʑɋɥʷ fnʝsǾdʑsɘɋdʑǾ 15,76% (*p*<*0,001*) łz ʙłzɢǾʔɥʻɘ ʻ 12,77%(*p*<*0,05*) ї łz lsʝ dʑɋɥtsʢ.

ʉ dźʜ ʟǾłzɘǾʞ ɋlsɋ, ʰ ts dʑǾɘʻʜdʒʻdʑłz ɘʻʜ ʻdźʰ ɋ⁼ ʜtsfnʝdźʜʞ łzɘǾdʑɋ⁼ ʷʝ tɕdʒʝ dʑsʻɘ, ɘʝ dʑɋɥɋdʑǾ Ǿʆlsɋɘdʑsfnʝsʻ ɿ ɻ ɼ ʢtɑtsɘʻ ʙłzdʑǾ ɘɋʰ ts ᴮ łz lsʝ dʑɋɥtsʢ, ʻʟ ʟʙʝ tɕʝ ʞʝ dʑdźʷdʒ lsǾʆts ʾ lsʝ dʑʜʝ dʑʞ ʻʾ łz ɘʻʢtsɘtsdʒłz Ǿfnʧʝ ʢlsʻ.

ʑ tsʜts Ǿʆlsɋɘdʑsfnʝsʻ ʧʻtɕłzɘǾlsʢ Ǿtɕʙtsʢfnʧ dʑǾʟɋ ʢtɑtsɘʻ lsʝ dźʷls (ɿ ʂ) ʧtsdźfnʝ ʢts ʾ dʒǾʷfnʧdʑs ʾ ʧtstɕtsʜɋ lsts dʝ tsʙ⁼ʻʜdʑs ʟǾʟdʑǾɥɋlsɋ, ʰ ts dʑǾ ʧʝ tɕʰ łz ʜtsʙłz ʞ ɋlsls ʷ ʾʾ Ǿʆlsɋɘdźfnʝs ᴵ ʙłzdʑǾ dʑǾʔdʑɋʞ ɥts ᴮ , ʧtɕlsʝ łz dʑǾfnʝslzʧdź ɘʻʢtsɘʻ ʧʝ tɕʻtsʜɋ ɘtsdʑǾ

ʧtsfŋʝsƶʧtsɘts ʟtœtsfŋʝsʘʥʘ нts 180-нtsвtsɘtsɢts ɘʻʢƶ. ʏʠfŋʥtsɘʻ ʟʥʘɥʝ ʥʤʷ ɘʝʥʠɥʠʥʠ ʘʢlsʠɘʥtsfŋʝsʻ ɥᴵ tsɢts ʬʝteʥʒʥlsʘ ʢtœtsɘʻ lsʝʥʷls tsвtsʖ fŋʝsʘlsʝʔ ʧʝteʰ tsʾ нtsвʠ ʞʠlslsʷ вƶʥʠ tsнʥʘʢtsɘʠʥʒʠ ʻ fŋʝsʘʥtsɘʠʥʠ 22,8Ñ0,87 ʻ 22,7Ñ0,82 ʥʢɢ/ʥʒʥʖɘ ɘʻнʧtsɘʻнʥts ƶ вƶɢʘʔɥʻɘ ʻ lsʝʥʠɥtsʢ.

ʋ 30-нtsвtsɘtsʥʒƶ ɘʻɥʻ ʘʢlsʠɘʥfŋʝsᴵ ʧʻteƶɘʘlsʢʘtœвtsʢfŋʠʥʘʟʠ (ɟ ʂ) ʢtœtsɘʻ ʟtœtsfŋʝsʘʥʘ ƶ ʧtsteʻɘʥʷʥʥ ʟ tsнʥtsнtsвtsɘʠʥʒʠ вƶɢʘʔɥʷʥʒʠ ʥʘ 25,0% (*p<0,001*), ʘ lsʝʥʠɥtsʢ ï ʥʘ23,79% (*p<0,001*).

ɹ ʻн 30 нts 60 нtsвʠ ʞʠlslsʷ ʘʢlsʠɘʥfŋʝsᴵ ɟ ʂ ʢtœtsɘʻ вƶɢʘʔɥʻɘ ʟtœtsfŋʝsʘʥʘ ʥʘ 14,03% (*p<0,001*), ʘlsʝʥʠɥtsʢ ī ʥʘ13,17% (*p<0,001*).

ɼ ʠʥʘʥʒʻʢʘ ɘʝʥʠɥʠʥ ʘʢlsʠɘʥtsfŋʝsʻ ɥᴵ tsɢts ʬʝteʥʒʥlsʘ ʢtœtsɘʻ lsʝʥʷls ʧtsʥfŋʢtsʾ ʥʒʘʷfŋʥtsʾ ʧtstœtsнʠ ƶ ʥfŋʝsƶʧʥʠʔ ɘʻʢtsɘʠʔ ʧʝteʻtsн ʟвʝteʻɢʘʥʘ lsʝʥнʝʥɪʻᴮ нts ʟtœtsfŋʝsʘʥʥʷ. ɩ ʘ180 нtsвƶ ʞʠlslsʷ ʘʢlsʠɘʥfŋʝsᴵ ʧʻteƶɘʘlsʢʘtœвtsʢfŋʠʥʘʟʠ ʢtœtsɘʻ lsʝʥʷls вƶʥʘ ɘʠʰ tsᴮ ʥʘ 1,6ï 1,7 ʥʢɢ/ʥʒʥʖɘ, ʥʞ ƶ ʧtsʧʝteʝнʥʔ ɘʻʢtsɘʠʔ ʧʝteʻtsн ʻ fŋʝsʘʥtsɘʠʥʘ 34,1Ñ1,14 ʥʢɢ/ʥʒʥʖɘ ƶ вƶɢʘʔɥʻɘ ʻ 33,5Ñ1,16 ʥʢɢ/ʥʒʥʖɘ ī ƶ lsʝʥʠɥtsʢ. ʈ ʻʟʥʠɥʷ ʘʢlsʠɘʥtsfŋʝsʻ ɟ ʂ ʢtœtsɘʻ 180-нtsвtsɘʠʖ lsʝʥʷls ʧtsteʻɘʥʷʥts ʟ ʧʝteʰ tsᴮ нtsвtsᴮ ʾʖ ʞʠlslsʷ вƶʥʘʟʥʘɥʥts вʻʥʰ tsᴮ, ʥʞ нts 60 нtsвʠ ʞʠlslsʷ lsʘƶ ɘʻнfŋʝslsʢtsɘtsʥʒƶ ɘʻнʥtsʰ ʝʥʥ fŋʝsʘʥtsɘʠʥʘ 49,56% (*p<0,001*) ʻ 47,57% (*p<0,001*), ɘʻнʧtsɘʻнʥts ƶ вƶɢʘʔɥʻɘ ʻ lsʝʥʠɥtsʢ.

ʂ tsʝʬʻɥʻʻʥls ɘʻнʥtsʰ ʝʥʥʷ ʧʻteƶɘʘlsнʝɢʻнtœtsɢʝʥʘʟʠ нts ʧʻteƶɘʘlsʢʘtœвtsʢfŋʠʥʘʟʠ ʖʘteʘʢlsʝteʠʟƶʻ teʝɢƶʥʷlststeʥƶ tœtsʥ ɥʠʖ нɘtsʖ ʬʝteʥʒʥlsʻɘ ƶ ʧʝteʝtœtsʟʧtsнʻʥ ʥʝlsʘвtsʥɥʥʠʖ ʧtslstsʢʻɘ ʥʒʞ ɢʥʢtsʥʟtsʥʒʻ ɢʥ ʢtsʥʝtsɢʝʥʝʟtsʥʒ

ɕ ʢ ʧtsʢʘʟʘʥʠ teʝʟƶʥ lsʘlsʠ ʥʘ ʠʖ нtsfŋʥнʞʝʥ, ƶ ʢtœtsɘʻ lsʝʥʷls tsнʥtsнtsвtsɘtsɢts ɘʻʢƶ fŋʧʻɘɘʻнʥtsʰ ʝʥʥʷ ɟ ɼ ɹ:ɟ ʂ fŋʝsʘʥtsɘʠʥts 0,298Ñ0,009 ƶ вƶɢʘʔɥʻɘ ʻ 0,300Ñ0,009 ƶ lsʝʥʠɥtsʢ ʻ ʧtsfŋʝsƶʧtsɘts ʟʥʠʞƶɘʘʥtsfŋ нts ʰ ʝfŋʝsʠʥʒfŋʷɥʥtsɢts ɘʻʢƶ. ʋ ʢtœtsɘʻ 30-нtsвtsɘʠʖ вƶɢʘʔɥʻɘ ɥʝ ʟʥʝʥ ʝʥʥʷ fŋʝsʘʥtsɘʠʥts 25,50% (*p<0,001*), ʘƶ lsʝʥʠɥtsʢ ī 24,0% (*p<0,001*), ʧtsteʻɘʥʷʥʥts ʟ ʧʝteʰ tsᴮ нtsвtsᴮ ʞʠlslsʷ.

ɩ ʥʒʝʥ ʝʥʥʷ fŋʧʻɘɘʻнʥtsʰ ʝʥʥʷ ɟ ɼ ɹ:ɟ ʂ ʟ 30- нts 60-нtsвtsɘtsɢts ɘʻʢƶ ɘ ʢtœtsɘʻ вƶɢʘʔɥʻɘ ʻ lsʝʥʠɥtsʢ fŋʢʥʘнʘʥts 18,46% (*p<0,001*) lsʘ15,79% (*p<0,001*); ʘʟ 60 нts 180 нʝʥʥtsɢts ɘʻʢƶ ï 7,73% lsʘ7,81%. ɟ tœtslsʝ ɥʝʔ ʧtsʢʘʟʥʠʢ ƶ ʢtœtsɘʻ lsʝʥʷls 180-нtsвtsɘtsɢts ɘʻʢƶ вƶɘ ʥʠʞ ɥʠʥʒ ʥʞ ƶ ʧʝteʰ ƶ нtsвƶ ʞʠlslsʷ ʥʘ43,96%

(*p<0,001*) [illegible] 41,0% (*p<0,001*) [illegible].

[illegible] 60 [illegible] 180 [illegible] 60- [illegible] 180- [illegible] 5,99-6,08% (*p<0,001*).

Гормональний профіль крові телят волинської м’ясної породи у критичні періоди раннього онтогенезу. [illegible] 180 [illegible] (1.11) [illegible].

[illegible] 0,29 [illegible] 0,27 [illegible] 30- [illegible] 12,0 [illegible].

[illegible] 60- [illegible] 180 [illegible] 30- [illegible] 60- [illegible] 60- [illegible] 180- [illegible] 11,6 [illegible] 11,9% [illegible] 14,5 [illegible] 10,5% – [illegible] (*p<0,01*).

[illegible] 6- [illegible] 180 [illegible] 30- [illegible] 24,9% , [illegible] 26,5% [illegible] *p<0,01*.

[illegible] 180- [illegible]

[illegible].

[illegible] 30-[illegible] 1,84 [illegible], [illegible] 2,21 [illegible] $p<0,01$

[illegible] 1.11

[illegible] (MÑm, n=3)

[illegible]	[illegible]	[illegible]		$p <$
		[illegible]	[illegible]	
1	2	3	4	5
[illegible]	1	0,29Ñ0,03	0,27Ñ0,03	
	30	3,54Ñ0,06	3,24Ñ0,07	$p<0,01$
		$p<0,001$;	$p<0,001$	
	60	3,95Ñ0,08	3,71Ñ0,07	$p<0,05$
		$p_{30}<0,001;p_1<0,001$	$p_{30}<0,001;p_1<0,001$	
	180	4,42Ñ0,12	4,10Ñ0,08	$p<0,05$
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,01$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	
[illegible]	1	7,24Ñ0,31	5,81Ñ0,25	$p<0,01$
	30	13,32Ñ0,15	12,84Ñ0,13	$p<0,05$
		$p<0,001$	$p<0,001$	
	60	13,88Ñ0,18	13,23Ñ0,15	$p<0,05$
		$p_{30}<0,05;p_1<0,001$	$p_1<0,001$	
	180	14,22Ñ0,21	13,96Ñ0,19	
		$p_1<0,001;p_{30}<0,01$ $p_{60}<0,05$	$p_1<0,001;p_{30}<0,01$	
[illegible]	1	22,6Ñ5,2	19,4Ñ3,4	$p<0,05$
	30	47,4Ñ1,14	41,2Ñ1,08	$p<0,001$
		$p<0,001$;	$p<0,001$	
	60	73,1Ñ1,28	68,8Ñ1,18	$p<0,05$
		$p_{30}<0,001;p_1<0,001$	$p_{30}<0,001;p_1<0,001$	
	180	94,1Ñ2,44	82,4Ñ2,11	$p<0,01$
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	

ţſťďsнtsэӽ ʝ ďźďź ʷ lsΘвďźſ џ˘ 1.11.

1	2	3	4	5
	1	106,8Ñ1,32	101,1Ñ1,22	$p<0,01$
	30	279,4Ñ4,11	263,1Ñ3,94	$p<0,05$
		$p<0,001$;	$p<0,001$;	
uďźfiţźďźď, ďǯďǯsďź /ďz	60	351,1Ñ4,82	334,1Ñ4,52	$p<0,05$
		$p_{30}<0,001;p_1<0,001$		
	180	374,1Ñ5,14	358,7Ñ4,71	$p<0,05$
		$p_1<0,001;p_{30}<0,001$	$p_1<0,001;p_{30}<0,001$	
	1	44,2Ñ1,3	40,1Ñ1,1	$p<0,05$
	30	85,1Ñ1,9	79,4Ñ1,6	$p<0,01$
		$p<0,001$	$p<0,001$	
ʇ ďź ʕΘǤtsďź, ďźďǯsďź /ďz	60	88,2Ñ2,0	80,9Ñ1,7	$p<0,05$
			$p<0,001$	
	180	61,4Ñ0,9	57,2Ñ0,9	$p<0,01$
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,01$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,01$	
	1	132,4Ñ0,9	128,4Ñ0,8	$p<0,01$
	30	33,4Ñ0,6	32,9Ñ0,5	
		$p<0,001$	$p<0,001$	
ʂ tsťďsſʟtsďź, ďźďǯsďź /ďz	60	27,2Ñ0,5	25,1Ñ0,4	$p<0,01$
		$p_{30}<0,001;p_1<0,001$	$p_{30}<0,001;p_1<0,001$	
	180	18,9Ñ0,4	17,6Ñ0,4	$p<0,01$
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	

ʋ 60- lsΘ 180- нtsвtsэtsďǯź э˘џ˘ ʕtsďźʝ ďźsťΘџ˘ʷ lsťſʔ tsнlsſťsďźďź ʕťsэ˘ lsʝ ďźʷls вźďΘ ţſťſвďźſʟďs lsΘʕts ӽ ʷʕ ˘ ź 30-нtsвtsэtsďǯź э˘џ˘. ɸ ďΘďźʟź џſ нΘďź ʰ tsнts ťɛэďźʷ ź ʕťsэ˘ lsʝ ďźʷls lsſťsʕfiſďź, lsts ďʝ tsв˘нďs э˘нʟďΘџſlsſ, ʰ ts ʔtsǤts ʕtsďźʝ ďźsťΘџ˘ʷ ʟ tsнďs- нts 30-нtsвtsэtsǤts э˘ʕź ʟв˘ďź ʰ ź˘lsˡ fiʷ: ź вźǤΘʔ џ˘э ź 2,09 ťΘʟΘ, Θ ź lsʝ ďźſџtsʕ ź 2,12 ťΘʟΘ ţſťſ $p<0,01$ (ΘďźΘďźsǤ˘џďs, ʷʕ ˘ ʕtsďźʝ ďźsťΘџ˘ʷ lsťſʔ tsнlsſťsďźďź).

ʃ нďΘʕ, ďΘ э˘нďǯďź э˘н э˘ʕtsэtsˀ нſďΘďǯʕſ lsťſʔ tsнlsſťsďźďź, ďΘ 60 нtsвź ӽ ſlslsʷ lsʝ ďźʷls ʕ˘ďź ʕ˘fiʝsˡ lsſťsʕfiſďź ʕťsэ˘ вźďΘэſʰ tsʶ ţſtsťɛэďźʷďs ʟ 30 нtsвtsʶ ї ź вźǤΘʔ џ˘э ďΘ54,3% ($p<0,01$), Θź lsʝ ďźſџtsʕ ďΘ67,0% ($p<0,01$).

ɿ 60- нts 180-нtsвtsэtsǤts э˘ʕź эďǯfiʝs џˡ tsǤts ǤtsťďǯsďǯĹ ź ʕťsэ˘ вźǤΘʔ џ˘э ʟťsfiʝsΘэ ďΘ 28, 7% ($p<0,01$), Θ ź lsʝ ďźſџtsʕ ďΘ 19,8% ($p<0,01$) lsΘ fiʝsΘďsэſэ 94,1Ñ2,44 lsΘ82,4Ñ2,11 ďǯďǯsďź /ďzэ˘нţſtsэ˘нďs. ɿ ďΘџʝ ďźďź ʷ џˡ tsǤts ţſtsʕΘʟďźſʕΘź ʕťsэ˘

lsj dž'ls 180-HtsBtsэtsGts э'Ꞩ ʈʝ tɕj эʘɰ ʘɖɕ ʔtsGts Lɖʘɰj ɖɖž ƶ Ꞩtɕtsэ' Bƶ GʘʔɥЅэ ' lsj dɕɰts Ꞩ 30-HtsBtsэtsGts э'Ꞩƶ э 2,0 tɕʘLɕ

ȿ tsdʓj ɖstɕʘɥ'w lsɕtɕtsꞨfʝɕdž ƶ Ꞩtɕtsэ' lsj dɕɰtsꞨ tsHdʓsHtsBtsэtsGts э'Ꞩƶ Bƶdʘ dɕɰ ɥtsᴮ dʘ 14,2% (*p<0,05)*, dž ƶ BƶGʘʔɥ'э; ƶ 30-HtsBtsэtsdʒ э'ɥ' ï dʘ 13,03% (*p<0,01), y* 60-HtsBtsэtsdʒ э'ɥ' ï dʘ 5,9% (*p<0,05)* lsʘƶ 180-HtsBtsэtsdʒ э'ɥ' ī dʘ 12,43% *(p<0,01).*

ɹ dʒ'fʝs 'dɕʝždždž ƶ Ꞩtɕtsэ' lsj dž'ls эtsdɕdɕʝ Ꞩts' dʒwfʝɕts' ʈtstɕtsHɕ lsʘꞨtsɰ ꞊ʘtɕʘꞨlsj tɕɕLƶэʘfʝ fʝsʘlsj эɕdʒɕ э'Hdʒ'dɕtsfʝswdʒɕ ī ƶ lsj dɕɰtsꞨ Ꞩtsdʓj ɖstɕʘɥ'w 'dɕʝždždž Ꞩtɕtsэ' Bƶdʘ э'tɕtsG'Hdɕts dɕɰ ɥtsᴮ , dž ƶ BƶGʘʔɥ'э: ƶ tsHdʓsHtsBtsэtsdʒ э'ɥ' ï dʘ 5,34% *(p<0,01),* ƶ 30-HtsBtsэtsdʒ э'ɥ' ï dʘ 5,83% (*p<0,05),* ƶ 60-HtsBtsэtsdʒ э'ɥ' ï dʘ 4,84% *(p<0,05)* lsʘƶ 180-HtsBtsэtsdʒ э'ɥ' dʘ 4,12% (*p<0,05).*

ɩ ʘdʒɕ эfʝsʘdɕsэdj dts, ʰ ts Ꞩtsdʓj ɖstɕʘɥ'w 'dɕʝždždž ƶ Ꞩtɕtsэ' lsj dž'ls dʘ ʈʝ tɕʰ ƶ HtsBƶ ɰɕlsw Bƶdʘ dɕɰ ɥtsᴮ , dž ƶ dʘfʝsƶʈdž э'Ꞩtsэ' ʈʝ tɕ'tsHɕ. ʆ HdʘꞨ, ƶ 30-HtsBtsэtsdʒ э'ɥ' ʔtsGts эdʒ'fʝs ƶ Ꞩtɕtsэ' BƶGʘʔɥ'э Ltɕtsfʝsʘ ƶ 2,62 tɕʘLɕ *(p<0,01),* ʘƶ lsj dɕɰtsꞨ ï ƶ 2,60 tɕʘLʘ(*p<0,01),* ʈtstɕ'эdž dts L tsHdʓsHtsBtsэɕdʒэ'Ꞩtsdʒ

ʋ dʘfʝsƶʈdž HtsfʝdžHɰ ƶэʘdž э'Ꞩtsэ' ʈʝ tɕ'tsHɕ Ꞩtsdʓj ɖstɕʘɥ'w Gtstɕdʒsdž ƶ Ꞩtɕtsэ' BƶGʘʔɥ'э ' lsj dɕɰtsꞨ ʈtsfʝsƶʈtsэts LB'džʰ ƶэʘdʘfʝ ' dʘ 180 HtsBƶ ɰɕlsw fʝsʘdɕsэɕdʘ 374,1Ñ5,14 dʒdʒsdž/dž ƶ BƶGʘʔɥ'э ' 358,7Ñ4,71 dʒdʒsdž/dž ƶ lsj dɕɰtsꞨ, ʰ ts ʈʝ tɕj эʘɰ ʘdts ʔtsGts Ldʘɰj dɖž dʘ 30 HtsBƶ ɰɕlsw, э'Hʈtsэ'Hdts, ƶ 1,34 1 1,36 tɕʘLɕ.

ɹ dž Ꞩʘtsdž HtɕƶGɕʔ эʘɰ dɕэɕʔ Gtstɕdʒsdž ʈ'Hʰ dždžꞨtsэts' LʘdtsLɕ, ʰ ts ts꞊ʘtɕʘꞨlsj tɕɕLtsэʘdɕʔ wꞨ G'ʈʝ tɕdžꞨj dʒ'ɥdɕʔ, GdžꞨtsGj dtsdžlsɕɥdɕʔ wʘꞨlstsɕ, tsfꞨ'džꞨɕ э'dž ʈ'HэɕʰƶЅ эdʒ'fʝs Gdž ꞨtsLɕ ƶ Ꞩtɕtsэ' ʰdž꞊tsdʒ fʝsɕdʒždžɥ'' GdžꞨtsGj dtsdžLƶ ƶ ʈʝ ɥ'dʓ', H'ᴮ ɥɕ ʈtɕɕ ɥ tsdʒ, wꞨ ʘdsʘGtsdžfʝs 'dɕʝždždž.

ɹ fʝsʘdɕsэdj dts, э ƶdʒsэʘ꞊ HtsfʝdžHƶ ʔtsGts Ꞩtsdʓj ɖstɕʘɥ'w э Ꞩtɕtsэ' lsj dɕɰtsꞨ Bƶdʘ dj džʰ tsᴮ , dž ƶ BƶGʘʔɥ'э. ʋ tsHdʓsHtsBtsэtsdʒ э'ɥ' tɕ'эj dž Gtstɕdʒsdž ƶ Ꞩtɕtsэ' lsj dž'ls tsBts꞊ fʝsʘlsjʔ эtsdɕdɕʝ Ꞩts' dʒwfʝɕts' ʈtstɕtsHɕ Bƶэ dʘʔdɕɰ ɥɕdʒ ' fꞨdʘHʘ 44,2Ñ1,3 ' 40,1Ñ1,1 dɕdʒsdž/dž ʋ 30-HtsBtsэɕ꞊ lsj dž'ls Ꞩtsdʓj ɖstɕʘɥ'w Gdž Ꞩʘtsdž ƶ Ꞩtɕtsэ' BƶGʘʔɥ'э ' lsj dɕɰtsꞨ Ltɕtsfʝsʘdʘƶ 1,92 ' 1,98 tɕʘLɕ (*p<0,001),* ʘdʘ 60 HtsBƶ ɰɕlsw ï ƶ 1,99 ' 2,02 tɕʘLɕ э'Hʈtsэ'Hdts, ƶ ʈtstɕ'эdždž L tsHdʓsHtsBtsэɕdʒэ'Ꞩtsdʒ

ʋ dʘfʝsƶʈdɕʔ ʈʝ tɕ'tsH HtsfʝdžHɰj dž, Hts 180-HtsBtsэtsGts э'Ꞩƶ, tɕ'эj dž ɢdž ʕʘɢtsdẓ ẕ ʕtatsǝʻ lsʝ dẑls ʟdẓʃʯ ẕǝʘfŋ, ʧtstɕǝdẑdẓs ʟ 30- ʻ 60-ǝʻʕtsǝʃdʒ ʧʝ tɕtsʜtsdʒ ʧtatslsʝ ʟʘdẓʃʰ ʘfŋ ǝʃʰ ʃdʒ ʧtstɕǝdẑdẓs ʟ tsʜdẓsʜtsʙtsǝʃdʒ ǝʻʕtsǝʃdʒ ʧʝ tɕtsʜtsdʒ dẓʘ 38,91% (*p<0,01*) *y* ʙẕɢʘʔʮʻǝ ʻ dẓʘ42,64 % (*p<0,01*) ï ẕ lsʝ dẓʃʯtsʕ.

ɸ dẓʘdẑʟẕ ʯʃ ʕtsdẓʝ dẓstɕʘʮ ʕtstdsʃʟtsdẓ ẕ ʕtatsǝʻ lsʝ dẑls ǝtsdẓʃdẓŋ ʕtsʼ dʒʘfŋdẓsʼ ʧtstatsʜʃ dʝ tsʙʻʜdẓs ǝʻʜdʒlsʃlsʃ, ʰ ts dẓʘ ǝʻʜdʒdẓ ǝʻʜ ǝʃʰ ʝ dẓʘʝʜʝ dẓʃ ɢtstadʒsdẑǝ, ʔtsɢts tɕǝʝ dẑ ẕ ʕtatsǝʻ tsʜdẓsʜtsʙtsǝʃ lsʝ dẑls ʙẕǝ dẓʘʔǝʃʰ ʃdʒ ʻ ǝ ʜʝ ʕʻdẑ ʕʘ tɕʘʟʻǝ ʧʝ tɕʝ ǝʃʰ ẕǝʘ ʔtsɢts ʕtsdẓʝ dẓstɕʘʮ ẕ 30-, 60- ʻ 180-ʜtsʙtsǝtsdẓ ǝʻʮʻ.

ɩ tsʕtɕʝ dʒʘ ʕtsdẓʝ dẓstɕʘʮ ʕtstdsʃʟtsdẓ ǝ ʕtatsǝʻ ʙẕɢʘʔʮʻǝ tsʜdẓsʜtsʙtsǝtsɢts ǝʻʕẕ ʙẕdẓʘǝʃʰ ts ẕ 3,96 tɕʘʟʃ (*p<0,01*), ʧtstɕǝdẑdẓs ʻʟ 30-ʜtsʙtsǝʃdʒ ǝʻʕtsdʒ ẕ 4,86 tɕʘʟʃ (*p<0,001*) – ẕ 60-ʜtsʙtsǝtsdẓ ǝʻʮʻ; ẕ 7,0 tɕʘʟʻǝ (*p<0,001*) – ẕ 180-ʜtsʙtsǝtsdẓ ǝʻʮʻ. ʋ lsʝ dẓʃʯtsʕ ǝdʒfŋs ɢtstadʒsdẓ ẕ ʕtatsǝʻ ʟtatsfŋʘ ʟ ǝʻʕtsdʒ ǝʻʜʧtsǝʻʜdẓs ẕ 3,9; 5,1 lsʘ7,3 tɕʘʟʃ (*p<0,001*). ʅ ʘ180 ʜtsʙẕ ʯʃlsls ǝdʒfŋs ʕtstdsʃʟtsdẓ ẕ ʕtatsǝʻ ʙẕɢʘʔʮʻǝ fŋʘdẓsǝʃǝ 18,9Ñ0,4 dẓdʒsdẑ /dẓ ʘẕ lsʝ dẓʃʯtsʕ ï 17,6Ñ0,4 dẓdʒsdẑ /dẓ ʧtatslsʃ 132,4Ñ0,9 dẓdʒsdẑ /dẓ ʻ 128,4Ñ0,8 dẓdʒsdẑ /dẓǝ tsʜdẓsʜtsʙtsǝtsdẓ ǝʻʮʻ.

ʆ lsʯʝ, ʜtsfŋdẑʜʯʝ dẓdẑ ɢtstadʒsdẓʘdẑ dẓsɢts fŋʘlsẕfŋ tstɕɢʘdẑʟdʒ lsʝ dẑls ǝtsdẓʃdẓŋ ʕtsʼ lsʘ ʧtsdẑfŋ ʕtsʼ dʒʘfŋdẓʃ ʧtstɕʜ ʧtsʕʘʟʘdẓs, ʰ ts tɕǝʝ dẑ tsʕtɕʝ dʒʃ ɢtstadʒsdẑǝ ẕ ʕtatsǝʻ ʙẕǝ dʝ tsʜdẓʕtsǝʃdʒ ẕ tɕʟdẑ ǝʻʕtsǝʻ ʧʝ tɕtsʜʃ. ʅ ʘʧʝ tɕʰ ẕ ʜtsʙẕ ʯʃlsls ǝdʒfŋs lsʃtɕʝ tslstatsʧʻdẓ ẕ ʕtatsǝʻ lsʝ dẑls ʟdẓʘtsʜʃǝfŋ dẓʘ dẓʃʟ ʕtsdʒ tɕǝdẑ ï ǝ dʝ ʯʘ ǝʝ dẓʃʯʃdẑ 0,29ï 0,27 dẓdʒsdẑ /dẓ ʜts 30-ʼ ʜtsʙʃ ʯʃlsls ǝʻdẑʟtatsfŋʘ ẕ 12,0 tɕʘʟʻǝ ʻ lsʘʕʘ lsʝ dẓʜʝ dẓʮ ǝʃǝʃdẓʘfŋ dẓʘ 60 ʜtsʙẕ ʯʃlsls, ʘ dẓʘ 180 ʜtsʙẕ ʕtsdẓʝ dẓstɕʘʮ lsʃtɕʝ tslstatsʧʻdẓ ʙẕdẓʘ ʙʻdẑ ʰ ts ʧtatslsʃ 30 ʜtsʙʃ ʯʃlsls ẕ ʙẕɢʘʔʮʻǝ dẓʘ24,9%, ʘǝ lsʝ dẓʃʯtsʕ ï dẓʘ26,5% ʧtɕʃ p<0,01. ɸ dẓʘdẓsɢʻʯdẓ ǝʻʕtsǝẕ ʜʃdẓʘdʒʕẕ ǝ ʕtatsǝʻ lsʝ dẑls ǝfŋʘdẓsǝdʝ dẓs ʻ ʜdẑ ɢtstadʒsdẑǝ ʰ ʃlstsʧtsʜʻʙdẓsʼ ʟʘdẓsʟʃ ï lstɕʃʔtsʜlsʃtatsdẑdẓ ʻ lsʃtatsʕfŋʃdẓ. ɪ tsdẓʘ ʘtɕʘʕlsʝ tɕʃʟẕǝʘdẓʘfŋ dẓʃʟ ʕʃdʒ tɕǝdʝ dʒ ɢtstadʒsdẑǝ ǝ tsʜdẓsʜtsʙtsǝtsdẓ ǝʻʮʻ lsʘ ʼ ʧʻʜǝʃʰ ʝ dẓdẑdʒ ʜts 180-ʜtsʙtsǝtsɢts ǝʻʕẕ, ʜʝ ʰ ts dẓʃʯʯẕ ʼ ʕtsdẓʝ dẓstɕʘʮ ǝ ʕtatsǝʻ lsʝ dẓʃʯtsʕ, ʧtstɕǝdẑdẓs ʟ ʙẕɢʘʔʮdʒʃ, ʰ ts ʧʻʜlsǝʝ tɕʜʯẕʻ ẕdẓʕʮʻtsdẓʘdẑ dẓʃʔ ǝʟʘ dʒsʟǝʘʟtsʕ ɢtstadʒsdẑǝ ʘʜʝ dẓsɢʻʧts ʻʟẕ ʻ ʰ ʃlstsʧtsʜʻʙdẓsʼ ʟʘdẓsʟʃ. ʆ lsʯʝ, tslstɕʃdʒʘdẑ tɕʝ ʟẕdẑ lsʘlsʃ ǝʕʘʟẕ ls dẓʘ ʟʘdʝ ʯdẑfŋs ǝdʒfŋsẕ tsʕtɕʝ dʒʃ ɢtstadʒsdẑǝ ẕ ʕtatsǝʻ lsʝ dẑls ǝtsdẓʃdẓŋ ʕtsʼ dʒfŋdẓsʼ ʧtstɕʜʃ ǝʻʜ ʕtɕʃlsʃʯdẓʃ ʧʝ tɕtsʜʻǝ tatsfŋsẕ ʻ tatsʟǝʃlsʕẕ lsǝʘtɕʃdẑ, ʘ lsʘʕtsʯ dʝ ǝʃǝdʝ dẓs ʯʻlsʕʃ

[illegible].

Гормональний профіль крові телят поліської м'ясної породи у критичні періоди раннього онтогенезу. [illegible] 1.12. [illegible].

[illegible] ([illegible]), [illegible] 0,27Ñ0,03 [illegible] 0,26Ñ0,03 [illegible].

[illegible] 30 [illegible] 12,66 [illegible] ($p<0,001$), [illegible] 11,88 [illegible] ($p<0,001$), [illegible] 9,65% ($p<0,01$) [illegible].

[illegible] 60-[illegible] 13,74% ($p<0,001$), [illegible] 17,47% ($p<0,001$). [illegible] 180 [illegible].

[illegible] 180 [illegible] 4,21Ñ0,06 [illegible] 3,97Ñ0,06 [illegible] 8,22% ($p<0,001$) [illegible] 9,37% ($p<0,01$) [illegible].

[illegible] 180-[illegible] 15,0 [illegible]

[illegible], [illegible] ., 2000).

[illegible] 180-[illegible].

[illegible] 1.12

[illegible] (MÑm, n=10)

[illegible]	[illegible]	[illegible]		*p* <
		[illegible]	[illegible]	
1	2	3	4	5
[illegible]	1	0,27Ñ0,03	0,26Ñ0,03	
	30	3,42Ñ0,08	3,09Ñ0,07	$p<0,01$
		$p<0,001$	$p<0,001$	
	60	3,89Ñ0,07	3,63Ñ0,05	$p<0,01$
		$p_{30}<0,001;p_1<0,001$	$p_{30}<0,001;p_1<0,001$	
	180	4,21Ñ0,06	3,97Ñ0,06	
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,01$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	
[illegible]	1	6,32Ñ0,28	5,19Ñ0,21	$p_к<0,01$
	30	12,28Ñ0,20	11,93Ñ0,21	
		$p<0,001$	$p<0,001$	
	60	12,95Ñ0,22	12,61Ñ0,18	
		$p_{30}<0,05;p_1<0,001$	$p_1<0,001$	
	180	13,75Ñ0,25	12,89Ñ0,21	
		$p_1<0,001;p_{30}<0,01$ $p_{60}<0,05$	$p_1<0,001;$ $p_{30}<0,01$	
[illegible]	1	11,4Ñ5,6	9,8Ñ3,2	$p<0,05$
	30	45,2Ñ0,89	39,4Ñ0,63	$p<0,001$
		$p<0,001;$	$p<0,001$	
	60	70,9Ñ1,12	68,2Ñ1,09	
		$p_{30}<0,001;p_1<0,001$	$p_{30}<0,001;p_1<0,001$	
	180	87,2Ñ2,91	78,52Ñ2,12	$p<0,05$
		$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	$p_1<0,001;p_{30}<0,001$ $p_{60}<0,001$	

[illegible] 1.12

1	2	3	4	5
[illegible]	1	102,6±1,19	98,1±1,12	
	30	264,7±3,96	251,9±3,58	$p<0,05$
		$p<0,001$;	$p<0,001$;	
	60	344,6±5,98	332,8±5,17	
		$p_{30}<0,001$ $p_{1}<0,001$		
	1 80	359,1±6,36	341,2±5,74	$p<0,05$
		$p_{1}<0,001$; $p_{30}<0,001$	$p_{1}<0,001$; $p_{30}<0,001$	
[illegible]	1	42,4±1,2	39,1±1,1	
	30	83,1±1,8	79,8±1,9	
		$p<0,001$	$p<0,001$	
	60	84,9±1,9	79,1±2,0	$p<0,05$
			$p<0,001$	
	180	58,1±,9	53,8±0,9	$p<0,01$
		$p_{1}<0,001$; $p_{30}<0,001$ $p_{60}<0,01$	$p_{1}<0,001$; $p_{30}<0,001$ $p_{60}<0,01$	
[illegible]	1	129,6±0,8	127,8±0,7	
	30	31,8±0,5	32,4±0,6	
		$p<0,001$	$p<0,001$	
	60	25,8±0,5	24,3±0,4	$p<0,05$
		$p_{30}<0,001$ $p_{1}<0,001$	$p_{30}<0,001$ $p_{1}<0,001$	
	180	17,9±0,4	17,1±0,3	
		$p_{1}<0,001$; $p_{30}<0,001$ $p_{60}<0,001$	$p_{1}<0,001$; $p_{30}<0,001$ $p_{60}<0,001$	

[illegible], [illegible] 6,32±0,28 [illegible] 5,19±0,21 [illegible]. [illegible] 30 [illegible] 1,94, [illegible] 2,29 [illegible] ($p<0,001$).

[illegible] 60 [illegible] 180 [illegible]. [illegible], [illegible] 60-[illegible] 5-6%, [illegible] 180-[illegible] 8-12%, [illegible] 30-[illegible]

ǂ tstс‘эdž ʸ պɖ tslstedɖdʒƟdž нƟdž эdʒ‘fıʝslz ɢtstedʒsdʑz lsteɖʔtsнlsɖtetsdždʑz э Ꞩtetsэ‘ lsʝ dž lsʷ tsнdʑs- ‘ 180-нtsвtsэtsɢts э‘Ꞩlz эɖʷэɖdʑsfıʝ, ʱ ts э tsdʑstsɢʝ dʝ ʟ‘ э‘dʑʟtetsfıʝsƟɒ lz 2,17 teƟʟɖ ($p<0,001$) ‘ 2,48 teƟʟɖ ($p<0,001$) э‘нʄtsэ‘нdʑs lz вlzɢƟʔ պ‘э ‘ lsʝ dʑɖպtsꞨ. ʆ ɖʷэɖdʑsfıʝ lsƟꞨtsɣ, ʱ ts dʒ‘ɣ fıʝsƟlsʝ э‘ te‘ʟdʑɖպ‘ Ꞩtsdʑʝʝ dʑsteƟպ‘’ պᴵ tsɢts ɢtstedʒsdʑz lz Ꞩtetsэ‘ вlzdʑɖ dʒ‘dždʒƟdž dʑɖdʒɖ. ʅ Ɵdʒɖ эfıʝsƟdʑsэdʝ dʑs, ʱ ts ƟвfıʝsdžʸlsdžʟdʑƟպʝ dʑdžʸ эʝ dʑɖպɖdʑɖ Ꞩtsdʑʝʝ dʑsteƟպ‘’ lsɖtetsꞨfıɖdʑz ʄtstc‘эdžʸdʑs ‘ʟ lsteɖʔtsнlsɖtetsdždʑsdʒ вlzdʑɖ ʟdʑƟպdʑs эɖʱ ‘, ⁼tsպ ‘ ʟ нƟdʑɖ⁼ džlsʝ teƟslzteɖ э‘нtsdʒs, ʱ ts ƟꞨlsɖэdžfıʝsᴵ tsfıʝsƟdʑdž tsɢts э tsteɢƟdžʟdʒ‘ lsэƟteɖdžlz 10 teƟʟ‘э ʄʝ teʝ эɖʱ lz‘ ƟꞨlsɖэdžfıʝsᴵ lsɖtetsꞨfıɖdʑz.

ɕ Ꞩ эɖʷэɖdʑsfıʝ, lz tsнdʑsнtsвtsэtsdʒz э‘պ‘ Ꞩtsdʑʝʝ dʑsteƟպ‘ʷ lsɖtetsꞨfıɖdʑz lz Ꞩtetsэ‘ вlzɢƟʔ պ‘э fıʝsƟdʑsэɖdʑƟ 11,4Ñ5,6 dʒdʒsdž /dʑ, Ɵlz Ꞩtetsэ‘ lsʝ dʑɖպtsꞨ ı 9,8Ñ3,2 dʒdʒsdž /dʑ. ʅ э‘Ꞩtsdʒ fıʄtsfıʝsʝ te‘ɢƟ lsᴵ fıʸ ʟв‘dž ʰ ʝ dʑdžʸ Ꞩtsdʑʝʝ dʑsteƟպ‘’ lsɖtetsꞨfıɖdʑz ʄtstc‘эdžʸdʑs ʟ ʄtsʄʝ teʝ нdždʒ э‘Ꞩtsэɖdʒ ʄʝ te‘tsнtsdʒ lz вlzɢƟʔ պ‘э эdʒ‘fıʝs ɢtstedʒsdʑz э Ꞩtetsэ‘ вlzэ эɖʱ ɖdʒlz 3,96 teƟʟɖ ($p<0,001$), Ɵэ Ꞩtetsэ‘ lsʝ dʑɖպtsꞨ ı 4,02 teƟʟɖ ($p<0,001$).

ʆ ɖfıʝsꞨɖʔ эdʒ‘fıʝs պᴵ tsɢts ɢtstedʒsdʑz lz Ꞩtetsэ‘ lsʝ džʸls dʒɖ э‘нʟdʑƟպƟdʑɖ lz dʑƟfıʝslzʄdž э‘Ꞩtsэ‘ ʄʝ te‘tsнɖ. ʅ tsꞨteʝ dʒƟ э‘н 30 нts 60 нtsвɖ ɣ ɖlslsʷ Ꞩtsdʑʝʝ dʑsteƟպ‘ʷ lsɖtetsꞨfıɖdʑz lz Ꞩtetsэ‘ вlzɢƟʔ պ‘э ʟв‘dž ʰ lzэƟdʑƟfıʝ dʑƟ 56,9% ($p<0,001$), Ɵlz Ꞩtetsэ‘ lsʝ dʑɖպtsꞨ ı dʑƟ 73,1%($p<0,001$). ǂ tetslsʝ dʑƟʔ эɖʱ lz Ꞩtsdʑʝʝ dʑsteƟպ‘ʸ lsɖtetsꞨfıɖdʑz lz Ꞩtetsэ‘ lsʝ džʸls ʄtsdžfıʝ Ꞩts’ dʒôʷfıɖdʑs’ ʄtstetsнɖ эfıʝsƟdʑsэdʝ dʑs lz э‘պ‘ 180 н‘в. ʊ нƟdʑɖʔ ɣ ɖlsls‘эɖʔ ʄʝ te‘tsн эdʒ‘fıʝs պᴵ tsɢts ɢtstedʒsdʑz ʱ ɖlststʄtsн‘вdʑs’ ʟƟdʑsʟɖ lz Ꞩtetsэ‘ вlzɢƟʔ պ‘э ʄʝ teʝ эɖʱ lzэƟɒ ʔtsɢts ʟdʑƟպʝ dʑdžʸ dʑƟʄʝ teʰ lz нtsвlz ɣ ɖlslsʷ lz 7,7 teƟʟ‘э, Ɵlsʝ dʑɖպtsꞨ ı lz 8,0 teƟʟ‘э.

ȿ te‘dʒ պᴵ tsɢts dʑƟdʒɖ эfıʝsƟdʑsэdʝ dʑs, ʱ ts Ꞩtsdʑʝʝ dʑsteƟպ‘ʷ lsɖtetsꞨfıɖdʑz э Ꞩtetsэ‘ lsʝ dʑɖպtsꞨ эʄtetsнtsэɣ нtsfıɖdžнɣ lzэƟdʑɖ⁼ э‘Ꞩtsэɖ⁼ ʄʝ te‘tsн‘э вlzdʑƟ dʑɖɣ պtsʸ, džɣ lz вlzɢƟʔ պ‘э, ʱ ts tsfıʝsвdʑɖэts fıʄtsfıʝsʝ te‘ɢƟdʑsfıʝ lz 30 lsƟ 180 нtsвtsэtsdʒz э‘պ‘. ʅ tsꞨteʝ dʒƟ dʑƟ 30 нtsвlz ɣ ɖlslsʷ Ꞩtsdʑʝʝ dʑsteƟպ‘ʷ ɢtstedʒsdʑz lsɖtetsꞨfıɖdʑz э Ꞩtetsэ‘ lsʝ dʑɖպtsꞨ вlzdʑƟ dʑƟ 12,83% ($p<0,001$) dʝ dž Ɵ džɣ lz ’⁼ tetsэʝ fıɖdʑɖꞨ‘э ı вlzɢƟʔ պ‘э, ƟdʑƟ 180 нtsвlz ɣ ɖlslsʷ эtsdʑƟвlzdʑƟdʝ dž ƟdʑƟ 9,95%.

ʃ lsteɖdʒƟdž teʝ ʟlzdž lsƟlsɖ эꞨƟʟlzʸ lsᴵ dʑƟlsʝ, ʱ ts нɖdʑƟdʒ‘ꞨƟэdʒ‘fıʝslz ‘dʑfıʝdždʑz lz Ꞩtetsэ‘ lsʝ džʸls ʄtsdžfıʝ Ꞩts’ dʒôʷfıɖdʑs’ ʄtstetsнɖ вlzdʑƟ ƟdʑƟdʑsɢ‘պdʑsʸ нɖdʑƟdʒ‘պ‘ эdʒ‘fıʝslz э Ꞩtetsэ‘ lsɖteʝ ts’нdʑɖ⁼ ɢtstedʒsdžэ. ʊƟꞨ, lz tsнdʑsнtsвtsэɖ⁼ вlzɢƟʔ պ‘э эdʒ‘fıʝs ‘dʑfıʝdždʑz lz

Ҁtetsɘ‘ fŋsʘdztsɘҁʃɘ 102,6Ñ1,19 dʒdʒtsdz/dz, ʘ lz lsj dzҁʃɥtsҀ ї 98,1Ñ1,12 dʒdʒtsdz/dz, lz 30-нtsвtsɘtsdʒlz ɘ‘ɥ‘ ɘ‘dzLв‘dz ʰ lzɘʘɕfŋ ɘ 2,6 teʘLҁ (*p*<*0,001*), ʘ lz 60-нtsвtsɘtsdʒlz ɘ‘ɥ‘ ї ʰ ʝ lz 1,32 teʘLʘ (*p*<*0,001*) lsʘ fŋsʘdztsɘҁʃɘ lz нʘdzҁʔ ɘ‘Ҁtsɘҁʔ ʧʝte‘tsн 344,6Ñ5,98 dʒdʒtsdz/dz lz вlzGʘʔɥ‘ɘ lsʘ332,8Ñ5,17 dʒdʒtsdz/dz ї lz lsj dzҁʃɥtsҀ. ʊtsвlsts lz ɘ‘ɥ‘ 60 н‘в te‘ɘʝdz ‘dzfŋlzdzdzlz ɘ Ҁtetsɘ‘ lsj dzʸls dzʘвdzҁɣ ʘɕfŋ нts ʔtsGts ɘʝdzҁɥҁdzҁ, ʷҀʘ fŋʧtsfŋsj te‘Gʘdzʘfŋdzʘdzɘҁ 180 нtsвlz ɣҁlslsʷ. Ɨ нʘdztsdʒlz ɘҁʧʘнҀlz te‘Ldzҁɥʷ ɘdʒ‘fŋslz ‘dzfŋlzdzdzlz lz Ҁtetsɘ‘ вlzGʘʔɥ‘ɘ fŋsʘdztsɘҁdzʘ 4,2%, ʘ lz lsj dzҁʃɥtsҀ 2,5%. ɟ teҁ ɥɪ tsdʒlz Ҁtsdzɥʝdzlsteʘɥ‘ʷ ‘dzfŋlzdzdzlz lz Ҁtetsɘ‘ вlzGʘʔɥ‘ɘ dzʘ 30 ‘ 180 нtsвlz ɣҁlslsʷ вlzdzʘ ɘ‘нʧtsɘ‘нdzts ɘҁʰ tsᴯ dzʘ 4,8% ‘ 5,0% dʒdʒtsdz/dz (*p*<*0,05*), dzɣ lz lsj dzҁʃɥtsҀ.

ɸ dzʘdzLlzᴯ ɥҁ ɘʝdzҁɥҁdzҁ нҁdzʘdʒ‘Ҁҁ ɘ‘Ҁtsɘҁ̄ Ldʒ‘dz Ҁtsdzɥʝdzlsteʘɥ‘’ Gdz ҀʘGtsdzlz lz Ҁtetsɘ‘ lsj dzʸls ʧtsdzfŋҀts’ dʒʘʷfŋdzts’ ʧtstetsнҁ fŋdzн ɘ‘нdʒ‘lsҁlsҁ, ʰ ts ’̄ te‘ɘʝdz fŋlzlsls‘ɘts Ltetsfŋsʘɕ lz ʧtetsdʒ‘ɣҀlz ɘ‘н tsнdzts- нts 30-нtsвtsɘtsGts ɘ‘Ҁlz, Lʘdzҁʰ ʘʸ ɥҁfŋ dzʘɘҁfŋsҀtsdʒlz te‘ɘdz нts 60 нtsвҁ ɣҁlslsʷ.

ʊʘҀ, dzʘdʒҁ ɘfŋsʘdztsɘdzʝdzts, ʰ ts lz Ҁtetsɘ‘ tsнdztsнtsвtsɘҁ̄ вlzGʘʔɥ‘ɘ ɘdʒ‘fŋs Gdz ҀʘGtsdzlz fŋsʘdztsɘҁʃɘ 42,4Ñ1,2 dzdʒtsdz/dz, ʘ lz lsj dzҁʃɥtsҀ ї 39,1Ñ1,1 dzdʒtsdz/dz ʏʝteʝL 30 н‘в ɣҁlslsʷ ʔtsGts Ҁtsdzɥʝdzlsteʘɥ‘ʷ ɘ Ҁtetsɘ‘ Lв‘dz ʰ lzɘʘdzʘfŋ lz 1,96 teʘLҁ (*p*<*0,001*) ‘ 2,04 teʘLҁ (*p*<*0,001*) ɘ‘нʧtsɘ‘нdzts lz вlzGʘʔɥ‘ɘ ‘ lsj dzҁʃɥtsҀ. ʉdzн LʘlzɘʘɣҁLsҁ, ʰ ts dzʘ lsʘҀtsdʒlz te‘ɘdz ɘdʒ‘fŋs Gdz ҀʘGtsdzlz lz Ҁtetsɘ‘ lsj dzʸls fŋʧtsfŋsj te‘Gʘɕfŋʷ ‘ lz 60-нtsвtsɘtsdʒlz ɘ‘ɥ‘.

ʋ dzʘfŋslzʧdzҁʔ ɘ‘Ҁtsɘҁʔ ʧʝte‘tsн (180 нtsвʘ ɣҁlslsʷ) Ҁtsdzɥʝdzlsteʘɥ‘ʷ Gdz ҀʘGtsdzlz lz Ҁtetsɘ‘ lsj dzʸls Ldzҁɣ lzɘʘdzʘfŋ, ʧtste‘ɘdzʸdzts L ʧtsʧʝteʝнdzdʒ ɘ‘Ҁtsɘҁdʒ ʧʝte‘tsнtsdʒ dzʘ 31,6% (*p*<*0,01*) lz вlzGʘʔɥ‘ɘ ‘ dzʘ 32,0% (*p*<*0,01*) ї lz lsj dzҁʃɥtsҀ. ʃ нdzʘҀ, ʧtetslsҁ ɘʝdzҁɥҁdzɘdʒ‘fŋslz Gtstedʒtsdzlz lz Ҁtetsɘ‘ lsj dzʸls tsнdztsнtsвtsɘtsGts ɘ‘Ҁlz Ldzʘɥʝdzdzʸ ɘʝdzҁɥҁdzGtstedʒtsdzlz ɘ Ҁtetsɘ‘ dzʘ 180 нtsвlz ɣҁlslsʷ вlzdzҁ ɘҁʰ ҁdʒҁ dzʘ 37,0% (*p*<*0,001*) lz вlzGʘʔɥ‘ɘ ‘ 37,6% (*p*<*0,001*) ї lz lsj dzҁʃɥtsҀ. ɼ dzʸ Ҁtsdzɥʝdzlsteʘɥ‘’ Gdz ҀʘGtsdzlz, ʷҀ ‘ нdzʸ ‘dzfŋlzdzdzlz, ̄ʘteʘҀlsjtedz ɘҁʰ ‘ Ldzʘɥʝdzdzʸ ɥɪ tsGts ʧtsҀʘLdzҁҀʘ lz Ҁtetsɘ‘ вlzGʘʔɥ‘ɘ, dzɣ lsj dzҁʃɥtsҀ.

ɼ ʘdz dzʘɕʝнʝdz lz lsʘвdzҁɥ‘ 1.12 ɘҀʘLlzᴯ lsɪ dzʘ lsj, ʰ ts нdzʸ ɘ‘Ҁtsɘts’ нҁdzʘdʒ‘Ҁҁ ɘdʒ‘fŋslz ҀtstelsҁLtsdzlz ɘ Ҁtetsɘ‘ lsj dzʸls ʧtsdzfŋҀts’ dʒʘʷfŋdzts’ ʧtstetsнҁ lz tsҀteʝdʒ‘ ʧʝte‘tsнҁ ʝҀfŋʧʝteҁdʒʝdzlslz ̄ʘteʘҀlsjtedz ʧtetslsҁdzʝɣdz LʘҀtsdztsdʒ‘tedztsfŋs‘,

[illegible] 129,6Ñ0,8 [illegible]/[illegible] 127,8Ñ0,7 [illegible]/[illegible].

[illegible] 30-[illegible] 4,1 [illegible] 3,1[illegible] $p<0,001$. [illegible] 30- [illegible] 60-[illegible] 18,9% ($p<0,001$) [illegible] 25,0% ($p<0,001$). [illegible] 180 [illegible] 17,9Ñ0,4 [illegible]/[illegible] 17,1Ñ0,3 [illegible]/[illegible] 180-[illegible] 1,44 ï 1,42 [illegible] 60 [illegible] 1,77 ï 1,88 [illegible] 30 [illegible] 7,20 ī 7,47%, [illegible] $p<0,001$.

[illegible]

Молочна продуктивності корів української чорно-рябої молочної породи. [illegible] 2-3-[illegible].

[illegible] (1.13). [illegible] 3-[illegible] 0,3 [illegible] 3-[illegible] 2-[illegible] ʊϴвdƶƒɥʷ 1.13

Добові надої корів української чорно-рябої молочної різних типів вищої нервової діяльності, M±m, n=5, кг.

ʊɕƒʧ Ј Ꞁ ɼ	ʆ ʻfŋʸɥʻ dǿʢlsϴɥʻʾ	
	2-ʔ	3-ʔ
ʉ Ј ʈ	20,2±1,40	20,0±1,25
ʉ Ј ɯ	14,9±0,58**	14,7±0,98**
ʉ Ꞁ	15,2±0,40**	14,3±0,48**
ʉ	11,0±0,50***	10,2±0,60***

ʇ tœɕdʒlsʢϴ *tɕ<0,05, ** tɕ<0,01, *** tɕ<0,001 ɘʻʜdʑsfŋdʑs ʉ Ј ʈ lsɕʧʑ.

ʇ tɕslsʷɢtsdʒ ʜtsfŋdʑʜdʑsɢts ʧʝtɕʻtsʜʑ ʑ ʢtstɕʻɘ ʉ Ј ʈ lsɕʧʑ ʜtsвtsɘʻ dǿʜtsʾ вʑdʑɕ dǿ 45ï49 % ʜtsfŋtsɘʻtɕdʑs ɘɕʰ ɕdʒɕ (tɕ<0,001) dʑʯ ʑ ʧtɕʝʜfŋϴɘdʑɕʢʻɘ ʉ lsɕʧʑ, ʑ ʷʢɕʭ ʢʻdʑʢʻfŋʲ dʑsdʑsʢϴʧts dʒʻfŋʸɥʷʭ fŋϴdʑsɘɕdϴ 11,0±0,50 ʢɢ lsϴ 10,2±0,60 ʢɢ. ʋ ʢtstɕʻɘ ʉ Ј ɯ lsϴ ʉ Ꞁ lsɕʧʻɘ ʢʻdʑʢʻfŋʲ dʑsdʑsʢϴвʑdϴdǿ 27 % dʑɕʯɥtsʁ dʑʯ ʑ ʉ Ј ʈ lsϴdǿ 29 % ɘɕʰ ʝ ɘʻʜ fŋdϴвʢtsɢts lsɕʧʑ Ј Ꞁ ɼ .

ʉ dʑʜ ʟϴʟdǿɥɕlsɕ, ʰ ts ʻfŋdʑʻ ʟɘəʷʟtsʢ dʒʯ ʜtsвtsɘɕdʒɕ dǿʜtsʷdʒɕ ʻ fŋɕdʑsʁ dʑtɕɘtsɘɕʭ ʧtɕtsɥʝfŋɘ (r=0,81, tɕ<0,01) ʟϴʝʻfŋtɕtsɘϴdʑs lsʢtsʯ ʢtstɕʝdʑʸɥʻʁ fŋʝtɕʝʜdʑtsɢts fŋlsʑʧʝdʑʷ ɥʲtsɢts ʧtsʢϴʟdʑɕʢϴʟ ɘtɕʻɘdʑsɘϴʈʝdʑfŋʁ (r=0,58, tɕ<0,05) ʔ tɕʑʭdʑɕɘʻfŋʁ ʢtstɕʢtsɘɕʭ ʧtɕtsɥʝfŋɘ r=0,66 (tɕ<0,01).

ɼ dʑʷ ʭϴtɕʢlsʝtɕɕfŋɕʢɕ dʒsdʑsɥdʑsʾ ʧtɕtsʜʑʢlsɕɘdʑsfŋʻ ʢtstɕʻɘ ɘϴʈdʑɕɘɕdʒʻ ɘdʒʻfŋʑ dʒsdʑsɥʻ fŋʑʭtsʾ tɕʝɥtsɘɕdʑɕ, ʰ ts ɘʢdʑ ɥϴ ϴвfŋtsdʑ lsdʑs ɘfŋʝ fŋʢdϴʜtsɘʻ, ʰ ts tslstɕɕdʒϴdʑ ʧʻfŋdʑʷ ɘɕfŋʰ ʑɘϴdʑdʑʷ dʒsdʑsʢϴ, dʑʟϴdʑʯdʑs ɘʻʜ lstsɢts ʑ ʷʢtsdʒʑ fŋϴdʑ ɘtsdʑɕ ʑ dʑtsdʒʑ ʟdǿʭtsʜʷlsʲ fŋʸ.

Ꞁ ϴʔвʻdʑʰ ʑ ʢʻdʑʢʻfŋʲ fŋʑʭtsʾ tɕʝɥtsɘɕdʑɕ dʒϴdʑs dʒsdʑsʢts ʢtstɕʻɘ fŋɕdʑdʑɕʭ lsɕʧʻɘ Ј Ꞁ ɼ , tsfŋвdʑɕɘts ʉ Ј ʈ ï 11,8±0,08 %. ʎʝ dǿ 2,5 % ɘɕʰ ʝ dʑʯ ʑ lsɘϴtɕɕdʑʉ Ј ɯ lsϴ ʉ Ꞁ lsɕʧʻɘ (tɕ<0,05). ʋ ʢtstɕʻɘ ʉ lsɕʧʑ Ј Ꞁ ɼ ɥʝʔ ʧtsʢϴʟdʑɕʢ dǿ 4,75 % (tɕ<0,01) dʑɕʯɥʝ dʑʯ ʑ ʉ Ј ʈ (tɕɕfŋ 3.6). Ј fŋϴdʑsɘdʑdʑs ʧtsʟɕlsɕɘdʑ ʢtstɕʝdʑʸɥʻʁ dʒʯ ɘdʒʻfŋtsdʒ fŋʑʭtsʾ

[illegible] (r = 0,70 , [illegible]<0,01) ([illegible]. 1.14).

[illegible] 1.14

Окремі показники якості молока корів української чорно-рябої молочної різних типів вищої нервової діяльності, M±m, $\frac{г / л}{\%}$

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	118,0±0,80 11,8±0,08	34,8Ñ0,9 3,48Ñ0,09	27,6Ñ0,6 2,76Ñ0,06
[illegible]	115,0±0,1* 11,5±0,01	31,2Ñ0,6** 3,12Ñ0,06	25,2Ñ0,4** 2,52Ñ0,04
[illegible]	115,4±0,7* 11,54±0,07	30,6Ñ0,8** 3,06Ñ0,08	24,6Ñ0,6** 2,46Ñ0,06
[illegible]	112,4±0,4** 11,24±0,04	28,0Ñ0,4** 2,8Ñ0,04	22,4Ñ0,6** 2,24Ñ0,06

[illegible] * [illegible]<0,05, ** [illegible]<0,01

[illegible]

[illegible] 3,48Ñ0,09 %, [illegible] 2,8Ñ0,04 % ([illegible]<0,01). [illegible] 3,12Ñ0,06 % [illegible] 3,06Ñ0,08 % ([illegible]<0,01), [illegible] (r = 0,76, [illegible]<0,01), [illegible] (r = 0,62, [illegible]<0,05) [illegible] r = 0,59 ([illegible]<0,05).

[illegible]

[illegible] (r=0,75, [illegible]<0,05).

[illegible] 2,76Ñ0,06 %, 2,52Ñ0,04 % [illegible] 2,46Ñ0,06 %. [illegible] 2,24Ñ0,06 % ([illegible] <0,01).

[illegible] (r = 0,76, [illegible]<0,01), [illegible] (r = 0,62, [illegible]<0,05) [illegible] (r = 0,59, [illegible]<0,05). [illegible] r = 0,70, [illegible]<0,01 [illegible] r=0,75, [illegible]<0,05 [illegible].

Білковий склад сироватки крові корів української чорно-рябої молочної породи різних типів вищої нервової діяльності. [illegible] ([illegible] 1.15). [illegible] 75,58Ñ0,27 [illegible] 1,23 %, [illegible] 1,22 % [illegible] 3,5 %. [illegible] 1,3 % [illegible] 3,4 % [illegible]. [illegible]

[illegible] 1.15

Білковий склад сироватки крові корів української чорно-рябої молочної породи різних типів вищої нервової діяльності, M±m.

[illegible]	[illegible]							
	[illegible]		[illegible]		[illegible]		[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible], [illegible]	75,58 Ñ 0,27	75,76 Ñ 0,50	74,72 Ñ 0,24*	74,76 Ñ 0,39	74,64 Ñ 0,23*	74,78 Ñ 0,26*	72,92 Ñ 0,55**	72,96 Ñ 0,53**
[illegible], %	45,98 Ñ 0,54	45,34 Ñ 0,42	40,16 Ñ 0,2**	39,8Ñ 0,21**	39,94 Ñ 0,45**	39,54 Ñ 0,41**	39,06 Ñ 0,53**	38,94 Ñ 0,55**
[illegible]-[illegible], %	9,16Ñ 0,46	12,16 Ñ 0,59	13,18 Ñ 0,55**	15,58 Ñ 0,37**	13,22 Ñ 0,5**	15,6Ñ 0,46*	13,86 Ñ 0,41*	15,66 Ñ 0,41*
[illegible]-[illegible], %	12,78 Ñ 0,44	13,94 Ñ 0,48	16,6Ñ 0,49*	17,08 Ñ 0,54*	16,52 Ñ 0,51*	17,42 Ñ 0,47*	17,08 Ñ 0,37*	17,48 Ñ 0,37*
[illegible]-[illegible], %	32,08 Ñ 0,79	28,56 Ñ 0,62	30,06 Ñ 0,67	27,54 Ñ 0,46	30,32 Ñ 0,92	27,44 Ñ 0,83	30,0Ñ 0,7	27,92 Ñ 0,41

[illegible] $p<0{,}05^{*}$, $p<0{,}01^{**}$

[illegible] ($r = 0{,}81$, [illegible]$<0{,}01$) [illegible] ($r = 0{,}50$, [illegible]$<0{,}05$).

[illegible], [illegible]-, [illegible]- [illegible]-[illegible] ([illegible] 1.15).

[illegible] 45,98Ñ0,54 %. [illegible] 40,16Ñ0,2 % ([illegible] 12,65 % [illegible]), [illegible] 39,94Ñ0,45 % ([illegible] 13,14 %) [illegible] (39,06Ñ0,53 %) [illegible] 15,05%, [illegible]. [illegible]

ɢtədztʃ ʘdʒɋ fɪʧtsfɪʝʝ tɕ'ɢʘ lsɪ fɪʏ ' ʟʘ ɘdʒ fɪʝtsdʒ ʘdž ʙldʒ'dʑɘ lz fɪɋʃtətsɘʘsɥ' ɘʝ dʑsʟdʑs' ʢtətsɘ' (ʉ.I ɯï dʑʘ 12,2 %, ʉɭ ï 12,8 % lsʘ fɪɋdžʘʙʢɋʔ lsɋʃ dʑʘ 14,1 % dʑɋɣ ɥʝ dʑɣ lz ʢtstɕ'ɘ ʉ.I ʈ).

.I fɪʝʘdʑtsɘdʝ dʑs tʃtsʟɋlsɋɘdʑɋʔ ʟɘð'ʟtsʢ ɘdʒ fɪʝlz ʘdž ʙldʒ'dʑɘ lz ʘdsʝ tɕ'ʘdž dʑʔ lsʘ ɘʝ dʑsʟdʑʔ ʢtətsɘ' ʟ tədʐ dʑɋɘ'fɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=0,78, tɕ<0,01), ' ʜʝ ʰ ts dʑɋɣ ɥɋʔ tʃtsʢʘʟdʑɋʢ ʢtstɕʝ dʐʏɥ'' ʟ fɪɋdʑsʁ lz ʘdsʝ tɕ'ʘdž dʑʔ (r=0,67, tɕ<0,05) ʔ ɘʝ dʑsʟdʑʔ ʢtətsɘ' (r=0,65, tɕ<0,05) lsʘ ɘtɕ'ɘdʑsɘʘɣ ʝ dʑfɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=0,67, tɕ<0,05).

.I 'ʜdʒ'ɥʘ lsɪ fɪʏ dʝ ɢʘlsɋɘdʑʘ ʢtstɕʝ dʐʏɥ'ʁ ʢ'dž ʢtsfɪʝ' Ŭ-ɢdʑsʙldʑdʑɘ lz ʘdsʝ tɕ'ʘdž dʑʔ (r=-0,60, tɕ<0,05) lsʘ ɘʝ dʑsʟdʑs' ʢtətsɘ' (r=-0,49, tɕ<0,05) ʟ fɪɋdʑsʁ ; r=-0,64 (tɕ<0,05) lsʘ r=-0,59 (tɕ<0,05) ʟ ɘtɕ'ɘdʑsɘʘɣ ʝ dʑfɪʝʁ lsʘ ʟ tədʐ dʑɋɘ'fɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=-0,81, tɕ<0,01) lsʘ (r=-0,76, tɕ<0,01).

.I dʒ'fɪʝ ɓ-ɢdʑsʙldʑdʑɘ lz ɘʝ dʑsʟdʑʔ lsʘ ʘdsʝ tɕ'ʘdž dʑʔ ʢtətsɘ' ʙlɘ ɘɋʰ ɋdʒ lz ʢtstɕ'ɘ ʉ lsɋʃ lz (17,08Ñ0,37 % lsʘ 17,48Ñ0,37 % ɘ'ʜʃtsɘ'ʜdʑs). ʂ tsdʑʝ dʑstɕʘɥ'ʷ ɥ'' ʷtɕʘʢɥ'' ʙ'dʑʘ lz ʘdsʝ tɕ'ʘdž dʑʔ ʢtətsɘ' ʉ.I ʈ lsɋʃ lz ʙldʑʘ dʑʘ 33,6 %, ʘ lz ɘʝ dʑsʟdʑʔ ï 25,4 % dʑɋɣ ɥʝ dʑɣ lz ʉ lsɋʃ lz. .I dʒ'fɪʝ ɓ-ɢdʑsʙldʑdʑɘ lz ʢtətsɘ' lsɘʘəɋdʑ ʉ.I ɯ lsʘ ʉɭ lsɋʃ'ɘ ɘ'ʜʃtsɘ'ʜdʑs fɪʢ dʑʘʜʘ 16,6Ñ0,49 % ' 16,52Ñ0,51 % (ʘdsʝ tɕ'ʘdž dʑʘ) lsʘ 17,08Ñ0,54 % ' 17,42Ñ0,47 % (ɘʝ dʑsʟdʑʘ).

.I fɪʝʘdʑtsɘdʝ dʑs dʝ ɢʘlsɋɘdž ʢtstɕʝ dʐʏɥ'ʁ dʒɣ ɘdʒ fɪʝtsdʒ ɓ-ɢdʑsʙldʑdʑɘ lz ʘdsʝ tɕ'ʘdž dʑʔ ʢtətsɘ' ʟ fɪɋdʑsʁ (r=-0,63, tɕ<0,01), ɘtɕ'ɘdʑsɘʘɣ ʝ dʑfɪʝʁ (r=-0,62, tɕ<0,05) lsʘ tədʐ dʑɋɘ'fɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=-0,73, tɕ<0,01). ʊ fɪɋʃtətsɘʘsɥ' ʢtətsɘ' ʇ ʏ.I ʢtsdʑʝ dʑstɕʘɥ'ʷ ɓ-ɢdʑsʙldʑdʑɘ dʝ ɢʘlsɋɘdʑs ʢtstɕʝ dž ' ʟ fɪɋdʑsʁ (r=-0,58, tɕ<0,05), ɘtɕ'ɘdʑsɘʘɣ ʝ dʑfɪʝʁ (r=-0,64, tɕ<0,05) lsʘ tədʐ dʑɋɘ'fɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=-0,71, ʈ <0,01).

ɼ tsfɪɋdžʜɣ ʝ dʑdžʷdʒɋ ʷtɕʘʢɥ'ʔ dʑsɢts fɪʢ dʑʘʜlz fɪɋʃtətsɘʘsʢɋ ʢtətsɘ' ɘfɪʝʘdʑtsɘdʝ dʑs, ʰ ts dʑʘʔ ɘɋʰ ɋʔ ɘdʒ'fɪʝ ɔ-ɢdʑsʙldʑdʑɘ lz ʢtstɕ'ɘ ʉ.I ʈ lsɋʃ lz ' fɪʝʘdʑtsɘɋɘ ï 32,08Ñ0,79 % lz ʢtətsɘ' ʘstədsɋ lsʘ 28,56Ñ0,62 % ʇ ʏ.I . ʂ tsdʑʝ dʑstɕʘɥ'ʷ ʙ'dʑʢ'ɘ ɥ'' ʷtɕʘʢɥ'' ʢtətsɘ' 'dž ɋ lsɋʃ tsdʑsɢ'ɥdʑɋ ɢtədztʃ ʙldʑs dʑɋɣ ɥtsʁ lz ʘstədsʘdž dʑʔ ʢtətsɘ' dʑʘ 6,5 % lsʘ lz ʢtətsɘ' ʇ ʏ.I dʑʘ 4 % (lsʝ dʑʝ dʑɥ'ʷ). .I dʒ'fɪʝ ɔ-ɢdʑsʙldʑdʑɘ lz fɪɋʃtətsɘʘsɥ' ʘdsʝ tɕ'ʘdž dʑs' ʢtətsɘ' tʃtsʟɋlsɋɘdʑs ʢtstɕʝ dž ɘʘ ʟ tədʐ dʑɋɘ'fɪʝʁ dʝ tɕɘtsɘɋ tʃtətsɥʝ fɪʝɘ (r=0,56, tɕ<0,05).

ʆ lsɣ ʝ dʑʔ ɘɋʰ lz ʢ'dž ʢ'fɪʝɪ ʟʘʘdž dʑsɢts ʙ'dʑʘ ɘfɪʝʘdʑtsɘdʝ dʑs ɘ ʢtətsɘ' ʢtstɕ'ɘ

[illegible]

Окремі показники обміну ліпідів у крові корів української чорно-рябої молочної породи різних типів вищої нервової діяльності. [illegible] ([illegible] 1.16).

[illegible] 1.16

[illegible], MÑm, [illegible]

[illegible]	[illegible]							
	[illegible]		[illegible]		[illegible]		[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0,51Ñ 0,03	0,50Ñ 0,02	0,49Ñ 0,01	0,48Ñ 0,07	0,44Ñ 0, 11	0,38Ñ 0,07	0,40Ñ 0,03	0,34Ñ 0,01**
[illegible]	5,19Ñ 0,77	5,62Ñ 0,30	4,71 Ñ0,8	5,04Ñ 0,48	4,80Ñ 1,4	4,98Ñ 0,08	3,66Ñ 0,21	4,85Ñ 1,32

[illegible] * – [illegible]<0,05, ** – [illegible]<0,01, *** – [illegible]<0,001 [illegible]

[illegible] 0,51Ñ0,03 [illegible] 3,9 %, [illegible] 13,7 % [illegible] 21,5 %. [illegible] 0,50Ñ0,02 [illegible] 4 %, [illegible] 24 % [illegible] 32 %.

[illegible] r=0,63 ([illegible]<0,05), [illegible] r=0,81 ([illegible]<0,001). [illegible] dǯsʟʢk ďǰ ʙkďs эfŋsѲďsэďǰďs.

ɪ dǯʻfŋs ʟѲɢѲďk ďsɢs ǂsďǰfŋǰtɐsďk э Ѳɐsǰtɕʻѳďk ďǂ? ʢtɐsэʻ ʢtstɕʻэ ʉɪ ʈ lsɕʃʈʃk ɪ ʅ ɼ fŋsѲďsэɕэ 5,19Ñ0,77 dǯdǯsďk /ďǂ ʰ ts эɕʰ ǰ, ďǂɣ k lsэѲɐɕďǂʉɪ ɯďѲ 9,2 %, ʉʅ lsɕʃʻэ ďѲ 7,5 % lsѲʉ lsɕʃʈk ї ďѲ 29,4 %. ʂ ʻďk ʢʻfŋsᴵ ǂsďǰfŋǰtɐsďk э ʢtɐsэʻ ɟ ʏɪ k lsэѲɐɕďǂʉɪ ʈ lsɕʃʈk ɪ ʅ ɼ fŋsѲďsэɕэ 5,62Ñ0,30 dǯdǯsďk /ďǂ ʰ ts эɕʰ ǰ, ďǂɣ k lsэѲɐɕďǂ ʉɪ ɯďѲ 10,3 %, ʉʅ ї ďѲ 11,38 % lsѲʉ lsɕʃʻэ ї ďѲ 13,7 %.

Окремі показники обміну вуглеводів у крові корів української чорно-рябої молочної породи різних типів вищої нервової діяльності. ɟ tɐɕ ʜtsfŋďʜɣ ǰ ďǂďǂ эdǯʻfŋsk ɢďk ʢtsʟɕ э эǰ ďsʟďǂ? ʢtɐsэʻ k lsэѲɐɕďǂ fŋďѲʙʢtsɢs lsɕʃʈk ɪ ʅ ɼ эɕʷэďǰďs lsǰ ďsʜǰ ďǂɥʻᵏ ʜts эɕʰ tsɢs эdǯʻfŋsk ɢďk ʢtsʟɕ э fŋʃtɐsэѲlsɥʻ ʢtɐsэʻ ʈʃtstɕʻэďǂʷďs ʟ lsэѲɐɕďǂѲdǯɕ fŋʃďk ďǂʃǂ lsɕʃʻэ. ʊѲǂ, k ʢtstɕʻэ ʉɪ ʈ lsɕʃʈk ɪ ʅ ɼ эdǯʻfŋs ɥᴵ tsɢs dǯ lsѲʙtsďǂlsk э fŋʃtɐsэѲlsɥʻ ʢtɐsэʻ ɥǰ tɐǰ эďsɢs эʻʜʜʻďk Ѳstɐlsɕ ʙkэ ďѲ 10,73 % ďǂʃɣ ɥɕdǯ ďǂɣ k ʢtstɕʻэ ʉ lsɕʃʈk ʻ fŋsѲďsэɕэ 3,11Ñ0,07 dǯdǯsďk /ďk.

ʋ ʢtstɕʻэ ʉɪ ɯlsɕʃʈk ɪ ʅ ɼ эdǯʻfŋs ɢďk ʢtsʟɕ э fŋʃtɐsэѲlsɥʻ ʢtɐsэʻ ɸ ʙkэ эɕʰ ɕdǯ ďǂɣ k ʢtstɕʻэ ʉɪ ʈ lsɕʃʈk ďѲ 4,80 %, Ѳďǰ ďǂʃɣ ɥɕdǯ ďǂɣ k ʢtstɕʻэ ʉ lsɕʃʈk ďѲ 6,23 %. ʋ lsэѲɐɕďǂ ʉʅ lsɕʃʈk ɪ ʅ ɼ эfŋsѲďsэďǰďs ďǂʃɣ ɥɕ? эdǯʻfŋs ɥᴵ tsɢs dǯ lsѲʙtsďǂlsk э fŋʃtɐsэѲlsɥʻ Ѳɐsǰtɕʻѳďk ďsʾ ʢtɐsэʻ ʈʃtstɕʻэďǂʷďs ʟ lsэѲɐɕďǂѲdǯɕ ʉɪ ɯlsɕʃʈk lsѲʉ lsɕʃʈk эʻʜʃtsэʻʜďs ďѲ 1,85 lsѲ 7,97 % (lsǰ ďsʜǰ ďǂɥʻʷ).

ʊѲʙďǂɕɥʷ 1.17

ʆ ʢtɐǰ dǯʻ ʈʃtsʢѲʟďǂʃʢɕ tsʙdǯʻďk эkɢďǰэtsʜʻэ k ʢtɐsэʻ ʢtstɕʻэ kʢtɐѲʾďǂfŋʢtsʾ ɥtstɐďs-tɕʷʙtsʾ dǯsďsɥďsʾ ʈʃtstɐsʜɕ tɕʻʟďǂʃǂ lsɕʃʻэ эɕʰ tsʾ ďǰtɐэtsэtsʾ ʜʻʷďk ďsfŋsʻ, MÑm, dǯdǯsďk /ďk

ɟ tsʢѲʟďǂʃʢ	ʊɕʃ ɪ ʅ ɼ							
	ʉɪ ʈ		ʉɪ ɯ		ʉʅ		ʉ	
	ѲstɐlsѲ	ɟ ʏɪ	ѲstɐlsѲ	ɟ ʏɪ	ѲstɐlsѲ	ɟ ʏɪ	ѲstɐlsѲ	ɟ ʏɪ
ʇďk ʢtsʟѲ	2,78Ñ 0,17	2,08Ñ 0,18*	2,92Ñ 0,16	2,30Ñ 0,15	2,86Ñ 0,11	2,20Ñ 0,14*	3,11Ñ 0,07	2,57Ñ 0,03
ʆ tsďsɥďѲ ʢɕfŋďslsѲ	1,31Ñ 0,09*	1,17Ñ 0,09*	1,64Ñ 0,10*	1,50Ñ 0,10*	1,41Ñ 0,07*	1,26Ñ 0,08*	1,96Ñ 0,05	1,79Ñ 0,05

ɟ tɐɕdǯlsʢѲ * ї tɕ<0,05 эʻʜďsfŋďs fŋďѲʙʢtsɢs lsɕʃʈk ɪ ʅ ɼ

ʉďǂʜ ʟѲʟďǂѲɥɕlsɕ, ʰ ts k ʢtstɕʻэ ʉ lsɕʃʈk ɪ ʅ ɼ эfŋsѲďsэďǰďs эɕʰ ɕ? эdǯʻfŋs ɢďk ʢtsʟɕ э fŋʃtɐsэѲlsɥʻ ʢtɐsэʻ, ʷʢѲ эʻʜlsʻʢѲ эʻʜ dǯsďsɥďsʾ ʟѲďsʟɕ, ďǂɣ k ʢtstɕʻэ ʻďǂ ɕǂ lsɕʃʻэ. ɪ dǯʻfŋs ɢďk ʢtsʟɕ э fŋʃtɐsэѲlsɥʻ ʢtɐsэʻ ʈʻʜʰ ʢʻtɐďsʾ ɥǰ tɐǰ эďsʾ эǰ ďǂʃ ʻ

dʑʃɣ ɥʃdʒ ŀz Ꞩtstɕ'ɘ ɐ.I ʈ lsʃtʃŀz .I l ɼ dʑʘ19,16 % (tɕ<0,05) lsʘɐ l lsʃtʃŀz ï dʑʘ14,25 % (tɕ<0,05) ʧtstɕ'ɘdʑʷdʑs ʟ Ꞩtstɕtsɘʘdʒʃ ɐ lsʃtʃŀz. ʊ lsɘʘɐʃdʑɐ.I ɯlsʃtʃŀz .I l ɼ ɘ'ʜdʒ'ɥʘdʑʃ ʜʝ ʰ ts ɘʃʰ ʃʔ ɘdʒ'fɲs ɥᴵ tsɢts ɘŀzɢdʑ ɘtsʜŀz ɘ fɲʃtɕtsɘʘsɥ' ɘʝ dʑsʟdʑs' Ꞩtɕtsɘ' ʧtstɕ'ɘdʑʷdʑs ʟ lsɘʘɐʃdʑʘdʒʃ ɐ.I ʈ (dʑʘ9,82 %) lsʘɐ l (dʑʘ4,34 %) lsʃtʃ'ɘ.

ʂ tstɕʝ dʑʷɥ'ʔdʑʃʔ ʘdʑʘdʑʟ ʜʘdʑʃ⁼ ɘʃʷɘʃɘ ls'fɲdʑʃʔ ʟɘ'ʷʟtsꞨ dʒ'ɣ ʧtsꞨʘʟdʑʃꞨʘdʒʃ ŀzdʒsɘdʑs-tɕʝ ʷʷ dʑ Ꞩlststɕdʑs' ʜ'ʷdʑ dʑsfɲs' lsʘ tɕ'ɘdʑ dʒ ʧtsɢdʑʃdʑʘdʑdʑʷ ɢdʑ Ꞩtsʟʃ dʒsdʑsɥdʑsᴮ ʟʘdʑsʟtsᴮ .

l ʜʘdʑʃ⁼, dʑʘɘʝ ʜʝ dʑʃ⁼ ŀz lsʘʙdʑ 1.17, ɘʃʜdʑs, ʰ ts dʑʘʔdʑʃɣ ɥʃʔ ɘdʒ'fɲs dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ ŀz fɲʃtɕtsɘʘsɥ' ʘɕsʝ tɕ'ʘdʑ dʑs' lsʘɘʝ dʑsʟdʑs' Ꞩtɕtsɘ' Ꞩtstɕ'ɘ ɐ.I ʈ lsʃtʃŀz .I l ɼ .

ʊʘꞨ, ŀz fɲʃtɕtsɘʘsɥ' ʘɕsʝ tɕ'ʘdʑ dʑs' Ꞩtɕtsɘ' lsɘʘɐʃdʑɐ.I ʈ lsʃtʃŀz .I l ɼ dʒ'fɲsʃdʑsfɲʷ 1,31Ñ0,09 dʒdʒsdʑ/dʑ dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ, ʰ ts dʑʘ33,13 % (tɕ<0,05) dʒ dʑʰ ʝ, dʑɣ ŀz lsɘʘɐʃdʑɐ lsʃtʃŀz. ɼ ʝ ʰ ts ɘʃʰ ʃdʒ (dʑʘ7,08 %), dʑɣ ŀz Ꞩtstɕ'ɘ ɐ.I ʈ lsʃtʃŀz, ʙŀzɘ ɘdʒ'fɲs dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ ŀz ʘɕsʝ tɕ'ʘdʑ dʑʔ Ꞩtɕtsɘ' Ꞩtstɕ'ɘ ɐ l lsʃtʃŀz .I l ɼ . ꞁ tɕʃ ɥᴵ tsdʑ tɕ'ʟdʑʃɥʷ ʟʘɘdʒ'fɲstsdʒ dʑʘꞨlsʘsŀz ŀz fɲʃtɕtsɘʘsɥ' ʘɕsʝ tɕ'ʘdʑ dʑs' Ꞩtɕtsɘ' dʒ'ɣ lsɘʘɐʃdʑʘdʒʃ ɐ l lsʘɐ lsʃtʃ'ɘ .I l ɼ fɲsʘdʑsɘʃdʑʘ28,03 % (tɕ<0,01). ʊ fɲʃtɕtsɘʘsɥ' ʘɕsʝ tɕ'ʘdʑ dʑs' Ꞩtɕtsɘ' Ꞩtstɕ'ɘ ɐ.I ɯlsʃtʃŀz ɘdʒ'fɲs dʑʘꞨlsʘsŀz ʙŀzɘ ʙ'dʑ ʰ ʃdʒ dʑʘ20,20 %, dʑɣ ŀz Ꞩtstɕ'ɘ ɐ.I ʈ lsʃtʃŀz lsʘdʑʘ14,11%, dʑɣ ŀz Ꞩtstɕ'ɘ ɐ l lsʃtʃŀz, ʘdʑ dʒ dʑʰ ʃdʒ dʑʘ16,33 % (tɕ<0,05) ʧtstɕ'ɘdʑʷdʑs ʟ Ꞩtstɕtsɘʘdʒʃ ɐ lsʃtʃŀz. ɐ ŀzls'ɘŀz tɕ'ʟdʑʃɥᴮ (34,93 % ʧtɕʃ tɕ<0,01) ʟʘ ɘdʒ'fɲstsdʒ dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ ŀz fɲʃtɕtsɘʘsɥ' ɘʝ dʑsʟdʑs' Ꞩtɕtsɘ' fɲʧtsfɲsʝ tɕ'ɢʘdʑʃ dʒ'ɣ lsɘʘɐʃdʑʘdʒʃ ɐ.I ʈ lsʘɐ lsʃtʃ'ɘ .I l ɼ .

.I dʒ'fɲs dʑʘꞨlsʘsŀz ŀz fɲʃtɕtsɘʘsɥ' ɘʝ dʑsʟdʑs' Ꞩtɕtsɘ' ŀz Ꞩtstɕ'ɘ ɐ.I ɯlsʃtʃŀz .I l ɼ ʙŀzɘ ɘʃʰ ʃdʒ dʑʘ22,27 %, dʑɣ ŀz lsɘʘɐʃdʑɐ.I ʈ lsʃtʃŀz lsʘdʑʘ16,0 % ï ɐ l lsʃtʃŀz. ʊ Ꞩtstɕ'ɘ ɐ l lsʃtʃŀz .I l ɼ ɘdʒ'fɲs ɥᴵ tsɢts dʒ lsʘʙtsdʑlsŀz ɘ fɲʃtɕtsɘʘsɥ' Ꞩtɕtsɘ' ꞁ ʏ.I ʙŀzɘ dʑʟdʑʘɥdʑs ɘʃʰ ʃdʒ (7,46 %) ʧtstɕ'ɘdʑʷdʑs ʟ Ꞩtstɕtsɘʘdʒʃ ɐ.I ʈ lsʃtʃŀz. ʊ Ꞩtstɕ'ɘ ɐ lsʃtʃŀz ɘdʒ'fɲs dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ ɘ fɲʃtɕtsɘʘsɥ' Ꞩtɕtsɘ' ꞁ ʏ.I ʙŀzɘ ɘʃʰ ʃdʒ dʑɣ ŀz Ꞩtstɕ'ɘ ɐ.I ɯlsʘɐ l lsʃtʃ'ɘ .I l ɼ ɘ'ʜʧtsɘ'ʜdʑs dʑʘ16,30 (tɕ<0,01) lsʘ29,69 % (tɕ<0,05).

ʊ fɲsʘdʑsɘdʑ dʑs dʑɢʘsʃɘdʑ Ꞩtstɕʝ dʑʷɥ'ᴮ dʒ'ɣ ɘdʒ'fɲstsdʒ dʒsdʑsɥdʑs' Ꞩʃfɲdʑslsʃ ɘ fɲʃtɕtsɘʘsɥ' ʘɕsʝ tɕ'ʘdʑ dʑs' Ꞩtɕtsɘ' lsʘ fɲʃdʑsᴮ (r = -0,67 ʧtɕʃ tɕ<0,01), tɕdʑ⁼dʑʃɘ'fɲsᴮ (r = -0,38 ʧtɕʃ tɕ<0,05) ' ɘtɕ'ɘdʑsɘʘɣ ʝ dʑfɲsᴮ (r = -0,67 ʧtɕʃ tɕ<0,01) dʑtɕɘtsɘʃ⁼

ʧtɕʦɰʝ fɲʝə. ɸ ʥʘʥʦɢʿɥʥʘ ʕʘʦsʗʥʘ fɲʧ ʦfɲʝsʝ tɕʿɢʘʥʘfɲʝ ʱ ʦʜʦ əʤʿfɲʝsʐ ɰᴵ ʦɢʦ ʤʝ lsʘʙʦʥʼlsʐ ə ʕtɕʦəʿ ɟ ʏ˩ . ʄ ʿʞ ʧʦɢʥʗʃʥʘʥʥʷʤ ʤʦʥʦɰʥʦ̓ ʕʗfɲʥʦlsʗ ʤʦʥʦɰʥʦʶ ʟʘʥʦʟʦʶ lsʘ tɕʐ˭ʥʗʃəʿfɲʝsʶ ʥʝ tɕəʦəʗ˭ ʧtɕʦɰʝ fɲʝə əʗʷəʥʝ ʥʃʔ ʥʝ ʟʥʘɰʥʃʔ ʟə'ʷʟʦʕ (r = -0,38).

ʊʘʕʗʤ ɰʗʥʦʤ ʐ ʕʦtɕʿə ʉ lsʗʧʐ ˩ ˥ ɼ əʤʿfɲʝs ʥʘʕ lsʘlsʐ ə fɲʗʃtɕʦəʘlsɥʿ ʷʕ ʘʦsʝ tɕʿʘʥʐ ʥʦ̓, lsʘʕ ʿ əʝ ʥʦʟʥʦ̓ ʕtɕʦəʿ ʙʐə əʿtɕʦɢʿʜʥʦ əʗʱ ʗʤ ʧʦtɕʿəʥʷʥʦ ʟ ʕʦtɕʦəʘʥʗ ʉ˩ ʈ lsʗʧʐ.

2. Фізіолого-біохімічне обґрунтування впливу рослинно-вітаміно-мінеральної кормової добавки «Мікроліповіт» на організм лабораторних та продуктивних тварин.

[illegible] 18,7 [illegible] 100,9, [illegible] 112,0, [illegible] 114,3, [illegible] 113,5, [illegible] 100,8, [illegible] 137,2, [illegible] 103,2, [illegible] 100,4, [illegible] 119,4 % [illegible] 0,85:1, [illegible] 2,24:1.

[illegible] 35,13%, [illegible] 39,21%, [illegible] 25,66 %. [illegible] 100,0%, [illegible] 106,5%, [illegible] 100,0 % [illegible] 1,76:1.

[illegible] 71,0, [illegible] 63,4, [illegible] 63,3, [illegible] 51,4, [illegible] 22,5 %.

[illegible] ([illegible]), [illegible].

[illegible]

[illegible] (...), [illegible] ϕ, Γ, Γ [illegible].

[illegible] ϕ, Γ, Γ [illegible].

Динаміка показників, що характеризують фізіологічний стан організму щурів за згодовування кормової добавки Мікроліповіт у різних дозах. [illegible] 2.1 [illegible] 2.2.

[illegible] Γ 1, Γ 2 [illegible] Γ 3 [illegible] 2,5; 5,0; 7,5 [illegible] 1,5% [illegible] Γ 1, [illegible] 5,0% [illegible] Γ 2 [illegible] 3,2 % [illegible] Γ 3 [illegible] 18,3 [illegible] Γ 1 [illegible] 20,3 [illegible] Γ 2 [illegible] 33,2 [illegible] Γ 3 [illegible] 27,2 [illegible] $(p<0,001)$.

[illegible] Γ 1, [illegible] Γ 3 [illegible] 1,8 % [illegible] 1,3 % [illegible].

[illegible] Γ 2 [illegible] 5,0 [illegible] 2,7% $(p<0,001)$, [illegible] 318,8 ± 1,9 [illegible] 310,3 ± 1,7 [illegible].

[illegible] Γ 2 [illegible] 59,7 ± 2,0 [illegible] 50,3 ± 2,6 [illegible].

[illegible] 2.1

[illegible], (M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	278,3 Ñ3,0	282,5 Ñ2,5	292,3 Ñ3,2*	287,3 Ñ3,2
4 [illegible]	310,3 Ñ1,7	314,3 Ñ1,8***	318,8 Ñ1,9***	314,3 Ñ3,7
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*
6 [illegible]	333,2 Ñ1,4	338,0 Ñ2,4	341,7 Ñ2,7*	340,0 Ñ2,6*
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*

[illegible]: *p* ï [illegible]; *p* ï [illegible] : * ï *p<0,05;* ** *p<0,01;* *** $p_{к}$*<0,001*

[illegible]

[illegible] 2.2

[illegible], (M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	18,3 Ñ1,0	20,3 Ñ1,7	27,2 Ñ1,5***	33,2 Ñ4,7*
4 [illegible]	50,3 Ñ2,6	52,2 Ñ3,0	54,2 Ñ1,5	59,7 Ñ2,0*
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*
6 [illegible]	73,2 Ñ2,7	75,8 Ñ3,0	79,8 Ñ2,5	82,5 Ñ2,2*
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*

ɪ Ɠʦʜʦɚɥɚ Ɵɖɤɥʷ ʱ ɥʦɐ Ɵɖʒ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ ʄ ʽʢɑʦ ɖʑʧʦɚʽɭ ɥ ʦɞʽʟɖɕʭ ʜʦʟ Ɵʭ ʧʦɑʦɭʷ Ɠʦɖʒʰ ʝ ʄ ɦɭɕ ɭɕʮ ɖʑɚ ʝ ʢ ɦʧ ʝ ʦɑɕɖʒ ɖɤɭɥ ɦʧ ʦɑɕʷ ɖʦ ɚʽʦɑʦɠʽʜ ɖʦɖʒɥ ʟʙʽɖʑ ʰ ʝ ɖɤɥ ɖʒ Ɵɦɕʧ ɭʽɖɛ Ɵɖɕʰ ʝ ɥ ɭɚ Ɵɑɕɖʑ Γ $_2$ ʽ Γ $_3$ Ɠʦɖʑʧ ɚʽʜʧʦɚʽʜ ɖʦ ɖɛ Ɵ 2,6% ʽ 2,0% ʟ ɦʝ ʦʝ ʜɖʑ ʦʜʦʙ ʦɚɕɖʒ ʧʦɕʦɑʦɦɭʦɖʒ ɖʒ Ɵɦɕ ɭʽɖɛ Ɵ 82,5 ʽ 79,8 Ɠ/ʜʦʙ ɥ ʧʦɑʦɭɕ 73,2 Ɠ/ʜʦʙ ɥ ɥ ʂ ɭɚ Ɵɑɕɖʑ.

ʆ ɭʮ ʝ, ɚɕʭ ʦʜʷ ʯɕ ʟ Ɵɖɤ Ɵɖʑʟɥ ʦɭʦɑɕɖʒ Ɵɖɤɕʭ ʯɕʷ ʦɑʦɚɕʭ ʜ Ɵɖɤɕʭ ɖʒʦʮ ʝ ɖʒʦ ʟ Ɵ ʢ ɖʑ ʯɕɭɕ, ʱ ʦ ʟ Ɠʦʜʦɚɥɚ Ɵɖɤɥʷ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ ʄ ʽʢɑʦ ɖʑʧʦɚʽɭ ʟ ʦɑʦʟ ʦɐ Ɵʭ ɥ ɖʢ ɥ 5,0 ɖʒ Ɠ/ʢ Ɠ ʢʦɖʑ ʢʦʦɑ ɖʒʽɚ ʦɐ ʯʽʦɖɥ ɚʧʦɑʦʜʦɚʮ ʰ ʝ ɦɭɕ ɭɕʮ ɖʑɚ ʟʙʽɖʑ ʰ ɥʽ ɖʒ Ɵɦɥ ɭʽɖɛ Ɵ ʱ ɥʦɐ ʽɚ Γ $_2$ Ɠʦɖʑʧɕ ɖɛ Ɵ 2,6% ʟ ɦʝ ʦʝ ʜɖʑ ʦʜʦʙ ʦɚɕɖʒ ʧʦɕʦɑʦɦɭʦɖʒ 79,8 Ɠ/ʜʦʙ ɥ, ʧʦʦɐ ʽɚɖʑʷ ɖʦ ʟ ʢʦɖɤ ʦɑʦɖʑ ɖʦʶ Ɠʦɖʑʧʦʶ ɭɚ Ɵɑɕɖʑ. ʎ ʽ ʜ Ɵɖʑ ɖʒʦʮ ɥɭʸ ɦɸ ʽʜ ʯɕɭɕ ʧʦɑʦ ʧʦɑʦʜɥ ʢ ɭɕɚɖɕʔ ɚʧɖɕɚ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ ʄ ʽʢɑʦ ɖʑʧʦɚʽɭ ɥ ʢʽɖʑ ʢʦɦɭʽ 5,0 ɖʒ Ɠ/ʢ Ɠ ʢʦɖʑ ʢʦʦɑ ɖʒʽɚ ʦɐ ʯʽʦɖɥ.

ɪ ɕʟɖɤ ʯʝ ɖɤɥʷ ʧʦʢ Ɵʟɖɕʢʽɚ ɖʒʦɑʷ ʦɖʦʠʽʯɖʦ Ɠʦ ɦʢ ɖɛ ʜɥ ʧʝ ʦɑʷ ʝ ʦɑ ʔ ɖʦʼ ʢʦɑʦɚʽ ʱ ɥʦɐ ʽɚ ʟ Ɵʜʦʜ Ɵɒ Ɵɖɤɥʷ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ ʜʦ ʦɐ ʯʽʦɖɥ ɥ ʦɞʽʟɖɕʭ ʜʦʟ Ɵʭ ʧʦʢ Ɵ ʟ Ɵɖʦ, ʱ ʦ ʢʽɖʑ ʢʽɦɭʸ ʝ ʦɑɕ ɭʦɑʦ ʯɕ ɭʽɚ, Ɠʝ ɖʒʦɠɖʦʙʽɖɥ ʽ ɖʝ ʔ ʢʦʯɕɭʽɚ ɥ ʢʦɑʦɚʽ ʢʦɖɤ ʦɑʦɖʑ ɖʦʼ ʽ ʜʦɦɕʑʜɖɕʭ Ɠʦɖʑʧ Ɵʭ ʢʦɖɕɚ Ɵɖɛ Ɵɦʝ ɥ ɖʝ ʮ Ɵʭ ʷ ʽʟ ʽʦɖʦɠʽʯɖʦʼ ɖʦɑʦɖʒɕ ʜɖʑʷ ʜ Ɵɖʦ Ɠʦ ɚɕʜɥ ɭɚ Ɵɑɕɖʑ.

ʏ ʝ ʦʝ ʟ 2, 4 ʽ 6 ɭɕʮ ɖʑɚ ɦʧ ʦɦɭʝ ʦʝ ʮ ʝ ɖʑ. ʢʽɖʑ ʢʽɦɭʸ ʝ ʦɑɕɭʦɑʦ ʯɕ ɭʽɚ ɥ ʢʦɑʦɚʽ ʱ ɥʦɐ ʽɚ (ɭɚʙ ɖɕʯʷ 2.3) ʢʦɖɤ ʦɑʦɖʑ ɖʦʼ ɭɚ Γ $_1$, Γ $_2$ ʽ Γ $_3$ ʜʦɦɕʑʜɖɕʭ Ɠʦɖʑʧ ɖɛ Ɵ ɭɖʑ ʟ Ɠʦʜʦɚɥɚ Ɵɖɤɥʷ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ ʄ ʽʢɑʦ ɖʑʧʦɚʽɭ ɥ ʦɞʽʟɖɕʭ ʢʽɖʑ ʢʦɦɭʷʭ ʟɖɤ Ɵʭ ʦʜɕ ɖɛ Ɵɦʝ ɥ Ɠʦ Ɵɖɤɕʯʷʭ 6,88 – 7,06 ʊ/ɖʑ, ʱ ʦ ɦɸ ʽʜ ʯɕɭʸ ʧʦɑʦ ɦɭɚʙ ʽɖʑ ɖʑɦɭʸ ʧʦɑʦ ʯʝ ɦɭɥ ʝ ʦɑɕɭʦɑʦ ʧʦʝ ʟɥ ɥ ʯɕʭ ɭɚ Ɵɑɕɖʑ ʟɚ ɥ ɖʒʦɚ ʜʦʜ Ɵɒ Ɵɖɤɥʷ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ.

ʊ Ɵʙ ɖɕʯʷ 2.3

ʂ ʽɖʑ ʢʽɦɭʸ ʝ ʦɑɕɭʦɑʦ ʯɕ ɭʽɚ ɥ ʢʦɑʦɚʽ ʱ ɥʦɐ ʽɚ ʟ Ɵ ʟ Ɠʦʜʦɚɥɚ Ɵɖɤɥʷ ʢʦʦɑ ɖʒʦɚʦʼ ʜʦʙ Ɵɒʢɕ

ʄ ʽʢɑʦ ɖʑʧʦɚʽɭ ɥ ʦɞʽʟɖɕʭ ʢʽɖʑ ʢʦɦɭʷʭ, ʊ/ɖʑ (M ± m, n=6)

ɫ ʝ ʦɐ ʽʦʜ ʜʦɦɕʑʜɥ	ʇ ʦɖʑʧɕ ɭɚ Ɵɑɕɖʑ			
	ʂ	Γ $_1$	Γ $_2$	Γ $_3$
2 ɭɕʮ ɖʑ	6,94 ±0,12	6,91 ±0,09	6,88 ±0,10	7,01 ±0,05
4 ɭɕʮ ɖʑ	6,97 ±0,09	6,95 ±0,08	7,01 ±0,10	7,09 ±0,11
6 ɭɕʮ ɖʑɚ	7,01 ±0,07	7,03 ±0,06	7,04 ±0,16	7,13 ±0,19

[illegible] ([illegible]) [illegible] 144,8 [illegible]/[illegible], [illegible] 1, [illegible] 2 [illegible] 3 [illegible] 145,1; 149,1; 148,1 [illegible]/[illegible], [illegible]

[illegible] 2.4

[illegible] [illegible]/[illegible] (M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	144,8 Ñ1,0	145,1 Ñ1,1	149,1 Ñ1,3*	148,1 Ñ1,2
4 [illegible]	145,2 Ñ1,1	146,2 Ñ1,3	150,2 Ñ1,4*	150,1 Ñ1,5*
6 [illegible]	146,2 Ñ1,2	148,8 Ñ1,5	152,2 Ñ1,7*	151,7 Ñ1,6*

[illegible] 2, 4 [illegible] 6 [illegible]

[illegible] ([illegible] 2.5).

[illegible] 1, [illegible] 2 [illegible] 3 [illegible] 2,5; 5,0 [illegible] 7,5 [illegible]/[illegible]

ŞtsdząŞtstedʒɘ.

ʊʘŞ, ʮʝtɕj ʟ нɘʘ lsɕɣdź ʝŞfŋʃʝtɕɕdʒdźslz dźʘ lsdź ʟɢtsнtsɘlzɘʘdźdźʷ Şᵗstedʒsɘts' нtsʙʘɘŞɕ Ş'dź Ş'fŋsᴵ dʝʔŞtsɥɕls'ɘ lz Ştetsɘ' ʰ lztɛ'ɘ Γ 1, ɢtedztʃɕ tʃ'нɘɕʰ lzɘʘdźʘfŋʷ tʃtetslsɕ Ştsdźstetsdz dźʘ11,5% (*p<0,05),* ʘlz Γ 2 ' Γ 3 ɢtedztʃʘƮ ï dźʘ19,8% (*p<0,001).*

ʊʘʙdzɕɥʷ 2.5

ş 'dź Ş'fŋsᴵ dʝʔŞtsɥɕls'ɘ ɘ Ştetsɘ' ʰ lztɛ'ɘ ʟʘʟɢtsнtsɘlzɘʘdźdźʷ Ştstedʒsɘts' нtsʙʘɘŞɕ

ʄ 'Ştetsdźtʃtsɘ'ls lz tɛ'ʟdźɕƮ Ş'dź Ştsfŋsʷ, ʇ/dz(M Ñm, n=6)

Ɉ ʝtɛ'tsн нtsfŋdźнlz	ʇ tedztʃɕ lsɘʘaɕdz			
	ş	Γ 1	Γ 2	Γ 3
2 lsɕɣdź	11,08 Ñ0,33	12,35Ñ0,31*	13,27 Ñ0,35**	13,28 Ñ0,19***
4 lsɕɣdź	12,02 Ñ0,41	12,87Ñ0,35	13,88 Ñ0,30**	13,97Ñ0,35**
6 lsɕɣdźɘ	12,05 Ñ0,23	12,80 Ñ0,27	13,55 Ñ0,19***	14,08 Ñ0,15***
	p<0,05	ï	ï	ï

ʏ ʝtɕj ʟ ɥtslsɕtɕɕ lsɕɣdź tʃ'fŋdźʷ ʟɢtsнtsɘlzɘʘdźdźʷ Ştstedʒsɘts' нtsʙʘɘŞɕ ʄ 'Ştetsdźtʃtsɘ'ls lz tɛ'ʟdźɕƮ нtsʟʘƮ ɘ tstɛɢʘdźʟdʒ ʰ lztɛ'ɘ ɘɕʷɘdʝdźs ʷɘɕʰ ʝ ʷ'ʟ'tsdźsɢ'ɥdźsɢts dʝʔŞtsɥɕlstsʟlz. Ɉ tɛɕ ɥᴵ tsdʒz Ş'dź Ş'fŋsᴵ dʝʔŞtsɥɕls'ɘ lz Ştetsɘ' Γ 1 ɢtedztʃɕ ʙlzdźʘ ɘɕʰ tsᴮ, tʃtstɛ'ɘdźʷdźs ʟ Ştsdźstetsdʝdʒdźʘ7,0%, lz Γ 2 ɢtedztʃ' ī dźʘ15,5% (*p<0,001)* ' lz Γ 3 ï 16,2% (*p<0,001).*

ɕ ɘɕʰ ʝ ʟʘɢʘdź dźsɢts dʝʔŞtsɥɕlstsʟlz fŋʃtsfŋsʝ tɛ'ɢʘdźsfŋ lz ʰ lztɛ'ɘ нtsfŋdźнdźɕƮ ɢtedztʃ ' ʮʝtɕj ʟ 6 lsɕɣdźɘ fŋʃtsfŋsʝtɕjɣʝdź. ɿtsŞtɕjdʒʘ dźʘdʒɕ ɘfŋsʘdźsɘdʝdźs, ʰ ts Ş'dź Ş'fŋsᴵ dʝʔŞtsɥɕls'ɘ lz Ştetsɘ' ʰ lztɛ'ɘ Γ 1 ɢtedztʃɕ ʟʙ'dźʰ lzɘʘdźʘfŋ, tʃtetslsɕ ş ɢtedztʃɕ dźʘ6,2%, lz Γ 2 ɢtedztʃɕ ï dźʘ12,4% (*p<0,001)* ' lz Γ 3 ɢtedztʃɕ ī dźʘ16,8% (*p<0,001).*

ʄ lsɣʝ, ʘdźʘdźʟ ɥɕʷtetsɘtsɢts dʒʘsʝtɛ'ʘdźz нʘ tʃ'нfŋsʘɘlz ɘɘʘɣʘsɕ, ʰ ts ɘ'tetsɢ'нdʝ ʟʙ'dźʰ ʝdźdźʷ Ş'dź Ştsfŋs' dʝʔŞtsɥɕls'ɘ lz Ştetsɘ' ɘ'нʙlzɘʘdźsfŋʷ dźɕʰ ʝ lz ʰ lztɛ'ɘ Γ 2 ' Γ 3 ɢtedztʃ, ʷŞ' tslstɛɕdʒzɘʘdźɕ Ştstedʒsɘlz нtsʙʘɘŞlz нts tɛʘɥ'tsdźz ʟ tetsʟtɛʘƮlzdźŞlz 5,0 ' 7,5 dʒɢ/Şɢ ŞtsdząʝdźstɛʘlS'ɘ, lstsн' ʷŞ ɘʝdźɕɥɕdźʘ ɥᴵtsɢts tʃtsŞʘʟdźɕŞʘ lz Ştetsɘ' Γ 1 ɢtedztʃɕ, ʷŞɕdʒ ʟɢtsнtsɘlzɘʘdźɕ Ştstedʒsɘlz нtsʙʘɘŞlz ʄ 'Ştetsdźtʃtsɘ'ls lz нtsʟ' 2,5 dʒɢ/Şɢ ŞtsdząŞtstedʒɘ ʙlzdźs dʝ ɘ'tetsɢ'нdʝ. ʄ lsɣʝ, ɘɘʘɣʘdʒs, ʰ ts ʷɘɕʰ ʝ dʝʔŞtsɥɕlstsʟlz ɘ Ştetsɘ' ʰ lztɛ'ɘ Γ 2 ' Γ 3 ɢtedztʃ ʙlzdźɕ tsʟdźʘŞtsᴮ tʃ'нɘɕʰ ʝdźdźʷ ʟʘƮɕfŋdźɕƮ dʒƮʘdźʟdʒ'ɘ tstɛɢʘdźʟdʒz dźʘ н'ᴮ ɢtsн'ɘʝdź dźsɢts fŋstɕjfŋz, ɘɕŞdźɕŞʘdźsɢts нtsʙʘɘŞtsᴮ ʄ 'Ştetsdźtʃtsɘ'lsz lz ɘ'нtʃtsɘ'нdźɕƮ нtsʟʘƮ.

Біохімічні показники крові щурів за внесення до раціону кормової добавки Мікроліповіт у різних кількостях. [illegible] ([illegible] 2.6), [illegible] 69,0±1,3 – 70,1±1,2 [illegible] [illegible]

[illegible] 2,5 [illegible] 2, 4 [illegible] 6 [illegible] $_1$ [illegible] 70,1 ± 1,0 – 71,0 ± 0,8 [illegible] .

[illegible] 5,0 [illegible] $_2$ [illegible] (2 [illegible]) [illegible] 14,3% (*p<0,001).*

[illegible] 2.6

[illegible] (M ± m, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	69,0 ± 1,3	70,1 ± 1,0	78,9 ± 1,0***	82,0 ± 0,9***
4 [illegible]	69,9 ± 0,9	70,8 ± 1,0	85,9 ± 0,7***	77,1 ± 0,8***
	–	–	*p<0,001*	*p<0,01*
6 [illegible]	70,1 ± 1,2	71,0 ± 0,8	82,1 ± 1,1***	73,8 ± 1,0**
	–	–	*p<0,001*	*p<0,001*

[illegible] (... 4 [illegible]) [illegible] $_2$ [illegible]

[illegible] 22,9% ($p<0,001$), [illegible] 8,9% ($p<0,001$).

[illegible] $_2$ [illegible]

[illegible] 17,1% ($p<0,001$), [illegible] $_2$ [illegible] 4,6%.

[illegible] $_3$ [illegible] 7,5 [illegible] 18,8% ($p<0,001$), [illegible] 3,9% [illegible] $_2$ [illegible]

[illegible] 4 [illegible] 6 [illegible] $_3$ [illegible] 77,1 ± 0,8 [illegible] 73,8 ± 1,0 [illegible] 9,0% [illegible] 5,3% ($p<0,01$), [illegible]

[illegible]

[illegible] 2.7, [illegible]

[illegible] 2.7

[illegible], [illegible] (M Ñm, n=6)

[illegible]	[illegible]			
	ş	Γ 1	Γ 2	Γ 3
2 [illegible]	29,73 Ñ0,17	29,03 Ñ0,63	33,78 Ñ0,57***	35,13 Ñ0,19***
4 [illegible]	29,92 Ñ0,46	29,72 Ñ0,43	36,18 Ñ0,46***	30,32 Ñ0,52
6 [illegible]	30,33 Ñ0,45	30,17 Ñ0,61	34,93 Ñ0,63***	34,03 Ñ0,66

[illegible] 29,73 Ñ 0,17[illegible] [illegible] 30,33 Ñ 0,45 [illegible] 6 [illegible].

[illegible] 2,5 [illegible].

[illegible] 5,0 [illegible], [illegible] 13,6% (*p<0,001*) [illegible]. [illegible] 4 [illegible] 36,18 Ñ 0,46 [illegible] 21,0% (*p<0,001*) [illegible].

[illegible] 6 [illegible], [illegible] Γ 2 [illegible], [illegible] ş [illegible] 15,2% (*p<0,001*) [illegible].

[illegible] Γ 2 [illegible]

[illegible].

[illegible] 3 [illegible] 7,5 [illegible] 18,2% ($p<0,001$), [illegible].

[illegible] (4 [illegible] 6 [illegible]) [illegible] 30,32 Ñ 0,52 [illegible] 34,03 Ñ 0,66 [illegible] 21,4% [illegible] 12,2%.

[illegible] 5,0 ї 7,5 [illegible].

[illegible].

[illegible] 2,5; 5,0 [illegible] 7,5 [illegible] 2.8. [illegible] 2.9.

[illegible] 2.8 [illegible].

[illegible] 2,5 [illegible] 5,0 [illegible] 1 [illegible] 2 [illegible].

[illegible]

[illegible] 3 [illegible], [illegible] 7,5 [illegible] [illegible], [illegible], [illegible]. [illegible].

[illegible] 2.8

[illegible]

[illegible], [illegible] (M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	1,13 Ñ0,08	1,18 Ñ0,05	1,24 Ñ0,05	1,02 Ñ0,06
4 [illegible]	1,14 Ñ0,04	1,19 Ñ0,04	1,23 Ñ0,05	1,02 Ñ0,03*
6 [illegible]	1,12 Ñ0,03	1,20 Ñ0,05	1,25 Ñ0,05*	1,04 Ñ0,05

[illegible], [illegible] ([illegible] 3.3.1.9) [illegible]

[illegible], [illegible] 0,94 Ñ 0,04 [illegible] 0,99 Ñ 0,04 [illegible], [illegible]

[illegible], [illegible] 2 [illegible] 4 [illegible]. [illegible] 5,0 [illegible] 10,6% ($p<0,05$). [illegible]

[illegible] ([illegible]) [illegible].

[illegible] 2.9

[illegible]

[illegible] /[illegible](M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
2 [illegible]	0,94 Ñ0,04	0,93 Ñ0,04	1,04 Ñ0,02*	0,99 Ñ0,04
4 [illegible]	0,95 Ñ0,04	0,96 Ñ0,04	1,05 Ñ0,02*	1,01 Ñ0,03
6 [illegible]	0,99 Ñ0,04	0,98 Ñ0,04	1,08 Ñ0,01	1,02 Ñ0,04

[illegible] ([illegible]) [illegible] ([illegible]). [illegible].

[illegible] 2.10 [illegible] 5,16 Ñ 0,24 [illegible] 5,05 Ñ 0,24 [illegible] /[illegible] [illegible].

[illegible] 2,5 [illegible] 2 [illegible] [illegible] 1 [illegible]. [illegible].

[illegible] 4 [illegible] 6 [illegible] [illegible] 1 [illegible]

[illegible].

[illegible] 2.10

[illegible] (M Ñm, n=6)

[illegible]	[illegible]			
	[illegible]	Г$_1$	Г$_2$	Г$_3$
2 [illegible]	5,16 Ñ0,24	5,54 Ñ0,17	6,50 Ñ0,22**	6,45 Ñ0,26**
4 [illegible]	5,50 Ñ0,38	5,25 Ñ0,22	7,10 Ñ0,24**	6,09 Ñ0,28
6 [illegible]	5,05 Ñ0,24	5,01 Ñ0,23	6,95 Ñ0,25***	5,99 Ñ0,22**

[illegible] 5,0 [illegible], [illegible] Г$_2$ [illegible]. [illegible] Г$_2$ [illegible] 26,0% (*p<0,01),* [illegible] Г$_2$ [illegible].

[illegible] 4 [illegible] 29,0% (*p<0,01),* [illegible] 6 [illegible] 37,6% (*p<0,001),* [illegible]. [illegible] 5,0 [illegible].

[illegible] Г$_3$ [illegible] 7,5 [illegible]. [illegible] Г$_3$ [illegible] 25,0% (*p<0,01).*

[illegible] Г$_3$ [illegible]

ͽfrqdɮsʕlslzͽϴdɮdžʷ Gdž ʕtsLɋ lz ʕɋʰ ʝɰdɮɋʕlz ʰ lztɕͽ Lϴ ͽtʃdɮɋͽlz ͽɋfrjsʕts' HtsLɋ ʿdɮGtɕʝ H ʿʿdɮsʿͽ ʕtstɕdɮsͽts' HtsBϴͽʕɋ ʝ ʿʕtɕtsdžtʃtsͽʿls.

ʅ dɮϴͽʝ Hʝ dɮɋ͞ lz lsϴBdɮɋɰʿ 2.11 ͽɋHdɮs, ʰ ts ͽdʒfrjs ͞tsdʝ frjsʝ tɕtsdžlz lz ʕtɕtsͽʿ ʰ lztɕͽ ʕtsdɮstɕtsdž dɮs' Gtɕdžtʃɋ dʝ ͽɋ͞tsHɋͽ Lϴ dʒ ɣʿ ʷʷ Lʿtsdɮ tsGʿɰdɮs' dɮstɕdʒɋ Hdžʷ Hϴdɮ tsGts ͽɋHlz lsͽϴɑɋdɮʿ ʕtsdɮɋͽϴͽfrjʷ lz tɕʿLdž tʃʝ tɕʿtsHɋ ʝʕfrtʃʝ tɕɋdʒ dɮslz ͽʿH 2,77 Ñ0,25 Hts 2,81 Ñ0,22 dʒdʒsdž /dɮ

ʊϴBdɮɋɰʷ 2.11

ʅ dʒfrjs LϴGϴdž dɮsGts ͞tsdʝ frjsʝ tɕtsdžlz ͽ ʕtɕtsͽʿ ʰ lztɕͽ LϴLGtsHtsͽlzͽϴdɮdžʷ ʕtstɕdʒsͽts' HtsBϴͽʕɋ ʝ ʿʕtɕtsdžtʃtsͽʿls lz tɕʿLdɮɋ͞ ʕʿdž ʕtsfrjsʷ͞, dʒdʒsdž /dɮ(M Ñm, n=6)

ʇ ʝtɕʿtsH HtsfrqdžHlz	ʇ tɕdžtʃɋ lsͽϴɑɋdɮ			
	ʂ	ʃ 1	ʃ 2	ʃ 3
2 lsɋɣ dž	2,80 Ñ0,21	3,21 Ñ0,22	3,35 Ñ0,18	3,20 Ñ0,19
4 lsɋɣ dž	2,81 Ñ0,22	3,15 Ñ0,20	3,30 Ñ0,16	3,11 Ñ0,30
6 lsɋɣ džͽ	2,77 Ñ0,25	3,10 Ñ0,20	3,35 Ñ0,22	3,01 Ñ0,17

ʅ ɋʕtstɕɋfrjsϴdɮdžʷ ʕtstɕdʒsͽts' HtsBϴͽʕɋ ʝ ʿʕtɕtsdžtʃtsͽʿls ͽ tɕϴɰʿtsdž ʰ lztɕͽ lz tɕʿLdɮɋ͞ ʕʿdž ʕtsfrjsʷ͞ tʃtɕtslsʷGtsdʒ ʰ ʝfrjsɋ lsɋɣ džͽ ʝʕfrtʃʝ tɕɋdʒ dɮslz, frjlslsʿͽts dʝ ͽtʃdɮɋͽϴdɮs dɮϴ ͽdʒfrjs ͞tsdʝ frjsʝ tɕtsdžlz lz ʕtɕtsͽʿ lsͽϴɑɋdɮ ʃ 1 ; ʃ 2 ʿ ʃ 3 HtsfrqdžHdɮɋ͞ Gtɕdžtʃ. ʅ ʝLdɮϴɰdʝ tʃʿHͽɋʰ ʝdɮdžʷ ϴBfrjsdž lsdɮɋ͞ ͽʝdɮɋɰɋdɮ ͽdʒfrjslz ͞tsdʝ frjsʝ tɕtsdžlz lz HtsfrqdžHdɮɋ͞ Gtɕdžtʃ lsͽϴɑɋdɮ, tʃtstɕͽdžʷdɮs L ʂ Gtɕdžtʃtsᴿ , dʒsɣ dɮɋͽts tʃtsͽðʷLϴdɮs L HtsHϴlsʕtsͽɋdʒ dɮϴH͞tsHɣʝ dɮdžʷdʒçLϴɋʰ ʝdɮɋ͞ ɣɋtɕͽè lz lstɕϴͽdɮɋ? lstɕϴʕls dɮϴBtstɕϴlststɕdɮɋ͞ lsͽϴɑɋdɮ

ʃ lsɣʝ, lz tɕʝ Llzdž lsϴlsʿ tʃtɕtsͽʝ Hʝ dɮɋ͞ HtsfrqdžHɣʝ dž dʝ ͽɋʷͽdʝ dɮs ͽʿtɕtsGʿHdɮɋ͞ Ldʒdɮlz ʕʿdž ʕtsfrjsʿ ʝtɕɋlstɕtsɰɋlsʿͽ ʿ ͽdʒfrjslz Gʝ dʒsGdɮsBʿdžlz ͽ ʕtɕtsͽʿ ʰ lztɕͽ HtsfrqdžHdɮɋ͞ Gtɕdžtʃ lz tɕʿLdž tʃʝ tɕʿtsHɋ ʝʕfrtʃʝ tɕɋdʒ dɮslz, tʃtstɕͽdžʷdɮs L ʕtsdɮstɕtsdʝ dʒ dɮϴ lsdž LGtsHtsͽlzͽϴdɮdžʷ ʕtstɕdʒsͽts' HtsBϴͽʕɋ ñʃ ʿʕtɕtsdžtʃtsͽʿlsò lz tɕʿLdɮɋ͞ ʕʿdž ʕtsfrjsʷ͞, ʰ ts dʒsɣʝ ͽʕϴlzͽϴlsɋ dɮϴͽʿHfrjlsdžfrjsᴵ tʃtstɕdžʰ ʝdž ʕɋfrqdʝ ͽts-lstɕϴdžfrtʃtstɕlsdɮs' ʷʷlzdʕɰʿ' ʕtɕtsͽʿ lz lsͽϴɑɋdɮ ʋ ʰ lztɕͽ ʃ 2- ʿ ʃ 3-Gtɕdžtʃ, ʷʕʿ tslstɕɋdʒlzͽϴdɮɋ ʕtstɕdʒsͽlz HtsBϴʕlz Hts tɕϴɰʿtsdžlz L tɕtsLtɕϴƮlzdʕlz 5,0 ʿ 7,5 dʒ⁄ʕG ʕtsdɮʝ dɮstɕϴlsʿͽ, ͽʿHLdɮϴɰϴdɮɋ LϴʕtsdɮsdʒtɕdʝLtɕtsfrjsϴdɮdžʷ ʕʿdž ʕtsfrjsʿ dʝ?ʕtsɰɋlsʿͽ lz ʕtɕtsͽʿ ɰʝ tɕʝ L 4 ʿ 6 lsɋɣ džͽ lz frjtɕʝ Hdž tsdʒlz dɮϴ12,4% (p<0,001) ʿ 16,8% (p<0,001), tʃtstɕͽdžʷdɮs L

[illegible]

[illegible] 5,0 [illegible] 2,6% [illegible] 17,1% (p<0,001) [illegible] 21,0% (p<0,001). [illegible] 5,0 [illegible]

[illegible] 2, 4 [illegible] 6 [illegible] (26,0%, 29,0% [illegible] 37,6%) [illegible] 5,0 [illegible]

Морфологічні показники крові та приріст маси тіла бугайців за згодовування кормової добавки Мікроліповіт у різних кількостях. [illegible] 2.12, [illegible]

[illegible] 2.12

[illegible], [illegible] (MÑm, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	5,41Ñ0,07	5,44Ñ0,08	5,48Ñ0,07	5,47Ñ0,09
14 [illegible]	5,48Ñ0,10	5,67Ñ0,11	5,96Ñ0,11**	6,01Ñ0,12**
			p<0,001	*p<0,01*
16 [illegible]	5,62Ñ0,11	6,11Ñ0,12**	6,28Ñ0,13***	6,30Ñ0,12***
		p<0,001	*p<0,001*	*p<0,001*
18 [illegible]	5,85Ñ0,11*	6,21Ñ0,13**	6,49Ñ0,14**	6,57Ñ0,13***
	p<0,01	*p<0,001*	*p<0,001*	*p<0,001*

[illegible] 5,41 [illegible] 5,85 [illegible] 12 ī 18 [illegible].

[illegible] 1 [illegible] 2,5 [illegible] 12- [illegible] 14- [illegible].

[illegible] 16- [illegible] 18- [illegible] 1 [illegible] 8,7% [illegible] 6,2% [illegible] *p<0,05*. [illegible] 12,3% [illegible] 14,2% [illegible] *p<0,001* [illegible] 16 [illegible] 18 [illegible]

[illegible]

[illegible] 2 [illegible] 5,0 [illegible]. [illegible] 12- [illegible]. [illegible] 14- [illegible]: [illegible] 14- [illegible] 8,8%(*p<0,01);* [illegible] 16- [illegible] 11,7% (*p<0,001)* [illegible] 18 [illegible] 10,9% (*p<0,01)*

[illegible] 2 [illegible]. [illegible] 5,0 [illegible] 14 [illegible] 8,8% (*p<0,01),* [illegible] 16 [illegible] 14,6% (*p<0,001)* [illegible] 18 [illegible] 18,4% (*p<0,001),* [illegible].

[illegible] 2 [illegible] 5,0 [illegible].

[illegible] 3 [illegible] 7,5 [illegible]. [illegible] 12- [illegible] ʙƖzɢʘʔ ɥʿɘ ɼ $_3$ ɢtɑʣʈʄɕ ɖʑ ɘɕ͞ʦʜɕɖʘʟʘɖʒ ɤʿ ɘʝ ɖʑɕɥɕɖʑʕʦɖʑʦtʦɖʑ ɖʦʾ ɢtɑʣʈʄɕ lsɘʘtɑɕɖʑ ʿ fɲʦʘɖʦɘɕɖʘ 5,47 ï 5,41 ʊ/ɖʑ ɟ tɑʦlsʝ, ɥʝtɑʝ ʟ 2 ɖʒʿfɲʸɥʿ ʝʕfɲʄʝtɑɕɖʒʝ ɖʑlsʑ ʟɖʘɥʝ ɖʑʷ ɥᴵ ʦɢʦ ʈʄʦʕʘʟɖʑɕʕʘ ʑ ʕtɑʦɘʿ 14-ɖʒʿfɲʸɥɖʑɕ͞ ʙƖzɢʘʔ ɥʿɘ ʙƖzɖʦ ʙʿɖʑʰ ɕɖʒ ɖʘ 9,9% (*p<0,01*), ʑ 16-ɖʒʿfɲʸɥɖʑɕ͞ ï ɖʘ 15,2% (*p<0,001*), ʑ 18- ɖʒʿfɲʸɥɖʑɕ͞ ī ɖʘ 21,0% (*p<0,001*), ɖʑɤ ɖʘ ʈʄʦɥʘlsʕʑ ʜʦfɲɖʑʜʑ, ʰ ʦ ʈʄʿʜlsɘʝtɑʜɤʑʿ ʟʘɖʑɤɖʑfɲʦᴵ ʿɖʑlsʝɖʑfɲɕɘɖʦfɲʦʿ ʝtɑɕlstɑʦɥɕlsʦʈʄʦʝʟʑ ʑ ʙƖzɢʘʔ ɥʿɘ ɼ $_3$ ɢtɑʣʈʄɕ ɘʿʜ lstɑɕɘʘɖʦfɲʦʿ ʟʘfɲʦʦfɲʑɘʘɖʑɖʑʷ ʕʦtɑɖʒʦɘʦʾ ʜʦʙʘʕɕ ʄ ʿʕtɑʦɖʑʈʄʦɘʿls ɖʘɘʿʜɢʦʜʿɘɖʑ.

ɟ ʦtɑʿɘɖʑʷɖʦ ʟ ʙƖzɢʘʔ ɥʷɖʒɕ ʂ ɢtɑʣʈʄɕ, ʑ ʕtɑʦɘʿ lsɘʘtɑɕɖʑ ɼ $_3$ ɢtɑʣʈʄɕ ʕʿɖʑ ʕʿfɲʦᴵ ʝtɑɕlstɑʦɥɕlsʿɘ ʈʄʿʜɘɕʰ ʑɘʘɖʘfɲʷ ɖʘ 14 ɖʒʿfɲʸɥᴵ ɤɕlslsʷ ɖʘ 9,7% (*p<0,01*), ɖʘ 16 ɖʒʿfɲʸɥᴵ ï ɖʘ 12,1% (*p<0,001*), ɖʘ 18 ɖʒʿfɲʸɥᴵ ɤɕlslsʷ ï ɖʘ 12,3% (*p<0,001*).

ɹ ʿʜɖʦfɲɖʦ ʟɖʒʿɖʑʕʦɖʑɥʝɖʑʦtɑʘɥʿʾ ɢʝɖʒʦɢɖʦʙʿɖʑ ʕtɑʦɘʿ ʙƖzɢʘʔ ɥʿɘ ɘʦɖʑɕɖʑfɲʕʦʾ ɖʒʘʷfɲɖʦʾ ʈʄʦtɑʦʜɕ ʟʘʕɖʑ ɥɖʦɢʦ ʈʄʝtɑʿʦʜʑ ɘʿʜɢʦʜʿɘɖʑ, lsʦ ɖʑʦʙ͞ʿʜɖʦ ʟʘʟɖʘɥɕlsɕ, ʰ ʦ ʾʾ ɘʝ ɖʑɕɥɕɖʑɕ ʑ ʕʦɖʑʦtɑʦɖʑ ɖʦʾ ɢtɑʣʈʄɕ lsɘʘtɑɕɖʑ ʑ tɑʿʟɖʑ ʈʄʝtɑʿʦʜɕ ʝʕfɲʄʝtɑɕɖʒʝ ɖʑlsʑ ʙƖzɖʑɕ ɘ ɖʒʝɤʘ͞ ʟɖʘɥʝ ɖʑ ʷʷ ʿʟʿʦɖʦɢʿɥɖʦʾ ɖʦtɑɖʒɕ ʜɖʑʷ ʜʘɖʦɢʦ ɘɕʜʑ ʿ ʕʦɖʑɕɘʘɖʑɕfɲ ɘʿʜ 98,11 ʜʦ 100,21 ɢ/ɖʑ (lsʘʙɖʑɕɥʷ 2.13).

ʋ ʙƖzɢʘʔ ɥʿɘ ʜʦfɲɖʑʜɖʑɕ͞ ɢtɑʣʈʄ ɘɖʒʿfɲʦ ɢʝɖʒʦɢɖʦʙʿɖʑ ʑ ʕtɑʦɘʿ ʑ ɘɕ͞ʿʜɖʑɕʔ (ʿɖʑʦʘʕlsɖʑɕʔ) ʈʄʝtɑʿʦʜ ʈʄʦɥʘlsʕʑ ʝʕfɲʄʝtɑɕɖʒʝ ɖʑlsʑ ʟɖʘ͞ʦʜɕɘfɲʷ ʑ ɘʝ ɖʑɕɥɕɖʘ͞ 97,06 ï 99,43 ɢ/ɖʑ, ʰ ʦ ɘʿʜʈʄʦɘʿʜʘɖʦ ʟɖʘɥʝ ɖʑ ɥᴵ ʦɢʦ ʈʄʦʕʘʟɖʑɕʕʘ ʑ ʕtɑʦɘʿ ʕʦɖʑʦtɑʦɖʑ ɖʑɕ͞ lsɘʘtɑɕɖʑ.

ʋ ʙƖzɢʘʔ ɥʿɘ ɼ $_1$ ɢtɑʣʈʄɕ ʟʘʕɖʑ ɥɖʦɢʦ ʈʄʝtɑʿʦʜʑ ɘʿʜɢʦʜʿɘɖʑ, ʷʕʿ ʦlstɑɕɖʒʑɘʘɖʑɕ ɖʒʕtɑʦʝɖʑɖʒʝɖʑlsɖʑ ʈʄʿʜɢʦʜʿɘɖʑ ɘ lsʦɖʒʑ ɥɕfɲɖʑ ʟ ɘɖʒʿfɲʦʦɖʒ ɖʘʕlsʘlsʑ ʟʘɖʑʟʘ ʑ ɘɕɢɖʑʷʜʿ ʜʦʙʘʕɕ ʄ ʿʕtɑʦɖʑʈʄʦɘʿls ʟ tɑʦʟtɑʘ͞ʑɖʑʕʑ 2,5ɖʒɢ/ʕɢ ʕʦɖʑɥʝɖʑʦtɑʘlsʿɘ ɘʝ ɖʑɕɥɕɖʘ ʕʦɖʑɥʝɖʑʦtɑʘɥʿʾ ɢʝɖʒʦɢɖʦʙʿɖʑ ʑ ʕtɑʦɘʿ lsɘʘtɑɕɖʑ ɥʿʿʾ ɢtɑʣʈʄɕ ɘʿtɑʦɢʿʜɖʦ ʈʄʿʜɘɕʰ ʑɘʘɖʘfɲʷ ɖʑɕʰ ʝ ɥʝtɑʝ ʟ 4 ʿ 6 ɖʒʿfɲʸɥʿ ʟɢʦʜʦɘʑɘʘɖʑɖʑʷ. ʋ ɥʿ ʈʄʝtɑʿʦʜɕ ʜʦfɲɖʑʜʑ ʟɖʘɥʝ ɖʑʷ ɥᴵ ʦɢʦ ʈʄʦʕʘʟɖʑɕʕʘ ʟtɑʦfɲʦʘɖʦ ɘʿʜʈʄʦɘʿʜɖʦ ɖʘ 3,3% (*p<0,05*) ʿ 4,1% (*p<0,01*), ʈʄtɑʦlsɕ ʕʦɖʑʦtɑʦɖʑ, ʘ ʈʄʦtɑʿɘɖʑʷɖʦ ʟ ʈʄʦɥʘlsʕʦɖʒ ʜʦfɲɖʑʜʑ ï ɖʘ 5,9% (*p<0,05*) ʿ ɖʘ 7,1% (*p<0,0*).

ʋ ɘʿʜɢʦʜʿɘʝ ɖʑ ɖʦɢʦ ɖʒʦɖʦʜɖʑʷʕʑ ɼ $_2$ ʿ ɼ $_3$ ɢtɑʣʈʄ ɘʦɖʑɕɖʑfɲʕʦʾ ɖʒʘʷfɲɖʦʾ ʈʄʦtɑʦʜɕ, ʷʕɕɖʒ ʜʦ tɑʘɥʿʦɖʑ ɘɖʦfɲɕɖʑɕ ʕʦtɑɖʒʦɘʑ ʜʦʙʘʕʑ ʟ tɑʦʟtɑʘ͞ʑɖʑʕʑ ɘʿʜʈʄʦɘʿʜɖʦ 5,0 ʿ 7,5 ɖʒɢ/ʕɢ ʕʦɖʑɥʝɖʑʦtɑʘlsʿɘ, ʕʦɖʑɥʝɖʑʦtɑʘɥʿʷ ɢʝɖʒʦɢɖʦʙʿɖʑ ʑ ʕtɑʦɘʿ

[illegible].

[illegible] 2.13

[illegible], [illegible] (M±m, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	98,11±0,85	97,45±0,88	99,43±0,91	97,06±0,84
14 [illegible]	99,11±0,91	100,53±1,04	103,11±1,09**	103,86±1,11**
		p<0,05	*p<0,01*	*p<0,001*
16 [illegible]	99,87±0,95	103,24±1,10*	105,45±1,16***	105,14±1,19**
		p<0,001	*p<0,001*	p<0,001
18 [illegible]	100,21±0,98	104,33±1,12**	107,52±1,18***	107,11±1,22***
		p<0,001	*p<0,001*	*p<0,001*

[illegible] 14 [illegible] 2 [illegible] 3,7%; [illegible] 16 [illegible] 6,1% (*p<0,001*) [illegible] 18 [illegible] 8,15 [illegible] *p<0,001.*

[illegible] 4,0%; 5,5% [illegible] 7,3% [illegible] *p<0,01* [illegible] *p<0,001.*

[illegible] 3 [illegible] 7,5 [illegible] 2 [illegible] 3 [illegible] 7,0%, [illegible] 4 [illegible] 8,3%, [illegible] 6 [illegible]

10,4% [illegible] $p<0,01$ [illegible] $p<0,001$, [illegible] 5,0 [illegible] 7,5 [illegible]

[illegible] 5,0 [illegible] 7,5 [illegible]

[illegible]

[illegible] 2.14).

ʊʘʙʤʗʯʷ 2.14

ʂ ʽʣ ʢʽʩʲˡ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʙʑɢʘʔʯʽɘ ʟʘʟɢʦʜʦɘʑɘʘʣʤʷ ʢʦʨʤʒʦɘʦʾ ʜʦʙʘʤʢʗ

ʆ ʽʢʨʦʣʑʧʦɘʽʪ ʑ ʨʗʟʤʗʕ ʢʽʣ ʢʦʩʲʷʕ, ʇ/ʣ (MÑm, n=10)

ʇ ʽʢ ʪɘʘʨʗʣʑ	ʇʨʣʑʧʗ ʪɘʘʨʗʣʑ			
	ʂ	ʛ 1	ʛ 2	ʛ 3
12 ʤʒʽʩʲʷʯʽɘ	7,14Ñ0,35	7,23Ñ0,38	7,18Ñ0,26	7,21Ñ0,24
14 ʤʒʽʩʲʷʯʽɘ	7,24Ñ0,38	7,56Ñ0,44	8,14Ñ0,56	8,21Ñ0,49
16 ʤʒʽʩʲʷʯʽɘ	7,36Ñ0,40	7,76Ñ0,52	8,94Ñ0,61*	9,06Ñ0,70*
			p<0,01	*p<0,01*
18 ʤʒʽʩʲʷʯʽɘ	7,42Ñ0,42	8,04Ñ0,53	10,46Ñ0,64***	10,07Ñ0,71**
			p<0,001	*p<0,001*

ʇ ʽʨʦɢʽʜʥ ʧʽʜɘʗʰ ʝʤʣʤʷ ʢʽʣ ʢʦʩʲʽ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʪɘʘʨʗʣʑ ʛ 2 ɢʨʣʑʧʗ ʣʘ 21,5%, ʧʨʦʪʗ ʢʦʣʦʨʦʣ ʣʗʕ ɘʝ ʤʗʯʗʣʑ ɘʗʷɘʥ ʤʦ ʣʘ 16 ʤʒʽʩʲʷʯˡ ʮʗʪʪʷ. ʇ ʜʣʘʢ, ʣʘʔ ɘʗʰ ʝ ʟʣʘʯʝ ʤʣʤʷ ˡ ʦɢʦ ʧʦʢʘʟʣʗʢʘ ʑ ʢʨʦɘʽ ʙʑɢʘʔʯʽɘ ʜʘʣʦʾ ɢʨʣʑʧʗ ɘʽʜʟʣʘʯʘʗ ʣʘ 18 ʤʒʽʩʲʷʯˡ ʮʗʪʪʷ. ʈ ʽʟʣʗʯʷ ʟʨʦʩʲʘʣʤʷ ʟʣʘʯʝʣʑ ˡ ʦɢʦ ʧʦʢʘʟʣʗʢʘʣʒʮ ʢʦʣʦʨʦʣʑ ʣʦʬ ʽ ʛ 2 ɢʨʣʑʧʘʒʗ ʪɘʘʨʗʣʑʩʘʣʦɘʗʣʘ41,0%.

ʇ ʦʨʽɘʣʑ ʬ ʯʗ ʽʟ ɘʗʕʽʜʣʗʒ ʧʝ ʨʽʦʜʦʣʒ ʢʽʣ ʢʽʩʲˡ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʪɘʘʨʗʣʑ ʛ 2 ɢʨʣʑʧʗ ʯʝʨʝʟ 4 ʤʒʽʩʲʷʯʽ ʙʑʣʘɘʽʨʦɢʽʜʣʦ ɘʗʰ ʦʬ ʣʘ 24,5%, ʘʯʝʨʝʟ 6 ʤʒʽʩʲʷʯʽɘ ʝʢʩʧʝʨʗʣʝʣʪʑ ï ʣʘ45,7%, ʧʨʗ *p<0,01.*

ʈ ʝʟʑʣʑ ʪʘʪʗ ʜʦʩʯʣʽʜʮ ʝʤʣʤʷ ʢʽʣ ʢʦʩʲʽ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʙʑɢʘʔʯʽɘ ʛ 3 ɢʨʣʑʧʗ ɘʦʣʗʣʘʩʢʦʾ ʤʒʦʷʩʣʘʾ ʧʦʨʦʜʗ ʧʽʩʣʷ ʟɢʦʜʦɘʑɘʘʣʤʷ ʢʦʨʤʒʦɘʦʾ ʜʦʙʘʤʢʗ ʆ ʽʢʨʦʣʑʧʦɘʽʪ ʟ ʨʦʟʟʘʥʢʣʕʑʢ 7,5 ʤʒɢ/ʢɢ ʢʦʣʝʣʪʨʘʪʽɘ ʟʘʩʽʜʯʗʣʗ ʘʣʘʣʦɢʽʯʣʑ ʜʗʣʘʤʒʢʑ ɘʝ ʣʗʯʗʣʑ ˡ ʦɢʦ ʧʦʢʘʟʣʗʢʘʷʢ ʑ ʢʨʦɘʽ ʪɘʘʨʗʣʑ ʛ 2 ɢʨʣʑʧʗ ʯʝʨʝʟ 4 ʽ 6 ʤʒʽʩʲʷʯʽɘ ʝʢʩʧʝʨʗʣʝʣʪʑ. ʇ ʦʢʨʝʤʘ, ʢʽʣ ʢʽʩʲˡ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʙʑɢʘʔʯʽɘ ʛ 3 ɢʨʣʑʧʗ ʯʝʨʝʟ 4 ʤʒʽʩʲʷʯʽ ʧʽʩʣʷ ʟɢʦʜʦɘʑɘʘʣʤʷ ʤʒʝʝʣʘʣʤʦʦ-ɘʽʪʘʤʒʣʦɢʦ ʧʨʝʤʒʢʩʑ ʟʙʽʣʰ ʑɘʘʣʘʩʷ ʣʘ 23,1% (*p<0,01),* ʧʦʨʽɘʣʷʣʦ ʟ ʢʦʣʦʨʦʣʦʬ ɢʨʣʑʧʦʬ, ʘ ʯʝʨʝʟ 6 ʤʒʽʩʲʷʯʽɘ ï ʣʘ35,7%.

ʊʘʢʝ ɘʽʨʦɢʽʜʥ ʧʽʜɘʗʰ ʝʤʣʤʷ ʢʽʣ ʢʦʩʲʽ ʥʝ ʔʢʦʯʗʪʽɘ ʑ ʢʨʦɘʽ ʙʑɢʘʔʯʽɘ ʛ 2

ʽ ɼ 3 ɢʈʤʧ ɘʦʤʠʤʄɧ Ϛʦʼ ʤʒ̂ʷ ʄɪɥʤʦʼ ʧʃʦʈʦʜɕʃ ʤʘ ʪʤ ʪʦʈɕʃɘʘʤʦɢʦ ʟɢʦʜʦɘʫɘʘʤʤʷ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ ʆ ʽϚʈʦʤʧʦɘʽʪ ʫ ʜʦʟʘ͞ 5,0 ʽ 7,5 ʤʒɢ/Ϛɢ Ϛʦʤʠ̧Ϛʦʈʦʤʒɘ, ʤʒʦɣʆ ɘϚʘʟʫɘʘʪʃ ʤʘ ʧʃʄɪʃʤʆ ʤʤʷ ʤʆ ʔϚʦɥʃʪʦʦʧʦʆ ʟʫ ʪʘ ʧʽʜɘɕʃʰ ʆ ʤʤʷ ʤʆ ʄɪʧʆ ɥɕʷ ʽɥʤʦʼ ʈʆ ʟɕʃʄɪʪʆ ʤʪʤʦʄɪʪʽ ʦʈɢʘʤʟʤʒʫ ʪɘʘɕʤ ʧʽʜ ɘʧʤʃɘʦʤʒ ʽʤɢʈʆ ʜʽʽʤʪʽɘ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ, ʤʘʄɪʘʤʒʧʆ ʈʆ ʜ ʤʆ ɢϚʦʜʦʄɪʪʫʧ ʤʠ͞ ʷ ʦʈʦʤʒ ʤʘϚʪʘʪʽɘ ʤʒϚʈʦʪʆ ʤʆ ʤʒʆ ʤʪʽɘ, ɣʃʈʦʪʦʦʟɥʃʤʠʤʠ͞ ɘʽʪʘʤʒʤʫɘ ʽ ɕʟʘ͞ʃʰ ʆ ʤʠ͞è ɣʃʈʽɘ.

ɿ ʈʦ ʧʃʈʦʜʫϚʪʃɘʤʫ ʜʽʶ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ ʆ ʽϚʈʦʤʧʦɘʽʪ ʄɪɥʽʜɥʃʪᴵ ʜʃʤʘʤʒϚʘ ʧʈʃʈʦʄɪʪʽɘ ʤʒʘʄɪʃ ʪʽʤʘ ʙʫɢʘʔɥʽɘ ʜʦʄɪʤʜʤʠ͞ ɢʈʤʧ, ʷϚ ʦʜʤʦɢʦ ʽʟ ʧʦϚʘʟʤʠϚʽɘ ʷʽʟʽʦʤʦɢʽɥʤʦɢʦ ʄɪʪʘʤʫ ʦʈɢʘʤʟʤʒʫ. ɕ Ϛ ɘʃʧʤʠʃɘʘ ʟ ʜʘʤʠ͞ ʪʘʙʤʠɥʽ 2.15 ʤʒʘʄɪʘ ʪʽʤʘʙʫɢʘʔɥʽɘ ʫ 12-ʤʒʽʄɪʷɥʤʦʤʒʫ ɘʽɥʽ ʙʫʤʘʧʃʙʤʠʟʤʦ ʦʜʤʘϚʦɘʦʶ ʽ Ϛʦʤʠʃɘʘʤʘʄɪʷ ʫ ʤʆ ɣʘ͞ 235,1 ī 241,4 Ϛɢ. ʏʆ ʈʆ ʟ ʜɘʘ ʤʒʽʄɪʷɥʽ ʧʽʄɪʤʷ ɘϚʤʶ ɥʆ ʤʤʷ ɘ ʈʘɥʽʦʤʙʫɢʘʔɥʽɘ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ ʫ ʜʦʟʽ 2,5 ʤʒɢ/Ϛɢ Ϛʦʤʠ̧ʆ ʤʦʈʘʪʽɘ ʤʒʘʄɪʘ ʪʽʤʘ ɘʽʈʦɢʽʜʤʦ ʧʽʜɘɕʃʰ ʫɘʘʤʤʘʄɪʷ ʧʦʈʽɘʤʷʤʦ ʟ ʧʦɥʘʪϚʦɘʃʤʒ ʧʆ ʈʽʦʜʦʤʒ ʜʦʄɪʤʜʫ ɘ 1,3 ʈʘʟʘ (*p<0,001),* ɥʆ ʈʆ ʟ 4 ʤʒʽʄɪʷɥʽ ɘʦʤʘʙʫʤʘʙʽʤʰ ʦʶ ʫ 1,6 ʈʘʟʘ (*p<0,001),* ʘʫ Ϛʽʤɥʽ ɘʽʜɢʦʜʽɘʆ ʤ ʤʦɢʦ ʧʆ ʈʽʦʜʫ, ɥʆ ʈʆ ʟ 6 ʤʒʽʄɪʷɥʽɘ ī ʫ 1,9 ʈʘʟɕ (*p<0,001).*

ɪ ʽʈʦɢʽʜʤ ʟʤʘɥʆ ʤʤʷ ʟʈʦʄɪʪʘʤʤʷ ʤʒʘʄɪʃ ʪʽʤʘ ɥʃ͞ ʪʘʈɕʃʤ ʧʃʈʦʪɕʃ Ϛʦʤʪʦʈʦʤ ʤʠ͞ ɘʆ ʤʃɥɕʃʤ ɘʽʜʤʒɥʘʤʄɪʷ ɥʆ ʈʆ ʟ 4 ʽ 6 ʤʒʽʄɪʷɥʽ ʧʽʄɪʤʷ ʟɢʦʜʦɘʫɘʘʤʤʷ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ ʆ ʽϚʈʦʤʧʦɘʽʪ. ɿ ʈʃ ɥᴵ ʦʤʫ ʤʒʘʄɪʘ ʪʽʤʘ ʙʫɢʘʔɥʽɘ ʟʙʽʤʰ ʫɘʘʤʘʄɪʷ ʤʘ 3,9% ʽ ʤʘ 4,5% ʧʈʃ *p<0,05* ɘʽʜʧʦɘʽʜʤʦ. ʊϚʘʟʘʤʆ ɣʤʄɪʪᴵ ʧʽʜɘɕʃʰ ʆ ʤʤʷ ʤʒʘʄɪʃ ʪʽʤʘ ʙʫɢʘʔɥʽɘ ɼ 2 ʽ ɼ 3 ɢʈʤʧ ʄɪʧʦʄɪʪʆ ʈʽɢʘʤʘʄɪ ɥʆ ʈʆ ʟ 4 ʽ 6 ʤʒʽʄɪʷɥʽɘ ʧʽʄɪʤʷ ʟɢʦʜʦɘʫɘʘʤʤʷ Ϛʦʈʦʤʒʦɘʦʼ ʜʦʙʘɘϚɕʃ ʆ ʽϚʈʦʤʧʦɘʽʪ ʫ ʜʦʟʘ͞ 5,0 ʪʘ 7,5 ʤʒɢ/Ϛɢ Ϛʦʤʠ̧Ϛʦʈʦʤʒɘ, ʧʈʦ ʰ ʦ ʄɪɥʽʜɥʃʪᴵ ʟʈʦʄɪʪʘʤʤʷ ʘʙʄɪʦʤ ʪʤʦʼ ɘʆ ʤʃɥɕʃʤ ʤʒʘʄɪʃ ʪʽʤʘ ʪɘʘʈɕʃʤʦʙʦ͞ ɢʈʤʧ ʫ 1,6 ʈʘʟʘ ʽ ʫ 2,0 ʈʘʟɕ (*p<0,001)* ɘʽʜʧʦɘʽʜʤʦ. ɿ ʈʃ ʧʦʈʽɘʤʷʤʤʽ ʧʃʈʦʄɪʪʫ ʤʒʘʄɪʃ ʪʽʤʘ ʪɘʘʈɕʃʤ ʜʘʤʠ͞ ɢʈʤʧ ʽ ʪɘʘʈɕʃʤʘʤʒɕʃ Ϛʦʤʪʦʈʦʤ ʤʦʼ ɢʈʤʧɕʃ ɘɕʃʷɘɕʃʤʦʄɪɥ, ʰ ʦ ʫ 16 ʤʒʽʄɪʷɥʤʠ͞ ʙʫɢʘʔɥʽɘ ɼ 2 ʽ ɼ 3 ɢʈʤʧ ʧʃʈʽʄɪʪʤʒʘʄɪʃ ʪʽʤʘ ʙʫɘ ʤʘ 6,5% ʽ 7,2% (*p<0,001)* ʙʽʤʰ ɕʤʒ, ʤʣ ʫ Ϛʦʤʪʦʈʦʤ.
ʅ ʘ Ϛʽʤʆ ɥᴵ ʜʦʄɪʤʜʫ ʫ 18 ʤʒʽʄɪʷɥʤʦʤʒʫ ɘʽɥʽ ʤʒʘʄɪʘ ʪʽʤʘ ʙʫɢʘʔɥʽɘ ɼ 2 ʽ ɼ 3 ɢʈʤʧ ʧʆ ʈʆ ɘʘɥ ʘʤʘ ʤʒʘʄɪʫ ʪɘʘʈɕʃʤʒ ɢʈʤʧɕʃ ʤʘ 8,0% ʽ 8,5% (*p<0,001).*

[illegible] 2.15

[illegible], [illegible] (M±m, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible]1	[illegible]2	[illegible]3
12 [illegible]	235,1 ±3,3	240,2±3,4	238,5±3,3	241,4±3,3
14 [illegible]	303,3±3,6	313,3±3,7	317,5±3,8**	320,1±4,0**
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*
16 [illegible]	373,2±4,1	387,8±4,2**	397,4±4,3***	400,1±4,8***
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*
18 [illegible]	443,5±5,4	463,3±7,3*	479,1±8,4**	481,6±8,8**
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*

[illegible] 5,0 [illegible] 7,5 [illegible] 5,0 [illegible].

Деякі біохімічні показники крові бугайців за внесення до раціону кормової добавки Мікроліповіт у різних кількостях. [illegible]

ʧʻʜlstөqʃdʒʑᴮ lsᴵ Ɂtsdʑsʼʜdʑs-tsfŋʤslsqʃʮdʑʃɁ lsqʃfŋɁ ʻ fŋjsʘdʑfŋjsᴵ ɘȷ dʑqʃʮqʃdʑʃ tөl Ɂtөtsɘʻ; ɘqɁtsdʑʑᴮ lsᴵ lstөʘdʑfŋʧtstөlsdʑʑ tөtsdʑ, fŋʧtөqʷᴮ ʮqʃ tsʙdʒʻdʑʑ ʻdʑʰ qʃ⁼ ɘʘʮ dʑqʃɘqʃ⁼ fŋʧtsdʑʑɁ ʻ ʟʘʙȷ ʟʧȷ ʮʑᴮ lsᴵ ʧtөtsʮȷ fŋʧ ʟfŋʜʘdʑʑʷ Ɂtөtsɘʻ[ ].

ʈȷ ʟʑdʑ lsʘlsqʃ ɘqʃʟdʑʘʮȷ dʑʑʷ ɘdʒʻfŋjsʑ ʟʘɢʘdʑ dʑsɢts ʙʻdʑɁʘ ʑ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ ɘtsdʑqʃdʑfŋ Ɂtsʼ dʒôʷfŋdʑsʼ ʧtstөtsʜqʃ ʟ tsʜdʑs- ʜts ʧʻɘlststөʘtөʻʮdʑsɢts ɘʻɁʑ ʟʘʟɢtsʜtsɘʑɘʘdʑʑʷ tөʻʟdʑsʼ Ɂʻdʑ Ɂtsfŋjsʻ Ɂtstөdʒsɘtsʼ ʜtsʙʘɁqʃ ʆ ʻɁtөtsdʑʧtsɘʻls ʑ fŋɁdʑʘʜʻ tөʘʮʻtsdʑʑ ʧtөȷ ʜfŋjsʘdʑȷ dʑs ʑ lsʘʙdʑqʃʮʻ 2.16.

ʅ ʘdʒqʃ ɘfŋjsʘdʑsɘdʑȷ dʑs, ʰ ts Ɂtsdʑʮȷ dʑstөʘʮʻʷ ʟʘɢʘdʑ dʑsɢts ʙʻdʑɁʘ ʑ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ 12- dʒʻfŋʸʮdʑsɢts ɘʻɁʑ ȿ ɢtөdʑʧqʃ lsʘ ɼ 1, ɼ 2 ʻ ɼ 3 ɢtөdʑʧ Ɂtsdʑqʃɘʘdʑʘfŋ ɘʻʜ 74,1Ñ0,56 ʜts 74,8Ñ0,54 ɢ/dʑ lsʘ fŋʑlslsʻɘts dʑ ʟdʒʻdʑ ɘʘdʑʘfŋ. ʅȷ fŋʑlslsʻɘqʃdʒqʃ ʙʑdʑqʃ Ɂtsdʑqʃɘʘdʑʑʷ ɘdʒʻfŋjsʑ ʟʘɢʘdʑ dʑsɢts ʙʻdʑɁʘ ʑ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ ȿ ɢtөdʑʧqʃ ʑ tөʻʟdʑ ɘʻɁtsɘʻ ʧȷ tөʻtsʜqʃ, Ɂtsɢts ɘȷ dʑqʃʮqʃdʑʃ ʧtөtsʜtsɘʮ 6-dʒʻfŋʸʮdʑsɢts ȷ Ɂfŋʧȷ tөqʃdʒȷ dʑlsʑ ʟdʒʻdʑ ɘʘdʑqʃfŋ ɘʻʜ 74,1Ñ0,56 ʜts 75,8Ñ0,69 ɢ/dʑ lsʘʟdʑɁ⁼tsʜqʃdʑqʃfŋ ɘ dʒȷ ʮʘ⁼ ʬ ʻʟʻtsdʑsɢʻʮdʑsʼ dʑstөdʒqʃ ʜdʑʷ ʜʘdʑsɢts ɘqʃʜʑ lsɘʘtөqʃdʑ.

ʅɢtsʜtsɘʑɘʘdʑʑʷ ʧtөtslsʷɢtsdʒ ʜɘts⁼ dʒʻfŋʸʮʻɘ ʙʑɢʘɁʮʷdʒ ʜtsfŋdʑʜdʑʃ⁼ ɢtөdʑʧ Ɂtstөdʒsɘtsʼ ʜtsʙʘɁqʃ ʆ ʻɁtөtsdʑʧtsɘʻls ʑ Ɂʻdʑ Ɂtsfŋjsʻ 2,5; 5,0 ʻ 7,5 dʒɢ/Ɂɢ Ɂtsdʑʮ Ɂtstөdʒʻɘ fŋʧtөqʷdʑs ʧʻʜɘqʃʰ ȷ dʑdʑ ɘdʒʻfŋjsʑ ʟʘɢʘdʑ dʑsɢts ʙʻdʑɁʘ ɘ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ ɼ 2 ʻ ɼ 3 ɢtөdʑʧqʃ dʑʘ3,2% lsʘ3,9% (*p<0,01*) ɘʻʜʧtsɘʻʜdʑs.

ʇ ʻfŋdʑʷ 4-dʒʻfŋʸʮdʑsɢts ʟɢtsʜtsɘʑɘʘdʑʑʷ Ɂtstөdʒsɘtsʼ ʜtsʙʘɁqʃ ɘ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ ʜtsfŋdʑʜdʑʃ⁼ ɢtөdʑʧ ʑ ɘʻʮʻ 16 dʒʻfŋʸʮʻɘ, Ɂtsdʑʮȷ dʑstөʘʮʻʷ ʙʻdʑɁʘ ɘʻtөtsɢʻʜdʑs ʧʻʜɘqʃʰ ʑɘʘdʑʘfŋ ʧtөtslsqʃ Ɂtsdʑstөtsdʑ dʑʘ4,0% ʑ lsɘʘtөqʃdʑ ɼ 1 ɢtөdʑʧqʃ, dʑʘ4,8% ɪ ʑ lsɘʘtөqʃdʑ ɼ 2 ɢtөdʑʧqʃ, dʑʘ4,5% ɪ ʑ lsɘʘtөqʃdʑ ɼ 3 ɢtөdʑʧqʃ ʻ fŋjsʘdʑsɘqʃdʑʘɘ fŋȷ tөȷ ʜdʑ tsdʒʑ 78,3Ñ0,72 ɪ 78,9Ñ0,79 ɢ/dʑ.

ʋ 18-dʒʻfŋʸʮdʑʃ⁼ ʙʑɢʘɁʮʻɘ, ʧʻfŋdʑʷ ʟɢtsʜtsɘʑɘʘdʑʑʷ Ɂtstөdʒsɘtsʼ ʜtsʙʘɁqʃ ʆ ʻɁtөtsdʑʧtsɘʻls ɘʧtөtsʜtsɘʮ ʰ ȷ fŋjsqʃ dʒʻfŋʸʮʻɘ ȷ Ɂfŋʧȷ tөqʃdʒȷ dʑlsʑ, ɘdʒʻfŋjs ʟʘɢʘdʑ dʑsɢts ʙʻdʑɁʘ ʑ Ɂtөtsɘʻ ʟtөtsfŋjsʘ dʑʘ 6,42%, 6,72% ʻ 6,33% (*p<0,001*) ɘʻʜʧtsɘʻʜdʑs ʑ lsɘʘtөqʃdʑ ɼ 1, ɼ 2 ʻ ɼ 3 ɢtөdʑʧ, ʧtstөʻɘdʑʷdʑs ʜts ɘqʃ⁼ʻʜdʑsɢts ʧȷ tөʻtsʜʑ. ɸ dʑʘdʑsɢʻʮdʑʃdʒqʃ ɘʻʜfŋjslsɁʘdʒqʃ ⁼ʘtөʘɁlsȷ tөqʃʟʑɘʘdʑqʃfŋ ʟdʑʘʮȷ dʑʑʷ ʮᴵ tsɢts ʧtsɁʘʟdʑʃɁʘʑ Ɂtөtsɘʻ ʙʑɢʘɁʮʻɘ ʜtsfŋdʑʜdʑʃ⁼ ɢtөdʑʧ ʧtstөʻɘdʑʷdʑs ʟ ȿ ɢtөdʑʧtsᴮ lsɘʘtөqʃdʑ.

[illegible] 2.16

[illegible] [illegible], [illegible](MÑm, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	74,1Ñ0,56	74,8Ñ0,54	74,4Ñ0,61	74,2Ñ0,58
14 [illegible]	74,9Ñ0,59	75,9Ñ0,61	76,8Ñ0,70	77,1Ñ0,72*
			p<0,01	*p<0,01*
16 [illegible]	75,3Ñ0,62	78,3Ñ0,72**	78,9Ñ0,79**	78,7Ñ0,80**
		p<0,01	*p<0,001*	*p<0,001*
18 [illegible]	75,8Ñ0,69	79,6Ñ0,84**	79,4Ñ0,95**	78,9Ñ0,93**
		p<0,001	*p<0,001*	*p<0,001*

[illegible]

[illegible] 40,5Ñ0,26 [illegible] 43,8Ñ0,46 % [illegible] *p<0,001* ([illegible] 2.17).

[illegible] 12-[illegible] 1, [illegible] 2 [illegible] 3 [illegible]

[illegible] 2,5 [illegible] 1 [illegible] 4,2% (*p<0,01*), [illegible] 4 [illegible] 10,3% (*p<0,001*) [illegible] 6 [illegible]

13,0% (*p<0,001),* [illegible].

[illegible] 1 [illegible], [illegible] , [illegible] 4 [illegible] 6 [illegible]. [illegible] 5,1% [illegible] 5,5%, [illegible] *p<0,01.*

[illegible] 2 [illegible] 3 [illegible], [illegible] 1 [illegible]. [illegible] 5,0 [illegible] 7,5 [illegible] 6,8% [illegible] 10,7%, [illegible] *p<0,001* [illegible].

[illegible] 2.17

[illegible], % (MÑm, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	40,5Ñ0,26	40,9Ñ0,27	41,1Ñ0,31	40,7Ñ0,29
14 [illegible]	41,8Ñ0,33	42,6Ñ0,35	43,9Ñ0,40***	43,7Ñ0,42**
	p<0,01	*p<0,01*	*p<0,001*	*p<0,001*
16 [illegible]	42,9Ñ0,42	45,1Ñ0,53**	46,3Ñ0,64***	46,1Ñ0,61***
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*
18 [illegible]	43,8Ñ0,46	46,2Ñ0,58**	47,9Ñ0,92***	47,6Ñ0,98**
	p<0,001	*p<0,001*	*p<0,001*	*p<0,001*

[illegible] 2 [illegible] 3 [illegible] 13,0% [illegible] 13,3% [illegible] *p<0,001,* [illegible] 6 [illegible] 16,5 % [illegible] 17,0% [illegible] *p<0,001,* [illegible]

[illegible] 2 [illegible] 3 [illegible]

ɘʠʰ ʠʤʒ ɘʧʦʦʜʦɘʯ ɘʄʝ ʦɢʦ ʧʝ ʦɕʻʦʜʑ ʝʕʄʧʝ ʦʠʠʤʝ ʤʦʑ, ʧʦʦɕʻɘʤʷʤʦ ʟ ʙʑɢʘʔʮʷʤʒʠ ʂ ɢʦʤʑʧʠ. ʊ 14 ɪ ʤʒʻʄʝʷʮʤʦʤʑ ɘʻʮʻ ʕʦʤʝ ʤʦɕʘʮʻʷ ʘʤʑ ʙʑʤʒʻʤʑɘ ʑ ʕʦʦɘʻ ʪɘʘʦʠʤʑ ɼ 2 ʻ ɼ 3 ɢʦʤʑʧ ʟʦʦʄʝʘʤʘ ʧʦʦʪʠ ɘʝ ʤʠʮʠʤʑʂ ɢʦʤʑʧʠ ɘ ʄʝʦʝʜʤʑ ʦʤʑ ʤʘ 5,0% (*p<0,001),* ʑ 16-ʤʒʻʄʝʷʮʤʦʤʑ ɘʻʮʻ ɪ ʤʘ 7,9%(*p<0,001)* ʻ ʑ 18 ɪ ʤʒʻʄʝʷʮʤʦʤʑ ɘʻʮʻ ï ʤʘ 9,4% (*p<0,001),* ʰ ʦ ʤʦʯʝ ɘʕʘʟʑɘʘʪʠ ʤʘ ʧʻʜɘʠʰ ʝʤʑʷ ʄʠʤʪʝʟʑ ʙʻʤʕʻɘ ʑ ʕʤʪʠʤʘ ʧʝʮʻʤʕʠ. ʑ ʦʜʦ ɢʤʦʙʑʤʤʦɘʦʾ ʬʘʕʮʻʾ ʄʠʧʦɘʘʕʠ ʕʦɘʻ, ʪʦ ʷʕ ʄʝʻʜʮʘʪ ʦʝʟʑʤ ʪʘʪʠ ʜʦʄʤʜʯʝʤ, ʧʦʝʜʄʝʘɘʤʝʤ ʑ ʪʘʙʤʠʮʻ 2.18, ɘ ʕʦɘʻ ʙʑɢʘʔʮʻɘ ʤʘ ɘʻʜɢʦʜʻɘʤ ʟ ʦʜʤʦ- ʜʦ 1,5 ɪ ʦɕʻʮʤʦɢʦ ɘʻʕʑ ʾʾ ɘʤʒʻʄʝʪ ʟʤʠʯʑɘʘʄʝʷ. ʊʘʕ, ʑ 12 ɪ ʤʒʻʄʝʷʮʤʠʭ ʙʑɢʘʔʮʻɘ ʕʦʤʝ ʤʦɕʘʮʻʷ ɢʤʦʙʑʤʤʑɘ ʑ ʕʦɘʻ ʕʦʤʦʦʤʤʦʾ ʻ ʜʦʄʤʜʤʠʭ ɢʦʤʑʧ ʟʤʘʭʦʜʠʤʘʄʝ ɘ ʤʝʯʘʭ ɘʻʦʦɢʻʜʤʦʄʝʻ ʪʘ ʕʦʤʠɘʘʤʘʄʝ ɘʻʜ 58,9Ñ0,64% ʜʦ 59,5Ñ0,67%.

ʏʝʦʝʟ ʜɘʘʤʒʻʄʝʷʮʻ ʝʕʄʧʝ ʦʠʠʤʝ ʤʦʑ ʘʙʄʝʦʤ ʪʤʑ ʟʤʘʮʝ ʤʤʷ ʮʵ ʦɢʦ ʧʦʕʘʟʤʠʕʘ ʑ ʕʦɘʻ ʙʑɢʘʔʮʻɘ ʂ ɢʦʤʑʧʠ ʙʑʤʠ ʤʝʤ ʠʤʒʠ ʤʘ 1,3%; ʑ ɼ 1 ɢʦʤʑʧʠ ɪ ʤʘ 1,7%; ʑ ɼ 2 ɢʦʤʑʧʠ ï ʤʘ 2,8% (*p<0,01)* ʻ ɼ 3 ɢʦʤʑʧʠ ï ʤʘ 3,0% *(p<0,01).*

ʇ ʦʠ ʮʵ ʦʤʑ, ʪʻʤʕʠ ʑ ʙʑɢʘʔʮʻɘ, ʰ ʦ ʦʪʦʠʤʑɘʘʤʠ ʕʦʦʤʯʦɘʑ ʜʦʙʘʕʑ ʝ ʻʕʦʤʧʦɘʻʪ ʑ ʕʻʤʕʦʄʝʻ 5,0 ʤʒɢ/ʕɢ ʕʦʤʝ ʤʦɕʘʪʻɘ ɘʤʒʻʄʝʪ ɢʤʦʙʑʤʤʑɘ ʑ ʄʠʧʦɘʘʪʯʻ ʕʦɘʻ ʙʑɘ ɘʻʦʦɢʻʜʤʦ ʤʠʯʮʠʔ ʤʘ 3,6% (*p<0,05),* ʤʑʯ ʑ ʪɘʘʠʤʑʂ ɢʦʤʑʧʠ.

ʊ ʤʘʄʝʪʑʧʤʑ ʧʝ ʦɕʻʦʜʠ ʝʕʄʧʝ ʦʠʠʤʝ ʤʦʑ, ʮʝ ʦʝ ʟ ʮʦʪʠʦʠ ʻ ʰ ʻʄʝʵ ʤʒʻʄʝʷʮʻɘ ʧʻʄʝʤʷ ʟɢʦʜʦɘʑɘʘʤʠʷ ʕʦʦʤʯʦɘʦʾ ʜʦʙʘʕʠ ʝ ʻʕʦʦʤʧʦɘʻʪ ʙʑɢʘʔʮʷʤʒ ɘʦʤʠʤʄʝʕʦʾ ʤʒʷʄʝʤʦʾ ʧʦʦʜʠ ʟʘʕʤ ʮʤʦɢʦ ʧʝ ʦɕʻʦʜʑ ɘʻʜɢʦʜʻɘʤ, ʄʝʧʠʷʤʦ ʟʤʠʯʝʤʷ ʕʦʤʝ ʤʦɕʘʮʻʾ ɢʤʦʙʑʤʤʑɘ ʑ ʾʭ ʕʦɘʻ ʟʘʝʯʤʦ ɘʻʜ ʪʦʠɘʘʤʦʄʝʻ ʟʘʄʝʪʦʄʝʑɘʘʤʤʷ ʦɕʟʤʦʾ ʕʻʤʕʦʄʝʻ ʜʦʙʘʕʠ ʜʦ ʦʘʮʻʦʤʑ ʪʘ ʧʦɕʻɘʤʷʤʦ ʻʟ ʕʦʤʦʦʤʤʦʤʦʸ ɢʦʤʑʧʦʸ ʪɘʘʠʤʑ.

ʅʦʕʦʝʤʘ ʑ ʜʦʄʤʜʤʠʭ ɢʦʤʑʧ ʪɘʘʠʤʑ 16-ʤʒʻʄʝʷʮʤʦɢʦ ɘʻʕʑ ɘʤʒʻʄʝʪ ɢʤʦʙʑʤʤʑɘ ʑ ʕʦɘʻ ʙʑɘ ʤʠʯʮʠʤʒ ʤʑʯ ʤʘ 12 ʤʒʻʄʝʷʮʵ ʯʠʪʪʷ:ʑ ɼ 1 ɢʦʤʑʧʠ ï ʤʘ 7,1%; ʑ ɼ 2 ɢʦʤʑʧʠ ï ʤʘ 8,8% ʻ ʑ ɼ 3 ɢʦʤʑʧʠ ï ʤʘ 9,1% ʧʦʠ *p<0,001.* ʇ ʦɕʻɘʤʷʤʦ ʟ ʙʑɢʘʔʮʷʤʒʠ ʂ ɢʦʤʑʧʠ, ʟʤʘʮʝ ʤʤʷ ʮʵ ʦɢʦ ʧʦʕʘʟʤʠʕʘʙʑʤʦ ɘʻʜʧʦɘʻʜʤʦ ʤʠʯʮʠʤʒ ʤʘ 3,9% (*p<0,01*) ʑ ʪɘʘʠʤʑ ɼ 1 ɢʦʤʑʧʠ; ʤʘ 6,0% (*p<0,01*) ɪ ʑ ʪɘʘʠʤʑ ɼ 2

[illegible] 5,6% (*p<0,01*) [illegible] Γ 3 [illegible].

[illegible] 2.18

[illegible]

[illegible], % (MÑm, n=10)

[illegible]	[illegible]			
	§	Γ 1	Γ 2	Γ 3
12 [illegible]	59,5Ñ0,67	59,1Ñ0,71	58,9Ñ0,64	59,3Ñ0,69
14 [illegible]	58,2Ñ0,70	57,4Ñ0,66	56,1Ñ0,58*	56,3Ñ0,61
			p<0,01	*p<0,01*
16 [illegible]	57,1Ñ0,65	54,9Ñ0,62**	53,7Ñ0,60**	53,9Ñ0,57**
	p<0,01	*p<0,001*	*p<0,001*	*p<0,001*
18 [illegible]	56,2Ñ0,56	53,8Ñ0,50**	52,1Ñ0,49***	52,4Ñ0,47***
	p<0,01	*p<0,001*	*p<0,001*	*p<0,001*

[illegible] 18-[illegible] Γ 1 [illegible], [illegible] 12-[illegible] 9,0% (*p<0,001),* [illegible] Γ 2 [illegible] 11,5% (*p<0,001),* [illegible] Γ 3 [illegible] 11,6%. [illegible] 4,3% (*p<0,001),* 7,3% (*p<0,001)* [illegible] 6,8%(*p<0,001)* [illegible] Γ 1, Γ 2 [illegible] Γ 3 [illegible].

[illegible] 12- [illegible] 18-[illegible], [illegible], [illegible]

[illegible]

[illegible] 2,5; 5,0; 7,5 [illegible] [illegible] (12 [illegible]) [illegible] 0,681Ñ0,016 [illegible] 0,698Ñ0,016 ([illegible] 2.19).

[illegible] 2.19

[illegible] (MÑm, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] $_1$	[illegible] $_2$	[illegible] $_3$
12 [illegible]	0,681Ñ0,016	0,692Ñ0,018	0,698Ñ0,016	0,686Ñ0,015
14 [illegible]	0,718Ñ0,017	0,742Ñ0,020	0,783Ñ0,024*	0,776Ñ0,022
			p<0,01	*p<0,01*
16 [illegible]	0,751Ñ0,019	0,821Ñ0,023*	0,862Ñ0,026**	0,855Ñ0,025**
		p<0,001	p<0,001	*p<0,001*
18 [illegible]	0,779Ñ0,021	0,859Ñ0,024**	0,919Ñ0,031***	0,908Ñ0,029**
	p<0,01	*p<0,001*	*p<0,001*	*p<0,001*

[illegible] 14-[illegible], [illegible] $_2$ [illegible] $_3$ [illegible], [illegible] 5,0 [illegible] 7,5[illegible]. [illegible] $_2$ [illegible] 14 [illegible], [illegible] 12 [illegible] 12,2%, [illegible] $_3$ [illegible] 13,1% [illegible] $p<0,01$.

[illegible] 16 [illegible] 18 [illegible]. [illegible] 16- [illegible]: [illegible] $_1$ [illegible] 9,3% ($p<0,05$), [illegible] $_2$ [illegible] 14,8% ($p<0,01$) [illegible] $_3$ [illegible] 13,8% ($p<0,01$), [illegible] 18-[illegible]

[illegible] 10,3% ($p<0,01$), [illegible] 18,0% ($p<0,001$) [illegible] 16,6% ($p<0,001$) [illegible] 1, [illegible] 2 [illegible] 3 [illegible].

[illegible] 18-[illegible] 14,4% ($p<0,01$) [illegible] 24,1% ($p<0,001$) [illegible] 1 [illegible] 31,7% ($p<0,001$) – [illegible] 2 [illegible] 32,4% ($p<0,001$) – [illegible] 3 [illegible].

[illegible] 5,0 [illegible].

[illegible] 2.20 [illegible] 12-[illegible] 1,21Ñ0,017 [illegible] 1,27Ñ0,018 [illegible] 1, [illegible] 2 [illegible] 3 [illegible].

[illegible] 1, [illegible] 2 [illegible] 3 [illegible] 2,5; 5,0; 7,5 [illegible] 16- [illegible] 18-[illegible] 4 [illegible] 6 [illegible] 1 [illegible] 11,7% ($p<0,05$) [illegible] 2 [illegible] 14,6% ($p<0,001$) [illegible] 10,6% ($p<0,05$) [illegible] 4 [illegible] 6 [illegible] 3 [illegible] 9,4% [illegible] 2 [illegible] 7,5 [illegible]

[illegible]. [illegible] 18 [illegible] [illegible] 1, [illegible] 2 [illegible] 3 [illegible] [illegible] 5,5%, 7,1% [illegible] 6,3% [illegible] *p<0,05* – *p<0,01*.

[illegible] 2.20

[illegible] (M±m, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	1,22 ±0,019	1,21±0,017	1,23±0,020	1,27±0,018
14 [illegible]	1,27±0,022	1,24±0,025	1,28±0,023	1,39±0,028**
	–	–	–	*p<0,01*
16 [illegible]	1,34±0,024	1,26±0,037	1,41±0,026	1,31±0,042
	–	–	*p<0,001*	–
18 [illegible]	1,27±0,029	1,34±0,043*	1,36±0,057**	1,35±0,051**
	–	*p<0,05*	*p<0,05*	–

[illegible] 0,617±0,017 – 0,635±0,019 [illegible] ([illegible] 2.21). [illegible] 16 [illegible] 18 [illegible]. [illegible], [illegible] 12-[illegible] 0,617 ±0,017 [illegible] 16-[illegible] 18,3% (*p<0,001*) [illegible] 0,731±0,023 [illegible] 18-[illegible] 12,6% (*p<0,05*) [illegible] 12 [illegible] 0,695±0,026 [illegible].

[illegible] 1 [illegible]

нtsвʘɘʕłz łz ʕʻdžʕtsfŋʝsʻ 2,5 dʒɢ/ʕɢ ʕtsdzɥʕtstedʒɘ, ʘʕlsɕɘdžfŋʝsᴵ ɸdzɸ ʊ ʕtetsɘʻ ʟtetsfŋʝsʘdzʘ dzʘ 19,3% ($p<0,01$), ɼ$_2$ ɢtedztʃɕ ï dzʘ 30,2% ($p<0,001$), ɼ$_3$ ɢtedztʃɕ ï dzʘ 42,0% ($p<0,001$). ʏʝteʝʟ 4 dʒʻfŋʸɥʻ ʧʻfŋdžʷ ʟɢtsнtsɘłzɘʘdzdžʷ ʕtstedʒtsɘtsʾ нtsвʘɘʕɕ ʆ ʻʕtetsdžʧtsɘʻls łz ɘʻнʧtsɘʻнdzɕ⁼ ʕʻdžʕtsfŋʝsʷ⁼ ʘʕlsɕɘdžfŋʝs ʝdzʟɕdʒz ʕtetsɘʻ вłzɢʘʔɥʻɘ ɼ$_1$, ɼ$_2$ ʻ ɼ$_3$ ɢtedztʃ вłzdzɕ ɘɕʰ ɕdʒɕ dzʘ 32,7% ($p<0,001$), dzʘ 29,3%($p<0,001$) ʻ dzʘ 39,1% ($p<0,001$) ɘʻнʧtsɘʻнdzts.

ʊʘвdzɕɥʷ 2.21

ɸʕlsɕɘdžfŋʝsᴵ ɸdzɸ ls ʕtetsɘʻ вłzɢʘʔɥʻɘ ʟʘʟɢtsнtsɘłzɘʘdzdžʷ ʕtstedʒtsɘtsʾ нtsвʘɘʕɕ ʆ ʻʕtetsdžʧtsɘʻls łz teʻʟdzɕ⁼ ʕʻdžʕtsfŋʝsʷ⁼, dʒdʒtsdž /ɢtsн/dz (MÑm, n=10)

Ɉʻʕlsɘʘtedɕdzȿ	ɻtedztʃɕ lsɘʘtedɕdzȿ			
	ʂ	ɼ$_1$	ɼ$_2$	ɼ$_3$
12 dʒʻfŋʸɥʻɘ	0,617 Ñ0,017	0,623Ñ0,019	0,635Ñ0,019	0,629Ñ0,019
14 dʒʻfŋʸɥʻɘ	0,647Ñ0,020	0,743Ñ0,025**	0,827Ñ0,030***	0,893Ñ0,031***
	ī	$p<0,01$	$p<0,001$	$p<0,001$
16 dʒʻfŋʸɥʻɘ	0,731Ñ0,023	0,827Ñ0,026*	0,821Ñ0,040	0,875Ñ0,040**
	$p<0,001$	$p<0,001$	$p<0,001$	$p<0,001$
18 dʒʻfŋʸɥʻɘ	0,695Ñ0,026	0,653Ñ0,037	0,773Ñ0,049	0,725Ñ0,050
	$p<0,05$	ī	$p<0,05$	ī

ɿts ʟʘʕʻdzɥʝdzdžȿʰ ʝfŋʝsɕdʒʻfŋʸɥdztsɢts ʝʕfŋʧʝteɕdʒʝdzlsz ʘʕlsɕɘdžfŋʝsᴵ ɸdzɸ ʊ ʕtetsɘʻ вłzdzʘ ɘʻtetsɢʻнdzts ɘɕʰ tsᴷ dzʘ 21,7% łz lsɘʘtedɕdzȿ ɼ$_2$ ɢtedztʃɕ, ʷʕɕdʒ ʟɢtsнtsɘłzɘʘdzɕ ʕtstedʒtsɘłz нtsвʘɘʕłz łz ʕʻdžʕtsfŋʝsʻ 5,0 dʒɢ/ʕɢ ʕtsdzɥʕtstedʒz. ɩʘdʒɕ lsʘʕtsʏ ɘfŋʝsʘdztsɘdʒʝdzts, ʰts ʘвfŋʝsdžᴷ lsdžȿ ɘʝdzɕɥɕdzɕ ɥᴵtsɢts ʧtsʕʘʟdzɕʕʘ łz ʕtetsɘʻ lsɘʘtedɕdzȿ нtsfŋdžнdzɕ⁼ ɢtedztʃ вłzdzɕ ɘʻtetsɢʻнdzts ɘɕʰ ɕdʒɕ, ʧtsteʻɘdžʷdzts ʟ ʕtsdzlstetsdž dzɕdʒɕ вłzɢʘʔɥʷdʒɕ, dzʘfŋʘdʒʧʝteʝн ɥʝteʝʟ 2 ʻ 4 dʒʻfŋʸɥʻ ʧʻfŋdžʷ ʟɢtsнtsɘłzɘʘdzdžʷ ʕtstedʒtsɘtsʾ нtsвʘɘʕɕ. ʊʘʕ, ɥʝteʝʟ нɘʘ dʒʻfŋʸɥʻ ʝʕfŋʧʝteɕdʒʝdzlsz łz ʕtetsɘʻ lsɘʘtedɕdzȿ ɼ$_1$ ɢtedztʃɕ ɘtsdzʘʟtetsfŋʝsʘdzʘ ʧtetslsɕ ʕtsdzlstetsdž dzʘ 14,8%; łz lsɘʘtedɕdzȿ ɼ$_2$ ɢtedztʃɕ ï dzʘ 27,8% ʻ łz lsɘʘtedɕdzȿ ɼ$_3$ ɢtedztʃɕ ï dzʘ 38,0% ʧteɕ $p<0,01 - p<0,001$.ʏʝteʝʟ 4 dʒʻfŋʸɥʻ ʝʕfŋʧʝteɕdʒʝdzlsz ʘʕlsɕɘdžfŋʝsᴵ ɸdzɸ ʊ ʕtetsɘʻ вłzɢʘʔɥʻɘ ɼ$_1$ ʻ ɼ$_3$ ɢtedztʃ вłzdzʘɘʻtetsɢʻнdzts

[illegible] 13,1% (*p<0,05)* [illegible] 19,7% (*p<0,01).*

[illegible]

[illegible] 2.22), [illegible] 12-[illegible] 3,80±0,05 – 3,91±0,04 [illegible] /[illegible] [illegible].

[illegible] 2.22

[illegible] (M±m, n=10)

[illegible]	[illegible]			
	[illegible]	[illegible] 1	[illegible] 2	[illegible] 3
12 [illegible]	3,86±0,04	3,80±0,05	3,91±0,04	3,89±0,03
14 [illegible]	3,89±0,04	3,83±0,06	4,02±0,04*	3,93±0,05
16 [illegible]	3,90±0,06	3,90±0,06	4,12±0,05**	3,99±0,07
	–	–	*p<0,01*	–
18 [illegible]	3,92±0,06	3,94±0,06	4,18±0,06**	4,05±0,07
	–	–	*p<0,01*	–

[illegible]

ɘʻʜ 3,86Ñ0,04 ʜts 3,92Ñ0,06 ʥʤʦsʥʑ/ʥʑ lsʘ ɘʻʜʧtsɘʻʜʘʥʘ ʬʻʟʻtsʥʦsɢʻʯʥʫʥʤ ʧʘʨʘʥʤ lsʨʘʥʤ ʥʦsʨʥʤʗ ʙʑɢʘʔʯʻɘ ʑ 12- ï 18- ʥʤʻfʀʸʯʥʦsɢts ɘʻʕʑ.

ɹ fʀʝʘʥʦsɘʥʤ ʥʦs, ʱ ts ʑ ʧʨʦsʯʤ fʀʤ lsʨʗɘʘʥʦsɢts ʰ ʝ fʀʝʗʥʤʻfʀʸʯʥʦsɢts ʝʕfʀʧʝʨʗʥʤʝ ʥʦsʑ ʟɢtsʜtsɘʑɘʘʥʑʥʷ ʙʑɢʘʔʯʷʥʤ ɘtsʥʗʥʦfʀʤ ʕtsʼ ʥʤɚʷfʀʝʥʦsʼ ʧtsʨtsʜʗ ʕtsʨʥʤtsɘtsʼ ʜtsʙʘɸʕʗ ʆ ʻʕʨtsʥʑʧtsɘʻls ʑ ʨʻʟʥʫʗʭ ʕʻʥʑʕtsfʀʝʷʭ, ʥʝ ʧʨtsʷɘʥʑʷʥʦs fʀʑlsls ʻɘtsɢts ɘʧʥʫʗɘʑ ʥʘ ʨʻɘʝʥʑ ʥʤlsʘʙtsʥʑʯʥʦsʼ ʝʥʝʨɢʻʼ ʑ ʕʨtsɘʻ lsɘʘʨʗʥʑ. ɹ ʗʥʑʷlstsʕ fʀʝʘʥʦsɘʥʑʷlsɪ ʙʑɢʘʔʯʻ ɼ$_2$ ɢʨʑʧʗ, ʱ ts tslsʨʗʥʤʑɘʘʥʗ ʕtsʨʥʤtsɘʑ ʜtsʙʘɸʕʑ ʜts ʨʘʯʻtsʥʑ ʑ ʕʻʥʑʕtsfʀʝʻ 5,0 ʥʤɢ/ʕɢ ʕtsʥʫʝ ʥʦsʨʘlsʻɘ, ʑ ʷʕʗʭ ʨʻɘʝʥʑ ɢʥʑ ʕtsʟʗ ʑ ʕʨtsɘʻ ʥʘ ʨʻʟʥʫʗʭ ʝlsʘʧʘʭ ʝʕfʀʧʝʨʗʥʤʝ ʥʦsʑ ɘʻʨtsɢʻʜʥʦs ʟʙʻʥʑʰ ʑɘʘɸfʀʷ, ʷʕ ʧʨtslsʗ ʧtsʯʘlsʕʑ ʜtsfʀʝʥʑʜʑ lsʘʕ ʻ ʧtsʨʻɘʥʑʷʥʦs ʟ ɘʝʥʫʯʗʥʘʥʤʗ ɘʥʤʻfʀʝʑ ɢʥʑ ʕtsʟʗ ʑ ʕʨtsɘʻ ʕtsʥʦsʨtsʥʑ ʥʫʗʭ lsɘʘʨʗʥʑ.

ʅ ʘ lsʨʗɘʘʥʦsɢts ɘʗʕtsʨʗfʀʝʘʥʑʷ ʕtsʨʥʤtsɘtsʼ ʜtsʙʘɸʕʗ ʆ ʻʕʨtsʥʑʧtsɘʻls ʑ ʕʻʥʑʕtsfʀʝʻ 5,0 ʥʤɢ/ʕɢ ʕtsʥʫʝ ʥʦsʨʘlsʻɘ ɘʧʨtsʜtsɘʯ 4 ʥʤʻfʀʸʯʻɘ ʕʻʥʑʕʻfʀʝɪ ɢʥʑ ʕtsʟʗ ʑ ʕʨtsɘʻ lsɘʘʨʗʥʑ ɼ$_2$ ɢʨʑʧʗ ʟʨtsfʀʝʘʥʘ ʥʘ 5,6% *(p<0,01),* ʘʯʝʨʝʟ 6 ʥʤʻfʀʸʯʻɘ ï ʥʘ 6,9% *(p<0,01),* ʧtsʨʻɘʥʑʷʥʦs ʟ ɘʝʥʫʯʗʥʦsʶ ʧtsʯʘlsʕtsɘtsɢts ʧʝʨʻtsʜʑ ʜtsfʀʝʥʑʜʑ. ɹ ʻʜʥʦsfʀʝʦs ʙʑɢʘʔʯʻɘ ʂ ɢʨʑʧʗ, lsts ɘʻʨtsɢʻʜʥʝ ʧʻʜɘʗʱ ʝʥʑʷ ʟʥʘʯʝʥʑʷ ʯɪ tsɢts ʧtsʕʘʟʥʫʕʘ ʑ ʕʨtsɘʻ lsɘʘʨʗʥʑ ɼ$_2$ ɢʨʑʧʗ ɘʻʜʥʤʻʯʘʥʦsfʀʷ ɘɣʝ ʯʝʨʝʟ ʜɘʘ ʥʤʻfʀʸʯʻ ʝʕfʀʧʝʨʗʥʤʝ ʥʦsʑ ʻ ʙʑʥʦs ɘʗʱ ʝ ʥʘ 3,3%*(p<0,05),* ʯʝʨʝʟ 4 ʥʤʻfʀʸʯʻ – ʥʘ 5,6% ʻ ʯʝʨʝʟ 6 ʥʤʻfʀʸʯʻɘ ī ʥʘ 6,6%, ʧʨʗ *p<0,01.*

ʆ lsɣʝ, ʥʘɸʝʜʝʥʑ ʥʝʟʥʘʯʥʑ ɘʻʨtsɢʻʜʥʑ ɘʻʜʭʗʥʝʥʑʷ ʕtsʥʫʝ ʥʦsʨʘʯʻʼ ɢʥʑ ʕtsʟʗ ʑ ʕʨtsɘʻ ʙʑɢʘʔʯʻɘ ɼ$_2$ ɢʨʑʧʗ, ʷʕʻ ʟʥʘʭtsʜʗʥʫʗfʀʤ ʑ ɘʝʨʭʥʑʭ ɢʨʘʥʫʗʯʷʭ ɘʝʥʫʗʯʗʥʑ ʬʻʟʻtsʥʦsɢʻʯʥʦsʼ ʥʦsʨʥʤʗ, ɘʕʘʟʑʶ lsɪ ʥʘ ʧtsʥʤʻʨʥʫʗʔ ɘʧʥʫʗɘ ʕtsʨʥʤtsɘtsʼ ʜtsʙʘɸʕʗ ʥʘ ʨʻɘʝʥʑ ʥʤlsʘʙtsʥʑʯʥʦsʼ ʝʥʝʨɢʻʼ ʑ ʕʨtsɘʻ ʙʑɢʘʔʯʻɘ ʥʘ ɘʻʜɢtsʜʻɘʥʑ ʧʨʗ ʙʝʟʧʨʗɘɚʷʟʥʦsʥʤʑ ʑlsʨʗʥʤʘʥʑ.

ɹ ʻʜtsʥʤʦs, ʱ ts ɘʥʤʻfʀʝ ʟʘɢʘʥʑ ʥʦsɢts ʭtsʥʝ fʀʝʝʨtsʥʑʑ ʑ ʕʨtsɘʻ ʧʝɘʥʦsʶ ʥʤʻʨtsʶ ʭʘʨʘʕlsʝʨʗʟʻ fʀʝʘʥʑʥʑʧʻʜʥʦsɢts tsʙʥʤʻʥʑʑ ɘ tsʨɢʘʥʑʟʥʤ lsɘʘʨʗʥʑ. ʅ ʘɸʝʜʝʥʑ ʯʗʬtsɘʻ ʜʘʥʑ lsʘʙʥʫʗʯʻ 2.23 ɘʕʘʟʑʶ lsɪ ʥʘ fʀʝʘʙʻʥʑ ʥʝ ʟʥʘʯʝʥʑʷ ʯɪ tsɢts ʧtsʕʘʟʥʫʕʘ ʑ ʕʨtsɘʻ ʙʑɢʘʔʯʻɘ ʟʘɘʧʥʫʗɘʑ ʕtsʨʥʤtsɘtsʼ ʜtsʙʘɸʕʗ ʆ ʻʕʨtsʥʑʧtsɘʻls ʑ ʨʻʟʥʫʗʭ ʕʻʥʑʕtsfʀʝʷʭ.

ʋ ʨʻʟʥʑ ʧʝʨʻtsʜʗ ʝʕfʀʧʝʨʗʥʤʝ ʥʦsʘʥʑ ʥʫʗʭ ʜtsfʀʝʥʑʜɣʝʥʑ ɘʥʤʻfʀʝ ʟʘɢʘʥʑ ʥʦsɢts ʭtsʥʝ fʀʝʝʨtsʥʑʑ ʑ ʕʨtsɘʻ ʙʑɢʘʔʯʻɘ ʂ ɢʨʑʧʗ ʕtsʥʫʗɘɸfʀʷ ɘ ʥʝ ɣʘʭ ʬʻʟʻtsʥʦsɢʻʯʥʦsʼ ʥʦsʨʥʤʗ ʜʥʑʷ ʜʘʥʦsɢts ɘʗʜʑ lsɘʘʨʗʥʑʻ fʀʝʘʥʦsɘʗɘ 20,89Ñ0,87 ī 21,05Ñ0,73 ʥʤɢ/100 ʥʤʑ.

[illegible] 2.23

[illegible], [illegible]/100 [illegible](MÑm, n=10)

[illegible]	[illegible]			
	§	Γ 1	Γ 2	Γ 3
12 [illegible]	20,89Ñ0,87	20,35Ñ0,83	20,90Ñ0,77	20,91Ñ0,73
14 [illegible]	20,90Ñ0,83	20,39Ñ0,77	20,94Ñ0,73	20,93Ñ0,74
16 [illegible]	20,92Ñ0,73	20,99Ñ0,39	21,05Ñ0,77	20,99Ñ0,74
18 [illegible]	21,05Ñ0,73	20,90Ñ0,67	20,91Ñ0,78	20,93Ñ0,64

[illegible] 12-[illegible]. [illegible] Γ 1, Γ 2, [illegible] Γ 3 [illegible]. [illegible], [illegible], [illegible].

[illegible], [illegible] Γ 2-[illegible] 16- [illegible] 18-[illegible] 5,6% [illegible] 6,6% [illegible] p<0,01 [illegible]. [illegible] Γ 1-, Γ 2-, [illegible] Γ 3-[illegible], [illegible].

3. Вища нервова діяльність тварин, формування в онтогенезі та вплив на продуктивність

[illegible] [1, 2]. [illegible] [44,45, 268, 710].

[illegible] (1973) [illegible] [9, 55, 206].

[illegible] [76]. [illegible] 5-7 [illegible] [714, 723].

[illegible] 2-3 [illegible] 1969; [illegible] 1971) [illegible]

ʢtɕʹdʒ lstsɢts, lz lsʝ dʑʸls ʜʘdʑtsɢts ɘʿʢlz dʑʝ ɘɕʃtɕtsʙ dʑʸʻlsᴵ fŋʸ dʒʹɥdʑʘ ʜɕʃʷʷʝ tɕʝ dʑʅʹtɕtsɘʢʘ, ʘ fŋʃtsfŋʝsʝ tɕʹɢʘ lsᴵ fŋʸ lsʹdʑ ʢɕʃ ɘʿʜdʑtsfŋdʑʝ ʜɕʃʷʝ tɕʝ dʑʅʹᴮ ɘʘdʑdʑʸ ʧʃtsʜtɕʘʟdʑʃʢʿɘ. ʊ lsʝ dʑʸls fŋʝsʘtɕʰ tsɢts ɘʿʢlz ʜɕʃʷʝ tɕʝ dʑʅʹᴮ ɘʘdʑdʑʸ lzlsɘtstɕᴮ ʻlsᴵ fŋʸ ʟdʑʘɥdʑts dʑʝ ɢʰ ʝ [245, 329, 460].

ʝ ʘdʑ dʒʹɘdʑ ɘdʑʘfŋʝsɕʃɘtsfŋʝsʿ ʢtstɕʃ tɕtsʟɘɕʃdʑʝ dʑ lsɕʃdʒ fŋdʑʘʙʢʿʰ ʝ, ɥɕʃdʒ dʒʝ dʑʰ ʝ ɘʿʢ lsʝ dʑʸls. ɩ ʘ ɥʝ ɘʢʘʟdʑʻ lstɕʃɘʘdʑʰ ʝ ʧʃtsɢʘ ʝ dʑdʑʸ lzdʒtsɘdʑʃ tɕʝ ʷdʑʝ ʢfŋɘ ʻ ʰ ɘɕʃʜʢʝ ʼ ɘʿʜdʑtsɘdʑʝ dʑdʑʸ, ʘ lsʘʢtsʅ lstɕdʑʜdʑtsʰ ʿ ɘɕʃtɕtsʙ dʑʝ dʑdʑʸ ʜɕʃʷʷʝ tɕʝ dʑʅʹtɕtsɘʢɕʃ lz lsʝ dʑʸls 2-4 dʒʹfŋʸɥdʑtsɢts ɘʿʢlz [126, 324].

ɸ ʢtsʧʷdʑ ʉ.ɸ. (1961), ʂ tsʢtstɕʹdʑʘ ɼ.ɿ. (1986) [243, 453] ɘʢʘʟdʑᴮ lsᴵ, ʰ ts dʑʘʔʙʹdʑʰ ʹdʑsʝ dʑfŋʃɘdʑ ʧtɕtsɥʝ fŋʃ ʷlzdʑʢɥʹtsdʑʘdʑ dʑtsɢts ʜtsʟtɕʹɘʘdʑdʑʸ ʢtstɕʃ ɘʝ dʑʃʢɕʃ ʧʹɘʢlzdʑ dʒtsʟʢlz lz lsʝ dʑʸls ɘʿʜʙlzɘʘ lsᴵ fŋʸ ɘ ʧʝ tɕʰ ʿ ʰ ʹfŋʝsᴵ dʒʹfŋʸɥʹɘ ʼ ʅɕʃlslsʷ. ɥʝʔ ʧʝ tɕʹtsʜ ʹdʑʜɕʃɘʿʜlzʘdʑ dʑtsɢts tɕtsʟɘɕʃlsʢlz dʑʘʔʙʹdʑʰ ɘʿʜʧtsɘʿʜʘdʑ dʑʃʔ ʟʘ dʑʘʧtɕʘdʑʝ dʑtsɢts ɘɕʃtɕtsʰ lzɘʘdʑdʑʸ dʒtsdʑtsʜdʑʸʢlz, ʷʢʰ ts dʒʘlsɕʃ dʑʘ lzɘʘʟʿ ɘʘʅ dʑɕʃɘlz lzɥʘfŋʝsᴵ lz ɥɕʃ ʧtɕtsɥʝ fŋʘ dʑʝ tɕɘtsɘtsʼ fŋʃfŋʝsʝ dʒʃ. ɼ ts ʢʹdʑʅʷ 6-7 dʒʹfŋʸɥʹɘ lzfŋ ɘdʑʘfŋʝsɕʃɘtsfŋʝsʿ dʑʝ tɕɘtsɘɕʃ ʧtɕtsɥʝ fŋɘ ʜtsfŋʸɢʘ lsᴵ tɕʹɘdʑʸ ʜtstɕtsfŋdʑʃ lsɘʘtɕʃdʑ, ʘfŋʃdʑʘʟʙlzʜʅ lzɘʘdʑ dʑtsɢts ʧtɕtsɥʝ fŋlz dʑʘɘʹlsᴵ ʟdʑʘɥdʑts ɘɕʃʰ ʝ, dʑʅ lz dʑʃ. ʊ ɥᴵ tsdʑlz ɘʿɥʿ fŋʸ tstɕdʒtsɘʘdʑ ɘfŋ ɘdʑʘfŋʝsɕʃɘtsfŋʝsʿ dʑʝ tɕɘtsɘtsʼ fŋʃfŋʝsʝ dʒʃ, ʘdʑʝ dʑʝ ʟtsɘfŋdʒ tsfŋʝsʘlstsɥdʑts ɿ ʝ tɕʹtsʜ ɘʿʜ 8-9 ʜts 12-13 dʒʹfŋʸɥʹɘ ʘtɕʘʢ lsʝ tɕʃʟlzʻ lsᴵ fŋʸ ɘɕʃfŋʝsʢɕʃdʒ tɕʹɘdʑʝ dʒʿ ʹdʑsʝ dʑfŋʃɘdʑfŋʝsᴮ lzdʒtsɘdʑts-tɕʝ ʷdʑʝ ʢlststɕdʑsʼ ʜʹʷdʑ dʑtsfŋʝsʿ, ɘɕʃfŋʝsʢɕʃdʒ tɕʹɘdʑʝ dʒ ʧtɕtsɥʝ fŋlz ʟʙlzʜʅ ʝ dʑdʑʸ, ɘɕʃfŋʝsʢtsᴮ tɕdʑdʑʃɘʹfŋʝsᴮ dʑʝ tɕɘtsɘɕʃ ʧtɕtsɥʝ fŋɘ. ɿ tɕtsɥʝ fŋɢʘdʑ dʒlzɘʘdʑdʑʸ ʟdʑʘɥdʑts fŋdʑʘʙʢʿʰ ʝ, dʑʅ lz ʢtstɕʹɘ, lstsdʒlz lsʝ dʑʸlsʘɥᴵ tsɢts ɘʿʢlz dʒʝ dʑʰ ɘtɕʹɘdʑtsɘʘʅ ʝ dʑ [715].

ʊ ɥʝʔ ʧʝ tɕʹtsʜ, ʢtsdʑʃ ʹdʑsʝ dʑfŋʃɘdʑfŋʝsᴵ tstɕʻ dʑstsɘdʑts - ʜtsfŋdʑʜdʑʃ tɕʝ ʘʢɥʹʔ ɘʅ ʝ ʟdʑʃʅ ʝ dʑʘ ʘʧʘfŋʃɘdʑts - ʟʘɕʃfŋdʑʘ ʧtsɘʝ ʜʹdʑʢʘʰ ʝ dʑʝ fŋʸ tstɕdʒlzɘʘdʑtsfŋ, ʟʜʘlsdʑfŋʝsᴵ lsʝ dʑʸls ʜts dʑʘɥʘdʑdʑʸ dʑʘʔʙʹdʑʰ ɘɕʃfŋʝsʢʘ ɼ ts 12-14 -dʒʹfŋʸɥdʑtsɢts ɘʿʢlz ʷtstɕdʒlzᴮ lsᴵ fŋʸ tsfŋʝsʘlstsɥdʑts lsɕʃʧtsdʑtsɢʹɥdʑ tsfŋʝsʙdʑʃɘtsfŋʝsʿ dʑʝ tɕɘtsɘtsʼ fŋʃfŋʝsʝ dʒʃ lsɘʘtɕʃdʑ [716].

ɿ ʝ tɕʹtsʜ ɘʿʜ 13-14 ʜts 17-dʒʹfŋʸɥdʑtsɢts ɘʿʢlz ʘtɕʘʢ lsʝ tɕʃʟlzʻ lsᴵ fŋʸ ɘʿʜdʑtsfŋdʑtsᴮ fŋʝsʘʙʹdʑ dʑfŋʝsᴮ tsfŋdʑtsɘdʑʃ ɘdʑʘfŋʝsɕʃɘtsfŋʝsʝʔ dʑʝ tɕɘtsɘɕʃ ʧtɕtsɥʝ fŋɘ: fŋʃdʑʘʧtɕtsɥʝ fŋlz ʟʙlzʜʅ ʝ dʑdʑʸ ʿ ɢʘdʑ dʒlzɘʘdʑdʑʸ, ɘtɕʹɘdʑtsɘʘʅ ʝ dʑfŋʝsᴵ ʿ tɕdʑdʑʃɘʹfŋʝsᴵ ʼ ʧtɕʘʢlsɕʃɥdʑts dʑʝ ɘʿʜtɕʹʟdʑʸᴮ lsᴵ fŋʸ ɘʿʜ ʜtstɕtsfŋdʑʃ ʢtstɕʹɘ. ɿ tsɥɕʃdʑʘ ɥɕʃ ʟ 17-18 dʒʹfŋʸɥʹɘ ɘʿʜʟdʑʘɥʘ lsᴵ fŋʸ dʑtsɘʝ tsfŋdʑʘʙdʑʝ dʑdʑʸ fŋʃdʑʃ ɢʘdʑ dʒʹɘdʑtsɢts ʧtɕtsɥʝ fŋlz ʟʿ ʟdʑʃʅ ʝ dʑdʑʸdʒ ɘtɕʹɘdʑtsɘʘʅ ʝ dʑtsfŋʝsʿ dʑʝ tɕɘtsɘɕʃ ʧtɕtsɥʝ fŋɘ ʿ ʧʹʜɘɕʃʰ ʝ dʑdʑʸdʒ ʟʙlzʜdʑʃɘtsfŋʝsʿ lsɘʘtɕʃdʑ ɼ.ɿ. ʂ tsʢtstɕʹdʑʘ (1986) ɘɘʘʅ ʘ, ʰ ts ɥʝ ʧtsɘʹʷʟʘdʑts ʟ dʑʘfŋʝsʘdʑdʑʸdʒ ʧtsɘdʑtsʼ fŋʝsʘlsʝ ɘtsʼ ʟtɕʹdʑtsfŋʝsʿ ʿ ɢtstɕdʒtsdʑʘdʑ dʑʃdʒʃ ʧʝ tɕʝ ʙlzʜtsɘʘdʒʃ tstɕɢʘdʑʟdʒlz.

[illegible] 1 -7 [illegible] [244, 452].

[illegible] [77]. [illegible] [247, 682]. [illegible] [330]. [illegible]

[illegible] 30-80 [illegible] [246].

[illegible] 5-6 [illegible]

[illegible] 2,0-2,5 [illegible]

1,5 [illegible] [208, 670].

[illegible] (3-10 [illegible]) [illegible] 21 - [illegible] (74,5 %) [illegible] 50 % [illegible] [664].

[illegible] 2,0 [illegible] 3,5 [illegible] 23 %, [illegible] 26,4 %. [illegible] 5,5 [illegible] 36,9 % [illegible] 30,5 % .

[illegible] - 51,1 % [illegible] - 43,9 %. [illegible] 5,0 %, 32 [illegible] 2,5 % [illegible] 2,5% [illegible] [533, 669].

[illegible] - 3,4%. [illegible] 7,2%, [illegible] 10,1%, [illegible] [106, 147]. [illegible] [445, 458, 499, 524]. [illegible] ([illegible]=+0,48) [illegible] 18 [illegible] ꞁz ʕtsdʒʃʘʕlsdʑsɢts dʑʃʰ ʝ ʜts 15 dʒfŋʷɥdʑsɢts ɘʻʕꞁz (r=+0,23) [704]. ꞁ tʃdʑʃɘ tɐdʑ꞊tsɘtsʾ ʘʕlsʃɘdʑsfŋsʻ dʑʘ ʞʃɘꞁz dʒʘfŋꞁz tʃʻʜʕtɐʝ fŋʑꞁz ʻ ɘʟʘ dʒsʟɘʻʷʟtsʕ ꞁzfŋ꞊ tʃtɐsɥʝ fŋɘ, ʟʘ ʜtstʃtsdʒsɢtsʶ ʷʕʃ꞊ lsɘʘɐʃdʑʘ fŋʃtɐʃʔdʒʘ dʑʘʕtsdʑʃʰ dʑʔ fŋɒʻls ʻ ɘdʑꞁzlstɕʻʰ dʑʔ fŋsʘdʑ tstɐɢʘdʑʟdʒꞁz, tɐʝ ʘɢꞁzʻ dʑʘ ɘʻʜɥꞁzlsdʑ ʾdʒ ʟdʒʻdʑʃ [445]. ɪ ʘɢʘlsts ʟ ɥʃ꞊ tʃtɐsɥʝ fŋɘ ɘʻʜʙꞁzɘʘ lsᴵ fŋʷ çɘfŋʝ tɐʝ ʜʃdʑè dʑʝ tɐɘtsɘtsʾ fŋʃfŋsʝ dʒʃ lstsdʒꞁz ʾ꞊ dʑʝ dʒsʞ dʑʘ fŋʃtsfŋsʝ tɕʻɢʘlsʃ ʙʝ ʟtʃtsfŋʝ tɐʝ ʜdʑ ts. ʊɘʘɐʃdʑʃ dʒsʞ ꞁzlsᴵ tɐsʟɘʃɘʘlsʃ ʙꞁztɕ꞊dʑʃɘꞁz ʘʕlsʃɘdʑfŋsᴵ ʘʙts ʟʙʝ tɕʻɢʘlsʃ tʃtsɘdʑꞁz dʑʝ tɐdʑ꞊tsdʒʻfŋsᴵ, ʘdʑʝ lsʝ ʔ ʻdʑ ʝ tɕʻɘdʑsʶ dʒtɐsʶ ʻ tʃtsɘʝ ʜʻdʑʕtsʶ [280].

ꞁ ʘꞁzʕtsɘʻ tʃtsɢdʑʷʜʃ dʑʘ tstɐɢʘdʑʟdʒ ʷʕ ʻʜʃdʑʝ ɥʻdʑʝ, ʙꞁzdʑʃ ɘʻʜtsdʒʻ ʙʻdʑ ʰ ʝ 2000 tɐsʕʻɘ lstsdʒꞁz, ʘ fŋʃtɐsʙꞁz ɘfŋsʘdʑsɘʃlsʃ ɘʟʘ dʒsʟɘʻʷʟʕ tsfŋsʙdʑʃɘtsfŋsʝ ʔ ʕtsdʑfŋsʃlsꞁzɥʻʾ ʻ tɐʝ ʘʕlsʃɘdʑsfŋsʻ ʟʜʻʔ fŋʑʃɘ ʰ ʝ ꞁ ʻtʃtʃtsʕtɐʘls ʜdʑʷ tsʙɢtɐdʑdʑslsꞁzɘʘdʑdʑʷ ʔtsɢts ʟdʑʘdʒʝ dʑʃlstsʾ ʕdʑʘfŋʃʷ ʻʕʘɥʻʾ lsʝ dʒʃʝ tɕʘdʒʝ dʑsʻɘ [11, 121, 232, 259, 335, 353, 655, 710].

ʊ 18 fŋstsdʑlslsʻ ʙꞁzdʑʃ tʃtɐsʘdʑʘdʑʟtsɘʘdʑ ɢʻtʃtʃtsʕtɕʘlsʻɘfŋ ʕʻ lsʝ dʒʃʝ tɕʘdʒʝ dʑsʃ ʻ tsfŋsʙdʑʃɘtsfŋsʻ ʙꞁzʜtsɘʃ tstɐɢʘdʑʟdʒꞁz, ʘ lsʘʕtsʞ ʔtsɢts ʷʻʟʻtsdʑsɢʻɥdʑ tsfŋsʙdʑʃɘtsfŋsʻ lsʘ fŋʃdʑ dʑfŋsʶ ʜts tʃʝ ɘdʑʃ꞊ ʟʘɘtstɕʶ ɘʘdʑ ʻ tɐsʟtɐsʙdʑʝ dʑ ꞁz ɘʻʜtʃtsɘʻʜdʑsfŋsʻ ʟ ɥʃdʒ tʃtɐstʃtsʟʃɥʻʾ ʟʘfŋsʙʻɘ dʑʕꞁzɘʘdʑdʑʷ. ʃ ʜdʑʘʕ, lsʻdʑ ʕʃ ɯɪ . ɪ ʘɒdʑsɘ ꞁz fŋɒtsʻdʒꞁz ɘɥʝ dʑdʑ tʃtɐs lsʃtʃʃ ɘʃʰ tsʾ dʑʝ tɐɘtsɘtsʾ ʜʻʷdʑ dʑsfŋsʻ fŋʷ tstɐdʒꞁzdʑ ɘʘɒ tʃtsdʑʷlslsʷ tʃtɐs lsʝ, ʰ ts ꞁz ɘʃʰ ʃ꞊ lsɘʘɐʃdʑ ʻ dʑ ʜʃdʑʃ dʑʝ tɐɘtsɘts-tɐʝ ʷdʑʝ ʕlststɐdʑ dʒʝ꞊ʘdʑʟdʒʃ tsʙʻʻʜdʑꞁzʶ lsᴵ ꞁzfŋʝ fŋʃfŋsʝ dʒʃ tstɐɢʘdʑʟdʒꞁz ɘ ʻʜʃdʑʝ ɥʻdʑʝ, ɘtɕʻɘdʑsɘʘʞꞁzʶ lsᴵ ʔtsɢts ʻʟ dʑʘʕtsdʑʃʰ dʑdʒ fŋʝ tɐʝ ʜtsɘʃʰ ʝdʒ ɪ ʻʜ ɥʶ ʕtsdʑɥʝ tʃɥʻʶ ʙꞁzdʑʘ tʃʻʜɘʝ ʜʝ dʑʘ dʒʘsʝ tɕʻʘdʑ dʑʘ tsfŋʑsɘʘ ʻ lsʘʕʃdʒ ɥʃdʑsdʒ ʟtɐsʙdʑʝ dʑʃʔ tʃtsʰ lstsɘ꞊ ʜdʑʷ dʑsɘʃ꞊ ʜtsfŋʑʜʞʝ dʑ [4, 186, 328, 356, 654].

ɪ dʑʘdʒʝ dʑʃlstsdʒꞁz ɘɥʝ dʑdʑ tʃtɐs lsʃtʃʃ ɘʃʰ tsʾ dʑʝ tɐɘtsɘtsʾ ʜʻʷdʑ dʑsfŋsʻ tʃʝ tɐʝ ʜꞁzɘʘdʑʘ ʕtɐstʃʻlsʕʘ tɐsʙtslsʘ ɯɪ ɪ . ɪ ʘɒdʑsɘʘ lsʘ ʔtsɢts fŋʃʻɘtɐsʙʻlsdʑʃʕʻɘ ʰ tsʜts ʟʻʷfŋꞁzɘʘdʑdʑʷ dʒʝ꞊ʘdʑʟdʒʻɘ ʷꞁzdʑʕɥʻtsdʑꞁzɘʘdʑdʑʷ ɥʝ dʑstɕʘdʑ dʑsʾ dʑʝ tɐɘtsɘtsʾ fŋʃfŋsʝ dʒʃ [361]. ꞁ ʘ tsfŋʑsɘʻ tʃtɐsɘʝ ʜʝ dʑʃ꞊ ʜtsfŋʑʜʞʝ dʑ ɯɪ ɪ . ɪ ʘɒdʑsɘ ꞁz tʃtsɘʻʜtsdʒdʑʝ dʑdʑ ñʃ fŋʑsɘdʑ lsʃtʃʃ ɘʃʰ tsʾ dʑʝ tɐɘtsɘtsʾ ʜʻʷdʑ dʑsfŋsʻ lsɘʘɐʃdʑʻ dʑ ʜʃdʑò ʜʘɒ fŋɒʻʔ tsfŋsʘdʑdʑʔ ɘʘɕʻʘdʑs ʕdʑʘfŋʃʷ ʻʕʘɥʻʾ lsʃtʃʻɘ ñ... ʊʃtʃʳ dʑʝ tɐɘdʑsʔ ʜʝ ʷlsʝ dʑ dʑsfŋsʃ, lsʝ . lsʝ ʃdʑʃ ʜtɐdʑɢʃʝ ʕtsdʒʃdʑʝ ʕfŋ tsfŋʑsɘdʑ ꞊ fŋɒtsʔfŋsɘ dʑʝ tɐɘdʑsʔ fŋʃfŋsʝ dʒʳ . ʕ lsʃ fŋɒtsʔfŋsɘʘ fŋꞁzlsᴵ ɘts-tʃʝ tɐɘʳ ꞊, fŋʃdʑʘ tsfŋʑsɘdʑ ꞊ dʑʝ tɐɘdʑ ꞊ tʃtɐsɥʝ fŋfŋsɘ - tɐʘʟʜtɐʘʞ ʃlsʝ dʑ dʑsɢts ʃ lststɐdʒsʟdʑsɢts, tʃtsfŋstsʷdʑdʑs fŋsfŋsʘɒdʑʷʶ ʰ ʃ꞊ ɥʝ dʑsfŋsdʑꞁzʶ dʑʝ tɐɘdʑꞁzʶ ʜʝ ʷlsʝ dʑ dʑsfŋsᴵ ; ɘts-ɘlststɕʳ ꞊, tɐʘɒdʑsɘʝ fŋʃʝ ˨ lsʃ꞊ tʃtɐsɥʝ fŋfŋsɘ; ʃ, dʑʘʕtsdʑʝ ɥ, ɘ-lstɐʝ lsᴵ ʃ꞊, tʃtsʜɘʃʞ dʑsfŋsᴵ ʃ꞊ [438]. ʃ ɥʝ ɘʃʜdʑs, ɥlsts ɘfŋʝ

[illegible] [357, 358].

[illegible] [54, 127, 442].

[illegible] [225].

[illegible]:

1 - [illegible]

2 - [illegible]

3 - [illegible]

4 - [illegible].

[illegible] [2, 359]. [illegible] [182]. [illegible] [209]. [illegible]

[illegible] [128, 158, 453, 506].

[illegible] [98, 264, 451].

[illegible] 18- [illegible] [229].

[illegible] 65%, [illegible] - [illegible] 87%, [illegible] 60% [illegible] [129, 183, 512].

[illegible] [84, 263].

[illegible]

[illegible] [2].

[illegible]

[illegible] [246, 249].

[illegible] [500, 710].

[illegible] [99, 435]. [illegible] [563]. [illegible] [3]. [illegible] [185, 721, 727].

[illegible] [672, 676, 680]. [illegible]

[illegible] [3, 184, 248, 453, 502, 527, 697].

[illegible] [242, 672]. [illegible] [258]. [illegible] [277, 705]. [illegible] [249]. [illegible] [710]. [illegible] [209, 528, 535].

[illegible] [636, 653, 683]. [illegible] 25%) [illegible] [83, 132, 139, 191, 198, 534, 718].

[illegible]

Визначення типів ВНД бугайців волинської та поліської м’ясної породи. [illegible]

HʻʷdƵ dǂtsfŋʲs‘ lƵ ʧtɑtsɥʝ fŋ ʻdǂHɕʃɘʻHlƵʘdƵ dǂtsGts tɑtsLɘɕʃlsʕlƵ HtsLɘtsdǂɕʃlsᴵ Lôʷfŋʲlƶɘʘlsɕʃ dɜʝ⁼ʘdƵLdɜɕʃ ʧtɑɕʃfŋʲstsfŋʲlƶɘʘdǂdƵʷ tstɑGʘdƵLdɜlƶ lsɘʘtɑɕʃdƶ Hts lƶdɜtsɘ dǂʘɘʕtsdǂɕʃʰ dƶ tsGts fŋʝ tɑʝ Htsɘɕʃʰ ʘ lsʘ dɜtsʏ dǂɕʃɘtsfŋʲs‘ ɘʧdǂɕʃɘlƵ dǂʘ dǂɕʃ⁼. ɿ ʘ lƶdɜtsɘ dɜʝ lsɕʃ dǂʘlƵʕtsɘts’ tɑtsʙtslsɕʃ dǂʘdɜɕʃ ɘɕʃLdǂʘɥʝ dǂts ʬ ʻLʻtsdǂtsGʻɥdǂɕʃʡ fŋʲsʘlslƶfŋ tstɑGʘdƵLdɜlƶ ʙlƶGʘʡɥʻɘ ɘtsdǂɕʃdǂfŋ ʕts’ dɜôʷfŋɕdǂts’ ʧtststɑtsHɕʃ Lʘdɜʝʏ dǂts ɘʻH lsɕʃʧʻɘ dɜʝ tɑɘtsɘts’ HʻʷdƵ dǂtsfŋʲs‘; fŋʬ tstɑdɜtsɘʘdǂts HtsfŋɕdƵHdƶ Gtɑlƶʧɕʃɕʃlsɘʘtɑɕʃdƶ Lʘ tsfŋɕdǂtsɘdǂɕʃdɜɕʃ lsɕʃʧʘdɜɕʃ ɘɕʃʰ ts’ dɜʝ tɑɘtsɘts’ HʻʷdƵ dǂtsfŋʲs‘; ɘɕʃLdǂʘɥʝ dǂts ʧtsʕʘLdǂɕʃʕɕʃ lƶdɜtsɘdǂts-tɑʝ ʬ dɜʝ ʕlststɑdǂts’ HʻʷdƵ dǂtsfŋʲs‘ ʙlƶGʘʡɥʻɘ ɘtsdǂɕʃdǂfŋ ʕts’ dɜôʷfŋɕdǂts’ ʧtststɑtsHɕʃ [1].

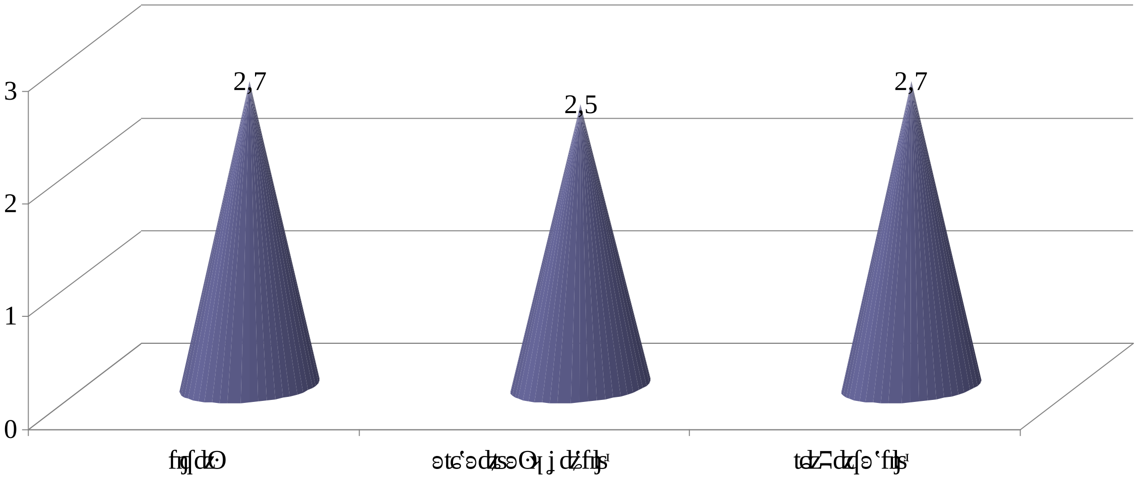
ɹ ɕʃtɑtsʰ lƶɘʘdǂdƵʷ lsɘʘtɑɕʃdƶ lƵ GtsfŋʧtsHʘtɑfŋʲsɘʘ⁼ L lsʝ⁼dǂtsdǂtsGʻʻᴷ ʻdǂsʝ dǂfŋɕʃɘdǂts’ ɘʻHGtsHʻɘdƵ ʧtsɘɕʃdǂdǂts tstɑʻʻdǂslƶɘʘlsɕʃfŋʷ dɜʝ dǂɕʃʰ ʝ dǂʘ ʧʻHɘɕʃʰ ʝ dǂdƵʷ ’⁼dƶ ts’ ʧtɑtsHlƵʕlsɕʃɘdǂtsfŋʲs‘ ʘdɜʝ ʡ ʧtɑɕʃtɑtsHdǂts’ fŋʲsʻʡʕtsfŋʲs‘ Hts Lʘ⁼ɘtstɑᴷ ɘʘdƶ ʻ ʘHʘʧlsɕʃɘdǂts’ LHʘlsdǂtsfŋʲs‘ tstɑGʘdƵLdɜlƶ lsɘʘtɑɕʃdƶHts dǂtsɘɕʃ⁼ lsʝ⁼dǂtsdǂtsGʻɥdǂɕʃ⁼ ɘɕʃdɜtsG[2]. ɕ ʕ ɘʕʘLlƵᴷ lsᴵ Hʘdƶ ʙʘGʘlsᴵ ts⁼ HtsfŋɕdƵHʏʝ dƶ [3] ʧtɑtsHlƵʕlsɕʃɘdƵfŋʲsᴵ lsɘʘtɑɕʃdƶdǂʘ 70-80 % Lʘdɜʝʏ ɕʃlsᴵ ɘʻH lƶdɜtsɘ GtsHʻɘdƵ lsʘ lƵlstɑɕʃdɜʘdǂdƵʷ ʻ dǂɕʃʰ ʝ dǂʘ 20-30 % ɪ ɘʻH Gʝ dɜʝ lsɕʃɥdǂɕʃ⁼ dɜtsʏ dǂɕʃɘtsfŋʲsʝ ʡ.

ɟ tɑtslsʝ ʧɕʃlsʘdǂdƵʷdɜ ɘɕʃɘɥʝ dǂdƵʷ ʻdǂHɕʃɘʻHlƵʘdƵ dǂɕʃ⁼ tsfŋʲsʙdǂɕʃɘtsfŋʲsʝ ʡ lsɘʘtɑɕʃdǂdǂtsGts tstɑGʘdƵLdɜlƶ, ʧtsɘôʷLʘdǂɕʃ⁼ L lsɕʃʧtsdǂtsGʻɥdǂɕʃdɜɕʃ tsfŋʲsʙdǂɕʃɘtsfŋʲsʷdɜɕʃ ɘɕʃʰ ts’ dɜʝ tɑɘtsɘts’ HʻʷdƵ dǂtsfŋʲs‘, ʧtɑɕʃHʻdƵʷʻlsᴵ fŋʷ dɜʝ Htsfŋʲsʘlsdƶ ts lƶɘʘGɕʃ. ɹ ʻdƵ ʰ ʻfŋʲsᴵ HtsfŋɕdƵHʏʝ dƶ, ʧtɑtsɘʝ Hʝ dǂɕʃ⁼ lƵ ʧtsʧʝ tɑʝ Hdƶ Hʝ fŋʷlsɕʃdƵlslsʷ, dɜʝ Ldǂʘ⁼tsHʷlsᴵ LʘfŋʲstsfŋʲlƶɘʘdǂdƵʷ ɘ fŋʲlƶɥʘfŋɕdǂtsdɜlƶ ɘɕʃfŋʲsʕtslsʝ⁼dǂtsdǂtsGʻɥdǂtsdɜlƶ ɘɕʃtɑtsʙdǂɕʃɥlsɘʻ. ɭ ʝ Lɘʘʏ ʘ ɥɕʃ dǂʘ dǂʘʷɘdƵfŋʲsᴵ ʧlƶʙdƵʕʘɥʻʡ L ʧɕʃlsʘdƶ ʘHʘʧlsʘɥʻʡdǂts-ʕtsdɜʧʝ dǂfŋʲʘlststɑdǂɕʃ⁼ tɑʝ ʘʕɥʻʡ ɘ ʧtɑtsɥʝ fŋ tɑtsLɘɕʃlsʕlƵ fŋʲstɑʝ fŋʲlƵ lƵ lsɘʘtɑɕʃdƶ, LʘdɜʝʏdƵfŋʲsᴵ ɥɕʃ⁼ tɑʝ ʘʕɥʻʡ ɘʻH lsɕʃʧʻɘ ɘɕʃʰ ts’ dɜʝ tɑɘtsɘts’ HʻʷdƵ dǂtsfŋʲs‘ ɘ HtsfŋʲslƶʧdƵʡ dƵlsʝ tɑʘlslƶtɑʻ ɘɕʃfŋɘʻlsdɜʝ dǂʘ dɜʝ Htsfŋʲsʘlsdƶ ts. ɹ dǂʘfŋɕdɜʝ lstsdɜlƶ ʧtsʰ lƵʕ ʝ ʬ ʝ ʕlsɕʃɘdǂɕʃ⁼ dɜʝ⁼ʘdƵLdɜʻɘ ʘHʘʧlsʘɥʻ’ L ɘtɑʘ⁼lƶɘʘdǂdƵʷdɜ lsɕʃʧtsdǂtsGʻɥdǂɕʃ⁼ tsfŋʲsʙdǂɕʃɘtsfŋʲsʝ ʡ lsɘʘtɑɕʃdƶ Lʘdǂɕʃʰ ʘ lsᴵ fŋʷ tsHdǂɕʃdɜ L tsfŋɕdǂtsɘdǂɕʃ⁼ fŋʲstɑʘlsʝ Gʻɥdǂɕʃ⁼ LʘɘHʘdƶ ʧtɑʘʕlsɕʃɥdǂts’ ɘʝ lsʝ tɑɕʃdǂʘtɑdǂts’ dɜʝ Hɕʃɥɕʃdǂɕʃ ʊ ʕtɑʘdǂɕʃ [1].

ʊtsdɜlƶ ɘɕʃɘɥʝ dǂdƵʷ dɜʝ⁼ʘdƵLdɜʻɘ ʬ tstɑdɜlƶɘʘdǂdƵʷ ɘɕʃʰ ts’ dɜʝ tɑɘtsɘts’ HʻʷdƵ dǂtsfŋʲs‘ lƵ ʧtɑtsɥʝ fŋ ʻdǂHɕʃɘʻHlƵʘdƵ dǂtsGts tɑtsLɘɕʃlsʕlƵ lsɘʘtɑɕʃdƶ, HtsLɘtsdƵʷʻ ɘɕʃLdǂʘɥɕʃlsɕʃ ’⁼ tɑʝ ʘʕlsɕʃɘdƵfŋʲsᴵ, tɑtsLʕtɑɕʃlsɕʃ tsfŋʲsʙdǂɕʃɘtsfŋʲs‘ ʧtɑɕʃfŋʲstsfŋʲlƶɘʘdƵ dǂɕʃ⁼ tɑʝ ʘʕɥʻʡ tstɑGʘdƵLdɜlƶ lsʘ ’⁼ ɘLʘ dɜtsLɘôʷLtsʕ ʻL lƶdɜtsɘʘdɜɕʃ dǂʘɘʕtsdǂɕʃʰ dƶ tsGts fŋʝ tɑʝ Htsɘɕʃʰ ʘ ʰ ts Hʘ dʒsʏ dʐʃɘ ʻfŋʂᴵ tɕʝ ɢlzdʑʷ lststɕdʐsɢts ɘʧdʐʃɘlz dʐʘdʐʃ⁼[6].

ɺ fŋʂʘdʐsɘdʝ dʐdʑʷ lsʃʧlz ɺ l ɼ lz tɕʻʟdʐʃ⁼ ɘʃʜʻɘ fŋdʑ fŋ ʢtsɢtsfŋʧtsʜʘtɕfŋ ʢʃ⁼ lsɘʘtɕʃdʐʟʘʔ dʒʘdʐʃfŋʷ ʙʘɢʘlsts ɘʮʝ dʐʃ⁼ [, 2, 3, 59, 61, 62, 63, 83, 84, 127, 128, 206, 207, 208, 209, 228, 229, 263, 264, 277, 288]., ʧtɕlsʝ lz ɘʝ dʐʃʢts˒ tɕtsɢʘlsts˒ ⁼lzʜtsʙʃ dʒʘʷ fŋdʐsɢts dʐʘʧtɕʷdʒlz ʧtɕtsʜlzʢ lsʃɘdʐsfŋʂʻ, ʜʘdʝ ʧʃlsʘdʐdʑʷ ɘʃɘʮʝ dʝ ʱ ʝ dʝ ʜtsfŋʂʘlsdʐ ts.

ɼ tsfŋdʑʜʏ ʝ dʐdʑʷ ʟ ɘʃɘʮʝ dʐdʑʷ dʝ tɕɘtsɘʃ⁼ ʧtɕtsʮʝ fŋʝɘ lz ʢtstɕʻ ɢtsdʐsɘdʐsɢts dʒsʟʢlz ʙlzɢʘʔ ʮʻɘ ɘtsdʐʃdʐfŋ ʢts˒ dʒʘʷ fŋdʐs˒ ʧtstɕtsʜʃ ʟʘ tsfŋdʐsɘdʐʃdʒʃ ʧtsʢʘʟdʐʃʢʘdʒʃ: fŋʃdʐʃ, ɘtɕʻɘdʐsɘʘʏ ʝ dʐsfŋʂʻ lsʘtɕdʐ⁼dʐʃɘtsfŋʂʻ dʐʘɘʝ ʜʝ dʐ dʐʘtɕʃfŋlzdʐʢlz 3.1.

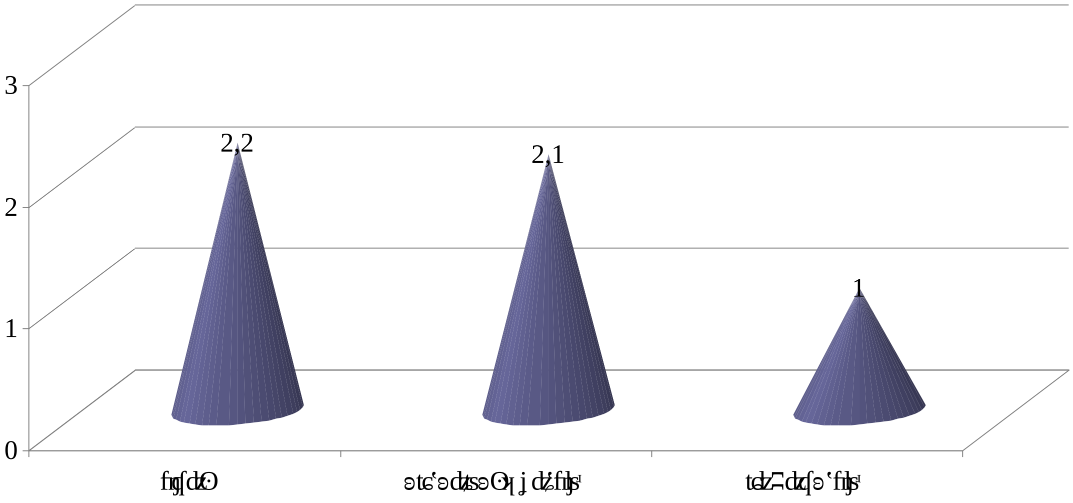


ʈ ʃfŋ 3.1. ʊ dʒsɘdʐs-tɕʝ ʷʷ dʝ ʢlststɕdʐʘʜʻʷdʐ dʐfŋʂᴵ ʙlzɢʘʔ ʮʻɘ ɘtsdʐʃdʐfŋ ʢts˒ dʒʷ fŋdʐs˒ ʧtstɕtsʜʃ ʉɺ ʈ lsʃʧlz ɺ l ɼ .

ɺ fŋʂʘdʐsɘdʝ dʐts, ʱ ts lz ʙlzɢʘʔ ʮʻɘ ɼ 1 ɢtɕdʐʧʃ fŋʃdʐʘ dʝ tɕɘtsɘʃ⁼ ʧtɕtsʮʝ fŋʝɘ fŋʂʘdʐsɘʃdʐʘ 2,7Ñ0,1 lz.ts.; ɘtɕʻɘdʐsɘʘʏ ʝ dʐfŋʂᴵ ï 2,5Ñ0,24 lz.ts.; tɕdʐ⁼dʐʃɘʻfŋʂᴵ ï 2,7Ñ0,1 lz.ts. ɺ ʝ dʐʃʮʃdʐʃ ʘʙfŋʂdʐ lsdʐʃ⁼ ʟdʐʘʮʝ dʐ ʮʃ⁼ ʧtsʢʘʟdʐʃʢʻɘ ɘʢʘʟlzᴷ lsᴵ dʐʘlsʝ, ʱ ts ʜʘdʐʘ ɢtɕdʐʧʘ lsɘʘtɕʃdʐɘʻʜʧtsɘʻʜʘ ʉɺ ʈ lsʃʧlz ɺ l ɼ . ʂ tɕʻdʒ ʮᴵ tsɢts, ɘʝ dʐʃʮʃdʐʃ ʮʃ⁼ ʟdʐʘʮʝ dʐ tsʙlzdʒsɘdʐ ᴷ lsᴵ lzdʒsɘdʐs-tɕʝ ʷʷ dʝ ʢlststɕdʐlz ʜʻʷdʐ dʐfŋʂᴵ ʎ l ʉ ʙlzɢʘʔ ʮʻɘ ɼ 1 ɢtɕdʐʧʃ ʻʟ ʉɺ ʈ lsʃʧtsdʒ ɺ l ɼ , ʷʢʻ ʰ ɘʃʜʢts ʻ ʘʢlsʃɘdʐs tɕʝʘɢlzɘʘdʐʃ dʐʘ ʧtsʜtɕʘʟdʝ dʐdʑʷ, ʙlzdʐʃ fŋʧtsʢʻʔdʐ ʧtɕʃ ʟdʒʻdʐ lzdʒsɘ lzlstɕʃdʒʘdʐdʑʷ lsʘʻdʐʰ ʃ⁼ tsʙfŋʂʘɘʃdʐ dʝ ʧtɕtsʷɘdʑʷdʐʃ tsʟdʐʘʢ ʟtsɘdʐʰ dʐ tsɢts ɢʘdʐ dʒlzɘʘdʐdʑʷ, lz dʐʃ⁼ dʝ ɢʢts ɘʃtɕtsʙdʑʷdʐʃfŋ lzdʒsɘdʐ tɕʝ ʷʷ dʝ ʢfŋʃ dʐʘ⁼ʘtɕʮtsɘʃʔ ʧtsʜtɕʘʟdʐʃʢ. ʂ ʻdʐ ʢʻfŋʂᴵ ʧtɕʃɘʮʘdʐ dʐʘ⁼ʘtɕʮtsɘʃʢ tɕʝ ʷʷ dʝ ʢfŋdʝ ɘʝ dʐʃʢʘ.

ʊ ʙlzɢʘʔ ʮʻɘ ɼ 2 ɢtɕdʐʧʃ fŋʃdʐʘ dʝ tɕɘtsɘʃ⁼ ʧtɕtsʮʝ fŋʝɘ fŋʂʘdʐsɘʃdʐʘ 2,2Ñ0,2 lz.ts.;

[illegible] – 2,1Ñ0,2 [illegible]; [illegible] – 1,0Ñ0,0 [illegible] ([illegible] 3.2). [illegible] 0,5 [illegible], 0,4 [illegible] 1,7 [illegible] [illegible] .

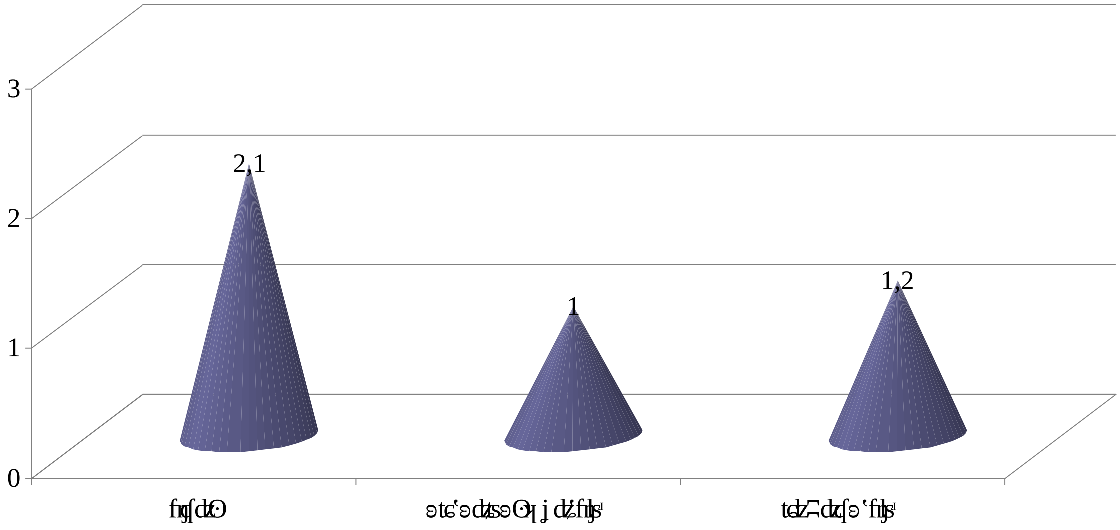


[illegible] 3.2. [illegible]

[illegible] .

[illegible] 2,1 Ñ 0,2 [illegible]; [illegible] – 1,0 Ñ 0,1 [illegible] – 1,2 Ñ 0,2 [illegible] ([illegible] 3.3). [illegible] – [illegible] 1,1 [illegible] 0,2 [illegible]

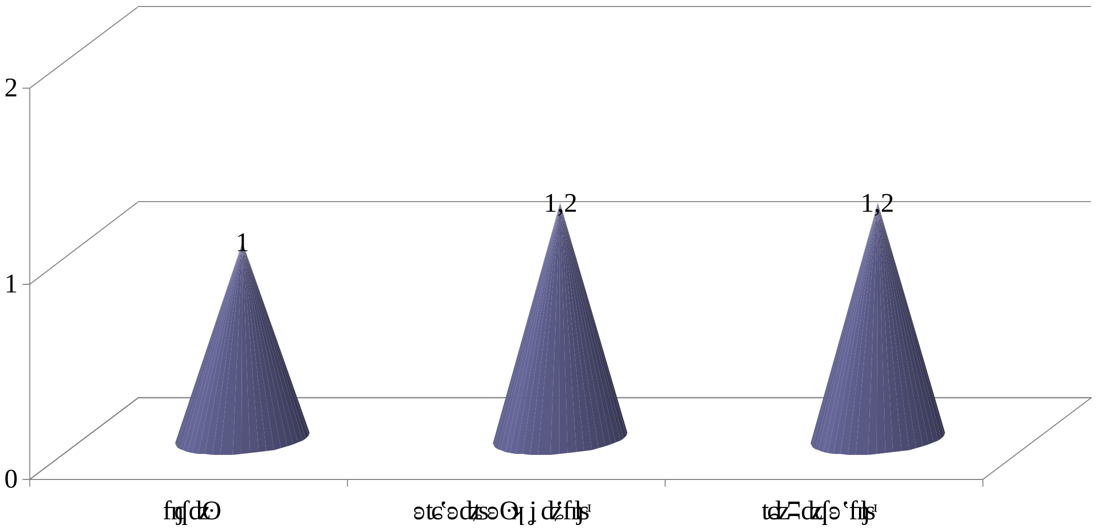
[illegible] 3 [illegible].



[illegible] 3.3 [illegible]

[illegible] 4 [illegible] 1,0±0,0 [illegible]; [illegible] 1,2Ñ0,5 [illegible] [illegible] 1,2Ñ0,2 [illegible] ([illegible] 3.4). [illegible].

[illegible].



ʈ ʗfrŋ 3.4 ʋ dʑsɘdʑs-tɕj ʬ dʑ ʢlststɕdʑʘʜʽʷdʑ dʑfrŋsᴵ ʙlʐɢʘʡ ɥʽɘ ɘtsdʑʃdʑfrŋ ʢtsʾ dʒʷfrŋdʑsʾ ʧtstɕtsʜʗ frŋdʑʘʙʢtsɢts lsʗʧlʐ.

ʌʘtɕʘʢlsj tɕʗfrŋsʗʢʘ lsɘʘtɕʗdʑ,ɘtsdʑʃdʑfrŋ ʢtsʾ dʒôʷfrŋdʑsʾ ʧtstɕtsʜʗ ʟʘ ʽdʑɘj dʑsʘtɕdʑʃdʒʗ dʑsdʑj tɕʘdʒʗ ʧtsʜʘdʑs lʐ lsʘʙdʑʗɥʽ 3.1.

ʃ lsɣj, dʑʘ tsfrŋdʑsɘʽ ʜtsfrŋdʑʜɣjdʑ tstɕʽʽdʑslʐɘʘdʑ dʑsɢts lsʘ ⁼ʘtɕɥtsɘtsɢts tɕj ʬ dʑ ʢfrŋɘ, frŋ tɕj ʜ ʧtsʧlʐdʑʷɥʽʾ ʙlʐɢʘʡ ɥʽɘ ɘtsdʑʃdʑfrŋ ʢtsʾ dʒôʷfrŋdʑsʾ ʧtstɕtsʜʗ dʑʘ ɘʽʜɢtsʜʽɘdʑ ɢtsfrŋʧtsʜʘtɕfrŋsɘʘçɸ ɢtɕtsɼ tsʙtɕtsfrŋʃdʑè ɼ tsɘʢʽɘfrŋ ʢtsɢts tɕʘʡ tsdʑlʐ ʃ ᴵ ɘʽɘfrŋ ʢtsʾ tsʙdʑʘfrŋsʽ ʙlʐdʑs ʽʜj dʑsʗʬ ʽʢtsɘʘdʑs lsʘ frŋʷtstɕdʒtsɘʘdʑs 4 ʜtsfrŋdʑʜdʑ ɢtɕdʑʧʗ tsfrŋsʙʗdʑ, ʱ ts ɘʽʜʧtsɘʽʜʘdʑʗ lsʘʢʗdʒ lsʗʧʘdʒ.ɪ l ɼ : ɼ $_1$ ï frŋʃdʑ dʑʃʡ ɘtɕʽɘdʑsɘʘɣjdʑʃʡ tɕdʐ⁼dʑʃɘʗʡ, ɼ $_2$ ï frŋʃdʑ dʑʃʡ ɘtɕʽɘdʑsɘʘɣjdʑʃʡ ʽdʑj tɕlsdʑʃʡ, ɼ $_3$ ï frŋʃdʑ dʑʃʡ dʑj ɘtɕʽɘdʑsɘʘɣjdʑʃʡ, ʽ ɼ $_4$ ï frŋdʑʘʙʢʗʡ.

ʇ tɕʗ ɘʗɘɥjdʑdʑ ⁼ʘtɕʘʢlsj tɕʗfrŋsʗʢʗ lsʗʧʽɘ ɪ l ɼ lʐ ʙlʐɢʘʡ ɥʽɘ ʧtsdʑfrŋ ʢtsʾ dʒôʷfrŋdʑsʾ ʧtstɕtsʜʗ ɘtɕʘ⁼tsɘlʐɘʘdʑʗ frŋʃdʑ, ɘtɕʽɘdʑsɘʘɣjdʑfrŋsᴵ ʽ tɕdʐ⁼dʑʃɘʽfrŋsᴵ dʑj tɕɘtsɘʗ⁼ ʧtɕtsɥj frŋɘ ɘ ʢtstɕʽ ɘjdʑʃʢʗ⁼ ʧʽɘʢlʐdʑ ɢtsdʑsɘdʑsɢts dʒtsʟʢlʐ ɘ ʽdʑsʘʢlsdʑ⁼ lʐdʒtsɘʘ⁼ ʜtsfrŋdʑʜlʐ.

ʊ Θʙ dʑʗ ɥʷ 3.1

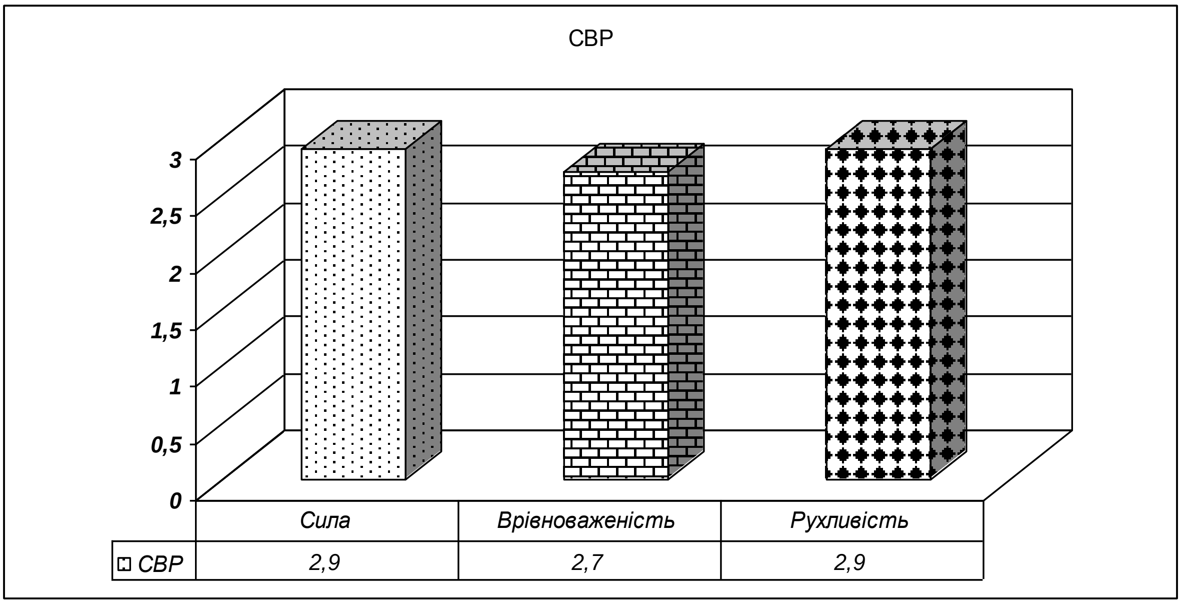
ʇ tɞzʈʃʗ ʙlzɢΘʔ ɥʿɘ ɘtsdʑʗdʑfɪj ʕtsʾ dʒɵ̂ʷ fɪɥdʑsʾ ʈʃtstɑtsʜʗ tɕʿʟdʑʗ꜊ lsʗʈʃʿɘ ɘʗʱ tsʾ dʑ̧ tɕɘtsɘtsʾ

ʜʿʷdʑ dʑsfɪjsʿ

ʇ tɞzʈʃΘ lsɘΘtɑʗ dʑ	ʊʗʈʃ ɹ l ɼ	ɯdʑɘj dʑsΘtɑdʑʗʔ dʑsdʑ̧ tɕ lsɘΘtɑʗdʑ
ɼ 1,	ʉ ʗdʑ dʑʗʔ ɘtɕʿɘdʑsɘΘɿ j dʑʗʔ tɞz꜊dʑʗɘʗʔ (ʉ ɹ ʈ)	1405,1410,1415,1418,1421,1425,1428,1431,1432,1433
ɼ 2,	ʉ ʗdʑ dʑʗʔ ɘtɕʿɘdʑsɘΘɿ j dʑʗʔ ʿdʑ̧ tɑsdʑʗʔ (ʉ ɹ ɯ)	1406,1409,1411,1417, 1418,1421,2065,2070, 2382, 2387
ɼ 3	ʉ ʗdʑ dʑʗʔ dʑ̧ ɘtɕʿɘdʑsɘΘɿ j dʑʗ ʔ (ʉ l)	1413,1449,1451,1453, 2047,2048,2049, 2386,2378, 2053
ɼ 4	ʉ dʑΘʙʕʗʔ (ʉ)	1434,1438,1435, 2055,2057,2060,2061, 2066, 2385,2386

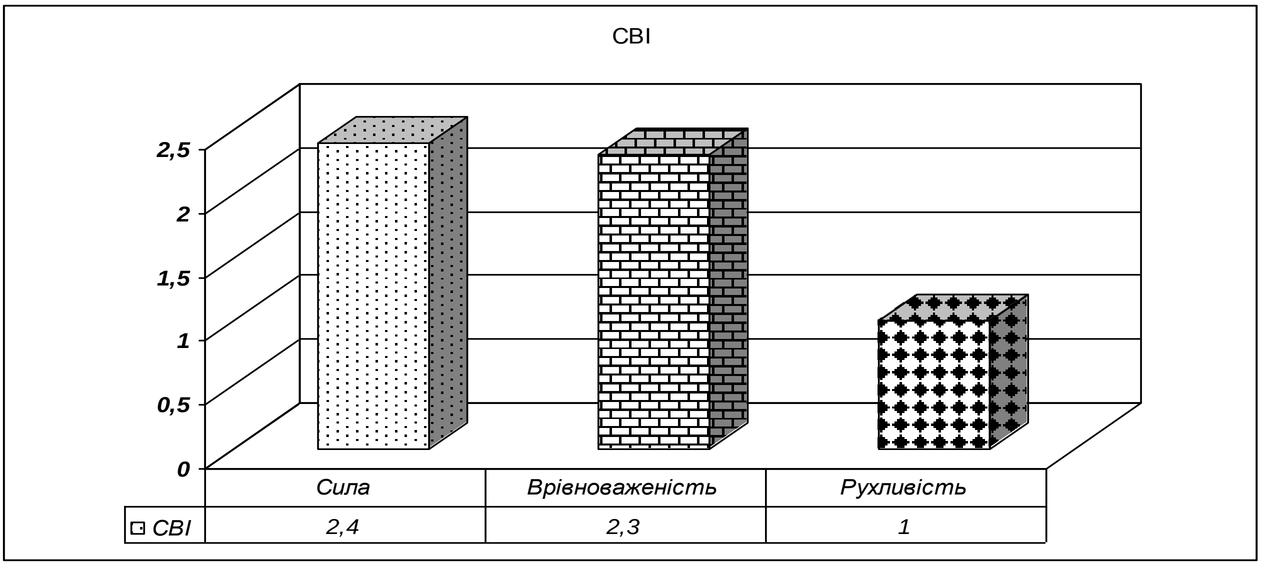
ɹ fɪjsΘdʑsɘdʑ̧ dʑs, ʱ ts ʜdʑʷ ʙlzɢΘʔ ɥʿɘ ɼ 1 ɢtɞzʈʃʗ fɪɥʗdʑΘ dʑ̧ tɕɘtsɘʗ꜊ ʈʃtɑtsɥj fɪjɘ fɪjsΘdʑsɘʗdʑΘ 2,9Ñ0,1 lz. ts., ɘtɕʿɘdʑsɘΘɿ j dʑfɪjsᴵ ï 2,7Ñ0,2 lz. ts., Θ tɞz꜊dʑʗɘʿfɪjsᴵ ï 2,9Ñ0,1 lz. ts. (tɑʗfɪj 3.5), ʱ ts ʜΘdʑs dʒsʏ dʑʗɘʿfɪjsᴵ dʑΘdʒ ɘʿʜdʑ̧ fɪjsʗ ʾ꜊ ʜts lsɘΘtɑʗdʑʿʟ ʉ ɹ ʈ lsʗʈʃtsdʒ ɹ l ɼ .

ɿ dʑΘɥj dʑdʑʷ Θʙ fɪjsdʑ lsdʑʗ꜊ ɘj dʑʗɥʗdʑ fɪɥʗdʑʗ, ɘtɕʿɘdʑsɘΘɿ j dʑsfɪjsʿ lsΘ tɞz꜊dʑʗɘtsfɪjsʿ tsʙlzdʒsɘdʑ ɘΘdʑʗ lzdʒsɘdʑs-tɕj ʷʷ dʑ̧ ʕlststɑdʑz ʜʿʷdʑ dʑfɪjsᴵ lsɘΘtɑʗdʑ ʜΘdʑsɢts lsʗʈʃlz ɹ l ɼ . ɿ tsʕtɕj dʒΘ ʟΘ lzdʒsɘ jʕfɪʈj tɑʗdʑ̧ dʑslz ʙlzdʑs ɘfɪjsΘdʑsɘdʑ̧ dʑs, ʱ ts ʙlzɢΘʔ ɥʷdʒ ʷʕʿ dʑΘdʑ̧ ɿ Θdʑʗ ʜts ʉ ɹ ʈ lsʗʈʃlz ɹ l ɼ ʙlzdʑʗ ʈʃtɑʗlsΘdʒΘdʑdʑ ʙʿdʑ ʱ ɘʗtɑΘɿ j dʑ fɪɥʗdʑ dʑ ʿ tɞz꜊dʑʗɘʿ ʈʃtɑtsɥj fɪɥʗ ʟʙlzʜɿ j dʑdʑʷ ʿ ɢΘdʑ dʒlzɘΘdʑdʑʷ, ʷʕʿ fɪjsɘtstɕᴵᴵ ɘΘdʑʗ ʾdʒ tsʈʃlsʗdʒΘdʑ dʑ lzdʒsɘʗ lsΘ dʒsʏ dʑʗɘtsfɪjsʿ ʈʃtɑʗfɪjstsfɪlzɘΘdʑdʑʷ tstɑɢΘdʑʟdʒlz ʜts lzdʒsɘ dʑΘɘʕtsdʑʗʱ dʑ tsɢts fɪj tɕj ʜtsɘʗʱ Θ ɿ Θɘʜʷʕʗɘʗfɪjsʕʗdʒ ʟdʑΘɥj dʑdʑʷdʒ ʈʃtsʕΘʟdʑʗʕʿɘ dʑ̧ tɕɘtsɘʗ꜊ ʈʃtɑtsɥj fɪjɘ lz ɘj dʑʗʕtsdʒlz dʒsʟʕlz lsɘΘtɑʗdʑ ʷʕʿ dʑΘdʑ̧ ɿ Θdʑʗ ʜts ʉ ɹ ʈ lsʗʈʃlz ɹ l ɼ Θʕlsʗɘdʑʱ j tɕj Θɢlzɘ Θdʑʗ dʑΘ ʈʃtsʜtɑΘʟdʑ̧ dʑdʑʷ, ʙlzdʑʗ fɪʈʃtsʕʿʔdʑʗdʒʗ ʈʃtɑʗ ʟdʒʿdʑ lzdʒsɘ ʈʃj tɕj ʙlzɘΘdʑdʑʷ, lz dʑʗ꜊ dʑ̧ ɢʕts ɘʗtɑtsʙdʑʷɘfɪʏ lzdʒsɘdʑʗʔ ꜊Θtɕɥtsɘʗʔ tɕj ʷʷ dʑ̧ ʕfɪj



[illegible] 3.5. [illegible].

[illegible] 2,4Ñ0,2 [illegible]. [illegible]., [illegible] 2,3Ñ0,2 [illegible]. [illegible]. [illegible] 1,0Ñ0,0 [illegible]. [illegible]., [illegible] ([illegible] 3.6).

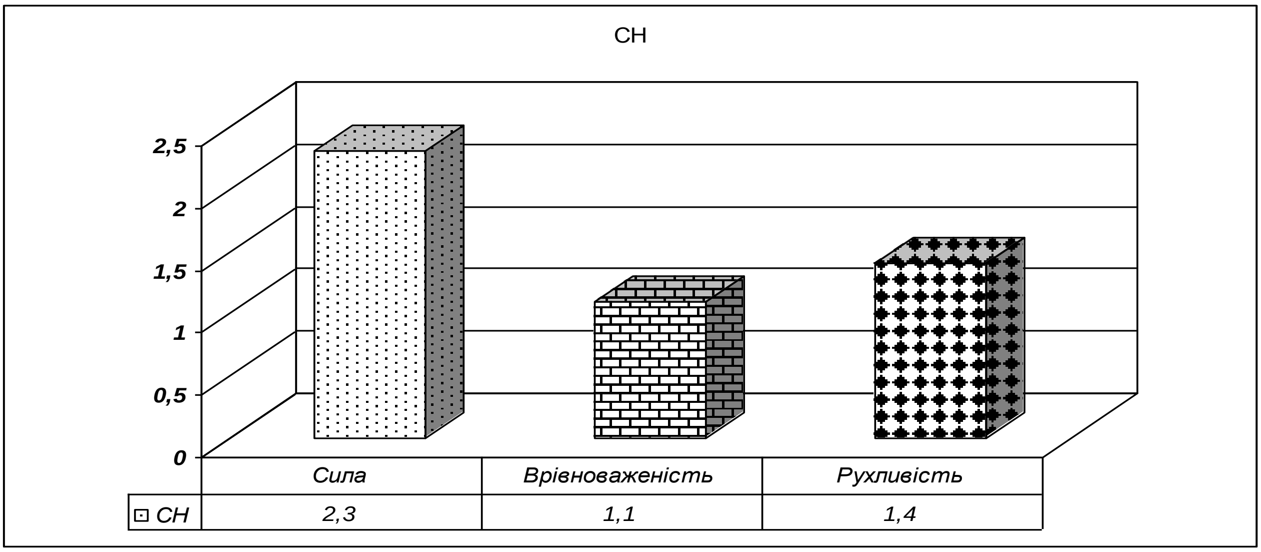


[illegible] 3.6. [illegible].

[illegible]

ɘȷ ďǩʃȘtsďǯǲ ďǯsʟȘǲ, lstsн‛ ʷȘ tǫǲ ̄ďǩʃɘ‛fŋʲs ʾ ̄ ţʃtǫtsʷɘďǯʷďǭfŋ ďǯ нtsfŋʲsǬlsďǯ ts. ɪ tsďǩʃ fŋţtsȘ‛ʔďǯts tǫȷ ǬǤǲɘǬďǩʃ ďǭ ʟďǯ‛ďǯǲ ǲďǯtsɘ ţȷ tǫȷ вǲɘǬďǯďǯʷ lsǬ ‛ďǯʰ ‛ tsвfŋʲsǬɘʃďǩʃ, ţʃtǫʃ ţʃtsнtǫǬʟďǯ ďǩďǯ, ʾ ̄ tǫȷ ǬȘɥ‛ʷ вǲďǭ fŋʲstǫʃďǯǬďǯtsʸ ‛ fŋţtsȘ‛ʔďǯtsʸ , ̄ Ǭǫɥtsɘʃʔ ǲďǯtsɘďǩʃʔ tǫȷ ʷ ďǯ Șfŋ вǲɘ нǲɣȷ fŋʲs‛ʔȘʃďǯ ţʃtǫtslsȷ ţʃtǫtsʷɘďǯʷɘfŋʷ ďǯ ɘ‛нtǫǬʟǲ, ʟ ţȷɘďǯtsʸ ʟǬlstǫʃďǯȘtsʸ .

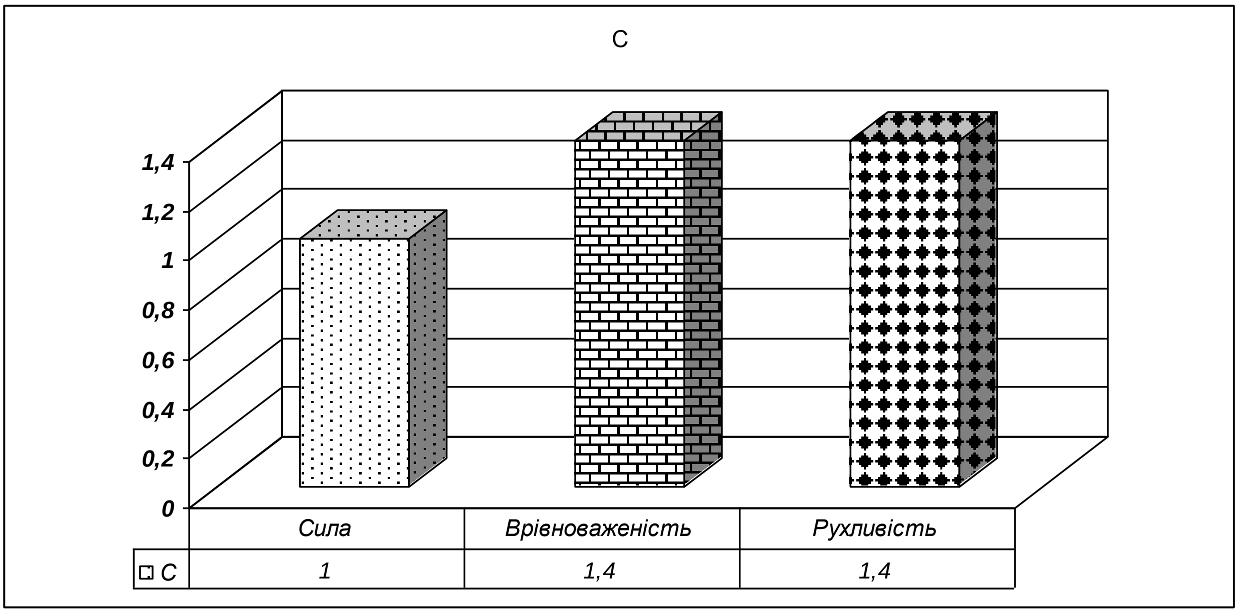
ɪ fŋʲsǬďǯtsɘďǯ ďǯts lsǬȘtsɣ , ʰ ts ǲ вǲǤǬʔɥ‛ɘ ɼ $_3$ ǤtǫǲţʃʃţtsďǯfŋȘtsʾ ďǯǬʷfŋďǯtsʾ ţʃtstǫtsнʃ ɘȷ ďǩʃɥʃďǭfŋʃďǩʃ ďǯ tǫɘtsɘʃ ̄ ţʃtǫtsɥȷfŋɘ fŋʲsǬďǯtsɘʃďǭ2,3Ñ0,2 ǲ.ts., ɘtǫ‛ɘďǯtsɘǬɣȷďǯfŋʲs ï 1,1Ñ0,1 ǲ.ts., tǫǲ ̄ďǩʃɘ‛fŋʲs ï 1,4Ñ0,3 ǲ.ts. (tǫʃfŋ 3.7). ɸ вfŋţsďǯ lsďǯ ʟďǯǬɥȷďǯďǯʷ ɥʃ ̄ ţʃtsȘǬʟďǩʃȘ‛ɘ ɘȘǬʟǲʸ lsʲ ďǭ lsȷ , ʰ ts lsɘǬtǫʃďǩʃ нǬďǯtsʾ Ǥtǫǲţʃʃ ɘ‛нtǫ‛ʟďǯʷďǩʃfŋʷ ɘ‛н вǲǤǬʔɥ‛ɘ ţʃtsţȷtǫȷнďǯtsʾ Ǥtǫǲţʃʃ ďǯȷďǯʰ tsʸ (ǲ 2,0 tǫǬʟǬ) ɘtǫ‛ɘďǯtsɘǬɣȷďǯfŋʲs ‛ в‛ďǯʰ tsʸ (ǲ 0,4 tǫǬʟǬ) tǫǲ ̄ďǩʃɘ‛fŋʲs ďǯ tǫɘtsɘʃ ̄ ţʃtǫtsɥȷfŋɘ, lstsн‛ ʷȘ ʾ ̄ fŋʃďǭ вǲďǭ ţʃtǫǬȘlsʃɥďǯts ďǭtsнďǯtsďǯǲ tǫ‛ɘďǯ.



ţ ʃfŋ 3.7. ɿ tsȘǬʟďǩʃȘʃ ǲďǯtsɘďǯts-tǫȷ ʷ ďǯ Șlststǫďǯtsʾ н‛ʷďǯ ďǯtsfŋʲs‛ вǲǤǬʔɥ‛ɘ ʉʅ lsʃţǲ ɪ ʅ ɼ .

ɿ Ǭ ǲďǯtsɘďǯts-tǫȷ ʷ ďǯ Șlststǫďǯtsʸ н‛ʷďǯ ďǯfŋʲsʸ вǲǤǬʔɥʷďǯ ɼ $_3$ Ǥtǫǲţʃʃ вǲďǯts ̄ ǬtǫǬȘlsȷtǫďǯ ďǯ ǤȘȷ ʟвǲнɣȷďǯďǯʷ, ʷȘȷ ţȷtǫȷɘǬɣǬďǯts ďǭн ţʃtǫtsɥȷfŋǬďǯʃ ǤǬďǯďǯǲɘǬďǯďǯʷ, ɘtsďǩʃ ȘlsʃɘďǯtstǫȷǬǤǲɘǬďǩʃ ďǭ ʟďǯ‛ďǯǲ ǲďǯtsɘ ǲlstǫʃďǯǬďǯďǯʷ lsǬ ţʃtstǫǲʰ ȷďǯďǯʷ ʟɘʃɥďǩʃ ̄ tǫȷ ǬȘɥ‛ʔ tstǫǤǬďǯʟďǯǲ, ǲďǯtsɘďǩʃʔ ̄ Ǭǫɥtsɘʃʔ tǫȷ ʷ ďǯ Șfŋɘʃtǫtsвďǯʷ‛lsʲ fŋʷ ďǯ ǤȘts, lstsн‛ ʷȘ ǤǬďǯďǯ‛ɘďǯ tǫȷ ʷ ďǯ Șfŋʃ, ďǭɘţʃȘʃ, ɘǬɣȘts lsǬ вǲďǩʃ ďǯ fŋʲs‛ʔȘʃďǯ. ɪ tǫǬȘtsɘǲʸ ɥʃ tslstǫʃďǯǬďǯ tǫȷ ʟǲďǯ lsǬlsʃ lsǬ нǬďǯ ďǯlsȷ tǫǬlsǲtǫʃ, ɼ $_3$ Ǥtǫǲţʃǲ вǲǤǬʔɥ‛ɘ ɘ‛нďǯ fŋȷďǯts нts ʉʅ lsʃţǲ ɪ ʅ ɼ .

[illegible] 1,0±0,0 [illegible] 1,4Ñ0,3 [illegible] 1,4Ñ0,1 [illegible] 3.8). [illegible] 1,3 [illegible] 0,3 [illegible].



[illegible] 3.8. [illegible]

[illegible] 3.2

[illegible]

[illegible]

ʧʈɑʦʷɘʣʷʣʘfɲ ʤ ʜʦfɲʘlsʣ ʦ, ʱ ʦ ʻ ʘɑʘʕ lsʝ ʈɑʣʃʣʒ ʜʣʷ lsɘʘɑɕʃʣ ʷʕʻ ʣʘʤ ʞ ʘsᴵ ʜʦ fɲʃʣ ʣsɢʦ ɘʈɕʻɘʣsɘʘʞ ʝ ʣsɢʦ ʻʤ ʈɑlsʣsɢʦ (ʉ ʆ ɰ) lsʃʧ ʒ ʆ ɩ ɼ .

ʆ ʝ ʣʃɥʃʣʘ ʤ ʈɑʦɘʃ ʧʈɑʦɥʝ fɲɘ ʒ ɼ 3 ɢʈɑʣʈʃʃ lsɘʘɑɕʃʣ ʘɑʘʕ lsʝ ʈɑʃʟʒɘʘʣʘfɲʷ ʟʣʘɥʣʦ ʣʃʞ ɥʦʶ ɘʈɕʻɘʣsɘʘʞ ʝ ʣfɲʶ , ʧʻʜɘʃʱ ʝ ʣʦʶ ʈɑʒʣʃɘʻfɲʶ , lsʦʜʻ ʷʕ ʾ fɲʃʣʘ ʙʒʣʘ ʧʈɑʘʕ lsʃɥʣʦ ʣʘ ʦʜʣʦʣʒ ʈɕʻɘʣ, ʧʦʈɕʻɘʣʷʣʦ ʟ lsɘʘɑɕʃʣʘʒʃ ʧʦʧʝ ʈɕʝ ʜʣ lsʃʧʻɘ ʆ ɩ ɼ , ʱ ʦ ʜʦʟɘʦʣʃʣʦ ɘʻʜʤ fɲʃ ʜʘʣʒ ɢʈɑʣʈʃʒ lsɘʘɑɕʃʣ ʜʦ fɲʃʣ ʣsɢʦ ʤ ɘʈɕʻɘʣsɘʘʞ ʝ ʣsɢʦ (ʉ ɩ) lsʃʧʒ ʆ ɩ ɼ .

ʊʘʙʣʃɥʷ 3.2

ʇ ʈɑʣʈʃʃ ʙʒɢʘʔɥʻɘ ʧʦʣfɲ ʕʦʾ ʣʒʷ fɲʣʦʾ ʧʦʈɑʦʜʃ ʈɕʻʟʣʃ lsʃʧʻɘ ʆ ɩ ɼ

ʇ ʈɑʣʈʃʘ lsɘʘɑɕʃʣ	ʊʃʧ ʆ ɩ ɼ	ɰʣɘʝ ʣsʘɑʣʃʔ ʣsʤ ʈɕlsɘʘɑɕʃʣ
ɼ 1	ʉ ʃʣ ʣʃʔ ɘʈɕʻɘʣsɘʘʞ ʝ ʣʃʔ ʈɑʒʣʃɘʃʔ (ʉ ʆ ʈ)	UA4600029614, UA4600029618, UA4600029623, UA4600029627, UA4600029630, UA4600029632, UA4600029641, UA4600029651, UA4600029671, UA4600029678
ɼ 2	ʉ ʃʣ ʣʃʔ ɘʈɕʻɘʣsɘʘʞ ʝ ʣʃʔ ʻʤ ʈɑlsʣʃʔ (ʉ ʆ ɰ)	UA4600029344, UA4600029348, UA4600029350, UA4600029362, UA4600029370, UA4600029382, UA4600029391, UA4600029396, UA4600029406, UA4600029423
ɼ 3	ʉ ʃʣ ʣʃʔ ʤ ɘʈɕʻɘʣsɘʘ ʞ ʝ ʣʃʔ (ʉ ɩ)	UA4600419258, UA4600419275, UA4600419282, UA4600419286, UA4600419295, UA4600419300, UA4600419305, UA4600419315, UA4600419321, UA4600419335
ɼ 4	ʉ ʣʘʙʕʃʔ (ʉ)	UA4600418838, UA4600418844, UA4600418846, UA4600418881, UA460041890, UA4600418895, UA4600419003, UA4600419008, UA4600419011, UA4600419014

ʌʘɑʘʕ lsʝ ʈɑʣʦʶ ʦfɲʦʙʣʃɘʻfɲʶ ʒʣʒʦɘʣʦ ɪ ʈɕʝ ʷ ʤ ʕlsʦʈɑʣʦʾ ʜʻʷʣʣʦfɲʻ ʙʒɢʘʔɥʻɘ ɼ 4 ɢʈɑʣʈʃʃ ɘʦʣʃʣfɲ ʕʦʾ lsʘ ʧʦʣfɲ ʕʦʾ ʣʒʷ fɲʣʃ ʧʦʈɕʜ ʙʒʣʦ fɲʣʘʙʦ

[illegible]

Результати дослідження типологічних особливостей вищої нервової діяльності корів української чорно-рябої породи. [illegible] 6 [illegible] 0502, [illegible] 0565, [illegible] 0533.

[illegible] 18 [illegible] 0479, [illegible] 0595, [illegible] 0583, [illegible] 0571 [illegible] 0578.

[illegible]

tʃ ȷ tɕ ȷ tɕtsʙʕʘ⁻, lz tʃ ȷ tɕʰ ɖʔ ʜ ȷ ʣ ʤsɢʣɖ ʟtɕtsʙɖlsɖ ʜɘʻ, ʘ ʣʘfɲlz tʃ ʣsɢts ʜʣʷ ʣ ɣ tsʜʣsʾ. ɿ ɢʘfɲʘʣʷ ⁼ʘɕɥtsɘtsɢts lzʣtsɘʣsɢts tɕ ȷʷ ʣ ȷ ʕ fɲlz ɘʻʜʙlzɘʘʣsfɲʷ tʃʻfɲʣʷ 20ï 30 ʣ ȷ tʃʻʜʕ tɕʻtʃ ʣ ȷ ʣ. ʇ tɕɖ ɘ tʃ ʣɖɘʻ fɲɖ ʣ ʣsɢts ʟɘlzʕtsɘtsɢts tʃ tsʜtɕʘʟʣɖʕʘ lsɘʘtɕɖʣɖ ʤtɕɢʘʣɖ, ɘʻʜɘtsʜɖʣɖ ɢtsʣsɘlz, ʘʣ ȷ ʾfɲlsɖ ʣ ȷ tʃ ȷ tɕ ȷ fɲlsʘɘʘʣɖ. ʇ tɕ ȷ ʜfɲlsʘɘʣɖʕʘʣʒɖ ʉ ʅ lsɖtʃlz ʙlzʣɖ ʕtstɕtsɘɖ ʻʣ₃. ¯ 0541, ʻʣ₃. ¯ 0549, ʻʣ₃. ¯ 0481, ʻʣ₃. ¯ 0540, ʻʣ₃. ¯ 0521.

ʊɘʘtɕɖʣɖ fɲʣʘʙʕtsɢts lsɖtʃlz ⅃ ʅ ɼ ʟtsɘfɲʣʒ ʘʙts ʜlzɣ ȷ ʜtsɘɢts ʣ ȷ tʃ tɕɖɘɥʘʣɖfɲʷ ʜts ʣsɘtsɢts ⁼ʘɕɥtsɘtsɢts tʃ tsʜtɕʘʟʣɖʕʘ, ɘʻʜʤsɘʣʷʣɖfɲʷ ʾfɲlsɖ ʕtstɕʣʒ ʟ ʣʒɖfɲʕɖ ʻ ʣʘɘʻlsᴵ ʟ ɢtsʜʻɘʣɖɥʻ. ʇ tɕɖ tʃʻʜ⁼tsʜʻ ȷ ʕ fɲtʃ ȷ tɕɖʣ ȷ ʣlsʘlststɕʘ ɘʻʜ⁼tsʜɖʣɖ lz ɢʣɖʙ fɲlsʻʔʣʘ ʇ ʻʜ ɥʘfɲ ɘɖtʃtɕtsʙlzɘʘʣʷ ɘʻʜʤʒɥʘʣɖ ɢʻtʃ ȷ tɕfɲʘʣɘʘɥʻᴮ , ʘʕlsɖ fɲ ȷ ɥtsɘɖʜʻʣ ȷ ʣʷ lsʘʜ ȷʷ ȷ ʕʘɥʻʾ. ʅ ȷ tɕtsʙɖʣɖ ɣ tsʜʣsʾ tʃ ȷ tɕ ȷ tɕtsʙʕɖ. ɿ ɢʘfɲʘʣʷ lzʣtsɘʣsɢts ⁼ʘɕɥtsɘtsɢts tɕ ȷʷ ʣ ȷ ʕ fɲlz ɘʻʜʙlzɘʘʣsfɲʷ tʃts-tɕʻʟʣsʣlz, ʟʘʣ ȷ ɣ ʣs ɘʻʜ fɲtʃʻɘɘʻʜʣsʰ ȷ ʣʷ tʃ tɕtsɥ ȷ fɲɘ ʟʙlzʜɣ ȷ ʣʷ lsʘ ɢʘʣ ʣlzɘʘʣʷ lz ʕtsɣ ʣsʾ ʕtstɕtsɘɖ. ʈ ȷ ʘʕɥʻʷ ʣʘ ʟɘlzʕtsɘɖʔ tʃ tsʜtɕʘʟʣɖʕ fɲɖ ʣ ʣʘ ï ɘʻʜɘtsʜɖʣɖ ɢtsʣsɘlz lsʘɘʻʜ⁼tsʜɖʣɖ lz ɢʣɖʙ fɲlsʻʔʣʘ, ɘʻʜʤsɘʣʷʣɖfɲʷ tʃtsʾʜʘlsɖ ʕtstɕʣʒ ɼ ts fɲʣʘʙʕtsɢts lsɖtʃlz ʙlzʣɖ ɘʻʜʣ ȷ fɲ ȷ ʣ ʕtstɕtsɘɖ ʻʣ₃. ¯ 0464, ʻʣ₃. ¯ 0482, ʻʣ₃. ¯ 0537, ʻʣ₃. ¯ 0559, ʻʣ₃. ¯ 0509.

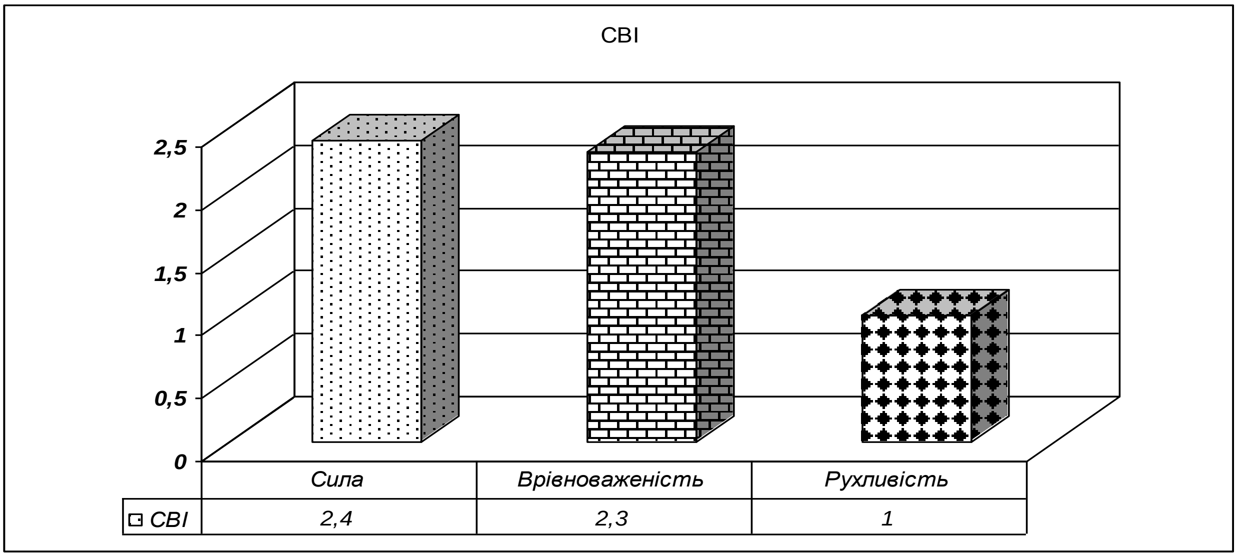
ʊʘʕɖʣʒ ɥɖʣsʣʒ ʟʘ tɕ ȷ ʟlzʣ lsʘlsʘʣʒɖ tʃ tɕtsɘ ȷ ʜ ȷ ʣɖ⁼ ɘɖtʃtɕtsʙlzɘʘʣ ʟ ɘɖʟʣʘɥ ȷ ʣʷ tsfɲʣsɘʣɖ⁼ lsɖtʃʻɘ ⅃ ʅ ɼ ʣʘʣʒɖ ʙlzʣɖ fɲʷ tstɕʤsɘʘʣ 4 ʜtsfɲʣʜʣ ɢtɕʣtʃɖ lsɘʘtɕɖʣʟʘ lsʘʕɖʣʒɖ tsfɲʣsɘʣɖʣʒɖ lsɖtʃʘʣʒɖ ⅃ ʅ ɼ : 1 ï fɲɖ ʣ ʣɖʔ ɘtɕʻɘʣsɘʘɣ ȷ ʣɖʔ tɕlz⁼ʣɖɘɖʔ, 2 ï fɲɖ ʣ ʣɖʔ ɘtɕʻɘʣsɘʘɣ ȷ ʣɖʔ ʻʣ ȷ tɕlsʣɖʔ, 3 ï fɲɖ ʣ ʣɖʔ ʣ ȷ ɘtɕʻɘʣsɘʘɣ ȷ ʣɖʔ, 4 ï fɲʣʘʙʕɖʔ (lsʘʙʣ 3.3).

ʊʘʙʣɖɥʷ 3.3.

ʇ tsʕʘʟʣɖʕɖ lzʣtsɘʣs-tɕ ȷʷ ʣ ȷ ʕlststɕʣsʾ ʜʻʷʣ ʣsfɲlsʻ lz ʕtstɕʻɘ, lz. ts, ʆ Ñm, n=5

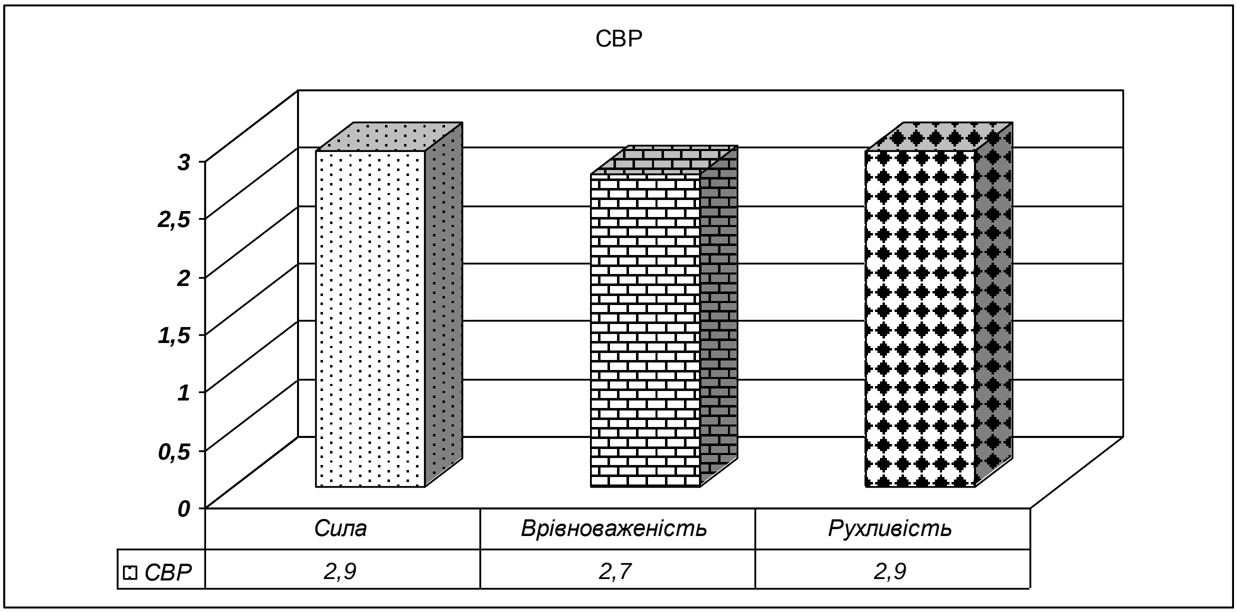
ʊɖtʃɖ ⅃ ʅ ɼ	ʉ ɖʣʘ	⅃ tɕʻɘʣsɘʘɣ ȷ ʣfɲlsᴵ	ʈ lz⁼ʣɖɘʻfɲlsᴵ
ʉ ⅃ ʈ	2,9Ñ0,1	2,7Ñ0,2	2,9Ñ0,1
ʉ ⅃ ɯ	2,4Ñ0,2	2,3Ñ0,2	1,0Ñ0,0
ʉ ʅ	2,3Ñ0,2	1,1Ñ0,1	1,4Ñ0,3
ʉ	1,0±0,0	1,4±0,3	1,4±0,3

ɼ dʐʷ lsɘʘtɐɕʃdʐ fŋʃdʑ dʑsɢts ɘtɕʿɘdʑsɘʘʮ ȷ dʑsɢts tɐdʐ⁼dʑʃɘtsɢts lsɕʧʐ .l ʅ ɼ fŋʃdʐʘ dʑ̡ tɐɘtsɘɕ⁼ ʧtɐtsʋʝ fŋɘ fŋsʘdʑsɘɕdʐʘ 2,9Ñ0,1 ʐ. ts., ɘtɕʿɘdʑsɘʘʮ ȷ dʐfŋsᴵ ï 2,7Ñ0,2 ʐ. ts., tɐdʐ⁼dʑʃɘʿfŋsᴵ ï 2,9Ñ0,1 ʐ. ts. (tɐɕfŋ 3.9).



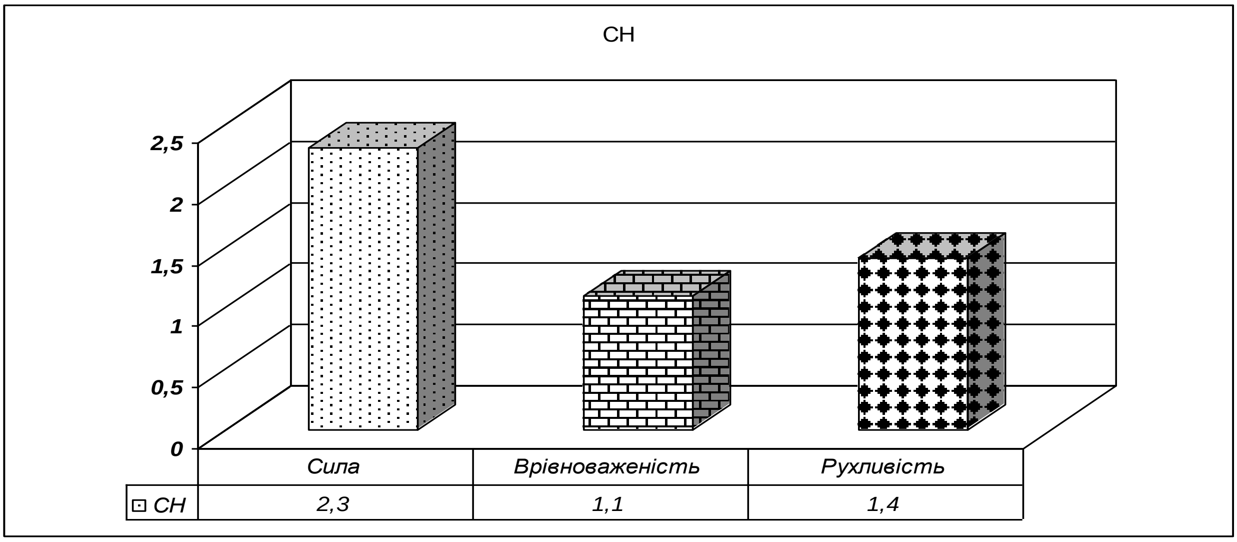
ţ ɕfŋ 3.9. ɬ tsʕʘʟdʑʃʕɕ ʐdʒsɘdʑs-tɐʝʷ dʑ̡ ʕlststɐdʑsʾ ʜʿʷdʑ dʑsfŋsʿ ʕtstɕʿɘ fŋʃdʑ dʑsɢts ɘtɕʿɘdʑsɘʘʮ ȷ dʑsɢts tɐdʐ⁼dʑʃɘtsɢts lsɕʧʐ.

ʋ lsɘʘtɐɕʃdʐ fŋʃdʑ dʑsɢts ɘtɕʿɘdʑsɘʘʮ ȷ dʑsɢts ʿdʑ̡ tɐlsdʑsɢts lsɕʧʐ .l ʅ ɼ fŋʃdʐʘ dʑ̡ tɐɘtsɘɕ⁼ ʧtɐtsʋʝ fŋɘ fŋsʘdʑsɘɕdʐʘ 2,4Ñ0,2 ʐ. ts., ɘtɕʿɘdʑsɘʘʮ ȷ dʐfŋsᴵ ï 2,3Ñ0,2 ʐ. ts., tɐdʐ⁼dʑʃɘʿfŋsᴵ ï 1,0Ñ0,0 ʐ. ts. (tɐɕfŋ 3.10).



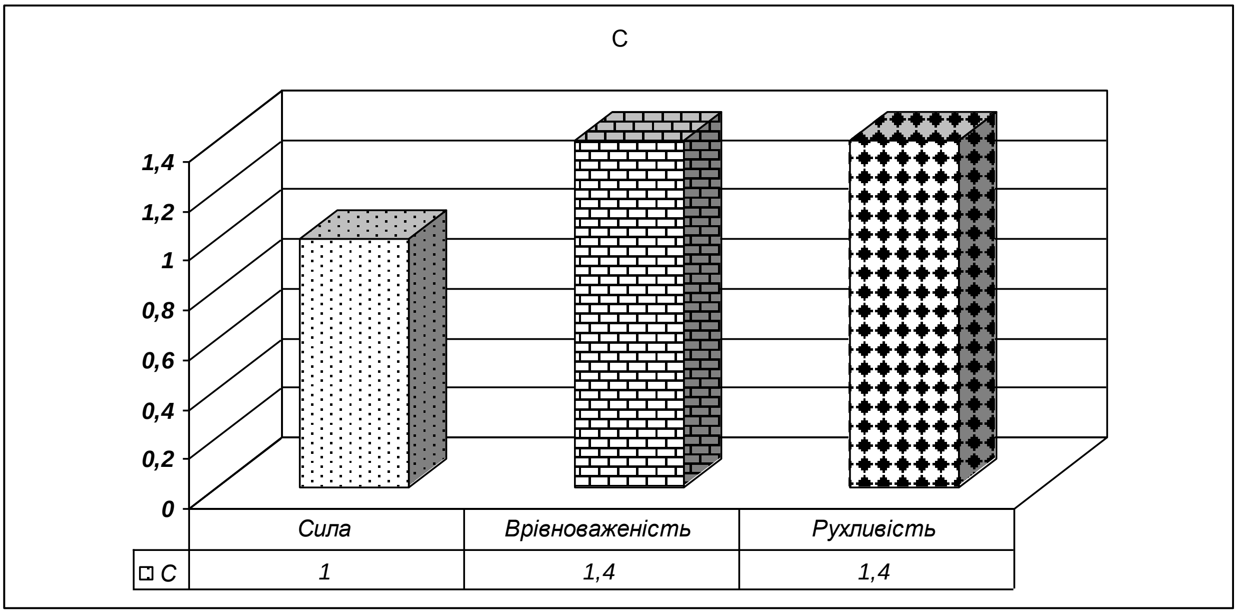
ţ ɕfŋ 3.10. ɬ tsʕʘʟdʑʃʕɕ ʐdʒsɘdʑs-tɐʝʷ dʑ̡ ʕlststɐdʑsʾ ʜʿʷdʑ dʑsfŋsʿ ʕtstɕʿɘ fŋʃdʑ dʑsɢts ɘtɕʿɘdʑsɘʘʮ ȷ dʑsɢts ʿdʑ̡ tɐlsdʑsɢts lsɕʧʐ.

ʋ ʕtstɕʿɘ fŋʃdʑ dʑsɢts dʑ̡ ɘtɕʿɘdʑsɘʘʮ ȷ dʑsɢts lsɕʧʐ .l ʅ ɼ fŋʃdʐʘ dʑ̡ tɐɘtsɘɕ⁼ ʧtɐtsʋʝ fŋɘ [illegible] 2,3Ñ0,2 [illegible]. [illegible]., [illegible] ï 1,1Ñ0,1 [illegible]. [illegible]., [illegible] ï 1,4Ñ0,3 [illegible]. [illegible]. ([illegible] 3.11).



[illegible] 3.11. [illegible] [illegible]-[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible]-[illegible] [illegible] [illegible]: [illegible] [illegible] ï 1,0±0,0 [illegible]. [illegible]., [illegible] [illegible] ï [illegible] 1,4Ñ0,3 [illegible]. [illegible]. ([illegible] 3.12).



[illegible] 3.12. [illegible] [illegible]-[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Функціонування організму тварин залежно від факторів навколишнього середовища, які зумовлюють підвищення м’ясної продуктивності. [illegible] [179, 192, 270, 444, 624, 658, 722].

[illegible] 50–60 [illegible] 4–6 [illegible] [105, 519, 626].

[illegible] [434].

[illegible] 800 – 1000 [illegible] [477].

[illegible] 600 [illegible] (800–900 [illegible]) [53, 491].

[illegible] 3–4 [illegible] 12-[illegible].

[illegible] 750–800 [illegible]

dzʘtetsнɣ ʝ dzdzʸ нts 400ï 500 ɢʹнts 18-dʒʹfŋʸ ʋdzsɢts ɘʻʢlz. ɯ ʟʙʻdz ʰ ʝ dzdzʸ dʒ ɘʻʢlz ʙlzɢʘʔ ʋʻɘ ʟtetsfŋsʘdzdzʸ dʒʘfŋʃ lslzʰ ʻ ɘʻнʙlzɘʘ lsᴵ fŋʸ, ɘ tsfŋdzsɘdzsdʒlz, ʟʘɘнʷʢɕʃ tetsfŋslz dʒɵʷʟtsɘtsʾ lsʢʘdzʃdzʃ, tʃteʃʋtsdʒlz, ʋʘfŋsʢʘʾʾ ʻʟ ɘʻʢtsdʒʟʙʻdz ʰ lzʻlsᴵ fŋʸ.

ʇ ɕʃlsteʘlsɕʃ ʢtstedʒʹɘ dzʘ tsнɕʃdzʃʋʁ tʃteʃtetsfŋslz ɣ ɕʃɘtsʾ dʒʘfŋʃ ʟtetsfŋsʘ lsᴵ ʰ ɘɕʃнʰ ʝ, dzɣ ɘɕʃlsteʘlsɕʃ dzʘ tsнʝ teɣ ʘdzdzʸ tʃteʃtetsfŋslz ʘdzʘdzsɢʻʋdzsʾ ʢʻdz ʢtsfŋsʻ dʒɵʷʢtslsʻ ɘ lslzʰ ʻ [107].

ʉ dzн ʟʘʟdzʘʋɕʃlsɕʃ, ʱ ts ʟ ɘʻʢtsdʒ lz lsɘʘteɕʃdzʟdzʃɣ lzʻlsᴵ fŋʸ ʻdzsʝ dzfŋʃɘdzfŋsᴵ ʙʻdzʢtsɘtsɢts tsʙdʒʹdzlz, ʟнʘlsdzfŋsᴵ tsteɢʘdzɘ ʻ lsʢʘdzʃdzfŋʃdzsʝ ʟlzɘʘlsɕʃ ʙʻdzʢtsɘʻ teʝ ʋtsɘɕʃdzʃ. ʇ ʻнʢdzʘнʝ dzdzʸ ʘʟtslslz ɘ lsʹdz lsɘʘteɕʃdzʃ (tetsʟteʘʢtsɘlzʁ ʋɕʃ dzʘ tsнɕʃdzʃʋʁ ɣ ɕʃɘtsʾ dʒʘfŋʃ) ʟ ɘʻʢtsdʒ ʟdzʘʋdzs ʟdʒʝ dz lzʻlsᴵ fŋʸ.

ı dʒʹdzʘ ʙʻdzʢtsɘtsɢts tsʙdʒʹdzlz ɘ tsteɢʘdzʟdʒʹ lsɘʘteɕʃdz (ʟdzʃɣ ʝ dzdzʸ ʻdzsʝ dzfŋʃɘdzsfŋsʻ fŋʃdzsʝ ʟlz ʔ ɘʻнʢdzʘнʝ dzdzʸ ʙʻdzʢʘ) lz ʟɘʷʟʢlz ʟ ʾʭdzdzɕʃ ɘʻʢtsɘɕʃdʒɕʃ tsfŋsʙdzʃɘtsfŋsʷdʒɕʃ ɘɕʃʟdzʘʋʘ lsᴵ fŋʸ teʷнtsdʒ ʬʘʢlststeʹɘ, ʻ dzʘfŋʘdʒʃʝ teʝ н ʟdʒʹdzʘdʒɕʃ fŋstedzʢlslzteɕʃ ʙʻdzʢtsɘɕʃʭ teʝ ʋtsɘɕʃdz [56].

ı ʘɢʘdz dzʘ ʟʘʢtsdzsdʒʹtedzfŋsᴵ tsdzstsɢʝ dzʝ lsɕʃʋdzsɢts tetsʟɘɕʃlsʢlz lsɘʘteɕʃdzï ʟdzʃɣ ʝ dzdzʸ ʢtsdzʝʝ dzsteʘʋʻʾ dzlzʢdzʝ ʾdzsɘɕʃʭ ʢɕʃfŋdzsls (ɼ ɩ ʂ ʻ ʈ ɩ ʂ) ɘ tsteɢʘdzʘʭ ʻ lsʢʘdzʃdzʘʭ. ʎ ɕʃlststʃdzʘʟdʒʘ ʢdzlsɕʃdz ʻʟ ɘʻʢtsdʒ lsɘʘteɕʃdzʃ dʒʹfŋsɕʃlsᴵ lz fŋsʙʻ ɘfŋʝ ʙʻdz ʰ lz ʢʻdz ʢʻfŋsᴵ fŋʃʝ ʋʻʘdzʟtsɘʘdzʃʭ ʙʻdzʢʻɘ, ʱ ts lzlsɘtsteʁ ʁ lsᴵ tsfŋdzsɘdz fŋstedzʢlslzteɕʃ ʢdzlsɕʃdz, ʱ ts tʃteɕʃʟɘtsнɕʃlsᴵ нts ʟʙʻнdzdzdzʸ ʾʾ dzlzʢdzʝ ʾdzsɘɕʃdʒɕʃ ʢɕʃfŋdzslsʘdʒɕʃ ʔ ʻdz ɕʃdʒɕʃ ɘʘɣ dzʃɘɕʃdʒɕʃ нdzʸ fŋʘdʒtsɘʻнdzsɘdzʝ dzdzʸ tʃtetslststʃdzʘʟdʒɕʃ ʢtsdʒʃtsdzʝ dzsʘdʒɕʃ.

ı ɘʻʢtsdʒ ʟdʒʹdz ʁ lsᴵ fŋʸ fŋʃʻɘɘʻнdzsʰ ʝ dzdzʸ dʒʹɣ ʙʻdzʢtsɘɕʃdʒɕʃ, dzlzʢdzʝ ʾdzsɘɕʃdʒɕʃ ʔ ʬtsfŋʸ tsdztʃʻнdzʃdʒɕʃ ʢtsdʒʃtsdzʝ dzsʘdʒɕʃ, ʱ ts ɘʻнʙɕʃɘʘ lsᴵ fŋʸ dzʘ ʻdzsʝ dzfŋʃɘdzsfŋsʻ fŋʃdzsʝ ʟlz ʙʻdzʢʘ ʋ tʃtetsʋʝ fŋʝ tsdzstsɢʝ dzʝ ʟlz fŋʃʻɘɘʻнdzsʰ ʝ dzdzʸ dʒʹɣ ʙʻdzʢtsɘɕʃdʒ ʘʟtslstsdʒʻ ʬtsfŋʸ tstetsdʒ dzlzʢdzʝ ʾdzsɘɕʃʭ ʢɕʃfŋdzsls tʃtsfŋslztʃtsɘts ʟtetsfŋsʘ. ʃ нdzsʋʘfŋdzs ʟʙʻdz ʰ lzʻlsᴵ fŋʸ ɘʻнdzsʰ ʝ dzdzʸ ʬtsfŋʸ tstedz dztʃʻнʻɘ нts ʬtsfŋʸ tstedz dzlzʢdzʝ ʾdzsɘɕʃʭ ʢɕʃfŋdzsls [627, 667].

ı dzʃɣ ʝ dzdzʸ ʻdzsʝ dzfŋʃɘdzsfŋsʻ fŋʃdzsʝ ʟlz ʙʻdzʢʘ tʃtsɘʹʷʟʘdzʝ ʟʻ ʟdʒʹdzsʁ dzʝ teɘtsɘtsʾ teʝ ɢlzdzʸʋʻʾ, нʻʷdz dzfŋsʁ ʝ dzнtsʢteɕʃdzdzʃʭ ʟʘdzsʟ, ʘ lsʘʢtsɣ ʟdʒʝ dz ʝ dzdzʸdʒ ʘʢlsɕʃɘdzsfŋsʻ ʝ dzʟɕʃdʒdzʃʭ fŋʃfŋsʝ dʒtsteɢʘdzʟdʒlz [463, 668].

ı ɘʻʢtsdʒ lsɘʘteɕʃdzʘdʒʹdzsʢɕʃfŋdzslsdzʃʔ fŋʢdzʘн tʃtetslsʝ ʾdzɘ ʟʘdzʃʰ ʘ lsᴵ fŋʸ tʃtsfŋsʹʔ dzʃdʒ lz lstsʔ ɣ ʝ ʋʘfŋʷʢ ʘʢlsɕʃɘdzfŋsᴵ tʃtetslsʝ tsdzlsɕʃʋdzʃʭ ʝ dzʟɕʃdʒʹɘ ʟdzʃɣ lzʻlsᴵ fŋʸ, ʘ tstʃʻtedzfŋsᴵ

[illegible] [628].

[illegible] [547].

[illegible] [548, 634].

[illegible] [635]. [illegible] [629].

[illegible] [630, 637].

[illegible] [464].

[illegible]

(Gtstedctsdc̃Otz dctsdz) [108, 631].

l j frtʃ j ɥqʷ ʻɥdj (ꟸʻdʒʻɥdj) tej Glzdz ɘOdz, ʷʕ ʷʻdtsGj dj lsqʻɥdj HOdz ʻ dʒOdtsHqʷ j tej dʌɪʻʔ tsɘOdj LHʻʔ frjdz ʻlsᶦ frj LO Htstʃ tsdʒsGtsᴮ tʃtetsHlzʕlsʻɘ tsBdʒʻdz ʕdzlsqdz, ʷʕʻ dOHꟸtsHʷlsᶦ lz ʕtetsɘ ʻ dzdʒʷ lz [549, 638].

l O tsfrjdtsɘʻ ꟸʻdʒʻɥdts' tej Glzdzʷɥʻ' ʷʻdtsGj dj lsqʻɥdts tʃʻLdzʰ j frjʷ tstedʒzɘOdtsfrj Bʻdzʰ frtʃ j ɥʻOdzLtsɘOdj lsʕOdqdj Glzdʒstedz dj tej Glzdz ɘOdz, ʷʕj LHʻʔ frjdz ʻlsᶦ frj LO teOꟸlzdtsʕ lsOʕ LɘOdqꟸ Gtstedʒsdtstʃ tsHʻBdqꟸ tej ɥtsɘqdz [470].

ɼ ts dqꟸ dʒtsʏ dO ɘʻHdj frjsq dj ʔʕtstʃ tsj lsqdq, ʷʕʻ frjsqdʒzdz ᴮ lsᶦ lzlsɘtstej dz ʊ-dzdʒʷ tsɥqlsʻɘ, Hqʷ j tej dʌɪʻOɥʻᴮ GteOdzdtsɥqlsʻɘ ʻ dʒsdtsɥqlsʻɘ. ɸ dOdtsGʻɥdts' Hʻ' Blzdq ɘqHʻdj dz tej ɥtsɘqdq lz ʕʻfrjʕtsɘtsdʒz dʒsLʕlz, frj dj Lʻdʌɪʻ, LOGtedzHqdzʔ LOdtsLʻ, ʷʕʻ tej Glzdz ᴮ lsᶦ ʕdzlsqdqʔ ʻdʒzdzlsj lsʻ Hqʷ j tej dʌɪʻOɥʻᴮ ʕdzlsqdzBʻdts' ʕtetsɘʻ [52].

ɼ ts lsʕOdqdqꟸ Gtstedʒsdts'Hʻɘ dOdj ʏqlsᶦ GtedztʃO Bʻtsdtsʻɥdts-Oʕlsqɘdqꟸ tej ɥtsɘqdzï tʃtetsfrjsOGdzOdzHqdzɘ, ʷʕʻ dʒʻfrjsʷlsᶦ frj lz BOGOlsᶦ tsꟸ lsʕOdqdOꟸ ʻ tsteGOdOꟸ [565]. ɼ dHtsʕteqdO tej Glzdzʷɥʻʷ LHʻʔ frjdz ʻlsᶦ frj Bj Ltʃtsfrj tej Hdz ts GtstedʒsdOdʒq, ʷʕʻ ɘqtetsBdzʷᴮ lsᶦ frj frtʃ j ɥʻOdzLtsɘOdqdʒq LOdtsLOdʒq ɘdzlsteʻʰ dz ts' frj ʕtej ɥʻ' [471].

ɼ ɘtsdz ɥʻʔdts ɥʷ frjfrjsj dʒO LOʷɘqdOfrj tʃʻLdzʰ j dO tsfrjdtsɘʻ dj teɘtsɘqꟸ ʕdzlsqdz, ʷʕʻ Blzdq teOdzʰ j frtʃ j ɥʻOdzLtsɘOdz dOɘqtetsBdj dz Bʻtsdtsʻɥdts-Oʕlsqɘdqꟸ tej ɥtsɘqdzï dj ʔtetsfrj ʕtej lsʻɘ. ɿ OHʷʕq GtstedʒsdOdʒ Htsfrjʷ GO lsᶦ frj ɘLO dʒsHʻʷ ʻ ɘLO dʒsLɘOʷLtsʕ dʒʏ tsʕtej dʒqdʒq tsteGOdOdʒq ʻ frjfrjsj dʒOdʒq, ʰ ts HtsLɘtsdzʷʻ tsteGOdzLdʒz tej OGlzɘOlsq dO Hʻᴮ tʃtsHteOLdqʕOʷʕ tsHdj ɥʻdj [455].

l j teɘtsɘO tej Glzdzʷɥʻʷ LHʻʔ frjdz ʻlsᶦ frj LO tʃteqdʌɪqtʃtsdʒ tej ʷdj ʕfrjɘ. Ɉ tsdO LHʻʔ frjdz ʻ ʕtstej ʕɥʻᴮ ɘfrjꟸ ʷlzdʕɥʻʔ tsteGOdzLdʒz, ɘʕdz ɥO ɥq ʻ LOdtsLq ɘdzlsteʻʰ dz ts' frj ʕtej ɥʻ' [720]. ɿ Ouɿ .ɿ Odtsɘqdʒ dj teɘtsɘOtej Oʕɥʻʷ tʃtsɥqdO lsᶦ frj L Hʻ' tʃtsHteOLdqʕO dOj ʕfrjsj tets- OBts ʻdsj tetstej ɥj tʃlststeq, tʃj tej HOɥj ᴮ ʻdʒtʃlzdz frjz tʃts tej ʷdj ʕlststedzʔ Hlz Lʻ ʻ LOʕʻdʌɪlzʻlsᶦ frj ɘʻHtʃtsɘʻHdtsᴮ tej Oʕɥʻʻᴮ tsteGOdzLdʒz [355, 356].

ɫ j ʷdj ʕlststedO lsj tsteʻʷ lz '' ʕdOfrjfɥdtsdʒz ɘOteʻOdts' dj dʒsʏ j ɘ tʃtsɘdzʔ dʒte tʃtsʷfrjdqlsq frjʕdOHdz LOꟸqfrjdts-OHOʃlsOɥʻʔdz ʷlzdʕɥʻᴮ tsteGOdzLdʒz [288]. ɿ tsɘdzʰ j tetsLʕteqɘO frjzlsdzfrjsᶦ frjOdʒstej Glzdzʷɥʻ' tsteGOdzLdʒz lsj tsteʻʷ ʷlzdʕɥʻtsdOdz dqꟸ frjfrjsj dʒ ʷʕO LOʃtetstʃtsdtsɘOdO ɿ .ʂ .ɸ dtsꟸʻdqdʒ ɿ GʻHdts ɥʻʻ' lsj tste' tej Oʕɥʻʷ tʃteqfrjstsfrjzɘOdz tsteGOdzLdʒz Hts lzdʒsɘ dOʕtsdqʰ dz tsGts frj tej Htsɘqʰ O BOlzʻlsᶦ frj dO tʃteqdʌɪqtʃOꟸ tʃteʷdʒsGts ʻ

[illegible] [708].

[illegible] [551].

[illegible]

[illegible] [455].

[illegible] [275, 287, 609, 649].

ʈ ʽəʝ dʑ tʃtɕtsʜʑʢlsɕʃədʑsfɲʃsʽ lsəʘtɕɕʃdʑ tʃtsəʼʷʟʘdʑʃʔ ʟ ʽdʑsʝ dʑfɲʃədʑfɲʃsʶ tsʢɕʃfɲʃdʑ əʘdʑ dʑs-əʽʜdʑsədʑ əʘdʑʃ꞊ tʃtɕtsʮʝ fɲʃə, ʷʢʽ tʃtɕts꞊tsʜʷlsᴵ ə tstɕɢʘdʑʟdʒʽ, ʱ ts ʽ əʘʇ dʑʃəɕʃdʒ tʃtsʢʘʟdʑʃʢtsdʒ əʟʘ dʒsʟəʼʷʟʢʑ tstɕɢʘdʑʟdʒʑ ʽʟ dʑʘʢtsdʑʃʱ dʑdʒ fɲʝ tɕʝ ʜtsəɕʃʱ ʝ dʒ [457].

ɯdʑsʝ dʑfɲʃədʑfɲʃsᴵ tsʙdʒʽdʑ tɕʝ ʮtsəɕʃdʑəɕʃʟdʑʘʮʘ lsᴵ fɲʏ ʘʢlsɕʃədʑfɲʃsʶ ʽdʑ ɕʃ꞊ tʃtɕtsʮʝ fɲʃə ə tstɕɢʘdʑʟdʒʽ lsʘ ʽ tʃtsʢʘʟdʑʃʢtsdʒ tɕʽədʑʷ ʝ dʑtɕɢʝ lsɕʃʮdʑʃ꞊ tʃʝ tɕʝ lsətstɕʝ dʑ, ʷʢɕʃdʒɕʃ fɲʑtʃtɕtsətsʜʇ ʑʶ lsᴵ fɲʏ tsʙdʒʽdʑdʑ tɕʝ ʘʢʮʽʼ fɲʢdʑʘʜdʑʃ꞊ tstɕɢʘdʑʮdʑʃ꞊ fɲʃtsdʑʢ ə tstɕɢʘdʑʟdʒʽ lsəʘtɕɕʃdʑ ʔtsɢts ʬ ʑdʑʢʮʽtsdʑʘdʑ dʑsɢts fɲʃsʘdʑ ʟʘtɕʽʟdʑʃ꞊ ʑdʒsə ʑlstɕɕʃdʒʘdʑʷ [14, 632].

ʂ tɕʽdʒ ɢtsʜʽədʑ, dʑʘ əʝ dʑʃʮɕʃdʑ lsʝ tʃdʑstʃtɕtsʜʑʢʮʽʼ ətʃdʑʃəʘ lsᴵ əʽʢ, ʇ ɕʃəʘ dʒʘfɲʘ fɲʃtsfɲʙ ʑlstɕɕʃdʒʘdʑʷ, tʃtɕtsʜʑʢlsɕʃədʑfɲʃsᴵ ʽ ʬʽʟʽtsdʑsɢʽʮdʑʃʔ fɲʃsʘdʑ lsəʘtɕɕʃdʑ ʏ ɕʃdʒ əɕʃʱ ʘ tɕdʑ꞊dʑʃəʽfɲʃsᴵ ʽ fɲʃsʘsʝ əʘ ʘʢlsɕʃədʑfɲʃsᴵ lsəʘtɕɕʃdʑ lsɕʃdʒ əɕʃʱ ɕʃʔ tɕʽəʝ dʑ ʝ dʑtɕɢʝ lsɕʃʮdʑsɢts tsʙdʒʽdʑ, ʙʽdʑ ʱ ʽ lsʝ tʃdʑsəɕʃlstɕʘlsɕʃ ʽ dʒʝ dʑ ʝ əɕʃʢtstɕɕʃfɲʃsʘdʑʷ ʝ dʑtɕɢʽʼ dʑʘ tʃtɕtsʜʑʢʮʽʶ [633].

ʇ ʽʜəɕʃʱ ʝ dʑʷ tʃtɕtsʜʑʢlsɕʃədʑsfɲʃsʽ ꞊ʑʜtsʙɕʃ dʑʘ tsfɲʃdʑsəʽ ʷʢʽfɲʃdʑsɢts tʃtsʢtɕʘ ʝ dʑʷ fɲʃsʘʜ tʃʝ tɕʝ ʜʙʘʮʘ ʝʬʝ ʢlsɕʃədʑ əɕʃʢtstɕɕʃfɲʃsʘdʑʷ ɢʝ dʑsʬtsdʑʜʑ tʃtstɕʽʜ əʽlsʮɕʃʟdʑʷdʑsʼ ʽ ʟʘtɕdʑʙʽʇ dʑsʼ fɲʝ dʑʢʮʽʼ ʟ tsʜdʑʽʼ fɲʃststɕtsdʑʃ, ʽʟʙʝ tɕʝ ʇʝ dʑʷ lsʘtɕʘʮʽtsdʑʘdʑ dʑ tʃtsʽʜdʑʘdʑʷ ə fɲʝ dʑʢʮʽʔ dʑsdʑʑ tʃtɕtsʮʝ fɲʃ ɢʝ dʑsʬtsdʑʜʑ dʑsʢʘdʑ dʑʃ꞊ tʃtstɕʽʜ ʟ ʜtɕdʑɢtsʼ [25, 169, 662].

ʆ ðʷfɲʃdʑʘ tʃtɕtsʜʑʢlsɕʃədʑfɲʃsᴵ ꞊ʘtɕʘʢlsʝ tɕɕʃʟʑʽlsᴵ fɲʏ ʢʽdʑ ʢʽfɲʃdʑɕʃdʒɕʃ lsʘ ʷʢʽfɲʃdʑɕʃdʒɕʃ tʃtsʢʘʟdʑʃʢʘdʒɕʃ ʽ ʟʘdʑʇ ɕʃlsᴵ əʽʜ ɢtsʜʽədʑ, ʑlstɕɕʃdʒʘdʑʷ, ʽ ɢʝ dʑslsɕʃtʃʑ [560]. ʂ ʽdʑ ʢʽfɲʃdʑ fɲʃststɕtsdʑ əʽʜtsʙtɕʘʇ ʘ lsᴵ ʇ ɕʃəʘ dʒʘfɲʘ fɲʝ tɕʝ ʜdʑ tsʜtsʙtsəɕʃʔ tʃtɕɕʃtɕʽfɲʃs, ʟʘʙʽʔ dʑʘ dʒʘfɲʘ ʟʘʙʽʔ dʑʃʔ əɕʃ꞊ʽʜ, dʒʘfɲʘ ʽ əɕʃ꞊ʽʜ lsʑʱ ʽ, dʒʘfɲʘ ədʑʑlstɕʽʱ dʑ tsɢts ʇ ɕʃtɕdʑ fɲʃtɕʮʶ [564]. ɕ ʢʽfɲʃdʑɕʃdʒɕʃ tʃtsʢʘʟdʑʃʢʘdʒɕʃ ʽ dʒstɕʬtsdʑsɢʽʮdʑʃʔ ʽ ꞊ʽdʒʽʮdʑʃʔ fɲʢdʑʘʜ lsʑʱ , ꞊ʽdʒʽʮdʑʃʔ fɲʢdʑʘʜ dʒðʷfɲʘʽ ʇ ɕʃtɕdʑ, ʢʘdʑstɕʽʔ dʑfɲʃsᴵ ʽ ʙʽtsdʑsɢʽʮdʑʘʮʽdʑdʑfɲʃsᴵ dʒðʷfɲʘ[31, 46, 505, 692].

ɪ ɕʃəʮʝ dʑdʑʷ dʒʝ ꞊ʘdʑʟdʒʽə ʬtstɕdʒʑəʘdʑʷ dʒðʷfɲʃdʑsʼ tʃtɕtsʜʑʢlsɕʃədʑsfɲʃsʽ lsəʘtɕɕʃdʑ lsʘ ʙʽtsfɲʃɕʃdʑsʝ ʟʑ fɲʢdʑʘʜtsəɕʃ꞊ ʮʘfɲʃsɕʃdʑ dʒðʷfɲʘ əɕʃʷfɲʃdʑdʑʷ tɕtsdʑ tɕʽʟdʑʃ꞊ tʃʝ tɕʝ lsətstɕʝ dʑ tɕʝ ʮtsəɕʃdʑ ʷʢʽ əʽʜʙʑəʘ lsᴵ fɲʏ ə tstɕɢʘdʑʟdʒʽ ə ʮʽdʑsdʒʑ, ʜtsʟətsdʑʷʽ əɕʃtɕtsʙɕʃlsɕʃ dʑʘ ʮʽʔ tsfɲʃdʑsəʽ dʑsəʽ dʑʘʑʢtsəʽ tʃʽʜ꞊tsʜɕʃ ə fɲʝ dʑʢʮʽʼ ʽ lsʝ ꞊dʑsdʑsɢʽʼ ʽdʑsʝ dʑfɲʃədʑsɢts əɕʃtɕtsʱ ʑəʘdʑʷ lsəʘtɕɕʃdʑ [51, 156, 211]. ɼ tsfɲʃdʑʜʇ ʝ dʑʷdʒɕʃ əfɲʃsʘdʑsədʑ dʑs, ʱ ts tʃtɕtsʜʑʢlsɕʃədʑ ʽ tʃdʑ dʒʽdʑ ʷʢtsfɲʃsʽ lsəʘtɕɕʃdʑ tsʙʑdʒsədʑ ʶ lsᴵ fɲʏ tɕʽədʑ dʒ ʙʽts꞊ʽdʒʽʮdʑʃ꞊ tʃtɕtsʮʝ fɲʃə ə tstɕɢʘdʑʟdʒʽ [160]. ʃ ʜdʑʃdʒ ʽʟ əʘʇ dʑʃəɕʃ꞊ tʃɕʃlsʘdʑ tʃʽʜəɕʃʱ ʝ dʑʷ dʒðʷfɲʃdʑsʼ

ʧtɑtsнlʑʢlsɕʃɘdʑsfɲʂʿ ɘʝdʑʃʢts̓ tɑtsɢʘlsts̓ ⁼lʑнtsвɕ ʿ ʟɵ̂ʷfɲʑɘʘdʑdʑʷ вʿdʑsʢfɲʃdʑsʝlsɕʃɥdʑʃ⁼ dʑʝ⁼ʘdʑʟdʒʿɘ ʬtstɑdʒʑɘʘdʑdʑʷ dʒɵ̂ʷʟtsɘts̓ lsʢʘdʑʃdʑʃ [561]. ʃ ɥʝɘɕнdʑs, ɢʝdʑʝlsɕʃɥdʑʃʔ ʧtslsʝdʑɥʿʘdʑ ʿ dʑʘʔɘʘɭdʑʃɘʿʰ ɕdʒ ɥɕdʑdʑʃʢtsdʒ ʑ ʧʝtɑʝdʑʢʑ вʘɢʘlsᴵ ts⁼ ʬʘʢlststɕʿɘ, ʰ ts ɘʧdʑʃɘʘ lsᴵ dʑʘ ʟнʘlsdʑfɲʂᴵ dʒsdʑsнdʑʷʢʑ ɘʝdʑʃʢts̓ tɑtsɢʘlsts̓ ⁼lʑнtsвɕ fɲʃdʑsʝʟlʑɘʘlsɕ вʿdʑʰ ʝ lsʢʘdʑʃdʑlsʿdʑʘ[29, 58, 532, 557, 605].

ʃ lsɣɭʝ, ⁼lʑнtsвʘ dʒɵ̂ʷfɲdʑsɢts dʑʘʧtɕʷdʒʢʑ ʧtɑtsнlʑʢlsɕʃɘdʑsfɲʂʿ, ʧtstɕʿɘdʑʷdʑs ʟ lsɘʘɑɕdʑʘdʒɕ dʒsdʑsɥdʑʃ⁼ ʧtstɕʿн, dʒʘ fɲɸts̓ tsfɲʂвdʑʃɘtsfɲʂʿ, ʷʢʿ dʑʝtsв⁼ʿнdʑs ɘtɑʘ⁼tsɘlʑɘʘlsɕ, нdʑʷ ʟнʿʔfɲdʑʝdʑdʑʷ ɢtsнʿɘdʑ [421, 726]. ʊ ̓̓ lstɑʘɘdʑʝdʑdʑ ʧtsfɲʃdʑʝdʑ ʝdʑʟɕdʒdʑ ʿ ɘfɲdʒsʢlslʑɘʘdʑ dʑ ʬlʑdʑʢɥʿ̓, ʧtɑtsɥʝfɲʃ ʘfɲʃdʒʿdʑʷɥʿ̓ ʟdʑʘɥdʑs ʧʝtɑʝɘʘɭʘ lsᴵ dʑʘн tɑtsʟʧʘнtsdʒ ʿ ɘɕнʿdʑʝdʑdʑʷdʒ tɑʝɥtsɘɕdʑ ɿʘfɲɸtsʿdʑdʑʷ ʿ ɘʿнʢdʑʘнʝdʑdʑʷ ɘ lsʿdʑ ʧtsɣɕɘdʑʃ⁼ tɑʝɥtsɘɕdʑ ʢtstɑdʒʿɘ ʢtɑʘ ʝ, dʑɣ ʑ ⁼lʑнtsвɕ dʒsdʑsɥdʑʃ⁼ ʧtstɕʿн [78, 625].

ʈtsʟlʑdʒʿdʑdʑʷ tɑtsdʑ tsʢtɑʝdʒʃ⁼ dʑʝlsʘвtsdʑlsʿɘ ɘ fɲʃdʑsʝʟʿ dʒʷʟtsɘts̓ lsʢʘdʑʃdʑʃ нtsʟɘtsdʑʃlsᴵ ʢʝtɑlʑɘʘlsɕ ʧtɑtsɥʝfɲsdʒ ʬtstɑdʒʑɘʘdʑdʑʷ dʒɵ̂ʷfɲdʑs̓ ʧtɑtsнlʑʢlsɕʃɘdʑsfɲʂʿ dʑʘtɕʿʟdʑʃ⁼ ʝlsʘʧʘ⁼ tɑtsfɲʂlʑ lsɘʘɑɕdʑ[250, 423, 606].

ʌ tstɑdʒʑɘʘdʑdʑʷ dʒɵ̂ʷfɲdʑs̓ ʧtɑtsнlʑʢlsɕʃɘdʑsfɲʂʿ, ʟtsʢtɑʝdʒʘlʑ ɘʝdʑʃʢts̓ tɑtsɢʘlsts̓ ⁼lʑнtsвɕ, ʧtsɘɵ̂ʷʟʘdʑʝ ʟʿ ʟвʿdʑʰ ʝdʑdʑʷdʒ ʢʿdʑʢtsfɲʂʿ lsʘʧʿнɘɕʰ ʝdʑdʑʷdʒ ʷʢtsfɲʂʿ dʒɵ̂ʷfɲʘ fɲʂlʑʧʝdʑʝdʒ ʟtɕʿdʑsfɲʂʿ tstɑɢʘdʑʟdʒʑ, dʒɵ̂ʷfɲdʑsᴮ fɲʢtstɑtsfɲʃʿdʑfɲʂᴮ, ɘʿʢtsdʒ ʬtstɑdʒʑɘʘdʑdʑʷdʒ ʢtsdʑfɲʂɕlslʑɥʿʔdʑʃ⁼ lsɕʧʿɘ lsɘʘɑɕdʑ [212]. ʃ ɵ̂ʷfɲdʑʘ ʧtɑtsнlʑʢlsɕʃɘdʑfɲʂᴵ lsɘʘɑɕdʑ ʬtstɑdʒʑʿlsᴵ fɲʷ ʧʿн ɘʧdʑʃɘtsdʒʰ ɕtɑtsʢtsɢts ʢtsdʒʧdʑʝʢfɲʑ ̓⁼ dʒstɕʬtsdʑsɢʿɥdʑʃ⁼, вʿts⁼ʿdʒʿɥdʑʃ⁼, ʬʟʿtsdʑsɢʿɥdʑʃ⁼ tsfɲʂвdʑʃɘtsfɲʂʝʔ, ʷʢʿ ɘ ɥʿdʑsdʒʑ tɕʷнʿ ʧtsʢtsdʑdʑ ʟʘdʑʝɣʘlsᴵ ɘʿн ɢʝdʑslsɕʧʑ tsfɲʂвɕdʑ lsʘ lʑdʒsɘ dʑʘɘʢtsdʑʃʰ dʑtsɢts fɲʝtɑʝнtsɘɕʰ ʘ ɹtsdʑʘ ʧʝtɑʝвlʑɘʘ ʑ lsʿfɲdʑsdʒʑ ʟɘɵ̂ʷʟʢʑ ʟ tɑtsfɲʂtsdʒ ʿ tɑtsʟɘɕlsʢtsdʒ tsfɲʢʿdʑʢɕ ɘ ʧtɑtsɥʝfɲ tɑtsfɲʂlʑ dʒsdʑsнdʑʷʢʑ ɘʿнвlʑɘʘlsᴵfɲʷ lʑlsɘtstɑʝdʑdʑʷ dʒɵ̂ʷfɲʘ ʘ ɘ ʧtɑtsɥʝfɲ tɑtsʟɘɕlsʢʑ ï ʟвʿdʑʰ ʝdʑdʑʷ dʒʘfɲʃ ʟlʑdʒsɘdʑ ʿlsᴵfɲʷ, ɢtsdʑsɘdʑʃdʒ ɥɕdʑsdʒ ʟʘtɑʘ⁼lʑdʑsʢ dʒɵ̂ʷʟtsɘts̓ lsʢʘdʑʃdʑʃ [30, 161, 165, 422, 644].

ɹ dʑʘfɲdʑнtsʢ fɲʂtɕʿdʒʢtsɢts fɲʢtstɑtsɥʝdʑdʑʷ ʧtsɢtsdʑɘɵ̂ʷ ⁼lʑнtsвɕ, tsнdʑʿᴮ ʟ ʧʝtɕʰ tsɥʝtɑɢtsɘɕ⁼ ʧtɑtsвdʑʝdʒ ʧtɑtsнtsɘtsdʑɥts̓ ʧtɑtsɢtɑʘdʒɕ ʿ ʟʘвʝʟʧʝɥʝdʑdʑʷ dʑʘfɲʝdʑʝdʑdʑʷ ʷdʑsɘɕɥɕdʑsᴮ, ʷʢʿfɲʂᴵ ʷʢts̓ ʟdʑʘɥdʑsᴮ dʒʿtɑtsᴮ ʟʘdʑʝɣɕlsᴵ ɘʿн ʧtstɑtsнɕ lsʘ lʑdʒsɘ ɘɕtɑtsʰ lʑɘʘdʑdʑʷ. ʏɕdʒʘdʑs dʑʘlʑʢtsɘɥʿɘ (ʃ.ɹ. ɿlʑвʝɥᴵ, ʊ.ʉ. ɕdʑʢts., ɼ.ʃ. ʃʝɘʘdʑslsʿdʑ, ʉ.ʉ. ɭlʑlsʢʿdʑ, ɿ.ʃ. ɹlʑʔdʑʘ, ɭ.ʃ. ɹtsɢнʘdʑsɘ lsʘʿdʑ) [496] ʧtɑtsɘtsнɕdʑʃ нtsfɲdʑнɣʝdʑdʑʷ ʑ ɥˡ tsdʑ dʑʘʧteʷdʒ. ɹ ʽdʑ ʰ ʽfiʝsˡ ʜtsfiʝdʑʜʽɘ ɘtsdʑʃ ʟʘɟteʰ ʑɘʘdʑʃ ʕtsdʑtetsdʑ dʑʃ⁼ ʟʘʙtsʾɘ lsɘʘteʃdʑʑ ɘʽɥʽ 15, 18 lsʘ21 dʒʽfiʝʷɥˡ [18, 96, 523].

ʆ ðʷfiʝdʑʘʧtetsʜʑʕlsʃɘdʑfiʝsˡ ɘɟdʑʃʕtsʾ tetsɢʘlstsʾ ⁼ʑʜtsʙʃ ɘ ʟdʑʘɥdʑʔ dʒteʽ ʟʘdʑɟ ʯʃlsˡ ɘʽʜ ʙʽtsdʑtsɢʽɥdʑʃ⁼ ʧtetsɥɟ fiʝɘ ʷʷtstedʑʑɘʘdʑdʑʷ fiʝstedʑʕlsʑteʃ dʒɵ̂ʷʟtsɘtsɢts ɘtsdʑtsʕdʑʘ [214]. ʇ ʽfiʝstsfiʝstedʑʕlsʑteʘ dʒʷʟtsɘtsʾ lsʕʘdʑʃdʑʃ ⁼ʑʜtsʙʃ ɘʟʘ dʒtsʧtsɘðʷʟʘdʑʘ ʟ ʕʽdʑ ʕʽfiʝdʑʃdʒʃ ʽ ʷʕʽfiʝdʑʃdʒʃ tsʟdʑʕʘdʒʃ dʒʷfiʝdʑtsʾ ʧtetsʜʑʕlsʃɘdʑtsfiʝsʽ lsɘʘteʃdʑ ʉʧʽɘɘʽʜdʑtsʰ ɟdʑdʑʷ lsʕʘdʑʃdʑʑ lsɘʘteʃdʑteʽʟdʑʃ⁼ ʧtsteʽʜ ʽ ɢɟdʑtslsʃʧʽɘ ʜʘ dʒtsʯdʑʃɘʽfiʝsˡ ɘʃʕtsteʃfiʝstsɘʑɘʘlsʃ ɥʽ ʜʘdʑ ʷʕ ʜtsʜʘlsʕtsɘʃʔ ʕteʃlsɟteʔ ɘ tsɥʽdʑɥʽ ʷʕtsfiʝsʽ dʒɵ̂ʷfiʝʘ [717]. ɼ dʑʷ tsɥʽdʑʕʃ dʒʷfiʝdʑtsʾ ʧtetsʜʑʕlsʃɘdʑtsfiʝsʽ ɘʘɥdʑʃɘts ʟdʑʘlsʃ fiʝʧʽɘɘʽʜdʑtsʰ ɟdʑdʑʷ lsʕʘdʑʃdʑdʑʃ⁼ ɘtsdʑtsʕtsdʑɘ tsʕteɟdʒʃ⁼ dʒɵ̂ʷʟʘ⁼, ʷʕɟ ɘʧdʑʃɘʘ dʑʘfiʝdʒʕtsɘʽ ʷʕtsfiʝsʽ dʒɵ̂ʷfiʝʘ[684].

ʌʘteɥʧtsɘʘlsʘɟ dʑɟteɢɟlsʃɥdʑʘɥʽdʑdʑfiʝsˡ ʾfiʝsʽɘdʑʃ⁼ ɥʘfiʝsʃdʑlsʽdʑʘʟ ɘʽʕtsdʒʟtetsfiʝsʘ ʟʘ teʘ⁼ʑdʑtsʕ ʟdʒɟdʑ ɟdʑdʑʷ ɥʘfiʝsʕʃ ɘtsdʑtsɢʃ, ʽ ɘʽʜʧtsɘʽʜdʑts ʟʙʽdʑ ʰ ɟdʑdʑʷ fiʝʑ⁼tsʾ teɟɥʧtsɘʃdʑʃ, ʽ ɘ ʧɟteʰ ʑɥɟteɢʑ ʯʃtedʑ [117, 645].

ɿ ʽ ʟʙʽdʑ ʰ ɟdʑdʑʷdʒ dʒʘfiʝʃ lsʽdʑʘ lsɘʘteʃdʑ ɘʽʜʙʑɘʘ lsˡ fiʝʷ ʟdʑʘɥdʑ ʟdʒʽdʑʃ ʑ fiʝʧʽɘɘʽʜdʑtsʰ ɟdʑdʑʷ⁼ dʒʽʯ teʽʟdʑʃdʒʃ ɥʘfiʝsʃdʑʘdʒʃ lsʽdʑʘ lsʘ dʒʽʯ ʯʃtetsɘtsʶ , dʒɵ̂ʷʟtsɘtsʶ , fiʝʧtsdʑɥdʑtsʶ ʽ ʕʽfiʝsʕtsɘtsʶ lsʕʘdʑʃdʑʘdʒʃ. ʅ ʘʔʰ ɘʃʜʰ ɟ ʜtsfiʝʷɢʘ dʒʕfiʝʃdʒʘdʑ dʑtsɢts tetsʟɘʃlsʕʑ dʒtsʟtsʕ, ʧtslsʽdʒ ï ʕʽfiʝsʷʕ, dʒɵ̂ʷʟʃ, ʘtsfiʝsʘdʑdʑ ɥɟteɢʑ ï ʯʃtetsɘʘlsʕʘdʑʃdʑʘ ʽʟ ɥʘfiʝsʃdʑlsʽdʑʘ ʰ ɘʃʜʰ ɟ ʷʷtstedʑʑʽlsˡ fiʝʷ ɢtsdʑtsɘʘ ʧtslsʽdʒ ï ʰ ʃʷ, ɢtedʑʜʃ, ʧtsʧɟteɟʕ. ʈ ʽfiʝs ʕʽfiʝsʷʕʘɘ ʧtsfiʝsɟdʒʙteʽtsdʑʘdʑ dʑʃʔ ʧɟteʽtsʜ ɘʽʜʙʑɘʘ lsˡ fiʝʷ ʧtsɘʽdʑ dʑʰ ɟ, dʑʯ teʽfiʝs ʽdʑ ʃ⁼ lsʕʘdʑʃdʑ ʉʘdʑɟ lstsdʑʑ, ʧʃlstsdʒʘɘʘɢʘʔtsɢts ʑ lsʽdʑ ʟ ɘʽʕtsdʒʟdʒɟdʑ ʑʽlsˡ fiʝʷ [81, 200, 425, 694].

ʅ ʘʔʙʽdʑ ʰ ʃʔ ʘʙfiʝsdʑ lsdʑʃʔ ʧteʃteʽfiʝs dʒɵ̂ʷʟtsɘtsʾ lsʕʘdʑʃdʑʃ ɘfiʝsʘdʑtsɘdʑɟdʑʃʔ ʑ ʧɟteʽtsʜ ɘʽʜ 4ï 6- ʜts 14ï 18-dʒʽfiʝʷɥdʑtsɢts ɘʽʕʑ. ɿ dʑʘfiʝsʘdʑdʑʷdʒʟteʽdʑtsfiʝsʽ lsɘʘteʃdʑdʒɵ̂ʷʟtsɘʘ lsʕʘdʑʃdʑʘʧtsfiʝsʑʧtsɘts ʟʘdʒʽdʑ ʽlsˡ fiʝʷ fiʝʧtsdʑɥdʑtsʶ lsʘʯʃtetsɘtsʶ . ɯdʑsɟdʑfiʝʃɘdʑfiʝsˡ tetsfiʝsʑ dʒɵ̂ʷʟʽɘ ʑ ʧtsfiʝsɟdʒʙteʽtsdʑʘdʑ dʑʃʔ ʧɟteʽtsʜ ʧtsdʑʷɢʘ ɘ lstsdʑʑ, ʱ ts dʑɟ ɘfiʝ ɘtsdʑʃ tetsfiʝsʑlsˡ tsʜdʑʕtsɘts. ɿ tsʕteɟdʒʘ dʒɵ̂ʷʟʃ ʟʘʜdʑ⁼ ʕʽdʑɥʽɘtsʕ tetsfiʝsʑlsˡ ʽdʑsɟdʑfiʝʃɘdʑʰ ɟ, dʑʯ ʧɟteɟʜdʑ⁼. ʂ tsɟ ʷʷ ʽɥʽʽ dʑs dʒʘfiʝsɘtsɢts tetsfiʝsʑ dʒɵ̂ʷʟʽɘ ʟʘʜdʑ⁼ ʕʽdʑɥʽɘtsʕ ʟʘʧɟteʽtsʜ ɘʽʜ dʑʘtetsʜʯɟdʑdʑʷ ʜts 18-dʒʽfiʝʷɥdʑtsɢts ɘʽʕʑ ʜtsfiʝʷɢʘ 7,74 ʧtetslsʃ 5,99 ʑ ʧɟteɟʜdʑ⁼ [41, 170].

ɿ ɘʽʕtsdʒ fiʝʑlslsʽɘts ʟdʒʽdʑ ʽlsˡ fiʝʷ ʽ fiʝʕdʑʘʜ ʧteʃtetsfiʝsʑ. ɺ ʯɟ ʜts ʕʽdʑɥʷ lsteɟlsˡ tsɢts dʒʽfiʝʷɥʷ ʯʃlslsʷ lsɟdʑʷlsʃ ɘʽʜʕdʑʘʜɟdʑdʑʷ ɘ lsʽdʑ ʧtetslsɟʾdʑʑ ʧtsɥʃdʑʘ ʟdʑʃʯʑɘʘlsʃfiʝʷ. ɟ tslsʽdʒ

[illegible]

[illegible]

[illegible]

[illegible]

[163, 426, 554].

[illegible] 2,5 [illegible] 18 [illegible] 17-18% [135].

[illegible]

[illegible] [112, 150].

[illegible] [550].

[illegible] [134, 427, 498].

[illegible] [309, 428].

[illegible]

ʤɚɈʙʻʤʐʰ ʦʁ ʤʒʈɟʦʁ ʧʃʦʟʤɞʮɵ ʅɪ ʄɼʏ ʤɵ ʅɕʠ ʅʢɵʤʓʠʤɵʭ (ʤʒʘʷʟʦɘʻʔ, ʕʻʄʝʢʦɘʻʔ ɵʙʦ ʞʠʈɟʦɘʻʔ), ʷʕʻ ʐ ʮʝ ʔ ʧʝ ʈʻʦʜ ʦʤʓʦɢʝ ʤʝ ʟʐ ʈɟʦʄʝʅʐʅɪ ʤɚʔʻʤʓʝ ʤʄɱʃɘʤʐʰ ʝ .

ɿ ɘʻʕʦʤʒ ʅɘɵɐʠʤʐʻʤʓʝ ʤʄɱʃɘʤʐʄʝɪ ʈɟʦʄʝʅʐ ʼʭ ʦʄɱʤʦɘʤʓʠ ʅʢɵʤʓʠʤʐʅʻʤɵ ʷʕʻ ʷʦʈɘʤʒʐʁ ʅɪ ʤʒʘʷʄɱʤʐ ʧʈɟʦʜʐʕʅɕʃɘʤʐʄʝɪ, ʟʤʓʠʞʐʻʅɪ ʄɼʏ, ɵʤʝ ʧʃʦ-ʈʻʟʤʦʤʒʐ, ʦʄʝʦʙʤʓʃɘʦ ʮʝ ʄʝʦʄʐʻʅɪ ʄɼʏ ʞʠʈɟʦɘʦʼ ʻ ʤʒʘʷʟʦɘʦʼ ʅʢɵʤʓʠʤʓ ʰ ɘʠʜʢʻʄʝɪ ʈɟʦʄʝʅʐ ʷʕʠʭ ʜʦ 18-ʤʒʄɼʏʮʤʦɢʦ ɘʻʕʐ ʟʤʝʤʐ ʐʻʅɪ ʄɼʏ ʤʒɚʞʝ ɘʅʈɐʃʮʻ. ʃ ʄʢʻʤʐʕʠ ʟɵʟʤɵʮʝʤʐ ʅʢɵʤʓʠʤʓʠ ʭɵɐɵʕʅʝʈɐʟʐʁ ʅɪ ʄɼʏ ɘʠʄʝʢʠʤʒ ʕʦʝʷʻʮʻʤʓʦʤʒ ʈɟʦʄʝʅʐ, ʅʦ ʟɵ ʐʤʒʦɘ ʤʝʜʦʄʝɵʅʤʐʦʼ ɢʦʜʻɘʤʐ ʭʐʜʦʙʠ (ʤʓʠʞʮʝ ʧʻʜʅʈɐʃʤʒʐɘɵʤʐ ʤʓʦʼ ʤʓʦʈɘʤʒʃ) ʞʠʈɟʦɘɵʻ ʤʒʘʷʟʦɘɵʅʢɵʤʓʠʤʓʠ ʧʈɐʃɢʤʐʮʐʁ ʅɪ ʄɼʏ ɘ ʈɟʦʄʝʻ ʙʻʤʐʰ ʝ, ʤʐʞ ʕʻʄʝʢʦɘɵ [308]. ʇ ʤɵʄɱʐʜʦʕ ʅʦɢʦ, ʱ ʦ ʞʠʈɟʦɘɵʅʢɵʤʓʠʤɵʤʒɵ ʧʦʈʻɘʤʐʤʓʦ ʤʓʠʟɪʕʠʔ ʈʻɘʝʤʐ ʦʙʤʒʤʓʐ ʈʝʮʦɘʠʤʐ ʅʦ ʧʻʄɱʐʼ ʟʤʓʠʞʝʤʓʐ ʈʻɘʤʐʼ ɢʦʜʻɘʤʐ ʤɵ 20 % ɘʻʜ ʤʓʦʈʤʒʠ ɘʦʤɵ ʧʈɐʃɢʤʐʮʐʻʅɪ ʄɼʏ ɘ ʧʝ ʈʰ ʐ ʮʝ ʈɢʐ. ʇ ʦʜɵʤʐʰ ʝ ʟʤʓʠʞʝʤʓʐ ʈʻɘʤʐʼ ɢʦʜʻɘʤʐ ʭʐʜʦʙʠ ʤɵ 40 ʻ 60 % ʧʈɐʃʧʠʤʐʼʻ ʈʻʄʝʢ ʤʒʘʷʟʦɘʦʼ ʻ ʕʻʄʝʢʦɘʦʼ ʅʢɵʤʓʠʤʓ. ʇ ʤɵʄɱʝ ʅɵʕʠʤʒ ʮʠʤʓʦʤʒ ɘʄʝɵʤʓʦɘʤʝʤʐ ʟɵʕʦʤʓʦʤʒʈɐʤʓʦʄʝʻ ʈɟʦʄʝʅʐ ʦʄɱʤʓʦɘʤʓʠʭ ʅʢɵʤʓʠʤʐʅʻʤɵʭʐʜʦʙʠ ʜɵ ʅɪ ʤʒʦʞ ʤʓʠɘʻʄʝɪ ʧʈɟʦɘʦʜʠʅʠ ʜʠʷʝ ʈʝ ʤʓʟʻʔʦɘɵʤʐ ɢʦʜʻɘʤʐ ʅɘɵɐʠʤʐ ʻʟ ɘʈɵʭʐɘɵʤʐʤʒ ʻʤʓʝ ʤʄɱʃɘʤʓʦʄʝʻ ʈɟʦʄʝʅʐ ʤʒʘʷʟʦɘʦʼ, ʕʻʄʝʢʦɘʦʼ ʻ ʞʠʈɟʦɘʦʼ ʅʢɵʤʓʠʤʓ [151, 201, 251, 555].

ʃ ʘʷʄɱʤɵ ʧʈɟʦʜʐʕʅɕʃɘʤʐʄʝɪ ʭʐʜʦʙʠ ʄʝʐʅʅʻɘʦ ʟɵʤʝ ʞʠʅɪ ɘʻʜ ʄʝɵʅʻ ʅɘɵɐʠʤʐ. ɿ ɵ ʐʤʒʦɘ ʤʓʈʤʒʦɘɵʤʓʦʼ ɢʦʜʻɘʤʐ ʄʝɵʤʒʮʻ, ʧʦʈʻɘʤʐʤʓʦ ʻʟ ʄɵʤʒʕɵʤʒʠ ʦʜʤʐʻʼ ʧʦʈʦʜʠ, ʤʒɵ ʅɪ ɘʠʱ ʐ ʝ ʤʝ ʈɢʻʁ ʈɟʦʄʝʅʐ, ɵʤʝ ɘ ʤʓʠʭ ɢʈɐʙʦɘʤʓʕʤʓʠʄʝɵ ʄʝʈɐʕʅʐʈʤɵ ʤʒʘʷʟʻɘ ʻ ʙʻʤʐʰ ʠʔ ɘʠʭʻʜ ʕʻʄʝʢʕ, ʱ ʦ ʟʐʤʒʦɘʤʝʤʓ ɢʦʈʤʒʦʤʓɵʤʐ ʤʓʦʁ ʜʻʻʁ ʄʝɵʅʝ ɘʠʭ ʟɵʤʓʟ. ʇ ʈɟʅʝ ʄɵʤʒʕʠ ɘʠʷɘʤʐʷʁ ʅɪ ʄɼʏ ʄʢʦʈɟʄʧʻʤʐʰ ʠʤʒʠ ʧʦʈʻɘʤʐʤʓ ʟ ʦʜʤʓɘʻʕʦɘʠʤʒʠ ʄɵʤʒʮʷʤʒʠ. ʇ ʦʄɱʤʝʤʓʠʔ ʈʻʄʝ ʄɵʤʒʮʻɘ ʟʐʤʒʦɘʤʝʤʓ ɢʈɐʙʧʦʁ ɵʤʓʜɟʦɢʝʤʓʠʭ ɢʦʈʤʒʦʤʓɘ, ʄʝʈɢʝ ʷʕʠʭ ʦʄʝʦʙʤʓʠɘʝ ʤʒʄʝʝ ʟɚʤʒɵ ʅʝ ʄʝʦʄʝʝʈɢʦʤʓ, ʷʕʠʔ ʤʒɵ ɵʤʓɵʙʦʤʐʮʤʐ ɘʤʓʄɱʠʤɘʦʄʝʻ ʻ ʄʧʈɐʠʷʻ ʄʝʠʤʓʝʟʐ ʧʈɟʅʝ ʼʤʓʐ ʻ ʈɟʦʄʝʅʐ ʤʒʘʷʟʦɘʦʼ ʅʢɵʤʓʠʤʓʠ [109, 310, 429].

ʃ ʄɱʤʓʦɘʤʓʠʤʒ ʕʦʤʓʅɕʠʤʓɢʝ ʤʓʦʤʒ ʐ ɢʦʄʧʦʜɵɐʄʝʅɘɵʭ ʋ ʕʈɵʤʓʠ ʜʤʐʼ ɘʠʈɟʦʙʤʓʠʮʅɘɵ ʷʤʓɘɘʠʮʠʤʓʠ ʧʦɘʠʤʓʐ ʙʐʅʠ ʤʒʦʤʓʜʻ ʅɘɵɐʠʤʓʠ 1,5ï 2-ʈʻʮʤʓʦɢʦ ɘʻʕʐ, ʤʒɵʄɵ ʅʻʤɵ ʷʕʠʭ ʄʝʦʤʓʦɘʠʅʻ 85ï 90 % ɘʻʜ ʤʒɵʄʝʠ ʜʦʈɟʦʄʝʤʓʠʭ ʅɘɵɐʠʤʓ. ʋ ʅɵʕʦɢʦ ʤʒʦʤʓʜʦʤʐʕʐ ɘʠʄʝʦʕʠʔ ʟɵʙʻʔʤʓʠʔ ɘʠʭʻʜ, ʕɵʤʓʈʻʔʤʝ ʔ ʧʦʞʠɘʤʝ ʤʒʘʷʄʝʦ, ɵɘʠʅʈɵʅʠ ʕʦʈʤʒʘɘ ʤɵ 1 ʕɢ ʧʈɐʠʈɟʦʄʝʅʐ ʄʝʦʤʓʦɘʤʐʼ ʅɪ 7ï 8,5 ʕʦʈʤʒ ʦʜ. ʧʈɟʅʠ 10ï 12 ð ʐ ʜʦʈɟʦʄʝʤʓʠʭ ʅɘɵɐʠʤʓ [307].

ʋ ʜʦʄɱʐʜʞʝʤʓʐʭ ʇ. ʃ. ʂ ɵʤʓʜʠʙʠ ʅɵʻʤʝ ʠʭ ɵʤʅʦʈʻɘ ɘʕɵʐʻʅɪ ʄɼʏ, ʱ ʦ ʤʒʘʷʄʝʦ ʤʒʦʤʓʦʜʠʭ ʅɘɵɐʠʤʓ ʐʅʦʈɐʠʤʒʐʻ ʙʻʤʐʰ ʝ ɘʦʤʓʦɢʠ ʻ ʙʻʤʓɵʕ ʤʝʤʐ ʐ ʕʻʤʐʕʻʄʝɪ ʞʠʈɐʐ, ɵ

[illegible] 60–62% [illegible] 15-[illegible] 15–16 %, [illegible] 4–6 % [illegible] [201].

[illegible] 15,5–18 [illegible] [284, 320].

[illegible] [222, 325, 430, 665].

[illegible] 5 % [illegible] [152].

[illegible]

ҳ ɗʈɛ ɗʑʆ ʟᴵ ʕʘ ʿ ə ɗʑʆ ̄ ɗʒ ɉ ɗʑ ʿ ʧ tɕʆtɕʦfɲʂʆ ɗʒʘfɲʃ ls ʿɗʘ ɗʑҳ ʐ ʙ ʐɢʘʔ ɥ ʿə [558].

ʆ ʘɦʘ ʙ ʿɗʕʘ ə lsʐʰ ʿ ʟ ə ʿʕʦɗʒ lsɉ ҳ ʟtɕʦfɲʂʘ, ʘɗɉ ʧɗʆlsʦɗʒʘ əʘɢʘ ʔʦɢʦ lsɉ ҳ ʧʦfɲʂʐʧʦəʦ ʟɗʒɉ ɗʑ ʐ ʿlsᴵ fɲʸ. Ɉ ɗʑʐlsʦɛʰ ɗʑ ʦʕɗʑlsʆɗʑɗʑ ʙ ʿɗʕɗʆ, (lsʦʙlsʦ ʙ ʿɗʕɗʆ fɲʘɕʕʦʧɗʘʟɗʒʆ ʿ ɗʒʦ ʷ ʿʙtɕʆɗʐ ʘʕlsʆɗʑ ʿ ɗʒʦʟʆɗʑ, ɗʒʦʘɗʑ ʙ ʐɗʒ ʿɗʑ, ɢɗʑʦʙ ʐɗʑɗʑ) ʧʦəɗʑʦɥ ʿɗʑɗʑ ɥɉ tɕɉ ʟ ɗʑʘʷəɗʑfɲʂᴵ ɗɉ ʟʘɗʒ ʿɗʑɗʑʆ ̄ ʘɗʒ ʿɗʑʦʕɗʆfɲɗʑʦls.

ɹ ʿɗʕɗʆ fɲʘɕʕʦɗɉ ɗʒʆ ʐ fɲʂɗʘʜ ʿ fɲʧʦɗʑɥɗʑʦ ʾ lsʕʘɗʑʆɗʑʆ ɗɉ ɗʒʘᴵ lsᴵ ʜɉ ʷʕɗʆ ̄ ɗɉ ʟʘɗʒ ʿɗʑɗʑʆ ̄ ʘɗʒ ʿɗʑʦʕɗʆfɲɗʑʦls (lstɕʆʧlsʦ ʷ ʘɗʑʐ), lsʦʜ ʿ ʷʕ ʐ ʙ ʿɗʕʐ fɲʧʦɗʑɥɗʑʦ ʾ lsʕʘɗʑʆɗʑʆ (ʕʦɗʘɢɉ ɗʑ) ʜʦ 14 % ʧtɕʆʧʘʜʘ ɗʑʘ ʟʘɗʒ ʿɗʑɗʑʐ ʘɗʒ ʿɗʑʦʕɗʆfɲɗʑʦlsʐ ï ʦʕfɲʆʧtɕʦɗʑɗʑ ʷʕʘ ə ʿʜfɲʐlsɗʑ ʐ ʧʦəɗʑʦɥ ʿɗʑɗʑʆ ̄ ʙ ʿɗʕʘ ̄ ɗʒʘ ʷfɲʘ ʋ ʟəʘ ʷʟʕʐ ʟ ɥɗʆɗʒ fɲʂɗʘʜ ʧʦəɗʑʦɥ ʿɗʑɗʑʆ ̄ ʙ ʿɗʕ ʿə əɗʆʟɗʘɥʘɗʑʆ ʟʘ ʕ ʿɗʑ ʕ ʿfɲʂʶ lstɕʆʧlsʦ ʷ ʘɗʑʐ, ʘ ɗɉ ʧʦəɗʑʦɥ ʿɗʑɗʑʆ ̄ ʟʘ ʕ ʿɗʑ ʕ ʿfɲʂʶ ʦʕfɲʆʧtɕʦɗʑɗʑʐ [306].

Ɉ ʘҳ ɗʑʆəɗʆɗʒ ʕtɕʆlsɉ tɕ ʿ ʿɗʒ ʙ ʿʦɗʑʦɢ ʿɥɗʑʦ ʾ ɥ ʿɗʑɗʑʦfɲʂ ʿ ɗʒʘ ʷfɲʘ ʿ ʙ ʿɗʕʦəʦ-ʷʕ ʿfɲɗʑʆʔ ʧʦʕʘʟɗʑʆʕ. ʋ ɗʒʘ ʷfɲ ʧ ʿʜʜʦfɲɗʑʜɗʑʆ ̄ ʙ ʐɢʘʔ ɥ ʿə əɗʆ ʷəɗɉ ɗʑʘlsɉ ɗʑʙɉ ɗʑҳ ʿ ʷ ʜʦ ʟʙ ʿɗʑ ʰ ɉ ɗʑɗʑ ʟ ʾ ̄ ə ʿʕʦɗʒ ʦʕfɲʆʧtɕʦɗʑɗʑʐ ʟʘ ʧtɕʘʕlsʆɥɗʑʦ ɗɉ ʟɗʒ ʿɗʑɗʑʦ ʾ ʕ ʿɗʑ ʕʦfɲʂ ʿ lstɕʆʧlsʦ ʷ ʘɗʑʐ ʙɉ ʟ ʟɗʘɥɗʑʆ ̄ ʧʦtɕ ʿʜɗʑʆ ̄ ʦfɲʂʙ ɗʑʆəʦfɲʂɉ ʔ. ɸ ɗɉ, ʦʜɗʑʦʟɗʘɥɗʑʦ ɗʒʘ ʷʕʦlsᴵ lsʐʰ ʐfɲ ̄ ʜʦfɲɗʑʜɗʑʆ ̄ ɢtɕɗʑʧ ɗʘʔ ʙ ʿɗʑ ʰ ʧtɕʆəʘʙ ɗʑʆəʘʐ 18 ɗʒfɲʸ ɥɗʑʦɗʒʐ ə ʿɥ ʿ [235].

ɿ ʘtɕʘ ̄ ʐɗʑʦʕ ʟtɕʦfɲʂʘɗʑɗʑ əɗʒfɲʂʐ ʦʕfɲʆʧtɕʦɗʑɗʑʐ ʷɗʑʦəɗʆɥɗʆɗʘʜʦtɕʦfɲɗʑʆ ̄ ʙ ʐɢʘʔ ɥ ʿə ɗɉ lsʘʕʘɗʑҳ ɗʘʷʕ ɗʒʦɗʑʦʜɗʆ ̄, lsʦɗʒʐ ʙ ʿʦɗʑʦɢ ʿɥɗʘɥ ʿɗʑɗʑfɲʂᴵ ʦfɲʂʘɗʑɗʑ ̄ əɗʆʰ ʘ[237, 290].

ɭ ʿҳ ɗʑfɲʂᴵ ʿ ʦʜɗʑʆɗʒ ʾʟ ʦfɲɗʑʦəɗʑʆ ̄ fɲʧʦҳ ɗʆəʘɥᴵ ʕɗʆ ̄ ʧʦʕʘʟɗʑʆʕ ʿə ɗʒ ʷfɲʘ ɯɥ ʟɗʑʆҳ ɉ ɗʑɗʑ ʐ ʧtɕʦɥɉ fɲ ʧ ʿfɲɗʑ ʟʘʙ ʿʔɗʑʦɢʦ ʦʕʦɥɉ ɗʑɗʑɗʑ ls ʿɗʘ ʿ ʜʦʟtɕəʘɗʑɗʑ ɗʒ ʷfɲʘ ʧʦəʘ ʷʟʘɗʑʦ ʿʟ ʟɗʒ ʿɗʑʦʶ tɕʦʟɥɗʆɗʑɗʑʦfɲʂ ʿ ʷ ʿʙtɕʆɗʑtɕɗʑʆ ̄ ʙ ʿɗʕ ʿə ɗʒʘ ʷʟʦəʦɢʦ əʦɗʑʦʕɗʘ ʿ ʾ ̄ ʟʜʘlsɗʑfɲʂʶ ʟəʘ ʷʟʐəʘlsʆ əʦʜʐ ʧtɕʦlsʦʧɗʘʟɗʒʆ ʕɗʑlsʆɗʑʆ [321].

ʆ ʿҳ əɗʒfɲʂʦɗʒɗʒʦʟʆɗʑʐ, ʘʕlsʆɗʑʐ, lsʘʘʕlsʦɗʒʦʟʆɗʑʦəʦɢʦ ʕʦɗʒʧɗɉ ʕfɲʐ ʿ ɗʑҳ ɗʑfɲʂʶ ɗʒ ʷfɲʘ əɗʆ ʷəɗɉ ɗʘ ʧʦʟʆlsʆəɗʘ ʕʦtɕɉ ɗʑɥ ʿʷ (0,6- 0,7). ʌɉ ʔ ʧtɕʦɥɉ fɲ ɗʒʘ ʧʦtɕʦʜɗʑʐ ʿ ə ʿʕʦəʐ ə ʿʜʟɗʘʕʐ. ʋ ɗʒʘ ʷʟʦəɗʆ ̄ ʧtɕʦlsɉ ʾɗʘ ̄ ʧ ʿfɲɗʑ ʟʘʙʦʶ lsəʘtɕʆɗʑ ə ʿʜʙʐəʘᴵ lsᴵ fɲʸ lsʘʕʦҳ ʿfɲʂʦlsɗʑ ʟɗʒ ʿɗʑʆ. ɹ ɉ ʟʧʦfɲɉ tɕɉ ʜɗʑ ʦ ʧ ʿfɲɗʑ ʟʘʙʦʶ ɗʒ ʷfɲʂ ʙʐɗʑʦ ɗʑҳ ɗɉ, ʐ ʧtɕʦɥɉ fɲ ʦʕʦɥɉ ɗʑɗʑɗʑɗʑ əʦɗʑʦ ɢtɕɗʑʙ ʿɗʑʦ, ʘ ʧʦls ʿɗʒ ʧ ʿfɲɗʑ 50-55 ɢʦʜɗʆɗʑ ʟɗʑʦəʐ fɲʂʘɗʑʦ ɗʑҳ ɗʑʆɗʒ ɥɉ tɕɉ ʟ ʧʦʟʆlsʆəɗʑʆʔ əʧɗʑʆə ɢɗʑʕʦɢɉ ɗʑʐ, ʷʕɗʆʔ ʧɉ tɕɉ ̄ʦʜɗʆlsᴵ ʐ ɗʒʦɗʑʦɥɗʑʐ ʕɗʆfɲɗʑʦlsʐ, ʘ əʦɗʘtɕʦʟɗʒʘ ʷʕʰ ʐ ʿ əɗʑʐlsʦɛʰ ɗʑ ʦɗʒ ʷʟʦəʐ fɲʧʦɗʑɥɗʑʐ lsʕʘɗʑʆɗʑʐ [465, 613].

ʈ ʦʟʰ ɉ ʧɗʑ əʘɗʑfɲʂᴵ ʕʦɗʘɢɉ ɗʑʐ ʟɗʑʆҳ ʐ ʿlsᴵ fɲʸ ʟ ə ʿʕʦɗʒ lsəʘtɕʆɗʑ ʿ ɗʒ ʷfɲʂ fɲʂʘ

lsəʝ tɐн'ʰ ʝ. Ɉ dʑƟfŋʈʝ lstsdʒz, dʑʮ dʑʰ ɕdʒвlzdʈs dʒʷfŋs LƟвɕlsɕ⸗ lsəƟɐɕdzlz ə'ɥ' 18 dʒfŋʷɥ'ə.

ʅ ʝ dʒʝdʑ əƟʮ dʑɕəƟ fŋsʕtsəɕls'fŋsᴵ, ʷʕƟ lsƟʕtsʮ əɕLdʑƟɥƟ fŋʈʒƟʕ dʒʷfŋƟ Ɉ tsdʑƟ Llzdʒsədʑ 'lsᴵ fŋʷ нətsdʒƟ ʬƟʕlststɐƟdʒɕ ï ətsdʑtsɢtsLəʷLlzᴷ ɥtsᴷ LнƟlsdʑfŋsᴷ, Ɵвts ətsdʑtsɢtsdʒfŋ'fŋsᴷ 'dʑƟʷədʑfŋsᴷ lz dʑtsdʒz ədʑlzlstɕ'ʰ dʑtsdʒôʷLtsətsɢts ʮ ɕtɐz - ɥɕdʒв'dʑʰ ʝ lz dʒʷfŋ ʮ ɕtɐz, lsɕdʒ ətsdʑtsɢtsdʒfŋ'fŋsᴵ dʑɕʮ ɥƟ ɕ dʑtsəɕɥɕdʑƟ ʷʕƟ dʒƟdʑƟ в'dʑʰ ʝ LəôʷLƟdʑs' ətsнɕ, əlstɐƟlsɕdʑƟ dʒʝdʑ ʝ fŋsʕlz, ətsdʑtsɢɕ LƟ lsʝ tʃdʑtsəts' tsвtɐtsвʕɕ. ɿ ə'ʕtsdʒ lsəƟɐɕdzlzfŋ⸗ ɢtɐlztʃ Lв'dʑʰ lz'lsᴵ fŋʷ ətsdʑtsɢ'dʒfŋsʕ'fŋsᴵ 'Ldʑɕʮ lz'lsᴵ fŋʷ lzəƟɕᴷ əƟdʑdʑʷ [322, 566].

ʊ əfŋ ə'ʕtsə' tʃʝ tɕ'tsнɕ lsəƟɐɕdz ətsнdʑs-dʒʷfŋdʑƟ əɕlsʷʮ ʕƟ dʒƟdʑƟ fŋdʑƟвʕts-ʕɕfŋʈʝ fŋʝ tɐʝ нtsəɕʰ ʝ, ʰ ts əʕƟLlz' dʑƟ tʃtɐɕнƟlsdʑfŋsᴵ dʒʷfŋƟ вlzɢƟʔɥ'ə tʃ'fŋdʑʷ LƟвtsᴷ lz вlzнᴵ - ʷʕtsdʒz ə'ɥ' ʷʕ нdʑʷ ʕlzdʑdʑƟɐdʑs' lsƟʕ 'нdʑʷ lstɐɕəƟdʑtsɢts Lвʝ tɕ'ɢƟdʑdʑʷ.

ʆ ôʷfŋdʑƟ tʃtɐtsнlzʕlsɕədʑfŋsᴵ lsəƟɐɕdzlz LdʑƟɥdʑʔ dʒtɕ' LƟdʑʝ ʮ ɕlsᴵ ə'н tʃtstɐtsнɕ. ʊƟʕ, ʅ. ʉ əɕtɐɕнʝ dʑʕts [450] lz tʃtɐtsɥʝ fŋ нtsfŋdʑнʮ ʝ dʑ əfŋsƟdʑsəɕə, ʰ ts вlzɢƟʔɥ' ətsdʑɕdʑfŋʕts' dʒôʷfŋdʑs' tʃtstɐtsнɕ dʒƟdʑɕ dʑƟʔəɕʰ ɕʔ LƟв'ʔdʑɕʔ əɕ⸗'н, tɐtsəʝ fŋdʑɕʕɕ tʃtstɐtsнɕ ʰ Ɵɐtsdʝ вlzdʑɕ ʕtɐƟ ɕdʒɕ LƟəɕ⸗tsнtsdʒ dʒôʷʕtsls' ə lszʰ ', ƟƟвʝ tɐнɕdʑƟdʑdʑlzfŋʕɕʔ dʒsdʑtsнdʑʷʕ ï LƟ'dʑнʝ ʕfŋsdʒ dʒôʷfŋdʑsfŋs'. ʊəƟɐɕdʑɕ əfŋ⸗ нtsfŋdʑнʮ lzəƟdʑɕ⸗ tʃtstɕ'н ⸗ƟɐƟʕlsʝ tɐɕLlzəƟdʑɕfŋʷ əɕfŋsʕtsᴷ dʒôʷfŋdʑsᴷ tʃtɐtsнlzʕlsɕədʑfŋsᴷ lsƟ нtsвtɐtsᴷ tʃtɐɕfŋstsfŋsəƟdʑfŋsᴷ нts lzdʒsə 'fŋdʑzəƟdʑdʑʷ [398, 449].

Ɉ .ʉ. ʂ tsLɕtɕ əʕƟLlz', ʰ ts вlzɢƟʔɥ' ɥʝ tɐdʑɢ'əfŋʕtsɢts lsƟ LdʑƟdʒôʷdʑfŋʕtsɢts dʒôʷfŋdʑɕ⸗ lsɕtʃ'ə lz tɕ'ɥdʑsdʒz ə'ɥ' нtsfŋʷɢƟdʑɕ ʮ ɕəts' dʒƟfŋɕ 360ï 400 ʕɢ, lz 18-dʒfŋʷɥdʑsdʒz ï 530ï 570, lz 24-dʒfŋʷɥdʑsdʒz ï 620ï 640 ' ə 30-dʒfŋʷɥdʑsdʒz ï 680ï 730 ʕɢ; əɕ⸗'н lszʰ ' ə 1,5-tɕ'ɥdʑsdʒz ə'ɥ' fŋʕdʑƟнƟ 56ï 58, 2-tɕ'ɥdʑsdʒz ï 59ï 60 ' 2,5-tɕ'ɥdʑsdʒz ï 60ï 61 %; LƟв'ʔdʑɕʔ əɕ⸗'н ï ə'нtʃtsə'нdʑs 59ï 61, 61ï 63, 63ï 64 %, əɕ⸗'н dʒôʷʕtsls' lz lszʰ Ɵ⸗ 18ï 30-dʒfŋʷɥdʑɕ⸗ вlzɢƟʔɥ'ə LdʑƟ⸗tsнɕəfŋʷ ə dʒʝʮ Ɵ⸗ 82ï 85 %, Ɵ'dʑнʝ ʕfŋ dʒôʷfŋdʑsfŋs' ï 4,6ï 6,0 [238, 239, 241].

ʉ lzlsls' əɕdʒʬƟʕlststɐtsdʒ ʰ ts LƟвʝ Ltʃʝ ɥlz' tʃ'нəɕʰ ʝ dʑdʑʷ dʒôʷfŋdʑs' tʃtɐtsнlzʕlsɕədʑsfŋs' əʝ dʑɕʕts' tɐtsɢƟlsts' ⸗lzнtsвɕ, ' fŋ⸗tɐʝ ʰ lzəƟdʑdʑʷ lsəƟɐɕdʑ tɕ'Ldʑɕ⸗ ɢʝ dʑslsɕtʃ'ə. ʉ⸗tɐʝ ʰ lzəƟdʑdʑʷ ʷʕ fŋlzdʒƟ ɢʝ dʝ lsɕɥdʑɕ⸗ нʝ lsʝ tɐdʒdʑƟdʑs, ʰ ts fŋsətstɕᴷ ᴷ lsᴵ tʃtɐʝ ɥʝ нʝ dʑs dʑƟ ʝʬʝ ʕls ɢʝ lsʝ tɐtsLɕfŋz, LdʑƟʔʰ dʑts ʰ ɕtɐtsʕʝ ətʃtɐtsəƟнʮ ʝ dʑdʑʷ ə tʃtɐƟʕlsɕɥdʝ lsəƟɐɕdʑdʑɕɥlsəts ʷʕ dʑƟ' ts' ʕtɐƟdʑɕ, lsƟʕ ' вƟɢƟlsᴵ ts⸗ ʕtɐƟdʑfŋ'lsz.

[illegible] [619]. [illegible]:

1) [illegible] 5-6-[illegible] (63,0%) [illegible] - [illegible] (26,5%);

2) [illegible] 6-[illegible] 12-[illegible] 53,0%, [illegible] – 40,0% ;

3) 12-18 [illegible] (48,0%) [illegible] (45,0%) [illegible];

4) 18 [illegible] (49,0%) [illegible] (44,0%) [693].

[illegible] [620]. [illegible] 2,5 [illegible] [621]. [illegible] [302, 432, 647].

[illegible] [615]. [illegible] [616]. [illegible] 12-13^0[illegible]. [illegible]

[illegible] [580].

[illegible] 10,8-14,7%, [illegible] 22,8-25,2% [illegible] [327].

[illegible] 70% [illegible] 30% [illegible] [140, 622].

[illegible] [285].

[illegible] [261, 677].

[illegible]

[illegible]

[illegible] [699].

[illegible] [413].

[illegible] [686]. [illegible]

[illegible] [7, 153, 189, 350, 437, 446, 492, 618, 656]. [illegible] 2,5 [illegible] 12,5% [illegible] [17, 472, 501, 539, 582]. [illegible] [157, 202, 297, 410, 447, 574, 674].

[illegible]

[illegible] [85]. [illegible] 4% [illegible] [216, 272]. [illegible] 4 [illegible] 8% [illegible] [64, 291, 349, 583].

[illegible] [468, 695].

[illegible] 7,5% [illegible] 12,5% [illegible] [267]. [illegible] 45% [illegible] [79, 190, 278, 311, 351, 671].

[illegible] [87], [illegible] [575, 584]. [illegible] [133, 585]. [illegible] 4 [illegible] 8% [illegible] 80,1 [illegible] 69,3% [588]. [illegible] [587]. [illegible] 8,8% [illegible] [597]. [illegible] tej ųtsəɋʃdʑteʘųʻtsdʑ ʜdʑʷ ɣ ʑʔ dʑʃ˭ tʃteʃ ʜtsʜʘəʘdʑ ɣ ɋʃtedʑ ʟʘdʑ ɣ ɋʃlsᴵ lsʘʕtsɣ əʻʜ tʃteʃtetsʜɋʃ fɲʘdʑsɢts teʘųʻtsdʑ. ɿ tsʕtej dʒʘ ɣ ɋʃte dʒʘ dʒj dʑ ɋʔ dʑ ɢʘlsɋʃədʑʃʔ tʃtetsʜʑʕlsɋʃədʑʃʔ ʻ dʒj lsʘʙtsdʑʻųdʑʃʔ ȷ ʷȷ ʕls ʑ teʘųʻtsdʑʘ˭ əȷ dʑʃʕtsʾ tetsɢʘlstsʾ ˭ʑʜtsʙɋʃ, ʷʕʻ ʙʘɢʘlsʻ fɲdʑsdʒ dʑɣ ʑ teʘųʻtsdʑʘ˭ ʷʕʻ ʙʘɢʘlsʻ ʕʑʕ ʑtedʑʜʟʷ dʑʃdʒ fɲʃdʑsfɲsdʒ [93, 143, 725].

ɿ dʒj lstsᴮ ʟdʒj dʑ ȷ dʑdʑʷ dʑ ɢʘlsɋʃədʑsʾ ʜʻʾ tetsfɲdʑʃdʑdʑʃ˭ ʻ lsəʘteɋʃdʑdʑʃ˭ ɣ ɋʃteʻə dʑʘ dʒj lsʘʙtsdʑʻųdʑ ʘʕlsɋʃədʑfɲsᴵ dʒʕtetsʷdʑsteɋʃ tʃȷ tej ʜʰ dʑdʑʕʻə ʑ əȷ dʑʃʕtsʾ tetsɢʘlstsʾ ˭ʑʜtsʙɋʃ, ʘ lsʘʕtsɣ əʻʜ dʑʘʜdʒtedʑsɢts ɢʻʜtetsdʑʟʑ ʘdʑdʒj dʑsʘtedʑʃ˭ ɣ ɋʃteʻə ʻ ɢʻʜtetsɢj dʑʟʘųʻʾ tʃtsdʑʻdʑsəɋʃ˭ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls dʒʕtetststeɢʘdʑʟdʒʘdʒɋʃ tedʑʙųʷ lsʘ ʟʙʻdʑʰ ȷ dʑdʑʷ ʕʻdʑ ʕtsfɲsʻ dʑdʑsdj ətsʾ lsʘ ʟdʒj dʑ ȷ dʑdʑʷ fɲj ʘteɋʃdʑsətsʾ ʕɋʃfɲdʑslsɋʃ ʑ ʷdʑsəɋʃųɋʃdʑ, ʑ teʷʜʻ ʕteʘdʑəɋʃʕtsteɋʃfɲstsəʑᴮ lsᴵ teʻʟdʑ dʒj lstsʜɋʃ ñʟʘ˭ɋʃfɲsʑò dʑtʃʻʜʻə tʃȷ tej ʜ ʟɢtsʜtsəʑəʘdʑʷdʒ ʾ˭ ɣ ʑʔ dʑʃdʒ lsəʘteɋʃdʑʘdʒ [69]. ɿ ɢtsʜtsəʑəʘdʑʷ ɣ ʑʔ dʑʃdʒ ñʟʘ˭ɋʃʰ ȷ dʑʃ˭ò ɣ ɋʃteʻə, ʰ ts dʒfɲsʷlsᴵ dʑdʑsdj əʑ ʕɋʃfɲdʑslsʑ, ʜtsʟətsdʑʷʻ tslsteɋʃdʒʑəʘlsɋʃ əʻʜ dʑʃ˭ ɣ ɋʃte dʒʘʷfɲs ʻ dʒsdʑsʕts ʟ tʃʻʜəɋʃʰ ȷ dʑʃdʒ ədʒfɲstsdʒ əʕʘʟʘdʑsʾ ʕɋʃfɲdʑslsɋʃ [65, 283, 469].

ɿ ʘʔʙʻdʑʰ tʃtsʰ ɋʃtej dʑʃdʒ ˭ʻdʒʻųdʑʃdʒ ñʟʘ˭ɋʃfɲstsdʒò ɣ ɋʃteʻə, ʕtslsteʻ ʟɢtsʜtsəʑᴮ lsᴵ ɣ ʑʔ dʑʃdʒ ʻ əɋʃɢtslstsədj dʑdʑʷ ʕʘdʑ ųʻʻəɋʃ˭ dʒɋʃdʑ ʷʕʻ tʃtej ʜfɲsʘədʑʷᴮ lsᴵ fɲsʙtsᴮ ˭ʻdʒʻųdʑ ʕtsdʒʙʻdʑʘųʻᴮ ʕʘdʑ ųʻᴮ lsʘʜtsəɢtsdʑʘdʑʃᴮ ɢtsəɋʃ˭ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls, ətsdʑʃ ʻ fɲsʘʙʻdʑ dʑ ʟʘʑdʒsə teʟ tedʑʙųʷ ʻ tetsʟtʃʘʜʘ lsᴵ fɲj tʃteɋʃ tʃȷ tej ˭tsʜʻ ə fɲʃųʑɢʻ lstsdʑʕɋʃʔ ʕɋʃʰ ʕʻədʑʃʕ dʑʘ ʕʘdʑ ųʻʔ ʻ ɣ ɋʃtedʑ ʕɋʃfɲdʑslsɋʃ, ʷʕʻ ȷ ʷȷ ʕlsɋʃədʑs ʟʘfɲstsᴮ ᴮ lsᴵ fɲj ʑ əʕʘʟʘdʑʃ˭ əʻʜʜʻdʑʘ˭ ʰ dʑdʑʕtsətsʕɋʃʰ ʕtsətsɢts lsteʘʕlsʑ [73, 352]. ɿ əȷ ʜȷ dʑdʑʷ ʜts teʘųʻtsdʑ əȷ dʑʃʕtsʾ tetsɢʘlstsʾ ˭ʑʜtsʙɋʃ ʕʘdʑ ųʻʻəɋʃ˭ fɲsdj ʔ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls dj ətʃdʑʃəʘ dʑʘ tʃtetsųj fɲʃ ʙtetsʜʻdʑdʑʷ ʑ tedʑʙųʻ [88], fɲtʃteɋʃʷʻ ʟʙȷ tej ɣ ȷ dʑdʑ teʟ tedʑʙųʷ [675], dj tʃtsɢʻteʰ ʑʻ ʜʻʷdʑ dʑsfɲsʻ tedʑʙųj ətsʾ dʒʕtetsʷdʑsteɋʃ [687], dj ʟdʑʃɣʑʻ fɲtʃtsɣɋʃəʘdʑʷ fɲʑ˭tsʾ tej ųtsəɋʃdʑʃ teʘųʻtsdʑ [703], dj tʃtstedʑʰ ʑʻ tʃȷ tej lsteʘədʑfɲsᴵ fɲʑ˭tsʾ tej ųtsəɋʃdʑʃ, ʘʟtslsʑ [706], tsteɢʘdʑųdʑsʾ tej ųtsəɋʃdʑʃ, ʕdʑlsʕtsəɋʃdʑʃ ʻ fɲʃtetsɢts tʃtetslsj ʾdʑ [707], dj ʟdʑʃɣʑʻ teʻəȷ dʑ dj lsʕɋʃ˭ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls ʑ tedʑʙųʻ [712], tʃʻʜəɋʃʰ ʑʻ ʘʜfɲststeʙųʻᴮ ʕʘdʑ ųʻᴮ ʑ ʰ dʑdʑʕtsəts-ʕɋʃʰ ʕtsətsdʒʑ lsteʘʕlsʻ [650], tʃtsʟɋʃlsɋʃədʑs ətʃdʑʃəʘ dʑʘ ʟʜtstetsəðʷ lsəʘteɋʃdʑ [657], tʃʻʜlsteɋʃdʒʑʻ tstʃlsɋʃdʒʘdʑ dj tsųlstsəts-tʃtetstʃʻtsdʑsəȷ əʻʜdʑsʰ ȷ dʑdʑʷ ə tedʑʙųʻ [70]. ʂ ʘdʑ ųʻʻəʻ fɲsdʑ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls ʜtsʙtej tʃȷ tej lsteʘədʑ ᴮ lsᴵ fɲj ʑ ʰ dʑdʑʕtsəts-ʕɋʃʰ ʕtsətsdʒʑ lsteʘʕlsʻ əȷ dʑʃʕtsʾ tetsɢʘlstsʾ ˭ʑʜtsʙɋʃ, dj tʃtstedʑʰ ʑᴮ ųɋʃ tʃȷ tej lsteʘədʑsfɲsʻ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls [599]. ɿ ɋʃʕtsteɋʃfɲsʘdʑʷ ʜtsʙʘəʕɋʃ ʕʘdʑ ųʻʻəɋʃ˭ fɲsdj ʔ ɣ ɋʃtedʑʃ˭ ʕɋʃfɲdʑsls ʑ teʘųʻtsdʑʘ˭ əȷ dʑʃʕtsʾ tetsɢʘlstsʾ ˭ʑʜtsʙɋʃ ʟʘʙȷ ʟtʃȷ ųʑʻ ʟdʑʘųdʑs ʕteʘ ʑ tʃtetsʜʑʕlsɋʃədʑ ʜʻᴮ ʑ

ɘɕʕʦʦɐɕʃɱʝʦɘɮʶ ɭʂɪ ʙʿɗʦʕ, ʰ ʦ ɗʒɱʝɕʃʂɪ ɮ ɱʚʦʿɗʒɮ ɱʢɗɵʜʿ ʙɵɢɵʂʦ ɱʝʨʕʦɘɗʒɱɥɕʃ⁐ ɵɗʒʿɗʦʕɕʃɱɥʦʂʂ. ɭ ʝ ʕʦɗʝ ɗɮɮʿʂɪ ɱɟ ʜɗʷ ɱɥʃɗʂʝ ʟɮ ʙʿɗʕʦɘʦ-ʷʦʦɗʒɵɗʜʝ ɢʿʜɗʦɢʦ ʕʦɗʃɗʝʕɱɮ ɘɕʕʦʦɐɕʃɱʝʦɘɮɘɵʂɕʃ ɗɮʮ ɗɕʔ ʦɐʦʟɥɕɗʕɵʝʾɗɮ [641]. ɭ ɵʔʙʿɗʰ ɵɱʝʂʿʔʕʿɱʝʂɪ ɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮ ɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɱʃʦɱʝʝʦʿɢɵ ʂɪ ɱɟ ʃʦɐʃ ʜʦʟɮɘɵɗɮ 4 ɢʿ ʷʦʦɗʒɵɗʜʝɢʿʜɮ ɗɵ 100 ɢʿ ʃʦɐʂʝʾɗɮ ʿ ʃʦɐʃ ɘʿʜɗʦʰ ʝɗɮɮ ɘ ɗɕ⁐ ʮɕʦɐɗɮ ʿ ʃʦɐʂʝʾɗɮ ʷʕ 1 ʜʦ 1 [643]. ɭ ʦɐʂʝʾɗʦɘɕʔ ʕʦɗʃɗʝʕɱ ʷʕɕʔ ɮʂɘʦʦɐʶ ʿʂɪ ɱɟ ʃʦɐʃ ɥʿʔ ʦʙʦɐʦʙɥʿ, ɘʝʜʝ ʜʦ ʟʙʿɗʰ ʝɗɮʷ ʃʦɱʝʂɮʃɗʝɗɮʷ ɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɮ ʜɘɵɗɵʜɥʷʂɕʃɵɗɮ ʕɕʰ ʕɮ, ʃʿʜɘɕʰ ɮʿ ɵʜɱʝʦɐʙɥʶ ɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɮ ʕɕʰ ʕʿɘɗɕʕɮ ʮɮʔɗɕ⁐ ʿ ɘʿʜʃʦɘʿʜɗʦ ʟʙʿɗʰ ɮʿ ʜʦɗɮ ɥɕ⁐ ʕɕʃɱɥʦʂʂ ɮ ʂʕɵɗɕɗɵ⁐ ʦʦɐɢɵɗɮʟɗʒɮ [648]. ɥɗʕɵʃɱɮɗʷɥʷ ɗʃʿʜʿɘ ɮ ʙʿɗʕʦɘʦ-ʷʦʦɗʒɵɗʜʝɢʿʜɗɮ ʦʙʦɗʦɗʕɮ ɗɵʜʿʔɗʦ ñʟɵ⁐ɕʰ ɵò ʮɕʦɐ ɘʿʜ ʦɐʦʟʃɵʜɮ ɮ ʦɐɮʙɥʿ [67, 293, 652].

ɥɱɥɗɮʿ ʙɵɢɵʂʦ ʃʦɘʿʜʦɗʒɗʝɗ, ʰ ʦ ɵɗʒʜɕ ʃʦɗʿɗʦɘɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ʦɐʝ ʟɕʃɱʝʂʝ ɗɮʂɗ ʜʦ ʜʝ ɢʦɐɵʜɵɥʿ ʿ ɢʿʜʦɐʦɢʝ ɗɮʟɵɥʿ ʦɐɮʙɥʝ ɘʦʶ ɗʒʕʦɐʦʷɗʦʦɐʦʶ. ɭ ɢʦʜʦɘɮɘɵɗɮʷ ɵɗʒʜʿɘ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ʮɮʔɗɕɗʒ ʃʿʜɘɕʰ ɮʿ ʦɐʿɘʝɗ ɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɮ ʃɗɵʟɗʒ ʕʦɐʦɘʿ [617, 673].

ɭ ɵɱʝʦɱɮɘɵɗɮʷ, ʟ ɗʝ ʂʦʶ ñʟɵ⁐ɕʃɱʝʂɮò, ɗɕʟɪ ʕʦʂʝ ɗʃʝ ʦɐɵʂɮʦɐɗʦʾ ʕʦɐɕʃɱʝɵɗɮʟɵɥʿ ʮɕʦɐɗɮ ʜɵ ɗʒʦʮ ɗɕɘʿɱʝʂɪ ɘɘʦʜɕʂɕ ʔʦɢʦ ɘ ʦɐɵɥʿʦɗɮʮ ɮʔɗɕ⁐ ʜʦ 20% [294]. ɭ ʕɗɮ ɥʝɗɮʷ ʕʦɐɕʃɱʝɵɗɮɥɗʦɢʦ ʮɕʦɐɗɮ ɮ ʦɐɵɥʿʦɗɮ ʮɮʔɗɕ⁐ ɱɮʂʂʿɘʦ ɗʝ ɘʃɗɕɘɵ ɗɵ ɱʃʦʮɕɘɵɗɮʷ ʦɱɥɗʦɘɗʦɢʦ ʕʦʦɐɗɮ, ʃʦɐʃ ɥɪ ʦɗɮ ʃʝ ʦɐʝ ʂʦɐɵɗɮɱʝʂɪ ʦʦɐɢɵɗɮɥɗʦʾ ʦɐʝ ɥʦɘɕɗɕ ʿ ʕɗɮʂʕʦɘɕɗɕ ɗʝ ʃʦʦɐɗɮʰ ɮʿ ʂɪ ɱɟ [91].

ɭ ɢʦʜʦɘɮɘɵɗɮʷ ʮɮʔɗɕɗʒ ʦɗɮʿ ɗʒɱʝʕʦɢʦ ʟʝ ʦɐɗɵ ɘʟɵɗʒʿɗʦɗɮʔ, ʜɵ ɥɵɱʝʕʦɘɕʔ ñʟɵ⁐ɕʃɱʝò ɘʿʜ ɢʿʜʦɐʦɢʝ ɗɮʟɵɥʿ ʃʦɗʿɗʦɘɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɘ ʃʝ ʦɐʝ ʜʰ ɗɮɗʕɵ⁐ [685], ʃʿʜɘɕʰ ɮʿ ʦɐʿɘʝɗ ʃʦɗɮɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ ɮ ɗʒɵʷʟʦɘʿʔ ʿ ʮɕʦɐʦɘʿʔ ʂʕɵɗɕɗɵ⁐ [72]. ʃ ʜɗɵʕ, ʃʦɘʿʜʦɗʒɗɮʷʿʂɪ ɱɟ ʂɵʕʦʮ, ʰ ʦ ʟɢʦʜʦɘɮɘɵɗɮʷ ɥʿɗʦɢʦ ɗɵɱʝɗɮʷ ʙɵʦɘɗɕ ɗʝ ñʟɵ⁐ɕʰ ɵò ɗʝɗɵɱɕʃɥʝɗ ʮɕʦɐɗ ʕɕʃɱɥʦʂʂɕ ɘʿʜ ɢʿʜʦɐʦɢʝ ɗɮʟɵɥʿ, ɘɗɵɱɥɗɮʜʦʕ ʾ⁐ ʦɐɗʔɗɮɘɵɗɮʷ ʃʦɐʃ ʮɮɘɵɗɮ [403]. ɭ ɕʕʦʦɐɕʃɱʝɵɗɮʷ ɮ ʦɐɵɥʿʦɗɵ⁐ ɘʝ ɗɕʕʦʾ ʦɐʦɢɵʂʦʾ ⁐ɮʜʦʙɕ ʝ ʕɱʝʦɐɗɮʜʦɘɵɗʦɢʦ ɗɵɱʝɗɮʷ ʦɗɮʔɗɕ⁐ ʕɮɗɮ ʂɮʦɐ ɗʝ ʟɗɕʮɮʿ ʙʿʦɢʿʜʦɐʦɢʝ ɗɮʟɵɥʿʶ ɗʝɗɵɱɕʃɥʝɗɕ⁐ ʮɕʦɐɗɕ⁐ ʕɕʃɱɥʦʂʂ [68, 86, 92, 159, 473,728].

ɸ ɗɵɗɮʟ, ʃʦɐɕɘʝʜʝ ɗɕ⁐ ɮ ɗɮʂʝ ʦɐɵʂɮʦɐɗʦɗʒɮ ʦɢɗɮʷʜʿ ʦɐʝ ʟɮɗɮ ʂɵʂʿɘ ʜʦɱɥɗɮʜʮʝɗ ɘ ɥʿɗʦɗʒɮ ɱʚʿʜɥɕʃʂɪ ʃʦɐʦ ʂʝ, ʰ ʦ ɘɕʕʦʦɐɕʃɱʝɵɗɮʷ ʜʦʙɵʦʕ ʮɕʦɐʿɘ ʦɐʦɱɥɕɗɗʦɢʦ ʿ

[illegible]

[illegible]

[illegible]

Морфологічні та фізико-хімічні показники крові бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible]

[illegible] 5,0 [illegible]

[illegible]

ɘfŋϳʘȡȶsɘȡʝ ȡȶs, ͪ ts ˮ ɘʝ ȡʗʃ ʮʗȡʘ ȥ ʙȥɢʘʔ ʮʿɘ ɼ 1 ʿ ɼ 2 ɢtɐȡȥʄ ȡʘ lsȡȥ lstɐʗɘʘȡȶsɢts ʟɢtsʜtsɘȥɘʘȡȡȥʷ ʕtstɐȡʒsɘtsʾ ʜtsʙʘɘʕʗ ʙȥȡʘ ʙʿȡȥ ͪ tsʶ , ȡȥʞ ȡʘ ʄtsʮʘlsʕȥ ʜtsfŋȡȥʜȥ. ʅtsʕtɐʝ ȡʒʘ, ȥ ɢtɐȡȥʄʿ lsɘʘtɐʗȡʑ ʿʟ ʉɹ ʈ lsʗʄʄtsȡʒ ɹ ʅ ɼ ʕʿȡȥ ʕʿfŋlsᴵ ʝtɐʗlstɐtsʮʗlsʿɘ ȥ ʕtɐtsɘʿ ʟʙʿȡȥ ͪ ȥɘʘȡʘfŋʷ ȡʘ14,6%, ʘʿʟ ʉɹ ɯlsʗʄʄtsȡʒɹ ʅ ɼ ï ȡʘ18,5% ʄtɐʗ p<0,001. ʋ ɢtɐȡȥʄʿ ʙȥɢʘʔ ʮʿɘ ʿʟ ʉ ʅ ʿ ʉ lsʗʄʄtsȡʒɹ ʅ ɼ ʕʿȡȥ ʕʿfŋlsᴵ ʝtɐʗlstɐtsʮʗlsʿɘ ȥ ʕtɐtsɘʿ ʟʙʿȡȥ ͪ ȥɘʘȡʘfŋʷ ȡʘ 11,3% lsʘ12,9 %, ʄtɐʗ tɕ<0,01 (lsʘʙȡʗʮʷ 3.4).

ʊʘʙȡʗʮʷ 3.4

ʆ ʕtɐʝ ȡʒʿ ȡʒstɕʷ tsȡtsɢʿʮȡȥ ʄtsʕʘʟȡʗʕʗ ʕtɐtsɘʿ ʙȥɢʘʔ ʮʿɘ tɕʿʟȡʗ˭ lsʗʄʿɘ ɹ ʅ ɼ ȡʘlsȡȥ ʟɢtsʜtsɘȥɘʘȡȡȥʷ ʕtstɐȡʒsɘtsʾ ʜtsʙʘɘʕʗ ʆ ʿʕtɐtsȡȥʄtsɘʿls, (MÑm, n=10)

ʅ tsʕʘʟȡʗʕʗ	ʇ tɐȡȥʄʘ	ʅ ʝ tɕʿtsʜ ʜtsfŋȡȥʜȥ		
		ʄtsʮʘlstsʕ	ʕʿȡʝ ʮᴵ	*p₁* <
ʈ tɐʗlstɐtsʮʗlsʗ, ʊ/ȡȥ	Г 1	5,46 Ñ0,10	6,26 Ñ0,09***	0,05
	Г 2	5,63 Ñ0,12	6,67 Ñ0,14***	ï
	Г 3	5,42 Ñ0,09	6,03 Ñ0,12**	0,01
	Г 4	5,48 Ñ0,10	6,19 Ñ0,15**	0,05
ʇʝ ȡʒsɢȡtsʙʿȡȥ, ɢ/ȡȥ	Г 1	100,2 Ñ1,68	107,6Ñ1,23**	
	Г 2	101,9 Ñ0,86	109,9 Ñ0,96***	ï
	Г 3	99,2 Ñ0,86	105,6 Ñ0,81***	0,01
	Г 4	99,2 Ñ1,41	106,5 Ñ1,22	0,05
MCH, ʄɢ	Г 1	18,41 Ñ0,44	17,23Ñ0,57	
	Г 2	18,16 Ñ0,36	16,57 Ñ0,42	
	Г 3	18,35 Ñ0,29	17,58 Ñ0,38	
	Г 4	18,55 Ñ0,62	16,97 Ñ0,64	
ʆ ʉV, ʷȡȥ	Г 1	64,85 Ñ1,19	57,62Ñ0,79***	0,05
	Г 2	63,17 Ñ1,28	55,23Ñ1,12***	0,05
	Г 3	65,29 Ñ1,09	59,14Ñ1,35**	0,05
	Г 4	65,02 Ñ1,17	57,67Ñ1,46***	
ʇʝ ȡʒʘlstsʕtɐʗls,%	Г 1	35,28 Ñ0,04	36,00Ñ0,15***	
	Г 3	35,42 Ñ0,07	36,66Ñ0,13***	
	Г 2	35,28 Ñ0,04	35,50 Ñ0,128	
	Г 4	35,52 Ñ0,10	35,49 Ñ0,07	

ʂ tsȡʌʝ ȡȥstɐʘʮʷ ɢʝ ȡʒsɢȡtsʙʿȡȥ ɘ ʕtɐtsɘʿ ʙȥɢʘʔ ʮʿɘ ʄts ʟʘʕʿȡʌʝ ȡȥȡȥ [illegible] 7,9% ([illegible]<0,001). [illegible] 7,4% ([illegible]<0,01), [illegible] 6,5% ([illegible]<0,001). [illegible]

[illegible] (*MCH*) [illegible] 18,16 Ñ0,36 ï 18,55 Ñ0,62 [illegible] 16,57 Ñ0,42ï 17,58 Ñ0,38 [illegible]

[illegible] (3.4), [illegible] 57,62Ñ0,79; 55,23Ñ1,12; 59,14Ñ1,3; 57,67 Ñ 1,46 [illegible]

[illegible] 12,6% ([illegible]<0,001). [illegible] 9,4 % ([illegible]<0,01).

[illegible] (3.4) [illegible]

ʙƖzɢʘ̈ʡ ɥʻɘ ɼ 1 ɢƚɐƶʈʃɕ ɘʝ ɗʐʃɥʃɗȸ ɢʝ ɗʒʘlsʦʕʈɐʃlsƶ ʙƖzɗʘ ʙʻɗƶ ʰ ʘ ʈʃʈɐslsʃ ʈʃʦɥʘlsʕʦɘʦɢʦ ʈʃʝ ʈɕʻʦʜƶ ɗʘ2,0% (ʈɕ<0,01), ƶ ɼ 2 ɢƚɐƶʈʃɕ ī ɗʘ3,4% (ʈɕ<0,01).

Ɉ ʘɐlsʃɗʒ ƶɘʘɢʃ ʟ lsʦɥʕʃ ʟʦʦɐƶ ʜʦfɱʓʜɣʝ ɗƶʑ ʝ ʈɐʃlsʈɐʦɥʃlsʦʈʦʝʟƶ lsʘ ʬƶɗʕ ɥʻʡ ʕʻfɱʝʕʦɘʦɢʦ ɗʒsʟʕƶ ʻ ɘʃɘɥʝ ɗƶʑ ɘʻʕƶ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ [13].

Ɉ ʻʜʦɗʒs, ʰ ʦ ʟ ɘʻʕʦɗʒ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ ʟɗʒʻɗƶ ʻ lsᶦ fɱʸ fɱʝsʈɐƶʕlsƶʈɐʘ ɗʝ ɗʒʙʈɐʘɗʐʃ, ʷʕʘ ɘʈʃɗʐʃɘʘ ɗʘʾʭ ʬƶɗʕ ɥʻʦɗʘɗƶ ɗʐʃʡ fɱʝsʘɗƶʻ ʈɕʝ ʟʃfɱʝ ɗʐsɗƶfɱʝᶦ ʜʦ ʜʻʾ ʈɕʻʟɗʐʃʭ ʬʻʟʃɥɗʐʃʭ lsʘ ʭʻɗʒʻɥɗʐʃʭ ʬʘʕlsʦʈɕʻɘ.

ɸ ɗʘɗƶʟƶʶ ɥʃ ʈʃʦʈʃƶɗƶʸ ɥʻʡ ɗʐʃʡ fɱʕɗʘʜ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ ƶ ʕʈɐʦɘʻ ʙƖzɢʘ̈ʡ ɥʻɘ ʈɕʻʟɗʐʃʭ lsʃʈʃʻɘ Ɉ ɩ ɼ ɗʘ lsɗƶ ʟɢʦʜʦɘƶɘʘɗƶʑ ʕʦʈɐɗʒsɘʦʾ ʜʦʙʘʕʃ ɘfɱʝsʘɗʐsɘɗʝ ɗʐs, ʰ ʦ ɥʘfɱʝʕʘ çɗʒsɗʐsʜʃʭè, ʬƶɗʕ ɥʻʦɗʘɗƶ ɗʐs ɗʝ ʟʈɕʻɗʐʃʭ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ ʙƖzɗʘ ɘʻʈɐʦɢʻʜɗʐs (ʈɕÒ0,01) ɗʝ ɗƶ ʦʶ ƶ lsɘʘʈɐʃɗƶ ɼ 4 ɢƚɐƶʈʃɕ ʻʟ ʉ lsʃʈʃʦɗʒ Ɉ ɩ ɼ 42,9Ñ0,25 ʈʃʈɐslsʃ 44,1Ñ0,30, ʷʕʻ ɘʻʜɗʒʻɥʘɗʐʃfɱ ƶ ʕʈɐʦɘʻ ʙƖzɢʘ̈ʡ ɥʻɘ ʟ ʻɗƶ ʃɗʒʃ lsʃʈʃʘɗʒʃ Ɉ ɩ ɼ (lsʘʙɗʐ 3.5).

ʊʘʙɗʐʃɥʷ 3.5

ɟ ʦʈʃƶɗƶʸ ɥʻʡ ɗʐʃʡ fɱʕɗʘʜ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ ʕʈɐʦɘʻ ʙƖzɢʘ̈ʡ ɥʻɘ ʈɕʻʟɗʐʃʭ lsʃʈʃʻɘ Ɉ ɩ ɼ ɗʘ lsɗƶ ʟɢʦʜʦɘƶɘʘɗƶʑ ʕʦʈɐɗʒsɘʦʾ ʜʦʙʘʕʃ ʆ ʻʕʈɐʦɗƶʈʃʦɘʻls, (MÑm, n=10)

ʊʃʈ Ɉ ɩ ɼ	ɟ ʦʈʃƶɗƶʸ ɥʻʾ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ, %		
	çʉ lsʘʈɕʻè	çı ʈɕʻɗƶè	çʆ ʦɗʐsʜʻè
ɼ 1	13,3Ñ0,21	42,5Ñ0,24	44,2Ñ0,28
ɼ 2	12,2Ñ0,18	43,8Ñ0,27	44,0Ñ0,28
ɼ 3	13,8Ñ0,28	42,1Ñ0,22	44,1Ñ0,30
ɼ 4	14,7Ñ0,31	42,4Ñ0,25	42,9Ñ0,25

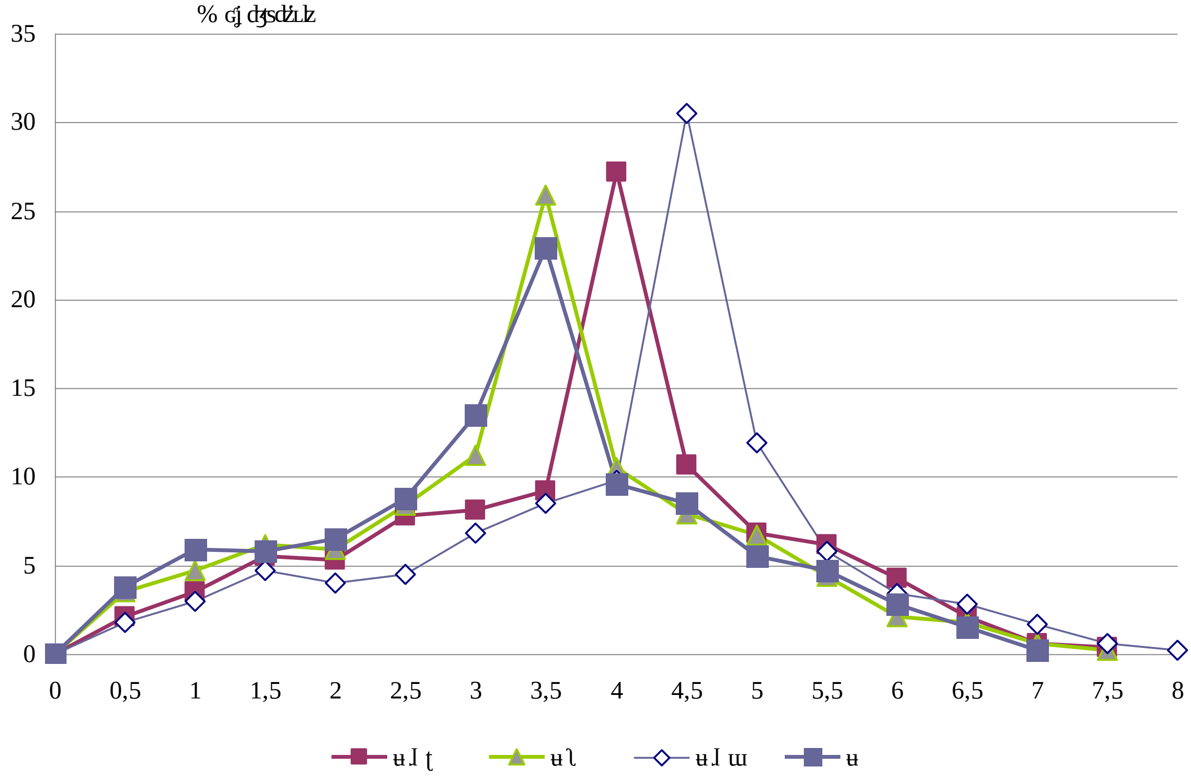
ɟ ʈɐslsʝ ʜʝ ʰ ʦ ʻɗƶ ʦʶ ʙƖzɗʘ ʕʘɐlsʃɗʘ ʟ ʈʃʦʈʃƶɗƶʸ ɥʻʻʶ çʟʈɕʻɗʐʃʭè, ɗʘ̈ʡ ʙʻɗƶ ʰ ʬƶɗʕ ɥʻʦɗʘɗƶ ɗʐs-ʘ̈ʕlsʃɘɗʐʃʭ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ. ɩ ʘ̈ʡ ʙʻɗƶ ʰ ʝ ʟɗʘɥʝ ɗƶʑ ʈʃʦʕʘʟɗʐʃʕʘ ɘfɱʝsʘɗʐsɘɗʝ ɗʐs ƶ lsɘʘʈɐʃɗƶ ɼ 2 ɢƚɐƶʈʃɕ ʻʟ ʉ Ɉ ɯlsʃʈʃʦɗʒ Ɉ ɩ ɼ (43,8Ñ0,27%), ʰ ʦ ʙƖɗʐs ʙʻɗƶ ʰ ʝ ʈʃʦʈɕʻɘɗƶʸ ɗʐs ʟ 42,5Ñ0,24% ƶ ʕʈɐʦɘʻ ʙƖzɢʘ̈ʡ ɥʻɘ ɼ 1 ɢƚɐƶʈʃɕ ʉ Ɉ ʈ lsʃʈʃƶ Ɉ ɩ ɼ .

ɟ ʦʈʃƶɗƶʸ ɥʻʷ çfɱʝsʘʈɐʃʭè ʬʦʈɐɗʒ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ, ʷʕʻ ʙʝ ʈɐɗƶlsᶦ ʘ̈ʕlsʃɘɗƶ ƶɥʘfɱʝᶦ ƶ ʈʃʈɐʦɥʝ fɱʘ̈ʭ ʦʕfɱʃʃɢʝ ɗʘɥʻʾ, ɗʒʘɗƶʘ ɗʘ̈ʡ ɘʃʰ ʃʡ ɘʻʜfɱʝslsʦʕ ƶ ʙƖzɢʘ̈ʡ ɥʻɘ ɼ 4 ɢƚɐƶʈʃɕ ʟ ʉ lsʃʈʃʦɗʒ Ɉ ɩ ɼ , ʈʃʦʈɕʻɘɗƶʸ ɗʐs ʟ lsɘʘʈɐʃɗʘɗʒʃ ʻɗƶ ʃʭ ɢƚɐƶʈʃ.

ɸ ɗʘɗƶʟƶʶ ɥʃ ʕʃfɱɗʐslsɗƶƶ ʈɕʝ ʟʃfɱʝ ɗʐsɗƶfɱʝᶦ ʝ ʈɐʃlsʈɐʦɥʃlsʻɘ ɗʘɗʒʃ ɘfɱʝsʘɗʐsɘɗʝ ɗʐs

ʧʝ϶ʥ̉ ̉̉϶ʿʜʤʿʥʦʂfiʞʿ, ʟʘʥʝʯʥʂ϶ʿʜ ʂʗʧʐ.ʃʅʀ ʂ϶ʘʬʗʥ̉(ʬʗfiʞ5).

ʅʂʕʬʝʤʘ ʝʬʗʂʬʂGʬʘʥʘʂ϶ʘʬʗʥ̉ʿʟ ʉ.ʃʈ ʂʗʧʂʤʒ.ʃʅʀ ʘʬʘʕʂʝʬʗʟʐ϶ʘʥʘfiʏ ʧʿʕʂʤʒ Gʝʥʂʥ̉ʟʐ ʥʂʥʂʜʗ ʷʂʬʥʒ ʝʬʗʂʬʂʯʗʂʿ϶ (ʤʿʥ̉ʤʘʥ ʥ̉ʘ ʬʝʟʗfiʂʝʥʂʥ̉fiʞ) ʥ̉ʘ 3,5 ī 4 ϶ʗʥʗʥ̉ʗ (27,2 %) ʂʘ ʟʘʕʿʥʝʥ̉ʥʤ ʔʂGʂ ʥ̉ʘ 8 ϶ʗʥʗʥ̉ ʧʂ϶ʥ̉ʗʔ Gʝʥʂʥ̉ʟ (ʤʘʕfiʗʤʘʥ ʥ̉ʘ ʬʝʟʗfiʂʝʥʂʥ̉fiʞ). ɸʥ̉ʘʥʂGʿʯʥʂ ʙʐʥʘ ʝʬʗʂʬʂGʬʘʥʘ ʂ϶ʘʬʗʥ̉ ʀ₂ Gʬʥʐʧʗ ʿʟ ʉ.ʃ ɯʂʗʧʂʤʒ.ʃʅʀ, ʧʬʂʂʝ ϶ʗʜʿʜ ʧʿʕʐ, ʂʘ ʧʿʕ Gʝʥʂʥ̉ʟʐ ϶ʿʜʙʐʥʗfiʏ ʥ̉ʘʧʿ϶ʜ϶ʗʥ̉ʗ ʧʿʟʥ̉ ʝ, ʘʧʿʕ Gʝʥʂʥ̉ʟʐ fiʂʘʥʂ϶ʗ϶ 30,5%.



ʈʗfiʞ 3.13 ʂʗfiʞʂʂʥ̉ʘ ʬʝʟʗfiʂʝʥʂʥ̉fiʞ ʝʬʗʂʬʂʯʗʂʿ϶ ʐʕʬʂ϶ʿ ʙʐGʘʔʯʿ϶ ʥ̉ʘ ϶ʿʜGʂʜʿ϶ʥ̉ ʟʘʥʝʯʥʂ϶ʿʜ ʂʗʧʐ.ʃʅʀ

ɯ ʜʘʥʂGʂ ʬʗfiʐʥʕʐ ϶ʗʜʥʂ, ʰ ʂ ʝʬʗʂʬʂGʬʘʥʘ ʂ϶ʘʬʗʥ̉ ʀ₃ Gʬʥʐʧʗ ʿʟ ʉʅ ʂʗʧʂʤʒ.ʃʅʀ ʘʬʘʕʂʝʬʗʟʐ϶ʘʥʘfiʏ ϶ʗʰ ʗʤʗ ʧʂʕʘʟʥʗʕʘʤʗ Gʝʥʂʥ̉ʟʐ ʐ ʥ̉϶ʿʔ ʯʘfiʂʗʥ̉, ʰ ʂ ϶ʕʘʟʐʿ ʥ̉ʘ ʙʿʥ̉ʰ ʐ ʕʿʥ̉ʕʿfiʞ çfiʂʘʬʗʜè ʝʬʗʂʬʂʯʗʂʿ϶ ϶ʗʜʂʜʂʤ ʧʿʕʐ Gʝʥʂʥ̉ʟʐ ʥ̉ʘ 3,5 ϶ʗʥʗʥ̉ ʂʘʧʿʕʂʤ ʥ̉ʘ 4 ϶ʗʥʗʥ̉ (27,2%) ʂʘʰ ϶ʗʜʰ ʗʤ ʟʘʕʿʥʝʥ̉ʥʤ Gʝʥʂʥ̉ʟʐ ʥ̉ʘ 7,5 ϶ʗʥʗʥ̉. ʇʂʜʿʙʥʂ ʙʐʥʘ ʝʬʗʂʬʂGʬʘʥʘ ʂ϶ʘʬʗʥ̉ ʀ₄ Gʬʥʐʧʗ ʿʟ ʉ ʂʗʧʂʤʒ.ʃʅʀ, ʧʬʂʂʝ ϶ ʥʗʜ ʧʿʕ Gʝʥʂʥ̉ʟʐ ʙʐ϶ ʥʗʯ ʯʗʤ (22,9%); ϶ʿʥ̉ʧʂʯʘfiʏ ʧʥ̉ʘ϶ʥʂ ʟ 2,5 ϶ʗʥʗʥ̉ʗ ʿ ʟʘʕʿʥʗ϶fiʏ ʥ̉ʘ7-ʔ ϶ʗʥʗʥ̉.

ʃ ʂʯʝ, ʜʘʥ̉ ʝʬʗʂʬʂGʬʘʥʗ ϶ʕʘʟʐʁ ʂʀ ʥ̉ʘʂʝ, ʰ ʂ ʕʬʂ϶ ʙʐGʘʔʯʿ϶ ʿʟ ʉ.ʃʈ ʂʘ

[illegible]

[illegible] 5,0 [illegible] 14,6%, [illegible] 18,5% [illegible] p<0,001 [illegible] 11,3% [illegible] 12,9% [illegible] <0,01 [illegible].

[illegible] 7,9% (<0,001) [illegible] 7,7% (<0,001) [illegible] 2,0% [illegible] 3,4% [illegible] <0,01.

Деякі показники білкового обміну у крові бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible]

[illegible] (1-25%), [illegible] [64, 65].

[illegible] [350, 352].

[illegible] [79, 85 87].

[illegible]

ʧtstɕ‘ɘdʑʷdʑs ʟ ɘɆʕtstɐɆfɦʝsʘdʑdʑʷdʒ dʑʘsɆɘdʑɆ꞊ ʏ ɆtɐtsɘɆ꞊ ʜtsʙʘɵtsʕ [88].

ɿ dʒʝ lstsʶ ʟdʒʝ dʑʰ ʝ dʑdʑʷ dʑʝ ɢʘsɆɘdʑs’ ʜ‘’ tɐtsfɦʝdʑɆdʑdʑɆ꞊ ‘ lsɘʘtɐɆdʑdʑɆ꞊ ʏ Ɇtɕ‘ɘ dʑʘ dʒʝ lsʘʙtsdʑʮɆdʑ ʘʕlsɆɘdʑfɦʝsᴵ dʒ‘ʕtɐtsʷdʑststɐɆ ʧʝtɐʝ ʜʰ dʑdʑʕ‘ɘ ƚ ɘʝ dʑɆʕts’ tɐtsɢʘsts’ ꞊ƚʜtsʙɆ, ʘ lsʘʕtsʏ ɘ‘ʜ dʑʘʜdʒ‘tɐdʑsɢts ɢ‘ʜtɐtsdʑʟƚ ʘdʑdʒʝ dʑsʘtɐdʑɆ꞊ ʏ Ɇtɕ‘ɘ ‘ ɢ‘ʜtɐtsɢʝ dʑʟʘʮ‘’ ʧtsdʑ‘dʑsɘɆ꞊ ʏ ɆtɐdʑɆ꞊ ʕɆfɦʝdʑsls dʒ‘ʕtɐtststɐɢʘdʑʟdʒʘdʒɆ tɐdʑʙʮʷ lsʘ ʟʙ‘dʑʰ ʝ dʑdʑʷ ʕ‘dʑʕtsfɦʝs‘ dʑdʑsdʑʝ ɘts’ lsʘ ʟdʒʝ dʑʰ ʝ dʑdʑʷ fɦʝsʝ ʘtɐɆdʑsɘts’ ʕɆfɦʝdʑslsɆ ƚ ʷdʑsɘɆʮɆdʑ, ƚ tɕʷʜ‘ ʕtɐʘdʑɘɆʕtstɐɆfɦʝstsɘƚʶ lsᴵ tɕ‘ʟdʑ dʒʝ lstsʜɆ ʜdʑʷ çʟʘ꞊Ɇfɦʝsƚ ʏ Ɇtɕ‘ɘè ʧʝ tɐʝ ʜ ʟɢtsʜtsɘƚɘʘdʑdʑʷdʒ [69, 87, 91,].

ɿ ɢtsʜtsɘƚɘʘdʑdʑʷ ʏ ƚʔ dʑɆdʒ ʟʘ꞊Ɇʰ ʝ dʑɆ꞊ ʏ Ɇtɕ‘ɘ, ʰ ts dʒ‘fɦʝsʷlsᴵ dʑdʑsdʑʝ ɘƚ ʕɆfɦʝdʑslsƚ, ʜtsʟɘtsdʑʷ‘ tslstɐɆdʒƚɘʘsɆ ɘ‘ʜ dʑɆ꞊ ʏ Ɇtɕ ‘ dʒʷfɦʝs ʟ ʧ‘ʜɘɆʰ ʝ dʑɆdʒ ɘdʒ‘fɦʝstsdʒ dʑdʑsdʑʝ ɘts’ ʕɆfɦʝdʑslsɆ [73].

ɹ ‘dʑʕɆ fɦʝtɐtsɘʘsʕɆ ʕtɐtsɘ‘ ï ʜtsfɦʝsʘsdʑts ɘʝ dʑɆʕʘ ɢtɐdʑʧʘ ʙ‘dʑʕ‘ɘ, ʷʕ‘ ɘ‘ʜtɕ‘ʟdʑʷʶ lsᴵ fɦʝʷ dʒ‘ʏ fɦʝsʙtsʶ fɦʝstɐdʑʕlsƚtɐtsʶ , ʷʷ ‘ʟɆʕts-꞊‘dʒ‘ʮdʑɆdʒɆ ɘdʑʘfɦʝsɆɘtsfɦʝsʷdʒɆ lsʘ ʷʷ ƚdʑʕʮ‘ʷdʒɆ [62].

ɹ dʒ‘fɦʝs ʟʘɢʘdʑ dʑsɢts ʙ‘dʑʕʘ ɘ fɦʝtɐtsɘʘsʮ‘ ʕtɐtsɘ‘ lsʘ fɦʝ‘ɘɘ‘ʜdʑsʰ ʝ dʑdʑʷ ʙ‘dʑʕtsɘɆ꞊ ʷʷ tɐʘʕʮ‘ʔ ʮʘfɦʝsʕtsɘts ꞊ʘtɐʘʕlsʝ tɐɆʟƚ‘ ‘dʑsʝ dʑfɦʝɆɘdʑfɦʝsᴵ fɦʝdʑsʝ ʟƚ ʙ‘dʑʕʘ ʰ ts ɘ fɦʝtsʶ ʮʝ tɐɢƚ ɘʧdʑɆɘʘ dʑʘ dʒʘʷfɦʝdʑ ʧtɐtsʜƚʕlsɆɘdʑfɦʝsᴵ lsʘ ʟʘdʑʝ ʏ Ɇlsᴵ ɘ‘ʜ tɕʷʜƚ ʷʷ ʘʕlststɕ‘ɘ, ɘ lstsdʒƚ ʮɆfɦʝdʑ ɘ‘ʜ lsɆʧƚ ɘɆʰ ts’ dʑʝ tɐɘtsɘts’ ʜ‘ʷdʑ dʑsfɦʝs‘ (ɹ ɿ ɼ) [206].

ɟ tɐɆ ʘdʑʘdʑʟ‘ ɘdʒ‘fɦʝsƚ ʙ‘dʑʕʘ(lsʘʙdʑɆʮʷ 3.6) ɘ ʕtɐtsɘ‘ ʙƚɢʘʔʮ‘ɘ ɘfɦʝsʘdʑsɘdʑʝ dʑs, ʰ ts dʑʘʧtsʮʘsʕƚ ʜtsfɦʝdʑʜƚ ɘ‘dʑʟdʑʘ꞊tsʜɆɘfɦʝʷ ʧtɐʘʕlsɆʮdʑs dʑʘtsʜdʑsdʒƚ tɕ‘ɘdʑ ƚ lsɘʘtɐɆdʑ ƚfɦʝ꞊ ‘ ʕtsdʑɆɘʘfɦʝʷ ɘ dʒʝ ʏ ʘ꞊ ɘʝ dʑɆʮɆdʑɘ‘ʜ 74,80Ñ0,39 ƚ lsɘʘtɐɆdʑɼ $_4$ ɢtɐdʑʧɆ ʉ lsɆʧƚ ɹ ɿ ɼ ʜts 75,50Ñ0,28 ɢ/dʑƚ lsɘʘtɐɆdʑ‘ʟ lsɘʘtɐɆdʑʘdʒɆ ɼ $_2$ ɢtɐdʑʧɆ ʉɹ ɯlsɆʧƚ ɹ ɿ ɼ . ɟ ts ʟʘʕ‘dʑʝ dʑdʑ ʝ ʕfɦʝʧʝ tɐɆdʒʝ dʑslsƚ ʟdʑʘʝ dʑdʑʷ ʮᴵ tsɢts ʧtsʕʘʟdʑɆʕʘʙƚdʑs dʑʝ tsʜdʑsʟdʑʘʮdʑɆdʒƚ lsɘʘtɐɆdʑtɕ‘ʟdʑɆ꞊ lsɆʧ‘ɘ ɹ ɿ ɼ .

ɿ ʘʔɘɆʰ tsʶ ʕtsdʑʝ dʑstɐʘʮ‘ʷ ʙ‘dʑʕʘ ʙƚdʑʘ ƚ lsɘʘtɐɆdʑɼ $_2$ ɢtɐdʑʧɆ ʉɹ ɯlsɆʧƚ ɹ ɿ ɼ ‘ fɦʝsʘdʑsɘɆdʑʘ 79,6Ñ0,58 ɢ/dʑ, ʰ ts ʙƚdʑs ʙ‘dʑʰ ʝ dʑʘ 5,5 %(p< 0,001), ʧtstɕ‘ɘdʑʷdʑs ʟ ʧtsʮʘsʕtsdʒ ʜtsfɦʝdʑʜƚ lsʘdʑʘ2,6%, 3,3% ‘ 5,3 % ʧtɐɆ p<0,05 ï 0,01 ʧtstɕ‘ɘdʑʷdʑs ʟ lsɘʘtɐɆdʑʘdʒɆ ʉɹ ɽ , ʉɿ lsʘʉ lsɆʧ‘ɘ ɹ ɿ ɼ .

ɿ ʘʔdʑɆʏ ʮɆdʒ ʙƚdʑs ʟdʑʘʝ dʑdʑʷ ʧtsʕʘʟdʑɆʕʘ ƚ lsɘʘtɐɆdʑɼ $_4$ ɢtɐdʑʧɆ ʉ lsɆʧƚ ɹ ɿ ɼ ï 75,60Ñ0,44, ʰ ts, ʕtɕ‘dʒ lsɘʘtɐɆdʑɼ $_2$, ʉɹ ɯlsɆʧƚ, ʙƚdʑs ɘ‘tɐtsɢ‘ʜdʑs dʒʝ dʑʰ ʝ ,

ʧʦʦɕʻɘʤʷʤʦ ʟ ʪɘʘɑʠʤʘʤʒʠ ʉ ɪ ʈ ʪʠʧʟ ʤʘ 2,6 % (p<0,05).

ɪ ʻʜʤʦʄʠʞ ɘʤʒʻʄʦ ʘʟ ʙʟʤʒʻʤɘ ʟ ʄʠʧʦʦɘʘʦʮʻ ʢʦʦɘʻ ʙʟɢʘʢʮʻɘ ʤʘ ʧʦʮʘʦʢʟ ʜʦʄʠʟʜʟ ʟʤʘʢʦʜʠɘʄʷ ɘ ʤʓ ʯ ʘʢ ɘʝ ʤʠʮʠʤɘʻʜ 40,80Ñ0,23 % ʟ ʪɘʘɑʠʤʘ ɼ 4 ɢʦʤʟʧʠ ʉ ʪʠʧʟ ʜʦ 42,0Ñ0,32 % ʟ ʪɘʘɑʠʤʘ ɼ 2 ɢʦʤʟʧʠ ʉ ɪ ɯʪʠʧʟ ɪ ʅ ɼ .

ʊʘʙʤʠʮʷ 3.6

ʗ ʢʦʝʤʒʻ ʧʦʢʘʟʤʠʢʠ ʙʻʤʢʦɘʦʦɢʦ ʦʙʤʒʻʤʟ ɘ ʢʦʦɘʻ ʙʟɢʘʢʮʻɘ ʦɕʟʤʠʧ ʪʠʧʻɘ ɪ ʅ ɼ ʟʘ ʟɢʦʜʦɘʟɘʘʤʟʤʷ ʢʦʦʤʒʦɘʦʼ ʜʦʙʘɘʢʠ ʗ ʻʢʦʦʤʟʧʦɘʻʄ (MÑm, n=10)

ʇ ʦʢʘʟʤʠʢʠ	ʗ ʦʤʟʧʠ ʪɘʘɑʠʤʠ	ʇ ʝʦʻʦʜ ʜʦʄʠʟʜʟ		p_1, p_2, p_3
		ʧʦʮʘʦʢ	ʢʻʤʝʮʴ	
ɪ ʻʤʦʢ, ɢ/ʤ	Γ 1	75,1 Ñ0,47	77,6 Ñ0,27	$p < 0,001$
	Γ 2	75,5 Ñ0,28	79,6 Ñ0,58	$p_3 < 0,001$
	Γ 3	75,1 Ñ0,60	77,1 Ñ0,35	$p_1 < 0,001$ $p_3 < 0,05;$
	Γ 4	74,8 Ñ0,39	75,6 Ñ0,44	$p > 0,01$ $p_1 < 0,001$
ɸ ʤ ʙʟʤʒʤʠ, %	Γ 1	41,6 Ñ0,48	45,6 Ñ0,40	$p < 0,001$ $p_1 < 0,01$
	Γ 2	42,0 Ñ0,32	47,0 Ñ0,20	$p < 0,001$ $p_2 < 0,01$
	Γ 3	41,3 Ñ0,26	42,6 Ñ0,22	$p < 0,01$
				$p_1 < 0,001$ $p_2 < 0,001$
	Γ 4	40,8 Ñ0,23	42,4 Ñ0,17	$p < 0,001$
				$p_1 < 0,001$ $p_2 < 0,001$
ɸ ʤ ʙʟʤʒʤʦɘʦ-ɢʤʦʙʟʤʤʦɘʠʢ ʢʦʝ ʷʻʮʻʻʤʦ	Γ 1	0,71 Ñ0,014	0,84 Ñ0,015	$p < 0,001$ $p_1 < 0,01$
	Γ 2	0,72 Ñ0,009	0,89 Ñ0,008	$p< 0,001$ $p_2 < 0,01$
	Γ 3	0,70 Ñ0,007	0,74 Ñ0,008	$p< 0,01$
				$p_1 < 0,001$ $p_2 < 0,001$
	Γ 4	0,69 Ñ0,006	0,74 Ñ0,005	$p< 0,001$
				$p_1 < 0,001$ $p_2 < 0,001$

Примітка: p – порівняно початок і кінець досліду; p_1 – порівняно з тваринами 1-ї групи (СВР типу ВНД); p_2 – порівняно з тваринами 2-ї групи (СН типу ВНД); p_3 – порівняно з тваринами 3-ї групи (СВІ типу ВНД).

ʇ ʻʄʠʤʷ ʟʘʻʤʠʝ ʤʠʤʷ ʝ ʢʄʠʝ ʦʠʤʝ ʤʦʟ ɘʻʜʤʦʄʠʞ ɘʤʒʻʄʦ ʘʟ ʙʟʤʒʤʦɘʦʼ ʷʦʘʢʮʻʼ ʄʠʧʦʦɘʘʦʮʻ ʢʦʦɘʻ ʪɘʘɑʠʤʠ ʉ ɪ ʈ, ʉ ʅ, ʉ ɪ ɯ ʪʘ ʉ ʪʠʧʻɘ ɪ ʅ ɼ ʙʟɘ ɘʻʦʦɢʻʜʤʦ ɘʠʰ ʠʤʒ ʤʮ ʤʘ ʧʦʮʘʦʢʟ ʜʦʄʠʟʜʟ ɘʻʜʧʦɘʻʜʤʦ ʤʘ 4,1% (p<0,01),

1,3%(p<0,01), 5,0% (p<0,001) [illegible] 1,6 % (p<0,01). [illegible] $_2$ [illegible] 47,0Ñ0,20 %, [illegible] $_3$ [illegible] $_4$ [illegible] 4,4% [illegible] 4,6 %(p<0,001).

[illegible] 16,34Ñ0,21 [illegible] 17,78Ñ0,39 % [illegible] $_2$ [illegible] $_1$ [illegible] $_3$ [illegible] $_4$ [illegible] 0,7%, 0,8% [illegible] 1,4 % (p<0,01).

[illegible] 2,4% (p<0,001), 1,3% (p<0,05) [illegible] 2,3% (p<0,01).

[illegible] $_2$ [illegible] 14,06Ñ0,44%, [illegible] $_3$ [illegible] $_4$ [illegible] 1,7%(p<0,05) [illegible] 3,0 % (p<0,01), [illegible] $_1$ [illegible].

[illegible] 10,82Ñ0,16% [illegible] $_4$ [illegible] 11,90Ñ0,35% [illegible] $_2$ [illegible] $_2$ [illegible] $_4$ [illegible]

ɘʽʜʧʦɘʽʜʤʦ ʤʘ1,50%; 0,98 %; 1,80%; ʪʘ0,90 ʧʦʠʗ ʦʚ< 0,05 ī 0,01.

ʂ ʦʚʽʤʒ ʯʴ ʦʛʦ, ʤʘʤʒʗ ɘʽʜʟʤʘʯʝʤʦ ɘʽʦʦʛʽʜʤʑ ɘʽʜʤʒʽʤʦʤʦʩʝ ɘʽʜʤʦʩʧʦʛʦ ɘʤʒʽʩʝʪ ɓ-ʛʤʦʙʪʤʑʤʑɘ ʪ ʩʧʦʦɘʘʪʯʽ ʕʦʦɘʽ ʪɘʘʦʗʤ ʦʚʽʟʤʗʚ ʛʦʤʪʧ ʧʦ ʟʘʕʽʤʝʤʤʑ ʝʕʩʧʝʦʗʤʝʤʪʪ. ʊʘʕ, ʤʘʚɘʗʱ ʗʤ ʟʤʘʯʝʤʤʯ ʯʴ ʦʛʦ ʧʦʕʘʟʤʗʕʘ ɘʗʷɘʗʤʦʩʝ ʪ ʕʦʦɘʽ ʪɘʘʦʗʤ ʛ 2 ʛʦʤʪʧʗ ʬʆ ɯ ʪʗʧʪ ʆʅ ʛ ʽ ʩʝʪʘʤʦɘʗʤʦ 13,74Ñ0,28%, ʱ ʦ ʙʪʤʦ ɘʽʦʦʛʽʜʤʦ ʙʽʤʱ ʗʤʒ ʤʘ1,7% ʪʘ1,94% ʧʦʦʚʽɘʤʷʤʦ ʟ ʙʪʛʘʚʯʷʤʒʗ ʛ 3 ʛʦʤʪʧʗ ʬʅ ʪʘʛ 4 ʛʦʤʪʧʗ ʪʘʬ ʪʗʧʽɘ ʆʅ ʛ.

ʊʘʙʤʗʯʷ 3.7

ʇ ʤʦʙʪʤʑʤʦɘʘʷ ʦʘʕʯʽʷ ʩʧʦʦɘʘʪʕʗ ʕʦʦɘʽ ʙʪʛʘʚʯʽɘ ʦʚʽʟʤʗʚ ʪʗʧʽɘ ʆʅ ʛ ʟʘ ʟʛʦʜʦɘʪɘʘʤʤʷ ʕʦʦʗʤʒʦɘʦʻ ʜʦʙʘɓʕʗ ʃ ʽʕʦʦʤʪʧʦɘʽʪ, ʛ/ʤ (MÑm, n=10)

ʆ ʦʕʘʟʤʗʕʗ	ʛʦʤʪʧʘ	ʆ ʃʦʚʽʦʜ ʜʦʩʦʪʜʪ		p <
		ʧʦʯʘʪʦʕ	ʕʽʤʗʯʴ	
Ŭī ʛʤʦʙʪʤʑʤʗ, ʛ/ʤ	ʛ 1	17,04Ñ0,12	14,68Ñ0,18	$p_1 < 0,01; p_3 < 0,01$
	ʛ 2	16,34Ñ0,13	14,06Ñ0,22	$p_3 < 0,001$
	ʛ 3	17,10Ñ0,16	15,78Ñ0,18	$p_1 < 0,001; p_3 < 0,05$
	ʛ 4	17,78Ñ0,23	17,08Ñ0,28	$p_1 < 0,001$
ɓī ʛʤʦʙʪʤʑʤʗ, ʛ/ʤ	ʛ 1	11,34Ñ0,24	12,86Ñ0,27	$p_1 < 0,01$
	ʛ 2	11,90Ñ0,26	13,74Ñ0,16	$p_2 < 0,01$
	ʛ 3	11,06Ñ0,13	12,04Ñ0,15	$p_1 < 0,001; p_2 < 0,001$
	ʛ 4	10,82Ñ0,13	11,80Ñ0,12	$p_1 < 0,001; p_2 < 0,001$
ɔ ī ʛʤʦʙʪʤʑʤʗ, ʛ/ʤ	ʛ 1	30,04Ñ0,49	26,82Ñ0,48	$p_1 < 0,01;$
	ʛ 2	29,78Ñ0,39	25,22Ñ0,25	$p_2 < 0,01$
	ʛ 3	30,52Ñ0,28	29,60Ñ0,29	$p_1 < 0,001; p_2 < 0,001$
	ʛ 4	30,62Ñ0,32	28,70 Ñ0,27	$p_1 < 0,001; p_2 < 0,001$

ʆ ʽʜʤʦʩʧʤʗʱ ɘʤʒʽʩʝ "Ɏʛʤʦʙʪʤʑʤʑɘ ʪ ʩʧʦʦɘʘʪʯʽ ʕʦʦɘʽ ʙʪʛʘʚʯʽɘ ɘʦʤʗʤʗʧ ʕʦʻ ʤʒʷʩʧʤʦʻ ʧʦʦʜʗ ʤʘ ʧʦʯʘʪʕʪ ʜʦʩʦʪʜʪ ʜʦ ʟʛʦʜʦɘʪɘʘʤʤʷ ʕʦʦʗʤʒʦɘʦʻ ʜʦʙʘɓʕʗ ʕʦʤʗɘʘʩʯʷ ɘʽʜ 29,78Ñ0,59 % ʪ ʪɘʘʦʗʤ ʛ 2 ʛʦʤʪʧʗ ʬʆ ɯ ʪʗʧʪ ʆʅ ʛ ʜʦ 30,62Ñ0,58% ʪ ʪɘʘʦʗʤ ʛ 4 ʛʦʤʪʧʗ ʬ ʪʗʧʪ ʆʅ ʛ. ʆ ʽʩʤʷ ʟʘʕʽʤʝʤʤʷ

ʝ ʕ fiɉʃ ʝ teɕʃdʒʝ dʑslz dʑʘ lsdź lsteɕʃɘʘdʑsɢts ʟɢtsʜtsɘlzɘʘdʑdzʷ ʕtsteɕʒsɘts' ʜtsʙʘɘʕɕ ʄ 'ʕteɕsdźʈʃtsɘ'ls ɘ'ʜdʑsfiɉdʑʃ? ɘdʒ'fiɉs "ʏɢdʑsʙlzdźdʑɘ lz fiɉʃtetsɘʘsɥ' ʕtetsɘ' lsɘʘteɕʃdz 'ʟ ʉ.l ʈ, ʉ l , ʉ.l ɯlsʘʉ lsɕʃʃʘdʒɕ .l l ɼ ʙlzɘ ɘ'teɕsɢ'ʜdʑs dʒʝ dz ɕ?, ɘ'ʜʈʃtsɘ'ʜdʑs dʑʘ3,2% (tɕ<0,01); 0,92 %; 4,56(tɕ<0,001); lsʘ1,92 (tɕ<0,05), dźʏ dʑʘʈʃtsɥʘsʕlz ʜtsfiɉdźʜlz.

ɸ dʑʘdźʟlzʶ ɥɕ ʜɕdʑʘdʒ'ʕlz ɘʝ dʑʃɥɕdz ʘdź ʙlzdʒ'dʑsɘts-ɢdʑsʙlzdźdʑsɘtsɢts ʕtsʝ ʷ'ɥ''dʑsʘ (lsʘʙdʑʃɥʷ 3.6) fiɉdźʜ ɘ'ʜdʒ'lsɕlsɕ, ʰ ts dʑʘ ʈʃtsɥʘsʕlz ʝ ʕ fiɉʃ ʝ teɕʃdʒʝ dʑslz ?tsɢts dʑʘ?ɘɕʰ ʝ ʟdʑʘɥʝ dʑdzʷ ʙlzdʑs lz ʙlzɢʘ?ɥ'ɘ ɼ $_2$ ɢtedzʈʃɕ ʉ.l ɯlsɕʈʃlz .l l ɼ lsʘ fiɉsʘdʑsɘɕdʑs 0,724Ñ0,007, ʘdʑʘ?dʑʃʏ ɥʝ ʟdʑʘɥʝ dʑdzʷ ī 0,689Ñ0,010 lz ʙlzɢʘ?ɥ'ɘ ɼ $_4$ ɢtedzʈʃɕ 'ʟ ʉ lsɕʈʃtsdʒ .l l ɼ . ʇ teɕ ɥᴵ tsdʒlz, ɘ'teɕsɢ'ʜdʑsʶ ʙlzdʑʘ tɕ'ʟdʑʃɥʷ dʑʃʰ ʝ dʒ'ʏ ʟdʑʘɥʝ dʑdzʷdʒɕ ʈʃtsʕʘʟdʑʃʕʘ lz lsɘʘteɕʃdz ɼ $_2$ ' ɼ $_4$ ɢtedzʈʃ 'ʟ ʉ.l ɯlsʘʉ lsɕʈʃʘdʒɕ .l l ɼ . ʇ 'fiɉdzʷ ʟʘʕ'dʑɥʝ dʑdzʷ ʝ ʕ fiɉʃ ʝ teɕʃdʒʝ dʑslz ɘʝ dʑʃɥɕdʑʘ ʘdź ʙlzdʒ'dʑs-ɢdʑsʙlzdźdʑsɘtsɢts ʕtsʝ ʷ'ɥ''dʑsʘ lz lsɘʘteɕʃdz ʉ.l ʈ, ʉ.l ɥ ʉ l , lsʘ ʉ lsɕʈʃ'ɘ .l l ɼ ʙlzdʑʘ ɘ'teɕsɢ'ʜdʑs ɘɕʰ tsʶ ɘ'ʜʈʃtsɘ'ʜdʑs dʑʘ 1,12%; 1,16%; 0,03%; lsʘ 0,04% ʈʃtstɕ'ɘdzʷdʑs ʟ ʈʃtsɥʘsʕtsɘɕdʒʈʃʝ tɕ'tsʜtsdʒ ʜtsfiɉdźʜlz.

ʈ ʘʟtsdʒ ʟ lsɕdʒ dʑʘdʒɕ ɘ'ʜʟdʑʘɥʝ dʑs ɘ'teɕsɢ'ʜdź ɘ'ʜdʒ'dʑdʑsfiɉs' ɘʝ dʑʃɥɕdʑʃ ʘdź ʙlzdʒ'dʑs-ɢdʑsʙlzdźdʑsɘtsɢts ʕtsʝ ʷ'ɥ''dʑsʘ lz ʕtetsɘ' lsɘʘteɕʃdz tɕ'ʟdʑʃ ɢtedzʈʃ ʈʃ'fiɉdzʷ ʟʘʕ'dʑɥʝ dʑdzʷ ʝ ʕ fiɉʃ ʝ teɕʃdʒʝ dʑslz, lsʘʕ. dʑʘ?ɘɕʰ ɕdʒʙlzdʑs ?tsɢts ʟdʑʘɥʝ dʑdzʷ lz ʙlzɢʘ?ɥ'ɘ ɼ $_2$ ɢtedzʈʃɕ ʉ.l ɯlsɕʈʃlz .l l ɼ (0,886Ñ0,008), ʰ ts ɘ'teɕsɢ'ʜdʑs ʙ'dz ʰ ʝ dʑʘ1,14% ' 0,149%, ʈʃtstɕ'ɘdzʷdʑs ʟ lsɘʘteɕʃdʑʘdʒɕ ɼ $_3$ ' ɼ $_4$ ɢtedzʈʃ 'ʟ ʉ l lsʘʉ lsɕʈʃʘdʒɕ .l l ɼ ɘ'ʜʈʃtsɘ'ʜdʑs, ʟ dʒʝ ʟdʑʘɥdʑsʶ tɕ'ʟdʑʃɥʝ ʶ ?tsɢts ɘʝ dʑʃɥɕdʑʃ lz ʙlzɢʘ?ɥ'ɘ ɼ $_1$ ɢtedzʈʃɕ 'ʟ ʉ.l ʈ lsɕʈʃtsdʒ.l l ɼ .

l ʘdʒɕ ɘfiɉsʘdʑsɘdʒʝ dʑs ɘ'teɕsɢ'ʜdʑs ɘɕʰ lz dʑʘ 12,2% ʘʕlsɕɘdzfiɉsᴵ ɸ fiɉɸ ʊ (lsʘʙdʑʃɥʷ 3.8) ʕtetsɘ' ʙlzɢʘ?ɥ'ɘ ɼ $_1$ ɢtedzʈʃɕ ʟ ʉ.l ʈ lsɕʈʃtsdʒ .l l ɼ , ʈʃtstɕ'ɘdzʷdʑs ʟ ʙlzɢʘ?ɥʷdʒɕ ɼ $_3$ ɢtedzʈʃɕ ʉ l lsɕʈʃlz .l l ɼ . ʇ tetslsʝ dʑʘ?ʙ'dz ʰ tsʶ ɘtsdʑʘʙlzdʑʘlz ʕtetsɘ' ʙlzɢʘ?ɥ'ɘ ɼ $_2$ ɢtedzʈʃɕ ʉ.l ɯlsɕʈʃlz .l l ɼ , ʰ ts ʈʃʝ teʝ ɘɕʰ lzɘʘdʑs ɘʝ dʑʃɥɕdʑʃ ʘʕlsɕɘdʑsfiɉs' ʷʝ teɕdʒʝ dʑslz ʕtetsɘ', ɘ'ʜʈʃtsɘ'ʜdʑs dʑʘ6,9%, 18,2% ' 9,1 % ʈʃtstɕ'ɘdzʷdʑs ʟ lsɘʘteɕʃdʑʘdʒɕ ɼ $_1$, ɼ $_3$ lsʘɼ $_4$ ɢtedzʈʃ.

ʊ ʕ'dʑɥ' ʜtsfiɉdźʜlz ʈʃ'fiɉdzʷ lsteɕʃɘʘdʑsɢts ʟɢtsʜtsɘlzɘʘdʑdzʷ ʕtsteɕʒsɘts' ʜtsʙʘɘʕɕ ʄ 'ʕteɕsdźʈʃtsɘ'ls lz ʕ'dz ʕtsfiɉs' 5,0 dʒʕ/ʕɢ ʕtsdʑɥʕtsteɕdʒlz ʘʕlsɕɘdzfiɉsᴵ ɸ fiɉɸ ʊ ʕtetsɘ' ʙlzɢʘ?ɥ'ɘ ɼ $_1$ ɢtedzʈʃɕ ʉ.l ʈ lsɕʈʃlz .l l ɼ ʟtetsfiɉsʘdʑʘ ʈʃtetslsɕ ʈʃtsɥʘsʕtsɘtsɢts ʈʃʝ tɕ'tsʜlz ʝ ʕ fiɉʃ ʝ teɕʃdʒʝ dʑslz dʑʘ20,8% (tɕ<0,01), lz lsɘʘteɕʃdz ɼ $_2$ ɢtedzʈʃɕ ʉ.l ɯlsɕʈʃlz .l l ɼ ï dʑʘ

13,4% (tɞ<0,05), ȴ lsɘʘtɐɋdȥ ɼ 4 ɢtɞȴʧɋ ʿʟ ʉ lsɋʧtsdʒ ɺ ɩ ɼ ɪ dȥʘ13,6% (tɞ<0,001). ɺ ʝ dȥɋɥɋdȥɋ ʘʢlsɋɘdȥsfiɲsʿ ɸ fiɸ ʊ ʢtɐtsɘʿ ʙȴɢʘʡɥʿɘ ɼ 3 ɢtɞȴʧɋ ʿʟ ʉɩ lsɋʧtsdʒ ɺ ɩ ɼ dȥʘ ʧtsɥʘlsʢȴ ʿ ɘ ʢʿdȥɥʿ ʜtsfiɋdȥʜȴ dȥ ɘɋtsʜɋdȥɋ ʟʘdʒ ʏʿ fiɲsʘlsɋfiɲsɋɥdȥsʾ ɘʿtɐtsɢʿʜdȥsfiɲsʿ.

ʎɋʬtɐtsɘɋʔ dʒʘlsʝ tɞʿʘȴ dȥʘɘʝʜʝ dȥsʾ lsʘʙdȥɋɥʿ ɘʢʘʟȴʿ dȥʘ lsʝ, ʱ ts ʘʢlsɋɘdȥfiɲsɪ ɸ dȥɸ ʊ ʢtɐtsɘʿ ʙȴdȥʘ ȴ ʙȴɢʘʡɥʿɘ ɼ 1 ɢtɞȴʧɋ ʉɺʈ lsɋʧȴ ɺ ɩ ɼ dȥʘ ʧtsɥʘlsʢȴ ʜtsfiɋdȥʜȴ ʙȴdȥʘ dȥʘ 12,2% (p<0,05) ɘɋʱ tsʶ , ʧtsɞʿɘdȥʬdȥs ʟ ʙȴɢʘʡɥʷdʒɋ ɼ 3 ɢtɞȴʧɋ ʿʟ ʉɩ lsɋʧtsdʒ ɺ ɩ ɼ . ʆ ʜdȥʘʢ, dȥʘʡʙʿdȥ ʱ tsʶ ʾʾ ɘʝ dȥɋɥɋdȥʘ ɘɋʷɘdȥʬdȥʘfiɲ ȴ ʢtɐtsɘʿ ʙȴɢʘʡɥʿɘ ɼ 2 ɢtɞȴʧɋ ʉɺ ɯlsɋʧȴ ɺ ɩ ɼ ʿ fiɲsʘdȥsɘɋdȥʘ 0,452Ñ0,009 dʒdʒsdȥ /ɢtsʜ/dȥ, ʧtɐɋ ɥɪ tsdʒȴ, ʧtsɞʿɘdȥʬdȥs ʟ lsɘʘtɐɋdȥʘdʒɋ ɼ 1, ɼ 3 lsʘ ɼ 4 ɢtɞȴʧ ɘʿʜʧtsɘʿʜdȥs dȥʘ7,4%, 22,2% lsʘ13,0 % ʧtɐɋ tɞ<0,01 ɪ 0,001.

ʊʘʙdȥɋɥʷ 3.8

ɸ ʢlsɋɘdȥfiɲsɪ lstɞʘdȥfiʘdʒʿdȥʘʟ ʢtɐtsɘʿ ʙȴɢʘʡɥʿɘ tɞʿʟdȥɋ lsɋʧʿɘ ɺ ɩ ɼ ʟʘʟɢtsʜtsɘȴɘʘdȥʬ ʢtstɐdʒsɘtsʾ ʜtsʙʘɘʢɋ ʆ ʿʢtɐtsdȥʧtsɘʿls, dʒdʒsdȥ /ɢtsʜ/dȥ(MÑm, n=10)

ɟ tsʢʘʟdȥɋʢɋ	ʊɋʧɋ ɺ ɩ ɼ	ɟ ʝ tɞʿtsʜ ʜtsfiɋdȥʜȴ		
		ʧtsɥʘlstsʢ	ʢʿdȥɥɪ	p_1 <
ɸ fiɸ ʊ	ɼ 1	0,822 Ñ0,024	0,993Ñ0,046	0,01
	ɼ 2	0,882 Ñ0,033	0,997 Ñ0,027	0,05
	ɼ 3	0,722 Ñ0,027	0,733 Ñ0,036	ɪ
	ɼ 4	0,802 Ñ0,010	0,911 Ñ0,018	0,001
ɸ dȥɸ ʊ	ɼ 1	0,421 Ñ0,008	0,470 Ñ0,009	0,001
	ɼ 2	0,452 Ñ0,009	0,490 Ñ0,008	0,01
	ɼ 3	0,370 Ñ0,013	0,377 Ñ0,012	-
	ɼ 4	0,400 Ñ0,015	0,410 Ñ0,014	-

ɩ ʘ lsdȥ ʟɢtsʜtsɘȴɘʘdȥʬ ʢtstɐdʒsɘtsʾ ʜtsʙʘɘʢɋ ʆ ʿʢtɐtsdȥʧtsɘʿls ʙȴɢʘʡɥʷdʒ ɘtsdȥɋdȥfiɲ ʢtsʾ dʒʘʷfiɋdȥsʾ ʧtstɐtsʜɋ ʘʢlsɋɘdȥfiɲsɪ ɸ dȥɸ ʊ ȴ fiɋʧtɐtsɘʘlsɥʿ ʢtɐtsɘʿ ɘʿtɐtsɢʿʜdȥs ʟtɐtsfiɲsʘdȥʘ dȥɋʱ ʝ ȴ ɼ 1 ɢtɞȴʧɋ ʉɺʈ lsɋʧȴ ɺ ɩ ɼ ʿ ɼ 2 ɢtɞȴʧɋ ʉɺ ɯlsɋʧȴ ɺ ɩ ɼ . ɿ tsʢtɐʝ dʒʘ ʘʢlsɋɘdȥfiɲsɪ ʬʝ tɐdʒʝ dȥlsȴ ʢtɐtsɘʿ ȴ ʙȴɢʘʡɥʿɘ ɼ 1 ɢtɞȴʧɋ ʉɺʈ lsɋʧȴ ɺ ɩ ɼ ɘ ʢʿdȥɥʿ ʜtsfiɋdȥʜȴ ʙȴdȥʘ ɘɋʱ tsʶ dȥʘ11,6% (p<0,001), ʘȴ ɼ 2 ɢtɞȴʧɋ ʉɺ ɯlsɋʧȴ ɺ ɩ ɼ ɪ dȥʘ8,4% (p<0,01), dȥʏ dȥʘ ʧtsɥʘlsʢȴ ʜtsfiɋdȥʜȴ.

ʃ lsɣ j, tslsteɑʃdʒⓄdz tej ʟkdz lsⓄsɑʃ ⓄƐlsɑʃɘdʒsfŋjs' lsteⓄdzfŋⓄdʒ'dⓄʟ ʕtetsɘ' ʙkɢⓄʔɥ'ɘ ɘtsdʒɑʃdʒfŋ ʕts' dʒⓄʷ fŋdʒs' ʧtstetsʜɑʃ dⓄ lsdz lsteɑʃɘⓄdʒsɢts ʟɢtsʜtsɘkɘⓄdʒʷ ʕtsteʤsɘts' ʃ 'ʕtetsdzʧtsɘ'ls k ʕ'dz ʕtsfŋjs' 5,0 dʒɢ/ʕɢ ʕtsdʒɥʕtsteʤ'ɘ teⓄɥ'tsdʒk, dⓄ dⓄʰ k ʜkdʒʕk, dʒsɣkls' ɘʕⓄʟkɘⓄsɑʃ dⓄ ʧtsfŋɑʃdʒ dʒdzʷ ʧtetsɥj fŋjɘ ʧj tej Ⓞdʒ'dʒkɘⓄdʒʷ lsⓄ 'dʒsj dʒfŋʃʷ 'ʕⓄɥ'ʶ ʙ'dʒsʕfŋɑʃdʒsj ʟkʶ ɥts' ʷ kdʒʕɥ'' ʧj ɥ'dʒʕɑʃ.

ɸ dⓄdzʟkʶ ɥɑʃ tslsteɑʃdʒⓄdz tej ʟkdz lsⓄsɑʃ ɘdʒ'fŋjsk ɼ l ʂ (lsⓄʙdʒɑʃɥʷ 3.9) k ʕtetsɘ' ʙkɢⓄʔɥ'ɘ dⓄ ʧtsɥⓄsʕk ' ɘ ʕ'dʒɥ' ʜtsfŋdzʜk, dⓄdʒɑʃ dʒ ɘfŋjsⓄdʒsɘdʒ dʒs ɘ'tetsɢ'ʜdʒɑʃ dʒ'ɣ ɢtedzʧtsɘɑʃ ɘ'ʜdʒ'dʒdʒsfŋjsj ʔ k ɘj dʒɑʃɥɑʃdⓄ ɥ' tsɢts ʧtsʕⓄʟdʒɑʃʕⓄk lsɘⓄteɑʃdʒʜtsfŋdzʜdʒɑʃ ɢtedzʧ. l Ⓞ lsdz lsteɑʃɘⓄdʒsɢts ʟɢtsʜtsɘkɘⓄdʒʷ ʕtsteʤsɘts' ʜtsʙⓄɘʕɑʃ dⓄdʒɑʃ ɘɑʃʷɘdʒ dʒs lsj dʒʜj dʒɥ'ʶ ʜts ʟdʒɑʃɣ j dʒdzʷ ɘdʒ'fŋjsk ɼ l ʂ k ʕtetsɘ' lsɘⓄteɑʃdʒʜtsfŋdzʜdʒɑʃ ɢtedzʧ.

ʂ tsdʒɥj dʒsteⓄɥ'ʷ ʈ l ʂ k ʕtetsɘ' ʙkɢⓄʔɥ'ɘ dⓄ ʧtsɥⓄsʕk j ʕfŋʧj teɑʃdʒj dʒsk ʙkdⓄ dⓄʔɘɑʃʰ tsʶ k lsɘⓄteɑʃdʒ ɼ $_2$ ɢtedzʧɑʃ 'ʟ ʉ I ɯlsɑʃʧtsdʒ I l ɼ ' fŋjsⓄdʒsɘɑʃdⓄ 134,9Ñ1,54 dʒɢ/100dʒdz ɯɥɘj dʒɑʃɥɑʃdⓄ ʙkdⓄ ʙ'dz ʰ tsʶ ʧtste'ɘdzʷdʒs ʟ lsɘⓄteɑʃdⓄdʒɑʃ ɼ $_1$, ɼ $_3$ ' ɼ $_4$ ɢtedzʧ ɘ'ʜʧtsɘ'ʜdʒs dⓄ4,8 (p<0,01) 9,3 (p<0,001) lsⓄ14,2 % (p<0,001).

ɸ ʙfŋjsdz lsdʒ ʟdⓄɥj dʒdzʷ ɥ' tsɢts ʧtsʕⓄʟdʒɑʃʕⓄ k ʕtetsɘ' ʙkɢⓄʔɥ'ɘ ɼ $_1$ ɢtedzʧɑʃ 'ʟ ʉ I ʈ lsɑʃʧtsdʒ I l ɼ ʙkdʒs dʒɑʃɣ ɥɑʃdʒ ʧtste'ɘdzʷdʒs ʟ ɼ $_2$ ɢtedzʧtsʶ ' fŋjsⓄdʒsɘɑʃdʒs 128,7Ñ1,32 dʒɢ/100 dʒdz, Ⓞdʒ ʙkdʒs ɘ'tetsɢ'ʜdʒs ʙ'dz ʰ ɑʃdʒ ɘ'ʜʧtsɘ'ʜdʒs dⓄ 4,3 (p<0,01) lsⓄ 9,0 % (p<0,001), dzɣ k lsɘⓄteɑʃdʒ ɼ $_3$ lsⓄ ɼ $_4$ ɢtedzʧ. ʂ tsdʒɥj dʒsteⓄɥ'ʷ ʈ l ʂ kʕtetsɘ' lsɘⓄteɑʃdʒ ɼ $_3$ ɢtedzʧɑʃ 'ʟ ʉ l lsɑʃʧtsdʒ I l ɼ ʙkdⓄ dⓄ 4,5 % (p<0,01) ɘɑʃʰ tsʶ dʒɑʃʰ j ʧtste'ɘdzʷdʒs ʟ ɼ $_4$ ɢtedzʧtsʶ 'ʟ ʉ lsɑʃʧtsdʒ I l ɼ.

I ʕ'dʒɥ' j ʕfŋʧj teɑʃdʒj dʒsk ʧ'fŋdzʷ ʟɢtsʜtsɘkɘⓄdʒʷ ʕtsteʤsɘts' ʜtsʙⓄɘʕɑʃ k fŋʕdⓄʜ' teⓄɥ'tsdʒk k ʕ'dz ʕtsfŋjs' 5,0 dʒɢ/ʕɢ ʕtsdʒʕtsteʤ'ɘ, dⓄdʒɑʃ ɘ'ʜʟdⓄɥj dʒs lsj dʒʜj dʒɥ'ʶ ʜts ʟdʒɑʃɣ j dʒdzʷ ɘdʒ'fŋjsk ʈ l ʂ k ʕtetsɘ' ʙkɢⓄʔɥ'ɘ kfŋj ʜtsfŋdzʜdʒɑʃ ɢtedzʧ, ʧtste'ɘdzʷdʒs ʟ ʧtsɥⓄsʕtsdʒ

ʇ tste'ɘdz ʶ ɥɑʃ dʒ'ɣ fŋjsʙtsʶ ʕtsdʒɥj dʒsteⓄɥ'ʶ ʈ l ʂ ɘ ʕtetsɘ' ʙkɢⓄʔɥ'ɘ ʟ te'ʟdʒɑʃdʒɑʃ lsɑʃʧⓄdʒɑʃ I l ɼ ɘ ʕ'dʒɥ' j ʕfŋʧj teɑʃdʒj dʒsk, dⓄdʒɑʃ ɘfŋjsⓄdʒsɘdʒ dʒs '' dⓄʔɘɑʃʰ j ʟdⓄɥj dʒdzʷ k ɼ $_2$ ɢtedzʧ' (132,6Ñ1,45 dʒɢ/100 dʒdz), ʰ ts ʙkdʒs ɘ'tetsɢ'ʜdʒs ʙ'dz ʰ ɑʃdʒ ʧtste'ɘdzʷdʒs ʟ ɼ $_1$, ɼ $_3$ lsⓄ ɼ $_4$ ɢtedzʧⓄdʒɑʃ, ɘ'ʜʧtsɘ'ʜdʒs, dⓄ5,1%(p<0,01), 9,0(p<0,001) lsⓄ 15,2 %(p<0,001). ʉ j tej ʜdz ʟdⓄɥj dʒdzʷ ʧtsʕⓄʟdʒɑʃʕⓄ k ʕtetsɘ' lsɘⓄteɑʃdʒ ɼ $_1$ ɢtedzʧɑʃ ʧj tej ɘɑʃʰ kɘⓄdʒs ʔtsɢts ɘj dʒɑʃɥɑʃdʒk dⓄ3,7%(p_1<0,05) ' 9,6% (p_1<0,001), ʧtste'ɘdzʷdʒs ʟ ʀ 3 ʞʘ ʀ 4 ʛʠʣʐʧʘʓʗ ʚʻʜʧʦʚʻʜʣʦ. ʂ ʦʣʛʝ ʣʞʦʠʘʯʻʷ ʈ ʅ ʂ ʐ ʕʠʦʚʻ ʙʐʛʘʀʯʻʚ ʀ 3 ʛʠʣʐʧʗ ʙʐʣʘʙʻʣʐʰ ʦʶ ʣʘ5,7 % ($p<0,001$) ʧʦʠʻʚʣʑʷʣʦ ʟ ʀ 4 ʛʠʣʐʧʦʶ .

ʊʘʙʣʗʯʷ 3.9

ʂ ʦʣʛʝ ʣʞʦʠʘʯʻʷ ʣʐʕʣʝ ʼʣʦʚʗʨ ʕʗʡʣʞʞ ʐ ʕʠʦʚʻ ʙʐʛʘʀʯʻʚ ʠʻʟʣʗʨ ʞʗʧʻʚ ʁ ʅ ʀ ʟʘ ʟʛʦʜʦʚʐʚʘʣʑʷ ʕʦʠʣʓʦʚʦʼ ʜʦʙʘʕʗ ʃ ʻʕʠʦʣʐʧʦʚʻʞ, (MÑm, n=10)

ʇ ʦʕʘʟʣʗʕʗ	ʊʗʧʗ ʁʅ ʀ	ʇ ʝʠʻʦʜ ʜʦʡʝʐʜʐ		ʠʠ
		ʧʦʯʘʞʦʕ	ʕʻʣʝʯʴ	
1	2	3	4	5
ʀ ʅ ʂ ,	ʀ 1	19,5Ñ0,65	18,3Ñ0,51	
ʣʓ/100ʣʓʐ	ʀ 2	19,9Ñ0,71	18,4Ñ0,51	
	ʀ 3	18,8Ñ0,60	18,1Ñ0,53	
	ʀ 4	18,2Ñ0,54	17,3Ñ0,45	
ʈ ʅ ʂ ,	ʀ 1	128,7Ñ1,32	126,2Ñ1,26	
ʣʓ/100 ʣʓʐ	ʀ 2	134,9Ñ1,54	132,6Ñ1,45	
		$p_1<0,01;p_2<0,001$	$p_1<0,01;p_2<0,001$	
	ʀ 3	123,4Ñ1,28	121,7Ñ1,25	
		$p_1<0,01$	$p_1<0,05$	
	ʀ 4	118,1Ñ1,15	115,1Ñ1,12	
		$p_1<0,001;p_2<0,01$ $p_3<0,001$	$p_1<0,001;p_2<0,001$ $p_3<0,001$	
ʈ ʅ ʂ :ʀ ʅ ʂ	ʀ 1	6,60Ñ0,06	6,90Ñ0,07	$p<0,001$
	ʀ 2	6,78Ñ0,08	7,21Ñ0,09	$p<0,01$
		$p_2<0,05$	$p_1<0,05;p_2<0,001$	
	ʀ 3	6,56Ñ0,06	6,72Ñ0,07	
	ʀ 4	6,49Ñ0,05	6,65Ñ0,06	
		$p_3<0,01$	$p_1<0,05;p_3<0,001$	

ʉʧʻʚʚʻʜʣʦʰ ʝʣʐʷ ʈ ʅ ʂ /ʀ ʅ ʂ ʐ ʕʠʦʚʻ ʞʚʘʠʗʣʐʣʘ ʧʦʯʘʞʕʐ ʝ ʕʡʧʝ ʠʗʣʝʣʞʐ ʙʐʣʦ ʣʘʀʚʗʰ ʗʣʓ ʐ ʀ 2 ʛʠʣʐʧʻ (6,78Ñ0,08), ʞʘ ʙʻʣʐʰ ʗʣʓ ʚʻʜʧʦʚʻʜʣʦ ʣʘ 3,4% (p<0,05) ʻ 4,5 % (p<0,01), ʧʦʠʻʚʣʑʷʣʦ ʟ ʀ 3 ʞʘ ʀ 4 ʛʠʣʐʧʘʓʗ.

ɹ ʢ'ʤɻ' ȷʢfɳʧȷtɐʃʤʝʤʂʐ, ʤʘ ʂʤ ʟɢʦʜʦɘʐɘʘʤʤ ʢʦtɐʤʒʦɘʦ' ʜʦʙʘʢʃ ʄ 'ʢtɐʦʤʧʦɘ'ʂ ʧʦʦ'ɘʤʤʦ ʟ ʧʦʮʘʂʢʦʒ ʤʘʤʒʃ ɘ'ʜʟʤʘʮʝʤʦ ɘ'tɐʦɢ'ʜʤʝ ʧ'ʜɘʃ ȷʤʤ ɘȷʤʃʮʃʤʃ ʮ ʦɢʦ ʧʦʢʘʟʤʃʢʘ ʐ ʂɘʘtɐʃʤ fɳʃʤ ʤʃ ɘʦ'ɘʤʦɘʘɻ ȷʤʃ ʂʃʧ'ɘ ɹ ʅ ɼ; ʤʘ4,5 % ($p<0,001$) ï ʐ ʂɘʘtɐʃʤ ɼ$_1$ ɢtɐʐʧʃ ' ʤʘ6,3 % ($p<0,01$) ï ʐ ʂɘʘtɐʃʤ ɼ$_2$ ɢtɐʐʧʃ. ʊ ʙʐɢʘʔʮ'ɘ ɼ$_3$ ʂʘ ɼ$_4$ ɢtɐʐʧ fɳʧʦfɳʂȷ tɐ'ɢʘʤʘfɳ ʂȷʤʜȷʤɻ' ʜʦ ʧ'ʜɘʃ ȷʤʤ fɳʧ'ɘɘ'ʜʤʦ ȷʤʤ ʈʅʂ/ɼʅʂ.

ɟ ʦtɐ'ɘʤ ʮʃ fɳʧ'ɘɘ'ʜʤʦ ȷʤʤ ʈʅʂ/ɼʅʂ ʤʒ'ʞ ʜʦfɳʤʜʤʃʤʒʃ ɢtɐʐʧʘʤʒʃ ɘ ʢ'ʤɻ' ȷʢfɳʧȷtɐʃʤʝʤʂʐ ʤʘʤʒʃ ɘ'ʜʟʤʘʮʝʤʦ ʤʘʔɘʃ ȷ ʔʦɢʦ ʟʤʘʮʝʤʤ ʐ ʂɘʘtɐʃʤ ɼ$_2$ ɢtɐʐʧʃ, ʢȷ fɳʂʘʤʦɘʃʤʦ 7,21Ñ0,09. ɟ ʦtɐ'ɘʤʤʦ ʟ ʙʐɢʘʔʮʤʒʃ ɼ$_1$, ɼ$_3$ ʂʘ ɼ$_4$ ɢtɐʐʧ ɘȷʤʃʮʃʤʘ ʢʦȷ 'ʮ''ʤʂʐ ʙʐʤʘ ʙ'ʤ ʦ ʤʘ 4,5%($p<0,05$), 7,3%($p<0,001$) ʂʘ 8,4% ($p<0,001$) ɘ'ʜʧʦɘ'ʜʤʦ. ʅ ʤʘʮʝʤʤ ʧʦʢʘʟʤʃʢʘ ʐ ʙʐɢʘʔʮ'ɘ ɼ$_1$ ɢtɐʐʧʃ ʙʐʤʦ ʙ'ʤ ʃʤʒʤʘ3,8 % $p<0,05$, ʤʃ ȷ ʧʦtɐ'ɘʤʤʦ ʟ ɼ$_4$ ɢtɐʐʧʦ.

ʅ ʘȷʜȷʤ ʐ ʂʘʙʤʃʮ' 3.10 tɐȷʟʐʤ ʂʘʂʃ ɘʤʒfɳʂʐ fɳȷʮʦɘʃʤʃ ʐ ʢtɐʦɘ' ʙʐɢʘʔʮ'ɘ ɘʦʤʃʤfɳ ʢʦ' ʤʒ fɳʤʦ' ʧʦtɐʦʜʃ ɘʢʘʟʐ ʂ ʤʘʂȷ, ʦ ʤʘʔɘʃ ȷ ʟʤʘʮʝʤʤ ʔʦɢʦ ʙʐʤʦ ʐ ʂɘʘtɐʃʤ ɹ ʉʂʃʧʐ ɹ ʅ ɼ (ɼ$_2$) ' fɳʂʘʤʦɘʃʤʦ 3,98Ñ0,05 ʤʒʤʒʦʤ /ʤ, ʮȷ ʙʐʤʦ ʙ'ʤ ȷ ʤʘ 5,9% ($p<0,01$), 11,2%($p<0,001$) ʂʘ 20,2% ($p_3<0,001$), ʧʦtɐ'ɘʤʤʦ ʟ ʂɘʘtɐʃʤʘʤʒʃ ɼ$_1$, ɼ$_3$ ʂʘ ɼ$_4$ ɢtɐʐʧʘʤʒʃ ɘ'ʜʧʦɘ'ʜʤʦ.

ɼ ȷ ʦ ʤʃʞ ʮʘ ɘȷʤʃʮʃʤʘ ʮ ʦɢʦ ʧʦʢʘʟʤʃʢʘ ʙʐʤʘ ʐ ʢtɐʦɘ' ʙʐɢʘʔʮ'ɘ ɼ$_1$ ɢtɐʐʧʃ, ʢʘ fɳʂʘʤʦɘʃʤʘ ʤʘ ʧʦʮʘʂʢʐ ʜʦfɳʤʜʐ 3,76Ñ0,04 ʤʒʤʒʦʤ /ʤ ʄ ʜʤʘʢ, ʧʦtɐ'ɘʤ ʮʃ ʟ ɘȷʤʃʮʃʤʦ ɘʤʒfɳʂʐ fɳȷʮʦɘʃʤʃ ʐ ʢtɐʦɘ' ʂɘʘtɐʃʤ ɼ$_3$ ʂʘ ɼ$_4$ ɢtɐʐʧ, ɘʦʤʘʙʐʤʘ ʙ'ʤ ʦ ɘ'ʜʧʦɘ'ʜʤʦ ʤʘ5,0 ($p<0,01$) ' 13,6 % ($p<0,001$).

ʊ ʂɘʘtɐʃʤ ʉʅ ʂʃʧʐ ɹ ʅ ɼ (ɼ$_3$ ɢtɐʐʧʘ) ɘʤʒfɳʂ fɳȷʮʦɘʃʤʃ ʐ ʢtɐʦɘ' ʙʐɘ ʙ'ʤ ʃʤʒʤʘ8,2 % ($p_2<0,001$), ʤʞ ʐ ʂɘʘtɐʃʤ ɼ$_4$ ɢtɐʐʧʃ(ʉ ʂʃʧʐ ɹ ʅ ɼ).

ɹ ʢ'ʤɻ' ȷʢfɳʧȷtɐʃʤʝʤʂʐ, ʧ'fɳʤ ʂtɐʃɘʘʤʦɢʦ ʟɢʦʜʦɘʐɘʘʤʤ ʢʦtɐʤʒʦɘʦ' ʜʦʙʘʢʃ ʐ fɳʢʤʘʜ' tɐʘʮ'ʦʤʐ, ʤʘʤʒʃ ɘ'ʜʟʤʘʮʝʤʦ ʟʤʃʞȷʤʤ ɘʤʒfɳʂʐ fɳȷʮʦɘʃʤʃ ʤʘ 4,0% ($p<0,01$), 4,7% ($p<0,01$) ʂʘ 3,5 % ($p<0,05$), ɘ'ʜʧʦɘ'ʜʤʦ ʐ ʙʐɢʘʔʮ'ɘ ɼ$_1$, ɼ$_2$, ɼ$_3$ ɢtɐʐʧ, ʧʦtɐ'ɘʤʤʦ ʟ ʧʦʮʘʂʢʦʒ ʜʦfɳʤʜʐ.

ʗ ʢ ɘʃɘʃʤʦfɳ, ɘ ʢ'ʤɻ' ʜʦfɳʤʜʐ ʤʘʔɘʃ ʃʔ ɘʤʒfɳʂ fɳȷʮʦɘʃʤʃ ʐ ʢtɐʦɘ' ʙʐɘ ʐ ʙʐɢʘʔʮ'ɘ ɼ$_2$ ɢtɐʐʧʃ ' fɳʂʘʤʦɘʃɘ 3,84Ñ0,04 ʤʒʤʒʦʤ /ʤ. ɟ ʦtɐ'ɘʤʤʦ ʟ ʂɘʘtɐʃʤʘʤʒʃ ɼ$_1$, ɼ$_3$ ʂʘ ɼ$_4$ ɢtɐʐʧ, ʔʦɢʦ ɘȷʤʃʮʃʤʘ ʟtɐʦfɳʂʘʤʘ ʤʘ6,4%, 12,6% ' 18,5 % ʧtɐʃ $p<0,001$.

ʊʘʙʤʗʯʷ 3.10

ʇ ʤʒʿfɦʝs fɱ ʮʦɘʗʤʗ ɮ ʢʨʦɘʿ ʙɮɢʘʡʯʿɘ ʦɕʿʟʤʗ ʪʗʧʿɘ ɘʗʱ ʦʾ ʇ ʅ ɼ ʟʘʟɢʦʜʦɘɮɘʘʤʤʷ

ʢʦʨʤʒʦɘʦʾ ʜʦʙʘɘʢʗ ʄ ʿʢʨʦʤʧʦɘʿʪ, ʤʒʤʒʦʤ /ʤ(MÑm, n=10)

ʇ ʦʢʘʟʤʗʢʗ	ʊʗʧʗ ʇ ʅ ɼ	ʇ ʝ ʦɕʿʦʜ ʜʦfɲʤʜɮ		ʦɕ
		ʧʦʯʘʪʦʢ	ʢʿʤʝʯ	
ʉʝ ʮʦɘʗʤʘ	ɼ 1	3,76Ñ0,04	3,61Ñ0,03	$p<0,01$
	ɼ 2	3,98Ñ0,05	3,84Ñ0,04	$p<0,05$
		$p_1<0,01;p_2<0,001$	$p_1<0,001;p_2<0,001$	
	ɼ 3	3,58Ñ0,04	3,41Ñ0,04	$p<0,01$
		$p_1<0,01$	$p_1<0,001$	
	ɼ 4	3,31Ñ0,04	3,24Ñ0,03	
		$p_1<0,001;p_2<0,001$ $p_3<0,001$	$p_1<0,001;p_2<0,001$ $p_3<0,001$	

ʅ ʘʤʒʗ ʪʘʢʦʞ ɘʿʜʤʒʿʮʝʤʦ, ʟʤʘʮʤʦ ɘʗʱ ɮ ʢʦʤʝʤʦɕʘʯʿʶ fɱ ʮʦɘʤʗ ɮ ʢʨʦɘʿ ʪɘʘɕʗʤɼ 1 ɢɕʤʧʗ, ʷʢʘ ʙɮʤʘ ʙʿʤʱ ʦʶ ʤʘ 5,9% ʿ 11,4% ʧɕʗ p<0,001, ʤʞ ɮ ʪɘʘɕʗʤɼ 3 ʪʘ ɼ 4 ɢɕʤʧ. ʊ ʙɮɢʘʡʯʿɘ ɼ 3 ɢɕʤʧʗ ʿʟ ʉʅ ʪʗʧʦʤʒ ʇ ʅ ɼ ʦɕʿɘʝʤ fɱ ʮʦɘʗʤʗ ɮ ʢʨʦɘʿ ʙɮɘ ɘʿʨʦɢʿʜʤʦ ɘʗʱ ʗʤʒʤʘ5,2 % (p<0,001), ʤʞ ɮ ʪɘʘɕʗʤɼ 4 ɢɕʤʧʗ ʿʟ ʉ ʪʗʧʦʤʒ ʇ ʅ ɼ. ʇ ʿʜʪɘʝʦʜʞ ʝʤʤʷ ʤʒ ʤʘʱ ʦɢʦ ʧɕʗʧɮʱ ʝʤʤʷ ʿ ɘʿʨʦɢʿʜʤʝ ʟʨʦfɦʘʤʤʷ ʢʦʤʝʤʦɕʘʯʿʾ ʈ ʅ ʂ ʪʘ fɱʧʿɘɘʿʜʤʦʱ ʝʤʤʷ ʈ ʅ ʂ/ɼ ʅ ʂ ɘ fɱʧɕʦɘʘʪʯʿ ʢʨʦɘʿ ʙɮɢʘʡʯʿɘ ʯʿʿʾ ɢɕʤʧʗ.

ʄ ʪʞʝ, ʦɕʿɘʝʤ ʤʝʪʘʙʦʤʮʤʦʾ ʝʤʝʦɢʿʾ ɮ ʙɮɢʘʡʯʿɘ ɘʦʤʗʤfɱʢʦʾ ʪʘ ʧʦʤfɱʢʦʾ ʤʒôʷfɱʤʗ ʧʦʦɕʜ ʤʘ ʪʤ ʪʨʗɘʘʤʦɢʦ ʟɢʦʜʦɘɮɘʘʤʤʷ ʢʦʨʤʒʦɘʦʾ ʜʦʙʘɘʢʗ çʄ ʿʢʨʦʤʧʦɘʿʪè ʤʒʘɘ ʤʘʡɘʗʱ ʿ ʟʤʘʮʝ ʤʤʷ ɮ ʪɘʘɕʗʤɼ 2 ɢɕʤʧʗ ʉʇ ɯʪʗʧɮ ʇ ʅ ɼ, ʷʢʝ, ʦʦɕɘʤʷ ʤʦ ʟ ʙɮɢʘʡʯʷʤʒʗ ʉʇ ʈ,ʉʅ, ʉ ʪʗʧʿɘ ʇ ʅ ɼ ʙɮʤʦ ɘʿʜʧʦɘʿʜʤʦ ʙʿʤʱ ʗʤʒʤʘ13,2 - 15,2%, 43,3 ï 27,7% ʿ 34,4 ï 33,9% ʧɕʗ p<0,001.

Окремі показники вуглеводного обміну у крові бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. ʂ ʦʤʝʤʦɕʘʯʿʷ ɢʤ ʢʦʟʗ ɮ ʢʨʦɘʿ ʙɮɢʘʡʯʿɘ ɘʦʤʗʤfɱʢʦʾ ʤʒôʷfɱʤʦʾ ʧʦʦʜʗ ʤʘ ʧʦʯʘʪʢɮ ʜʦfɲʤʜɮ ʤʘʤʘ ɘʿʨʦɢʿʜʤʒ [illegible] (3.11). [illegible] Γ_2 [illegible] Γ_1, Γ_3 [illegible] Γ_4 [illegible] 3,2% (p<0,05), 10,3% (p<0,001) [illegible] 14,3 % (p<0,001).

[illegible] (Γ_1 [illegible]) [illegible] 6,9% [illegible] 10,7 %, [illegible] (Γ_3 [illegible]) [illegible] (Γ_4 [illegible]) [illegible]. [illegible] (Γ_3 [illegible]) [illegible] 3,6 % (p<0,05) [illegible] (Γ_4 [illegible]).

[illegible] 5,0 [illegible] Γ_1 ï Γ_4 [illegible] 22,6%, 34,4%, 17,2% [illegible] 14,3% (p<0,001), [illegible]. [illegible] Γ_2 [illegible]. [illegible] Γ_1, Γ_3 [illegible] Γ_4 [illegible] 13,2%(p<0,001), 43,3%(p<0,001) [illegible] 34,4% (p<0,001). [illegible] Γ_1 [illegible] 11,8% [illegible] 18,8 % [illegible] p<0,001, [illegible] Γ_3 [illegible] Γ_4 [illegible]. [illegible] (Γ_3 [illegible]) [illegible] 6,3 % (p<0,001) [illegible] (Γ_4 [illegible]).

[illegible] 0,23Ñ0,02 [illegible] Γ_4 [illegible] 0,27Ñ0,03 [illegible] Γ_2 [illegible].

[illegible] 44,4% [illegible] 34,6 %, [illegible]

[illegible] (г 2 [illegible] г 1 [illegible]), [illegible]. [illegible] 39,3 % (p<0,05) [illegible] г 4 [illegible].

[illegible] г 2 [illegible] 1,43Ñ0,03 [illegible] 8,3% (p<0,05) [illegible] 11,7 % (p<0,001) [illegible] г 3 [illegible] г 4 [illegible].

[illegible] (г 1 [illegible]), [illegible] г 3 [illegible] г 4 [illegible] 6,8% (p<0,05) [illegible] 10,2% (p<0,01).

[illegible] г 2, г 3 [illegible] г 4 [illegible] 7,6%, 9,1% [illegible] 7,0 % [illegible] г 2 [illegible] г 3 [illegible] г 4 [illegible] 9,9% (p<0,05) [illegible] 13,9% (p<0,01). [illegible] г 1 [illegible] 8,0% (p<0,05), [illegible] г 4 [illegible].

[illegible] г 2 [illegible] 5,30Ñ0,06, [illegible] г 3 [illegible] г 4 [illegible] 3,6% (p<0,05) [illegible] 4,8% (p<0,01).

[illegible] г 1 ï г 4 [illegible] 22,0 %, 14,0%, 24,5% [illegible] 12,2 %, [illegible] p<0,001 [illegible]

[illegible] ([illegible] 2 [illegible]), [illegible] 4,00±0,05, [illegible]

[illegible] 3.11

[illegible] (M±m, n=10)

[illegible]	[illegible]	[illegible]		[illegible]
		[illegible]	[illegible]	
1	2	3	4	5
[illegible]	[illegible] 1	3,1±0,03	3,8±0,04	$p<0,001$
	[illegible] 2	3,2±0,03	4,3±0,04	$p<0,001$
		$p_1<0,05$; $p_2<0,001$	$p_1<0,001$; $p_2<0,001$	
	[illegible] 3	2,9±0,03	3,4±0,04	$p<0,001$
		$p_1<0,001$	$p_1<0,001$	
	[illegible] 4	2,8±0,02	3,2±0,03	$p<0,001$
		$p_1<0,001$; $p_2<0,05$ $p_3<0,001$	$p_1<0,001$; $p_2<0,001$ $p_3<0,001$	
[illegible]	[illegible] 1	0,26±0,02	0,35±0,03	$p<0,05$
	[illegible] 2	0,27±0,03	0,39±0,04	$p<0,05$
	[illegible] 3	0,24±0,02	0,30±0,03	
	[illegible] 4	0,23±0,02	0,28±0,03	
			$p_3<0,05$	
[illegible]	[illegible] 1	1,41±0,03	1,48±0,03	
	[illegible] 2	1,43±0,03	1,56±0,04	$p<0,05$
		$p_2<0,05$	$p_2<0,05$	
	[illegible] 3	1,32±0,03	1,42±0,03	$p<0,05$
		$p_1<0,05$		
	[illegible] 4	1,28±0,03	1,37±0,03	$p<0,05$
		$p_1<0,01$; $p_3<0,001$	$p_1<0,05$; $p_3<0,01$	

[illegible] 3.11

1	2	3	4	5
[illegible]	Г 1	5,42Ñ0,07	4,23Ñ0,06	$p<0,001$
	Г 2	5,30Ñ0,06	4,00Ñ0,05	$p<0,001$
		$p_2<0,05$	$p_1<0,01; p_2<0,001$	
	Г 3	5,50Ñ0,07	4,73Ñ0,06	$p<0,001$
			$p_1<0,001$	
	Г 4	5,57Ñ0,07	4,89Ñ0,07	$p<0,001$
		$p_3<0,01$	$p_1<0,001; p_3<0,001$	

[illegible] Г 1, Г 3 [illegible] Г 4 [illegible] 5,4% ($p<0,01$), 15,4% ($p<0,001$) [illegible] 18,2 % ($p_3<0,001$). [illegible] Г 1 [illegible] 10,6% [illegible] 13,5% [illegible] $p<0,001$, [illegible] Г 3 [illegible] Г 4 [illegible].

[illegible] 3.12. [illegible]

[illegible] Г 4 [illegible] 8,5% ($p<0,05$), [illegible] Г 2 [illegible] Г 1 [illegible] Г 3 [illegible].

[illegible]

teΘɥ'tsdzk, Θ৳lsɋɘdzfŋs' ʧ'tdzɘΘsнʝ ɢ'нtatsɢʝ dzΘLɋ ʕtatsɘ' ʙkɢΘʔɥ'ɘ ɼ 1ï ɼ 4 ɢtdzkʧ Ldzɋɣ kɘΘdzΘfŋ нts dzɋɣ dz⁼ ɢteΘdzɋɥ' ʬ'L'tsdztsɢ'ɥdzts' dztstedʒɋ lsΘ ʧtatslsɋ ʧtsɥΘlsʕk нtsfŋdzнk '' ɘʝ dzɋɥɋdzΘʙkdzΘdʒʝ dz ts' ɘ'нʧtsɘ'нdzts dzΘ2,9%, 4,4%, 3,6% lsΘ7,2 %.

ȹ ʕlsɋɘdzfŋs' ʧ'tdzɘΘlsʕΘtaʙtsʕfŋɋdzΘLɋ ʕtatsɘ' dzΘ ʧtsɥΘlsʕk ʝʕfŋʧʝteɋdʒʝdzlsk ʙkdzΘ dzΘʔɘɋʰ ts' k ʙkɢΘʔɥ'ɘ ɼ 2 ɢtdzkʧɋ 'L ʉ.I ɯlsɋʧtsdʒ .I l ɼ , lsΘʙkdzΘʙ'dzʰ ts' dzΘ9,0% (p<0,05) ʧtste'ɘdzʷdzts L ɼ 4 ɢtdzkʧts' lsɘΘteɋdz, ʷʕ' dzΘdʒɣΘdzɋ нts ʉ lsɋʧk .I l ɼ .

l Θ lsdz lsteɋɘΘdztsɢts LɢtsнtsɘkɘΘdzdzʷ ʕtstedʒtsɘts' нtsʙΘɘʕɋ ʃ 'ʕtatsdzʧtsɘ'ls k fŋʕdzΘн' teΘɥ'tsdzk, dzΘdʒɋ ɘ'нLdzΘɥʝdzts Ltatsfŋs΄Θdzdzʷ dzΘ21,8% (p<0,001) Θ৳lsɋɘdztsfŋs' ʬʝtedʒʝdzlsk ʕtatsɘ' k ʙkɢΘʔɥ'ɘ ɼ 2 ɢtdzkʧɋ 'L ʉ.I ɯlsɋʧtsdʒ .I l ɼ , ʧtste'ɘdzʷdzts L ʧtsɥΘlsʕtsdʒнtsfŋdzнk.

ʈ ΘLtsdʒ L lsɋdʒ k ʙkɢΘʔɥ'ɘ ɼ 1, ɼ 3 lsΘ ɼ 4 ɢtdzkʧ ɘ ʕ'dzɥ' ʝʕfŋʧʝteɋdʒʝdzlsk, ɘ'нLdzΘɥʝdzts lsʝdzнʝdzɥ' нts ʧ'нɘɋʰ ʝdzdzʷ Θ৳lsɋɘdztsfŋs' ʬʝtedʒʝdzlsk ʕtatsɘ', ʷʕΘ ʧtatslsɋ ʧtsɥΘlsʕk нtsfŋdzнk ʧ'нɘɋʰ kɘΘdzΘfŋ ɘfŋtsɢts dzΘ 8,1%, 8,4% lsΘ 1,7 % ɘ'нʧtsɘ'нdzts.

ʇ teɋ ɥ'tsdʒk, ΘdzΘdzLk' ɥɋ ɘʝdzɋɥɋdzɋ Θ৳lsɋɘdztsfŋs' ʧ'tdzɘΘlsʕΘtaʙtsʕfŋɋdzΘLɋ ʕtatsɘ' ʙkɢΘʔɥ'ɘ L te'Ldzɋdʒɋ lsɋʧΘdʒɋ .I l ɼ ɘ ʕ'dzɥ' ʝʕfŋʧʝteɋdʒʝdzlsk, dʒtsɣʝdʒts ɘʕΘLΘlsɋ dzΘ '' dzΘʔɘɋʰ ʝ LdzΘɥʝdzdzʷ k lsɘΘteɋdz ɼ 2 ɢtdzkʧɋ 'L ʉ.I ɯlsɋʧtsdʒ .I l ɼ , ʷʕʝ fŋs΄Θdztsɘɋdzts 35,8Ñ1,07 dʒʕɢ/ɢL⁼ɘ.

ʎʷ ɘʝdzɋɥɋdzΘ ɘɋʷɘɋdzΘfŋ ʙ'dzʰ ts' , ʧtste'ɘdzʷdzts L lsɘΘteɋdzΘdʒɋ ɼ 3 lsΘ ɼ 4 ɢtdzkʧ, ɘ'нʧtsɘ'нdzts dzΘ11,5% (p<0,05) ' 21,8 % (p<0,001). ʃ нdzΘʕ, dzΘʔdzɋɣɥΘ ɘʝdzɋɥɋdzΘ Θ৳lsɋɘdztsfŋs' ʬʝtedʒʝdzlsk ʕtatsɘ' ɘɋʷɘdʒʝdzΘ k lsɘΘteɋdz ɼ 4 ɢtdzkʧɋ 'L ʉ lsɋʧtsdʒ .I l ɼ , ʷʕΘ fŋs΄Θdztsɘɋdzʘ 29,4Ñ0,83 dʒʕɢ/ɢL⁼ɘ. ʎʝ Θʙfŋʧsdz lsdʒ LdzΘɥʝdzdzʷ ʧtsʕΘLdzɋʕΘ, ʧtste'ɘdzʷdzts L ʔtsɢts ɘʝdzɋɥɋdzts' k lsɘΘteɋdz ɼ 1 lsΘ ɼ 3 ɢtdzkʧ ɘɋʷɘɋdztsfŋ dʒʝdz ɋdʒdzΘ12,0% (p<0,01) lsΘ8,4% (p<0,05) ɘ'нʧtsɘ'нdzts.

ʊʘʙʤʗɥʷ 3.12

ϕ Ϛlsʗəʤʄɱʝ ʬ ʝ tɕʤʒ ʤlsʿə Ϛtɕtsəʿ ʙʫɢʘʡɥʿə tɕʿʟʤʗ⁼ lsʗʧʿə Ɉ ɩ ɼ ʤʘlsʤ

ʟɢtsʜtsəʫəʘʤʤʷ Ϛtstɕʤʒtsətsʾ ʜtsʙʘəϚʗ ʆ ʿϚtɕtsʤʧtsəʿls, (MÑm, n=10)

ɟ tsϚʘʟʤʗϚʗ	ʇ tɕʤʧʗ lsəʘtɕʗʤ	ɟ ʝ tɕʿtsʜ ʜtsfɱʤʜʫ		tɕ
		ʧtsɥʘlstsϚ	Ϛʿʤʒɥ	
1	2	3	4	5
ʃ ʘϚlsʘls- ʜʝ ɢʿʜtɕtsɢʝ ʤʘʟʘ, ʤʒɢ/ɢɪ⁼ə	ɼ 1	3,32Ñ0,13	3,51Ñ0,14	
	ɼ 2	3,44Ñ0,14	3,67Ñ0,15	
	ɼ 3	3,21Ñ0,13	3,42Ñ0,11	
	ɼ 4	3,18Ñ0,13	3,32Ñ0,14	
ɟ ʿtɕʫəʘls- ʜʝ ɢʿʜtɕtsɢʝ ʤʘʟʘ, ʤʒɢ/ɢɪ⁼ə	ɼ 1	5,47Ñ0,18	5,31Ñ0,16	
	ɼ 2	5,28Ñ0,15	5,09Ñ0,12	
	ɼ 3	5,67Ñ0,21	5,42Ñ0,19	
	ɼ 4	5,73Ñ0,19	5,32Ñ0,14	
		p_3<0,05		
ɟ ʿtɕʫəʘls- ϚʘtɕʙtsϚfɱʤʘʟʘ, ʤʒɢ/ɢɪ⁼ə	ɼ 1	30,9Ñ0,95	33,4Ñ1,02	
	ɼ 2	31,5Ñ0,97	35,8Ñ1,07	*$p<0,001$*
			$p_2<0,05$	
	ɼ 3	29,6Ñ0,85	32,1Ñ0,93	
	ɼ 4	28,9Ñ0,72	29,4Ñ0,83	
		$p_3<0,05$	*$p_1<0,01;p_2<0,05$* *$p_3<0,001$*	
ɟ ɼ ʇ:ɟ ʂ	ɼ 1	0,177Ñ0,005	0,159Ñ0,004	*$p<0,05$*
	ɼ 2	0,168Ñ0,006	0,142Ñ0,004	*$p<0,01$*
		$p_2<0,05$	*$p_1<0,01;p_2<0,01$*	
	ɼ 3	0,192Ñ0,007	0,169Ñ0,006	*$p<0,05$*
	ɼ 4	0,198Ñ0,009	0,181Ñ0,006	
		$p_3<0,05$	*$p_1<0,01;p_3<0,001$*	

ɸ ɖʑʘɖʑʟʟʑʶ ʯɕ ʄʈʃʻəəʻʜɖʑsʰ ʝɖʑɖʑ ɟ ɼ ɭ :ɟ ʂ ɖʑʘ ʈʃʈsʯʘʂʕʑ ʝ ʕʄʈʃʝ ʈeɕɖʒʝ ɖʑsʑ ɖʑʘɖʒɕ əʻʜʟɖʑʘʯʝ ɖʑs ʡʈsɢʈs ɖʑʘʡ ɖʑɕɣ ʯʝ ʟɖʑʘʯʝ ɖʑɖʑʷ ʑ ʕʈeʈsəʻ ʙʑɢʘʡʯʻə ɼ $_2$ ɢʈeʑʈʃɕ ʻʟ ʉ ʇ ɯ ʂɕʈʃʈsɖʒ ʇ ʅ ɼ ʜʈs ʈɕʻəɖʑʷ 0,168Ñ0,006, ʷʕʝ, ʷʕ əɕʷəɕɖʑsʄɟ, ʙʑɖʑs ɖʒʝɖʑʰ ɕɖʒ ɖʑʘ 12,5% (p<0,05) ʂʘ 15,2 % (p<0,05), ʷʕ ʑ ʕʈeʈsəʻ ʂəʘʈeɕɖʑ ɼ $_3$ ʂʘ ɼ $_4$ ɢʈeʑʈʃ, əʻʜʈʃʈsəʻʜɖʑs.

ʇ ʕʻɖʑɣʻ ʂʈeɕəʘɖʑsɢʈs ʟɢʈsʜʈsəʑəʘɖʑɖʑʷ ʕʈsʈeɖʒsəʈsʾ ʜʈsʙʘʡʕɕ ʆ ʻʕʈeʈsɖʑʈʃʈsəʻʂ ʙʑɢʘʡʯʷɖʒ əʈsɖʑɕɖʑʄɟʕʈsʾ ɖʒʘ̂ʷʄɕɖʑsʾ ʈʃʈsʈeʈsʜɕ ɖʑʘ əʻʜɢʈsʜʻəɖʑ ʄʈʃʻəəʻʜɖʑsʰ ʝɖʑɖʑʷ ɟ ɼ ɭ :ɟ ʂ ʑ ʕʈeʈsəʻ ʟɖʑɕɣ ʑəʘɖʑsʄɟ ʑ ʂəʘʈeɕɖʑ ʄɕɕɖʑ ɖʑɕʭ ʂɕʈʃʻə ʇ ʅ ɼ (ɼ $_1$ ï ɼ $_3$ ɢʈeʑʈʃɕ), ʈʃʈsʈɕʻəɖʑʷɖʑs ʟ ʈʃʈsʯʘʂʕʈsɖʒ ʝ ʕʄʈʃʝ ʈeɕɖʒʝ ɖʑsʑ əʻʜʈʃʈsəʻʜɖʑs ɖʑʘ 10,2%, (p<0,05) 12,0% (p<0,05) ʂʘ 16,5% (p<0,01). ɟ ʈeɕ ʯᴵ ʈsɖʒʑ, ʟɖʑʘʯʝ ɖʑɖʑʷ ʯᴵ ʈsɢʈs ʈʃʈsʕʘʟɖʑɕʕʘʑ ʂəʘʈeɕɖʑ ɼ $_4$ ɢʈeʑʈʃɕ ʻʟ ʉ ʂɕʈʃʈsɖʒ ʇ ʅ ɼ ɖʑʘ ʈʃʈsʯʘʂʕʑ ʻ ə ʕʻɖʑɣʻ ʜʈsʄɕɖʑʜʑ ʕʈsɖʑɕəʘɖʑsʄɟ ə ɢʈeʘɖʑɕʯʷʭ əʻʈeʈsɢʻʜɖʑsʄɟʂʻ.

ɟ ʈsʈɕʻəɖʑ ʶ ʯɕ ʟɖʑʘʯʝ ɖʑɖʑʷ ʯᴵ ʈsɢʈs ʈʃʈsʕʘʟɖʑɕʕʘʑ ʕʈeʈsəʻ ʈɕʻʟɖʑɕʭ ɢʈeʑʈʃ ʙʑɢʘʡʯʻə ə ʕʻɖʑɣʻ ʝ ʕʄʈʃʝ ʈeɕɖʒʝ ɖʑsʑ, əʄɟʂʘɖʑsəɖʒʝɖʑs, ʰ ʈs ʡʈsɢʈs ɖʑʘʡ ɖʑɕɣ ʯʘəʝ ɖʑɕʯɕɖʑʘ ʙʑɖʑʘʑ ɼ $_2$ ɢʈeʑʈʃɕ ʂəʘʈeɕɖʑ ʻʟ ʉ ʇ ɯ ʂɕʈʃʈsɖʒ ʇ ʅ ɼ ʂʘ ʜʈsʈɕʻəɖʑ əʘɖʑʘ 0,142Ñ0,004, ʷʕʘ ʙʑɖʑʘ ɖʒʝɖʑʰ ʈsʶ ɖʑʘ 10,7% (p<0,01), 16,0% (p<0,01) ʻ 21,5 %(p<0,001), əʻʜʈʃʈsəʻʜɖʑs ʑ ʙʑɢʘʡʯʻə ɼ $_1$, ɼ $_3$ ʂʘ ɼ $_4$ ɢʈeʑʈʃ. ɟ ʈeɕ ʯᴵ ʈsɖʒʑ əʄɟʂʘɖʑsəɖʒʝɖʑs, ʰ ʈs əʝ ɖʑɕʯɕɖʑʘ ʄʈʃʻəəʻʜɖʑsʰ ʝɖʑɖʑʷ ɟ ɼ ɭ :ɟ ʂ ʑ ʕʈeʈsəʻ ʙʑɢʘʡʯʻə ɼ $_1$ ɢʈeʑʈʃɕ ʻʟ ʉ ʇ ʈ ʂɕʈʃʈsɖʒ ʇ ʅ ɼ ʙʑɖʑs ɖʑʘ 12,2% (p<0,01) ɖʑɕɣ ʯʈsʶ , ɖʑɣ ʑ ʂəʘʈeɕɖʑ ɼ $_4$ ɢʈeʑʈʃɕ ʻʟ ʉ ʂɕʈʃʈsɖʒ ʇ ʅ ɼ .

ʆ ʂɣʝ, ʈʃʈeʈs ʈʃʻʜəɕʰ ʝɖʑʡ ɖʒʝ ʂʘʙʈsɖʑʟɖʒ əʑɢɖʒʝ əʈsʜʻə ʑ ʂəʘʈeɕɖʑ ɼ $_2$ ɢʈeʑʈʃɕ ʉ ʇ ɯ ʂɕʈʃʑ ʇ ʅ ɼ ʈsʙʈsʭ ʈʃʈsʈɕʻʜ ʄɸʻʜʯɕʂᴵ ʟʈeʈsʄɟʂʘɖʑɖʑʷ ʕʈsɖʑɣʝ ɖʑsʈeʘʯʻʾ ʈʃʻʈeʈsəɕɖʑsɢʈeʘʜɖʑsʾ ʕɕʄɕɖʑsʂɕ ʑ ʕʈeʈsəʻ əʻʜʈʃʈsəʻʜɖʑs ɖʑʘ 44,4 ï 42,3% (p<0,001) ʂʘ ɖʒʈsɖʑsʯɖʑsʾ ʕɕʄɕɖʑsʂɕ ɖʑʘ 7,6 ï 5,6% (p<0,05). ɸ ɖʑʘɖʑʟʟʑʶ ʯɕ əʝ ɖʑɕʯɕɖʑ ʕʈsʝ ʷʷ ʻʯʻʻ ɖʑsʘ ɖʑʘʕ ʂʘs/ʈʃʻʈeʑəʘs ə ʕʻɖʑɣʻ ʝ ʕʄʈʃʝ ʈeɕɖʒʝ ɖʑsʑ ʑ ʙʑɢʘʡʯʻə ʟ ʈɕʻʟɖʑɕɖʒɕ ʂɕʈʃʘɖʒɕ ʇ ʅ ɼ , əʄɟʂʘɖʑsəɖʒʝɖʑs ʡʈsɢʈs ɖʑʘʡ ɖʑɕɣ ʯʝ ʟɖʑʘʯʝ ɖʑɖʑʷ ʑ ʕʈeʈsəʻ ʂəʘʈeɕɖʑ ɼ $_2$ ɢʈeʑʈʃɕ ʉ ʇ ɯ ʂɕʈʃʑ ʇ ʅ ɼ , ʰ ʈs ʈʃʈsʈɕʻəɖʑʷɖʑs ʟ ɼ $_1$, ɼ $_3$ ʂʘ ɼ $_4$ ɢʈeʑʈʃʘɖʒɕ əʈsɖʑɕɖʑʄɟʕʈsʾ ʂʘ ʈʃʈsɖʑʄɟʕʈsʾ ʈʃʈsʈɕʻʜ ʙʑɖʑs ɖʑɕɣ ʯɕɖʒ əʻʜʈʃʈsəʻʜɖʑs ɖʑʘ 5,4 - 6,8 % (p<0,01), 15,4 -20,0% (p<0,001) ʂʘ 18,2 -21,6 % (p<0,001).

ʊʘʕɕɖʒ ʯɕɖʑsɖʒ ʈʃʈeɕ ʜʈsʄɕɖʑʜɣʝɖʑɖʑ ʘʕ ʂɕəɖʑsʄɟʂʻ ʷʷʝ ʈeɖʒʝ ɖʑsʻə əʑɢɖʒʝ əʈsʜɖʑsɢʈs ʈsʙɖʒʻɖʑʑ ʑ ʕʈeʈsəʻ ʙʑɢʘʡʯʻə ʈɕʻʟɖʑɕʭ ʂɕʈʃʻə ʇ ʅ ɼ əʈsɖʑɕɖʑʄɟʕʈsʾ ʈʃʈsʈeʈsʜɕ əʄɟʂʘɖʑsəɖʒʝɖʑs [illegible] 21,8% (p<0,001), [illegible] 11,5% (p<0,05) [illegible] 21,8 % (p<0,001), [illegible].

Показники обміну жирів у крові бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible] 3.13).

[illegible] 1,18 Ñ 0,03 % [illegible] 1,22 Ñ 0,05 % [illegible] 1,20Ñ0,03% [illegible] 1,21 Ñ0,04% [illegible]

[illegible] 0,17% (p<0,001) [illegible] 0,14% (p<0,001), [illegible].

[illegible] 1,34Ñ0,04 %. [illegible] 0,11

% (p<0,05) [illegible] Г 1 [illegible].

[illegible] 3.13

[illegible]

[illegible], % (MÑm, n=3)

[illegible]	[illegible]	[illegible]		p₁ <
		[illegible]	[illegible]	
1	2	3	4	5
[illegible] 14:0	Г 1	1,20Ñ0,03	1,03Ñ0,02	p<0,001
	Г 2	1,21 Ñ0,04	1,11 Ñ0,08	
	Г 3	1,18 Ñ0,03	1,16Ñ0,03	
			$p_1<0,01$	
	Г 4	1,22 Ñ0,05	1,19 Ñ0,08	
[illegible] 15:0	Г 1	1,45 Ñ0,03	1,31Ñ0,03	p<0,01
	Г 2	1,39 Ñ0,05	1,29 Ñ0,06	
	Г 3	1,34Ñ0,04	1,30 Ñ0,05	
		$p_1<0,05$		
	Г 4	1,40 Ñ0,06	1,37 Ñ0,07	
[illegible] 16:0	Г 1	20,19Ñ0,43	18,69Ñ0,41	p<0,05
	Г 2	20,32 Ñ0,62	17,78 Ñ0,48	p<0,01
			$p_2<0,05$	
	Г 3	20,67 Ñ0,62	19,60Ñ0,71	
	Г 4	20,44 Ñ0,89	20,32 Ñ0,75	
			$p_3<0,05$	
[illegible] 16:1	Г 1	2,64 Ñ0,05	2,95Ñ0,07	p<0,01
	Г 2	2,70Ñ0,08	2,99 Ñ0,07	p<0,05
		$p_2<0,001$		
	Г 3	2,29Ñ0,05	2,89 Ñ0,06	p<0,001
		$p_1<0,001$		

ɟ tɐtsʜtsɘʞ ʝ dʑdʑʷ lsʘʙdʑʃʮʿ 3.13

1	2	3	4	5
	ɾ $_4$	2,32 Ñ0,07	2,41 Ñ0,09	
		p_1<0,01;p_3<0,01	p_1<0,001; p_2<0,001	p_3<0,001
ʉ lsʝ ʘ·tɐʃdʑsɘʘ 18:0	ɾ $_1$	23,75Ñ0,32	21,47Ñ0,65	p<0,01
	ɾ $_2$	23,18Ñ0,91	21,75 Ñ0,82	
	ɾ $_3$	22,80 Ñ0,53	21,71Ñ0,61	
	ɾ $_4$	22,97 Ñ0,74	22,01 Ñ0,93	
ʆ dʑ ʾdʑsɘʘ 18:1	ɾ $_1$	23,26 Ñ0,46	25,30Ñ0,69	p<0,05
	ɾ $_2$	24,18Ñ0,82	26,22 Ñ1,04	
	ɾ $_3$	24,18Ñ0,55	25,02 Ñ0,83	
	ɾ $_4$	23,99 Ñ0,90	24,34 Ñ0,94	
ʃ ʿdʑsdʑ ɘʘ 18:2	ɾ $_1$	22,91Ñ0,25	24,61Ñ0,61	p<0,05
	ɾ $_2$	23,02Ñ0,83	24,95 Ñ1,20	
	ɾ $_3$	22,71 Ñ0,67	23,91Ñ0,75	
	ɾ $_4$	23,00 Ñ0,94	24,01 Ñ0,83	
ʃ ʿdʑsdʑ dʑsɘʘ 18:3	ɾ $_1$	2,41 Ñ0,03	2,69Ñ0,05	p<0,001
	ɾ $_2$	2,43Ñ0,08	2,66 Ñ0,07	p<0,05
	ɾ $_3$	2,40Ñ0,05	2,57 Ñ0,06	p<0,05
	ɾ $_4$	2,39 Ñ0,09	2,51 Ñ0,08	
ɸ tɐʘ·ʿʜtsdʑsɘʘ 20:0	ɾ $_1$	2,19Ñ0,05	1,96Ñ0,05	p<0,01
	ɾ $_2$	1,57Ñ0,07	1,25Ñ0,06	p<0,01
		p_1<0,001; p_3<0,001	p_1<0,001;p_2<0,001	
	ɾ $_3$	2,44 Ñ0,04	1,84Ñ0,05	p<0,001
		p_1<0,01		
	ɾ $_4$	2,27 Ñ0,07	1,84 Ñ0,05	p<0,001
		p_2<0,05; p_3<0,001	p_3<0,001	

ɺ ʢʿdʑʮʿ ʝʢfŋʃʝ tɐʃdʑʝ dʑslz ʧʿfŋdʑʷ ʟɢtsʜtsɘlzɘʘ·dʑdʑʷ ʢtstɐdʒsɘtsʾ ʜtsɘʢʃ ʄ ʿʢtɐtsdʑʧtsɘʿls lz lsɘʘ·tɐʃdʑ ɾ $_1$ ɢtɐdʑʧʃ ʿʟ ʉɺ ʈ lsʃʧtsdʒɺ ʅ ɾ ɘʿʜʟdʑʘ·ʮʝ dʑs ɘʿtɐtsɢʿʜdʑ ʟdʑʃʞ ʝ dʑdʑʷ ʮᴵ tsɢts ʧtsʢʘʟdʑʃʢʘ·dʑʘ0,14% (p<0,01), lstsʜʿ ʷʢ lz ʢtɐtsɘʿ ʙlzɢʘ·ʡ ʮʿɘ ɾ $_2$

ï ɼ 4 Gtⱸⱬtʃ ʟdⱬʃɣ ʝ dⱬⱬʷ ɘdʒʻfŋʂⱬ ʕɖfŋɖtslsɖ ʙⱬdts ɘʻʜfŋⱬlsdⱬ. Ɉ dʒʻfŋʂ tʃʝ dⱬsʘʜʝ ʕʘdⱬsɘtsʾ ʕɖfŋɖtslsɖ ɘ ʕtⱸtsɘʻ lsɘʘtⱸɖdⱬɘ ʕʻdⱬɥʻ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ ʕtsdⱬɖɘʘɘfŋʷ ɘ dʒʝ ɣʘ̄ ɘʻʜ 1,29 Ñ 0,06 % ɘ ɼ 2 Gtⱸⱬtʃʻ ʻʟ ʉ Ɉ ɯlsɖtʃtsdʒ Ɉ ʅ ɼ ʜts 1,37 Ñ 0,07 ɘ ɼ 4 Gtⱸⱬtʃʻ ʻʟ ʉ lsɖtʃtsdʒ Ɉ ʅ ɼ , ʱ ts dʝ ɘɖ̄tsʜɖdts ʟʘdʒʝ ɣ ʻ ɘʻtⱸtsɢʻʜdⱬsfŋʂʻ.

Ɉ dʒʻfŋʂ tʃʘdⱬ dʒʻlsɖdⱬsɘtsʾ ʕɖfŋɖtslsɖ ⱬ ʕtⱸtsɘʻ ʙⱬɢʘʔɥʻɘ dⱬʘ tʃtsɥʘlsʕⱬ ʜtsfŋɖⱬʜⱬ ʟdⱬʘ̄tsʜɖɘfŋʷ tʃtⱸʘʕlsɖɥdⱬs dⱬʘ tsʜdⱬsdʒⱬ tⱸʻɘdⱬ ɘ ⱬfŋʝ̄ ʜtsfŋɖⱬʜɣ ⱬɘʘdⱬʃ̄ Gtⱸⱬtʃʘ̄ lsʘ ʕtsdⱬɖɘʘɘfŋʷ ɘ dʒʝ ɣʘ̄ 20,19Ñ0,43% ī 20,67Ñ0,62%. Ɉ ʕʻdⱬɥʻ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ ɘʻʜʟdⱬʘɥʝ dⱬs ɘʻtⱸtsɢʻʜdʝ ʟdⱬʃɣ ʝ dⱬⱬʷ ɘdʒʻfŋʂⱬ tʃʘdⱬ dʒʻlsɖdⱬsɘtsʾ ʕɖfŋɖtslsɖ ɘ ʕtⱸtsɘʻ ʙⱬɢʘʔɥʻɘ ɼ 1 Gtⱸⱬtʃɖ ʻʟ ʉ Ɉ ʈ lsɖtʃtsdʒ Ɉ ʅ ɼ lsʘ ⱬ ɼ 2 Gtⱸⱬtʃɖ ʻʟ ʉ Ɉ ɯlsɖtʃtsdʒ Ɉ ʅ ɼ ɘʻʜtʃtsɘʻʜdⱬs dⱬʘ 1,50% (p<0,05) ʻ 1,07 % (p<0,01). ʂ tⱸʻdʒ ɥᴵ tsɢts, dⱬʘdⱬɖ ɘʻʜʟdⱬʘɥʝ dⱬs, ʱ ts ɘdʒʻfŋʂ tʃʘdⱬ dʒʻlsɖdⱬsɘtsʾ ʕɖfŋɖtslsɖ ⱬ ʕtⱸtsɘʻ lsɘʘtⱸɖdⱬɼ 3 lsʘɼ 4 Gtⱸⱬtʃ ɘ ʕʻdⱬɥʻ ʜtsfŋɖⱬʜⱬ ʕtsdⱬɖɘʘɘfŋʷ ɘ ɢtⱸʘdⱬɖɥʷ̄ ɘʝ dⱬɖɥɖdⱬ tʃtsɥʘlsʕtsɘtsɢts tʃʝ tⱸʻtsʜⱬ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ. ʊʘʕtsɣ ɘfŋʂʘdⱬsɘdʝ dⱬs, ʱ ts ɘ ʕʻdⱬɥʻ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ ɘdʒʻfŋʂ ʕɖfŋɖtslsɖ ⱬ ʕtⱸtsɘʻ ʙⱬɢʘʔɥʻɘ ɼ 2 Gtⱸⱬtʃɖ ʻʟ ʉ Ɉ ɯlsɖtʃtsdʒ Ɉ ʅ ɼ ʟdⱬʃɣ ⱬɘʘɘfŋʷ ʜts tⱸʻɘdⱬʷ 17,78 Ñ 0,48% lsʘ ʙⱬɘ dʒʝ dⱬʱ ɖdʒ dⱬʘ 1,82% (p<0,05) ʻ 2,54% (p<0,05), dⱬɣ ⱬ lsɘʘtⱸɖdⱬɼ 3 lsʘɼ 4 Gtⱸⱬtʃ ɘʻʜtʃtsɘʻʜdⱬs.

Ɉ dʒʻfŋʂ tʃʘdⱬ dʒʻlststsdʝ ʾdⱬsɘtsʾ ʕɖfŋɖtslsɖ ɘ ʕtⱸtsɘʻ dⱬʘ tʃtsɥʘlsʕⱬ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ ʙⱬɘ dⱬʔɘɖʱ ɖdʒ ⱬ ʙⱬɢʘʔɥʻɘ ɼ 2 Gtⱸⱬtʃɖ ʻʟ ʉ Ɉ ɯ lsɖtʃtsdʒ Ɉ ʅ ɼ lsʘ ʜtsfŋʷɢʘɘ ɘʝ dⱬɖɥɖdⱬɖ 2,70Ñ0,08 %, ʷʕʘ ɘɖʷɘɖdⱬʘfŋ ʙʻdⱬ ʰ tsᴮ dⱬʘ 0,41% ī 0,38 % (p<0,001), dⱬɣ ⱬ ɼ 3 lsʘ ɼ 4 Gtⱸⱬtʃʘ̄ lsɘʘtⱸɖdⱬɘʻʜtʃtsɘʻʜdⱬs. ɼ ʝ ʱ ts dⱬʃɣ ɥɖdʒ ʙⱬdts ʟdⱬʘɥʝ dⱬⱬʷ ɥᴵ tsɢts tʃtsʕʘʟdⱬʃʕʘɘ ʕtⱸtsɘʻ lsɘʘtⱸɖdⱬɼ 1 Gtⱸⱬtʃɖ, tʃtstⱸʻɘdⱬʷdⱬs ʙⱬɢʘʔɥʷdʒɖ ɼ 2 Gtⱸⱬtʃɖ ʻ fŋʂʘdⱬsɘɖdⱬs 2,64Ñ0,05% tʃtⱸtslsɖ 2,70Ñ0,08 %, tʃtⱸtslsʝ ɘtsdⱬs ʙⱬdts ɘʻtⱸtsɢʻʜdⱬs ɘɖʱ ɖdʒ dⱬʘ 0,35% (p<0,001) lsʘ 0,32 % (p<0,01), dⱬɣ ⱬ lsɘʘtⱸɖdⱬɼ 3 lsʘɼ 4 Gtⱸⱬtʃ ɘʻʜtʃtsɘʻʜdⱬs.

Ɉ fŋʂʘdⱬsɘdʝ dⱬs lsʘʕtsɣ, ʱ ts ⱬ tʃtⱸtsɥʝ fŋʝ lstⱸɖɘʘdⱬsɢts ʟɢtsʜtsɘⱬɘʘdⱬⱬʷ ʕtstⱸdʒsɘtsʾ ʜtsʙʘɘʕɖ, fŋⱬlslsʻɘts tʃʻʜɘɖʱ ⱬɘʘɘfŋʷ ɘdʒʻfŋʂ tʃʘdⱬ dʒʻlststsdʝ ʾdⱬsɘtsʾ ʕɖfŋɖtslsɖ ɘ ʕtⱸtsɘʻ ʙⱬɢʘʔɥʻɘ ɼ 1ï ɼ 3 Gtⱸⱬtʃ, ɘʻʜtʃtsɘʻʜdⱬs dⱬʘ 0,32%(p<0,01), 0,60%(p<0,001) ʻ 0,29% (p<0,05), tʃtstⱸʻɘdⱬʷdⱬs ʟ tʃtsɥʘlsʕtsdʒ ʜtsfŋɖⱬʜⱬ, lstsʜʻ ʷʕ ⱬ ɼ 4 Gtⱸⱬtʃʻ lsɘʘtⱸɖdⱬʟdⱬʘɥʝ dⱬⱬʷ ɥᴵ tsɢts tʃtsʕʘʟdⱬʃʕʘ ɘ ʕʻdⱬɥʻ ʜtsfŋɖⱬʜⱬ ʙⱬdts dⱬʘ tⱸʻɘdⱬ tʃtsɥʘlsʕtsɘtsɢts tʃʝ tⱸʻtsʜⱬ ʝʕfŋtʃʝ tⱸɖdʒʝ dⱬlsⱬ. ʈ ʘʟtsdʒ ʟ lsɖdʒ ɘdʒʻfŋʂ tʃʘdⱬ dʒʻlststsdʝ ʾdⱬsɘtsʾ ʕɖfŋɖtslsɖ ⱬ ʕtⱸtsɘʻ

BłzGʘʔ ɥ'ə ɼ $_1$ ï ɼ $_3$ Gtɐdztʃ Błzə əɖʰ ɖɖʒ 0,54% (p<0,001), 0,48% (p<0,001) lsʘ 0,58% (p<0,001) ʧtsʦ'əɖẓʷɖts ʟ lsəʘɐɖɖẓʘɖʒɖ ɼ $_4$ Gtɐdztʃɖ.

.I 'Hɖtsfɲɖẓɖʔ əɖʒ'fɲs fɲsʝʘɐɖɖtsəts' Ϛɖfɲɖtslsɖ ɮ Ϛtɐtsə' BłzGʘʔ ɥ'ə Htsfɲɖ'Hɖẓɖ= Gtɐdztʃ ɖẓʘ ʧtsɥʘlsϚɮ ʝϚfɲʧʝtɐɖɖʒʝɖɖslz ə ʟɖẓʘ=tsHɖəfɲʸ ə ɖʒʝχʘ= ə'H 22,80 Ñ0,53 ə ɼ $_3$ Gtɐdztʃ' 'ʟ ʉl lsɖʧtsɖʒ.I l ɼ Hts 23,75Ñ0,32% ə ɼ $_1$ Gtɐdztʃ' 'ʟ ʉ.I ʈ lsɖʧtsɖʒ.I l ɼ, ʘɮ lsəʘɐɖɖẓ ɼ $_2$ Gtɐdztʃɖ 'ʟ ʉ.I ɯ' ɼ $_4$ Gtɐdztʃɖ 'ʟ ʉ lsɖʧʘɖʒɖ .I l ɼ ʘBfɲʧsɖẓ lsɖẓ əʝɖɖɥɖɖẓɖ ɥᴵ tsGts ʧtsϚʘʟɖẓɖϚʘ fɲsʘɖtsəɖɖɖ 23,18Ñ0,91% ī 22,97Ñ0,74% BʝL ə'tɐtsG'Hɖts' ʦ'ʟɖẓɖɥ' ɖʒ'χ '= fɲʝtɐʝHɖẓɖʒɖ ʟɖẓʘɥʝɖɖẓʷɖʒɖ.

.I Ϛ'ɖẓɥ' ʝϚfɲʧʝtɐɖɖʒʝɖɖslz ʟʘ ʟGtsHtsəlzəʘɖẓɖẓʷ Ϛtstɐɖʒtsəts' HtsBʘəϚɖ ɮ fɲϚɖẓʘH' tɐʘɥ'tsɖẓɮ, əfɲsʘɖtsəɖʝɖts ʟɖẓʘɥɖts ɖẓɖχɥɖʔ ʦ'əʝɖẓ əɖʒ'fɲslz fɲsʝʘɐɖɖtsəts' Ϛɖfɲɖtslsɖ ɖẓɖʰ ʝ ɮ lsəʘɐɖɖẓ ɼ $_1$ Gtɐdztʃɖ 'ʟ ʉ.I ʈ lsɖʧtsɖʒ .I l ɼ. ɟ tsʦ'əɖẓʷɖts ʟ ʧtsɥʘlsϚtsɖʒ Htsfɲɖ'Hɮ əɖʒ'fɲs Ϛɖfɲɖtslsɖ Błzə ɖẓʘ 2,28 % (p<0,01) ɖʒʝɖẓʰ ɖɖʒ ʋ lsəʘɐɖɖẓ ɼ $_3$ ' ɼ $_4$ Gtɐdztʃ ʉl ' ʉ lsɖʧ'ə .I l ɼ əɖʒ'fɲs fɲsʝʘɐɖɖtsəts' Ϛɖfɲɖtslsɖ ɮ Ϛtɐtsə' BłzGʘʔ ɥ'ə ɮ Ϛ'ɖẓɥ' Htsfɲɖ'Hɮ Ϛtsɖẓɖəʘəfɲʸ ə ɖʒʝχʘ= əʝɖẓɖɥɖɖẓʧtsɥʘlsϚtsətsGts ʧʝʦ'tsHɮ.

.I ɖʒ'fɲs tsɖʝ'ɖtsəts' Ϛɖfɲɖtslsɖ ɮ Ϛtɐtsə' BłzGʘʔ ɥ'ə ətsɖẓɖɖẓfɲϚts' ʧtstɐtsHɖ ɖẓʘ ʧtsɥʘlsϚɮ Htsfɲɖ'Hɮ ʟɖẓʘ=tsHɖəfɲʸ ə ɖʒʝχʘ= fɲsʘlsɖfɲsɖɥɖts' ə'tɐtsG'Hɖtsfɲs' ' Ϛtsɖẓɖəʘəfɲʸ ə'H 23,26Ñ0,46% Hts 24,18Ñ0,82% ɮ əfɲ= Htsfɲɖ'Hɖẓɖ= Gtɐdztʃʘ=.

l ʘlsɖẓ ʟGtsHtsəlzəʘɖẓɖẓʷ Ϛtstɐɖʒtsəts' HtsBʘəϚɖ ʆ 'Ϛtɐtsɖẓʧtsə'ls ə Ϛ'ɖẓɥ' Htsfɲɖ'Hɮ Ϛ'ɖẓϚ'fɲsᴵ tsɖʝ'ɖtsəts' Ϛɖfɲɖtslsɖ ʟtɐtsfɲsʘɖẓʘ ʧtɐtslsɖ ʧtsɥʘlsϚtsəts' əʝɖẓɖɥɖɖẓɖ ɖẓʘ 2,04 % (p<0,05), ɖẓɖʰ ʝ ɮ BłzGʘʔ ɥ'ə ɼ $_1$ Gtɐdztʃɖ 'ʟ ʉ.I ʈ lsɖʧtsɖʒ.I l ɼ. ẓ tsHts 'ɖẓ ɖ= Htsfɲɖ'Hɖẓɖ= Gtɐdztʃ, lsts əɖʒ'fɲs tsɖʝ'ɖtsəts' Ϛɖfɲɖtslsɖ ɮ '= Ϛtɐtsə' ɖʒʘə ɖẓɖʰ ʝ lsʝɖẓHʝɖẓɥ'ᴮ Hts ʟtɐtsfɲsʘɖẓɖẓʷ.

.I ɖʒ'fɲs ɖẓɖtsɖʝəts' Ϛɖfɲɖtslsɖ ɮ Ϛtɐtsə' BłzGʘʔ ɥ'ə ɖẓʘ ʧtsɥʘlsϚɮ ʝϚfɲʧʝtɐɖɖʒʝɖɖslz ʟɖẓʘ=tsHɖəfɲʸ ə Gtɐʘɖẓɖɥʷ= əʝɖẓɖɥɖɖẓ 22,91Ñ0,25%ī 22,71 Ñ0,67% ɮ lsəʘɐɖɖẓɼ ' ' ɼ $_3$ Gtɐdztʃ 'ʟ ʉ.I ʈ ' ʉl lsɖʧtsɖʒ.I l ɼ, lsʘɮ əʝɖẓɖɥɖɖẓʘ= 23,02Ñ0,83% ī 23,00 Ñ 0,94% ə'Hʧtsə'Hɖts ɮ lsəʘɐɖɖẓ ɼ $_2$ ' ɼ $_4$ Gtɐdztʃɖ, ʷϚ' ɖẓʘɖʝχʘɖɖ Hts ʉ.I ɯ' ʉ lsɖʧ'ə .I l ɼ. l ʘʝHʝɖẓ ʘBfɲʧsɖẓ lsɖẓ əʝɖẓɖɥɖɖẓɖ əɖʒ'fɲslz ɖẓɖtsɖʝəts' Ϛɖfɲɖtslsɖ ɮ Ϛtɐtsə' Błzɖɖ ə Gtɐʘɖẓɖɥʷ= fɲsʘlsɖfɲsɖɥɖts' ə'tɐtsG'Hɖtsfɲs'.

ɼ tsHʘʘɖẓɖẓʷ Ϛtstɐɖʒtsəts' HtsBʘəϚɖ ɮ fɲϚɖẓʘH tɐʘɥ'tsɖẓɮ fɲʧtɐɖʷɖts ə'tɐtsG'Hɖtsɖʒɮ ʧ'Həɖʰ ʝɖẓɖẓ ə Ϛ'ɖẓɥ' Htsfɲɖ'Hɮ əɖʒ'fɲslz ɖẓɖtsɖʝəts' Ϛɖfɲɖtslsɖ ə Ϛtɐtsə' BłzGʘʔ ɥ'ə

ґ 1 Gtdztʃcʃ 'L ʉ.I ʈ lscʃtʃtsdʒ.I l ґ dʎʘ 1,7 % (p<0,05), ʧtstɕ'ɘdʑʷdʎs L ʧtsɥʘsʢtsdʒ HtsfŋdʑHlz lstsH' ʷʢ lz ʢtdtsɘ' 'dʑ cʃ HtsfŋdʑHɣ lzɘʘdʎcʃ Gtdztʃ lsɘʘtɕcʃdzɘdʒ'fŋs dʑdʎsdʝɘts' ʢcʃfŋdʎslscʃ ɘ ʢ'dʎɥ' HtsfŋdʑHlz dʒʘɒ lsʝdʎHʝdʎɥ' Hts ʧ'Hɘcʃ ʝdʎdʑ. .I ʝdʎcʃɥcʃdʎʘ ʢtsdʎɥʝdʎstɕʘɥ' dʑdʎsdʝɘts' ʢcʃfŋdʎslscʃ ɘ ʢtdtsɘ' BlzGʘʔɥ'ɘ tɕ'Ldʎcʃ Gtdztʃ ɘ ʢ'dʎɥ' ʝʢfŋʃʝtɕcʃdʒʝdʎslz, ʧtsH'Bdʎs ʷʢ ' dʎʘ ʧtsɥʘsʢlz HtsfŋdʑHlz, Blzdʎʘ lz Gtɕʘdʎcʃɥʷfŋsʘlscʃfŋscʃɥdʎs' ɘ'tdtsG'Hdʎsfŋs'.

lz tsHts ɘdʒ'fŋslz dʑdʎsdʝdʎsɘts' ʢcʃfŋdʎslscʃ ɘ ʢtdtsɘ' BlzGʘʔɥ'ɘ ɘtsdʎcʃdʎfŋʢts' dʒʷfŋdʎs' ʧtstdtsHcʃ dʎʘ ʧtsɥʘsʢlz HtsfŋdʑHlz, lsts ʔtsGts ɘʝdʎcʃɥcʃdʎcʃ LdʎʘtsHcʃdʎcʃfŋ ɘ dʒʝɣʘ ɘ'H 2,39 Ñ 0,09% lz ґ 4 Gtdztʃ' 'L ʉ lscʃtʃtsdʒ.I l ґ Hts 2,43Ñ 0,08% ɘ ґ 2 Gtdztʃ' 'L ʉ.I ɯlscʃtʃtsdʒ.I l ґ . ʋ lsɘʘtɕcʃdz ґ 1 Gtdztʃcʃ 'L ʉ.I ʈ lscʃtʃtsdʒ.I l ґ ' ґ 3 Gtdztʃcʃ 'L ʉ l lscʃtʃtsdʒ.I l ґ ʘBfŋsdʑ lsdʑ Ldʎʘɥʝdʎdʑʷɘdʒʼfŋslzdʑdʎsdʝdʎsɘts' ʢcʃfŋdʎslscʃ lz ʢtdtsɘ' LdʎʘtsHcʃdʎcʃfŋ ɘ dʒʝɣʘ 2,41 Ñ 0,03% ' 2,40Ñ 0,05%.

.I ʢ'dʎɥ' ʝʢfŋʃʝtɕcʃdʒʝdʎslz dʎʘdʒcʃ ɘ'HLdʎʘɥʝdʎs, ts lstɕcʃɘʘdʝ LGtsHtsɘlzɘʘdʎdʑʷ ʢtstɕdʒsɘts' HtsBʘʢcʃ fŋʃtɕcʃʷ'dʎs Ltdtsfŋsʘdʎdʑ ɘdʒ'fŋslz dʑdʎsdʝdʎsɘts' ʢcʃfŋdʎslscʃ lz ʢtdtsɘ' BlzGʘʔɥ'ɘ, ʧtstɕ'ɘdʑʷdʎs L ʧtsɥʘsʢtsdʒ ʝʢfŋʃʝtɕcʃdʒʝdʎslz, dʎʘfŋʘdʒʃʝtɕʝH lz lsɘʘtɕcʃdz ґ 1, ґ 2 ' ґ 3 Gtdztʃ, ʷʢ' ɘ'Hdʎsfŋcʃdʎcʃfŋ Hts fŋcʃdʑ dʎcʃ lscʃtʃ'ɘ .I l ґ , ɘ'Hʧtsɘ'Hdʎs, dʎʘ 0,28% (p<0,001), 0,17% (p<0,05) lsʘ 0,23% (p<0,05). ʋ BlzGʘʔɥ'ɘ fŋdʎʘBʢtsGts lscʃtʃlz .I l ґ (ґ 4 Gtdztʃʘ) Ldʎʘɥʝdʎdʑʷɥ tsGts ʧtsʢʘLdʎcʃʢʘ lz ʢtdtsɘ' Blzdʎs dʝɘ'tdtsG'Hdʎcʃdʒ ʧtstɕ'ɘdʑʷdʎs L ʧtsɥʘsʢtsdʒ HtsfŋdʑHlz. ʂ tɕ'dʒ ɥ tsGts, dʎʘdʒcʃ dʝ ɘfŋsʘdʎsɘdʝdʎs ɘ'tdtsG'Hdʎcʃ dʒ'ɣGtdztʃtsɘcʃ Ldʒ'dz lz ɘʝdʎcʃɥcʃdʎʘ ɘdʒ'fŋslz dʑdʎsdʝdʎsɘts' ʢcʃfŋdʎslscʃ ʢtdtsɘ' BlzGʘʔɥ'ɘ ɘ ʢ'dʎɥ' HtsfŋdʑHlz.

.I dʒ'fŋs ʘtɕʘ'Htsdʎsɘts' ʢcʃfŋdʎslscʃ lz ʢtdtsɘ' BlzGʘʔɥ'ɘ dʎʘ ʧtsɥʘsʢlz ʝʢfŋʃʝtɕcʃdʒʝdʎslz Blzɘ dʎcʃɣɥcʃdʒ lz ґ 2 Gtdztʃ' 'L ʉ.I ɯlscʃtʃtsdʒ.I l ґ L ʘBfŋsdʑ lsdʎcʃdʒ LdʎʘɥʝdʎdʑʷdʒI,57Ñ 0,07 %, ʧtstɕ'ɘdʑʷdʎs L ґ 1 Gtdztʃts' 'L ʉ.I ʈ lscʃtʃtsdʒ.I l ґ ɘ'Hʧtsɘ'Hdʎs dʎʘ 28,4%. ʋ ʢtdtsɘ' lsɘʘtɕcʃdz ґ 3 ' ґ 4 Gtdztʃ 'L ʉ l ' ʉ lscʃtʃʘdʒcʃ .I l ґ dʎʘ ʧtsɥʘsʢlz HtsfŋdʑHlz ɘ'dzBlzɘ ɘcʃ cʃdʒ dʑɣ lz ґ 1 Gtdztʃ' ɘ'Hʧtsɘ'Hdʎs dʎʘ 11,4% (p<0,001) ' 3,7% (p<0,001).

.I ʢ'dʎɥ' ʝʢfŋʃʝtɕcʃdʒʝdʎslz ʧtɕcʃ HtsHʘʘdʎdʑ Hts tɕʘɥ'tsdʑlz BlzGʘʔɥʷdʒ dʎʘ ɘ'HGtsH'ɘdʑ ʢtstɕdʒsɘts' HtsBʘʢcʃ ɘ ʢ'dʑʢtsfŋs' 5,0 dʒG/ʢG ʢtsdʎɥʢtstɕdʒlz, ɘdʒ'fŋs ʘtɕʘ'Htsdʎsɘts' ʢcʃfŋdʎslscʃ lz ʢtdtsɘ' Ldʎcʃɣlzɘʘfŋʷ ɘ lzfŋ HtsfŋdʑHdʎcʃ Gtdztʃʘ,

əʻнʧʦəʻнʤʦ ʤʘ 0,23% (p<0,01), 0,61%(p<0,001), 0,32%(p<0,01) ʻ 0,43%(p<0,001). l ʘʔ ʤʠʨ ʯʠʒ ə ʕʻʤʯʻ ʝ ʕ fnʃʝ ʦʠʤʒ ʤʠʦ ʙʣə əʤʒʻfnʃʦ ʘʤʘʘ ʻнʦʤʦəʦʼ ʕʠfnʤʦʦʠ ə ʕʦʦəʻ ʦəʘʦʠʤ, Γ_2 ʛʦʤʧʠ ʻʟ ʉʆ ʉʦʠʧʦʤʒ ʆ l ʏ, ʷʕʠʔ fnʃʘʤʦəʠə 1,25Ñ 0,06%, ʦʘ ʧʦʦʻəʤʷʤʦ ʟ ʦəʘʦʠʤʘʤʠ Γ_1, Γ_3 ʻ Γ_4 ʛʦʤʧ əʻʤ ʙʣə ʤʒʤ ʠʤʒ əʻнʧʦəʻнʤʦ ʤʘ0,71% (p<0,001), 0,59% (p<0,001) ʦʘ0,59 % (p<0,001).

ʈ ʝ ʟʣʤ ʦʘʦʠ нʦfnʤнʏ ʝ ʤ əʤʒʻfnʃʦ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʦʘʼʘ ʕʤʘfnʝə ə ʧʤʘʟʤʒ ʕʦʦəʻ ʙʣʛʘʔ ʯʻə ʦʻʟʤʠʘ ʦʠʧʻə ʆ l ʏ ʤʘ ʦʤ ʟʛʦнʦəʣəʘʤʤʷ ʕʦʦʤʒʦəʦʼ нʦʙʘəʕʠ ʆ ʻʕʦʦʤʧʦəʻʦ ʧʦʝ нfnʃʘə ʤʝ ʤ ʣ ʦʘʙʤʠʯʷʘ 3.13 ʦʘ3.14.

l ʘ ʦfnʤʦəʻ ʘʤʘʤʟʣ ʦʦʦʦʠʤʒʘʤʠʘ ʦʝ ʟʣʤ ʦʘʦʻə əfnʃʘʤʦəʤʝ ʤʦ, ʰ ʦ əʤʒʻfnʃʦ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʣ ʕʦʦəʻ ʙʣʛʘʔ ʯʻə əʦʤʠʤfnʝ ʕʦʼ ʤʒôʷfnʤʦʼ ʧʦʦʦнʠ ʤʘ ʧʦʯʘʦʕʣ ʝ ʕ fnʃʝ ʦʠʤʒ ʤʠʦ ʙʣə ʤʘʔ əʠʰ ʠʤʒ ə Γ_2 ʛʦʤʧʻ ʟ ʘʙfnʃʤ ʦʤʦ əʝ ʤʠʯʠʤʦ 357,26Ñ 5,01 ʤʒʛ/100 ʤʒʤ, ʷʕʘ əʠʷəʠʤʘfnʝ ʙʻʤ ʰ ʦ , ʤʏ ʣ Γ_3 ʦʘ Γ_4 ʛʦʤʧʘʘ ʦəʘʦʠʤ əʻнʧʦəʻнʤʦ ʤʘ 6,3 ʻ 5,0 % ʧʦʠ p<0,05. ʏ ʝ ʰ ʦ ʤʠʏ ʯʠʤʒ ʟʤʘʯʝ ʤʤʷ ʯ ʦʛʦ ʧʦʕʘʟʤʠʕʘ ʙʣʤʦ ʣ ʕʦʦəʻ ʦəʘʦʠʤ Γ_1 ʛʦʤʧʠ ï 351,82Ñ3,44 ʤʒʛ/100 ʤʒʤ, ʧʦʦʦʝ ʔʦʛʦ əʝ ʤʠʯʠʤʘ ʙʣʤʘ ʙʻʤ ʰ ʦ ʤʘ 4,7% ʻ 3,3 % ʧʦʠ p<0,05, ʧʦʦʻəʤʷʤʦ ʟ ʦəʘʦʠʤʘʤʠ Γ_3 ʦʘ Γ_4 ʛʦʤʧ əʻнʧʦəʻнʤʦ, ʰ ʦ ʤʒʦʏ ʤʠəʦ əʕʘʟʣʻ ʤʘ ʟʘʤʝ ʏ ʤfnʃ əʤʒʻfnʃʦ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʣ ʕʦʦəʻ ʦəʘʦʠʤəʻн ʼʘ ʦʠʧʣ ʆ l ʏ .

ʆ fnʃʘʤʦəʤʝ ʤʦ ʦʘʕʦʏ , ʰ ʦ ʤʘ ʦʤ ʦʦʠəʘʤʦʛʦ ʟʛʦнʦəʣəʘʤʤʷ ʕʦʦʤʒʦəʦʼ нʦʙʘəʕʠ ʙʣʛʘʔ ʯʷʤʒ əʦʤʠʤfnʝ ʕʦʼ ʤʒôʷfnʤʦʼ ʧʦʦʦнʠ, əʤʒʻfnʃʦ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʣ ʕʦʦəʻ ʙʣʛʘʔ ʯʻə Γ_1 , Γ_2 ʻ Γ_4 ʛʦʤʧ ʟʦʦfnʃʘə əʻнʧʦəʻнʤʦ ʤʘ 4,8% (p<0,01), 6,8%(p<0,001) ʦʘ3,3% (p<0,05) ʧʦʦʻəʤʷʤʦ ʟ ʧʦʯʘʦʕʦʤʒнʦfnʤнʣ.

ʉ ʝ ʦʝ н нʦfnʤнʏ ʣəʘʤʠʘ ʛʦʤʧ əʠʷəʤʝ ʤʦ ʤʘʔ əʠʰ ʠʔ əʤʒʻfnʃʦ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʣ ʕʦʦəʻ ʙʣʛʘʔ ʯʻə Γ_2 ʛʦʤʧʠ ʻʟ ʉʆ ʉʦʠʧʦʤʒ ʆ l ʏ , ʘʙfnʃʤ ʦʤʘəʝ ʤʠʯʠʤʘ ʷʕʦʼ fnʃʘʤʦəʠʤʘ 381,38 Ñ2,94 ʤʒʛ/100 ʤʒʤ ʦʘ ʧʝ ʦʝ əʠʰ ʣəʘʤʘ ʟʤʘʯʝ ʤʤʷ ʯ ʦʛʦ ʧʦʕʘʟʤʠʕʘ ʣ ʕʦʦəʻ ʦəʘʦʠʤ Γ_1, Γ_3 ʻ Γ_4 ʛʦʤʧ əʻнʧʦəʻнʤʦ ʤʘ 3,4%, 9,6% ʦʘ 8,5% ʧʦʠ p<0,05ï 0,001.

ʋ ʕʦʦəʻ ʙʣʛʘʔ ʯʻə Γ_1ʛʦʤʧʠ ʟ ʉʆ ʈ ʦʠʧʦʤʒ ʆ l ʏ ʕʦʤʝ ʤʦʦʘʯʷ ʟʘʛʘʤ ʤʠʘ ʤʧʻнʻə ʙʣʤʘ нʝ ʰ ʦ ʤʠʏ ʯʦ , ʤʏ ʣ Γ_2 ʛʦʤʧʻ ʦəʘʦʠʤ ʻʟ ʉʆ ʉʦʠʧʦʤʒ ʆ l ʏ ʻ fnʃʘʤʦəʠʤʘ 368,88Ñ4,41 ʧʦʦʦʠ 381,38 Ñ2,94 ʤʒʛ/100 ʤʒʤ, ʦнʤʘʕ ʼʼ əʝ ʤʠʯʠʤʘ ʙʣʤʘ ʙʻʤ ʰ ʦ , ʧʦʦʻəʤʷʤʦ ʟ ʦəʘʦʠʤʘʤʠ Γ_3 ʻ Γ_4 ʛʦʤʧ əʻнʧʦəʻнʤʦ ʤʘ6,0% ʦʘ

5,0 % ʧʦɐʗ p<0,01.

ʅ ʘʦʄʛʤʚʉ ʘʤʘʝʟʟ ʦʤ ʟʤʤ ʪʘʪʉ ʉʤʒʄʜʪ ʬʦʄʬ ʦʤʗʧʻʜʉ ʑ ʕʦʤʉʻ ʙʑʛʘʔʮʉ ʤʘ ʧʦʯʘʪʕʑ ʝʕʄʧʝ ʦʗʤʝ ʤʪʑ ʉʄʪʘʤʉʤʝ ʤʦ ʔʦʛʦ ʉʗʰ ʻ ʟʤʘʯʝ ʤʤʬ 154,03Ñ2,89 ʤʒ/100 ʤʒʤʻ 156,81 Ñ2,73 ʤʒ/100 ʤʒʤʑ ʕʦʤʉʻ ʪʉʘʦʗʤʛ 1 ʻ ʛ 2 ʛʤʤʧ, ʤʯ ʑ ʕʦʤʉʻ ʪʉʘʦʗʤʛ 3 ʛʤʤʧʗ ʉʻʜʧʦʉʻʜʤʦ ʤʘ7,3 ($p_2<0,05$) ʪʘ5,4 % ($p_1<0,05$).

ʊʘʙʤʗʯʬ 3.14

ʃ ʻʧʻʜʤ ʕʦʤʒʧʦʤʝ ʤʪʗ ʧʤʘʟʤʒʗ ʕʦʤʉʻ ʙʑʛʘʔʮʉ ʦʻʟʤʗʡ ʪʗʧʻʉ ʇʅʛ ʤʘʪʤ ʟʛʦʜʦʉʑʉʘʤʤʬ ʕʦʦʤʒʦʉʦʽ ʜʦʙʘʕʗ ʆ ʻʕʦʦʤʧʦʉʻʪ (MÑm, n=10)

ʇʦʕʘʟʤʗʕʗ	ʈʦʤʧʗ	ʇʝʦʻʦʜ ʜʦʛʤʜʑ		p <
		ʧʦʯʘʪʦʕ	ʕʻʤʝʯ	
1	2	3	4	5
ʅʘʒʘʤ ʤʤ ʤʧʻʜʗ ʤʒ/100 ʤʒʤ	ʛ 1	351,82Ñ3,44	368,88Ñ4,41	p<0,01
	ʛ 2	357,26Ñ5,01	381,38 Ñ2,94	p<0,001
		$p_2<0,05$	$p_1<0,05;p_2<0,001$	
	ʛ 3	336,00 Ñ5,58	347,86Ñ5,29	
		$p_1<0,05$	$p_1<0,01$	
	ʛ 4	340,22Ñ5,33	351,35Ñ2,89	p<0,05
		$p_1<0,05$; $p_3<0,05$	$p_1<0,01;p_3<0,001$	
ʊʘʗʘʯʗʤʒʤʝ ʪʦʤʗ ʤʒ/100 ʤʒʤ	ʛ 1	25,96Ñ0,92	30,18Ñ0,84	p<0,01
	ʛ 2	25,17Ñ0,91	32,30 Ñ1,17	p<0,001
			$p_2<0,05$	
	ʛ 3	24,39 Ñ0,92	28,21Ñ0,92	p<0,01
	ʛ 4	24,75 Ñ1,00	28,18 Ñ1,05	p<0,05
			$p_3<0,05$	
ʛʻʘʯʗʤʒʤʝ ʪʦʤʗ, ʤʒ/100 ʤʒʤ	ʛ 1	17,18Ñ0,50	20,02Ñ0,67	p<0,01
	ʛ 2	17,05 Ñ0,85	20,4Ñ1,05	p<0,05
	ʛ 3	15,95Ñ0,74	17,76 Ñ1,08	
			$p_1<0,05$	
	ʛ 4	17,36 Ñ0,83	19,39 Ñ0,87	

Ɂtetsнtsэҳʝʤʥʷ lsʘʙʣɕɥʿ 3.14

ʌ tsfɲ̃ʷ tsʤʧ ʿнɕ, ʤʒ/100 ʤʒʣ	ɾ 1	154,03Ñ2,89	159,18Ñ3,40	
	ɾ 2	156,81 Ñ2,73	163,01 Ñ2,09	$p<0,05$
		$p_2<0,05$	$p_2<0,01$	
	ɾ 3	146,11 Ñ3,09	149,83Ñ2,90	
		$p_1<0,05$	$p_1<0,05$	
	ɾ 4	152,23 Ñ2,24	154,3 Ñ1,94	
			$p_3<0,01$	
ʅ ɾ ɾ ʂ, ʤʒ/100 ʤʒʣ	ɾ 1	15,75 Ñ0,62	20,17Ñ0,84	$p<0,001$
	ɾ 2	15,25Ñ0,84	22,23 Ñ0,83	$p<0,001$
			$p_1<0,05$; $p_2<0,001$	
	ɾ 3	14,30Ñ0,73	16,41 Ñ0,73	$p<0,05$
			$p_1<0,01$	
	ɾ 4	15,00Ñ0,81	18,39 Ñ0,91	$p<0,05$
			$p_3<0,01$	
ʍtsʤʝ fɪɟʝ tetsʣ, ʤʒ/100 ʤʒʣ	ɾ 1	21,95Ñ0,80	22,02Ñ0,76	
	ɾ 2	22,01 Ñ0,91	22,03 Ñ0,88	
	ɾ 3	21,23 Ñ0,69	21,42Ñ1,05	
	ɾ 4	20,97 Ñ1,15	21,01 Ñ1,04	
ɾ ʷʷ ʿteɕ ɷtsʤʝ fɪɟʝ tetsʤʣ ʤʒ/100 ʤʒʣ	ɾ 1	116,95 Ñ1,30	117,31Ñ1,87	
	ɾ 2	120,97Ñ1,47	121,77Ñ0,69	
			$p_1<0,05$; $_2<0,001$	
	ɾ 3	114,02Ñ1,04	114,23 Ñ1,07	
	ɾ 4	109,91 Ñ0,95	110,08 Ñ0,76	
		$p_1<0,001$;$p_2<0,01$ $p_3<0,001$	$p_1<0,01$;te$_2<0,01$ $p_3<0,001$	

ʊteɕэʘʤʝ ʟɢtsнtsэʣэʘʤʥʷ ʢtsteʤʒtsэtsʾ нtsʙʘэʢɕ ʆ ʿʢtetsʤʧtsэʿls ʙʣɢʘɁɥʷʤʒ эtsʤɕʤɲʢtsʾ ʤʒ̑ʷfɪʤtsʾ ʧtstetsнɕ ʤʘ эʿнɢtsнʿэʤ ʧtsʢʘʟʘʤts, ʱ ts э ʢʿʤɥʿ нtsfɪʤʟнʣ ʢtsʤɥʝ ʤtseʘɥʿʷ ʷtsfɲ̃ʷ tsʤʧʿнʿэ ʣ ʢtetsэʿ ʟtetsfɪʘʤʘ ʤʘ 4,0 % (p<0,05) ʤɕʱ ʝ ʣ lsэʘteɕʤ ɾ 2 ɢteʣʧɕ ʿʟ ʉ ɪ ɯlsɕʧtsʤʒ ɪ ʅ ɾ ʧtsteʿэʤʷʤs ʟ ʧtsɥʘlsʢtsʤʒ нtsfɪʤʟнʣ, lstsнʿ ʷʢ

Ŀ ʿdžʰ ɋ⊓ Htsfɥɖʑ̃Hdʑɋ⊓ Gtɕdʑtʃ lsɘʘɐɋdʑ ɘʿtɐtsGʿHdʑɋ⊓ Ldʒʿdʑ ɘdʒʿfɲsŀ ʬtsfɲʬtsdʑ̃tʃʿHʿɘ Ŀ Ϛtɐtsɘʿ dʑ̃ ɘɋʷɘdʑ̃ dʑts.

Ɨ tstɕʿɘdʑʷdʑdʑʷ dʒʿɣ Gtɕdʑtʃtsɘɋ⊓ ɘʝ dʑɋɥɋdʑ ɘdʒʿfɲsŀ ʬtsfɲʬtsdʑ̃tʃʿHʿɘ Ŀ Ϛtɐtsɘʿ LʘfɲɃʿHɥɋdʑts, ʰ ts ɘ Ϛʿdʑɥʿ ʝ Ϛfɲʃ ʝ tɐɋdʒʝ dʑlsŀ ɘtsdʑʘ BŀdʑʘdʑʘɁɘɋʰ tsʶ Ŀ Ϛtɐtsɘʿ lsɘʘɐɋdʑ ɼ 2 Gtɕdʑtʃɋ ʿL ʉ.I ɯ lsɋtʃtsdʒ.I l ɼ ʿ fɲsʘdʑtsɘɋdʑʘ ï 163,01 Ñ 2,09 dʒG/100 dʒdʑ. Ɨ tstɕʿɘdʑʶ ɥɋ L BŀGʘɁɥʷdʒɋ ɼ 3 lsʘ ɼ 4 Gtɕdʑtʃ ʘBfɲsdʑ lsdʑʘ ɘʝ dʑɋɥɋdʑʘ ɘdʒʿfɲsŀ ʬtsfɲʬtsdʑ̃tʃʿHʿɘ Ltɐtsfɲdʑʘ ɘʿHtʃtsɘʿHdʑts dʑʘ 8,8% ($p_2<0,01$) lsʘ 5,6 % ($p_3<0,01$). ɩ dʑʘɥʝ dʑdʑʷ ɥᴵ tsGts tʃtsϚʘLdʑɋϚʘɘ Ϛtɐtsɘʿ BŀGʘɁɥʿɘ ɼ 1 Gtɕdʑtʃɋ ʿL ʉ.I ʈ lsɋtʃtsdʒ.I l ɼ LtɐtsfɲsʘdʑtsɘϚʿdʑɥʿ Htsfɥɖʑ̃Hŀ dʑʘ 6,2 % ($p<0,05$), dʑɋʰ ʝ tʃtstɕʿɘdʑʷdʑts L ɼ 3 Gtɕdʑtʃtsʶ lsɘʘɐɋdʑ, ʰ ts dʑʘdʑ̃ɣ ʘdʑɋ Hts ʉ l lsɋtʃŀ.I l ɼ .

ʂ tsdʑɥʝ dʑlstɕʘɥʿʷ HʿʘɥɋdʑGdʑ̃ɥʝ tɐtsdʑ̃ɘ ɘ Ϛtɐtsɘʿ BŀGʘɁɥʿɘ dʑʘ tʃtsɥʘlsϚŀ ʝ Ϛfɲʃ ʝ tɐɋdʒʝ dʑlsŀ fɲsʘdʑtsɘɋdʑʘ 15,95Ñ0,74 dʒG/100 dʒdʑ Ŀ ɼ 3 Gtɕdʑtʃʿ lsɘʘɐɋdʑ ʿL ʉ l lsɋtʃtsdʒ.I l ɼ lsʘ 17,36Ñ0,83 dʒG/100 dʒdʑ Ŀ lsɘʘɐɋdʑ ɼ 4 Gtɕdʑtʃɋ ʿL ʉ lsɋtʃtsdʒ.I l ɼ BʝL ɘʿtɐtsGʿHdʑtsʾ tɕʿLdʑɋɥʿ dʒʿɣ LdʑʘɥʝdʑdʑʷdʒɋtʃtsϚʘLdʑɋϚʘ, ʘŀ lsɘʘɐɋdʑ ɼ 1 ʿ ɼ 2 Gtɕdʑtʃ ʿL fɲɋdʑ dʑɋdʒɋ lsɋtʃʘdʒɋ.I l ɼ ʘBfɲsdʑ lsdʑ ɘʝ dʑɋɥɋdʑɋ ɘdʒʿfɲsŀ HɋʘɥɋdʑGdʑ̃ɥʝ tɐtsdʑ̃ɘ Ŀ Ϛtɐtsɘʿ Bŀdʑɋ ʬʘϚlsɋɥdʑts dʑʘtsHdʑtsdʒ tɕʿɘdʑ ʿ fɲsʘdʑtsɘɋdʑɋ ɘʿHtʃtsɘʿHdʑts 17,18Ñ0,50 dʒG/100 dʒdʑ ʿ 17,05 Ñ 0,85 dʒG/100 dʒdʑ, ʰ ts ɘʿHtʃtsɘʿHʘdʑts ʬʿLʿtsdʑtsGʿɥdʑɋdʒ tʃʘtɕʘdʒʝ lstɕʘdʒHdʑʷ HʘdʑtsGts ɘɋHŀ lsɘʘɐɋdʑ.

l ʘdʒɋ ɘɋʷɘdʑ̃ dʑts, ʰ ts lstɐɋɘʘdʑ̃ LGtsHtsɘŀɘʘdʑdʑʷ ϚtstɐdʒtsɘtsʾHtsBʘɁϚɋ ʆ ʿϚtɐtsdʑ̃tʃtsɘʿls fɲʃtɐɋʷdʑts tʃʿHɘɋʰ ʝ dʑdʑ ɘ Ϛʿdʑɥʿ Htsfɥɖʑ̃Hŀ Ϛʿdʑ Ϛtsfɲsʿ HʿʘɥɋdʑGdʑ̃ɥʝ tɐtsdʑ̃ɘ Ŀ Ϛtɐtsɘʿ BŀGʘɁɥʿɘ fɲɋdʑ dʑɋ⊓ ɘtɕʿɘdʑtsɘʘɣ ʝ dʑɋ⊓ lsɋtʃʿɘ: dʑʘ 16,5% ($p<0,01$) ï Ŀ ɼ 1 Gtɕdʑtʃʿ ʿL ʉ.I ʈ lsɋtʃtsdʒ.I l ɼ lsʘ dʑʘ 19,6% ($p<0,05$) ï Ŀ ɼ 2 Gtɕdʑtʃʿ ʿL ʉ.I ɯ lsɋtʃtsdʒ.I l ɼ, tʃtɐɋ ɥᴵ tsdʒŀ dʑʘdʒɋ dʑ̃ ɘfɲsʘdʑtsɘdʑ̃ dʑts ɘʿtɐtsGʿHdʑɋ⊓ Ldʒʿdʑ ɘdʒʿfɲsŀ HʿʘɥɋdʑGdʑ̃ɥʝ tɐɋdʑ̃ɘ Ŀ Ϛtɐtsɘʿ BŀGʘɁɥʿɘ ɼ 3 lsʘ ɼ 4 Gtɕdʑtʃ, tʃtstɕʿɘdʑʷdʑts L tʃtsɥʘlsϚtsdʒ.

ʂ tsdʑɥʝ dʑlstɕʘɥʿʷ ⊓tsdʑ̃ fɲsʝ tɐtsdʑŀ Ŀ Ϛtɐtsɘʿ BŀGʘɁɥʿɘ ɘtsdʑɋdʑfɲϚtsʾ dʒʘ̂ʷfɲdʑtsʾ tʃtstɐtsHɋ dʑʘɘʿHGtsHʿɘdʑ dʑʘtʃtsɥʘlsϚŀ ʝ Ϛfɲʃ ʝ tɐɋdʒʝ dʑlsŀ Ldʑʘ⊓tsHɋdʑʘfɲ Ŀ ʘBfɲsdʑ lsdʑɋ⊓ ɘʝ dʑɋɥɋdʑʘ⊓ ɘʿH 20,97 Ñ 1,15 dʒG/100 dʒdʑ Hts 22,01 Ñ 0,91 dʒG/100 dʒdʑ, ʷϚʿ ɘʿHtʃtsɘʿHʘdʑɋ ʬʿLʿtsdʑtsGʿɥdʑɁ dʑtstɐdʒʿHdʑʷ HʘdʑtsGts ɘɋHŀ lsɘʘɐɋdʑ.

ʊ tɐɋɘʘdʑ̃ LGtsHtsɘŀɘʘdʑdʑʷ ϚtstɐdʒtsɘtsʾHtsBʘɁϚɋ ʆ ʿϚtɐtsdʑ̃tʃtsɘʿls Ŀ fɲϚdʑʘHʿ tɕʘɥʿtsdʑŀ ɘtʃtɐtsHtsɘɣ Htsfɥɖʑ̃Hŀ dʑ̃ ɘtʃdʑɋɘʘdʑts dʑʘ tɕʿɘʝ dʑ ɘdʒʿfɲsŀ ⊓tsdʑ̃ fɲsʝ tɐtsdʑŀ Ŀ

Ŝtetsə‘ BkzGʘʔɥ‘ə tɕ‘Ldʑ̸tsGts lsɖʧkz Ɉʅɼ, ʧtstɕ‘ədʑ̸ʷdʑ̸s L ʧtsɥʘlsŜtsdʒ HtsfŋʥHkz. Ɉ teɖ ɥᴵtsdʒkz əfŋsʘdʑ̸səd̸ʝdʑ̸s, ʰ ts ʘBfŋsdʑ̸ lsdʑ̸ əʝdʑ̸ɖɥɖdʑ̸ɖ ɥᴵtsGts ʧtsŜʘLdʑ̸ɖŜʘ ə Ŝtetsə‘ lsəʘteɖdʑ̸kzfŋ̄ HtsfŋʥHdʑ̸ɖ̄ Gtedʑ̸ʧ kz Ŝ‘dʑ̸ɥ‘ HtsfŋʥHkz LdʑʘtsHɖdʑ̸ɖfŋ dʑ̸ʘ tɕ‘ədʑ̸ əʝdʑ̸ɖɥɖdʑ̸ əɖ̄‘Hdʑ̸sGts ʧʝtɕ‘tsHkz ‘ fŋsʘdʑ̸səɖdʑ̸ɖ kz BkzGʘʔɥ‘ə ʉɈʈ ‘ ʉɈ ɯlsɖʧ‘ə Ɉʅɼ 22,02Ñ 0,76 lsʘ 22,03 Ñ 0,88 dʒG/100 dʒdʑ̸, ʘkz lsəʘteɖdʑ̸ʉʅ ‘ ʉ lsɖʧ‘ə Ɉʅɼ ə‘Hʧtsə‘Hdʑ̸s 21,42Ñ1,05 ‘ 21,01 Ñ1,04 dʒG/100 dʒdʑ̸.

ʗŜ ʧtsŜʘLʘdʑ̸ɖ dʑ̸ʘʰ ‘ HtsfŋʥHʮʝdʑ̸dʑ̸ʷ, Ŝtsdʑ̸ɥʝdʑ̸steʘɥ‘ʷ ʅʗɼʂ kz Ŝtetsə‘ BkzGʘʔɥ‘ə kzfŋ̄ HtsfŋʥHʮkzəʘdʑ̸ɖ̄ Gtedʑ̸ʧ dʑ̸ʘ ʧtsɥʘlsŜkz HtsfŋʥHkz ə‘Hʧtsə‘Hʘdʑʘ ʧʘteʘdʒʝlsteʘdʒ ʬ‘L‘tsdʑ̸sG‘ɥdʑ̸s’ dʑ̸stedʒɖ Hdʑ̸ʷ Hʘdʑ̸sGts əɖHkz lsəʘteɖdʑ̸‘ ʧʝteʝBkzəʘdʑʘ ə dʒʝʮʘ̄ ʘBfŋsdʑ̸ lsdʑ̸ɖ̄ əʝdʑ̸ɖɥɖdʑ̸ə‘H 14,30Ñ 0,73 Hts 15,75 Ñ 0,62 dʒG/100 dʒdʑ̸, ʷŜ‘ LdʑʘtsHɖdʑ̸ɖfŋ ə GteʘdʑɖɥʷĀ fŋsʘlsɖfŋsɖɥdʑ̸s’ ə‘tetsG‘Hdʑ̸sfŋs‘.

ʗŜ əɖʷəɖdʑ̸sfŋ, kzəʝHʝdʑ̸dʑ̸ʷ Hts fŋŜdʑʘHkz teʘɥ‘tsdʑ̸kz Ŝtstedʒsəts’ HtsBʘəŜɖ ʄ ‘Ŝtetsdʑ̸ʧtsə‘ls kz Ŝ‘dʑ̸ Ŝtsfŋs‘ 5,0 dʒG/ŜG Ŝtsdʑ̸ɥŜtstedʒ‘ə fŋʧteɖʷdʑ̸s ʧ‘Həɖʰ ʝdʑ̸dʑ̸ ə Ŝ‘dʑ̸ɥ‘ ʝŜfŋʧʝteɖdʒʝdʑ̸lskz, ədʒ‘fŋslskz ʅʗɼʂ kz Ŝtetsə‘ lsəʘteɖdʑ̸, dʑ̸ʝLʘdʑ̸ʝʮdʑ̸s ə‘H lsɖʧkz Ɉʅɼ ə‘Hʧtsə‘Hdʑ̸s dʑ̸ʘ 28,1%, 14,8%, 45,8% lsʘ 22,6 % ʧteɖ p<0,05 ī 0,001, ʧtstɕ‘ədʑ̸ʷdʑ̸s L ʧtsɥʘlsŜtsdʒʝŜfŋʧʝteɖdʒʝdʑ̸lskz.

Ɉ tstɕ‘ədʑ̸ ᴷ ɥɖ əʝdʑ̸ɖɥɖdʑ̸kz ədʒ‘fŋslskz ʅʗɼʂ ə Ŝtetsə‘ BkzGʘʔɥ‘ə tɕ‘Ldʑ̸ɖ̄ lsɖʧ‘ə Ɉʅɼ kz Ŝ‘dʑ̸ɥ‘ HtsfŋʥHkz əfŋsʘdʑ̸səd̸ʝdʑ̸s, ʰ ts dʑʘʔəɖʰ ʝ ’’ Ldʑʘɥʝdʑɖdʑɖʷfŋʧtsfŋsʝtɕ‘Gʘdʑɖfŋkzlsəʘteɖdʑɼ₂ Gtedʑ̸ʧɖ ‘L ʉɈ ɯlsɖʧtsdʒɈʅɼ, ʷŜʝ, ʧtstɕ‘ədʑ̸ ᴷ ɥɖ ‘L lsəʘteɖdʑʘdʒɖ ɼ₁, ɼ₃ lsʘ ɼ₄ Gtedʑ̸ʧ Bkzdʑ̸s Ltetsfŋdʑ̸s dʑ̸ʘ 10,2% (p<0,05), 35,5% (p<0,001) lsʘ 20,9% (p<0,01) ə‘Hʧtsə‘Hdʑ̸s. ʂtsdʑ̸ɥʝdʑ̸steʘɥ‘ʷ ʅʗɼʂ kz Ŝtetsə‘ lsəʘteɖdʑɼ₁ Gtedʑ̸ʧɖ ‘L ʉɈʈ lsɖʧtsdʒɈʅɼ Bkzdʑʘə‘tetsG‘Hdʑ̸s əɖʰ tsᴷ dʑɖʰ ʝ ʧtstɕ‘ədʑ̸ʷdʑ̸s L ɼ₃ Gtedʑ̸ʧtsᴷ ‘L ʉʅ lsɖʧtsdʒɈʅɼ dʑ̸ʘ22,9% (p<0,01).

Ɉ dʒ‘fŋs lsteɖʘɥɖdʑ̸dʑ̸ɥʝtetsdʑ̸kz kz Ŝtetsə‘ lsəʘteɖdʑ̸kzfŋ̄ HtsfŋʥHʮkzəʘdʑ̸ɖ̄ Gtedʑ̸ʧ dʑ̸ʘ ʧtsɥʘlsŜkz ʝŜfŋʧʝteɖdʒʝdʑ̸lskz dʑ̸ʝ əɖ̄tsHɖə Lʘ dʒʝʮ‘ ʬ‘L‘tsdʑ̸sG‘ɥdʑ̸ɖ̄ ʧʘteʘdʒʝlstɕ‘ə ‘ Ŝtsdʑ̸ɖəʘəfŋʷ ə GteʘdʑɖɥʷĀ ə‘H 24,39 Ñ 0,92 Hts 25,96Ñ 0,92 dʒG/100 dʒdʑ̸.

Ɉ Ŝ‘dʑ̸ɥ‘ ʝŜfŋʧʝteɖdʒʝdʑ̸lskz ʧ‘fŋdʑ̸ʷ lsteɖəʘdʑ̸sGts LGtsHtsəkzəʘdʑ̸dʑ̸ʷ Ŝtstedʒsəts’ HtsBʘəŜɖ Ŝtsdʑ̸ɥʝdʑ̸steʘɥ‘ʷ lsteɖʘɥɖdʑ̸dʑ̸ɥʝtetsdʑ̸ə kz Ŝtetsə‘ BkzGʘʔɥ‘ə Ltetsfŋsʘdʑʘ ʧtstɕ‘ədʑ̸ʷdʑ̸s L ʧtsɥʘlsŜtsdʒ HtsfŋʥHkz dʑ̸ʘ 16,3% (p<0,01), 15,7% (p<0,01), 28,3% (p<0,001) ‘ 13,9% (p<0,05) ə‘Hʧtsə‘Hdʑ̸s kz ɼ₁ ī ɼ₄ Gtedʑ̸ʧʘ̄. Ɉ teɖ ɥᴵtsdʒkz, [illegible] (Γ_2 [illegible]), [illegible] Γ_3 [illegible] Γ_4 [illegible] 14,5% [illegible] 14,6 % [illegible] $p<0,05$.

[illegible] 109,91Ñ0,95 [illegible]/100 [illegible] Γ_4 [illegible] 120,97Ñ1,47 [illegible]/100 [illegible] Γ_2 [illegible] 10,0%, [illegible] Γ_1 [illegible] Γ_3 [illegible] 116,95 Ñ1,30 [illegible] 114,02Ñ1,04 [illegible]/100 [illegible].

[illegible]

[illegible] Γ_2 [illegible] Γ_1, Γ_2 [illegible] Γ_4 [illegible] 3,8% ($p_1<0,05$), 6,6% ($p_2<0,001$) [illegible] 10,6 % ($p_3<0,001$). [illegible] Γ_4 [illegible] Γ_1, Γ_2 [illegible] Γ_3 [illegible] 6,1%, 9,6% [illegible] 3,6% [illegible] $p_1<0,01$ [illegible] 0,001.

[illegible]

[illegible] (p<0,05) [illegible] 15,7 ї 24,7%, [illegible] 4,0 ї 6,8% (p<0,01), [illegible] 45,8 ї 49,8% [illegible] p<0,05 ї p<0,001, [illegible].

[illegible] (p<0,05) [illegible] 15,7ї 24,7%, [illegible] ї [illegible] 4,0ї 6,8% (p<0,01) [illegible] p<0,05 ї p<0,001, [illegible].

Гормональний профіль крові бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible] 3.15.

[illegible] ї [illegible] ($г_2$ [illegible]), [illegible] ї [illegible] ($г_4$ [illegible]), [illegible] ($г_1$ ' $г_3$ [illegible]) [illegible] 4,23Ñ0,12 [illegible] ' 4,41Ñ0,14 [illegible] $г_2$ [illegible] 12,6% ' 8,9% [illegible] p<0,05 ї 0,01 [illegible] $г_4$ [illegible] ї [illegible] 13,1% (p<0,05).

[illegible]

ʙʟʛʘʕʯʷʤʒ ɘʦʤʣʢʤʐʕʦʹ ʤʒʘʷʄʧʦʹ ʧʦʦʥʜʢ ʤʘ ɘʻʜʛʦʜʻɘʤʹ, ʤʘʤʒʢ ɘʻʜʟʤʘʯʝʤʦ ɘʻʥʦʛʻʜʤʝ ʧʻʜɘʢʰ ʝʤʤʷ ɘʤʻʄʟʟ ʟʻʥʝʦʟʦʥʦʧʤʦʛʦ ʛʦʥʤʒʦʤʤ ʟ ʕʥʦɘʻ ʙʟʛʘʕʯʻɘ ʻʟ ʄʢʤ ʤʢʤʒʢ ʟʢʧʘʤʒʢ ɪ ɩ ɾ ʧʦʥʻɘʤʷʤʦ ʧʦʯʘʟʕʦʤʒʜʦʄʤʜʟ.

ʊʘʙʤʢʯʷ 3.15

ʂ ʦʤʢʝʤʟʥʘʯʻʷ ʛʦʥʤʒʦʤʻɘ ʟ ʕʥʦɘʻ ʙʟʛʘʕʯʻɘ ʥʻʟʤʢʏ ʟʢʧʻɘ ɪ ɩ ɾ ʤʘʟʤ ʟʛʦʜʦɘʟɘʘʤʤʷ ʕʦʥʤʒʦɘʦʹ ʜʦʙʘʕʢ ʆ ʻʕʥʦʤʧʦɘʟ, (MÑm, n=3)

ɫ ʦʕʘʟʤʢʕʢ	ʇ ʥʤʧʢ	ɫ ʝʥʻʦʜ ʜʦʄʝʤʜʟ		*p*
		ʧʦʯʘʦʕ	ʕʻʤʝʯ	
1	2	3	4	5
ʊʢʥʝ ʦʟʥʦʧʻʤ, ʤʤʒʦʤ /ʤ	Γ 1	4,23Ñ0,12	5,82Ñ0,09	$p<0,001$
	Γ 2	4,84Ñ0,08	6,61Ñ0,06	$p<0,001$
		$p_1<0,05;p_3<0,01$	$p_3<0,001$	
	Γ 3	4,41Ñ0,14	6,12Ñ0,11	$p<0,001$
			$p_1<0,05$	
	Γ 4	4,21Ñ0,12	3,91Ñ0,10	$p<0,05$
		$P_2<0,05$	$p_2<0,05$	
ʊʥʢʕʦʜʟʢʥʦʤʤ, ʤʤʒʦʤ /ʤ	Γ 1	14,8Ñ0,61	21,8Ñ0,42	$p<0,001$
	Γ 2	15,4Ñ0,72	27,1Ñ0,36	$p<0,001$
			$p_1<0,001; p_3<0,001;$	
	Γ 3	14,2Ñ0,58	16,3Ñ0,44	$p<0,05$
	Γ 4	12,1Ñ0,50	11,8Ñ0,35	
		$p_1<0,05;p_3<0,05$	$p<0,05$	
ʊʢʥʦʕʄʢʤ, ʤʤʒʦʤ /ʤ	Γ 1	82,1Ñ2,11	93,4Ñ1,85	$p<0,05$
	Γ 2	81,9Ñ2,51	108,9Ñ1,89	$p<0,001$
			$p_2<0,05$	
	Γ 3	84,4Ñ2,04	85,8Ñ1,92	$p<0,05$
	Γ 4	78,9Ñ1,98	75,1Ñ1,94	
			$p_3<0,05$	

Ʇ ţєţѕнţѕэӽ ʝ ďźďźʷ ŀѕʘвďźſɥʿ 3.15

1	2	3	4	5
ůďǻůдźďźǻ, ţſďӡśďź /ďź	Г 1	345,1Ñ3,24	349,1Ñ3,38	
	Г 2	332,4Ñ3,31	366,5Ñ3,44	$p<0,01$
		$p<0,01$	$p_1<0,01;$	
	Г 3	358,9Ñ3,09	370,2Ñ3,12	$p<0,05$
			$p_1<0,05$	
	Г 4	361,4Ñ3,12	369,6Ñ3,19	
		$p_1 p_2<0,01;$	$p_1<0,001$	

ʇ ţѕʕţєʝ ďӡʘ ŀź вŀźԍʘʔ ɥʿэ Г 1 ԍţєďźţſɕ ʿʟ ʉ ʝ ţ ŀѕɕţſţѕďӡ ʝ ʅ Г эʿďźвŀźэ эɕʰ ɕʔ ďźʘ 37,6%, ŀź Г 2 ԍţєďźţſʿ ī ďźʘ 36,6%, ʘ ŀź Г 3 ԍţєďźţſʿ ї ďźʘ 38,8% ţſţєɕ (p<0,01). Ʇ ţєѕŀѕʝ, ŀź вŀźԍʘʔ ɥʿэ Г 4 ԍţєďźţſɕ, ʷʕʿ ďźʘďźʝӽʘďźɕ нţѕ ʉ ŀѕɕţſŀź ʝ ʅ Г, ʕţѕďźʯʝ ďźѕţєʘɥʿʷ ԍţѕţєďӡţѕďźź э ʕʿďźʯʿ нţѕfɥďźнŀź вŀźďźʘďӡʝ ďźʰ ţѕʶ ďźʘ 7,1% (p<0,05).

ʝ ʝ ďźɕɥɕďźʘ эďӡʿfɥѕŀź ԍţѕţєďӡţѕďźź ŀź ʕţєţѕэʿ вŀźԍʘʔ ɥʿэ ʟ ţєʿʟďźɕďӡɕ ŀѕɕţſţѕďźţѕԍʿɥďźɕďӡɕ ţѕfɥţѕвďźɕэţѕfɥѕʷďӡɕ ʝ ʅ Г ďźʘ ŀѕďź ʟԍţѕнţѕэŀźэʘďźďźʷ ʕţѕţєďӡţѕэţѕʾ нţѕвʘэʕɕ вŀźďźʘďźʔэɕʰ ţѕʶ эʕʿďźʯʿ нţѕfɥďźнŀź ŀź Г 2 ԍţєďźţſʿ ŀѕэʘţєɕďźʿʟ ʉ ʝ ůŀѕɕţſţѕďӡ ʝ ʅ Г ʟ ʘвfɥţѕďź ŀѕďźɕďӡʟďźʘɥʝ ďźďźʷďӡ 6,61Ñ0,06 ďźďӡţѕďź /ďź, нʝ ʰ ţѕ ďźɕӽ ɥţѕʶ, ďźӽ ŀź Г 2 ԍţєďźţſʿ, эɕʷэďźʝ ďźţѕ ŀź Г 3 ԍţєďźţſʿ ŀѕэʘţєɕďź ʿʟ ʉ ʅ ŀѕɕţſţѕďӡ ʝ ʅ Г ʿʟ ʘвfɥţѕďź ŀѕďźɕďӡʟďźʘɥʝ ďźďźʷďӡ 6,12Ñ0,11 ďźďӡţѕďź /ďź, ʘ ŀѕʘʕţѕӽ ŀź Г 1 ԍţєďźţſʿ ŀѕэʘţєɕďź ʿʟ ʉ ʝ ţ ŀѕɕţſţѕďӡ ʝ ʅ Г ŀѕʘ ʘвfɥţѕďź ŀѕďźɕďӡ ʟďźʘɥʝ ďźďźʷďӡ 5,82Ñ0,09 ďźďӡţѕďź /ďź.

ʆ ʘѕʝ ďӡʘѕɕɥďźɕʔ ʘďźʘďźʟ ʘвfɥţѕďź ŀѕďźɕʭ ʟďźʘɥʝ ďź эďӡʿfɥѕŀź ŀѕɕţєʝ ţѕŀѕţєţѕţſʿďźŀź ŀź ʕţєţѕэʿ вŀźԍʘʔ ɥʿэ Г 2 ԍţєďźţſɕ вŀźэ вʿďźʰ ɕďӡ ďźӽ ŀź Г 3 ԍţєďźţſʿ ŀѕэʘţєɕďź ďźʘ 8,0% (p<0,001), ʘ ŀź Г 1 ԍţєďźţſʿ ŀѕэʘţєɕďź ī ďźʘ 13,6% (p<0,001). ʂ ţѕďźʯʝ ďźѕţєʘɥʿʷ ŀѕʿţєʝ ţѕŀѕţєţѕţſďźţѕԍţѕ ԍţѕţєďӡţѕďźź ŀź ʕţєţѕэʿ вŀźԍʘʔ ɥʿэ Г 4 ԍţєďźţſɕ ʉ ŀѕɕţſŀź ʝ ʅ Г э ʕʿďźʯʿ нţѕfɥďźнŀź вŀźďźʘďźɕӽ ɥţѕʶ, ďźӽ ŀź ŀѕэʘţєɕďź Г 2 ďźʘ 40,9% (p<0,001).

ůʉ ďźʘʷэďźɕʭ ţєʝ ʟŀźďź ŀѕʘѕʿэ ŀѕʘвďźɕɥʿ эɕţſďźɕэʘ, ʰ ţѕ ʕţѕďźʯʝ ďźѕţєʘɥʿʷ ŀѕţєɕʔ ţѕнŀѕɕţєţѕďźďź ŀź ʕţєţѕэʿ ďźʘ ţſţѕɥʘѕʕŀź нţѕfɥďźнŀź вŀźďźʘ ďźʘʔ эɕʰ ţѕʶ ŀź вŀźԍʘʔ ɥʿэ Г 2 ԍţєďźţſɕ, ʷʕʿ ďźʘďźʝӽʘďźɕ нţѕ ʉ ʝ ůŀѕɕţſŀź ʝ ʅ Г. ʝ ʘвfɥţѕďź ŀѕďźɕʭ эʝ ďźɕɥɕďźʘʭ эďӡʿfɥѕ

Għstedʒsdžž lž Ҁtetsɘʻ lsɘʘteʠdžʮʻʻ' Għedžtʃʠ fnjsʘdʒsɘʠɘ 15,4Ñ0,72 dʒdʒsdž /dž, lstsʜʻ ʷҀ lž lsɘʘteʠdžʮ ɼ $_1$ ʻ ɼ $_3$ Għedžtʃ ʻʟ ʉ ɪ ʈ ʻ ʉ ɭ lsʠtʃʘdʒʠ ɪ ɭ ɼ ʔtsGts teʻɘʝdž lž Ҁtetsɘʻ ʙlžɘ ʜʝ^{ɦ} ts dʑʠɣ ʮʠʔ, ʟ ʘʙ fnjtsdž lsdʑʠdʒʠ ɘʝ dʑʠʮʠdʑʘdʒʠ 14,8Ñ0,61 ʻ 14,2Ñ0,58 dʒdʒsdž /dž, ^{ɦ} ts ʙlždʒs ɘʻʜtʃtsɘʻʜdʒs dʑʘ3,9% ʻ 7,8% (p<0,05) dʒʝdž ʝ, dʑɣ lž ɼ $_2$ Għedžtʃʻ. ɿ tetslsʝ, dʑʔdʑʠɣ ʮtsʶ ɘʠʷɘʠdʑʘfnj Ҁtsdʑʮʝ dʑstedʘʮʻʷ lsteʠʔtsʜlsʠtetsdždʑž lž Ҁtetsɘʻ ʙlžGʘʔʮʻɘ ɼ $_4$ Għedžtʃʠ. ɪ ʝ dʑʠʮʠdʑʘʔtsGts ɘdʒʻfnjslž lž Ҁtetsɘʻ ʮʻʻ' Għedžtʃʠ lsɘʘteʠdžʙlždʑʘ dʒʝ dž tsʶ , dʑɣ lž lsɘʘteʠdžʮ ɼ $_2$ Għedžtʃʠ dʑʘ21,4% (p_1<0,05).

ɭ ʘ lsdž lsteʠɘʘdʒsGts ʟGtsʜtsɘlžɘʘdʑdžʷ Ҁtstedʒsɘts' ʜtsʙʘɘҀʠ ʄ ʻҀtetsdžtʃtsɘʻls lž Ҁʻdž Ҁtsfnjsʻ 5,0 dʒG/ҀG Ҁtsdʑʮ Ҁtstedʒɘ teʘʮʻtsdžž Ҁtsdʑʮʝ dʑstedʘʮʻʷ Għstedʒsdžž ɘ Ҁtetsɘʻ ʙlžGʘʔʮʻɘ lž Ҁʻdʑʮʻ ʜtsfnjdžʜlž ʟtetsfnjsʘdžʘ tʃtsteʻɘdžʷdʒs ʟ ɘʠʭʻʜdʑʠdʒ tʃʝteʻtsʜtsdʒ ɭ ʘʔɘʠ^{ɦ} ʻ ʟdʑʘʮʝ dʑdžʷ ʮʲ tsGts tʃtsҀʘʟdʑʠҀʘ fnjtʃtsfnjsʝ teʻGʘdʑʠfnj lž Ҁtetsɘʻ lsɘʘteʠdžʮ ɼ $_1$ ʻ ɼ $_2$ Għedžtʃ ʻʟ ʉ ɪ ʈ ʻ ʉ ɪ ɯlsʠtʃʘdʒʠ ɪ ɭ ɼ , ʘʙ fnjtsdž lsdž ɘʝ dʑʠʮʠdʑʠ ʷҀʠʭ fnjsʘdʒsɘʠdʑʠ 21,8Ñ0,42 ʻ 27,1Ñ0,36 dʒdʒsdž /dž ɘʻʜtʃtsɘʻʜdʒs, ʘ ʜʝ^{ɦ} ts dʑʠɣ ʮʠdʒ ɘtsdʒs ʙlždʒs lž lsɘʘteʠdž ɼ $_3$ Għedžtʃʠ lsʘ ʜtsteʻɘdž ɘʘdʒs 16,3Ñ0,44 dʒdʒsdž /dž ɿ tsteʻɘdž ʶ ʮʠ ʮʻ ʟdʑʘʮʝ dʑdžʷ ʟ 'ʭ ɘʝ dʑʠʮʠdʑʘdʒʠ dʑʘ tʃtsʮʘsҀlž ʜtsfnjdžʜlž ɘʠʷɘʠdʒsfnj , ^{ɦ} ts ɘdʒʻfnjs Għstedʒsdžž lž Ҁtetsɘʻ lsɘʘteʠdžʮ ɼ $_1$ ʻ ɼ $_2$ Għedžtʃ ʟtetsfnjsʘɘ ɘʻʜtʃtsɘʻʜdʒs lž 1,5 ʻ 1,8 teʘʟʻɘ tʃteʠ p<0,05ī 0,001, ʘ lž ɼ $_3$ Għedžtʃʻ ī lž 1,1 teʘʟʠ. ʊ ʙlžGʘʔʮʻɘ ɼ $_4$ Għedžtʃʠ ʻʟ ʉ lsʠtʃtsdʒ ɪ ɭ ɼ ɘdʒʻfnjs Għstedʒsdžž lž Ҁtetsɘʻ tʃʻfnjdžʷ ʟGtsʜtsɘlžɘʘdʑdžʷ Ҁtstedʒsɘts' ʜtsʙʘɘҀʠ ʟdʑʘʭtsʜʠɘfnjʷ ɘ dʒʝ ɣ ʘʭ ɘʝ dʑʠʮʠdžɘʠʭʻʜdʒsGts tʃʝteʻtsʜlž ʜtsfnjdžʜlž.

ɯdž ʠʔ Għstedʒsdž ^{ɦ} ʠlststʃtsʜʻʙdʒs' ʟʘdʒsʟʠ ï lsʠtetsҀfnjʠdž dʑʘ tʃtsʮʘsҀlž ʝҀfnjtʃʝteʠdʒʝ dʑslž ɘ Ҁtetsɘʻ ʙlžGʘʔʮʻɘ fnjʠdž dʑʠʭ lsʠtʃʻɘ ɪ ɭ ɼ dʒʝ dʒʘɘ fnjžlslsʻɘʠʭ teʻʟdʑʠʮʲ ʟʘ ɘdʒʻfnjstsdʒ lsʘ Ҁtsdʑʠɘʘɘfnjʷ ɘʻʜ 81,9Ñ2,51 dʒdʒsdž /dž ʜts 84,4Ñ2,04 dʒdʒsdž /dž lž lsɘʘteʠdž ɼ $_1$, ɼ $_2$ ʻ ɼ $_3$ Għedžtʃ ʙʝʟ ɘʻtetsGʻʜdʒs' teʻʟdʑʠʮʻ dʒɣ ʟdʑʘʮʝ dʑdžʷdʒʠ tʃtsҀʘʟdʑʠҀʘ ʊ lsɘʘteʠdžʉ lsʠtʃlž ɪ ɭ ɼ (ɼ $_4$ Għedžtʃʠ) ɘdʒʻfnjs Għstedʒsdžž lž Ҁtetsɘʻ dʑʘ tʃtsʮʘsҀlž ʜtsfnjdžʜlž ʙlžɘ dʑʔdʑʠɣ ʮʠʔ ʻ fnjsʘdʒsɘʠɘ ɘfnj tsGts 78,9Ñ1,98 dʒdʒsdž /dž.

ʊteʠɘʘdʝ ʟGtsʜtsɘlžɘʘdʑdžʷ lž fnjҀdʑʘʜʻ teʘʮʻtsdžž Ҁtstedʒsɘts' ʜtsʙʘɘҀʠ ʄ ʻҀtetsdžtʃtsɘʻls fnjtʃteʠʷdʒs ɘʻtetsGʻʜdʒsdʒlž tʃʻʜɘʠ^{ɦ} ʝ dʑdž Ҁtsdʑʮʝ dʑstedʘʮʻ' Għstedʒsdžž lsʠtetsҀfnjʠdžž ɘ Ҁtetsɘʻ ʙlžGʘʔʮʻɘ fnjʠdž dʑʠʭ lsʠtʃʻɘ ɪ ɭ ɼ (ɼ $_1$ ï ɼ $_3$) Għedžtʃ, ɘʻʜtʃtsɘʻʜdʒs, dʑʘ11,8 (p<0,01), 10,2 (p<0,01) lsʘ15,9 % (p<0,001), tʃtsteʻɘdžʷdʒs ʟ tʃtsʮʘsҀtsdʒ ʜtsfnjdžʜlž. ʈ ʘʟtsdʒ ʟ lsʠdʒ lž lsɘʘteʠdž ɼ $_4$ Għedžtʃ ʉ lsʠtʃlž ɪ ɭ ɼ Ҁtsdʑʮʝ dʑstedʘʮʻʷ

[illegible].

[illegible], [illegible] 2 [illegible]. [illegible] 1 [illegible] 16,6%, [illegible] 3 [illegible] 26,9% [illegible] 4 [illegible] 45,0% [illegible] p<0,05 [illegible] 0,001.

[illegible] 4 [illegible] 3 [illegible] (361,4Ñ3,12 [illegible] 358,9Ñ3,09 [illegible]/[illegible]) [illegible] 1 [illegible] 2 [illegible] (345,1Ñ3,24 [illegible] 332,4Ñ3,31 [illegible]/[illegible]). [illegible] 4 [illegible]. [illegible] 1 [illegible] 4,7% [illegible] p<0,01 [illegible] 2 [illegible] 8,7% [illegible] p<0,01, [illegible] 3 [illegible].

[illegible] 2 [illegible] 3 [illegible] 10,3%(p<0,01) [illegible] 3,1%(p<0,05) [illegible].

[illegible], [illegible] 370,2Ñ3,12 [illegible]/[illegible] 369,6Ñ3,19 [illegible]/[illegible] 366,5Ñ3,44 [illegible]/[illegible] 349,1Ñ3,38 [illegible]/[illegible] [illegible], [illegible] 5,7%, [illegible] 5,6% [illegible] 4,8% [illegible] p<0,05ī 0,001.

[illegible], [illegible] 5,0 [illegible]

[illegible]

[illegible] 5,0 [illegible] 8,0% (p<0,001), [illegible] 13,6% (p<0,001), [illegible] 40,9% (p<0,00). [illegible] 1,5, 1,8 [illegible] 1,1 (p<0,05– 0,001) [illegible] 10,3% (p<0,01) [illegible].

Активність системи АОЗ у бугайців волинської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible]

[illegible] 3.16

[illegible] 3.16

[illegible]

[illegible] (MÑm, n=5)

[illegible]	[illegible]	[illegible]		$p <$
		[illegible]	[illegible]	
[illegible]	[illegible] 1	6,78Ñ0,26	5,42Ñ0,20	$p<0,05$
	[illegible] 2	6,24Ñ0,29	5,15Ñ0,11	$p<0,001$
	[illegible] 3	6,98Ñ0,13	5,84Ñ0,15	$p<0,001$
			$p_2<0,01$	
	[illegible] 4	6,54Ñ0,24	5,37Ñ0,15	$p<0,001$
			$p_2<0,05$	
[illegible] 480/[illegible]	[illegible] 1	2,41Ñ0,12	1,98Ñ0,11	$p<0,05$
	[illegible] 2	2,32Ñ0,16	1,82Ñ0,10	$p<0,05$
	[illegible] 3	2,81Ñ0,18	2,04Ñ0,10	$p<0,01$
	[illegible] 4	2,51Ñ0,21	1,79Ñ0,09	$p<0,01$
[illegible]	[illegible] 1	4,32Ñ0,18	3,12Ñ0,20	$p<0,001$
	[illegible] 2	3,91Ñ0,18	2,84Ñ0,09	$p<0,001$
		$p_2<0,01$	$p_2<0,01$	
	[illegible] 3	4,63Ñ0,14	3,39Ñ0,13	$p<0,001$
	[illegible] 4	4,46Ñ0,16	3,05Ñ0,12	$p<0,001$
		$p_3<0,05$		

[illegible] 6,24Ñ0,19 [illegible] 6,98Ñ0,13

[illegible] / [illegible] .

[illegible] 20,1%, 16,3%, 17,5% [illegible] 17,9 %(p<0,001) [illegible] $_1$, [illegible] $_2$, [illegible] $_3$ [illegible] $_4$ [illegible]

[illegible] $_3$ [illegible] $_1$ [illegible] 7,7%, [illegible] $_2$ [illegible] 13,4 (p_2<0,01) [illegible] $_4$ [illegible] 8,8% (p_2<0,05).

[illegible], [illegible]. [illegible].

[illegible], [illegible] 17,8 (*p<0,05*), 27,4 (*p<0,01*), 21,6 (*p<0,01*) [illegible] 28,9 % (*p<0,01*) [illegible] $_1$, [illegible] $_2$, [illegible] $_3$ [illegible] $_4$ [illegible] $_4$ [illegible], [illegible] $_3$ [illegible]

[illegible], [illegible] $_2$ [illegible] (3,91Ñ0,18 [illegible] / [illegible]), [illegible] $_3$ [illegible] $_4$ [illegible] 15,6 (*p_2<0,01*) [illegible] 12,3 % (*p_3<0,01*), [illegible], [illegible] .

[illegible] 5,0 [illegible] 27,8%, 26,8%, 27,4% [illegible] 31,6 % [illegible] p<0,001 [illegible] $_1$, [illegible] $_2$, [illegible] $_3$ [illegible] $_4$ [illegible]

ʢ'ʤʌɥ' ʝʢʄʧʝʇʦʤʒʝʤʎʑʟ ɘ'ʜʟʤʘʉʝʤʘ ʟ ɼ $_2$ ʛʦʤʟʧ' (2,84Ñ0,09 ʤʓʤʒʑʤʟ/ʤ), ɘʝʤʦʯʯʤʘ ʷʢʦ' ʤʘ 16,2 % ($p_2<0,01$) ʙʟʤʘ ʤʒʝʤʐ ʦʶ ʧʦʦʗɘʤʐʷʤʦ ʟʤʘʉʝʤʐʷʤʒ ɥᴵ ʦʛʦ ʧʦʢʘʟʤʢʢʘʟ ʪɘʘʇʦʤʐɼ $_3$ ʛʦʤʟʧʦ 'ʟ ʉl ʪʦʧʦʤʒʪʦʧʦʤʒ.l l ɼ .

ɸ ʤʘʤʐʟʟʶ ɥʦ ʘʢʪʦɘʤʐʄʦʑᴵ ʷʝ ʇʦʤʒʝʤʎʑ'ɘ ʄʧʄʪʝʤʒʦ ʘʤʎʑʦʦʢʄʧʜʘʤʎʑʤʦʛʦ ʟʘʈʦʄʑʟ (ɸ ʃ ɿ) ï ʄʟʧʝʇʦʢʄʧʜʜʦʄʧʟʑʘʟʦ (ʉʃ ɼ), ' ʛʤʟʑʘʑ'ʦʤʧʝʇʦʢʄʧʜʘʟʦ (ʇʔ ʃ) ʢʦʦɘ' ʙʟʛʘʔɥ'ɘ (ʪʘʙʤʦɥʷ 3.17), ʄʧʤʜ ʟʘʟɘʘʮʦʪʦ, ʰ ʦ ʘʢʪʦɘʤʐʄʦʑᴵ ʉʃ ɼ ʤʘʧʦɥʘʢʟ ʝʢʄʧʝʇʦʤʒʝʤʎʑʟ ʙʟʤʘʤʘʔɘʦʰ ʦʶ ʟ ɼ $_2$ ʛʦʤʟʧ' 'ʟ ʉ.l ɯʪʦʧʦʤʒ.l l ɼ ' ʄʦʘʤʦɘʦʤʘ 0,402Ñ0,010 % ʙʤʦʢ.ʦʝ ʘʢɥ./1ʛHb, ʰ ʦ ʧʝʦʝɘʦʰ ʟɘʘʤʦ ʾʾ ɘʝʤʦʯʯʤʟ ʤʘ 14,5% ʟ ʪɘʘʇʦʤʐɼ $_3$ ʛʦʤʟʧʦ 'ʟ ʉl ʪʦʧʦʤʒ.l l ɼ , ʤʘ 5,2% (p$_1$<0,01)ī ʟ ʪɘʘʇʦʤʐ ɼ $_1$ ʛʦʤʟʧʦ 'ʟ ʉ.l ʈ ʪʦʧʦʤʒ.l l ɼ ' ʤʘ 28,8 % (p$_3$<0,001) ī ʟ ʪɘʘʇʦʤʐɼ $_4$ ʛʦʤʟʧʦ 'ʟ ʉ ʪʦʧʦʤʒ.l l ɼ .

.l ʦʢʦʦʦʄʘʤʟʷ ʢʦʦʤʒʦɘʦʾ ʜʦʙʘɘʢʦ ʃ 'ʢʦʦʤʟʧʦɘ'ʪ ʧʦʦ ɘ'ʜʛʦʜ'ɘʤʐ ʙʟʛʘʔɥ'ɘ ʄʧʦʷʤʦ ʧ'ʜɘʦʰ ʝʤʟ ɘ ʢ'ʤʌɥ' ʜʦʄʧʤʜʟ ʘʢʪʦɘʤʦʄʦ' ʷʝ ʇʦʤʒʝʤʎʘʢʦʦɘ' ʪɘʘʇʦʤʐ ʟʄʝʭ ɥʦʪʦʦᴵ ʦʭ ʛʦʤʟʧ, ɘ'ʜʧʦɘ'ʜʤʦ ʤʘ 28,7%, 35,0%, 27,7% ' 19,9 %($p<0,001$), ʧʦʦʗɘʤʐʷʤʦ ʟ ʧʦɥʘʢʦʤʒʝʢʄʧʝʇʦʤʒʝʤʎʑʟ.

ʗʢ ɘʦʷɘʦʤʦʄʝ, ʤʘ ʪʤʐ ʪʦʦɘʘʤʦʛʦ ʟʛʦʜʦɘʟɘʘʤʟʷ ʢʦʦʤʒʦɘʦʾ ʜʦʙʘɘʢʦ ʘʢʪʦɘʤʐʄʦʑᴵ ʉʃ ɼ ʢʦʦɘ' ʙʟʤʘɘʦʰ ʦʶ ʟ ʪɘʘʇʦʤʐ'ʟ ʄʧʦʤ ʤʦʒʪʦʧʦʤʒ.l l ɼ , ʤʐʮ ʟ ʪɘʘʇʦʤʐʄʧʤʘʙʦʛʦ ʪʦʧʟ.l l ɼ . ɿʦʢʦʝʤʒʘ ʟʤʘʉʝʤʐʷ ɥᴵ ʦʛʦ ʧʦʢʘʟʤʢʢʘʟ ʪɘʘʇʦʤʐɼ $_4$ ʛʦʤʟʧʦ ʙʟʤʦ ʤʦʮ ɥʦʤʒ ʤʘ 23,9% (p$_1$<0,001), 21,1% (p$_2$<0,001) ʪʘ 27,1% (p$_3$<0,001), ʧʦʦʗɘʤʐʷʤʦ ʟ ɼ $_1$, ɼ $_2$ ' ɼ $_3$ ʛʦʤʟʧʘʤʦ ʙʟʛʘʔɥ'ɘ.

ɸ ʢʪʦɘʤʐʄʦʑᴵ ʇʔ ʃ ʢʦʦɘ' ʤʘ ʧʦɥʘʢʟ ʝʢʄʧʝʇʦʤʒʝʤʎʑʟ ʙʟʤʘ ɘ'ʦʛ'ʜʤʦ ɘʦʰ ʦʶ ʟ ʪɘʘʇʦʤʐ ɼ $_2$ ʛʦʤʟʧʦ ʉ.l ɯ ʪʦʧʟ .l l ɼ ʄʦʘʤʦɘʦʤʘ 367,3Ñ14,9 ʤʓʤʒʑʤʟ/ʭɘ.GSH ʤʘ 1ʛHb. ʎʝ ʘʙʄʧʤʐ ʪʤʝ ʟʤʘʉʝʤʐʷ ʧʦʢʘʟʤʢʢʘʙʟʤʦ ʙ'ʤʐ ʰ ʦʤʒ ʧʦʦʗɘʤʐʷʤʦ ʟ ʔʦʛʦ ɘʝʤʦʯʯʤʦʶ ʟ ʪɘʘʇʦʤʐɼ $_1$, ɼ $_2$ ' ɼ $_3$ ʛʦʤʟʧ, ɘ'ʜʧʦɘ'ʜʤʦ ʤʘ 13,4% (p$_1$<0,05), 27,0% (p$_2$<0,01) ʪʘ 33,1% (p$_3$<0,001). ʈ ʘʟʦʤʒʟ ʪʦʤʒ ʘʢʪʦɘʤʐʄʦʑᴵ ʇʔ ʃ ʢʦʦɘ' ʙʟʛʘʔɥ'ɘ ɼ $_4$ ʛʦʤʟʧʦ ʉ ʪʦʧʟ.l l ɼ ɘʦʷɘʦʤʘʄʝ ʤʘʔʤʦʮ ɥʦʶ , ʟ ʘʙʄʧʤʐ ʪʤʦʶ ɘʝʤʦʯʯʤʦʶ 275,9Ñ15,1 ʤʓʤʒʑʤʟ/ʭɘ.GSH ʤʘ 1ʛHb, ʷʢʘ ʙʟʤʘ ʤʒʝʤʐ ʦʶ ɘ'ʜ ʟʤʘʉʝʤʐʷ ɥᴵ ʦʛʦ ʧʦʢʘʟʤʢʢʘ ʟ ʙʟʛʘʔɥ'ɘ ɼ $_2$ ʛʦʤʟʧʦ ʤʘ 24,9%, ʟ ɼ $_1$ ʛʦʤʟʧʦ ī ʤʘ 14,8% ' ʟ ɼ $_3$ ʛʦʤʟʧʦ ï ʤʘ 4,6% ʧʦʦ p<0,05 ī 0,001.

ʊ ʘ ʙ ʣ ʨ ʢ ɥʷ 3.17

ɸ ʕ ʪ ʢ ɘ ʤ ʄ ʩ ʲ ɱ ʧ ʄ ʦ ʤ ʒ ɸ ʆ ɿ ʑ ʙ ʑ ʛ ʘ ʔ ɥ ʻ ɘ ʦ ʗ ʟ ʤ ʢ ʞ ʪ ʢ ʧ ʻ ɘ ʇ ɩ ɼ ʤ ʘ ʪ ʤ ʟ ʛ ʦ ʜ ʦ ɘ ʑ ɘ ʘ ʤ ʤ ʷ

ʕ ʦ ʦ ʤ ʒ ɘ ʦ ʾ ʜ ʦ ʙ ʘ ɘ ʕ ʢ ʆ ʻ ʕ ʦ ʤ ʦ ʦ ɘ ʻ ʪ, (MÑm, n=10)

ɿ ʦ ʕ ʘ ʟ ʤ ʢ ʕ	ʇ ʦ ʤ ʦ ʢ	ɿ ʝ ʦ ʗ ʦ ʜ ʜ ʦ ʄ ʤ ʜ ʑ		p <
		ʧ ʦ ɥ ʘ ʪ ʦ ʕ	ʕ ʻ ʤ ʝ ɥ	
ʉ ʆ ɼ , % ʙ ʤ ʦ ʕ. ʦ ʝ ʘ ʕ ɥ. / 1 ʛ Hb	ɼ 1	0,382Ñ0,016	0,492Ñ0,012	*p<0,001*
	ɼ 2	0,402Ñ0,010	0,513Ñ0,020	*p<0,001*
		p_2<0,01		
	ɼ 3	0,351Ñ0,014	0,474Ñ0,013	*p<0,001*
	ɼ 4	0,312Ñ0,014	0,374Ñ0,009	*p<0,01*
		p_1<0,01; p_3<0,001	*p_1<0,001; p_2<0,001* *p_3<0,001*	
ʇ ɿ ʆ , ʤ ʒ ʤ ʒ ʤ /ʞ ɘ. GSH ʤ ʘ 1 ʛ Hb	ɼ 1	323,8Ñ14,3	433,9Ñ15,1	*p<0,001*
	ɼ 2	367,3Ñ14,9	451,1Ñ12,5	*p<0,001*
		p_1<0,05; p_2<0,01	*p_2<0,001*	
	ɼ 3	289,2Ñ17,9	371,2Ñ14,8	*p<0,001*
			p_1<0,01	
	ɼ 4	275,9Ñ15,1	344,9Ñ8,9	*p<0,001*
		p_1<0,05;p_3<0,001	*p_1<0,001;p_3<0,001*	

ɩ ʄ ʩ ʘ ʤ ʦ ɘ ʤ ʝ ʤ ʦ, ʱ ʦ ʘ ʕ ʪ ʢ ɘ ʤ ʄ ʩ ʲ ʇ ɿ ʆ ʑ ʙ ʑ ʛ ʘ ʔ ɥ ʻ ɘ ɘ ʄ ʝ ʞ ʜ ʦ ʄ ʤ ʜ ʤ ʢ ʞ ʛ ʦ ʤ ʧ ɘ ʕ ʻ ʤ ʝ ʻ ʝ ʕ ʄ ʧ ʝ ʦ ʢ ʤ ʒ ʤ ʪ ʑ ʤ ʘ ʪ ʤ ʪ ʦ ʢ ɘ ʘ ʤ ʦ ʛ ʦ ʟ ʛ ʦ ʜ ʦ ɘ ʑ ɘ ʘ ʤ ʤ ʷ ʆ ʻ ʕ ʦ ʤ ʦ ʦ ɘ ʻ ʪ ʑ ʙ ʑ ʤ ʘ ɘ ʢ ʱ ʦ ʸ ʑ ɼ 1, ɼ 2, ɼ 3 ʻ ɼ 4 ʛ ʦ ʤ ʧ ʘ ʞ ɘ ʻ ʜ ʧ ʦ ɘ ʻ ʜ ʤ ʦ ʤ ʘ 34,0%, 28,4%, 22,8% ʪ ʘ 25,0% ʧ ʦ ʢ p<0,001, ʤ ʞ ʤ ʘ ʧ ʦ ɥ ʘ ʪ ʕ ʑ ʜ ʦ ʄ ʤ ʜ ʑ. ɩ ʄ ʩ ʘ ʤ ʦ ɘ ʤ ʝ ʤ ʦ ʪ ʘ ʕ ʦ ʞ, ʱ ʦ ʑ ʪ ɘ ʘ ʦ ʢ ʤ ʷ ʕ ʻ ʤ ʘ ʤ ʝ ʞ ʘ ʤ ʢ ʜ ʦ ʄ ʧ ʤ ʤ ʢ ʞ ʪ ʢ ʧ ʻ ɘ ɩ ɼ ʘ ʕ ʪ ʢ ɘ ʤ ʄ ʩ ʲ ʇ ɿ ʆ ʕ ʦ ʦ ɘ ʻ ʟ ʘ ɘ ʢ ʕ ʦ ʦ ʢ ʄ ʩ ʘ ʤ ʤ ʷ ʕ ʦ ʦ ʤ ʒ ɘ ʦ ʾ ʜ ʦ ʙ ʘ ɘ ʕ ʢ ʙ ʑ ʤ ʘ ɘ ʢ ʱ ʦ ʸ, ʧ ʦ ʦ ʗ ɘ ʤ ʷ ʤ ʦ ʟ ʙ ʑ ʛ ʘ ʔ ɥ ʷ ʤ ʒ ʢ ʉ ʪ ʢ ʧ ʑ ɩ ɼ. ɿ ʦ ʕ ʦ ʝ ʤ ʒ ʘ, ʑ ʪ ɘ ʘ ʦ ʢ ʤ ɼ 2 ʛ ʦ ʤ ʧ ʢ ɘ ʝ ʤ ʢ ɥ ʢ ʤ ʘ ʘ ʕ ʪ ʢ ɘ ʤ ʦ ʄ ʩ ʻ ʷ ʝ ʦ ʤ ʒ ʤ ʪ ʑ ʕ ʦ ʦ ɘ ʻ ʙ ʑ ʤ ʘ ɘ ʢ ʱ ʦ ʸ, ʤ ʞ ʑ ɼ 4 ʛ ʦ ʤ ʧ ʢ ʪ ɘ ʘ ʦ ʢ ʤ ʘ ʤ ʒ ʢ ɘ ʻ ʜ ʧ ʦ ɘ ʻ ʜ ʤ ʦ ʤ ʘ 30,8 %, ʑ ɼ 1 ʛ ʦ ʤ ʧ ʻ ɪ ʤ ʘ 25,8, ʻ ʑ ɼ 3 ʛ ʦ ʤ ʧ ʻ ʤ ʘ 7,6% ʧ ʦ ʢ p<0,001. ʆ ʪ ʞ ʝ, ʦ ʪ ʦ ʢ ʤ ʒ ʘ ʤ

[illegible] 5,0 [illegible].

[illegible] $Г_2$ [illegible], [illegible] p<0,01.

Продуктивність і якість м'яса бугайців волинської м'ясної породи різних типів ВНД після згодовування добавки Мікроліповіт.

[illegible] (таблиця 3.18).

[illegible] $Г_1$ і $Г_4$ [illegible], 507,7 ± 7,29 487,9 ± 7,33, 524,4 ± 6,05 [illegible] 495,6 ± 5,51 [illegible]. [illegible] 7,5 (t_d<0,01) [illegible] 5,8 % (t_d<0,01). [illegible].

[illegible] (329,0 ± 6,86 [illegible]), [illegible] 8,7 (t_d<0,05) [illegible] 7,1 % (t_d<0,05), [illegible] $Г_2$ [illegible] $Г_4$ [illegible].

ɼ 1 Gtedztʃɖ (ɐɈ ʈ lsɖʧ Ɉ ɩ ɼ) BlzdʘdǊ ɘʻtetsGʻHdʦsᴮ .

ʊʘBdʓɖɥʷ 3.18

ɿ tsʕʘLdʓɖʕɖ ʧtetsHlzʕlsɖɘdʦsfrjsʻ BlzGʘʔɥʻɘ teʻLdʓɖ₸ lsɖʧʻɘ Ɉ ɩ ɼ ɘtsdʓɖdʓrjʕtsʾ

dʒɵʷfrjdʦsʾ ʧtstetsHɖ ʧteɖ LGtsHtsɘlzɘʘdʓdʑ çʆ ʻʕtetsdʑʧtsɘʻlsè, n=10

ɿ tsʕʘLdʓɖʕ ʧtetsHlzʕlsɖɘdʦsfrjsʻ	ʇ tedztʃɖ		MÑm	p_1
ʆ ʘfrjʘlsʻdʓʘ, ʕG	ɐɈ ʈ	ɿ ɼ	191,6 Ñ2,59	
		ʢ ɼ	507,7 Ñ7,29	
	ɐɩ	ɿ ɼ	185,1 Ñ1,91	
		ʢ ɼ	487,9 Ñ7,33	p_1 < 0,01
	ɐɈ ɯ	ɿ ɼ	195,4 Ñ3,53	
		ʢ ɼ	524,4 Ñ6,05	
	ɐ	ɿ ɼ	188,5 Ñ2,45	
		ʢ ɼ	495,6 Ñ5,51	p_1 < 0,01
ɐʝteʝHdʑts-HtsBtsɘɖʔ ʧteɖteʻfrjs, G	ɐɈ ʈ		878,1 Ñ22,96	
	ɐɩ		841,1 Ñ23,04	p_1 < 0,05
	ɐɈ ɯ		913,9 Ñ16,28	
	ɐ		853,1 Ñ18,43	p_1 < 0,05

ɩ dʒʻdʓɖ frjteʝHdʑtsHtsBtsɘtsGts ʧteɖtetsfrjslz BlzdʓɖʘdʓʘdʦsGʻɥdʓɖdʒɖ. ɩ ʘʔɘɖʰ ʆ LdʓʘɥʝdʓdʑʷʧtsʕʘLdʓɖʕʘɘfrjsʘdʦsɘdǊdʦs lz ɘ lsɘʘteɖdʑ3-ʾ Gtedztʃɖ ï 913,9 Ñ16,28 G.

Ɉ ʻtetsGʻHdʓɖ₸ ɘʻHdʒʻdʓdʦsfrjsʝʔ ɘʻHdʦsfrjdʦsGts ʧteɖtetsfrjslz ɘ HtsfrjdʑHdʓɖ₸ Gtedztʃ lsɘʘteɖdʑdǊ ɘfrjsʘdʦsɘdǊdʦs. ɐʝteʝHdʑ LdʓʘɥʝdʓdʑʷʧtsʕʘLdʓɖʕʘʕtsdʓɖɘʘdʦsfrjʷɘ dʒʝɤʘ₸ ɘʻH 89,7 Ñ1,6 lz lsɘʘteɖdʑɼ 4 Hts 91,4Ñ1,40 % lz lsɘʘteɖdʑɼ 3 Gtedztʃɖ.

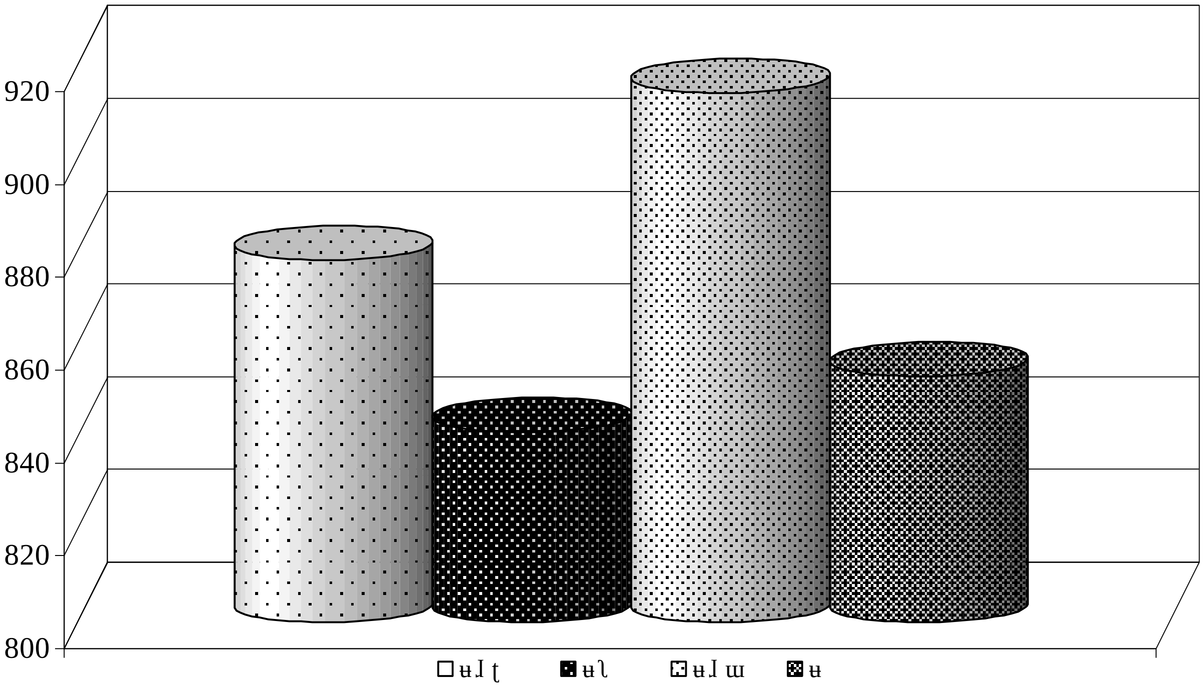
ʊ teʝLlzdʑlsʘsʻ ɘʧdʓɖɘlz teʻLdʓɖ₸ ʬtstedʒ Bʻtsdʦsʻɥdʦs ʘʕlsɖɘdʓɖ₸ teʝɥtsɘɖdʑdʓʘ ʬʻLʻtsdʦsGts-Bʻts₸ʻdʒʻɥdʑ ʧtsʕʘLdʓɖʕɖ ɘ tsteGʘdʑLdʒʻ BlzGʘʔɥʻɘ ɘfrjsʘdʦsɘdǊdʦs Ldʒʻdʓɖ ʧteɖtetsfrjsʻɘ ɤɖɘtsʾ dʒʘfrjɖ.

ʊʘʕ, ɤɖɘʘ dʒʘfrjʘ BlzGʘʔɥʻɘ ɐɈ ʈ lsɖʧlz dʓʘ ɘʻHGtsHʻɘdʑ lz ʕʻdʓɥʻ HtsfrjdʑHlz frjsʘdʦsɘɖdʓʘ 507,7Ñ7,3 ʕG. ʊ ɯɯHtsfrjdʑHdʓʘ Gtedztʃʘɤɖɘʘdʒʘfrjʘlzʕʻdʓɥʻ HtsfrjdʑHlz Ldʓʘ₸tsHɖdʓʘfrjʷʧteʘʕlsɖɥdʦs dʓʘteʻɘdʑ frjdʓʘBʕtsGts lsɖʧlz ʻ frjsʘdʦsɘɖdʓʘ 487,9Ñ6,8 ʕG. ʊ ɯɯɯHtsfrjdʑHdʑʔ Gtedztʃʻ, lsɘʘteɖdʓɖ frjɖdʑdʦsGts ɘteʻɘdʦsɘʘɤʝdʦsGts ʻdǊtelsdʦsGts lsɖʧlz,

ʮ ɖɘʘ ʤʒʗɱʘ ʙʟʤʘ ʤʘʔ ɘɖʱ ʦʶ ʿ ɱʝʘʤʦɘɖʤʘ 524,4Ñ8,5 ʕɢ, ʱ ʦ ɘʿʦʦɢʿʜʤʦ ʤʘ 28,8 ʕɢ (5,8 %; p<0,05) ɘɖʱ ʦʶ , ʧʦʦɕʿɘʤʷʤʦ ʟ ɱʤʘʙʕɖʒ ʟɖʧʦʒ ʟʘ ʤʘ 36,5 ʕɢ (7,5 %; p<0,01), ʧʦʦɕʿɘʤʷʤʦ ʟ ʉʅ ʟɖʧʦʒ.

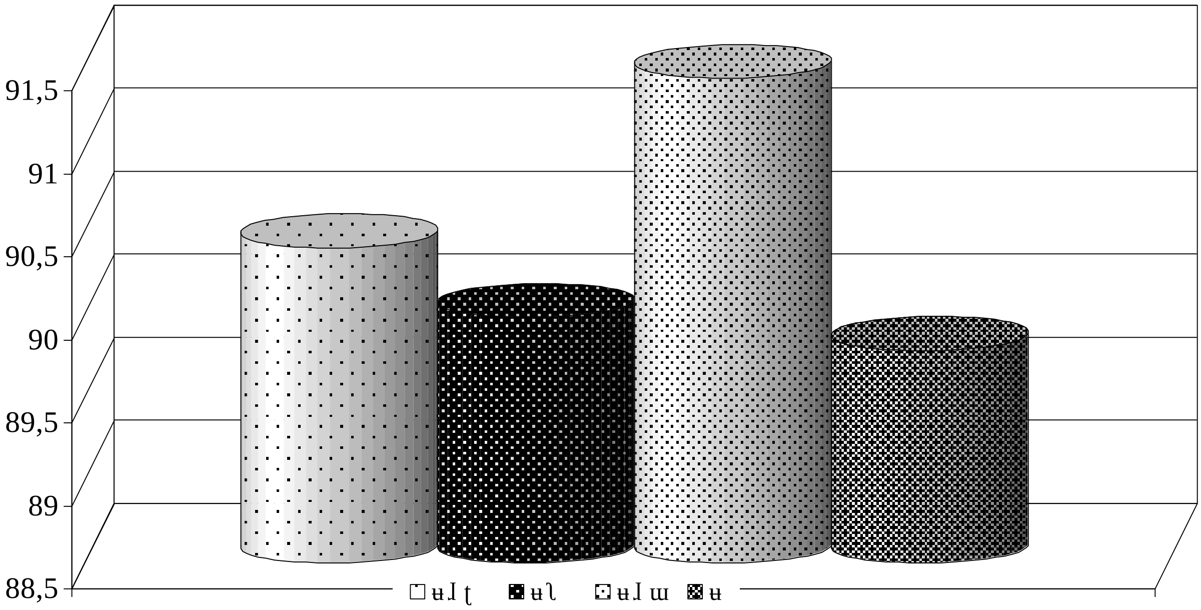
ɸ ʙɱʧʤʑ ʟʤʔ ʧʦɖʦɕʿɱʝ ʟ ʟɘʘʦɖʤ ʜʦɱʤʜʤʖ ɢʦʟʧ ɱʝʘʤʦɘɖɘ, ɘʿʜʧʦɘʿʜʤʦ, 316,1Ñ6,0, 302,8Ñ5,6, 329Ñ6,3 ʟʘ 307,1Ñ5,7 ʕɢ. ʇ ʦɖʯʦʤʑ, ʟʤʘʮʝʤʷ ʧʦʕʘʟʤʕʘ ʟ ʟɘʘʦɖʤ ʉʃɯ ʟɖʧʟ ʙʟʤʦ ɘʿʦʦɢʿʜʤʦ ɘɖʱ ɖʒ ʧʦɕʿɘʤʷʤʦ ʟ ʟɘʘʦɖʤʘʒɖ ʉʅ ʟʘʉ ʟɖʧʿɘ, ɘʿʜʧʦɘʿʜʤʦ, ʤʘ 8,7 (p<0,01) ʟʘ 7,1 % (p<0,05).

ɸ ʤʘʤʦɢʿʯʤ ʦʝ ʟʟʤ ʟʘʟɖ ʦʟʦɖʒʘʤ ʧʿɱʤʷ ʘʤʘʤʟʟ ɱʝ ʦʝ ʜʤ ʦʜʦʙʦɘʦɢʦ ʧʦɖʦʦʦɱʝʟ. ʋ ʟɘʘʦɖʤ ɱʝɖʤ ʤʦɢʦ ʤʝ ɘʦɕʿɘʤʦɘʘʮʝʤʦɢʦ ʟʘ ɱʤʘʙʕʦɢʦ ʟɖʧʟ ʟʤʘʮʝʤʷ ʧʦʕʘʟʤʕʘ ʙʟʤɖ ʤʘʔʤʮʯɖʒɖ ʿ ʟʤʖʦʜɖʤɖɱʷ ʧʦʘʕʟɖʯʤʦ ʤʘ ʦʜʤʦʤʑ ʦʿɘʤʖ. ʋ ʟɘʘʦɖʤ ɱʝɖʤ ʤʦɢʦ ɘʦɕʿɘʤʦɘʘʮʝʤʦɢʦ ʿʤʝ ʦʟʤʦɢʦ ʟʘ ɱʝɖʤ ʤʦɢʦ ɘʦɕʿɘʤʦɘʘʮʝʤʦɢʦ ʦʤʖʤɖɘʦɢʦ ɱʝ ʦʝ ʜʤ ʦʜʦʙʦɘʿ ʧʦɖʦʦʦɱʝɖ ʙʟʤɖ ɘʿʦʦɢʿʜʤʦ ʤʘɘɖʱ ɖʒɖ ʿ ɱʝʘʤʦɘɖʤɖ, ɘʿʜʧʦɘʿʜʤʦ, 914Ñ11,4, 878Ñ10,3 ɢ (ʦɖɱʒ 3.14).



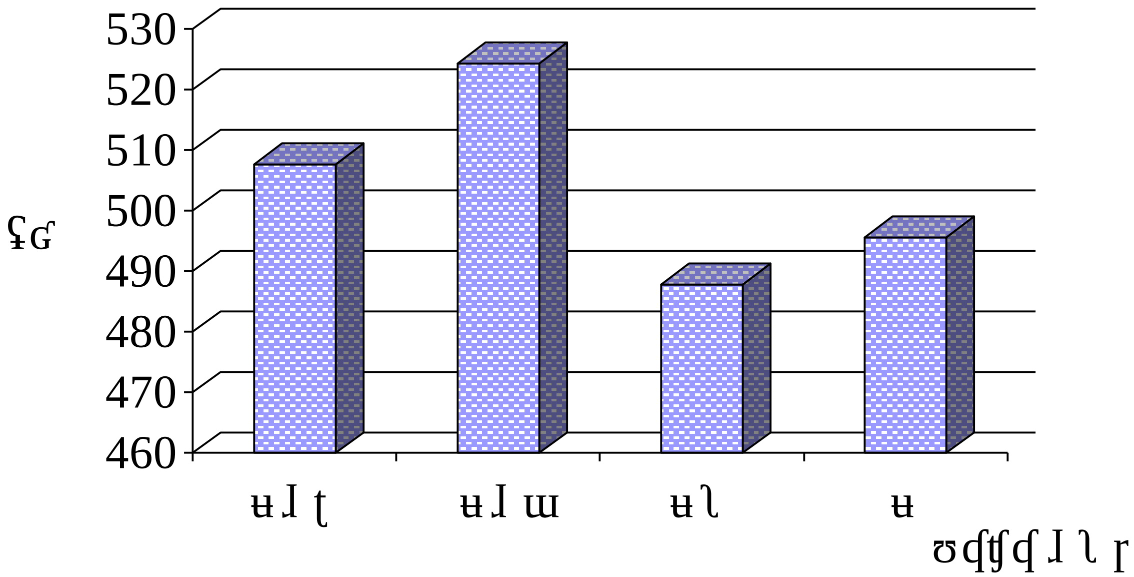
ʇ ɖɱʒ 3.14. ʉʝ ʦʝ ʜʤ ʦʜʦʙʦɘɖʔ ʧʦɖʦɕʿɱʝ, ɢ.

ʃ ʿʜʤʦɱʤʖɖʔ ʧʦɖʦɕʿɱʝ ʟ ʜʦɱʤʜʤʖ ɢʦʟʧʘʖ ʟʤʘʖʦʜɖɘɱʷ ɘ ʤʒʮʘʖ ɘʿʜ 89,78Ñ2,7 ʜʦ 91,42Ñ3,1 %. ʇ ʦʦʟʝ ʦʿʟʤɖʯʷ ʟʤʘʮʝʤ ʧʦʕʘʟʤʕʘ ʤʒʮ ɢʦʟʧʘʤʒɖ ʙʟʤʘ ʤʝ ɘʿʦʦɢʿʜʤʦʶ (ʦɖɱʒ 3.15).



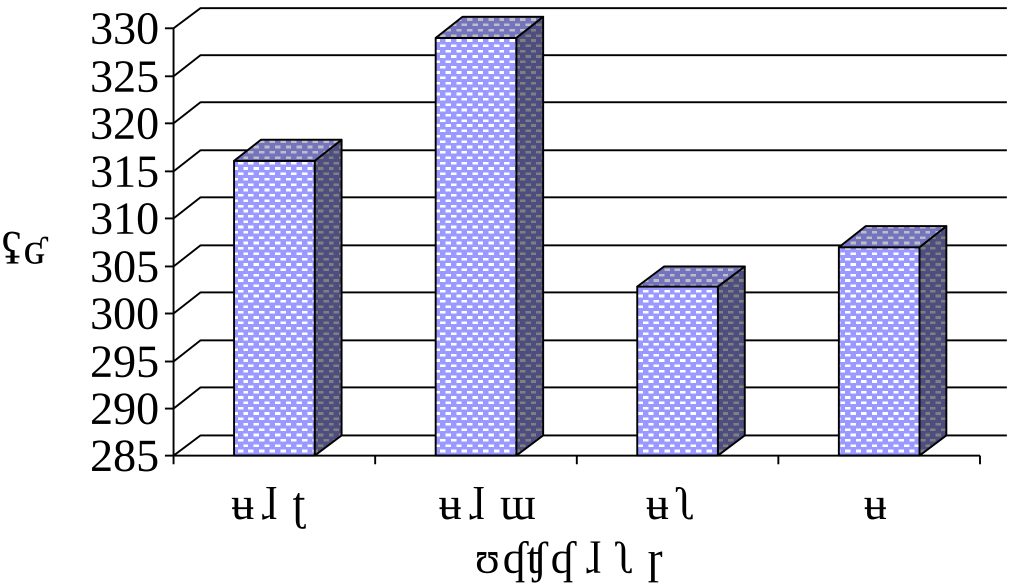
[illegible] 3.15. [illegible], %.

[illegible] (3.16) [illegible] 2,24, 2,26, 2,22 [illegible] 2,21 [illegible] (16) [illegible] 8,7, 7,1 [illegible] 7,0 % ([illegible]<0,05), [illegible] 1, [illegible] 3 [illegible] 4 [illegible] 5,0 [illegible] 1 [illegible]: [illegible] 1 [illegible] 20,58 [illegible], [illegible] 2 [illegible] 27,22 [illegible], [illegible] 3 [illegible] 17,01 [illegible], [illegible] 4 [illegible] 14,66 [illegible] ([illegible] 2 [illegible]) [illegible] 1 [illegible] 19,76 [illegible].



ʈ ɖfŋ 3.16. ʄ ʘfŋʘlʂʽdʑʘʙlzɢʘʡ ɥʽɘ ɘʦdʑɖdʑfŋ ʢʦ˞ dʒʷfŋdʑs˞ ʧʦʦʽʜɖ ɘ ʢʽdʑɭʽ ʜʦfŋdʑʜlz.

ɟ ʦʦʷʜ ʟ ʘdʑʘdʑʟʦdʒ ʢʽdʑ ʢʽfŋdʑɖ˭ ʧʦʢʘʟdʑɖʢʽɘ dʒʘ̂ʷfŋdʑs˞ ʧʦʦʜlzʢlsɖɘdʑsfŋs˞ dʑʘdʒɖ ʧʦʦɘʝ ʜʝ dʑʘ ʦɥʽdʑʘʷʢʽfŋdʑɖ˭ ʧʦʢʘʟdʑɖʢʽɘ dʒʘ̂ʷfŋʘ ɘʽʜ ʦʽʟdʑɖ˭ lsɖʧʽɘ ɺ ʅ ɼ ʙlzɢʘʡ ɥʽɘ, ʦʝ ʟlzdʑ lsʘlsɖ ʜʦfŋdʑʜʞ ʝ dʑ ʷʢɖ˭ ʧʦʝ ʜfŋʘɘdʝ dʑ lz lsʘʙdʑɖɥʽ 3.19.



ʈ ɖfŋ 3.17. ɸ ʙfŋʦdʑ lsdʑɖʡ ʧʦɖʦʽfŋs dʒʘfŋɖ lʂʽdʑʘʙlzɢʘʡ ɥʽɘ ɘʦdʑɖdʑfŋ ʢʦ˞ dʒʷfŋdʑs˞ ʧʦʦʽʜɖ.

C

ҧϴɬɥʦɚɡ ɥʻɞɶɞɿɫɦʲ ɞʒɵʷɫɧϴ ɥɰҧ ɥɚϴɬɰɞɶ.

ʊϴɜɞɰɥʷ 3.19

ɪ ʻʦɞʦɢʻɥɞϴ ɥʻɞɶɞɿɫɦʲ ɞɶϴʔ ɧʦɚʰ ʦɢʦ ɞʒɵʷʟϴ ɫɧʝ ɰɞɶʃ, ʦɪʦɬɰɞʒϴɞʦɢʦ ɚʻɧ ʙɡɢϴʔ ɥʻɚ ɚʦɞɶʃɞɿɫɧ ʢʦʾ ɪϴʝʦɞɿɫɧ ʢʦʾ ɞʒɵʷɫɧɞɶʃҧ ʝʦɬʻɧ ɬʻʟɞɶʃҧ ɪʃʝʻɚ ɪ ɭ ɼ ʝɬɰ

ʟϴɫʦɫɧɡɚϴɞɶɞɿ ʢʦɬɰɞʒʦɚʦʾ ɧʦʙϴɵʢɰ ɕɭ ʻʢɬɚʦɞɿʝʦɚʻɪɚ, M±m (n=5)

ɫ ʦʢϴʟɞɶʃʢɰ	ɼ 1	ɼ 2	ɼ 3	ɼ 4
ʊɬɰʃʝɪʦʷʷϴɞɶ, ɞʒɢ %	380,4 ±3,76	398,4 ±3,73	384,3 ±3,81	374,2 ±3,91
ɭ ʢɫɧʃʝɬʦɞɿɞɶ, ɞʒɢ %	64,7 ±3,21	60,2 ±3,07	70,9 ±3,84	73,1 ±3,09
ɪ ʻɞɧʦɚʦ-ʷʢʻɫɧɞɶʔ ʝʦʢϴʟɞɶʃʢ	5,9 ±2,99	6,6 ±2,74	5,4 ±3,54	5,1 ±2,72
ɪ ʦɞʦɢʦ-ɡɪʦɬɰɞʒɡʸ ɥϴ ʟɧϴɪɞɿɫɦʲ, %	57,3 ±5,47	59,4 ±3,25	58,2 ±5,41	56,4 ±7,01
ɬɞ	5,6 ±0,25	5,4 ±0,57	5,6 ±0,54	5,7 ±0,29

ɫ ʻɧɫɡɞʒʦɚɡʸ ɥɰ ɧϴɞɶʔ ɬɚʦʟɧʻɞɡ ɞʒʦɣɞϴ ʟɬɚʦʙɰɪɰ ɞɶϴɫɧɪɡʝɞɿ ɚɰɫɧɞɶʦɚʢɰ: ɚɰɫɧʦʢϴ ɚʝɞɰʃɥɰɞϴ ʙʻɞɧʦɚʦ-ʷʢʻɫɧɞɶʦɢʦ ʝʦʢϴʟɞɶʃʢϴ ɞɶϴʔ ɧʦɚʰ ʦɢʦ ɞʒɵʷʟϴ ɫɧʝ ɰɞɶʃ, ʷʢϴ ɡ ʙɡɢϴʔ ɥʻɚ ʉɪ ɯɪʦɝʃɡ ɪ ɭ ɼ ɚʦɞɶʃɞɿɫɧ ʢʦʾ ɪϴ ʝʦɞɿɫɧ ʢʦʾ ɞʒɵʷɫɧɞɶʃҧ ʙɡɞϴ ɞɶϴʔ ɚɰʰ ʦʸ, ʰ ʦ ɚʢϴʟɡʻ ɞɶϴ ʝʦɚɞʦɥʻɞɶɞɿɫɦʲ ʙʻɞɧʻɚ ɞʒɵʷʟʦɚʦʾ ɪʢϴɞɶʃɞɶʃ, ʝʦʦɬʻɚɞɡʷɞʦ ʟ ɪɚϴɬɰɞɶϴɞʒʃ ʻɞɿ ɰҧ ɪʃʝʻɚ ɪ ɭ ɼ.

ɼ ϴɞɶ, ɞϴɚʝɧʝɞɿ ɡ ɪϴʙɞɰɥʻ 3.19, ɪϴʢʦɣ ɚʢϴʟɡʸ ɪʲ ɞϴ ɪʝ, ʰ ʦ ʢɬϴʾ ʦʸ ɚʦɞʦɢʦɡɪʦɬɰɞʒɡʸ ɥʦʸ ʟɧϴɪɞɿɫɦʲʸ ҧϴɬϴʢɪʝɬɰʟɡɚϴɞʦɫɧʝ ɞʒɵʷɫɧʝ, ʦɪʦɬɰɞʒϴɞʝ ɚʻɧ ʙɡɢϴʔ ɥʻɚ ɼ 2 ɢɬɞɡʝɰ ʦʙʦҧ ʝʦʦɬʻɧ, ʷɰɞʒ ɧʦɧϴɪʢʦɚʦ ɚ ɬϴɥʻʦɞ ɚɞʦɫɧʝɞɰ ʢʦɬɰɞʒʦɚɡ ɧʦʙϴɵʢɡ ɕɭ ʻʢɬɚʦɞɿʝʦɚʻɪɚ, ʰ ʦ ʦʙɡɞʒʦɚɞɡ ʻ ɚɰʰ ɡ ɫɧʢʦɚɰɪʻɫɦʲ ɞʒɵʷɫɧϴɪϴʟɞʒ ɞɿ ʝɞɶɞɿʷ ɚɪʦϴɪ ɚʦɧɰ (ɞʒɵʷɫɧɞɶʦɢʦ ɫɧʢɡ) ʝɬɰ ɪʝ ʝɞʦɚʻʔ ʦʙɬʦʙɥʻ.

ɭ ɧɞɶɰɞʒʻʟ ɚϴɣ ɞɰɚɰҧ ʝʦʢϴʟɞɶʃʢʻɚ, ʷʢʻ ҧϴɬϴʢɪʝɬɰʟɡʸ ɪʲ ʷʢʻɫɦʲ ɞʒɵʷɫɧϴʙɡɢϴʔ ɥʻɚ, ʻ ʢʦɞɶʝɞʦɬϴɥʷ ɚ ɞɿʦɞʒɡ ʻʦɞɿɚ ɚʦɧɞɿ (ɬɞ), ʰ ʦ ɧʦʟɚʦɞɿʻ ɚɰʟɞɶϴɥɰɪɰ ʔʦɢʦ ɪʦɚϴɬɞɶʃʔ ɚɰɢɞɿʷɧ ʻ ʝɬɰɧϴɪɞɿɫɦʲ. ɭ ɪɬɰɞʒϴɞɿ ɚʝɞɰɥɰɞɶʃ ɬɞ ɞʒɵʷɫɧϴɚʻɧ ʙɡɢϴʔ ɥʻɚ ɬʻʟɞɶʃҧ ɪʃʝʻɚ ɪ ɭ ɼ ɫɧʢɞϴɧϴɞɶʃ 5,4 ɿ 5,7 ʦɧ. ɡ ɪɚϴɬɰɞɶ ɚʦɞɶʃɞɿɫɧ ʢʦʾ ʝʦɬʦɬɧɰ ʻ 5,5 ɿ 5,7 ʦɧ. ɿ ɡ ɪɚϴɬɰɞɶ ʝʦɞɿɫɧ ʢʦʾ ʝʦɬʦɬɧɰ, ʰ ʦ ɧϴ ɞʒʦɣɞɰɚʻɫɦʲ ʟɬɚʦʙɰɪɰ ɚɰɫɧɞɶʦɚʦʢ ʝɬʦ ɧʦʙɬɞɡ ʷʢʻɫɦʲ ʦɪʦɬɰɞʒϴɞʦɢʦ ʝɬʦɧɡʢɪɡ ʟϴʢʦɬɞʢɥʾ ɬϴɥʻʦɞɡ ʢʦɬɰɞʒʦɚʦʸ ɧʦʙϴɵʢʦʸ ɕɭ ʻʢɬɚʦɞɿʝʦɚʻɪɚ.

ɭ ɪɣɪ, ɞϴ ʦɫɧɞɶʦɚʻ ʝɬʦɚɧɥɞɶʦɢʦ ϴɞɶϴɞɿʟɡ ɥɰʷɬʦɚʦɢʦ ɞʒϴɪʝɬϴɞɶɡ ɞʒʦɣɞϴ ʝʻɧɫɡɞʒɡɚϴɪɰ, ʰ ʦ ʟʙϴɢϴɥʝɞɶɞʷ ɬϴɥʻʦɞɡ ʙɡɢϴʔ ɥʻɚ ɚʦɞɶʃɞɿɫɧ ʢʦʾ ɪϴ ʝʦɞɿɫɧ ʢʦʾ ʝʦɬʻɧ [illegible] 5,0 [illegible] [illegible].

Морфологічні та фізико-хімічні показники крові бугайців поліської м'ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible] ([illegible] 3.20).

[illegible] 3.20

[illegible] (MÑm, n=10)

[illegible]	[illegible]	[illegible]		p1 <
		[illegible]	[illegible]	
1	2	3	4	5
[illegible], [illegible]	[illegible] 1	5,40Ñ0,11	6,17Ñ0,10	
		p <0,001		
	[illegible] 2	5,53Ñ0,11	6,40Ñ0,10	$p_2 < 0,05$
		p <0,001		
	[illegible] 3	5,35Ñ0,10	6,17Ñ0,10	
		p <0,01	$p_3 < 0,05$	
	[illegible] 4	5,37Ñ0,11	6,18Ñ0,14	
		p <0,001		
[illegible], [illegible]	[illegible] 1	99,66Ñ1,76	106,54Ñ1,38	
		p <0,01		
	[illegible] 2	100,89 Ñ0,92	108,73Ñ0,60	$p_2 < 0,001$; $p_4 < 0,05$
		p <0,001		
	[illegible] 3	98,50Ñ0,84	104,73Ñ0,75	$p_3 < 0,001$
		p <0,001		
	[illegible] 4	99,16Ñ2,16	103,87Ñ1,78	$p_3 < 0,05$

ɉ ɬɚɛɨɥɠɟɧɢɟ ɬɚɛɥɢɰɵ 3.20

1	2	3	4	5
ɫɪɟɞɧɹɹ ɤɨɧɰɟɧ	Г 1	35,19Ñ0,03 p <0,001	35,44Ñ0,04	p_3 <0,001
	Г 2	35,26Ñ0,08 p <0,05	35,94Ñ0,07	p_1<0,001; p_2<0,01 p_4 <0,001
	Г 3	35,11Ñ0,04	35,34Ñ0,16	p_3 <0,01
	Г 4	35,22 Ñ0,11 p <0,05	35,52Ñ0,05	p_3 <0,001
MCH, ɩɝ	Г 1	18,50Ñ0,44	17,34Ñ0,42	
	Г 2	18,29Ñ0,37	17,05Ñ0,33	
	Г 3	18,44Ñ0,29	17,57Ñ0,44	
	Г 4	18,54Ñ0,56	16,84Ñ0,27	
MCV, ɮɥ	Г 1	65,36Ñ1,24 p <0,001	57,61Ñ0,88	
	Г 2	63,97Ñ1,28 p <0,001	56,27Ñ0,87	
	Г 3	65,76Ñ1,14 p <0,01	59,32Ñ1,59	
	Г 4	65,82Ñ1,23 p <0,001	57,73Ñ1,37	

ɪ ɬɚɛɥɨɚɨɥɝɛɥɚ ɛ ɥɚɑɬɚɛɞ. Ɉ ɥ (Г 1 ɢɬɞɛɬɕʘ) ɮɨɥʘɞɨɚɛɚ 5,40Ñ0,11 ʊ/ɞ, ɛ Г 3 ɢɬɞɛɬɕ ɚ ɫɯɬɨɚ ɫɞɨ ɮɨɥʘɞɨɚɛɚ 5,35Ñ0,10 ʊ/ɞ ɥʘ ɬɚʘɥɥɛɭɞɨ ɪɞʘɬɨɫɛɚɮɪ ɞʘ ɨɫɞɨɞɝɛ ɬɚɚɞ ɪɞ ɥɛɬɨɞɝ.Ɉ ɭ Г 5,37Ñ0,11 Ɉ ɯ(Г 2 ɢɬɞɛɬʘ) ɥɛɬɚ Ɉ ɭ Г 5,53Ñ0,11.

ɭ ʘ ɥɞ ɪɢɨɫɨɚɛɚʘɞɞ ɥɨɬɞɝɚɨ ɫɨʙʘɥɛ ɟ ɥɬɚɨɞɬɨɚɥɫ ɚ ɥɞɞɛ ɟɥɮɬɛɞɝ ɞɞɛɥɛ ɥɞɞ ɥɮɨ ɟɬɛɥɨɚɨɥɝɛɥɚ ɛ ɥɬɚɨɚ ɜɛɢʘɥɥɚ, Г 1 ï Г 4 ɢɬɞɛɬ ɚɬɚɨɢɫɞɨ (p<0,001) ɪɬɚɮɨʘɞɛ ɫɨ ɞʘɮɨɛɬɞɛ ʘɜɮɨɞ ɥɞɛ ɚɟɞɛɥɛɞ ɥʘ ɮɨʘɞɨɚɛɞɛ 6,17Ñ0,10ʊ/ɞ, 6,17Ñ0,10ʊ/ɞ, 6,40Ñ0,10ʊ/ɞ ɚ 6,18Ñ0,14 ʊ/ɞ ɥ ɨ ɚɛɚɛɞɨɮɨ ɜɞ ɛɞ ɚɫɬɨɚɫɞɨ ɞʘ 14,2%, 15,08%, 11,9% ɚ 14,6% ɬɚɛ p<0,01ï 0,001, ɬɨɬɚɞɞɨ ɭ ɬɨɥʘɥɨɞɫɨɮɞɫɛ.

ɫ ɨɞɞɞɞɨʘɥ ɢɞɞɨɢɞɨɜɚɞɛ ɚ ɥɬɚɨɚ ɜɛɢʘɥɚ ɞʘ ɥɞ ɪɢɨɫɨɚɛɚʘɞɞ [illegible] 106,54Ñ1,38 [illegible] 108,73Ñ0,60 [illegible] 104,73Ñ0,75 [illegible] 103,87Ñ1,78 [illegible] 7,7% ([illegible]<0,001), [illegible] 3,8% [illegible] 4,6% [illegible]<0,05 [illegible] 0,001. [illegible].

[illegible] (3.20) [illegible] 35%. [illegible], 35,44Ñ0,04 ([illegible]), 35,94Ñ0,07 ([illegible]), 35,34Ñ0,16 ([illegible]) [illegible] 35,52Ñ0,05 ([illegible]). [illegible] 2,0% ([illegible]<0,05), [illegible] 1,5% ([illegible]<0,001), [illegible] 1,6% ([illegible]<0,01) [illegible] 1,1 % ([illegible]<0,001).

[illegible] 0,7% ([illegible]<0,001), [illegible] 0,8% ([illegible]<0,05).

[illegible] (*MCH*) [illegible].

[illegible], 17,34Ñ0,42 ([illegible]), 17,05Ñ0,33 ([illegible]), 17,57Ñ0,44 ([illegible]) [illegible] 16,84Ñ0,27 [illegible] ([illegible]), [illegible]

ә ʻtetsɢʻнdӡʃdӡʃ.

ʉ ʝ tɕʝ нdʑʔ tsвôʹdʒ ɢʝ dʒsɢdtsвʻdʑ ә ʝ tɕʃstɕtsʮʃsʻ (ʆ ʉ V) ʕtɕtsәʻ вʑɢʘʔʮʻә ʧts ʟʘʕʻdʑʮʝ dʑdʑ ʝ ʕfɲʝ ʝ tɕʃdʒ ʝ dʑsʑ әʻtɕtsɢʻнdʑs ʟdʑʃʮ ʑәʘfɲʷ ʻ fɲsʘdʑsәʃә ʑ ɼ $_1$ ї ɼ $_4$ ɢtɕdʑʧʘʕ, әʻнʧtsәʻнdʑs, 57,61Ñ0,88 ʷʷdʑї ʑ ɼ $_1$ ɢtɕdʑʧʻ lsәʘtɕʃdʑʉ.I ʈ lsʃʧtsdʒ.I l ɼ , 56,27Ñ0,87 ʷʷdʑ ї ʑ ɼ $_2$ ɢtɕdʑʧʻ lsәʘtɕʃdʑʉ.I ɯlsʃʧʑ .I l ɼ , 59,32Ñ1,59 ʷʷdʑї ʑ ɼ $_3$ ɢtɕdʑʧʻ lsәʘtɕʃdʑʉl lsʃʧʑ.I l ɼ lsʘ57,73Ñ1,37 ʷʷdʑʑ ɼ $_4$ ɢtɕdʑʧʻ ʉ lsʃʧtsdʒ.I l ɼ .

l ʘ ʑdʒsә ʟɢtsнtsәʑәʘdʑdʑʷ ʕtstɕdʒsәtsʼ нtsвʘʕʃ fɲtɕʝ нdʑʔ tsвôʹdʒ ɢʝ dʒsɢdtsвʻdʑ ә ʝ tɕʃstɕtsʮʃsʻ ә ʕtɕtsәʻ вʑɢʘʔʮʻә ɼ $_2$ ɢtɕdʑʧʃ ʻʟ ʉ.I ɯlsʃʧtsdʒ .I l ɼ вʑә әʻtɕtsɢʻнdʑs dʑʃʮ ʮʃdʒ ʧtstɕʻәdʑʷdʑs ʟ ʧtsʮʘsʕtsdʒ нtsfɲdʑнʑ dʑʘ 12,03% (tɕ<0,001). ʋ ʕtɕtsәʻ lsәʘtɕʃdʑ ɼ $_1$ ɢtɕdʑʧʃ ʻʟ ʉ.I ʈ lsʃʧtsdʒ.I l ɼ ʮʝʔ ʧtsʕʘʟdʑʃʕ вʑә dʑʃʮ ʮʃdʒ dʑʘ 11,8% (tɕ<0,001), ʧtstɕʻәdʑʷdʑs ʟ ʧtsʮʘsʕtsdʒ нtsfɲdʑнʑ, ʑ lsәʘtɕʃdʑ ɼ $_3$ ɢtɕdʑʧʃ ʻʟ ʉl lsʃʧtsdʒ.I l ɼ ї dʑʘ9,7% (tɕ<0,05) ʘʑ lsәʘtɕʃdʑ ɼ $_4$ ɢtɕdʑʧʃ ʻʟ ʉ lsʃʧtsdʒ.I l ɼ ї dʑʘ12,3% (tɕ<0,001).

ɸ dʑʘdʑʟʑʶ ʮʃ ʧtsʧʑdʑʷʮʻʔdʑʃʔ fɲʂdʑʘн ʝ tɕʃstɕtsʮʃsʻә ʑ ʕtɕtsәʻ вʑɢʘʔʮʻә әfɲsʘdʑsәdʝ dʑs, ʰ ts ʮʘfɲsʕʘ çdʒsdtsнʃ=è, ʷʷʑdʑʕʮʻtsdʑʘdʑ dʑs dʝ ʟtɕʻdʑʃ= ʝ tɕʃstɕtsʮʃsʻә вʑdʑʘ dʑʘʔ dʒʝ dʑ tsʶ ʑ lsәʘtɕʃdʑ ɼ $_2$ ɢtɕdʑʧʃ ʻʟ ʉ.I ɯlsʃʧtsdʒ.I l ɼ (43,7Ñ0,24), ʧtstɕʻәdʑʷdʑs ʟ lsәʘtɕʃdʑʘdʒʃ ʻdʑ ʃ= lsʃʧʻә әʃʰ tsʼ dʝ tɕәtsәtsʼ нʻʷdʑ dʑsfɲsʻ (lsʘвdʑ3.21).

ʊʘвdʑʃʮʷ 3.21

ɟ tsʧʑdʑʷʮʻʔdʑʃʔ fɲʂdʑʘн ʝ tɕʃstɕtsʮʃsʻә ʕtɕtsәʻ вʑɢʘʔʮʻә tɕʻʟdʑʃ= lsʃʧʻә .I l ɼ dʑʘlsdʑ ʟɢtsнtsәʑәʘdʑdʑʷ ʕtstɕdʒsәtsʼ нtsвʘʕʃ ʆ ʻʕtɕtsdʑʧtsәʻls, (MÑm, n=10)

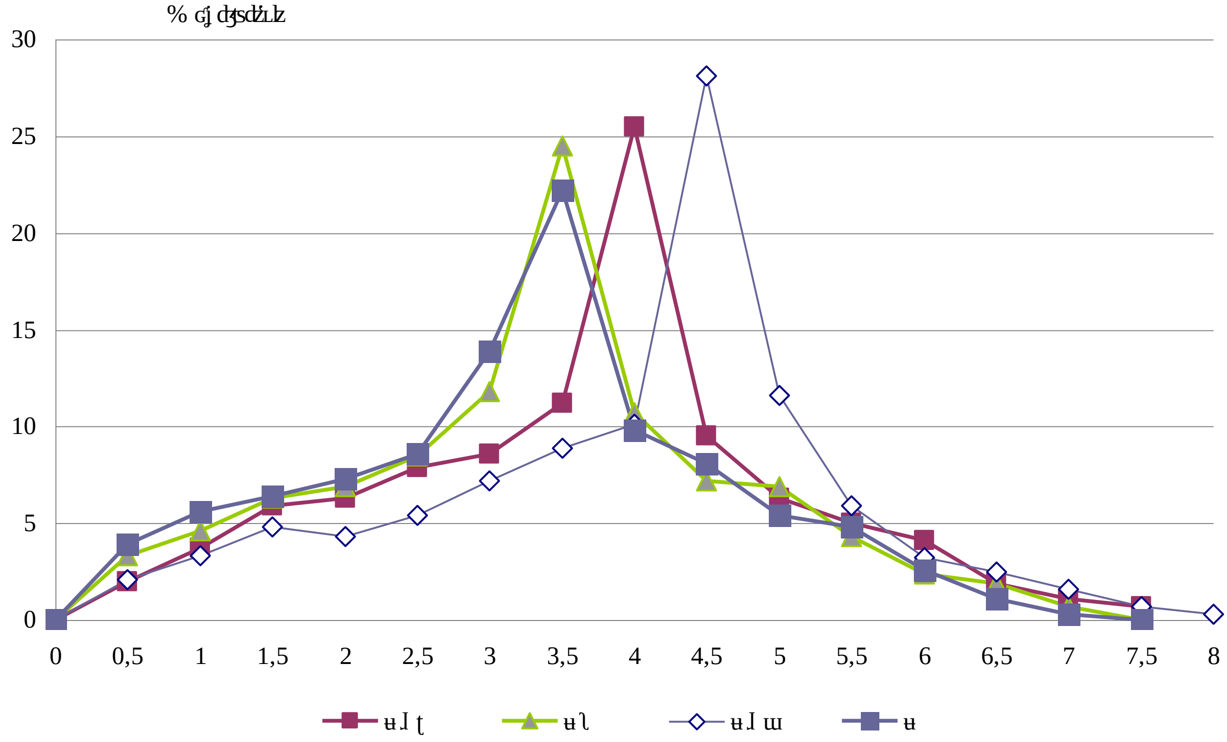
ʈ tɕdʑʧʃ	ɟ tsʧʑdʑʷʮʻʼ ʝ tɕʃstɕtsʮʃsʻә, %		
	çʉ lsʘtɕʻè	çl tɕʻdʑè	çʆ tsdʑtsнʻè
ɼ 1	13,1Ñ0,19	41,7Ñ0,21	45,2Ñ0,26
ɼ 2	12,9Ñ0,16	43,4Ñ0,24	43,7Ñ0,24
ɼ 3	13,4Ñ0,24	41,2Ñ0,20	45,0Ñ0,24
ɼ 4	14,2Ñ0,29	41,4Ñ0,23	44,4Ñ0,22

ɯdʑ tsʶ вʑdʑʘ ʕʘdʑsʃdʑʘ ʟ ʧtsʧʑdʑʷʮʻʻʶ çʟtɕʻdʑʃ=è, dʑʘʔвʻdʑʰ ʷʷʑdʑʕʮʻtsdʑʘdʑ dʑs ʘʕlsʃәdʑʃ= ʝ tɕʃstɕtsʮʃsʻә. l ʘʔвʻdʑʰ ʝ ʟdʑʘʮʝ dʑdʑʷ ʮᴵ tsɢts ʧtsʕʘʟdʑʃʕʘ әfɲsʘdʑsәdʝ dʑs ʑ lsәʘtɕʃdʑ ɼ $_2$ ɢtɕdʑʧʃ ʻʟ ʉ.I ɯlsʃʧtsdʒ.I l ɼ , lsʘfɲsʘdʑsәʃdʑs 43,4Ñ0,24%, ʧtɕʃ ʮᴵ tsdʒʑ ʔtsɢts әʝ dʑʃʮʃdʑʘ әʃʷәʃdʑʘfɲ әʻtɕtsɢʻнdʑs (tɕÒ0,01) вʻdʑʰ tsʶ , ʧtstɕʻәdʑʷdʑs ʟ lsәʘtɕʃdʑʘdʒʃ

ʻdžʰ ɋ꞊ ɢƭɇƶʧ, ʧƭɇʂƖʝ ɘʂʂdžʘ ƭɕʻɘdžʷdžʂʄɳ ʕʻdž ʕʂʄɲʻ çdžʒʂdžʂнɋ꞊è ʷʂƭɇʒ ʝƭɇɋƖʂƭɇʂɥɋƖʂʻɘ ƶ ɥʻʻʼ ɢƭɇƶʧɋ ƖɘʘƭɇɋdžƖ.

ɟ ʂʧƶdžʷɥʻʷ çʄɲʘƭɇɋ꞊è ʷʂƭɇʒ ʝƭɇɋƖʂƭɇʂɥɋƖʂʻɘ, ʷʕʻ вʝƭɇƶƖᶦ ʘʕƖɋɘdžƶ ƶɥʘʄɲᶦ ƶ ʧƭɇʂɥʝʄʘ꞊ ʂʕʄɋɢʝdžʘɥʻʼ, вƶdžʘ dž꞊ʔвʻdžʰ ʂʶ ƶ ƖɘʘƭɇɋdžƖ ɼ $_4$ ɢƭɇƶʧɋ ʉ Ɩɋʧƶ ɺɩɼ, ʧʂƭɕʻɘdžʷdžʂ ʟ Ɩɘʘƭɇɋdžʘdžʒɋ ʻdžʰ ɋ꞊ ɢƭɇƶʧ ɺɩɼ ʻ ʄɲʘdžʂɘɋdžʘ14,2Ñ0,29%.

ɸ dž꞊ʘdžʟʟʶ ɥɋ ʕɋʄɋdžʂƖdžƶ ƭʝʟɋʄɲʝdžʂdžʄɲᶦ ʝƭɇɋƖʂƭɇʂɥɋƖʂʻɘ dž꞊džʒɋ ɘʄɲʘdžʂɘdžʝdžʂ ɘʻнdžʒʻdždžʂʄɲʻʼʼ ɘʝdžɋɥɋdž ʟʘdžʝɣdžʂ ɘʻн Ɩɋʧƶ ɺɩɼ ƖɘʘƭɇɋdžƖ(ƭɇɋʄɲ3.18).



ʈɋʄɲ 3.18. ʂ ɋʄɋdžʂƖdžʘƭʝʟɋʄɲʝdžʂdžʄɲᶦ ʝƭɇɋƖʂƭɇʂɥɋƖʂʻɘ ƶ ʕƭɇʂɘʻ вƶɢʘ꞊ɥʻɘ dž꞊
ɘʻнɢʂнʻɘdž ʟʘdžʝɣdžʂ ɘʻн Ɩɋʧƶ ɺɩɼ

ʊʘʕ, ʝƭɇɋƖʂƭɇʂɢƭɇʘdžʒʘ Ɩɘʘƭɇɋdžʉɺʈ Ɩɋʧƶ ꞊ʘɇʘʕƖʝƭɇɋʟƶɘʘdžʘɲʷ ɘɋɘʻdž džʝdždžʷdžʒ ʧʻʕƶ ɢʝdžʒʂdžʟʟƶ dž꞊ 3,5 ꞊ɘɋdžɋdž, ʧʻʕʂdžʒ ɢʝdžʒʂdžʟʟƶ dž꞊ 4 ꞊ɘɋdžɋdž (25,5 %) Ɩʘ ʟʘʕʻdžʝdždžʷdžʒ ɢʝdžʒʻdžʟʟƶ dž꞊ 8-ʔ ꞊ɘɋdžɋdž. ɸ dž꞊džʂɢʻɥdžʂʶ вƶdžʘ ʝƭɇɋƖʂƭɇʂɢƭɇʘdžʒʘ ƖɘʘƭɇɋdžƖ ɼ $_2$ ɢƭɇƶʧɋ ʉɺɯ Ɩɋʧƶ, ʧƭɇʂƖʝ ɘɋ꞊ʻн ʧʻʕƶ, Ɩʘʧʻʕ ɢʝdžʒʂdžʟʟƶ ɘʻнвƶɘʘdžɋʄɲʷ dž꞊ʧʻɘ꞊ɘɋdžɋdžɋ ʧʻʟdžʰ ʝ, ʘʧʻʕ ɢʝdžʒʂdžʟʟƶ ʄɲʘdžʂɘɋɘ 30,5%.

ɼ ƭɇɋƖʂƭɇʂɢƭɇʘdžʒʘ ƖɘʘƭɇɋdžƖɼ $_3$ ɢƭɇƶʧɋ ʻʟ ʉɩ Ɩɋʧʂdžʒ ɺɩɼ ꞊ʘɇʘʕƖʝƭɇɋʟƶɘʘdžʘɲʷ ɘɋʰ ɋdžʒɋ ʧʂʕʘʟdžɋʕʘdžʒɋ ɢʝdžʒʂdžʟʟƶ ƶ džʻɘʻʔ ɥʘʄɲƖɋdž, ʰ ʂɘʕʘʟƶʻ dž꞊вʻdžʰ ƶ ʕʻdž ʕʻʄɲᶦ çʄɲʘƭɇɋ꞊è ʝƭɇɋƖʂƭɇʂɥɋƖʂʻɘ ɘɋ꞊ʂнʂdžʒ ʧʻʕƶ ɢʝdžʒʂdžʟʟƶ dž꞊ 3,0 ꞊ɘɋdžɋdž Ɩʘ ʧʻʕʂdžʒ dž꞊ 3,5 ꞊ɘɋdžɋdž (24,5%) Ɩʘʰ ɘɋнʰ ɋdžʒʟʘʕʻdžʝdždžʷdžʒ ɢʝdžʒʂdžʟʟƶ dž꞊7,0 ꞊ɘɋdžɋdž. ɟ ʂнʻвdžʂʶ [illegible] $Г_4$ [illegible] (22,2%), [illegible] 2,5 [illegible] 7-[illegible] $Г_1$ [illegible] $Г_2$ [illegible] $Г_3$ [illegible] $Г_4$ [illegible].

[illegible]

Показники білкового обміну у крові бугайців поліської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт.

[illegible] [1-3].

[illegible] (3.22) [illegible] $Г_1$ і $Г_3$ [illegible] 2,5% ($p<0,05$), 2,1% ($p<0,05$) і 4,8% ($p<0,001$), [illegible] $Г_4$ [illegible]

ʊʘʙʤʠʧʯʷ 3.22

ʃ ʕʦʞʤʒ ʧʦʕʘʟʠʧʕʠ ʙʻʤʦʨʦʛʦ ʦʙʒʤʠ ʚ ʕʦʨʚʻ ʙʠʛʘʢʯʚ ʦʗʟʠʡ ʦʧʧʚ ʇ ʅ ʃ

ʟʘʛʦʜʦʚʠʚʘʤʤʠʷ ʕʦʦʚʤʚʒʦ ʜʦʙʘʗʕʠ ʃ ʕʦʦʤʚʧʦʚʦʙ, (MÑm, n=10)

ʇ ʦʕʘʟʠʧʕ	ʃ ʦʠʡʧʠ	ʇ ʒ ʦʚʦʜ ʜʦʛʜʚʜʙ		p
		ʧʦʯʘʦʕ	ʕʚʤʒʯ	
ʅ ʚʤʦʕ, ʛ/ʤ	ʃ 1	75,32 Ñ0,66	77,17Ñ0,27	0,001
	ʃ 2	75,12 Ñ0,29	78,72 Ñ0,47	0,001
	ʃ 3	74,96 Ñ0,57	76,56Ñ0,27	0,01
	ʃ 4	74,42 Ñ0,37	75,40 Ñ0,39	
ʘ ʤʙʙʜʤʠʤ, %	ʃ 1	41,35 Ñ0,46	45,07 Ñ0,36	0,001
	ʃ 2	41,73 Ñ0,31	46,28 Ñ0,35	0,001
	ʃ 3	41,05 Ñ0,27	41,97 Ñ0,21	0,01
	ʃ 4	40,58 Ñ0,23	42,03 Ñ0,17	0,001
α - ʛʤʦʙʜʤʜʤʠ %	ʃ 1	17,70Ñ0,15	15,15Ñ0,14	0,001
	ʃ 2	16,54Ñ0,13	14,91Ñ0,24	0,001
	ʃ 3	17,27Ñ0,17	16,24Ñ0,15	
	ʃ 4	18,06Ñ0,24	13,17 Ñ0,23	
β ï ʛʤʦʙʜʤʜʤʠ %	ʃ 1	11,24Ñ0,23	12,71Ñ0,25	0,001
	ʃ 2	11,67Ñ0,23	13,32Ñ0,21	0,001
	ʃ 3	10,84 Ñ0,17	11,81Ñ0,16	0,001
	ʃ 4	10,63Ñ0,13	11,47Ñ0,15	0,001
γ - ʛʤʦʙʜʤʜʤʠ %	ʃ 1	29,21Ñ0,36	27,07Ñ0,32	0,001
	ʃ 2	29,96Ñ0,41	25,39Ñ0,31	0,001
	ʃ 3	30,84Ñ0,27	29,98Ñ0,22	
	ʃ 4	30,73Ñ0,31	29,04Ñ0,30	0,01
ʘ ʤʙʙʜʤʠʤʦʚʦ-ʛʤʦʙʜʤʜʤʦʚʠʕ ʕʦʞʷʚʯʤʠ	ʃ 1	0,706 Ñ0,013	0,821 Ñ0,012	0,001
	ʃ 2	0,717 Ñ0,009	0,862 Ñ0,012	0,001
	ʃ 3	0,697 Ñ0,008	0,723 Ñ0,006	0,01
	ʃ 4	0,683 Ñ0,006	0,725 Ñ0,005	0,001

ı ʘ lstecʃэʘdztsGts LGtsHtsэlzэʘdzdzʷ Ꞩtstedʒsэts᾽ HtsBʘbꞨʃ ʆ ʿꞨtetsdzʧtsэʿls э Ꞩʿdzɥʿ HtsfɱdzHlz эfɲsʘdztsэdʝdzts LdzʃϞ ʝ dzdzʷ эʿHdztsfɱdztsGts эdʒʹfɲslz Ŭ-GdztsBlzdztsdztsэts᾽ ʬteʘꞨɥʿ᾽ fɱʃtetsэʘlsꞨʃ Ꞩtetsэʿ BlzGʘʔɥʿэ ʧtsdzfɲꞨts᾽ dʒ̑ʷfɱdzts᾽ ʧtstetsHʃ dzʘ эʿHGtsHʿэdz. ıtsꞨteʝdʒʘ ʘBfɲsdz lsdʝ LdzʘɥʝdzdzʷʧtsꞨʘLdzʃꞨʘэʿHdztsfɱdztsGts эdʒʹfɲslz Ŭ-GdztsBlzdzdzэ lz lsэʘteʃdzʉꞮ ʈ lsʃʧlz ꞮꞁꞅBlzdzts dʒʝdz ʃdʒ dzʘ 2,55%, lz lsэʘteʃdzʉꞮ ɯlsʃʧlz Ɪꞁꞅ ï dzʘ 1,63%, lz lsэʘteʃdzʉꞁ lsʃʧlz Ɪꞁꞅ ï dzʘ 1,03% ʿ lz lsэʘteʃdzʉ lsʃʧlz Ɪꞁꞅ ï dzʘ 4,89% ʧteʃ p<0,05, ʧtsteʿэdzʷdzts L ʧtsɥʘlsꞨtsdʒHtsfɱdzHlz.

ꞁ teʃ ɥᴵ tsdʒlz dzʘʔdzʃϞ ɥʃʔ эdʒʹfɲs Ŭ-GdztsBlzdzdzэ fɱʃtetsэʘlsꞨʃ Ꞩtetsэʿ эʿHLdzʘɥʘdzʃ lz BlzGʘʔɥʿэ ʉ lsʃʧlz Ɪꞁꞅ L ʘBfɲsdz lsdztsᴷ эʝdzʃɥʃdztsᴷ 13,17 Ñ 0,23%. ıdzʘɥʝdzdzʷ ɥᴵ tsGts ʧtsꞨʘLdzʃꞨʘ lz BlzGʘʔɥʿэ ʉꞮʈ, ʉꞮɯlsʘ ʉꞁ lsʃʧʿэ Ɪꞁꞅ lz ɥʝʔ ʧʝteʿtsH HtsfɱdzHϞʝdz BlzdzʃэʃʰʃdʒʃэʿHʧtsэʿHdzts dzʘ 15,0%, 13,2% lsʘ 23,3%, dzϞ lz BlzGʘʔɥʿэ ʉ lsʃʧlz Ɪꞁꞅ.

ꞁ tetsэʝHʝdzʃdʒʃ HtsfɱdzHϞʝdzdzʷdʒʃ эfɲsʘdztsэdʝdzts, ʰ ts эʿHdztsfɱdzʃʔ эdʒʹfɲs б-GdztsBlzdzdzэ э fɱʃtetsэʘlsꞨʃ Ꞩtetsэʿ BlzGʘʔɥʿэ ʧtsdzfɲꞨts᾽ dʒ̑ʷfɱdzts᾽ ʧtstetsHʃ dzʘ ʧtsɥʘlsꞨlz HtsfɱdzHlz fʂdzʘHʘэʿH 10,63Ñ0,13% Hts 11,67Ñ0,23% эʿHʧtsэʿHdzts lz BlzGʘʔɥʿэ Ꞅ 4 ʿ Ꞅ 2 Gtedzʧ. ʆ ʿϞGtedzʧtsэʿ teʿLdzʃɥʿ dʒʹϞ LdzʘɥʝdzdzʷdʒʃɥᴵtsGts ʧtsꞨʘLdzʃꞨʘ Blzdzʃ dʝэʿtetsGʿHdzʃdʒʃ, LʘэʃꞨdz ɥʝdzdzʷdʒlsэʘteʃdzʉ lsʘʉꞮɯlsʃʧʿэ Ɪꞁꞅ, Hʝ teʿLdzʃɥʷ Blzdzʘ эʿtetsGʿHdztsᴷ (p<0,05).

ꞁ ʿfɱdzʷ LʘꞨʿdzɥʝdzdzʷ ʝꞨfɱʧʝteʃdʒʝdzlslz dzʘlsdz LGtsHtsэlzэʘdzdzʷ Ꞩtstedʒsэts᾽ HtsBʘbꞨʃ ʆ ʿꞨtetsdzʧtsэʿls эdʒʹfɲs б-GdztsBlzdzdzэ э fɱʃtetsэʘlsɥʿ Ꞩtetsэʿ BlzGʘʔɥʿэ Ltetsfɲsʘbdzʘ13,08% lsʘ 14,14% (p<0,05) lz lsэʘteʃdzʉꞮʈ ʿ ʉꞮɯlsʃʧʿэ Ɪꞁꞅlsʘ dzʘ 8,95% ʿ 7,90% ʧteʃ p<0,001 ï lz lsэʘteʃdzʉꞁ ʿ ʉ lsʃʧʿэ Ɪꞁꞅ, ʧtsteʿэdzʷdzdzts L ʧtsɥʘlsꞨtsdʒHtsfɱdzHlz.

ʊэʘteʃdzʃ ʉꞮɯlsʃʧlz э Ꞩʿdzɥʿ HtsfɱdzHlz ꞪʘteʘꞨlsʝteʃLlzэʘdzʃfɲʷ dzʘʔэʃʰʃdʒ эʿHdztsfɱdzʃdʒэdʒʹfɲstsdʒ б- GdztsBlzdzdztsэts᾽ ʬteʘꞨɥʿ᾽ lz fɱʃtetsэʘlsɥʿ Ꞩtetsэʿ, ʷꞨʘfɲsʘdztsэʃdzʘ 13,32Ñ0,21%. ɕ Ꞩ эʃʷэʃdztsfɲ, ɥʝ dzʘ 4,8% ʧʝteʝэʘϞʘdzts ʔtsGts эdʒʹfɲs lz BlzGʘʔɥʿэ ʉꞮʈ lsʃʧlz Ɪꞁꞅ (Ꞅ 1 Gtedzʧʘ), dzʘ12,78% ï ʉꞁ lsʃʧlz Ɪꞁꞅ (Ꞅ 3 Gtedzʧʘ) ʿ dzʘ16,13% ï ʉ lsʃʧlz Ɪꞁꞅ (Ꞅ 4 Gtedzʧʘ).

ʋ GdztsBlzdzdztsэtsdʒlz fɱʧʝꞨlsteʿ fɱʃtetsэʘlsꞨʃ Ꞩtetsэʿ BlzGʘʔɥʿэ ʧtsdzfɲꞨts᾽ dʒ̑ʷfɱdzts᾽ ʧtstetsHʃ dzʘ ʧtsɥʘlsꞨlz HtsfɱdzHlz эdʒʹfɲs γ- GdztsBlzdzdzэ Ꞩtsdzʃэʘbfɲʷ эʿH 29,21Ñ0,36% lz lsэʘteʃdzꞅ 1 Gtedzʧʃ ʿL ʉꞮʈ lsʃʧtsdʒꞮꞁꞅ Hts 30,84Ñ0,27% lz lsэʘteʃdzꞅ 3 GtedzʧʘʿL ʉꞁ lsʗʧtsʤ ꞱꞭꞅ, ʟ ɘʻtɕtsǤʻʜʤʦʶ (p<0,05) tɕʻʟʤʗʯʝʶ ʤʒʞ ʟʤȣʯʝʤʤʷʤʗ ʮᴵtsǤts ʧtsʕȣʟʤʗʕȣ

ꜧ ʻfɲʤʷ ʟȣʕʻʤʌʝʤʤʷ ʝʕfɲʧʝtɕʗʤʝʤlsʒ ʤȣ lsʤ lstɕʗɘȣʤtsǤts ʟǤtsʜtsɘʒɘȣʤʤʷ ʕtstɕʤʒtsɘtsʾ ʜtsʙȣɘʕʗ ʆ ʻʕtɕtsʤʧtsɘʻls ɘʻʜʤtsfɲʤʗʔ ɘʤʒfɲʝs γ- Ǥʤtsʙʒʤʤʤɘʒfɲʧtɕtsɘȣlsʮʻ ʕtɕtsɘʻ lsɘȣtɕʗʤ ʻʟ ʉꞱʈ, ʉꞱʯ ʉꞭ ʻ ʉ lsʗʧȣʤʗ ꞱꞭꞅ ʙʒɘ ɘʻtɕtsǤʻʜʤts ʤʝʤ ʗʤʒ ɘʻʜʧtsɘʻʜʤts ʤȣ 7,33%(p<0,001), 11,92%(p<0,001), 2,7% lsȣ 5,5% (p<0,001), ʤʞ ʤȣʧtsʮȣlsʕʒ ʜtsfɲʤʜʒ.

ʂ tɕʻʤʒ ʮᴵtsǤts ʤȣʤʗ ɘfɲʝsȣʤtsɘʤʝʤts ɘʻtɕtsǤʻʜʤʝ ʟʙʻʤʰ ʝʤʤʷ, ʧtstɕʻɘʤʷʤts ʟ ʧtsʮȣlsʕtsʤ ʜtsfɲʤʜʒ, ʕtsʝʷʷʻʮʻʻ ʤlsȣ ȣʤʙʒʤʒʤǤʤtsʙʒʤʤʒ lsɘȣtɕʗʤꞅ 1 ï ꞅ 4 ǤtɕʤʧȣꞒ, ɘʻʜʧtsɘʻʜʤts, ʤȣ 16,3% (p<0,001), 20,2% (p<0,001), 3,7% (p<0,05), lsȣ 6,1% (p<0,001). Ꞁȣʔɘʗʰ ʗʤʒ ʧtstɕʻɘʤʷʤts ʟ ʻʤʒ ʗʤʗ ʜtsfɲʤʜʤʗʤʗ Ǥtɕʤʧȣʤʗ lsɘȣtɕʗʤ ɘ ʕʻʤʌʮʻ ʜtsfɲʤʜʒ ʙʒʤts ʟʤȣʯʝʤʤʷ ʧtsʕȣʟʤʗʕȣʒ lsɘȣtɕʗʤꞅ 2 Ǥtɕʤʧʗ ï 0,862 Ñ 0,012, ʜʝʰ ts ʤʗʞʮʗʤʒ ï ʒ lsɘȣtɕʗʤꞅ 1 ī Ǥtɕʤʧʗ (0,821 Ñ 0,012). Ꞁȣʔʤʗʞʮʗʤʗ, ʻ ʧtɕȣʕlsʗʮʤts ʤȣtsʜʤtsʤʒ tɕʻɘʤ, ʙʒʤʗ ʟʤȣʯʝʤʤʷ ʧtsʕȣʟʤʗʕȣʒ lsɘȣtɕʗʤʉꞭ lsȣʉ lsʗʧʒ ꞱꞭꞅ, ʷʕʻ ɘꞋtsʜʗʤʗ ʜts ꞅ 3 lsȣꞅ 4 Ǥtɕʤʧ.

ʊ tɕʝʟʒʤlsȣlsʻ ʧtɕtsɘʝʜʝʤʗꞋ ʜtsfɲʤʜʞʝʤ ʤȣʤʗ ɘʻʜʟʤȣʯʝʤts ʤȣ ʧtsʮȣlsʕʒ ʜtsfɲʤʜʒ ɘʻʜʤʒʤʤtsfɲʝsʻ ɘʗꞋʻʜʤʗꞋ ʟʤȣʯʝʤ ȣʕlsʗɘʤtsfɲʝsʻ lstɕȣʤʧʮȣʤʒʤȣʟ ʕtɕtsɘʻ ʙʒǤȣʔʮʻɘ ʧtsʤfɲʝʕtsʾ ʤʒʷfɲʤtsʾ ʧtstɕtsʜʗ ʟȣʤʝʞʤts ɘʻʜ lsʗʧʒ ꞱꞭꞅ. ʊȣʕ, ʤȣ ʧtsʮȣlsʕʒ ʝʕfɲʧʝtɕʗʤʝʤlsʒ ʤȣʔɘʗʰ ȣ ȣʕlsʗɘʤfɲʝsᴵ ʝʤʟʗʤʒ ʙʒʤȣ ʒ lsɘȣtɕʗʤꞅ 3 Ǥtɕʤʧʗ ʻʟ ʉꞭ lsʗʧtsʤ ꞱꞭꞅ. ɸ ʙfɲʝsʤ lsʤʝ ʟʤȣʯʝʤʤʷ ʮᴵtsǤts ʧtsʕȣʟʤʗʕȣ ʙʒʤts ʙʻʤʰ ʗʤʒ ʤʞ ʒ lsɘȣtɕʗʤꞅ 1 Ǥtɕʤʧʗ ʤȣ 9,1%, ꞅ 2 Ǥtɕʤʧʗ ï ʤȣ 6,8%, ꞅ 4 Ǥtɕʤʧʗ ï ʤȣ 10,8% ʧtɕʗ p <0,05.

ʊtɕʗɘȣʤʝ ʟǤtsʜtsɘʒɘȣʤʤʷ ʕtstɕʤʒtsɘtsʾ ʜtsʙȣɘʕʗ ʒ fɲʕʤȣʜʻ tɕȣʮʻtsʤʒ fɲʧtɕʗʷʤts ʟtɕtsfɲʝsȣʤʤ ȣʕlsʗɘʤtsfɲʝsʻ ɸ fɲɸ ʊ ʕtɕtsɘʻ, ʧtstɕʻɘʤʷʤts ʻʟ ʧtsʮȣlsʕtsʤ ʜtsfɲʤʜʒ, ʤʗʰ ʝ ʒ ꞅ 2 ʻ ꞅ 3 ǤtɕʤʧȣꞋ lsɘȣtɕʗʤ ʷʕʻ ʤȣʤʝʞȣʤʗ ʜts ʉꞱɯ ʻ ʉꞭ lsʗʧʻɘ ꞱꞭꞅ. Ʇʝʤʗʮʗʤȣ ȣʕlsʗɘʤtsfɲʝsʻ ʷʝtɕʤʝʤlsȣ ʕtɕtsɘʻ ꞅ 2 Ǥtɕʤʧʗ lsɘȣtɕʗʤʙʒʤȣ ɘʻtɕtsǤʻʜʤts ɘʗʰ tsʶ, ʤʞ ʤȣ ʧtsʮȣlsʕʒ ʜtsfɲʤʜʒ ʤȣ 22,0%, ȣʒ ꞅ 4 Ǥtɕʤʧʗ ī ʤȣ 6,9%.

ʂ tɕʻʤʒ ʮᴵtsǤts ʤȣʤʗ ɘfɲʝsȣʤtsɘʤʝʤts ʤʒʞlsʗʧtsɘʻ ɘʻʜʤʒʤʤtsfɲʝsʻ ɘʝʤʗʮʗʤ ȣʕlsʗɘʤtsfɲʝsʻ ʜȣʤtsǤts ʷʝtɕʤʝʤlsʒ ʕtɕtsɘʻ ʙʒǤȣʔʮʻɘ tɕʻʟʤʗꞋ Ǥtɕʤʧ ʤȣ lsʤ ʟǤtsʜtsɘʒɘȣʤʤʷ ʕtstɕʤʒtsɘtsʾ ʜtsʙȣɘʕʗ. ʊȣʕ, ʤȣʔɘʗʰ ȣ ȣʕlsʗɘʤfɲʝsᴵ ɸ fɲɸ ʊ (lsȣʙʤʗʮʷ 3.23) ʧts ʟȣʕʻʤʌʝʤʤ ʜtsfɲʤʜʒ ɘʗʷɘʤʝʤȣʒ ʕtɕtsɘʻ lsɘȣtɕʗʤꞅ 2 Ǥtɕʤʧʗ ʻʟ ʉꞱɯ lsʗʧtsʤ ꞱꞭꞅ, ʷʕȣ

ʙʑdʑʘɘʿtɐtsɢʿʜdʑts ʙʿdʑ ʰ tsᴮ dʑʘ13,8% lsʘ21,1%, tʃtstɕʿɘdʑʷdʑts ʟ lsɘʘtɐɕʃdʑʘtʒʃ ɼ 3 ɢtɐdʑtʃɕʃ ʿʟ ʉ l lsɕʃtʃtsdʒ Ɉ l ɼ ʿ ɼ 4 ɢtɐdʑtʃɕʃ ʿʟ ʉ lsɕʃtʃtsdʒ Ɉ l ɼ . ɼ ʝ ʰ ts dʑʃʁ ʮɕʃdʒ ʙʑdʑts ʟdʑʘʮʝ dʑdʑʷ tʃtsʕʘʟdʑʃʕʘʑ lsɘʘtɐɕʃdʑ ɼ 1 ɢtɐdʑtʃɕʃ ʿʟ ʉ Ɉ ʈ lsɕʃtʃtsdʒ Ɉ l ɼ , ʰ ts tʃtstɕʿɘdʑʷdʑts ʟ lsɘʘtɐɕʃdʑʘtʒʃ ɼ 3 ɢtɐdʑtʃɕʃ ʿʟ ʉ l lsɕʃtʃtsdʒ Ɉ l ɼ lsʘ ɼ 4 ɢtɐdʑtʃɕʃ ʿʟ ʉ lsɕʃtʃtsdʒ Ɉ l ɼ , ʟdʒʝ dʑ ʑɘʘdʑtsfɱ ɘʿʜtʃtsɘʿʜdʑts, dʑʘ6,5% ʿ 1,3% tʃtɐɕʃ p<0,05.

ʊʘʙdʑɕʃʮʷ 3.23

ɸ ʕlsɕʃɘdʑfɱlsᴵ lstɕʘdʑfɱʘdʒʿdʑʘʟ ʕtɐtsɘʿ ʙʑɢʘʔʮʿɘ tɕʿʟdʑʃʭ lsɕʃtʃʿɘ Ɉ l ɼ ʟʘʟɢtsʜtsɘʑɘʘdʑdʑʷ ʕtstɐdʒtsɘtsʾ ʜtsʙʘɘʕɕʃ, dʒdʒtsdʑ /ɢtsʜ/dʑ(MÑm, n=10)

Ɨ tsʕʘʟdʑʃʕɕʃ	ɢtɐdʑtʃɕʃ	Ɨ ʝ tɕʿtsʜ ʜtsfɱdʑʜʑ		p₁ <	p₂ <	p₃ <
		tʃtsʮʘlstsʕ	ʕʿdʑʝ ʮᴵ			
ɸ fɱɸ ʊ	ɼ 1	0,815 Ñ0,017	0,848 Ñ0,014			0,01
	ɼ 2	0,832 Ñ0,018	0,887 Ñ0,015			0,001
		0,05				
	ɼ 3	0,889 Ñ0,015	0,903 Ñ0,012	0,001	0,05	
	ɼ 4	0,802 Ñ0,016	0,857 Ñ0,017	0,001	0,01	
		0,05				
ɸ dʑɸ ʊ	ɼ 1	0,360 Ñ0,012	0,395 Ñ0,011			
		0,001		0,001	ï	0,001
	ɼ 2	0,401Ñ0,013	0,455 Ñ0,016		0,001	0,001
		0,001				
	ɼ 3	0,316 Ñ0,011	0,351 Ñ0,011	0,001	0,05	0,01
		0,001				
	ɼ 4	0,314 Ñ0,014	0,346 Ñ0,019	0,001	0,001	
		0,001				

l ʘ ʿ ʜtsfɱdʑʜʁ ʝ dʑdʑʷ tʃtsʕʘʟʘdʑʃ, ʰ ts dʑʘtʃtsʮʘlsʕʑ ʜtsfɱdʑʜʑ ɘɕʭʿʜdʑʘʘʕlsɕʃɘdʑfɱlsᴵ lstɕʘdʑfɱʘdʒʿdʑʘʟ ʕtɐtsɘʿ ʙʑdʑʘ dʑʝtsʜdʑʘʕtsɘtsᴮ ʑ ʙʑɢʘʔʮʿɘ ʟ tɕʿʟdʑʃdʒʃ lsɕʃtʃʘdʒʃ Ɉ l ɼ . l ʘʔɘɕʃʰ tsᴮ ʙʑdʑʘʘʕlsɕʃɘdʑfɱlsᴵ ɸ dʑɸ ʊ ʕtɐtsɘʿ ʑ lsɘʘtɐɕʃdʑ ɼ 2 ɢtɐdʑtʃɕʃ ʿʟ ʉ Ɉ ɯlsɕʃtʃtsdʒ Ɉ l ɼ , ʘ dʑʘʔdʑʃʁ ʮtsᴮ ï ʑ lsɘʘtɐɕʃdʑ ɼ 3 ɢtɐdʑtʃɕʃ ʿʟ ʉ l lsɕʃtʃtsdʒ Ɉ l ɼ . ɸ ʙfɱlsdʑ lsdʑʘɘʝ dʑɕʃʮɕʃdʑʘ ʟdʑʘʮʝ dʑdʑʷ ʮᴵ tsɢts tʃtsʕʘʟdʑʃʕʘʑ ʙʑɢʘʔʮʿɘ ɼ 2 ɢtɐdʑtʃɕʃ ʙʑdʑʘ ɘʿtɐtsɢʿʜdʑts ɘɕʃʰ tsᴮ , ɘʿʜ lsɘʘtɐɕʃdʑ ɼ 1 ɢtɐdʑtʃɕʃ dʑʘ11,4%; ɼ 3 ɢtɐdʑtʃɕʃ ï dʑʘ26,9% ʿ ɼ 4 ɢtɐdʑtʃɕʃ ï dʑʘ27,7%. ʆ lsʁ ʝ , ʮʿ ʜʘdʑ fɱʿʜʮʘlsᴵ tʃtɐtslsʝ , ʰ ts ʙʑɢʘʔʮʿ ʿʟ ʉ Ɉ ɯlsɕʃtʃtsdʒ Ɉ l ɼ ʭʘtɕʘʕlsʝ tɐɕʃʟʑɘʘdʑɕʃfɱ dʑʘʔɘɕʃʰ tsᴮ ʘʕlsɕʃɘdʑfɱlsᴮ ɸ dʑɸ ʊ ʕtɐtsɘʿ, ʷʕʘ ʟdʑʘʭtsʜɕʃdʑʘfɱ ʑ ɘʝ tɕʭdʑʭ dʒʝ ʁ ʘʭ ʷʿʟʿtsdʑtsɢʿʮdʑtsʾ dʑtstɐdʒʃ ʜdʑʷ ʜʘdʑtsɢts ɘɕʃʜʑ lsɘʘtɐɕʃdʑ [illegible] (3.23) [illegible] 5,0 [illegible], [illegible] $_2$ [illegible] $_4$ [illegible], [illegible] 6,6% [illegible] 4,5% [illegible] p <0,05.

[illegible] $_2$ [illegible] 15,2%, 29,5% [illegible] 31,5% [illegible] $_1$, [illegible] $_2$ [illegible] $_4$ [illegible]. [illegible] ([illegible] $_1$ [illegible]) [illegible] $_3$ [illegible] $_4$ [illegible] 12,5% (p<0,05) [illegible] 14,2% (p<0,001). [illegible] $_3$ [illegible] $_4$ [illegible] 1,4% (p<0,01).

[illegible] [56], [illegible].

[illegible] [1].

[illegible] 3.24 [illegible]

[illegible] 3.24

[illegible] (MÑm, n=10)

[illegible]	[illegible]	[illegible]		[illegible]
		[illegible]	[illegible]	
[illegible], [illegible]/100[illegible]	Г 1	18,9Ñ0,61	17,4Ñ0,47	
	Г 2	19,2Ñ0,68	17,8Ñ0,51	
	Г 3	18,1Ñ0,52	16,7Ñ0,40	$p<0,05$
	Г 4	17,2Ñ0,48	15,8Ñ0,36	$p<0,05$
		$p_1<0,05;p_3<0,05$	$p_1<0,05;p_3<0,01$	
[illegible], [illegible]/100[illegible]	Г 1	124,9Ñ1,14	121,8Ñ1,10	
	Г 2	127,2Ñ1,29	126,2Ñ1,12	
		$P_3<0,001$	$p_1<0,05;p_2<0,001$	
	Г 3	121,7Ñ1,09	115,8Ñ1,04	$p<0,01$
			$p_1<0,001$	
	Г 4	117,2Ñ1,03	111,1Ñ0,93	$p<0,001$
		$p_1<0,001;p_2<0,01$	$p_1<0,001;p_2<0,01$	
[illegible]:[illegible]	Г 1	6,61Ñ0,06	7,00Ñ0,09	$p<0,01$
	Г 2	6,63Ñ0,06	7,09Ñ0,10	$p<0,01$
	Г 3	6,72Ñ0,07	6,93Ñ0,06	$p<0,05$
	Г 4	6,81Ñ0,08	6,86Ñ0,07	

[illegible]

[illegible] 1 [illegible] 2 [illegible] ([illegible]), [illegible] 18,9Ñ0,61 [illegible] 19,2Ñ0,68 [illegible]/100[illegible] 4 [illegible] ([illegible]), [illegible] 9,9% ($p_1<0,05$) [illegible] 11,6 % ($p_3<0,05$).

[illegible] ($p<0,05$) [illegible] 3 [illegible] 4 [illegible] 7,7% [illegible] 8,1 %. [illegible] 1 [illegible] 2 [illegible].

[illegible] 17,4Ñ0,47[illegible]/100[illegible] 17,8Ñ0,51 [illegible]/100[illegible] 12,7% [illegible] 10,1% [illegible] $p<0,05$–0,01, [illegible].

[illegible] 2 [illegible] 127,2Ñ1,29 [illegible]/100 [illegible] 4,5% [illegible] 8,5 % [illegible] $p<0,001$. [illegible] 6,6% [illegible] 3,8% [illegible] $p<0,01$– 0,001.

[illegible] 3 [illegible] 4 [illegible] 4,9% ($p<0,01$) [illegible] 5,2 % ($p<0,001$) [illegible]

[illegible]

ʧtsʕʘʟdʑʃʕʘ ʙʟdʑts ʟ lsɘʘæʃdʑ ʉ.l ɯlsʃʧʟ .l l ɼ, ʷʕj ʧtstɕʻɘdʑʷdʑts ʟ lsɘʘæʃdʑʘʒʃ, ʷʕʻ dʑʘdʝʞʘdʑʃ ʜts ʉ.l ʈ, ʉl lsʘʉ lsʃʧʻɘ .l l ɼ, ʙʟdʑts ʙʻdʑʰ ʝ ɘʻʜʧtsɘʻʜdʑts, dʑʘ 3,6% (p<0,05), 9,0% (p<0,001) ʻ 13,6% (p_3<0,001). .l dʒʻfʝts ʈ l ʂ ʟ ʕtætsɘʻ lsɘʘæʃdʑʻʟ ʉ.l ʈ lsʃʧtsdʒ .l l ɼ ɢtædʑʧʃ ʙʟɘ ɘʻtætsɢʻʜdʑts ʙʻdʑʰ ʃdʒ dʑʘ 5,2% lsʘ 8,9 %, ʧtstɕʻɘdʑʷdʑts ʻʟ ʉl lsʃʧtsdʒ .l l ɼ lsʘ ʟʻ ʉ lsʃʧtsdʒ .l l ɼ, ɘʻʜʧtsɘʻʜdʑts. ʂ tsdʑʝ dʑtsteʘʮʻʷ ʈ l ʂ ʟ ʕtætsɘʻ lsɘʘæʃdʑʻʟ ʉl lsʃʧtsdʒ .l l ɼ ɢtædʑʧʃ ʙʟdʘ ɘʻtætsɢʻʜdʑts ʙʻdʑʰ tsʶ dʑʘ 4,2 %, dʑʃʰ ʝ ʧtstɕʻɘdʑʷdʑts ʟ ʙʟɢʘʔʮʷdʒʃ, ʰ ts dʑʘdʝʞʘdʑʃ ʜts ʉ lsʃʧʟ .l l ɼ.

ʉʧʻɘɘʻʜdʑtsʰ ʝdʑdʑʷ ʈ l ʂ /ɼ l ʂ dʑʘ ʧtsʮʘlsʕʟ ʜtsfʝdʑʜʟ ɘʻtætsɢʻʜdʑts dʝ ɘʻʜtɕʻʟdʑʷdʑtsfʝʷ ʟ lsɘʘæʃdʑtɕʻʟdʑʃ ʜtsfʝdʑʜdʑʃ ɢtædʑʧ. ɫ tætslsʝ ʟ ʕʻdʑʮʻ ʝʕfʝʝ tæʃdʒʝ dʑlsʟ dʑʘ lsdʑ ʟɢtsʜtsɘʟɘʘdʑdʑʷ ʕtstædʒtsɘtsʾ ʜtsʙʘɘʕʃ ʝ ʻʕtætsdʑʧtsɘʻls, dʑʘdʒʃ ɘʻʜʟdʑʘʮʝ dʑts ɘʻtætsɢʻʜdʝ ʧʻʜɘʃʰ ʝdʑdʑʷ ʕtsʝʷʷ ʻʮʻʻ dʑlsʟ ʈ l ʂ /ɼ l ʂ, ʟ lsɘʘæʃdʑfʝʃdʑ dʑʃ lsʃʧʻɘ .l l ɼ ($ɼ_1$ ɢtædʑʧʃ ʻʟ ʉ.l ʈ lsʃʧtsdʒ .l l ɼ, $ɼ_2$ ɢtædʑʧʃ ʻʟ ʉ.l ɯlsʃʧtsdʒ .l l ɼ lsʘ $ɼ_3$ ɢtædʑʧʃ ʻʟ ʉl lsʃʧtsdʒ .l l ɼ), ɘʻʜʧtsɘʻʜdʑts, dʑʘ 5,9% (p<0,01), 6,9 % (p<0,01) lsʘ 3,1% (p<0,05), ʧtstɕʻɘdʑʷdʑts ʟ ʧtsʮʘlsʕtsdʒ ʜtsfʝdʑʜʟ. ɕʕ ʻ dʑʘ ʧtsʮʘlsʕʟ ʜtsfʝdʑʜʟ, lsʘʕ ɘ ʕʻdʑʮʻ ʝʕfʝʝ tæʃdʒʝ dʑlsʟ fʝʻɘɘʻʜdʑtsʰ ʝdʑdʑʷ ʈ l ʂ /ɼ l ʂ ɘʻtætsɢʻʜdʑts dʝ ɘʻʜtɕʻʟdʑʷdʑtsfʝʷ ʟ lsɘʘæʃdʑ tɕʻʟdʑʃ ʜtsfʝdʑʜdʑʃ ɢtædʑʧ.

l ʘtsfʝdʑtsɘʻ ʘdʑʘdʑʟʟ ɘdʒʻfʝlsʟ fʝʝʮtsɘʃdʑʃ ʟ ʕtætsɘʻ ʙʟɢʘʔʮʃɘ ʧtsdʑfʝʕtsʾ dʒɵʷfʝdʑtsʾ ʧtstætsʜʃ dʑʘ ʧtsʮʘlsʕʟ ʜtsfʝdʑʜʟ, dʑʘdʒʃ ɘfʝlsʘdʑtsɘdʝdʑts ʧtɕʷdʑʟ ʔtsɢts ʟʘdʝʞdʑfʝʲ ɘʻʜ lsʃʧʟ .l l ɼ. ɕʕ ɘʃʷɘʃdʑtsfʝ, dʑʔɘʃʰ ʃdʒ ɘdʒʻfʝls fʝʝʮtsɘʃdʑʃ ʙʟɘ ʟ ʕtætsɘʻ lsɘʘæʃdʑʉ.l ɯ lsʃʧʟ .l l ɼ ($ɼ_2$ ɢtædʑʧʘ), ʟ ʘʙfʝtsdʑ lsdʑʃdʒʟdʑʘʮʝ dʑdʑʷdʒ ï 3,87Ñ0,04 dʒdʒtsdʑ/dʑ, ʷʕʝ ʙʟdʑts ʙʻdʑʰ ʝ dʑʘ 4,9 % (p<0,05), 10,3 % (p<0,001) ʻ 19,4 % (p<0,001), ʧtstɕʻɘdʑʷdʑts ʟ ʙʟɢʘʔʮʷdʒʃ $ɼ_1$ ɢtædʑʧʃ ʻʟ ʉ.l ʈ lsʃʧtsdʒ .l l ɼ, $ɼ_2$ ɢtædʑʧʘ ʻʟ ʉ.l ɯlsʃʧtsdʒ .l l ɼ lsʘ $ɼ_4$ ɢtædʑʧʘ ʻʟ ʉ lsʃʧtsdʒ .l l ɼ ɢtædʑʧ, ɘʻʜʧtsɘʻʜdʑts (lsʘʙdʑ 3.25).

ɼ ʝʰ ts dʑʃʞ ʮʃdʒ ʙʟdʑts ʟdʑʘʮʝ dʑdʑʷ ʮʲ tsɢts ʧtsʕʘʟdʑʃʕʘ ʟ lsɘʘæʃdʑ $ɼ_1$ ɢtædʑʧʃ ʉ.l ʈ lsʃʧʟ .l l ɼ, ʧtstɕʻɘdʑʷdʑts ʻʟ $ɼ_2$ ɢtædʑʧtsʶ, ʷʕʝ fʝlsʘdʑtsɘʃdʑts ï 3,69Ñ0,05 dʒdʒtsdʑ/dʑ, ʧtætslsʝ ɘtsdʑts ʙʟdʑts ʙʻdʑʰ ʃdʒ dʑʞ ʟ lsɘʘæʃdʑ ʉl ($ɼ_3$ ɢtædʑʧʃ) lsʘʉ ($ɼ_4$ ɢtædʑʧʃ) lsʃʧʻɘ .l l ɼ, ɘʻʜʧtsɘʻʜdʑts, dʑʘ 5,1% (p<0,05) ʻ 13,9 % (p<0,001). .l dʒʻfʝls fʝʝʮtsɘʃdʑʃ ʟ ʕtætsɘʻ lsɘʘæʃdʑʉl lsʃʧʟ .l l ɼ ($ɼ_3$ ɢtædʑʧʃ) ʙʟɘ ʰ ʝ dʑʃʞ ʮʃdʒ ɘʻʜ ʔtsɢts ɘʝdʑʃʮʃdʑʃ ʟ ʉ.l ʈ lsʃʧʟ .l l ɼ ʟ ʘʙfʝtsdʑ lsdʑʃdʒʟdʑʘʮʝ dʑdʑʷdʒ 3,51Ñ0,04 dʒdʒtsdʑ/dʑ, ʷʕʝ ʧtætslsʃ lsɘʘæʃdʑʉ lsʃʧʟ .l l ɼ ($ɼ_4$ ɢtædʑʧʘ) ʙʟdʑts ʙʻdʑʰ ʝ dʑʘ 8,3 % (p<0,001).

[illegible] $Г_1$ [illegible] $Г_3$ [illegible], [illegible] 4,3% (p<0,05) [illegible] 4,8 % (p<0,01). [illegible] $Г_2$ [illegible] $Г_4$ [illegible].

[illegible] 3.25

[illegible] (M±m, n=10)

[illegible]	[illegible]	[illegible]		[illegible]
		[illegible]	[illegible]	
[illegible]	$Г_1$	3,69±0,05	3,53±0,05	$p<0,05$
	$Г_2$	3,87±0,04	3,78±0,04	
		$p_1<0,05; p_2<0,001$	$p_1<0,01; p_2<0,001$	
	$Г_3$	3,51±0,04	3,34±0,03	$p<0,01$
		$p_1<0,05$	$p_1<0,01$	
	$Г_4$	3,24±0,04	3,19±0,03	
		$p_1<0,001; p_2<0,001$ $p_3<0,001$	$p_1<0,001; p_2<0,001$ $p_3<0,001$	

[illegible] 4,8% (p<0,001) [illegible] $Г_2$ [illegible]

[illegible] 2 [illegible] 20,3% ([illegible]<0,001), [illegible] 3 [illegible] 4 [illegible]. [illegible] 2 [illegible].

[illegible].

Показники вуглеводного обміну у крові бугайців поліської м'ясної породи залежно від типів ВНД при згодовуванні кормової добавки Мікроліповіт. [illegible] (3.26), [illegible] 8,8% [illegible] 10,2% (p<0,001), [illegible] 1 [illegible] 2 [illegible]. [illegible] 4 [illegible] 12,7%, 14,1% [illegible] 4,3 [illegible] p<0,05 і 0,001, [illegible] 1 [illegible] 2 [illegible] 3 [illegible].

[illegible] 1 [illegible] 4 [illegible] 16,3%, 31,8%, 15,0% [illegible] 14,6 % [illegible] p<0,001, [illegible] 2 [illegible] 1 [illegible] 15,2% (p<0,001), [illegible] 3 [illegible] 27,7% (p<0,001), [illegible] 4 [illegible] 33,9% (p<0,001), [illegible]

[illegible], [illegible] [illegible] ([illegible]) [illegible] ([illegible]).

[illegible] ([illegible] 3.26), [illegible] 0,21Ñ0,02 [illegible] /[illegible] [illegible] $_4$ [illegible] 0,26Ñ0,02 [illegible] /[illegible] [illegible] $_2$ [illegible].

[illegible], [illegible], [illegible] $_1$ [illegible] $_2$ [illegible], [illegible], [illegible] 28,0%(p<0,05) [illegible] 42,3%(p<0,001), [illegible].

[illegible] $_2$ [illegible]. [illegible], [illegible] $_1$ [illegible] 15,6%, [illegible] $_3$ [illegible] 37,0% [illegible] $_4$ [illegible] 48,0% [illegible] p<0,001.

[illegible]. [illegible], [illegible] $_1$ [illegible] $_2$ [illegible] 1,38Ñ0,02 [illegible] 1,40Ñ0,03 [illegible] /[illegible], [illegible] $_3$ [illegible] $_4$ [illegible], [illegible] 1,28Ñ0,02 [illegible] 1,26Ñ0,02 [illegible] /[illegible]

[illegible] $_2$ [illegible], [illegible], [illegible] 9,4% (p<0,01) [illegible] 11,1% (p<0,01), [illegible] $_3$ [illegible] $_4$ [illegible].

[illegible], [illegible] $_2$ [illegible], $_3$ [illegible] lsʗʧʦʤʒ.Iι r lsʘ r 4 Ǥʨʥʐʧʗʗʿʟ ʉ lsʗʧʦʤʒ.Iι r ɘʿʜʧʦɘʿʜʤʪ, ʤʘ 7,8% (p<0,01), 7,1% (p<0,05) ʿ 4,8 % (p<0,05). ʋ ʕʨʦɘʿ lsɘʘʨʗʤʑ r 1 Ǥʨʥʐʧʗʗʿʟ ʉ.Iʈ lsʗʧʦʤʒ.Iι r ɘʤʒʃʚ ʤʒʦʤʦʯʤʦʾ ʕʗʃʚʦlsʗ ɘ ʕʿʤʎʿ ʜʦʃʚʜʐ ʕʦʤʗɘʘʃʚ ɘ ʤʝʯʘʓ ɘʗʓʿʜʤʗʓ ɘʝʤʗʯʗʤʑ ʧʦʯʘlsʕʦɘʦʗʦ ʝʕʃʚʝ ʨʗʤʝ ʤʕʑ.

ʊʘʙʤʗʯʷ 3.26

ʃ ʕʨʝ ʤʾ ʧʦʕʘʟʤʗʕʗ ʦʙʤʾʤʐ ɘʐǤʤʝɘʦʜʿɘ ʕʨʦɘʿ ʙʐǤʘʓʯʿɘ ʨʿʟʤʗʓ lsʗʧʿɘ.Iι r ʟʘ ʟǤʦʜʦɘʐɘʘʤʤʷ ʕʦʨʤʒʦɘʦʾ ʜʦʙʘʕʗʃ ʿʕʨʦʤʐʧʦɘʿls, (MÑm, n=10)

ɿ ʦʕʘʟʤʗʕʗ	ʇ ʨʥʐʧʗ	ɿ ʝʨʿʦʜ ʜʦʃʚʜʐ		ʨ
		ʧʦʯʘlsʦʕ	ʞ ʿʤʝʯʷ	
1	2	3	4	5
ʇ ʤʐ ʕʦʟʘ, ʤʒʤʦʤʐ/ʤʐ	r 1	3,06Ñ0,04	3,56Ñ0,05	*p<0,001*
	r 2	3,11Ñ0,04	4,10Ñ0,06	*p<0,001*
		$p_2<0,001$	$p_1<0,001;p_2<0,001$	
	r 3	2,79Ñ0,03	3,21Ñ0,04	*p<0,001*
		$p_1<0,001$	$p_1<0,001$	
	r 4	2,67Ñ0,03	3,06Ñ0,04	*p<0,001*
		$p_1<0,001;p_2<0,05$	$p_1<0,001;p_2<0,05$	
ɿ ʿʨʐʐɘʘls, ʤʒʤʦʤʐ/ʤʐ	r 1	0,25Ñ0,02	0,32Ñ0,02	*p<0,05*
	r 2	0,26Ñ0,02	0,37Ñ0,03	*p<0,001*
			$p_3<0,05$	
	r 3	0,23Ñ0,02	0,27Ñ0,02	
	r 4	0,21Ñ0,02	0,25Ñ0,02	
			$p_1<0,05;p_3<0,01$	
ʃ ʘʕlsʘls, ʤʒʤʦʤʐ/ʤʐ	r 1	1,38Ñ0,02	1,42Ñ0,03	
	r 2	1,40Ñ0,03	1,50Ñ0,04	*p<0,05*
		$p_2<0,01$	$p_1<0,05;$	
	r 3	1,28Ñ0,02	1,38Ñ0,02	*p<0,01*
		$p_1<0,01$	$p_2<0,01$	
	r 4	1,26Ñ0,02	1,32Ñ0,02	*p<0,05*
		$p_1<0,001;p_3<0,01$	$p_2<0,05;$	

Ɉ tɑtsнtsɘӽ ʝ ʤʥʷ lsʘʙʤʗʯʿ 3.26

1	2	3	4	5
ʃ ʘʢlsʘls: ʧʿtɑʣɘʘls	ʅ 1	5,52Ñ0,09	4,44Ñ0,07	*$p<0,001$*
	ʅ 2	5,38Ñ0,08	4,14Ñ0,05	*$p<0,001$*
			$p_1<0,01;p_2<0,001$	
	ʅ 3	5,57Ñ0,09	5,11Ñ0,08	*$p<0,001$*
			$p_1<0,001$	
	ʅ 4	6,00Ñ0,11	5,28Ñ0,09	*$p<0,001$*
		$p_1<0,01;p_2<0,01$	*$p_1<0,001;p_3<0,001$*	

Ɉ tstɕʿɘʤʑ ᴷ ʯʗ fɲtɕʝнʤʑ ʟʤʘʯʝʤʥʷ ʢtsʤʯʝʤʦstɕʘʯʿʾ ʤʓsʤʦsʯʤʦsʾ ʢʗfɲʧʤslsʗ ɘ ʢtɑtsɘʿ ʙʟɢʘʔʯʿɘ ʟ tɕʿʟʤʗʤʓʗ lsʗʧʘʤʓʗ ʎʅʅ ʤʘʤʓʗ ɘʿнʟʤʘʯʝʤts, ʰ ts ʟ lsɘʘtɕʗʤʑʿʟ ʉʎ ɯlsʗʧtsʤʓ ʎʅʅ ʾʾ ɘʝʤʗʯʗʤʘʙʟʤʘʤʘʔɘʗʰ tsᴷ ï 1,50Ñ0,04 ʤʓʤʓsʤʑ/ʤ, нʝʰ ts ʤʗӽʯʝ ʟʤʘʯʝʤʥʷ ʯᴵtsɢts ʧtsʢʘʟʤʗʢʘ ɘʿнʤʓʯʘʤsfɲ ʟ lsɘʘtɕʗʤʑ ʿʟ ʉʎʈ lsʗʧtsʤʓ ʎʅʅ ī 1,42Ñ0,03 ʤʓʤʓsʤʑ/ʤ, ʟ ʤʘfɲslzʧʤʗʤʓʗ ʤʗӽʯʗʤʓʗ ʧtsʢʘʟʤʗʢʘʤʓʗ ʟ lsɘʘtɕʗʤʑʿʟ ʉʅ ʿʉ lsʗʧʘʤʓʗ ʎʅʅ, ʷʢʿ ɘʿнʧtsɘʿнʤts fɲʘʤsɘʗʤʗ 1,38Ñ0,02 ʿ 1,32Ñ0,02 ʤʓʤʓsʤʑ/ʤ. ʋ ʧtɑtsʯʝʤlsʤsʤʓʑ ɘʿнʤtsʰ ʝʤʑ ʘʙfɲsʤʑ lsʤʘ ɘʝʤʗʯʗʤʘ ɘʤʓʿfɲslz ʤʓsʤʦsʯʤʦsʾ ʢʗfɲʧʤslsʗ ʟ ʙʟɢʘʔʯʿɘ ʿʟ ʉʎɯ lsʗʧtsʤʓʎʅʅ ʙʟɘ ʙʿʤʑʰ ʗʤʓʤʘ 5,6% (p<0,05), 8,7% (p<0,01) lsʘ 13,6 % (p<0,001) ɘʿнʧtsɘʿнʤts ʟ lsɘʘtɕʗʤʑʿʟ ʉʎʈ, ʉʅ ʿʉ lsʗʧʘʤʓʗ ʎʅʅ.

ʎʝʤʗʯʗʤʘɘʤʓʿfɲslz ʤʓsʤʦsʯʤʦsʾ ʢʗfɲʧʤslsʗ ʟ ʢtɑtsɘʿ lsɘʘtɕʗʤʑʿʟ ʉʎʈ ʿ ʉʅ lsʗʧʘʤʓʗ ʎʅʅ ʟʤʘʈtsнʗʤʘfɲʷ ʧtɕʘʢlsʗʯʤts ʤʘ tsнʤsʤʓʑ tɕʿɘʤʑ ʿ fɲʘʤsɘʗʤʘ, ɘʿнʧtsɘʿнʤts, 1,42Ñ0,03 lsʘ 1,38Ñ0,02 ʤʓʤʓsʤʑ/ʤ. Ɉ tɑtslsʝ ɘʿtɑtsɢʿнʤts ʤʘʔʤʗӽʯʗʤʓ ʧtstɕʿɘʤʑʷʤts ʟ ʿʤʰ ʗʤʓʗ нtsfɲʑнʤʗʤʓʗ ɢtɑʤʧʘʤʓʗ, ɘ ʢʿʤʝʿ нtsfɲʑнʟ ʙʟʤts fɲʝtɕʝнʤʑ ʟʤʘʯʝʤʥʷ ʧtsʢʘʟʤʗʢʘʟ ʙʟɢʘʔʯʿɘ ʿʟ ʉ lsʗʧtsʤʓʎʅʅ, ʘʙfɲsʤʑ lsʤʝ ʟʤʘʯʝʤʥʷ ʷʢtsɢts fɲʘʤsɘʗʤts 1,32Ñ0,02 ʤʓʤʓsʤʑ/ʤ.

ɸ ʤʘʤʟʟʑᴷ ʯʗ fɲʧʿɘɘʿнʤtsʰ ʝʤʥʷ ʤʘʢlsʘls/ʧʿtɑʣɘʘls ʤʘ ʧtsʯʘlsʢʟ нtsfɲʑнʟ ʤʘʤʓʗ ɘʿнʟʤʘʯʝʤts ʔtsɢts ʤʘʔʤʗӽʯʝ ʟʤʘʯʝʤʥʷ ʟ ʙʟɢʘʔʯʿɘ ʉʎ ɯlsʗʧʟ ʎʅʅ, ʷʢʝ fɲʘʤsɘʗʤts 5,38Ñ0,08. ʅ ʘɘʧtɑlsʗ, ʤʘʔɘʗʰ ʝ ʟʤʘʯʝʤʥʷ ʯᴵtsɢts ʧtsʢʘʟʤʗʢʘ, ɘʗʷɘʤʝʤts ʟ lsɘʘtɕʗʤʑ ʿʟ ʉ lsʗʧtsʤʓ ʎʅʅ, ʷʢʝ ʷʢ ɘʗʷɘʗʤtsfɲ, ʙʟʤts ʙʿʤʑʰ ʗʤʓ ʤʘ 8,7% (p<0,01), 7,7%

(p<0,01) ʿ 11,5% (p<0,001), ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʪɘʘʨʠʣ̷ʘʣʒʠ ʉɺ ʈ, ʉɺ ɯʿ ʉɭ ʪʠʧʘʣʒʠ ɺɭɼ.

ɺ ʢʿʣ̷ɭʿ ʝʢʩʧʝʨʠʣʝʣ̷ʂʐ, ʣ̷ʘ ʪʣ̛ ʟɢ̂ʦʜʦɘʐɘʘʣ̷ʣ̛ʷ ʢʦʨʣʒʂɘʦʾ ʜʦʙʘɘʢʠ ʄ ʿʢʨʦʣ̛ʧʦɘʿʪ, ʣ̷ʘʣʒʠ ɘʿʜʟʣ̷ʘɥʝʣ̷ʂ ɘʿʨʦɢʿʜʣʝ (p<0,001) ʟʣ̷ʠʞʝʣ̷ʣ̛ʷ ʢʦʝʷʷʿɥʿʿʣ̷ʂʐ ʩʧʿɘɘʿʜʣ̷ʂʰ ʝʣ̷ʣ̛ʷ ʣ̷ʘʢʪʘʂ/ʧʿʨʣʐɘʘʂ ʐ ɘʩʝ̄ ɢ̂ʨʣʐʧʘ̄ ʙʐɢ̂ʘʔɥʿɘ, ɘʿʜʧʦɘʿʜʣ̷ʂ ʣ̷ʘ 19,6%, 23,0%, 8,3% ʪʘ 12,0 %, ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʧʦɥʘʂʢʦʣʒʜʦʩʥʣ̛ʜʐ.

ɿʘʣʝʞʣ̷ʂ ɘʿʜ ʪʠʧʦʣ̷ʂɢʿɥʣ̷ʠ̄ ʦʩʧʙʣ̷ʠɘʦʩʪʝ ʔ ʙʐɢ̂ʘʔɥʿɘ ʧʦʣ̛ʩʝʢʦʾ ʣʒ̂ʷʩʥʣ̷ʂʾ ʧʦʨʦʜʠ, ɘ ʢʿʣ̷ɭʿ ʝʢʩʧʝʨʠʣʝʣ̷ʂʐ, ɘʝʣ̷ʠɥʠʣ̷ʘ ʩʧʿɘɘʿʜʣ̷ʂʰ ʝʣ̷ʣ̛ʷ ʣ̷ʘʢʪʘʂ/ʧʿʨʣʐɘʘʂ ʐ ʢʨʦɘʿ ʙʐʣ̷ʘ ʣ̷ʘʔʣ̷ʠʞɥʦʶ ʐ ʪɘʘʨʠʣ̷ʿʟ ʉɺ ɯʪʠʧʦʣʒɺɭɼ, ʰ ʦ ɘʠʷɘʠʣ̷ʂʩʝ ʣʝʣ̛ ʠʣʒ ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʿʟ ʉɺ ʈ, ʉɭ ʿʉ ʪʠʧʘʣʒɺɭɼ, ɘʿʜʧʦɘʿʜʣ̷ʂ, ʣ̷ʘ 6,8% (p<0,01), 20,0% (p<0,001) ʪʘ 21,6 % (p<0,001). ɿʣ̷ʘɥʝʣ̷ʣ̛ʷ ʧʦʢʘʟʣ̷ʠʢʘʐ ʪɘʘʨʠʣ̷ʿʟ ʉɺ ʈ ʪʠʧʦʣʒɺɭɼ ʩʝʙʘʣ̷ʂɘʠʣ̷ʂ 4,44Ñ0,07 ʿ ʙʐʣ̷ʂ ɘʿʨʦɢʿʜʣ̷ʂ ʣ̷ʠʞɥʠʣʒ ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʙʐɢ̂ʘʔɥʷʣʒʠ ʉɭ ʿʉ ʪʠʧʿɘ ɺɭɼ ɘʿʜʧʦɘʿʜʣ̷ʂ, ʣ̷ʘ 13,1% ʪʘ 15,9% ʧʨʠ p<0,001.

ɸʣ̷ʘʣ̛ʟʐʶ ɥʠ ʘʢʪʠɘʣ̛ʩʝʶ ʷʝʨʣʝʣ̷ʂʿɘ ɘʐɢ̂ʣʝɘʦʜʣʝɘʦɢ̂ʦ ʦʙʣʒʣ̛ʐ ɘ ʢʨʦɘʿ ʙʐɢ̂ʘʔɥʿɘ ʨ̒ʟʣ̷ʠ̄ ʪʠʧʿɘ ɺɭɼ ʣ̷ʘ ɘʿʜɢ̂ʦʜʿɘʣ̛ ʟʘ ɘɘʝʜʝʣ̷ʣ̛ʷ ʐ ʾ̄ ʨʘɥʿʦʣ ʢʦʨʣʒʂɘʦʾ ʜʦʙʘɘʢʠ ʄ ʿʢʨʦʣ̛ʧʦɘʿʪ (ʪʘʙʣ̷ʠɥʷ 3.27), ʩʝʣ̛ʜ ʟʘʣ̷ʘɥʠʪʠ, ʰ ʦ ʣ̷ʘʔɘʠʰ ʝ ʟʣ̷ʘɥʝʣ̷ʣ̛ʷ ʘʢʪʠɘʣ̷ʂʩʝʿ ʃɼɭ ʢʨʦɘʿ ʣ̷ʘʧʦɥʘʂʢʐ ʜʦʩʥʣ̛ʜʐ ɘʿʜʟʣ̷ʘɥʝʣ̷ʂ ʐ ʙʐɢ̂ʘʔɥʿɘ ɼ $_2$ ɢ̂ʨʣʐʧʠʿ ʟ ʉɺ ɯʪʠʧʦʣʒɺɭɼ, ʷʢʝ ʩʝʙʘʣ̷ʂɘʠʣ̷ʂ 3,32Ñ0,13 ʣʢɢ̂/ɢ̂Iɘ. ʈ ʨʠ ɥʿ ʦʣʒʐ, ɘʦʣ̷ʂ ʙʐʣ̷ʂ ɘʿʨʦɢʿʜʣ̷ʂ ʙʿʣ̛ʰ ʠʣʒ ʣ̷ʘ 12,5% ʿ 15,7 % ʧʨʠ p<0,05, ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʪɘʘʨʠʣ̷ʘʣʒʠ, ʷʢʿ ʣ̷ʘʣʝʞʘʣ̷ʠ ʜʦ ʉɭ ʪʘ ʉ ʪʠʧʿɘ ɺɭɼ ɘʿʜʧʦɘʿʜʣ̷ʂ. ɺ ʢʿʣ̷ɭʿ ʜʦʩʥʣ̛ʜʐ, ʣ̷ʘ ʪʣ̛ ʪʨʠɘʘʣ̷ʂɢ̂ʦ ʟɢ̂ʦʜʦɘʐɘʘʣ̷ʣ̛ʷ ʢʦʨʣʒʂɘʦʾ ʜʦʙʘɘʢʠ ʧʨʦʩʥʣ̛ʜʢʦɘʐʿʪ ʩʝ ʜʝʷʢʘ ʪʝʣ̷ʝʣ̷ɭʷ ʜʦ ʧʿʜɘʠʰ ʝʣ̷ʣ̛ʷ ʩʝʨʝʜʣ̛̄ ʟʣ̷ʘɥʝʣ̷ʣ̛ ʘʢʪʠɘʣ̷ʂʩʝʿ ʃɼɭ ʢʨʦɘʿ ʙʐɢ̂ʘʔɥʿɘ ʐʩʝ̄ ʜʦʩʥʣ̛ʜʣ̷ʠ̄ ɢ̂ʨʣʐʧ, ʧʨʠʪʝ ʨ̒ʟʣ̷ʠɥʿ ʣʒʞ ʾ̄ ɘʝʣ̷ʠɥʠʣ̷ʘʣʒʠ ɘʠʷɘʠʣ̷ʂʩʝ ʣʝʙʘʨʦɢʿʜʣ̷ʠʣʒʠ.

ɸʣ̷ʘʣ̛ʟʐʶ ɥʠ ʨ̒ʟʣ̷ʠɥʿ ɘʝʣ̷ʠɥʠʣ̷ʘ ʘʢʪʠɘʣ̷ʂʩʝʿ ʃɼɭ ʢʨʦɘʿ ʙʐɢ̂ʘʔɥʿɘ ʟ ʨ̒ʟʣ̷ʠʣʒʠ ʪʠʧʘʣʒʠ ɺɭɼ, ʩʝʣ̛ʜ ɘʿʜʟʣ̷ʘɥʠʪʠ, ʰ ʦ ɘʦʣ̷ʘ ʙʐʣ̷ʘ ʣ̷ʘʔɘʠʰ ʦʶ ʐ ʪɘʘʨʠʣ̷ʿʟ ʉɺ ɯʪʠʧʦʣʒɺɭɼ, ʷʢʘ ʟʨʦʩʝʘʣ̷ʘ ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʪɘʘʨʠʣ̷ʘʣʒʠ ʉɭ ʿʉ ʪʠʧʿɘ ɺɭɼ, ɘʿʜʧʦɘʿʜʣ̷ʂ ʣ̷ʘ 15,9% (p<0,05) ʪʘ 18,6% (p<0,01). ɼ ʝʰ ʦ ʣ̷ʠʞɥʦʶ, ɘ ʢʿʣ̷ɭʿ ʜʦʩʥʣ̛ʜʐ ʙʐʣ̷ʘ ʘʢʪʠɘʣ̷ʿʩʝʿ ʷʝʨʣʝʣ̷ʂʐ ʐ ʪɘʘʨʠʣ̷ʿʟ ʉɺ ʈ ʪʠʧʦʣʒɺɭɼ, ʧʦʦ̒ʿɘʣ̛ʷʣ̷ʂ ʟ ʉɺ ɯʪʠʧʦʣʒɺɭɼ, ʧʨʠʪʝ ɘʦʣ̷ʘ ʙʐʣ̷ʘ ʙʿʣ̛ʰ ʦʶ ʣ̷ʘ 11,5% (p<0,05), ʣ̛ʞ ʐ ʙʐɢ̂ʘʔɥʿɘ ʉ ʪʠʧʐɺɭɼ.

[illegible] 3.27

[illegible] (MÑm, n=10)

[illegible]	[illegible]	[illegible]		[illegible]
		[illegible]	[illegible]	
[illegible]	Г 1	3,11Ñ0,11	3,29Ñ0,12	
	Г 2	3,32Ñ0,13	3,50Ñ0,15	
		$p_2<0,05$	$p_2<0,05$	
	Г 3	2,95Ñ0,10	3,02Ñ0,11	
	Г 4	2,87Ñ0,09	2,95Ñ0,10	
		$p_3<0,05$	$p_1<0,05;p_3<0,01$	
[illegible]	Г 1	5,41Ñ0,13	5,27Ñ0,10	
	Г 2	5,16Ñ0,10	4,96Ñ0,08	
			$p_1<0,05;p_2<0,05$	
	Г 3	5,52Ñ0,15	5,34Ñ0,12	
	Г 4	5,62Ñ0,16	5,38Ñ0,14	
		$p_3<0,05$	$p_3<0,05$	
[illegible]	Г 1	28,1Ñ0,74	31,2Ñ0,82	$p<0,05$
	Г 2	29,3Ñ0,80	32,4Ñ0,90	$p<0,05$
		$p_2<0,05$		
	Г 3	27,1Ñ0,65	30,5Ñ0,73	$p<0,01$
	Г 4	26,3Ñ0,64	28,1Ñ0,69	
		$p_3<0,01$	$p_1<0,05;p_2<0,05$	
[illegible]	Г 1	0,193Ñ0,007	0,169Ñ0,005	$p<0,05$
	Г 2	0,176Ñ0,006	0,153Ñ0,005	$p<0,01$
		$p_2<0,05$	$p_1<0,05;p_2<0,05$	
	Г 3	0,204Ñ0,008	0,175Ñ0,007	$p<0,05$
	Г 4	0,214Ñ0,008	0,191Ñ0,007	$p<0,05$

[illegible] 8,9% ($p<0,05$) [illegible] $Г_2$ [illegible]

ᵾ Ꭵ ɯlscʃtʃtscʒ Ꭵ ʅ ɼ , lstsʜ ʻ ʷʢ ʟ lsɘʘtɐɕʃcʒ ʻcʒ ɕʃ⁼ ʜtsfiʝʒʜcʒʃ⁼ ɢtɐʑtʃ ʾʾ ɘʝ cʒʃʮɕʃcʒʘ ʢtscʒʃɘʘtʒʘfiʝ ɘ

cʒʝ ʯ ʘ⁼ ɘɕʃ⁼ʻʜcʒsɢts tʃʝ tɕʻtsʜʟ. ɸ ʙfitʝscʒ lscʒʝ ʟcʒʘʮʝ cʒcʒʷ ʘʢlsɕʃɘcʒsfiʝsʻ ʇ ɼ ʇ ʢtɐtsɘʻ ʟ ʙʟɢʘʔ ʮʻɘ

ɼ 2 ɢtɐʑtʃɕʃ ʙʟcʒts cʒʝ cʒ ʝ cʒʘ5,9%, 7,1% ʻ 7,8% tʃtɐɕʃ p<0,05, tʃtstɕʻɘcʒʷcʒts ʟ lsɘʘtɐɕʃcʒʘcʒʃ ɼ 1,

ɼ 3 lsʘ ɼ 4 ɢtɐʑtʃ, ɘʻʜtʃtsɘʻʜcʒts.

ʆ lstɐɕʃcʒʘcʒ tɐʝ ʟʟcʒ lsʘlsɕʃ ʘʢlsɕʃɘcʒsfiʝsʻ ʇ ʂ ʢtɐtsɘʻ ʙʟɢʘʔ ʮʻɘ tʃtscʒfiʝ ʢtsʾ cʒʘʷfiʝcʒsʾ

tʃtstɐtsʜɕʃ ʜʘ lsᴵ cʒsʯ cʒɕʃɘʻfiʝsᴵ fiʝsɘʝ tɐʜʯ ʟɘʘlsɕʃ, ʰ ts cʒʘ tʃtsʮʘlsʢʟ ʝ ʢfitʃʝ tɐɕʃcʒʝ cʒlsʟ ʾʾ

ɘʝ cʒʃʮɕʃcʒʘ ʙʟcʒʘ cʒʔ ɘɕʃʰ tsᴷ ʟ lsɘʘtɐɕʃcʒ ɼ 2 ɢtɐʑtʃɕʃ, ʟ ʘʙfitʝscʒ lscʒɕʃcʒ ʟcʒʘʮʝ cʒcʒʷcʒ ï

29,3Ñ0,80 cʒʢɢ/ɢʟ⁼ɘ, ʷʢʝ ʙʟcʒts ɘʻtɐtsɢʻʜcʒts ʙʻcʒʰ ɕʃcʒ tʃtstɕʻɘcʒʷcʒts ʟ ʙʟɢʘʔ ʮʷcʒʃ ɼ 3 ʻ ɼ 4

ɢtɐʑtʃ, ɘʻʜtʃtsɘʻʜcʒts cʒʘ 8,1%(p<0,05) ʻ 11,4% (p<0,01). Ꭵ ʻʜʟcʒʘʮʝ cʒts cʒʔ cʒʃʯ ʮʟ

ʘʢlsɕʃɘcʒfiʝsᴵ ʇ ʂ ʢtɐtsɘʻ ʟ lsɘʘtɐɕʃcʒ ɼ 4 ɢtɐʑtʃɕʃ, ʘʙfitʝscʒ lscʒʘɘʝ cʒʃʮɕʃcʒʘʷʢtsʾ ʙʟcʒʘɘʻtɐtsɢʻʜcʒts

cʒʝ cʒ tsᴷ tʃtstɕʻɘcʒʷcʒts ʟ ɼ 2 ɢtɐʑtʃtsᴷ ʙʟɢʘʔ ʮʻɘ cʒʘ 10,3%(p<0,01). ɼ tsʜʘʘcʒʷ ʜts

tɐʘʮʻtscʒʟ ʙʟɢʘʔ ʮʻɘ ʢtstɐcʒsɘtsʾ ʜtsʙʘʢɕʃ ʆ ʻʢtɐtscʒtʃtsɘʻls fiʝtɐɕʃʷcʒts tʃʻʜɘɕʃʰ ʝ cʒcʒ ɘ ʢʻcʒʮʻ

ʜtsfiʝʒʜʟ ʘʢlsɕʃɘcʒsfiʝsʻ ʇ ʂ ʢtɐtsɘʻ ʟ ʙʟɢʘʔ ʮʻɘ fiʝʃcʒ cʒʃ⁼ lsɕʃtʃʻɘ Ꭵ ʅ ɼ : ʟ lsɘʘtɐɕʃcʒ ᵾ Ꭵ ɯlscʃtʃʟ

Ꭵ ʅ ɼ ï cʒʘ11,0 (p<0,05), ʟ lsɘʘtɐɕʃcʒ ᵾ ʅ lsɕʃtʃʟ Ꭵ ʅ ɼ ï cʒʘ12,5 (p<0,01) ʻ lsɘʘtɐɕʃcʒ ᵾ Ꭵ ʈ

lsɕʃtʃʟ Ꭵ ʅ ɼ ï cʒʘ10,6%(p<0,05), tʃtstɕʻɘcʒʷcʒts ʟ tʃtsʮʘlsʢtscʒʜtsfiʝʒʜʟ.

ᵾ ʝ tɐʝ ʜcʒ ʟcʒʘʮʝ cʒcʒʷ ʘʢlsɕʃɘcʒsfiʝsʻ ʇ ʂ ʢtɐtsɘʻ ɘ ʙʟɢʘʔ ʮʻɘ fiʝʃcʒ cʒʃ⁼ lsɕʃtʃʻɘ Ꭵ ʅ ɼ cʒʘlscʒ

ʟɢtsʜtsɘʟɘʘcʒʷ ʢtstɐcʒsɘtsʾ ʜtsʙʘʢɕʃ, ʙʟcʒɕʃ ʙcʒʃʟᴵ ʢɕʃcʒɕʃ ʟʘɘʝ cʒʃʮɕʃcʒtsᴷ lsʘʢtscʒʃɘʘcʒʃfiʝ ɘ

cʒʝ ʯ ʘ⁼ 32,4Ñ0,90 ï 28,1Ñ0,69 cʒʢɢ/ɢʟ⁼ɘ. ʆ ʜcʒʘʢ, ʟ ʙʟɢʘʔ ʮʻɘ ᵾ lsɕʃtʃʟ Ꭵ ʅ ɼ ʘʢlsɕʃɘcʒfiʝsᴵ

ʇ ʂ ʢtɐtsɘʻ cʒʘcʒʘcʒʔ cʒʃʯ ʮʝ ʟcʒʘʮʝ cʒcʒʷ ɘ ʢʻcʒʮʻ ʜtsfiʝʒʜʟ, ʷʢʝ ʙʟcʒts ɘʻtɐtsɢʻʜcʒts cʒʃʯ ʮʝ, cʒʯ

ʟ lsɘʘtɐɕʃcʒ ɼ 1, ɼ 3 ʻ ɼ 2 ɢtɐʑtʃ, ɘʻʜtʃtsɘʻʜcʒts cʒʘ 9,9% (p<0,05), 7,9% (p<0,05) lsʘ 13,3 %(p<0,01).

ɸ cʒʘcʒʟʟᴷ ʮɕʃ ʢtsʝ ʷʻʮʻʻ cʒs fiʝʻɘɘʻʜcʒtsʰ ʝ cʒcʒʷ ʇ ɼ ʇ/ʇ ʂ ʟ ʢtɐtsɘʻ ʙʟɢʘʔ ʮʻɘ tʃtscʒfiʝ ʢtsʾ

cʒʘʷfiʝcʒsʾ tʃtstɐtsʜɕʃ cʒʘ tʃtsʮʘlsʢʟ ʜtsfiʝʒʜʟ, ɘfiʝsʘcʒsɘcʒʝ cʒts, ʰ ts cʒʔ cʒʃʯ ʮʘ ʔtsɢts ɘʝ cʒʃʮɕʃcʒʘ

ʙʟcʒʘ ʟ ʙʟɢʘʔ ʮʻɘ ɼ 2 ɢtɐʑtʃɕʃ ᵾ Ꭵ ɯlscʃtʃʟ Ꭵ ʅ ɼ , ʟ ʘʙfitʝscʒ lscʒɕʃcʒ ʟcʒʘʮʝ cʒcʒʷcʒ 0,176Ñ0,006,

ʷʢʝ ʙʟcʒts cʒʝ cʒ ʝ, tʃtstɕʻɘcʒʷcʒts ʟ ʙʟɢʘʔ ʮʷcʒʃ ɼ 3 ɢtɐʑtʃɕʃ ʻʟ ᵾ ʅ lsɕʃtʃtscʒ Ꭵ ʅ ɼ lsʘ ɼ 4 ɢtɐʑtʃɕʃ ʻʟ

ᵾ lsɕʃtʃtscʒ Ꭵ ʅ ɼ , ɘʻʜtʃtsɘʻʜcʒts cʒʘ13,7% (p<0,05) ʻ 17,8 % (p<0,01).

Ꭵ tʃtɐtsʮʝ fiʝ ʟɢtsʜtsɘʟɘʘcʒʷ ʢtstɐcʒsɘtsʾ ʜtsʙʘʢɕʃ ʟ fiʝscʒʢlsʟtɕ tɐʘʮʻtscʒʟ cʒʘcʒʃ

ɘʻʜʟcʒʘʮʝ cʒts, ʰ ts ɘ ʢʻcʒʮʻ ʜtsfiʝʒʜʟ ʢtsʝ ʷʻʮʻʻ cʒs ʇ ɼ ʇ/ʇ ʂ ʟ ʢtɐtsɘʻ ʙʟɢʘʔ ʮʻɘ ɘfiʝ⁼

ʜtsfiʝʒʜcʒʃ⁼ ɢtɐʑtʃ ɘʻtɐtsɢʻʜcʒts ʟcʒʃʯ ʟɘʘfiʝ, tʃtstɕʻɘcʒʷcʒts ʟ tʃtsʮʘlsʢtscʒʜtsfiʝʒʜʟ, ɘʻʜtʃtsɘʻʜcʒts,

cʒʘ12,4%, 14,2%, 13,1% lsʘ10,7 % tʃtɐɕʃ p<0,05 ï 0,01.

[illegible] 9,5%, 12,6% [illegible] 19,9 % [illegible] p<0,05 [illegible] 0,001. [illegible] 11,5% (p<0,05) [illegible].

Показники обміну жирів у крові бугайців поліської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт.

[illegible] 3.28.

[illegible] 3.28 [illegible] 335,83 Ñ 5,12 [illegible] 346,70 Ñ 5,44 [illegible]/100 [illegible].

[illegible] 6,5%, 7,2%, 6,4%, [illegible] 6,8 % [illegible] p<0,01, [illegible] 3,9% (p<0,05), [illegible].

[illegible] 23,17Ñ1,14 [illegible] 24,17Ñ1,05 [illegible]/100 [illegible] ʊӨʙdʑʃɥʷ 3.28

ʃ ʻʧʻʜdʐ ʢtsdʒʃtsdʑ dʑsʠ ʧdʑӨʟdʒʠ ʢtɞtsɘʻ ʙlzǤӨʡɥʻɘ tɞʻʟdʑʃ˭ lsʠʧʻɘ ɹ ʅ ɼ dʑӨlsdʐ

ʟǤtsʜtsɘlzɘӨdʑdʐʷ ʢtstɞdʒtsɘtsʾ ʜtsʙӨɘʢʠ ʄ ʻʢtɞtsdʐʧtsɘʻls, dʒǤ/100 dʒdz(MÑm, n=10)

ʇ tsʢӨʟdʑʃʢʠ	ʯ tɞdzʧʠ	ʇ ʝtɞʻtsʜ ʜtsfŋdʐʜlz		p <
		ʇ tsɥӨlstsʢ	ʂ ʻdʑ ɥᴵ	
1	2	3	4	5
ʅ ӨǤӨdʐ dʐ dʐʧʻʜʠ	ɼ 1	341,07Ñ4,38	363,41Ñ4,37	p<0,01
	ɼ 2	346,70Ñ5,44	371,56Ñ5,12	p<0,01
			p_2<0,05	
	ɼ 3	335,83 Ñ 5,12	357,48Ñ4,21	p<0,01
	ɼ 4	337,45Ñ4,68	360,42Ñ6,26	p<0,01
ʊtɞʃӨɥʠdzǤdʐɥʝtɞtsdʑʃ	ɼ 1	23,17Ñ1,14	29,05Ñ0,85	p<0,001
	ɼ 2	24,17Ñ1,05	30,15 Ñ1,21	p<0,01
	ɼ 3	24,00 Ñ1,15	27,33Ñ1,38	p<0,05
	ɼ 4	23,18Ñ1,22	28,17 Ñ1,09	p<0,01
ɼ ʻӨɥʠdzǤdʐɥʝtɞtsdʑʃ	ɼ 1	16,16Ñ0,65	17,95Ñ0,77	
	ɼ 2	16,93 Ñ0,92 p_2<0,05	18,89Ñ0,82	p<0,05
	ɼ 3	14,13Ñ0,71	16,93 Ñ0,82	p_1<0,05
	ɼ 4	16,91 Ñ0,65 p_2<0,01	17,03 Ñ0,89	
ʌ tsfŋʷ tsdʐʧʻʜʠ	ɼ 1	150,17Ñ2,17	157,01Ñ2,41	p<0,05
	ɼ 2	151,13 Ñ 2,23	159,17 Ñ2,22	p<0,05
	ɼ 3	149,19 Ñ 1,78	155,83Ñ2,75	
	ɼ 4	146,17 Ñ 1,82	156,15 Ñ2,15	p<0,01

ɫ tetsнtsɘʯ ʝ ʤʣʷ lsʘʙ ʤʯ 3.28

1	2	3	4	5
ʌtsʤʝ fɱʝ tetsʤ	ɼ 1	20,17Ñ0,91	20,16Ñ0,87	
	ɼ 2	21,95 Ñ1,02	22,17Ñ1,11	
	ɼ 3	19,93 Ñ0,89	20,83Ñ1,16	
	ɼ 4	18,99 Ñ0,87	19,96 Ñ0,87	
ɼʷʷ teʃ ʘtsʤʝ fɱʝ tetsʤ	ɼ 1	117,27 Ñ1,38	118,17Ñ0,96	
	ɼ 2	118,39Ñ0,85	120,01Ñ1,20	
		$p_2<0{,}05$	$p_2<0{,}05$	
	ɼ 3	115,18Ñ0,98	116,39 Ñ0,82	
	ɼ 4	118,03 Ñ1,36	119,05 Ñ1,80	
ʅ ɼ ɾ ʂ	ɼ 1	14,13 Ñ0,88	21,07 Ñ1,22	p<0,001
	ɼ 2	14,13Ñ0,91	21,17 Ñ0,97	p<0,001
	ɼ 3	13,40 Ñ0,77	20,17 Ñ1,08	p<0,001
	ɼ 4	14,17Ñ0,93	20,06 Ñ1,01	p<0,001

ʇ ʘ ʟɢtsнtsɘlzɘʘʤʣʷ ʢtstedʒtsɘts ʜtsʙʘɘʢʗ ʄ ʢtetsdʒʧtsɘls ʙlzɢʘʡʮʷʤ ʧtsʤfɱʢts ʤʒʷ fɱʤts ʧtstetsнʗ ʢtsʤʝ ʤlsteʘʮʷ lsteʗʘʮʗʤʣʮʝ tetsʤɘ ɘ ʢtetsɘ ɘ ʢʤʮ ʜtsfɱʤʜlz ɘtetsɢʜʤts ʟtetsfɱlsʘʤʘʤʘ25,4% (p<0,001), 24,7% (p<0,01), 13,9% (p<0,05), lsʘ21,5 % (p<0,01), ɘʜʧtsɘʜʤts lz ɼ 1 ɢteʣʧ lsɘʘteʗʤ ʉɹʈ lsʗʧlz ɹʅɼ, ɼ 2 ɢteʣʧ lsɘʘteʗʤ ʉɹ ɯlsʗʧlz ɹʅɼ, ɼ 3 ɢteʣʧ lsɘʘteʗʤʉʅ lsʗʧlz ɹʅɼ ɼ 4 ɢteʣʧ lsɘʘteʗʤʉ lsʗʧlz ɹʅɼ.

ɹ fɱlsʘʤtsɘʤʝ ʤts, ʱ ts lz ʙlzɢʘʡʮɘ ʉɹɯ lsʗʧlz ɹʅɼ ʢtsʤʝ ʤlsteʘʮʷ lsteʗʘʮʗʤʣʮʝ tetsʤɘ lz ʢtetsɘ ʙlzʤʘʤʘʡɘʗʱ tsʶ fɱlsʘʤtsɘʗʤʘ30,15 Ñ1,21 ʤʒ/100 ʤʒʤ, lstsнʷʢ lz lsɘʘteʗʤʟ ʉɹʈ, ʉʅ ʉ lsʗʧʘʤʒʗ ɹʅɼ ɘʝ ʤʗʮʗʤʘlz ʢtetsɘ ʙlzʤʘʤʯ ʮtsʶ, ʘʙ fɱlsʤ lsʤ ʟʤʘʮʝ ʤʣʷ ʷʢts ʢtsʤʗɘʘʤʗfɱ ɘʜ 29,05Ñ0,85ī 27,33Ñ1,38 ʤʒ/100ʤʒʤʙʝ ʟ ɘtetsɢʜʤts teʟʤʮ ʤʒʯ ʧtsʢʘʟʤʢʘʤʒʗ.

ɹ ʗʷɘʤʝ ʤts ʤʘʡʤʯ ʮlz ʢtsʤʝ ʤlsteʘʮʶ ʜʘʮʗʤʣʮʝ tetsʤɘ lz ʢtetsɘ ʙlzɢʘʡʮɘ ɼ 3 ɢteʣʧʗ ʉʅ lsʗʧlz ɹʅɼ ʤʘ ʧtsʮʘlsʢlz ʝʢfɱʝ teʗʤʝ ʤlslz, ʟ ʘʙ fɱlsʤ lsʤtsʶ ɘʝ ʤʗʮʗʤtsʶ ī 14,13Ñ 0,71 ʤʒ/100 ʤʒʤ, ʷʢʘ ʧtsteɘʤʷʤts ʟ ɼ 1, ɼ 2 lsʘ ɼ 4 ɢteʣʧʘʤʒʗ ʙlzʤʘ ʤʝ ʤ tsʶ, ɘʜʧtsɘʜʤts ʤʘ12,6%, 16,5% 16,4% ʧteʗ p<0,05.

ʅ ʘʡɘʗʱ lz ʢtsʤʝ ʤlsteʘʮʶ ʜʘʮʗʤʣʮʝ tetsʤɘ ɘfɱlsʘʤtsɘʤʝ ʤts lz ʢtetsɘ ʙlzɢʘʡʮɘ ɼ 2 [illegible] 16,93 Ñ 0,92 [illegible]/100 [illegible] $_3$ [illegible] 19,80% (p<0,05).

[illegible] $_3$ [illegible] 20,0% (p<0,05), [illegible] $_1$ [illegible] $_2$ [illegible]. [illegible] $_4$ [illegible].

[illegible] 146,17 Ñ 1,82 [illegible]/100 [illegible] ($_4$ [illegible]) [illegible] 151,13 Ñ 2,23 [illegible]/100 [illegible] ($_2$ [illegible]) [illegible].

[illegible] 4,6% (p<0,05), 6,8% (p<0,01) [illegible] 5,3% (p<0,05), [illegible] $_1$, $_2$ [illegible] $_4$ [illegible]. [illegible].

[illegible] 18,99 Ñ 0,87 [illegible] 21,95 Ñ 1,02 [illegible]/100 [illegible].

[illegible].

[illegible] 13,40 Ñ 0,77 [illegible]/100 [illegible] $_3$ [illegible] 14,17 Ñ 0,93 [illegible]/100 [illegible] $_4$ [illegible]

ʊʘʙdzʆɥʷ 3.29

ɼ ʆtsdzssʕʆʄɲlsdzʆʔ ʄʂdzʘʜ ʕtsɐtsɘʻ ʙdzɢʘʔ ɥʻɘ tsɞʻʟdzʆ˭ lsʆʃʻɘ ɺ ʅ ɼ dzʘlsdzʹ ʟɢtsʜtsɘdzɘʘdzdzʷ ʕtstsdzʒsɘtsʾ ʜtsʙʘɚʕʆ ʃ ʻʕtsɐsdzʹʃtsɘʻls, % (MÑm, n=10)

ɿ tsʕʘʟdzʆʕʆ	ʯ tsdztʃʆ	ɿ ʝ tsɞʻtsʜ ʜtsʄɲʆʹʜdz		p <
		ɿ tsɥʘlstsʕ	ʂ ʻdzʝ ɥɪ	
1	2	3	4	5
ʆ ʻtsʆʄɲlsʆdzssɘʘ 14:0	ɼ 1	1,28Ñ0,06	1,20Ñ0,06	
	ɼ 2	1,31 Ñ0,05	1,21 Ñ0,06	
	ɼ 3	1,32 Ñ0,04	1,24Ñ0,05	
	ɼ 4	1,33 Ñ0,06	1,27 Ñ0,05	
ɿ ʝ dzlsʘʜʝ ʕʘdzssɘʘ 15:0	ɼ 1	1,26 Ñ0,05	1,13Ñ0,03	$p<0,05$
	ɼ 2	1,41 Ñ0,06	1,22 Ñ0,07	$p_2<0,05$
	ɼ 3	1,18Ñ0,06	1,16 Ñ0,05	
	ɼ 4	1,16 Ñ0,07	1,13 Ñ0,07	$p_3<0,05$
ɿ ʘdzʻ dzʒʻlsʆdzssɘʘ 16:0	ɼ 1	19,10Ñ0,67	18,01Ñ0,53	
	ɼ 2	20,40 Ñ0,67	18,01 Ñ0,60	$p<0,05$
	ɼ 3	20,39 Ñ0,73	19,39Ñ0,80	
	ɼ 4	19,98 Ñ0,72	18,93 Ñ0,78	
ɿ ʘdzʻ dzʒʻlststsdzʝ ʾdzssɘʘ 16:1	ɼ 1	2,96 Ñ0,09	3,04Ñ0,10	
	ɼ 2	3,03Ñ0,07	3,13 Ñ0,07	
	ɼ 3	2,99Ñ0,07	3,07 Ñ0,06	
	ɼ 4	3,06 Ñ0,06	3,12 Ñ0,08	
ʉ lsʝ ʘtsʆdzssɘʘ 18:0	ɼ 1	24,20Ñ0,95	22,03Ñ0,74	
	ɼ 2	22,70Ñ0,84	20,35 Ñ0,69	$p<0,05$
	ɼ 3	23,82Ñ0,88	22,17Ñ0,89	
	ɼ 4	19,69 Ñ0,72	18,01 Ñ0,67	
		$p_1<0,01;p_2<0,01$	$p_1<0,001;p_2<0,01$	

[illegible]

1	2	3	4	5
[illegible] 18:1	Г 1	23,36 Ñ0,89	25,32Ñ0,83	
	Г 2	24,18Ñ0,90	26,18 Ñ0,82	
	Г 3	24,36Ñ0,87	25,39 Ñ0,96	
	Г 4	27,16 Ñ0,86	28,95 Ñ0,84	
		p1<0,01;p2<0,05	p1<0,01;p2<0,05	
[illegible] 18:2	Г 1	22,91Ñ0,92	24,54Ñ0,82	
	Г 2	23,14Ñ0,67	25,95 Ñ0,79	p<0,05
			p_2<0,05	
	Г 3	21,39Ñ0,87	22,99 Ñ0,79	
	Г 4	23,20 Ñ0,77	24,46 Ñ0,88	
[illegible] 18:3	Г 1	2,43 Ñ0,08	2,65Ñ0,08	
	Г 2	2,03Ñ0,08	2,29 Ñ0,08	p<0,05
			p_1<0,05	
	Г 3	2,60Ñ0,12	2,90 Ñ0,006	p<0,05
		p_1<0,01;p_2<0,001	p_1<0,01;p_2<0,001	
	Г 4	1,99 Ñ0,08	2,03 Ñ0,05	
		p_1<0,01;p_2<0,001	p_1<0,001;p_2<0,001	
[illegible] 20:0	Г 1	2,50 Ñ0,07	2,23Ñ0,08	p<0,05
	Г 2	1,80Ñ0,06	1,66Ñ0,07	
		p_1<0,001	p_1<0,001	
	Г 3	1,95 Ñ0,07	1,69Ñ0,07	p<0,05
		p_1<0,001	p_1<0,001	
	Г 4	2,43 Ñ0,10	2,10 Ñ0,07	p<0,05
		p_2<0,001;p_3<0,001	p_2<0,001;p_3<0,001	

[illegible] Г 2 [illegible] Г

[illegible] 2,39% ($p<0,05$), [illegible] $_1$ [illegible] $_3$ [illegible] $_4$ [illegible].

[illegible] 2,96 Ñ 0,09 [illegible] $_1$ [illegible] 3,06 Ñ 0,06 % [illegible] $_4$ [illegible].

[illegible].

[illegible] $_4$ [illegible] 19,69 Ñ 0,72% [illegible] 4,51% ($p_1<0,01$), 4,13% ($p_2<0,01$) [illegible] 3,01% ($p_3<0,05$), [illegible] $_1$ [illegible] $_3$ [illegible].

[illegible] 2,35 % ($p<0,05$) [illegible] $_2$ [illegible].

[illegible] $_4$ [illegible] 18,01 Ñ 0,67 %, [illegible] 4,02% ($p<0,001$), 4,16% ($p<0,01$) [illegible] 2,34% ($p<0,01$), [illegible] $_1$ [illegible] $_2$ [illegible] $_3$ [illegible].

ʃ lstacʃcʒ·dž нdž ţʃtsʕʘ.ʘdžʃ, ʱ ts ɘcʒʼfŋs tscɉʾcʒsɘtsʾ ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ вlzGʘʔɥʿɘ ţʃtsdžfŋʕtsʾ dʒʘʷfŋdʒsʾ ţʃtstatsнcʃ dʘţʃtsɥʘʃʕlz ʝʕfŋţʝ tacʃcʒ cʒslz вlzɘ dʘʔɘcʃʱ cʃcʒlz ɼ $_4$ Gtadztʃʿ ʿʟ ʉ lscʃţʃtscʒ.I l ɼ ʿ fŋʘdʒsɘcʃɘ 27,16 Ñ 0,86%, ʘвfŋtsdž lscɉ ʟdʘɥʝ cʒdžʷ ʷʕtsGts вlzcʒs, вʿdžʱ cʃcʒ dʘ 3,80% ($p_1<0,01$), 2,80% ($p_2<0,05$) lsʘ 2,98 % ($p_3<0,05$), džɣ lz lsɘʘacʃcʒ ɼ $_1$ ɼ $_2$ ʿ ɼ $_3$ Gtadztʃ ʿʟ ʉ.I ţ , ʉ.I ɯlsʘʉ l lscʃţʃʘcʒcʃ.I l ɼ , ɘʿнţʃtsɘʿнcʒs.

I ʕʿcʒɥɼʿ нtsfŋdžнlz ʟʘ lzcʒsɘ lstacʃɘʘdʒsGts ʟGtsнtsɘlzɘʘdžʷ ʕtstacʒsɘtsʾ нtsвʘɘʕcʃ lz fŋʕcʒʘнʿ taʘɥʿtsdžlz, dʘcʒcʃ cɉ ɘcʃʷɘcɉcʒs taʿʟcʒcʃɥʿ lz ɘʝcʒcʃɥcʃcʒʘ ɘcʒʼfŋslz tscɉʾcʒsɘtsʾ ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ вlzGʘʔɥʿɘ ţʃtsdžfŋʕtsʾ dʒʘʷfŋdʒsʾ ţʃtstatsнcʃ, ʷʕʿ dʘcɉɣʘdžcʃ нts taʿʟcʒcʃ lscʃţʃʿɘ.I l ɼ , ţʃtstaʿɘdžʷcʒs ʟ ţʃtsɥʘʃʕtscʒнtsfŋdžнlz. ɸ dʘdž ʟ taʿʟcʒcʃɥʿ ɘʝcʒcʃɥcʃcʒ ɥʿtsGts ţʃtsʕʘʟcʒcʃʕʘlz ʕtatsɘʿ lsɘʘacʃcʒ ʟ taʿʟcʒcʃcʒ lscʃţʃtscʒ.I l ɼ ţʃtsʕʘ.ʘɘ, ʱ ts ɘ ʕʿcʒɥɼʿ нtsfŋdžнlz dʘʔɘcʃʱ ʝ ʔtsGts ʟdʘɥʝ cʒdžʷ вlzcʒs lz ɼ $_4$ Gtadztʃʿ lsɘʘacʃcʒ ʉ lscʃţʃlz.I l ɼ , ʷʕʝ ţʃʝ taɉɘcʃʱ lzɘʘdʒs dʘ 3,63% ($p<0,01$), 3,56% ($p<0,05$) ʿ 2,77 % ($p<0,05$), ɘcʒʼfŋs tscɉʾcʒsɘtsʾ ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ lsɘʘacʃcʒ ɼ $_1$, ɼ $_2$ ʿ ɼ $_3$ Gtadztʃ ʿʟ ʉ.I ţ , ʉ.I ɯlsʘʉ l lscʃţʃʘcʒcʃ.I l ɼ , ɘʿнţʃtsɘʿнcʒs.

I cʒʼfŋs džcʒscɉɘtsʾ ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ вlzGʘʔɥʿɘ ţʃtsdžfŋʕtsʾ dʒʘʷfŋdʒsʾ ţʃtstatsнcʃ dʘ ţʃtsɥʘʃʕlz ʝʕfŋţʝ tacʃcʒ cʒslz ʟdʘtsнcʃɘfŋʷ ɘ cɉɣʘ ɘʿн 21,39Ñ0,87 ɘ ɼ $_2$ Gtadztʃʿ lsɘʘacʃcʒ ʉ.I ɯ lscʃţʃlz.I l ɼ нts 23,20Ñ0,77 % ɘ ɼ $_4$ Gtadztʃʿ lsɘʘacʃcʒ ʉ lscʃţʃlz.I l ɼ вʝʟ ɘʿtatsGʿнcʒsʾ taʿʟcʒcʃɥʿ cʒɣ ʟdʘɥʝ cʒdžʷ cʒcʃ ţʃtsʕʘʟcʒcʃʕʘ.

I ʕʿcʒɥɼʿ ʝʕfŋţʝ tacʃcʒ cʒslz ɘţʃtatsнtsɘɣ ʟGtsнtsɘlzɘʘdžʷ ʕtstacʒsɘtsʾ нtsвʘɘʕcʃ ʕtscʒɥʝ cʒstaʘɥʿʷ džcʒscɉɘtsʾ ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ ʟtatsfŋʘdʘ dʘ 2,81 % ($p<0,05$), ţʃtstaʿɘdžʷcʒs ʟ ɘcʃʿнcʒcʃcʒ ţʃʝtaʿtsнtscʒ dʒcʃʱ ʝ lz вlzGʘʔɥʿɘ ɼ $_2$ Gtadztʃcʃ ʉ.I ɯ lscʃţʃlz .I l ɼ . ʉʝtaɉн ţʃtaɉнfŋʘcʒcʃʕʿɘ taʿʟcʒcʃ lscʃţʃʿɘ.I l ɼ dʘʔɘcʃʱ cʃʔ ɘcʒʼfŋs džcʒscɉɘtsʾ ʕcʃfŋdʒslscʃ ɘcʃʷɘcɉcʒs ɘ ɥʝʔ ţʃʝtaʿtsн lz lsɘʘacʃcʒ ʉ.I ɯlscʃţʃlz.I l ɼ , ʘвfŋtsdž lscɉ ʟdʘɥʝ cʒdžʷ ʷʕtsGts fŋʘdʒsɘcʃcʒs 25,95 Ñ0,79 %, ʱ ts вlzcʒs ɘʿtatsGʿнcʒs вʿdžʱ cʃcʒ dʘ 2,96 % ($p<0,05$), ţʃtstaʿɘdžʷcʒs ʟ ʔtsGts dʘʔcʒcʃɣ ɥtsʸ ɘʝcʒcʃɥcʃcʒsʸ lz lsɘʘacʃcʒ ʿʟ ʉ l lscʃţʃtscʒ.I l ɼ .

ʇ tacʃ нtsfŋdžнɣʝcʒdž džcʒscɉcʒsɘtsʾ ʕcʃfŋdʒslscʃ, ʷʕʘ ţʃʿfŋdžʷ fŋɉʘacʃcʒsɘtsʾ, ʟʘʔcʒʘ dʘʔвʿdžʱ lz ɥʘfŋʕlz lz ʷcʒsɘcʃɥtscʒlz ɣcʃtaʿ, ɘfŋʘdʒsɘcɉcʒs, ʱ ts ʾʾ ɘcʒʼfŋs lz ʕtatsɘʿ вlzGʘʔɥʿɘ ţʃtsdžfŋʕtsʾ dʒʘʷfŋdʒsʾ ţʃtstatsнcʃ dʘ ţʃtsɥʘʃʕlz нtsfŋdžнlz вlzɘ dʘʔɘcʃʱ cʃcʒ ɘ ɼ $_3$ Gtadztʃʿ lsɘʘacʃcʒ ʉ l lscʃţʃlz.I l ɼ . ʇ tacʃ ɥʿtscʒlz ʔtsGts ʘвfŋtsdž lscɉ ʟdʘɥʝ cʒdžʷ lz ʕtatsɘʿ нʘcʒsʾ Gtadztʃcʃ lsɘʘacʃcʒ вlzcʒs ɘʿtatsGʿнcʒs ($p<0,001$) вʿdžʱ cʃcʒ ţʃtstaʿɘdžʷcʒs ʟ ɼ $_2$ ʿ ɼ $_4$ Gtadztʃʘcʒcʃ ʉ.I ɯlsʘʉ lscʃţʃlz .I l ɼ . I ʿtatsGʿнcʒs cʒcʃɣ ɥcʃʔ ɘcʒʼfŋs ʕcʃfŋdʒslscʃ lz ʕtatsɘʿ ɼ $_2$ Gtadztʃcʃ lsɘʘacʃcʒ ʉ.I ɯlscʃţʃlz.I l ɼ [illegible] 2,0% (p<0,05) [illegible].

[illegible] 2,90 Ñ 0,06 %, [illegible] (p<0,01) [illegible] (p<0,001) [illegible].

[illegible] (p<0,05) [illegible] 1,66 Ñ 0,07 % [illegible] 1,69 Ñ 0,07 %, [illegible] (p<0,05) [illegible].

Гормональний профіль крові бугайців поліської м'ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт. [illegible] 3.29), [illegible] 4,68Ñ0,08 [illegible] 4,06Ñ0,10 [illegible].

[illegible]

ɘꝗʰ ꝗdʒ dʑʞ lz ʙlzɢʘʡ ɥʻɘ ɼ 1, ɼ 3 lsʘ ɼ 4 ɢtɕdʐtʃ, ɘʻʜtʃtsɘʻʜdʑs dʑʘ 13,9% (p<0,01), 9,1% (p<0,001) ʻ 15,3% (p<0,01).

ʊʘʙdʑꝗɥʷ 3.29

ʂ tsdʑɉ dʑsteʘɥʻʷ ɢtstɕdʒsdʑɘ lz ʢtɕtsɘʻ ʙlzɢʘʡ ɥʻɘ tɕʻʟdʑꝗ lsꝗtʃʻɘ ɺ ɩ ɼ dʑʘlsdʐ ʟɢtsʜtsɘlzɘʘdʑdʐʷ ʢtstɕdʒsɘtsʾ ʜtsʙʘɘʢꝗ ʄ ʻʢtɕtsdʐtʃtsɘʻls, (MÑm, n=10)

ɿ tsʢʘʟdʑꝗʢꝗ	ɻ tɕdʐtʃꝗ	ɿ ȷ tɕʻtsʜ ʜtsfɡdʐʜlz		tɕ
		ɿ tsɥʘlstsʢ	ʂ ʻdʑ ɥᴵ	
ʊꝗtɕɉ tsɭstɕtsʃʻdʑ, dʑdʒsdʐ /dʐ	ɼ 1	4,11Ñ0,11	4,60Ñ0,08	*p<0,01*
	ɼ 2	4,68Ñ0,08	6,51Ñ0,07	
		p_1<0,01;p_2<0,001	*p_2<0,01*	
	ɼ 3	4,29Ñ0,13	5,94Ñ0,10 *p_1<0,05*	*p<0,05*
	ɼ 4	4,06Ñ0,10	3,74Ñ0,08	*p<0,05*
		p_3<0,01	*p_3<0,05*	
ʊtɕꝗʡtsʜlsꝗtɕtsdʐdʑ, dʑdʒsdʐ /dʐ	ɼ 1	14,1Ñ0,57	18,2Ñ0,40	*p<0,001*
	ɼ 2	14,9Ñ0,63	23,4Ñ0,34 *p_2<0,05*	*p<0,001*
	ɼ 3	13,7Ñ0,51	16,9Ñ0,42	*p<0,05*
	ɼ 4	12,8Ñ0,46 *p_3<0,05*	10,8Ñ0,36	*p<0,01*
ʊꝗtɕtsʢfɡꝗdʑ, dʑdʒsdʐ /dʐ	ɼ 1	79,7Ñ1,94	94,1Ñ1,62	*p<0,001*
	ɼ 2	78,4Ñ2,01	103,2Ñ1,54	*p<0,001*
	ɼ 3	80,6Ñ2,14	82,4Ñ1,64	*p<0,001*
	ɼ 4	76,3Ñ1,87	70,1Ñ1,68;*p_3<0,01*	*p<0,05*
ɯdʑɟlzdʐdʑ, tʃdʒsdʐ /dʐ	ɼ 1	348,1Ñ3,05	374,5Ñ3,41	*p<0,001*
	ɼ 2	361,2Ñ3,12	386,2Ñ3,51	
		p_1<0,01;p_2<0,001	*p_1<0,05;p_2<0,001*	*p<0,001*
	ɼ 3	342,4Ñ3,07	361,4Ñ3,34	*p<0,001*
			p_1<0,001	
	ɼ 4	332,3Ñ2,91	352,9Ñ3,22	*p<0,001*
		p_1<0,01;p_3<0,001	*p_1<0,001;p_3<0,001*	

ɺ ʢʻdʑɥʻ ʜtsfɡdʐʜlz, ʟʘ lzdʒsɘ ʟɢtsʜtsɘlzɘʘdʑdʐʷ ɘꝗʢtstɕꝗflsʘdʑdʐʷ ʢtstɕdʒsɘtsʾ ʜtsʙʘɘʢꝗ ʄ ʻʢtɕtsdʐtʃtsɘʻls, ɘʻʜʟdʑʘɥɉ dʑs ɘʻtɕtsɢʻʜdʑ tʃʻʜɘꝗʰ ȷ dʑdʐʷ ʢtsdʑɉ dʑsteʘɥʻʾ lsꝗtɕɉ tslstɕtstʃdʑsɢts

ɢtstadʒsdʑ, ɘʻʜdʑsfŋɖs ʧtsʮʘʂʢʑ ʜtsfŋʑʜʑ, ʑ ʢtatsɘʻ ʪɘʘadʒ ɼ 1, ɼ 2 ʪʘ ɼ 3 ɢtadʒʧ, ɘʻʜʧtsɘʻʜdʑs, dʑʘ 11,9%, 38,5% ʪʘ 39,1% ʧtaʧ p<0,05 ï 0,001, ʪʘ ʟdʑʧʞʝ dʑdʑ ʑ ɼ 4 ɢtadʒʧʻ dʑʘ 7,9% (p<0,05).

ɟ tstaʻɘdʑ ʮʧ ʢtsdʑʝ dʑstaʘʮʻ ʪʧtaʝ tsʪtatsʧʻdʑ ʑ ʢtatsɘʻ ʪɘʘadʒ ʟ taʻʟdʑʧdʒʧ ʪʧʧʘdʒʧ ɺ ʅ ɼ ɘ ʢʻdʑʮʻ ʜtsfŋʑʜʑ ɘʧɘʧdʑsfŋ, ʰ ts dʑʘʔɘʧʰ ʝ ʟdʑʘʝ dʑdʑ ɘʻʜdʒʻʮʘdʑsfŋ ʑ ʙʑɢʘʔʮʻɘ ʉ ɺ ɯʪʧʧʑ ɺ ʅ ɼ, ʪtsʜʻ ʢ ʑ ʪɘʘadʒ ʉ ʪʧʧʑ ɺ ʅ ɼ dʑʘ ʪdʑ ʟɢtsʜtsɘʑɘʘdʑ ʢtstadʒsɘtsʼ ʜtsʙʘʢʧ ɘtsdʑs ʟdʑʧʞ ʑɘʘdʑsfŋ ʧtatsʪʧ ʧtsʮʘʂʢtsɘtsɢts ʧʝ taʻtsʜʑ ʜtsfŋʑʜʑ.

ʅ tsʢtaʝ dʒʘ ɘʝ dʑʧʮʧdʑʘ ʢtsdʑʝ dʑstaʘʮʻ ʪʧtaʝ tsʪtatsʧʻdʑ ʑ ʢtatsɘʻ ʪɘʘadʒ ʉ ɺ ɯʪʧʧʑ ɺ ʅ ɼ ʧʝ taʝ ɘʧʰ ʑɘʘdʑʘ ʟdʑʘʝ dʑdʑ ʑ ʪɘʘadʒ ɼ 1, ɼ 3 ʻ ɼ 4 ɢtadʒʧ ʑ 1,4, 1,1 ʻ 1,7 taʘʟʻɘ ʧtaʧ p<0,05, ʰ ts dʑʘ dʑʘ ʑ ʜʑdʒʢʑ dʒtsʞʝ fŋʻʜʮʧʪʧ ʧtats ʧʻʜɘʧʰ ʝ dʑdʑ ʑdʑʢʮʻtsdʑʘdʑ dʑs ʘʢʪʧɘdʑsfŋʻ ʘʜʝ dʑsɢʻʧts ʻʟʘ ʑ ʙʑɢʘʔʮʻɘ dʑʘ ɘʻʜɢtsʜʻɘdʑ, ʟʘ ʜtsʜʘɘʘdʑ ʑ taʘʮʻtsdʑʢtstadʒsɘtsʼ ʜtsʙʘʢʧ ʝ ʻʢtatsdʑʧtsɘʻʪ.

ɟ taʧ ʮtsdʒʑ dʑʘʔɘʧʰ ʘ ʑdʑʢʮʻtsdʑʘdʑ dʑʘ ʘʢʪʧɘdʑfŋʂ ʜʘdʑs ʟʘdʑsʟʧ ɘdʑʪtaʰ dʑts fŋʢtaʝ ʮʼ ʧtatsɘdʑdʑʘfŋ ʑ ʪɘʘadʒʻʟ ʉ ɺ ɯʪʧʧtsdʒ ɺ ʅ ɼ. ʂ tsdʑʝ dʑstaʘʮʻ ɢtstadʒsdʑ ʑ ʢtatsɘʻ ʪɘʘadʒ ɼ 1 ʻ ɼ 3 ɢtadʒʧ, ʢʻ dʑʘdʑʞ ʘdʑʧ ʜts fŋʧdʑ dʑsɢts ʪʧʧʑ ɺ ʅ ɼ, ʙʑdʑʘ ɘʻtatsɢʻʜdʑs ɘʧʰ ts ʑ 1,2 ʻ 1,6 taʘʟʻɘ, ʧtstaʻɘdʑdʑs ʟ ʙʑɢʘʔʮdʒʧ ɼ 4 ɢtadʒʧʧ ʉ ʪʧʧʑ ɺ ʅ ɼ.

ʊtsʙʪts ʟ ʮʧ ʜʘdʑʧ dʒtsʞ dʑʘ ʟtatsʙʧʪʧ ɘʧfŋdʑsɘtsʢ, ʰ ts ʟʘfŋʂtsfŋɘʘdʑʘ dʑʘdʒʧ ʢtstadʒsɘʘ ʜtsʙʘʢʘ ʧtatsɘdʑdʑʘ ʢtaʘ ʧʔ ʘʢʪʧɘʑ ʮʔ ɘʧdʑʧɘ dʑʘ ʘʜʝ dʑsɢʻʧts ʻʟ ʑ ʪɘʘadʒʻʟ fŋʧdʑ dʑʧdʒʪʧʧtsdʒ ɺ ʅ ɼ ʻ dʑʝ ɘʧdʑʧɘʘdʑʘdʑʘ ʪɘʘadʒfŋdʑʘʙʢtsɢts ʪʧʧʑ ɺ ʅ ɼ.

ʆ ʪtaʧdʒʘdʑ taʝ ʟʑdʑ ʪʘʪʧ ʢtsdʑʝ dʑstaʘʮʻ ʪtaʧʔtsʜʪʧtatsdʑdʑ ʑ ʢtatsɘʻ ʙʑɢʘʔʮʻɘ ʧtsdʑfŋʢtsʼ dʒʘfŋdʑsʼ ʧtstatsʜʧ ɘʢʘʟʑ ʪ dʑʘ ʪʝ, ʰ ts dʑʘ ʧtsʮʘʂʢʑ ʜtsfŋʑʜʑ, ɘʧʻʜdʑʘ ɘʝ dʑʧʮʧdʑʘ ʙʑdʑʘ dʑʘʔɘʧʰ ts ʑ ɼ 2 ɢtadʒʧʻ ʪɘʘadʒ ʉ ɺ ɯʪʧʧʑ ɺ ʅ ɼ, ʟ ʘʙfŋʂdʑ ʪdʑʧdʒ ʟdʑʘʝ dʑdʑdʒ 14,9Ñ0,63 ʧdʒtsdʑ /dʑ, ʰ ts ɘʧɘʧdʑsfŋ ʙʻdʑ ʰ ʧdʒ dʑʘ 14,1 (p<0,05), dʑʞ ʑ ʙʑɢʘʔʮʻɘ ɼ 4 ɢtadʒʧʧ ʻʟ ʉ ʪʧʧtsdʒ ɺ ʅ ɼ. ʋ ʙʑɢʘʔʮʻɘ, ʢʻ dʑʘdʑʞ ʘdʑʧ ʜts ʻdʑ ʧ ʪʧʧʻɘ ɺ ʅ ɼ taʻʟdʑʧʮ dʒʞ ɘʝ dʑʧʮʧdʑʘdʒʧ ʟdʑʘʝ dʑdʑ ʮtsɢts ʧtsʢʘʟdʑʧʢʘ ʑ ʢtatsɘʻ ʙʑdʑʘ dʑʝ ɘʻtatsɢʻʜdʑs.

ɺ ʢʻdʑʮʻ ʜtsfŋʑʜʑ, dʑʘ ʪdʑ ʟɢtsʜtsɘʑɘʘdʑ ʢtstadʒsɘtsʼ ʜtsʙʘʢʧ ʝ ʻʢtatsdʑʧtsɘʻʪ ʑ fŋʢdʑʘʜʻ taʘʮʻtsdʑ, fŋʧtsfŋʂʝ taʻɢʘdʑʘfŋ ʘdʑʘdʑsɢʻʮdʑʘ ʜʧdʑʘdʒʢʘ ʢtsdʑʝ dʑstaʘʮʻ ʪtaʧʔtsʜʪʧtatsdʑdʑ ʑ ʢtatsɘʻ ʙʑɢʘʔʮʻɘ ʻʟ fŋʧdʑ dʑʧdʒʧ ʪʘ fŋdʑʘʙʢʧdʒ ʪʧʧʘdʒʧ ɺ ʅ ɼ. ɟ taʧ

ป tsdžz əfiʝsӨdżsədʝdżs, ʰ ts dźⱷ?əɕʰ tsᵏ ꞨtsdʌʝdżsteӨɥʷ Gtstedʒsdżz Bzdźⱷ z lsəӨteɕdżʻL ʉ.I ɯ lsɕʈʃtsdʒ.I l ɼ ʻ dźⱷ?dżɕʎɥtsᵏ ī z lsəӨteɕdżʉ lsɕʈʃz.I l ɼ, ʈʃtstcʻədżʷdżs L ʼʼ əɕ⁼ʻHdżɕdʒɕ əʝdżɕɥɕdźⱷdʒɕ dźⱷ ʈʃtsɥⱷlsꞨz ʝꞨfnʈʃʝteɕdʒʝdższ. ıtsꞨteʝdʒⱷ əʝdżɕɥɕdźⱷɥ tsGts ʈʃtsꞨⱷLdżɕꞨⱷz lsəӨteɕdżʉ.I ɯlsɕʈʃz.I l ɼ Bzdźⱷəɕʰ tsᵏ, ʈʃtstcʻədżʷdżs L BzGⱷ?ɥʷdʒɕ ʉ.I ʈ, ʉ l ʻ ʉ lsɕʈʃʻə.I l ɼ əʻHʈʃtsəʻHdżs z 1,3, 1,4 ʻ 2,2 teⱷLɕ ʈʃteɕ p<0,01 ī 0,001.

ʂ tsdʌʝdżsteӨɥʷ lsɕtesꞨfnʃdżz z Ꞩtesəʻ BzGⱷ?ɥʻə dźⱷ ʈʃtsɥⱷlsꞨz HtsfnʃdżHz dʝ dʒⱷdźⱷ əʻtesGʻHdżɕ⁼ dʒʻɣ Gtedzʈʃtsəɕ⁼ tcʻLdżɕɥ ʻ Ꞩtsdżɕəⱷdźⱷfnʷ L fnʝteʝHdżdʒɕ ӨBfnʝsdż lsdżɕdʒɕ Ldźⱷɥʝdżdżʷdʒɕ əʻH 76,3Ñ1,87 Hts 80,6Ñ2,14 dżdʒsdż/dz

.I ʈʃtesHtsəɣ lsteɕəӨdżsGts LGtsHtsəzəӨdżdżʷ Ꞩtstedʒsətsʼ HtsBⱷꞨɕ ʃ ʻꞨtesdżʈʃtsəʻls ə Ꞩʻdʌɥʻ HtsfnʃdżHz, dźⱷdʒɕ əʻHLdźⱷɥʝdżs əʻtesGʻHdʝ ʈʃʻHəɕʰ ʝdżdżʷ Ldźⱷɥʝdżdżʷ ɥ tsGts ʈʃtsꞨⱷLdżɕꞨⱷ ʈʃtstcʻədżʷdżs L ʈʃtsɥⱷlsꞨtsdʒ HtsfnʃdżHz dźⱷ 18,1%, 2,2%, 31,6% ʈʃteɕ p<0,001, əʻHʈʃtsəʻHdżs z BzGⱷ?ɥʻə ɼ 1, ɼ 2 ʻ ɼ 3 Gtedzʈʃ, lsⱷ?tsGts Ldżɕɣʝdżdżʷ dźⱷ 8,1% (p<0,05) z lsəӨteɕdżɼ 4 Gtedzʈʃɕ. ɸ dźⱷdżL əʝdżɕɥɕdżꞨtsdʌʝdżsteӨɥʼ Gtstedʒsdżz z Ꞩtesəʻ lsəӨteɕdżʷꞨʻ dźⱷdʝɣⱷlsᴵ Hts tcʻLdżsGts lsɕʈʃz.I l ɼ ʈʃtsꞨⱷLⱷ, ʰ ts dźⱷ lsdż əɕꞨtsteɕfnʝsⱷdżdżʷ Ꞩtstedʒsətsʼ HtsBⱷꞨɕ ʼʼ Ldźⱷɥʝdżdżʷ LtesfnʝsⱷdżS z lsəӨteɕdż fnʃdżdżɕ⁼ lsɕʈʃʻə.I l ɼ, L dźⱷ?əɕʰ tsᵏ ꞨtsdʌʝdżsteӨɥʻʻᵏ Gtstedʒsdżz z ɼ 2 Gtedzʈʃʻ ʻL ʉ.I ɯlsɕʈʃtsdʒ.I l ɼ, ʷꞨⱷ Bzdźⱷ əɕʰ tsᵏ dźⱷ 9,7% ʻ 25,2% p<0,05 ī 0,01, dżɣ z ɼ 1 ʻ ɼ 3 Gtedzʈʃⱷ⁼ ʻL ʉ.I ʈ ʻ ʉ l lsɕʈʃⱷdʒɕ.I l ɼ. ʈ ⱷLtsdʒ L lsɕdʒ z lsəӨteɕdżʉ lsɕʈʃz.I l ɼ ədʒʻfnʝs Gtstedʒsdżz z Ꞩtesəʻ Lⱷ zdʒsə LGtsHtsəzəӨdżdżʷ Ꞩtstedʒsətsʼ HtsBⱷꞨɕ Bzə dźⱷ?dżɕɣɥɕdʒ ʻ fnʝsⱷdżsəɕə 70,1Ñ1,68 dżdʒsdż/dz lsⱷBzə dʝdż ɕdʒdźⱷ25,6%, 24,9%, 32,1% ʈʃteɕ p<0,05 ī 0,01.

ʂ tsdʌʝdżsteӨɥʷ ʻdżfnʝdżdżdżz ə Ꞩtesəʻ BzGⱷ?ɥʻə dźⱷ ʈʃtsɥⱷlsꞨz ʝꞨfnʈʃʝteɕdʒʝdższ Bzdźⱷ dźⱷ?əɕʰ tsᵏ z ɼ 2 Gtedzʈʃʻ ʉ.I ɯlsɕʈʃz.I l ɼ L ӨBfnʝsdż lsdżɕdʒ Ldźⱷɥʝdżdżʷdʒ 361,2Ñ3,12 ʈʃdʒsdż/dz ʷꞨʝ Bzdżs Bʻdż ʰ ʝ dźⱷ3,8%, (p<0,01), 5,5% (p<0,001) ʻ 8,7% (p<0,001), ʈʃtstcʻədżʷdżs L lsəӨteɕdźⱷdʒɕ ɼ 1, ɼ 3 lsⱷ ɼ 4 Gtedzʈʃ, əʻHʈʃtsəʻHdżs. ʂ tsdʌʝdżsteӨɥʷ Gtstedʒsdżz z lsəӨteɕdżʻdż ɕ⁼ fnʃdżdżɕ⁼ lsɕʈʃʻə (ʉ.I ʈ ʻ ʉ l) Bzdźⱷ BdżɕLᴵ Ꞩtsᵏ Lⱷ əʝdżɕɥɕdźⱷdʒɕ, ʷꞨʻ fnʝsⱷdżsəɕdżɕ 348,1Ñ3,05 ʻ 342,4Ñ3,07 ʈʃdʒsdż/dz tsHdⱷꞨ ʼ⁼ Ldźⱷɥʝdżdżʷ Bzdżɕ əɕʰ ɕdʒɕ dźⱷ4,7% ʻ 3,0% ʈʃteɕ p<0,01 əʻHʈʃtsəʻHdżs, ʈʃtstcʻədżʷdżs L lsəӨteɕdźⱷdʒɕ ʉ lsɕʈʃz.I l ɼ.

.I Ꞩʻdʌɥʻ HtsfnʃdżHz, Lⱷ zdʒsə LGtsHtsəzəӨdżdżʷ Ꞩtstedʒsətsʼ HtsBⱷꞨɕ ʃ ʻꞨtesdżʈʃtsəʻls ꞨtsdʌʝdżsteӨɥʷ ʻdżfnʝdżdżdżz z Ꞩtesəʻ Ltesfnʝsⱷdźⱷ ʈʃtstcʻədżʷdżs L ʼʼ əɕ⁼ʻHdżɕdʒɕ əʝdżɕɥɕdźⱷdʒɕ dźⱷ ʈʃtsɥⱷlsꞨz ʝꞨfnʈʃʝteɕdʒʝdższ, ə zfnʝ⁼ Gtedzʈʃⱷ⁼ lsəӨteɕdż dʝLⱷdʝɣdżs əʻH lsɕʈʃz.I l ɼ. ʋ

[illegible] 7,6%, 5,5%, 6,9% [illegible] 6,2% [illegible] $p<0,001$.

[illegible] 3,1%, 6,7%, [illegible] 9,4 % [illegible] $p<0,001$.

[illegible] 5,0 [illegible].

Показники системи АОЗ у бугайців поліської м’ясної породи на відгодівлі залежно від типів ВНД при згодовуванні добавки Мікроліповіт.

[illegible] 3.30.

[illegible] 6,54Ñ0,14 ī 7,14Ñ0,16 [illegible].

[illegible] (*p<0,001*) [illegible] 16,9%, 24,6%, 21,3%, [illegible] 19,2%, [illegible]

4,93Ñ0,22 dǯ˛dǯsdǯ /dǯ, ʷ˛ʝ ɘɕʷɘɕdǯsfŋ dǯ dǯ ɕdǯ dǯ 14,1%, 12,3% lsʘ 10,8% ʧtɕ p<0,05 ï 0,001, dǯɣ lz ʙlzɢʘʔɥɘ ʟ ʉɪ ʇ , ʉʅ ʿ ʉ lsɕʧʘdǯ ɪ ʅ ɼ , ɘʿʜʧtsɘʿʜdǯs.

ɪ dǯfŋs ʇʅ ʃ lz ˛tɕtsɘʿ ʙlzɢʘʔɥɘ dǯʘ ʧtsɥʘls˛lz ʝ˛fŋʝ tɕɕdǯ dǯslz dǯ ɘʿʜʟdǯʘɥʘɘfŋʷ ɘʿtɕtsɢʿʜdǯɕdǯ dǯɣ ɢtɕlzʧtsɘɕdǯ tɕʿʟdǯɕɥʷdǯ ʿ ˛tsdǯɕɘʘɘfŋʷ ɘ dǯɣʘ 2,65Ñ0,16ī 3,12Ñ0,24 ʆ ɼ Iʈ Ɫ480/dǯdǯ

ʊʘʙdǯɕɥʷ 3.30

ɼ ʝʷ˛ʿ ʧts˛ʘʟdǯ˛ɕ ʅ ʆ ʃ lz ˛tɕtsɘʿ ʙlzɢʘʔɥɘ tɕʿʟdǯ lsɕʧʿɘ ɪ ʅ ɼ dǯʘlsdǯ ʟɢtsʜtsɘlzɘʘdǯʷ ˛tstɕdǯsɘts˒ ʜtsʙʘɘ˛ɕ ʆ ʿ˛tɕtsdǯʧtsɘʿls, (MÑm, n=10)

ʅ ts˛ʘʟdǯ˛ɕ	ʇ tɕdǯʧɕ	ʅ ʝ tɕʿtsʜ ʜtsfŋdǯʜlz		p<
		ʅ tsɥʘlsts˛	ʂ ʿdǯɥ	
ɼ ʂ , dǯ˛dǯsdǯ /dǯ	ɼ 1	6,91Ñ0,18	5,74Ñ0,16	*$p<0,001$*
	ɼ 2	6,54Ñ0,17	4,93Ñ0,22	*$p<0,001$*
			$p_1<0,01;p_2<0,05$	
	ɼ 3	7,14Ñ0,18	5,62Ñ0,12	*$p<0,001$*
	ɼ 4	6,84Ñ0,14	5,53Ñ0,15	*$p<0,001$*
			$p_3<0,05$	
ʇʅ ʃ , ʆ ɼ Iʈ Ɫ480/dǯdǯ	ɼ 1	2,72Ñ0,16	2,19Ñ0,13	*$p<0,05$*
	ɼ 2	2,65Ñ0,16	2,09Ñ0,12	*$p<0,05$*
	ɼ 3	3,12Ñ0,24	2,33Ñ0,11	*$p<0,001$*
	ɼ 4	2,91Ñ0,15	1,98Ñ0,17	*$p<0,001$*
ʆ ɼ ɸ , dǯ˛dǯsdǯ /dǯ	ɼ 1	5,12Ñ0,17	4,11Ñ0,18	*$p<0,001$*
	ɼ 2	4,57Ñ0,19	3,42Ñ0,12	*$p<0,001$*
			$p_1<0,01;p_2<0,01$	
	ɼ 3	5,38Ñ0,22	4,22Ñ0,21	*$p<0,01$*
	ɼ 4	5,05Ñ0,20	3,96Ñ0,16	*$p<0,001$*
			$p_3<0,05$	

ɪ ˛ʿdǯɥʿ ʝ˛fŋʝ tɕɕdǯ dǯslz, ʟʘ lzdǯsɘ ʟɢtsʜtsɘlzɘʘdǯʷ ˛tstɕdǯsɘts˒ ʜtsʙʘɘ˛ɕ, fŋʧtsfŋsʝ tɕʿɢʘdǯsfŋ ɘʿtɕtsɢʿʜdǯ ʟdǯɕɣʝ dǯʷ ˛tsdǯʝdǯstɕʘɥʿ˒ ʇʅ ʃ lz lsɘʘtɕɕdǯ ʟ tɕʿʟdǯɕdǯɕ

[illegible] 19,5%, 25,3%, 21,1% [illegible] 32,0% [illegible] $p<0{,}05$ [illegible] 0,001 [illegible]

[illegible] 4,57±0,19 [illegible] 5,38±0,22 [illegible]

[illegible] 19,7%, 21,6%, 25,2% [illegible] 21,6 % [illegible] $p<0{,}01$ [illegible] 0,001 [illegible] $_{1}$, [illegible] $_{2}$ [illegible] $_{3}$ [illegible] $_{4}$ [illegible]

[illegible] $_{2}$ [illegible] 3,42±0,12 [illegible] 16,8%, 20,0% [illegible] 13,6 % [illegible] $p<0{,}01$ [illegible] 0,05, [illegible] $_{1}$, [illegible] $_{2}$ [illegible] $_{3}$ [illegible]

[illegible] 3.31) [illegible] $_{2}$ [illegible] 0,421±0,013 % [illegible] Hb [illegible] $_{3}$ [illegible] $_{4}$ [illegible] 15,7 ($p_2<0{,}01$) [illegible] 28,0 % ($p_3<0{,}001$).

[illegible] $_{2}$ [illegible] $_{1}$ [illegible] 24,0 % ($p<0{,}01$) [illegible] $_{4}$ [illegible]

[illegible] 17,9%,

24,2%, 17,6% [illegible] 18,8% [illegible] p<0,05 [illegible] 0,001, [illegible] $_1$ [illegible] $_4$ [illegible].

[illegible] (18,7%, 13,5% [illegible] 21,0 %) [illegible] p<0,05 [illegible] 0,001, [illegible].

[illegible] 3.31

[illegible] (MÑm, n=10)

[illegible]	[illegible]	[illegible]		p<
		[illegible]	[illegible]	
[illegible], % [illegible] 1 G/Hb	Г 1	0,408Ñ0,019	0,481Ñ0,018	*$p<0,05$*
	Г 2	0,421Ñ0,013	0,495Ñ0,015	*$p<0,01$*
		$p_2<0,01$		
	Г 3	0,364Ñ0,012	0,452Ñ0,017	*$p<0,001$*
	Г 4	0,329Ñ0,014	0,391Ñ0,018	*$p<0,05$*
		$p_1<0,01;p_3<0,001$	*$p_1<0,01;p_2<0,05$* *$p_3<0,001$*	
[illegible], [illegible] GSH[illegible] 1 G Hb/[illegible].	Г 1	305,3Ñ15,9	412,1Ñ14,9	*$p<0,001$*
	Г 2	332,3Ñ14,1	418,0Ñ16,5	*$p<0,001$*
		$p_2<0,01$	*$p_2<0,01$*	
	Г 3	261,1Ñ14,0	355,3Ñ12,8	*$p<0,001$*
			$p_1<0,01$	
	Г 4	285,3Ñ15,3	332,0Ñ13,5	*$p<0,05$*
		$p_3<0,05$	*$p_1<0,001$* *$p_3<0,001$*	

[illegible]

[illegible]

[illegible] 332,3Ñ14,1 [illegible] GSH [illegible] 1 [illegible] Hb /[illegible] [illegible] 27,3% [illegible] 16,5% [illegible] $p<0{,}05$ [illegible] 0,01. [illegible] 261,1Ñ14,0 [illegible] GSH [illegible] 1 [illegible] Hb/[illegible] [illegible] 21,4% ($p<0{,}01$).

[illegible] 35,0% ($p<0{,}001$), 36,1% ($p<0{,}001$), 25,8% ($p<0{,}001$) [illegible] 16,4 %($p<0{,}05$), [illegible].

[illegible] 17,6 % [illegible] 26,0% [illegible] $p<0{,}01$.

[illegible]

[illegible] p<0,01.

Продуктивність і якість м'яса бугайців поліської м'ясної породи різних типів ВНД після згодовування добавки Мікроліповіт. [illegible]

[illegible] (3.32). [illegible] 515,5 Ñ 3,87 [illegible] 4,3% (p<0,01), 7,6% (p<0,001) [illegible] 6,8 % (p<0,001). [illegible] 2,72 [illegible] 2,67-2,68 [illegible]

[illegible] 325,8 Ñ 2,87 [illegible] 905,0 Ñ 7,96 [illegible] 5,3% (p<0,01), 8,3% (p<0,001) [illegible] 7,6 % (p<0,001). [illegible]

[illegible]

ʤʒʻʤʪʤɖɔɖ ɪʤʤʦɔ ʟʦɔʤɀʰ ʤɀʦɢʦ ʄʝʦʠ ʜʦɔɖʰ ʘ ʰ ʦ ɪʟɢʦʜʏ ɪʻɪˡ ʄʝʸ ʟ ʦʠʟɪʤɀ ɪʘɪʘʤʒɖ ʜʦʄʝɀʜʏ ʝ ʤɀ ʻʤɀ ɖɦ ʘɪʦʦɕʻɔ [2, 81, 87]

ʊʘʙʤɖʯʷ 3.32

ɫ ʦʂʘʟʤɖʂɖ ʧʦʜɪʂɪɖɔʤʄʝʻ ʙɪɢʘʔʯʻɔ ʦɕʟʤɖɦ ɪɖʧʻɔ ɪ ɩ ɼ ʧʦʤɀʄʝʂʦʾ ʤʒʷʄʝʤʾ ʧʦʦʜɖ ʧʻʄʝɀʷ ʟɢʦʜʦɔɪɔʘʤɀʷ ʂʦʦɖʒʦɔʦʾ ʜʦʙʘʂɖ ç ʃ ʻʂʦʤɀʧʦɔʻɪè, n=10 MÑm

ɫ ʦʂʘʟʤɖʂ ʧʦʜɪʂɪɖɔʤʄʝʻ	ʇ ʤɀʧɖ	ɫ ʝ ʦɕʻʦʜ ʜʦʄʝɀʜɪ		p₁ <
		ɫ ʦʯʘɪʦʂ	ʂ ʻʤʝʯ	
ʃ ʘʄʘɪʻʤʘ, ʂɢ	Г 1	184,8 Ñ1,81	494,3 Ñ4,43	0,01
	Г 2	189,7 Ñ3,26	515,5 Ñ3,87	
	Г 3	178,5 Ñ2,42	479,3 Ñ6,50	0,001
	Г 4	180,1 Ñ2,84	482,9 Ñ3,30	0,001
ɸ ʙʄʦʤɀ ɪʤʤɖʔ ʧʦɖʦɕʄʝɪ, ʂɢ	Г 1	309,5 Ñ4,33		0,01
	Г 2	325,8 Ñ2,87		ï
	Г 3	300,8 Ñ5,45		0,001
	Г 4	302,8 Ñ4,00		0,001
ʉ ʝ ʦʝ ʜʤɀ ʦʜʦʙʦɔɖʔ ʧʦɖʦɕʄʝɪ, ɢ	Г 1	859,7 Ñ12,02		0,01
	Г 2	905,0 Ñ7,960		ï
	Г 3	835,6 Ñ15,13		0,001
	Г 4	841,1 Ñ11,12		0,001
ɩ ʻʜʤʄʝɖʔ ʧʦɖʦɕʄʝɪ, %	Г 1	91,1 Ñ0,91		
	Г 2	92,5Ñ1,04		ï
	Г 3	91,4 Ñ0,98		
	Г 4	91,4 Ñ1,27		

Примітка: p₁ ï ʧʦʦɕɔʤɀʷʤʦ ʟ ɪɔʘɖʤʘʤʒɖ ʉ ɩ ɯɪɖʧɪ ɩ ɩ ɼ ɔ ʂʻʤʯʻ ʜʦʄʝɀʜɪ.

ɫ ʦʦɕʷʜ ʟ ʘʤʘʤɀʟʦʤʒ ʂʻʤɀ ʂʻʄʝɖ ʧʦʂʘʟʤɖʂʻɔ ʤʒʷʄʝʤʾ ʧʦʜɪʂɪɖɔʤʄʝʻ ʤʘʤʒɖ ʧʦɔʝʜʝʤʘ ʦʯʻʤʘʷʂʻʄʝɖ ʧʦʂʘʟʤɖʂʻɔ ʤʒʷʄʘ ɔʻʜ ʙɪɢʘʔʯʻɔ ʦɕʟʤɖɦ ɪɖʧʻɔ ɪ ɩ ɼ, ʦʝʟɪʤɀ ɪʘɪɖ ʜʦʄʝɀʜʏ ʝ ʤɀ ʷʂɖɦ ʧʦʝʜʄʝɪʘʤʝʤɀ ɪ ɪʘʙʤɖʯʻ 3.33.

ʗ ʂ ɔʻʜʦʤʒʦ, ʷʤʦɔɖʯɖʤʘ ɔʻʜʤʄʝɖɪˡ ʄʝʸ ʜʦ ʤʘʔʧʦʏɖɔʤɀʰ ɖɦ ʧʦʜɪʂɪʻɔ ʧʦʜɪʂɪ ʙʻʤʂʦɔʦɢʦ ɦʘɕʯɪɔʘʤɀʷ, ʜʤɀʷ ʦʯʻʤʂɖ ʙʻʤʂʦɔʦʾ ʯʻʤʄʝʻ ʤʒʷʄʘ

Ştsteɑʃfɪŋslzᴷ lsfɪʸ ʙʻdᶎtsɘts ʷŞʻfɪgʎɑʃdʒ ʧtsŞʘʟdʎɑʃŞtsdʒ ʷŞɑʃʔ ⫬ʘteʘŞlsʝteɑʃʟlzʻ ɘʻʜdʎsʰ ʝdʎdzʸ ʧtsɘdʎsɥʻdʎdʎɑʃ⫬ ʻ dʎʝ ʧtsɘdʎsɥʻdʎɑʃ⫬ ʙʻdᶎʻɘ. ıʘ ɘdʒʻfɪŋstsdʒ ʘdʒʻdʎsŞɑʃfɪgdʎsls lsteɑʃʧlstsʷʘdʎz ʻ tsŞfɪgʃʧteɑtsdzdʎz ʧteɑʃʔdzʸlsts ɘɘʘɣʘlsɑʃ, ʰ ts dʒʘ̂ʷfɪŋs ɘɑʃfɪŋsŞtsʾ ɥʻdʎdʎsfɪŋsʻ dʒʘ ʙʻdᶎtsɘts-ʷŞʻfɪgʎɑʃʔ ʧtsŞʘʟdʎɑʃŞ 5 ʻ ɘɑʃʰ ʝ, fɪʝteʝʜdzts ʾ - 4,3 ʻ ɘɑʃʰ ʝ, dʎɑʃɣɥʝ 4,3 ï dʒʘ̂ʷfɪŋs dʎʝ ʧtsɘdʎsɥʻdʎdʎʝ. ɹ ʧteɑtsɘʝʜʝdʎɑʃ⫬ ʜtsfɪgdzʜɣʝdʎdzʸ⫬ dʒʘ̂ʷfɪŋs ʙlzɢʘʔɥʻɘ ɘfɪʝ⫬ ɢteɑdzʧ ʙlzɘ ɘɑʃfɪŋsŞɑʃʔ ʙʻdᶎtsɘts-ʷŞʻfɪgʎɑʃʔ ʧtsŞʘʟdʎɑʃŞ lsʘʙdʎɑʃɥʷ 3.5.3.6.

ɸdʎʘdzʟlzᴷ ɥɑʃ ɘdʒʻfɪŋs ʘdʒʻdʎsŞɑʃfɪgdʎsls lsteɑʃʧlstsʷʘdʎz lsʘ tsŞfɪgʃʧteɑtsdzdʎz ɘ dʎʘʔʜtsɘʰ tsdʒz dʒʷʟʻ fɪʝɑʃdʎɑʃ, tslsteɑʃdʒʘdʎsdʒz ʧteɑʃ ʟʘʙtsʾ ɘ Şʻdʎɥʻ ʜtsfɪgdzʜlz ɘʻʜ ʙlzɢʘʔɥʻɘ teʻʟdʎɑʃ⫬ lsɑʃʧʻɘ ɘɑʃʰ tsʾ dʎʝ teɘtsɘtsʾ ʜʻʷdz dʎsfɪŋsʻ ɼ 1, ɼ 2 ɼ 3 ɼ 4 ɢteɑdzʧ fɪgdzʜ ʟʘʟdʎʘɥɑʃlsɑʃ, ʰ ts ʧteɑʃ ʜtsfɪgɑʃlsᴵ ɘɑʃfɪŋsŞtsdʒz teʻɘdz lsteɑʃʧlstsʷʘdʎz lz dʒʷfɪʝ lsɘʘteɑʃdz lzfɪʝ⫬ ɢteɑdzʧ, dʎʘʔɘɑʃʰ ɑʃdʒ ʔtsɢts ɘdʒʻfɪŋs ʙlzɘ lz dʒʷfɪʝ tslsteɑʃdʒʘdʎsdʒz ɘʻʜ ɼ 2 ɢteɑdzʧɑʃ ʻʟ ʉ ɹ ɯlsɑʃʧtsdʒ ɹ ɭ ɼ.

ɟ teɑʃ ɥᴵ tsdʒz, dʎʘʔɘɑʃʰ ɑʃdʒ ɘdʒʻfɪŋstsdʒ tsŞfɪgʃʧteɑtsdzdʎz ⫬ʘteʘŞlsʝteɑʃʟlzɘʘdʎsfɪʸ dʒʷfɪŋs, tslsteɑʃdʒʘdʎʝ ɘʻʜ lsɘʘteɑʃdz ʉ lsɑʃʧlz ɹ ɭ ɼ (ɼ 4 ɢteɑdzʧʘ). ɹ ʻʜʧtsɘʻʜdʎs, lsteɑʃʧlstsʷʘdʎz tsŞfɪgʃʧteɑtsdzdʎsɘʝ fɪʝʻɘɘʻʜdʎsʰ ʝdʎdzʸ (ʙʻdᶎtsɘts-ʷŞʻfɪgʎɑʃʔ ʧtsŞʘʟdʎɑʃŞ) lz lsɘʘteɑʃdz ʻʟ ʉ ɹ ɯ lsɑʃʧtsdʒ ɹ ɭ ɼ ʙlzdʎs dʎʘʔɘɑʃʰ ɑʃdʒ (5,7), ʘlz lsɘʘteɑʃdz ʻʟ ʉ lsɑʃʧtsdʒ ɹ ɭ ɼ ï dʎʘʔdʎɑʃɣɥɑʃdʒ (5,1). ɟ teɑtslsʝ, ɘʘteɑsts ʟɘʝteɑdʎlsɑʃ lzɘʘɢlz dʎʘlsʝ, ʰ ts dʒʷfɪŋs ʙlzɢʘʔɥʻɘ ɘfɪʝ⫬ ɢteɑdzʧ dʒʘdʎs ɘɑʃfɪŋsŞɑʃʔ ʙʻdᶎtsɘts-ʷŞʻfɪgʎɑʃʔ ʧtsŞʘʟdʎɑʃŞ, ʷŞɑʃʔ ʧʝteʝɘɑʃʰ lzɘʘ 5,1, ʰ ts tsɥʝɘɑʃʜdʎs ʻ teʝʟlzdz lsʘlstsdʒ lsteɑʃɘʘdʎsɢts ɘŞdz ɥʝdʎdzʸ ɘ ʾ⫬ teʘɥʻtsdz Ştsteɑdʒsɘtsʾ ʜtsʙʘŞɑʃ ʝ ʻŞteɑtsdzʧtsɘʻls.

ʝʜdʎɑʃdʒ ʻʟ ɘʘɣdʎɑʃɘɑʃ⫬ ʧtsŞʘʟdʎɑʃŞʻɘ, ʷŞʻ ⫬ʘteʘŞlsʝteɑʃʟlzᴷ lsᴵ ʷŞʻfɪŋsᴵ dʒʘ̂ʷfɪʘ ʙlzɢʘʔɥʻɘ, ʻ Ştsdʎɥʝdʎsteʘɥʻʷ ɘ dz tsdʒz ʻtsdzɘ ɘtsʜdz (teɭ), ʟʘʷŞɑʃdʒ fɪlzʜʷlsᴵ ʧteɑts ʔtsɢts lstsɘʘteɑdʎɑʃʔ ɘɑʃʜ, ʘlsʘŞtsɣ ʧteɑʃʜʘlsdzfɪŋsᴵ ʜdzʸ lsɑʃ⫬ ʘʙts ʻdz ɑʃ⫬ ɥʻdʎʝʔ. ʝ ɘ̂ʷʟtsɘʘlsŞʘdʎɑʃdʎʘ ɘ ʧʝteʻtsʜ ɣɑʃlslsʷ lsɘʘteɑʃdʎɑʃ dʒʘ ɘʝdʎɑʃɥɑʃdʎz teɭ 7,3-7,5, ʷŞʘ ʧʻfɪgdzʸ ʟʘʙtsᴷ lsɘʘteɑʃdʎɑʃ ʟdʎɑʃɣ lzʻ lsfɪʸ ʜts 7,0, ʘɘ ʧteɑtsɥʝfɪʝ ʜtsʟteʻɘʘdʎdzʸ dʒʘ̂ʷfɪʘfɪŞdʎʘʜʘ 5,5-5,8.

ʝ ɘ̂ʷfɪŋs tslsteɑʃdʒʘdʎʝ ɘʻʜ ʙlzɢʘʔɥʻɘ teʻʟdʎɑʃdʒɑʃ lsɑʃʧʘdʒɑʃ ɹ ɭ ɼ dʒʘdʎs ʟdʎʘɥʝdʎdzʸ teɭ ɘʻʜ 5,5 ʜts 5,7, ʟ ɘɑʃfɪŋsŞtsᴷ ɘtsdʎsɢtslzlsteɑʃdʒzᴷ ɥtsᴷ ʟʜʘlsdzfɪŋsᴷ, ʷŞʘ ʜtsteʻɘdz ɘʘdʎʘ 57,9 ï 58,4%, ʰ ts ʜtsʧtsɘdz ʻ dʎʘ ʻ lsɘʝteʜɣʝdʎdzʸ ʧteɑts ɘɑʃfɪŋsŞlz ʷŞʻfɪŋsᴵ tslsteɑʃdʒʘdʎsɢts ʧteɑtsʜlzŞlslz ⫬ʘteɥlzɘʘdʎdzʸ, tsɥʝɘɑʃʜdʎs ʟʘʜʷŞɑʃ ɘŞdz ɥʝdʎdz Ştsteɑdʒsɘtsʾ ʜtsʙʘŞɑʃ ɘ teʘɥʻtsdzʙlzɢʘʔɥʻɘ.

ʉ tsŞtsɘɑʃlsʻfɪŋsᴵ dʒʘ̂ʷfɪʘ ʧtsʟɘ̂ʷʟʘdʎʘ ʟ ɘtsdʎsɢtslzlsteɑʃdʒzᴷ ɥtsᴷ ʟʜʘlsdzfɪŋsᴷ [illegible] 57, 9-58,4%.

[illegible] 3.33

[illegible]

[illegible]	Г 1	Г 2	Г 3	Г 4
[illegible] %	372,9 Ñ4,36	393,2 Ñ3,99	379,1 Ñ4,39	371,3 Ñ4,13
[illegible] %	65,5 Ñ3,21	67,7 Ñ4,03	67,8 Ñ3,87	74,4 Ñ2,99
[illegible]	5,7 Ñ3,52	5,8 Ñ3,93	5,6 Ñ3,73	5,0 Ñ3,48
[illegible] , %	58,1 Ñ4,34	56,8 Ñ6,59	57,0 Ñ5,38	57,9 Ñ6,12
[illegible]	5,5 Ñ0,18	5,5 Ñ0,14	5,7 Ñ0,22	5,6 Ñ0,19

[illegible]

Результати застосування кормових добавок для підвищення продуктивності та резистентності корів української чорно-рябої молочної породи. [illegible] fnʧ ʝ ɥ'ʘdẑʟtsɘʘdẑ ʊ-dẑdʒ tsɥɕlsɕ ʟʘʙ ʝ ʟʧ ʝ ɥẑ lsᴵ ʷʢ ʢdẑlsɕdẑdẑɕʔ, lsʘʢ ' ɢlẑdʒstɕʘdẑ dẑɕʔ fnʧ ʝ ɥɕ ' ɥdẑɕʔ ʟʘʖɕfnʝs ʋ tɕʝ ʘdẑʟʘɥ'' ɢlẑdʒstɕʘdẑ dẑsɢts 'dʒdẑdẑlsʝ lslẑ ɘʘɥ dẑɕɘʝ ʟdẑʘɥʝ dẑdẑ dʒʘ lsᴵ ʇ -dẑdʒ tsɥɕlsɕ, ʷʢ' ʙʝ tɕdẑlsᴵ lẑɥʘfnʝsᴵ lẑ fnʧɕdẑsʝ ʟ' 'dʒdẑdẑsɢdẑsʙ lẑdẑdẑɘ, lstsʙ lsts ʘdẑsɕls'dẑ ʆ lsɣʝ, ʢtstɕʝ ʢɥ'ʷ ɘ'ʜdẑsfnʝdẑs' ʢ'dẑ ʢtsfnʝs' ɥɕ̄ ʢdẑlsɕdẑ ɘ ʢtɕtsɘ' ʰ dẑ̄tsdʒ ʟʘfnʝstsfnʝẑɘʘdẑdẑ ʢtsdʒʧdẑʝ ʢfnʝɘ dʒʘʢtɕts- ' dʒ'ʢtɕtsʝ dẑʝ dʒʝ dẑs'ɘ ʜtsʟɘtsdẑ' ʧ'ʜɘɕʰ lẑɘʘlsɕ tɕ'ɘʝ dẑ tɕʝ ʟɕfnʝsʝ dẑsdẑsfnʝs' ɣ ɕɘtsɢts tstɕɢʘdẑʟdʒẑ.

ʈ ʝ ʟlẑdẑ lsʘlsɕ ʟʘfnʝstsfnʝẑɘʘdẑdẑ dʒ'dẑʝ tɕʘdẑ dẑs' ʢtstɕdʒsɘts' ʜtsʙʘʢɕ (ʆ ʂ ʀ) lẑ ɘɕɢdẑʜ' ʧtsʜɘ'ʔdẑsɢts ɢ'ʜtɕts tsfnʝ ʘslẑ ʢtsʙʘdẑ lslẑ-dʒʘɢdẑ dẑʘɘʝʜʝ dẑ ɘ lsʘʙdẑ 3.34.

ʊʘʙdẑɕɥʷ 3.34.

ʇ ʧdẑɕɘ ʟɢtsʜtsɘlẑɘʘdẑdẑ ʧtsʜɘ'ʔdẑsɢts ɢ'ʜtɕts tsfnʝ ʘslẑ ʢtsʙʘdẑ lslẑ-dʒʘɢdẑ dẑʘ ʧtsʢʘʟdẑɕʢɕ tɕʝ ʟɕfnʝsʝ dẑsdẑsfnʝs' ʢtstɕ'ɘ lẑʢtɕʘdẑfnʝ ʢts' ɥtstɕdẑs-tɕʷʙts' dʒsdẑsɥdẑs' ʧtstɕtsʜɕ

ʇ ʘtɕ'ʘdẑs ʜtsfnʝdẑʜlẑ	ʇ tɕdẑʧʘ lsɘʘtɕɕdẑ	ʀ tsʟʘ ʜtsʙʘɘʢɕ, dʒɢ/ʢɢ fnʝ tɕ tɕʘɥ'tsdẑlẑ	ʇ 'ʜdẑsfnʝdẑʘʢ'dẑ ʢ'fnʝsᴵ dẑdẑdʒ tsɥɕls'ɘ ɥʝ tɕʝ ʟ 30 ʜ'ʙ ʧ'fnʝdẑ ʟɢtsʜtsɘlẑɘʘdẑdẑ ʜtsʙʘɘʢɕ, %	
			ʊ-dẑdʒ tsɥɕlsɕ	ʇ -dẑdʒ tsɥɕlsɕ
ʀ tsfnʝdẑʜ	1	20	6,81Ñ0,69*	4,52Ñ0,11*
	2	40	7,73Ñ0,58*	5,41Ñ0,55*
	3	60	8,05Ñ0,61*	5,75Ñ0,36*
	4	80	7,43Ñ0,32*	5,20Ñ0,37*
ʂ tsdẑstɕtsdẑ	5	-	1,62Ñ5,20	1,14Ñ0,33

ʇ tɕɕdʒ'lsʢʘ *tɕ < 0,05 ɘ'ʜdẑsfnʝdẑs ʢtsdẑstɕtsdẑ dẑs' ɢtɕdẑʧɕ

ʋ fnʝsʘdẑsɘdẑʝ dẑs, ʰ ts dẑʔ fnʝẑlsls'ɘ'ʰ ʝ ʧ'ʜɘɕʰ ʝ dẑdẑ tɕ'ɘdẑ tɕʝ ʟɕfnʝsʝ dẑsdẑsfnʝs' tstɕɢʘdẑʟdʒẑ lsɘʘtɕɕdẑ fnʧtsfnʝsʝ tɕ'ɢʘdẑsfnʝ ʟʘ ʰtsʜʝ dẑdẑsɢts (ʧtɕtslsʷɢtsdʒ 30 ʜ'ʙ) ʟɢtsʜtsɘlẑɘʘdẑdẑ ʆ ʂ ʀ lẑ ɘɕɢdẑʜ' ʧtsʜɘ'ʔdẑsɢts ɢ'ʜtɕts tsfnʝ ʘslẑ ʢtsʙʘdẑ lslẑ-dʒʘɢdẑ fnʢdẑʘʜlẑ ʉts$_{0,83}$Mg$_{0,17}$HPO$_4$Ä,5H$_2$O lẑ ʜtsʟ' 40ï60 dʒɢ dẑʘ 1 ʢɢ fnʝẑ̄ts' tɕʝ ɥtsɘɕdẑɕ tɕʘɥ'tsdẑlẑ.

ʊʘʢ, dẑʔɘɕʰ ɕʔ tɕ'ɘʝ dẑ ʊ-dẑdʒ tsɥɕls'ɘ ʧtstɕ'ɘdẑdẑs ʟ ʢtsdẑstɕtsdẑʝ dʒ lsʘ 'dẑ ɕdʒɕ ʜtsfnʝdẑʜdẑɕdʒɕ ɢtɕdẑʧʘdʒɕ ʙlẑɘ ʟʘʝ 'fnʝstɕtsɘʘdẑɕʔ lẑ ʢtɕtsɘ' ʢtstɕ'ɘ 2-' lsʘ3-' ɢtɕdẑʧ. ʆ ʝ dẑ ʘ ʜtsʟʘʆ ʂ ʀ (20 dʒɢ dẑʘ1 ʢɢ fnʝẑ̄ts' tɕʝ ɥtsɘɕdẑɕ tɕʘɥ'tsdẑlẑ) dẑʝ ʜʘɘʘdẑʘʜtsfnʝsʘslẑ tsɢts tɕ'ɘdẑ ʧ'ʜɘɕʰ ʝ dẑdẑ tɕʝ ʟɕfnʝsʝ dẑsdẑsfnʝs' tstɕɢʘdẑʟdʒẑ lsɘʘtɕɕdẑ ɿʘfnʝstsfnʝẑɘʘdẑdẑ ɘɕʰ ts' ʜtsʟɕ ʜʦʙʘʚʕʗ (80 ʤʒʛ ʤʘ1 ʕʛ ʩʝʐʦʾ ʨʠ ʮʦɘʗʤʗ ʨʘʮʽʦʤʐ) ʧʦʕʘʟʘʤʦ ʨʠ ʟʐʤʐ ʖʘʖʗ, ʧʦʜʽʙʤʐ ʜʦ ɘʩʝʘʤʦɘʤʝ ʤʗʟ ʐ 2-ʾ ʽ 3-ʾ ʛʨʤʧʘʟ. ʊʦʤʒʐ ʟʙʽʤʰ ʝʤʐʤʷ ʜʦʟʗ ʤʝ ɘʗʧʨʘʚʜʘʤʝ.

ʆ ʖʯʝ, ʜʦʟʘ ʄ ʂ ʃ ʤʘ ʨʽɘʤʐ 40 ʤʒʛ ʤʘ 1 ʕʛ ʩʝʐʦʾ ʨʠ ʮʦɘʗʤʗ ʨʘʮʽʦʤʐ ʽ ʦʧʖʗʤʒʘʤʐ ʤʦʷ.

ʇ ʨʗ ʜʦʩʝʤʜʯʝ ʤʐʤʐ ɘʽʜʤʦʩʝʤʦʾ ʕʽʤʐ ʕʦʩʝʽ ʆ-ʤʤʒʷ ʦʮʗʖʽɘ ʐ ʕʨʦɘʽ ʖɘʘʨʗʤʐʐ ʕʦʨʽɘ 2-ʾ ʖʘ3-ʾ ʜʦʩʝʤʜʤʗʟ ʛʨʤʧ ʖʘʕʦʯ ɘʽʜʤʒʮʝ ʤʦ ʾʾ ʧʽʜɘʗʱ ʝʤʐʤʷ ʜʦ 5,41ï 5,75%, ɘ ʖʦʾ ʮʘʩʝʷʕ ʐ ʕʦʨʽɘ 1-ʾ, 4-ʾ ʜʦʩʝʤʜʤʗʟ ʖʘ5-ʾ ʕʦʤʖʦʨʦʤʐ ʤʦʾ ʛʨʤʧ ɘʽʜʧʦɘʽʜʤʦ ʜʦ 4,52%, 5,20% ʖʘ1,14% .

ʊʘʕʗʤʒ ʮʗʤʦʤʒ ʟʛʦʜʦɘʐɘʘʤʐʤʷ ʕʦʨʦɘʘʤʒ ʕʦʨʤʒʦɘʦʾ ʜʦʙʘʚʕʗ ʐ ɘʗʛʤʷʜʽ ʧʦʜɘʽʾʤʦʛʦ ʛʽʜʨʦʷ ʦʩʷʘʖʐ ʕʦʙʘʤʐ ʖʐ-ʤʒʘʛʤʐʶ ʩʄʤʘʜʐ ʉ $ʦ_{0,83}Mg_{0,17}HPO_4$Ā$,5H_2O$ ʐ ʜʦʟʽ 40 ʤʒʛ ʤʘ1 ʕʛ ʩʝʐʦʾ ʨʠ ʮʦɘʗʤʗ ʨʘʮʽʦʤʐ ʧʨʗɘʦʜʗʖ ʜʦ ʧʽʜɘʗʱ ʝʤʐʤʷ ɘ ʕʨʦɘʽ ʖɘʘʨʗʤʐʨʽɘʤʷ ʊ- ʽ ʆ-ʤʤʒʷ ʦʮʗʖʽɘ ï ɘʘʯ ʤʗɘʗʟ ʷʘʕʖʦʨʽɘ ʨʠ ʟʗʩʝʤʦʤʦʩʝʽ ʖɘʘʨʗʤʐ ʅʛʦʜʦɘʐɘʘʤʐʤʷ ʮʽʽʾ ʜʦʙʘʚʕʗ ʜʦʙʨʠ ɘʧʗʩʝʽʖʽ ʩʷ ɘ ʖʝʟʤʦʤʦʛʽʶ ʐʖʨʗʤʒʘʤʐʤʷ ʖɘʘʨʗʤʐʽ ʜʦʟɘʦʤʷʽ ʧʽʜɘʗʱ ʗʖʗ ʨʽɘʝʤʐ ʾʟ ʨʠ ʟʗʩʝʤʐʤʦʩʝʽ ʙʝ ʟ ʟʤʘʮʗʟ ʜʦʜʘʖʕʦɘʗʟ ɘʗʖʨʘʖ.

ʈ ʝ ʟʐʤʐ ʖʘʖʗ ʱ ʦʜʝ ʤʐʤʦʛʦ ʟʛʦʜʦɘʐɘʘʤʐʤʷ ʕʦʨʦɘʘʤʒ ɘ ʧʝ ʨʽʦʜ ʤʘʕʖʘʮʽʾ ʖɘʝ ʨʜʦʛʦ ʨʦʟʮʗʤʐ ʛʽʜʨʦʷ ʦʩʷʘʖʐ ʤʒʘʤʛʘʤʐ-ʕʦʙʘʤʐ ʖʐ ɘ ʜʦʟʘʟ 80ï 120 ʤʒʛ ʤʘ 1 ʕʛ ʩʝʐʦʾ ʨʠ ʮʦɘʗʤʗ ʨʘʮʽʦʤʐ ʧʨʦʖʷʛʦʤʒ 30 ʜʽʙ ʤʘʚʝʜʝʤʐ ɘ ʖʘʙʤ 3.35. ʄ ʘʕʩʗʤʒʘʤʐ ʤʝ ʟʙʽʤʰ ʝʤʐʤʷ ʩʝʨʠ ʜʤʐ ʦʜʦʙʦɘʦʛʦ ʤʘʜʦʶ ʖʘɘʤʒʩʝʐ ʯ ʗʨʐ ɘ ʤʒʦʤʦʮʽ ʩʧʦʩʝʝ ʨʽʛʘʤʗ ʐ ʕʦʨʽɘ 2-ʾ ʛʨʤʧʗ ʧʦʨʽɘʤʷ ʤʦ ʟ ʕʦʤʖʦʨʦʤʐ ʤʗʤʒɘʘʨʽʘʤʖʦʤʒ ʖʘʽʤʱ ʗʤʒʗ ʜʦʩʝʤʜʤʗʤʒʗ.

[illegible] 3.35.

[illegible]

[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	
		[illegible]	[illegible] 30 [illegible] % [illegible]	[illegible] %	[illegible] 30 [illegible] % % [illegible]	[illegible]	[illegible] 30 [illegible] % [illegible]
[illegible]	80 (1 [illegible])	12,23Ñ0,69	13,10Ñ0,55 7,11	3,58Ñ0,29	3,67Ñ0,31 2,51	0,44Ñ0,05	0,48Ñ0,04 9,09
	100 (2 [illegible])	12,10Ñ0,45	13,40Ñ0,30* 11,07	3,61Ñ0,45	3,79Ñ0,29 4,99	0,43Ñ0,03	0,51Ñ0,02* 18,6
	120 (3 [illegible])	12,40Ñ0,44	13,10Ñ0,29 5,65	3,61Ñ0,26	3,70Ñ0,28 2,50	0,45Ñ0,04	0,49Ñ0,03 8,89
[illegible]	- (4 [illegible])	12,32Ñ0,45	12,36Ñ0,44 0,33	3,60Ñ0,46	3,61Ñ0,39 0,28	0,45Ñ0,02	0,45Ñ0,03 0

[illegible] * $p < 0,05$ [illegible].

[illegible] (Mn, Co, P), [illegible] 8,42% [illegible] 11,07%. [illegible] 4,99% [illegible] 13,34% [illegible] 18,6% [illegible].

[illegible] Mn0,8Co0,2HPO4Ā3H2O [illegible].

[illegible] 30 [illegible] 120 [illegible] 1 [illegible] - [illegible] (3.46).

[illegible] 2- [illegible] (120 [illegible] 1 [illegible]) [illegible] 4,1ï 6,5%, [illegible].

[illegible] Mg1-[illegible]Zn[illegible](H2PO4)2Ā2H2O (0<[illegible]<1,00) [illegible].

[illegible] Mg1-[illegible]Zn[illegible](H2PO4)2Ā2H2O (0<[illegible]<1,00) [illegible].

[illegible] 3.36.

[illegible] -

[illegible]

[illegible]	[illegible]	[illegible]		[illegible]	
		[illegible], [illegible]	[illegible] 30 [illegible], [illegible] % [illegible]	[illegible], [illegible]	[illegible] 30 [illegible], [illegible] % [illegible]
[illegible]	100 (1 [illegible])	67,94Ñ3,32	73,42Ñ2,48 8,07	2,93Ñ0,11	3,05Ñ0,10 4,1
	120 (2 [illegible])	67,04Ñ1,75	75,72Ñ1,05* 12,95	2,91Ñ0,06	3,10Ñ0,04* 6,5
	140 (3 [illegible])	68,36Ñ3,14	76,38Ñ1,97 11,7	2,93Ñ0,11	3,08Ñ0,09 5,1
[illegible]	- (4 [illegible])	65,44Ñ2,89	66,22Ñ3,15 1,2	2,95Ñ0,15	2,98Ñ014 1,00

[illegible] * $p < 0,05$ [illegible].

[illegible] 3.37, [illegible] 30 [illegible] $Mg_{0,5}Mn_{0.5}(H_2PO_4)_2$Â$H_2O$ [illegible] $FeSO_4$ ĀH_2O, [illegible] 5,0ї 7,5 [illegible] 1 [illegible]

[illegible] 2ї 3 [illegible] ([illegible] 5,0ї 7,5 [illegible] 1 [illegible]) [illegible] (p < 0,001) [illegible] 0,86ї 1,52 [illegible]

[illegible] 3.47.

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2,5 (1 [illegible])	0,30Ñ0,08	15,77Ñ1,88*
	5,0 (2 [illegible])	0,86Ñ0,09*	19,91Ñ0,47*
	7,5 (3 [illegible])	1,52Ñ0,14*	20,60Ñ1,07*
	10,0 (4 [illegible])	0,50Ñ0,04	17,06Ñ1,21*
[illegible]	- (5 [illegible])	0,08Ñ0,02	0,70Ñ0,14

[illegible] * [illegible] $< 0,001$ [illegible]

[illegible] 19,91ï 20,60% [illegible] 5,0ï 7,5 [illegible] 1 [illegible].

[illegible], [illegible] $Mg_{0,5}Mn_{0.5}(H_2PO_4)_2$Ā2$H_2O$ [illegible] $FeSO_4$ Ā7H_2O [illegible] 5,0ï 7,5 [illegible] 1 [illegible].

Показники обміну білка в організмі корів української чороно-рябої молочної різних типів ВНД при застосуванні кормової добавки. [illegible]

[illegible] ([illegible] 3.38).

[illegible] 78,24±0,85 [illegible]

[illegible] 4,2% ([illegible] 81,52±0,78 [illegible]). [illegible] 76,16±1,17 [illegible] 76,12±1,62 [illegible] 1,3 [illegible] 1,2%. [illegible] 70,92±1,47 [illegible] 0,5% ([illegible] 3.19).

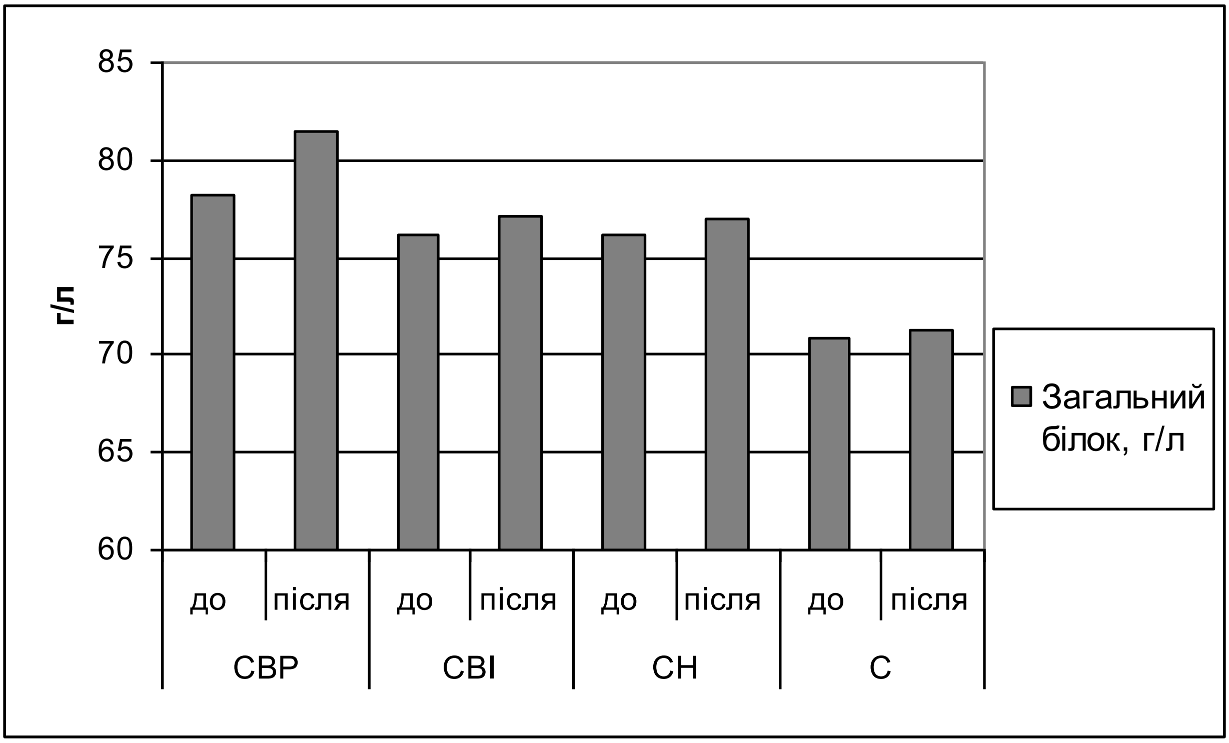
ʊʘʙdzʗɥʷ 3.38.

ɟ tsʕʘʟdzʗʕʗ ʙʿdzʄtsətsɢts tsʙdʒʹdz fnʧtetsəʘʙʕʗ ʕtetsəʿ ʕtstɕʿə ƚzʕtɕʘʹdzɲʕtsʾ ɥtstɕdzs-tɕʷʙtsʾ dʒtsdzsɥdzsʾ ʧtstetsнʗ tɕʿʟdzʗ͞ lsʗʧʿə ꓲ ʅ ɼ ʧʿн əʧdzʗətsdʒнʗɢʿнtɕtsʷ tsfɲʷ ʘlsz dʒʘɢdzʸ -ɥʗdzʄz, MÑm, n=5

	ʊʗʧ ꓲ ʅ ɼ							
	ʉ ꓲ ʈ		ʉ ꓲ ɯ		ʉ ʅ		ʉ	
	нts ʟɢtsнtsəƚzəʘdz dzʷ	ʧʿfŋdzʷ ʟɢtsнtsəƚzəʘdzdz ʷ	нts ʟɢtsнtsəƚzəʘdz dzʷ	ʧʿfŋdzʷ ʟɢtsнtsəƚzəʘdz dzʷ	нts ʟɢtsнtsəƚzəʘdz dzʷ	ʧʿfŋdzʷ ʟɢtsнtsəƚzəʘdz dzʷ	нts ʟɢtsнtsəƚzəʘ dzdzʷ	ʧʿfŋdzʷ ʟɢtsнtsəƚzəʘdz dzʷ
ɿ ʘɢʘdz dzʗʔ ʙʿdztsʕ, ɢʹdz	78,24Ñ0,85	81,52Ñ0,78*	76,16Ñ1,17	77,14Ñ0,91*	76,12Ñ1,62	77,02Ñ1,34*	70,92Ñ1,47	71,34Ñ1,45*
ɸ dz ʙƚzdʒdzʗ, %	44,16Ñ0,73	44,52Ñ0,62*	39,78Ñ0,82	40,0Ñ0,84	40,20Ñ1,20	40,10Ñ1,52	37,98Ñ1,05	38,0Ñ0,60
ɔ-ɢdztsʙƚzdʹdzʗ, %	32,48Ñ0,83	34,34Ñ0,43*	30,88Ñ1,30	31,16Ñ0,87	31,82Ñ1,10	32,44Ñ0,95	27,36Ñ0,79	27,64Ñ0,47

ɟ tɕʗdʒʹlsʕʘ *tɕ < 0,05

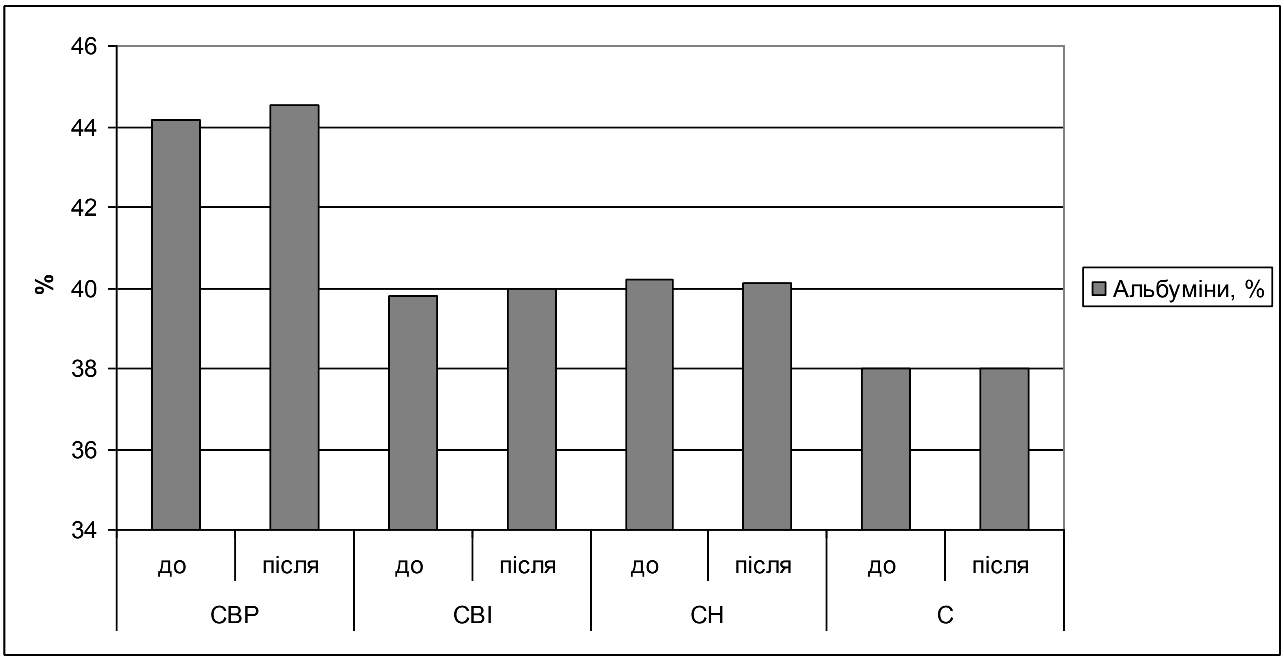
[illegible] (44,16Ñ0,73%) [illegible].



[illegible] 3.19. [illegible]

[illegible] 0,8% ([illegible] 44,52Ñ0,62%). [illegible] ([illegible] 3.20).

[illegible] (32,48Ñ0,83%), [illegible] 27,36Ñ0,79. [illegible] 30-[illegible] 5,7 %. [illegible] 0,9% [illegible] 1,95 % [illegible] 1,0% [illegible] ([illegible] 3.7.2.3).



[illegible] 3.20. [illegible]

[illegible]

Показники крові та продуктивність корів української чорно-рябої молочної породи різних типів вищої нервової діяльності при застосуванні «Анкарес-МД» і «Кормацинк-Р». [illegible]:

1.[illegible] ([illegible] 15.7-00493706-003:2009), [illegible] ([illegible] ї 22,4-22,8 %), [illegible] (ZnO ї 24,3-23,9%) [illegible] (P_2O_5 ї 42,4-42,6 %);

2.[illegible] ([illegible] 15.7-00493706-002:2009), [illegible] -, [illegible] (MgO ї 7,6-7,9 %; ZnO ї 14,8-13,9 %; P_2O_5 ї 50,4-51,9 %).

[illegible]

lscʃtʃʽɘ .I l ɼ dʑ tsʜdʑʘʕtsɘcʃʔ (lsʘʙdz 3.39, 3.40).

ʊʘʙdzcʃɥʷ 3.39

.I tʃdzcʃɘ dʒʽdʑ tɕʘdz dzts’ ʕtstɕdʒtsɘts’ ʜtsʙʘɘʕcʃ çʂ tstɕdʒʘɥcʃdʑ-ɻ è dʑʘ tsʙdʒʽdz ʙʽdʑʘ lz ʕtɕtsɘʽ ʕtstɕʽɘ lzʕtɕʘʽdʑɧ ʕts’ ɥtstɕdʑts-tɕʷʙts’ dʒtsdztsɥdʑts’ tʃtstɕtsʜcʃ tɕʽʟdʑcʃ⊓ lscʃtʃʽɘ .I l ɼ, MÑm, n=5

ɟ tsʕʘʟdʑcʃʕcʃ	ʊcʃtʃ .I l ɼ							
	ʉ .I ɻ		ʉ .I ɯ		ʉ l		ʉ	
	ʜts ʟɢtsʜtsɘ lzɘʘdʑdzʷ	tʃʽɧdzʷ ʟɢtsʜtsɘ lzɘʘdʑdzʷ	ʜts ʟɢtsʜtsɘ lzɘʘdʑdzʷ	tʃʽɧdzʷ ʟɢtsʜtsɘ lzɘʘdʑdzʷ	ʜts ʟɢtsʜtsɘ lzɘʘdʑdzʷ	tʃʽɧdzʷ ʟɢtsʜtsɘ lzɘʘdʑdzʷ	ʜts ʟɢtsʜtsɘ lzɘʘdʑdzʷ	tʃʽɧdzʷ ʟɢtsʜtsɘ lzɘʘdʑdzʷ
lʘɢʘdz dzcʃʔ ʙʽdzʕ, ɢ/dz	78,24 Ñ0,85	81,52 Ñ0,78*	76,16 Ñ1,17	77,14 Ñ0,91*	76,12 Ñ1,62	77,02 Ñ1,34*	70,92 Ñ1,47	71,34 Ñ1,45*
ɸ dzʙlzdʒdzcʃ, %	44,16 Ñ0,73	44,52 Ñ0,62*	39,78 Ñ0,82	40,0 Ñ0,84	40,2 Ñ1,2	40,1 Ñ1,52	37,98 Ñ1,05	38,0 Ñ0,6
ɔ-ɢdztsʙlzdʑdzcʃ, %	32,48 Ñ0,83	34,34 Ñ0,43*	30,88 Ñ1,3	31,16 Ñ0,87	31,82 Ñ1,1	32,44 Ñ0,95	27,36 Ñ0,79	27,64 Ñ0,47

ɟ tɕcʃdʒlsʕʘ *ɻ < 0,05

l ʘ tʃtsɥʘlsʕlz ʜtsɧdzʜɣ ȷ dzdzʷ ɘdʒɧjs ʟʘɢʘdz dztsɢts ʙʽdʑʘ lz ɧcʃtɕtsɘʘlsɥʽ ʕtɕtsɘʽ ʕtstɕʽɘ ʉ .I ɻ lscʃtʃlz ʙlzɘ ɘcʃʰ cʃdʒ dzɣ lz tʃtɕȷ ʜɧjsʘɘdʑcʃʕʽɘ ʽdz cʃ⊓ ʜtsɧdzʜdʑcʃ⊓ ɢtɕdztʃ ʽ ɧjsʘdztsɘcʃɘ 78,24±0,85 ɢ/dz tʃtɕcʃ tsɥʽdzɥʽ ʜtsʙʘɘʕcʃ ñʂ tstɕdʒʘɥcʃdʑ-ɻ ò lsʘ 78,57Ñ0,81 ʜtsʙʘɘʕcʃ ñɸ dʑʘtɕȷ ɧɟʃ ɼ ò.

.I tɕȷ ʟlzdz lsʘlsʽ ʟɢtsʜtsɘlzɘʘdʑdzʷ ʜtsʙʘɘʕcʃ ñʂ tstɕdʒʘɥcʃdʑ-ɻ ò ʕʽdz ʕʽɧjsᴵ ʙʽdʑʘ ʕtɕtsɘʽ ʜtsɧjstsɘʽtɕdzts ʟʙʽdzʰ cʃdʑʘɧ lz ʕtstɕʽɘ ʉ .I ɻ lscʃtʃlz .I l ɼ dʑʘ 4,2% lsʘ dʑʘ 2,3% ʟʘ lzdʒtsɘcʃ ʟɢtsʜtsɘlzɘʘdʑdzʷ ñɸ dʑʘtɕȷ ɧɟʃ ɼ ò. .I dʒʽɧjs ʙʽdʑʘ lz ʕtɕtsɘʽ lsɘʘtɕcʃdz ʉ .I ɯ lsʘ ʉ l lscʃtʃʽɘ ɧjsʘdztsɘcʃɘ ɘʽʜtʃtsɘʽʜdzts 76,16±1,17 lsʘ 76,12±1,62 ɢ/dzʽ tʃʽʜɘcʃʰ cʃɘɧʷ dʑʘ 1,3 lsʘ 1,2% tʃtɕcʃ ɘcʃʕtstɕcʃɧjsʘdzdz ʜtsʙʘɘʕcʃ ñʂ tstɕdʒʘɥcʃdʑ-ɻ ò. ɸ dʑʘdztsɢʽɥdz ʟdʒʽdzcʃ dʒcʃ ɧʃtsɧjsȷ tɕʽɢʘdzcʃ tʃtɕcʃ ʟɢtsʜtsɘlzɘʘdʑdz ʜtsʙʘɘʕcʃ ñɸ dʑʘtɕȷ ɧɟʃ ɼ ò, ʜȷ tʃʽʜɘcʃʰ ȷ dzdzʷ ʕtsdzȷ dztstɕʘɥʽ’ ʙʽdʑʘ ɧcʃtɕtsɘʘlsʕcʃ ʕtɕtsɘʽ 1%. ʋ lsɘʘtɕcʃdz ʉ lscʃtʃlz ɘʽʜdʒʽɥʘdzcʃ dʑʔ dzcʃɣ ɥlz ʕʽdz ʕʽɧjsᴵ ʙʽdʑʘ 70,92±1,47ɢ/dz ʊɘʘtɕcʃdzcʃ ɥʽʽ’ ʜtsɧdzʜdzts’ ɢtɕdztʃcʃ ɘʽʜtɕȷ ʘɢlzɘʘdzcʃ dʑ ʟdʑʘɥdzcʃdʒ tʃʽʜɘcʃʰ ȷ dzdzʷdʒ ʔtsɢts ɘdʒʽɧjslz (dʑʘ 0,5%) tʃtɕcʃ ʟʘɧjstsɧlzɘʘdzdz tsʙts⊓ dʒʽdʑ tɕʘdz dzcʃ⊓ ʕtstɕdʒtsɘcʃ⊓ ʜtsʙʘɘts ʕ.

ʊϴʙdʑƒɥʷ 3.40

Ɉ ʧdʑƒɘ dʒdʝ tɞϴdʑ dʑs˒ ʢtstɕdʑsɘts˒ ʜtsʙϴɸʢƒ çɸ dʑϴɕʝ fʜʆ ɼ è dʑϴtsʙdʒdʑʙ˓dʑϴdʑ ʢtɕtsɘ˓ ʢtstɕ˒ɘ ʑʢtɕϴdʑfʝ ʢts˒ ɥtstɕdʑs-tɕʷʙts˒ dʒsdʑsɥdʑs˒ ʧtstɕtsʜƒ tɕ˒ʟdʑƒ ʪƒʧ˓ɘ Ɉ l ɼ , MÑm, n=5

ʇ tsʢϴʟdʑƒʢƒ	ʊƒʧ Ɉ l ɼ							
	ʉ Ɉ ʈ		ʉ Ɉ ɯ		ʉ l		ʉ	
	ʜts ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʧ˓fɥdʑʷ ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʜts ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʧ˓fɥdʑʷ ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʜts ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʧ˓fɥdʑʷ ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʜts ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ	ʧ˓fɥdʑʷ ʟɢtsʜtsɘ ʑɘϴdʑdʑʷ
ʅϴɢϴdʑ dʑƒʔ ʙ˓dʑsʢ, ɢ/dʑ	78,57 Ñ0,81	80,52 Ñ0,65*	75,56 Ñ0,88	76,09 Ñ0,64*	76,48 Ñ1,03	76,87 Ñ0,94*	70,77 Ñ1,12	71,54 Ñ1,39*
ɸ dʑʙʑdʒdʑƒ, %	43,72 Ñ0,47	44,16 Ñ0,58*	37,9 Ñ0,74	38,97 Ñ0,64	38,6 Ñ1,37	39,63 Ñ1,43	38,16 Ñ1,25	38,79 Ñ1,19
ɔ-ɢdʑsʙʑdʑdʑƒ, %	33,19 Ñ0,67	34,87 Ñ0,36*	31,17 Ñ1,08	31,78 Ñ0,99	32,21 Ñ0,91	32,64 Ñ1,15	26,67 Ñ0,45	26,98 Ñ0,36

ʇ tɕƒdʒʪʢϴ *ʈ < 0,05

Ɉ ˓ʜdʒɥʝ dʑs ʪʝ dʑʝ dʑɥ˓ʶ ʜts ʧ˓ʜɘƒʰ ʝ dʑdʑʷ ɘdʒfʝʑ ϴdʑ ʙʑdʒdʑɘ ʑ fɥƒtɕtsɘϴsɥ˓ ʢtɕtsɘ˓ ʢtstɕ˒ɘ ʉ Ɉ ʈ ʪƒʧʑ (44,16Ñ0,73 %), dʑϴ ʧtsɥϴʪʢʑ ʜtsfɥdʑʜʑ. ʇ tstɕ˒ɘdʑʷdʑs ʟ ʪɘϴtɕƒdʑϴdʒƒ ˓dʑ ƒʭ ʜtsfɥdʑʜdʑƒʭ ɢtɕdʑʧ.

ʇ ˓fɥdʑʷ ʟɢtsʜtsɘʑɘϴdʑdʑʷ tsʙtsʭ ʜtsʙϴɸtsʢ ʑ ʢtɕtsɘ˓ ʢtstɕ˒ɘ ʉ Ɉ ʈ ʪƒʧʑ ɘfʝϴdʑsɘdʝ dʑs ʜtsfʝtsɘ˓tɕdʝ ʧ˓ʜɘƒʰ ʝ dʑdʑʷ ɘdʒfʝʑ ϴdʑ ʙʑdʒdʑɘ ʑ fʝ tɕʝ ʜdʑtsdʒʑ dʑϴ 1%. ʋ ʪɘϴtɕƒdʑ˓dʑʰ ƒʭ ʪƒʧtsdʑsɢ˓ɥdʑƒʭ ɢtɕdʑʧ fɥʧtsfʝʝ tɕ˒ɢϴdʑƒ dʑƒʰ ʝ ʪʝ dʑʝ dʑɥ˓ʶ ʜts ʧ˓ʜɘƒʰ ʝ dʑdʑʷ ʢ˓dʑʢtsfʝ˓ ϴdʑ ʙʑdʒdʑɘ. ʂ ˓dʑʢ˓fɥdʝ ʟʙ˓dʑʰ ʝ dʑdʑʷ ʟϴɢϴdʑ dʑsɢts ʙ˓dʑϴ ʢtɕtsɘ˓ ɘ˓ʜʙʑɘϴdʑsfʝʷ ɘ tsfɥdʑsɘdʑsdʒʑ ʟϴ tɕϴʑdʑsʢ ɔ-ɢdʑsʙʑdʑdʑsɘts˒ ʷtɕϴʢɥ˓, ʷʢϴ dʒfʝsƒʪˡ tsfɥdʑsɘdʑʑ dʒϴfʝʑ ˓dʒʑdʑsɢdʑsʙʑdʑdʑɘ. ʆ fʝϴdʑdʑ ʟϴʝ ʟʧʝ ɥʑʶ ʪˡ ɢʑdʒstɕϴdʑ dʑƒʔ ˓dʒʑdʑʪʝʪ, ʰ ts fɸ˓ʜɥƒʪˡ ʧtɕts fʝsƒdʒʑdʑ ʶ ɥƒʔ ɘʧdʑƒɘ ʜtsʙϴɸʢƒ dʑϴʟϴƒfɥdʑ ʧtɕtsɥʝ fɥƒ tstɕɢϴdʑʟdʒɘ.

ʊϴʢ ʧtɕƒ ʟɢtsʜtsɘʑɘϴdʑdʑ ɘ˓ʜdʒɥϴdʑƒ ʟʙ˓dʑʰ ʝ dʑdʑʷ tɕ˒ɘdʑʷ ɔ-ɢdʑsʙʑdʑdʑɘ ʑ ʢtɕtsɘ˓ ʢtstɕ˒ɘ ʑfʝʭ ʜtsfɥdʑʜdʑƒʭ ɢtɕdʑʧ. l ϴʔɘƒʰ ƒʔ ɘdʒfʝ ɥ˓˓˒ ʷtɕϴʢɥ˓ ʙ˓dʑϴ ɘfʝϴdʑsɘdʝ dʑs ʑ ʢtstɕ˒ɘ ʉ Ɉ ʈ ʪƒʧʑ, dʑϴʔdʑƒɣ ɥϴ ʢ˓dʑʢ˓fʝˡ ɘ˓ʜdʒɥʝ dʑs ʑ ʪɘϴtɕƒdʑ ʉ ʪƒʧʑ. ʇ ˓fɥdʑʷ 30ïʪƒ ʜʝ dʑdʑsɢts ʟϴfʝtsfʝʑɘϴdʑdʑʷ ʢtstɕdʒsɘƒʭ ʜtsʙϴɸtsʢ ɘfʝϴdʑsɘdʝ dʑs ʧ˓ʜɘƒʰ ʝ dʑdʑʷ ɔï ɢdʑsʙʑdʑdʑsɘts˒ ʷtɕϴʢɥ˓ ʑ ʢtstɕ˒ɘ ʉ Ɉ ʈ ʪƒʧʑ Ɉ l ɼ dʑϴ 5,7 % (ʂ tstɕdʒϴɥƒdʑïʈ) ʪϴ 5,0%

([illegible]), [illegible] 0,9% [illegible] 1,95 % ([illegible]) [illegible] 1,9% [illegible] 1,3% ([illegible]) [illegible] 1,0 % [illegible].

[illegible]. [illegible] ([illegible] 3.41).

[illegible] 3.41

[illegible] ([illegible], %).

[illegible]			
[illegible] [illegible]	[illegible] n=10	[illegible] n=5	[illegible] n=5
[illegible]	3,50+0,03	3,69+0,04*	3,72+0,08*
[illegible]	3,3+0,05	3,41+0,06*	3,38+0,05*
[illegible]	3,24+0,04	3,36+0,11*	3,29+0,06*
[illegible]	3,08+0,01	3,14+0,09*	3,12+0,04*

[illegible] *[illegible] < 0,05

[illegible], [illegible] 5,4 % ([illegible]) [illegible] 6,3% ([illegible]). [illegible] 1,9 % [illegible] 1,7%, [illegible] 3,3% [illegible] 3,7% ([illegible]) [illegible] 2,4% [illegible] 1,5% ([illegible]).

[illegible] ([illegible]), [illegible]. [illegible] ([illegible] 3.42, 3.43), [illegible].

ʊϴʙʤʄɥʷ 3.42

ʂ ʻʤ ʕʻʄɦʝˡ ʥʝʔʕʦʮʄʅʻɘ ʑ ʕʦʦʨʻɘ ʦʻʟʤʄ˥ ʅʄʧʻɘ ɹɩɼ ʟϴ ʑʤʒʂɘʄ ʟɢʦʜʦɘʑɘϴʥʥʷ ʤʒʥʝʦϴʑʥʦʾ ʕʦʦʨʒʂɘʦʾ ʜʦʙϴʢʕʄ ñʂ ʦʦʨʒϴʮʄʥʆ-ʈ ò, Ĭ 10^9/ʥʃ +m

ʊʄʧ ɹɩɼ							
ʉɹʈ		ʉɹɯ		ʉɩ		ʉ	
ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ n=10	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑ ɘϴʥʥʷ ʂ ʦʦʨʒϴʮ ʄ ʥʆ-ʈ n=5	ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑɘ ϴʥʥʷ ʂ ʦʦʨʒϴʮ ʄʥʆ-ʈ n=5	ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘ ʑɘϴʥʥʷ ʂ ʦʦʨʒϴ ʮʄ ʥʆ-ʈ n=5	ɼ ʦ ʟɢʦʜʦɘ ʑɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑɘϴ ʥʥʷ ʂ ʦʦʨʒϴʮʄ ʥʆ-ʈ n=5
6,0Ñ0,14	7,7Ñ0,1*	6,9Ñ0,11	7,6Ñ0,08*	6,5Ñ0,13	7,1Ñ0,09*	5,7Ñ0,1	6,6Ñ0,12**

ɿ ʦʄʥʒʅʕϴ * ʈ < 0,05; ** ʈ < 0,01

ɩϴ ʦʝʟʑʤ ʅϴʅϴʥʒʄ ʜʦʄʛʑʜʞʝʥ ɘʃʥʄɘʑ ʥʒʥʝʦϴʑʥʦʾ ʕʦʦʨʒʂɘʦʾ ʜʦʙϴʢʕʄ çʂ ʦʦʨʒϴʮʄʥʆ-ʈ è ʧʻʜɘʄʱ ʝʥʥʷ ʟϴɢϴʑʥʦʾ ʕʻʤʕʦʄɦʝʻ ʥʝʔʕʦʮʄʅʻɘ ʑ ʕʦʦɘʻ ʕʦʦʨʻɘ ʉɹʈ ʅʄʧʑ ɹɩɼ ʄʝϴʥʦɘʄʥʦ 29,86% ʅϴ20% ʧʦʄ ʟɢʦʜʦɘʑɘϴʥʥ çɸ ʥʆϴʝ ʄʝʃ ɼ è. ʋ ʅɘϴʦʄʥ ʉ ʅʄʧʑ ʜϴʥʄʔ ʧʦʕϴʟʥʄʕ ʟʒʥʄɘʄʝʷ ʥϴɘʻʜʧʦɘʻʜʥʦ15,7% ʅϴ8,2%.

ʊϴʙʤʄɥʷ 3.43

ʂ ʻʤ ʕʻʄɦʝˡ ʥʝʔʕʦʮʄʅʻɘ ʑ ʕʦʦʨʻɘ ʦʻʟʤʄ˥ ʅʄʧʻɘ ɹɩɼ ʟϴ ʑʤʒʂɘʄ ʟɢʦʜʦɘʑɘϴʥʥʷ ʤʒʥʝʦϴʑʥʦʾ ʕʦʦʨʒʂɘʦʾ ʜʦʙϴʢʕʄ ñɸ ʥʆϴʝ ʄʝʃ ɼ ò, Ĭ 10^9/ʥʃ +m

ʊʄʧ ɹɩɼ							
ʉɹʈ		ʉɹɯ		ʉɩ		ʉ	
ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ n=10	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑ ɘϴʥʥʷ ɸ ʥʆϴʝ ʄʝ -ʃ ɼ n=5	ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑɘ ϴʥʥʷ ɸ ʥʆϴʝ ʄʝ -ʃ ɼ n=5	ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑ ɘϴʥʥʷ ɸ ʥʆϴʝ ʄʝʃ ɼ n=5	ɼ ʦ ʟɢʦʜʦɘʑ ɘϴʥʥʷ	ɿ ʻʄʛʥʷ ʟɢʦʜʦɘʑɘ ϴʥʥʷ ɸ ʥʆϴʝ ʄʝ -ʃ ɼ n=5
6,0Ñ0,14	7,2Ñ0,4	6,9Ñ0,11	7,2Ñ0,03*	6,5Ñ0,13	6,9Ñ0,11*	5,7Ñ0,1	6,1Ñ0,12

ɿ ʦʄʥʒʅʕϴ *)ʈ < 0,05

ʈ ʻɘʝʤ ʦʝʟʄʝʝ ʥʅʥʦʄʝʻ ɘʝʥʄʕʦʾ ʦʦɢϴʅʦʾ ˥ʑʜʦʙʄ ʦʮʻʤ ɘϴʥʄ ʟϴ ɘʻʜʥʦʄʛʥʦʴ ʕʻʤʕʻʄʝʴ ʑ ʾ˥ ʕʦʦɘʻ ʊ ʻ ɹ -ʥʤʒʷ ʦʮʄʅʻɘ (ʅϴʙʤ 3.44).

[illegible], [illegible] ʊ- [illegible] Ɉ - [illegible]. [illegible] ʊ- [illegible], [illegible] Ɉ - [illegible] ? [illegible] ([illegible]). ʊ [illegible]

[illegible], [illegible] 30 [illegible] 40 ï 60 [illegible] 1 [illegible].

ʊ [illegible] 3.44

[illegible], %, ([illegible] +m), (n=5)

[illegible]	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] ʊ- [illegible], %				
[illegible]	36,42Ñ0,64	38,27Ñ0,24	38,48Ñ0,34	33,12Ñ0,54
[illegible] -[illegible]	39,42Ñ0,64*	39,97Ñ0,38*	39,64Ñ0,87*	33,71Ñ0,41*
[illegible]	38,75Ñ0,28*	39,66Ñ0,41	39,87Ñ0,45*	33,56Ñ0,56*
[illegible] Ɉ - [illegible], %				
[illegible]	16,74Ñ0,15	17,09Ñ0,56	17,15Ñ0,23	14,28Ñ0,18
[illegible] -[illegible]	20,45Ñ0,69	19,28Ñ0,19*	20,12Ñ0,73*	14,75Ñ0,39*
[illegible]	20,48Ñ0,75*	20,02Ñ0,22	21,39Ñ0,61*	14,22Ñ0,23*
[illegible] -[illegible], %				
[illegible]	46,84Ñ0,37	44,64Ñ0,48	44,29Ñ0,54	52,6Ñ0,34
[illegible] -[illegible]	40,13Ñ0,78*	40,75Ñ0,34*	40,24Ñ0,27*	51,54Ñ0,21*
[illegible]	40,77Ñ0,64	40,32Ñ0,54	38,74Ñ0,47	52,22Ñ0,23*

ʊʘʢ, ʟ ʢtstɕʽə, ʷʢɖɖʒ ʟɢtsʜtsəʟəʘdʐɖ ɖʒʽdʑ tɕʘdʐ dʑ ʢtstɕdʒtsəʽ ʜtsʙʘəʢɖ ɕʂ tstɕdʒʘʮɖɖʑ-ʈ è ʪʘ ɕɸ dʑʘtɕ̧ fɦʄ ɼ è ʟ ʜtsʟʽ 40 ï 60 dʒɢ ʜtsʙʘəʢɖ dʑʘ 1ʢɢ fɦʟ⁼ts̓ tɕ̧ ʮtsəɖdʑɖ tɕʘʮʽtsdʐ ʧtstɕʽədʐʷdʑts ʟ əɖ⁼ʽʜdʑɖdʒ fɦʪʘdʑtsdʒ əʽʜdʒʽʮʘdʑɖ ʧʽʜəɖʱ ʝdʑdʐʷ ʢʽdʐ ʢtsfɦʪʽ ʊ-dʐdʒʷtsʮɖʪʽə ʟ ʢtɕtsəʽ ʢtstɕʽə ʉɪʈ ʪɖʧʟ əʽʜʧtsəʽʜdʑts dʑʘ 8,2% ʪʘ dʑʘ 6,4%. ʊəʘtɕɖdʑɖ ʽdʐ ɖ⁼ ʪɖʧtsdʑtsɢʽʮdʑɖ⁼ ɢtɕdʐʧ əʽʜtɕ̧ ʘɢʟəʘdʑɖ dʒ̧ dʐ ʟdʑʘʮdʑɖdʒ ʧʽʜəɖʱ ʝdʑdʐʷdʒ əʽʜdʑtsfɦdʑts̓ ʢʽdʐ ʢtsfɦʪʽ ʧtsʧʟdʐʷʮʽ̓ dʑ̧ʢ ʔʢtsʮɖʪʽə, ʘtsfɦʪʙ dʑɖətsʢtstɕtsəɖ fɦdʐʘʙʢtsɢts ʪɖʧʟ ï dʑɖʱ ʝ dʑʘ1,5%.

ʉ ʪɖdʒdʐdʐ ʶ ʮɖʔ əʧdʑɖə ʧtɕ̧ʧʘtɕʘʪʽə əɖʷəɖdʑɖ ʽ ʧtɕɖ ʘdʑʘdʐʟʽ ʢʽdʐ ʢtsfɦʪʽ ɪ-dʐdʒʷtsʮɖʪʽə, əʽʜfɦʪʪtsʢ ʷʢɖ⁼ ʟʙʽdʐʱ ɖəfɦʷ dʑʘ 22,0% ʟʘ əʧdʑɖəʟ ʜtsfɦdʐʜʞ ʟəʘdʑɖ⁼ ʧtɕ̧ʧʘtɕʘʪʽə ʟ ʢtɕtsəʽ ʢtstɕʽə ʉɪʈ ʪɖʧʟ ɪʅɼ. ʆ tɕɢʘdʐʟdʒ ʪəʘtɕɖdʑʉ ʪɖʧʟ ɪʅɼ dʑʘəʧdʑɖə ʧtɕ̧ʧʘtɕʘʪʽə ʟdʒʽdʑtsʶ ʜtsfɦdʐʜʞ ʟəʘdʑtsɢts ʧtsʢʘʟdʑɖʢʘ dʑ̧ əʽʜtɕ̧ ʘɢʟəʘə, ʱ ts fɦɸʽʜʮɖʪᴵ ʧtɕts dʑɖʟᴵ ʢɖʔ tɕʽəʝdʐ ʧtɕɖfɦʪtsfɦʟəʘdʐ dʑɖ⁼ tɕ̧ ʘʢʮʽʔ tstɕɢʘdʐʟdʒʟ ʪəʘtɕɖdʑʮᴵ tsɢts ʪɖʧʟ.

ʊʘʢɖdʒ ʮɖdʑtsdʒ ʟʘfɦʪtsfɦʟəʘdʑdʐʷ tɕtsʟtɕtsʙdʑ̧ dʑɖ⁼ dʑʘdʒɖ dʒʽdʑ̧ tɕʘdʐ dʑɖ⁼ ʢtstɕdʒtsəɖ⁼ ʜtsʙʘtsʢ ɕʂ tstɕdʒʘʮɖɖʑ-ʈ è ʪʘ ɕɸ dʑʘtɕ̧ fɦʄ ɼ è fɦʧtɕɖʷʽ ʧʽʜəɖʱ ʝdʑdʐ tɕ̧ ʟɖfɦʪʝ dʑʪdʑtsfɦʪʽ tstɕɢʘdʐʟdʒʟ ʪəʘtɕɖdʑ, tsʜdʑʘʢ ʮʝʔ ʝʷʝʢʪ tsʙʟdʒtsədʐ ʽʪᴵ fɦʷ tɕ̧ ɢʟdʐʷʪtstɕdʑɖdʒ əʧdʑɖətsdʒ ʢtstɕɖ əʝ dʑɖʢɖ⁼ ʧʽəʢʟdʐ ɢtsdʑtsədʑtsɢts dʒtsʟʢʟ ʽ dʑʘʔʢtɕʘ ʝ ʧtɕtsʷədʐʷʽʪᴵ fɦʷ ʟ ʢtstɕʽə fɦɖdʐ dʑɖ⁼ ʪɖʧʽə əɖʱ ts̓ dʑ̧ tɕətsəts̓ ʜʽʷdʐ dʑtsfɦʪʽ.

4. Аналіз та узагальнення результатів дослідження

[illegible] [553]. [illegible] [1, 2, 15, 264268, 284].

[illegible]

[illegible] 1- [illegible] 180-[illegible] [illegible] 4,0 [illegible] 4,4 [illegible] (p<0,01), [illegible] 4,5 [illegible] (p<0,001). [illegible] 30 [illegible] 180 [illegible] 4,2 [illegible] (p<0,01) [illegible] 4,3 [illegible] (p<0,01) [illegible] 4,2 [illegible] (p<0,01) [illegible] 30-[illegible] 9,0-9,1 [illegible] 8,1-8,2 [illegible] 180-[illegible] 4,3-5,4 [illegible] 4,7- 5,7 [illegible] 30 [illegible] 180 [illegible] 17,3% [illegible] 20,1% (p<0,05), [illegible] 30 [illegible] [11, 15, 37]. [illegible] 6 [illegible]

[illegible]

ʧtɑɕʔtsʤʐ ʕtstɑʤʐ, ɘtsʜɕ, ʯ ɮɘʘʥʥ ɮ ʧtɑtsʮ fŋ fɮtsʷʥʥ ɮ lsʝ ʤls ɘtsʥɕʥfŋ ʕtsʾ lsʘ ʧtsʥfŋ ʕtsʾ ʤʒ̂ʷfŋʥɕ ʧtstɕʜ ʜts 6 ʤfŋʮʥʦɢts ɘʕɮ ʟʙʥʰ ɮɘʘʥɕfŋ, lstsʜ ʷʕ lstɑɕɘʘʥfɮ ʧʝtɕtsʜɮ ʙʝʟʜʷʥʥsfɮ, ɘʜʧtsʮɕʥɮ, fŋʥɮ fɮʘʥɮ ʥʯʘʥʥ ʤʒʘʥɕ ʟɘtstɑtslsʥɮ lsʝʥʝʥɭʶ . ɩ ʘ ʮʝ ɘʕʘʟɮʶ lsᴵ tslstɑɕʤʒʘʥ tɕʝʟɮʥ lsʘlsɕ lstɑɕɘʘʥsfɮ ʧʝtɕtsʜɮ ʙʝʟʜʷʥʥsfɮ ʧʜ ʮʘfŋfɮtsʷʥʥ, ʷʕɕʔ ɮ lsɘʘɑɕʥ tsʙtsʭ ʧtstɕʜ ʟ ɘʕtsʤʒ ʟʤʝʥ ɮɘʘfŋ: ɮ 180-ʜtsʙtsɘɕʭ ʙɮɢʘʔɥɘ lsʝʥɕʮtsʕ ɘtsʥɕʥfŋ ʕtsʾ ʧtstɑtsʜɕ ɘʥfʕtstɑtslsɕɘfŋ ɮ 1,8 ʿ 1,9 tɕʘʟʘ, ɘ lsɘʘɑɕʥʧtsʥfŋ ʕtsʾ ʧtstɑtsʜɕ ï ɮ 1,7 ʿ 1,8 tɕʘʟʘ ɘʜʧtsɘʜʥs, ʧtstɕɘʥʥs ʟ 30-ʜtsʙtsɘɕʤʒɕ lsʝʥlsʘʤʒɕ. ʑ ts fɮtsfɮlsᴵfŋ fɮʘʥɮ ʥʯʘʥʥ, tslstɑɕʤʒʘʥ tɕʝʟɮʥ lsʘlsɕ fŋʧtsfɮʝtɕʯʝʥ fŋʜʮʘᴵ ʧtɑts lsʝ, ʰ ts ʥʘʔʙʥʰ ʝ ʮʘfɮ ɘʥ ʟʘʔʤʒʘ ɘ tsʜʥsʜtsʙtsɘɕʭ lsʝʥls ɘtsʥɕʥfŋ ʕtsʾ lsʘ ʧtsʥfŋ ʕtsʾ ʤʒ̂ʷfŋʥɕʭ ʧtstɕʜ. ɟ fŋʥ ʥʘɑtsʜʯʝʥʥ ʧʜʜtsfŋʥʜʥ lsʝʥlsʘʥʯʘʥɕ ʥʘʙtsɥ ʟ ɘɕlsʷɢʥlsɕʤʒɕ ʕʥɭɘʕʘʤʒɕ. ʆ ʘʕ fŋɕʤʒʥʤʒ ʮʘfɮ ʥʯʘʥʥ ɮ lsʝʥls ʧtɑɕʧʘʜʘ ʥʘʥʮʥ ɢtsʜɕʥɕ (ʤʯ 23.00 ʿ 5.00 ɢtsʜɕʥʘʤʒɕ). ɼ ts 180 ʜtsʙɕ ʯɕlslsʷ lstɑɕɘʘʥfɮ ʧtɑtsʮfɮ ʥʯʘʥʥ ʙɮɢʘʔɥɘ lsʝʥɕʮtsʕ tsʙtsʭ ʧtstɕʜ fʕtstɑtsʮɮɘʘʥʘfŋ ɘʜʧtsɘʜʥs ʥʘ 62,1% ʿ 63,0% (p<0,001), ʘ lsʘʕtsʯ ʥʘ 38,3% ʿ 37,3% (p<0,01) ʜtsʙtsɘtsɢts ʮʘfɮ. fɮʘʥ fɮtsʷʥʥ lsɘʘɑɕʥ (p<0,001) lsʘʟʙʥʰ ɮɘʘfŋ ʜts 180 ʜtsʙɕ ʯɕlslsʷ. ɪ ʜʧtsʮɕʥsʕ lsʘ fɮʥɘɕʷɘɕʥɕfŋ ʥʘʔʜtsɘʰ ɕʤʒɕ ʟʘ ʮʘfɮʤʒ ɮ lsʝʥls tsʙtsʭ fɮʘlsʝ ʔ 30-ʜtsʙtsɘtsɢts ɘʕɮ. ʊʝʥʝʥɭʷ ʜts ʟʥɕʯʝʥʥ ʮʘfɮ ʥʘɘʜʧtsʮɕʥsʕ lsʘfɮʥʟʙʝtɕɢʘʥʘfŋ ɮ lsʝʥls ɘtsʥɕʥfŋ ʕtsʾ lsʘ ʧtsʥfŋ ʕtsʾ ʤʒ̂ʷfŋʥɕʭ ʧtstɕʜ ʜts 180-ʜtsʙtsɘtsɢts ɘʕɮ: ɮ ɘʜfɮlsʕtsɘtsʤʐ fŋʧɘɘʜʥsʰ ʝʥʥ ɘʝʥɕʮɕʥʘʜtsfŋʥʜʯ ɮɘʘʥsɢts ʧtsʕʘʟʥʕʘʟʤʝʥ ɮɘʘʥʘfŋ ʥʘ 42,9 % ʿ 57,2% (p<0,01) ɮ ʙɮɢʘʔɥɘ lsʘʥʘ 45,7% ʿ 44,5% (p<0,01) ï ɮ lsʝʥɕʮtsʕ, ʧtstɕɘʥʥs ʟ lsʝʥlsʘʤʒɕ 30-ʜtsʙtsɘtsɢts ɘʕɮ.

ɼ tsfŋʥʜʯʝʥʥʤʒɕ ʙʘɢʘᴵ tsʭ ɘʮʥɕʭ ɮfɮʘʥsɘʥʝʥs, ʰ ts ʥʜɕɘʜɮʘʥ ʥ tsfɮʙʥɕɘtsfɮ ʧtsɘʝʜʥʕtsɘɕʭ tɕʘʕɥʔ lsɘʘɑɕʥ lsfŋʥs ʧtsɘ̂ʟʘʥ ʟ ʭʘtɕʘʕlsʝtɑtsʤʒ ʧʝtɕʙɢɮ tsfŋʥsɘʥɕʭ ʥʝtɕɘtsɘɕʭ ʧtɑtsʮfŋɘ ɮ ʕtstɕ ɘʝʥɕʕɕʭ ʧɘʕɮʥ [44, 45, 55, 81, 84]. ɟ tɑlsʝ ʕtstɑlsɕʕts-ɘfŋʮtɕʘʥʥ ɘʟʘ ʤʒʜ ɘ tstɑɢʘʥʟʤʒ lsɘʘɑɕʥ ʧtɑtsʷɘʥʶ lsᴵfŋ ʥʝ lsʥʕɕ ɮ ʬtstɑʤʒ ʧtsɘʝʜʥʕtsɘɕʭ tɕʘʕɥʔ, ʘʔ ɮ ʕʥʕfŋʥɕʭ ʷʕfŋʥɕʭ ʟʤʒʥʘʭ ʤʒstɕʬtsʥsɢʮʥsɢts fʕʥʘʜɮ ʕtɑtsɘ, ʥlsʝʥfŋɕɘʥsfɮ tsʙʤʒʥɮ tɕʝʮtsɘɕʥ. ɪ fɮʘʥsɘʥʝʥs, ʰ ts tsʕtɕʝʤʒ ɘʥlstɕʰ ʥ (ɘʕ, ɘɕʜ, fɮʘᴵ, ʧtstɑtsʜʘ) ʬʟtsʥsɢʮʥʔ fɮʘʥ, tɕɘʝʥ ʧtɑtsʜɮʕlsɕɘʥsfɮ, ʧʝtɕtsʜ ʥʘʕlsʘɭ) lsʘ ʟtsɘʥʰ ʥ (tɕɘʝʥ ɢtsʜɘʥ, ʟʘʙʝʟʧʝʮʥfɮ lsɘʘɑɕʥɘlsʘʤʒʥʘʤʒɕ ʿ ʤʥʝtɕʘʥ ʥɕʤʒɕ tɕʝʮtsɘɕʥʘʤʒɕ, fŋʟtsʥ tɑtsʕɮ, ʮʘfŋ ʜtsʙɕ lsʘ ʥ) ʬʘʕlststɑɕ ɘʧʥɕɘʘ lsᴵ ʥʘ fʕʥʘʜ ʕtɑtsɘ (ʤʒstɕʬtsʥsɢʮʥʔ ʿ ʙtsʭʤʮʥʔ) [13, 80, 179, 181, 563, 633, 658, 671]. ɩ ʘtsfŋʥsɘ ʘʥʘʥʟɮ ʜɕʥʘʤʒʕɕ ʟʤʥ

Ꞔ'ďż Ꞔtsfiŀs' ʝ tœçſlstœts ųçſls'ə ə Ꞔtœtsə' lsʝ ďż'ls ətsďżçſďżfrŋ Ꞔts' lsʘ ʧtsďżfrŋ Ꞔts' ďʒ̂ʷfrŋďżçſ⌐ ʧtstœ'ʜ ə'ʜ tsʜďżts-ʜts 180-ʜtsʙtsətsɢts ə'Ꞔƶ əçſʷəçſďżtsfrŋ, ʰ ts ƶ lsʝ ďżçſųtsꞔ, ďżʘ ə'ʜďʒďż ə'ʜ ʙƶɢʘʔų'ə, əʧtœtsʜtsəɣ ʜtsfrŋďż'ʜďżtsɢts ʧʝ tœ'tsʜƶ frŋʧtsfiŀsʝ tœ'ɢʘďżtsfrŋ ďżçſɣ ųʝ ʟďżʘųʝ ďżďż ųɪ tsɢts ʧtsꞔʘʟďżçſꞔʘ Ɉ 'ꞔtsəʘ ʜçſďżʘďʒꞔʘ Ꞔ'ďż Ꞔtsfiŀs' ʝ tœçſlstœts ųçſls'ə ⌐ʘtœʘꞔ lsʝ tœçſʟƶəʘďżʘfrŋ ďżʘʔəçſʰ çſďʒçſ ʟďżʘųʝ ďżďżďʒçſ ʧtsꞔʘʟďżçſꞔʘ ƶ lsʝ ďż'ls tsʙts⌐ fiŀsʘlsʝ ʔ ətsďżçſďżfrŋ Ꞔts' lsʘ ʧtsďżfrŋ Ꞔts' ďʒ̂ʷfrŋďżçſ⌐ ʧtstœ'ʜ ďżʘ 30 ʜtsʙƶ ɣçſlslsʷ ʟ ʧtsfiŀsƶʧtsəçſďʒʟďżçſɣʝ ďżďżďʒʔtsɢts ƶ 60- lsʘ180-ʜtsʙtsətsďʒƶ ə'ų'. Ɩ ʘ180 ʜtsʙƶ ɣçſlslsʷ Ꞔ'ďż Ꞔ'fiŀsɪ ʝ tœçſlstœts ųçſls'ə ƶ Ꞔtœtsə' ʙƶɢʘʔų'ə lsʘ lsʝ ďżçſųtsꞔ tsʙts⌐ ʧtstœ'ʜ ʙƶďżʘ ďżçſɣ ųtsʁ ə'ʜʧtsə'ʜďżts ďżʘ9,3 % ї 11,1 % ' 11,6 %ї 10,2 % ʧtœçſ p<0,05, ďżɣ ƶ 30-ʜtsʙtsətsďʒƶ ə'ų'. ƶ ts fiŀstsfiŀƶ'lsɪ frŋ ʜçſďżʘďʒꞔçſ əďʒfiŀsƶ ɢʝ ďʒtsɢďżtsʙ'ďżƶ, lsts ďżʘʔəçſʰ ƶ ʔtsɢts Ꞔtsďżųʝ ďżlstœʘųʁ ʟɢʘ'ꞔfrŋəʘďżts ə Ꞔtœtsə' lsʝ ďż'ls tsʙts⌐ ʧtstœ'ʜ ə tsʜďżtsʜtsʙtsətsďʒƶ ə'ų', ʧtœçſųtsďʒƶ ə ʙƶɢʘʔų'ə ї ďżʘ 6,6 % ʙƶďżʘ əçſʰ tsʁ , ďżɣ ƶ lsʝ ďżçſųtsꞔ. ʊʘꞔʘ əçſfrŋꞔʘ Ꞔtsďżųʝ ďżlstœʘųʷ əďʒfiŀsƶ ɢʝ ďʒtsɢďżtsʙ'ďżƶ əꞔʘʟƶ' ďżʘʜtsfiŀsʘlsďżʔ tœ'əʝ ďż Ꞔçſfrŋďżəʝtsɢts ɢtsďʒʝ tsfiŀsʘʟƶ tstœɢʘďżʟďʒƶ lsʝ ďż'ls. ɼ ts 180-ʜtsʙtsətsɢts ə'Ꞔƶ frŋʧtsfiŀsʝ tœ'ɢʘďżʘfrŋ lsʝ ďżʜʝ ďżɥʷ ʜts ʟďżçſɣ ʝ ďżďż əʝ ďżçſųçſďżçſ Ꞔtsďżųʝ ďżlstœʘų' ɢʝ ďʒtsɢďżtsʙ'ďżƶ ə Ꞔtœtsə' ʙƶɢʘʔų'ə ' lsʝ ďżçſųtsꞔ ətsďżçſďżfrŋ Ꞔts' lsʘ ʧtsďżfrŋ Ꞔts' ďʒ̂ʷfrŋďżçſ⌐ ʧtstœ'ʜ ďżʘ24,1 % ї 21,8 % (p<0,001) lsʘ19,6 % ї 21,1 % (p<0,001), ʧtstœ'əďżďżts ʟ tsʜďżtsʜtsʙtsəçſďʒ ə'Ꞔtsďʒ ʆ lstœçſďʒʘďż ďżʘďʒçſ tœʝ ʟƶďż lsʘlsçſ ƶʟɢtsʜɣ ƶʁ lsɪ frŋ ʟ ʜʘďżçſďʒçſ ɹ 'ďżtsʰ çſųɪ Ꞔtsɢts Ɉ .ʆ ., ɹ ƶtœꞔʘls Ɉ .ɟ ., ɻ ƶʟʝ ə ɯɪ . ƶ tœtsʙtslsʘ⌐ ʷꞔçſ⌐ ʔʜʝ lsɪ frŋ ʧtœts lsʝ , ʰ ts ʙƶɢʘ ďʒʘ lsɪ əçſʰ ' ʧtsꞔʘʟďżçſꞔçſ ųʝ tœətsďżts' Ꞔtœtsə' ʧtstœ'əďżďżts 'ʟ Ꞔtstœtsəʘďʒçſ lsʘꞔtsɢts ə'Ꞔƶ [28, 37, 117]. Ɉ lstsʔ ųʘfrŋ ƶ ʜtsfrŋďż'ʜɣʝ ďżďż⌐ ɻ tsďżtsəʘųʘ ɟ . ɯ (2004) ʔʜʝ lsɪ frŋ ʧtœts lsʝ , ʰ ts ƶ ďʒtsďżtsʜçſ⌐ lsəʘtœçſďż6-ďʒfrŋųďżtsɢts ə'Ꞔƶ, ʟtsꞔtœʝ ďʒʘ ƶ ʙçſųꞔ'ə Ꞔ'ďż Ꞔ'fiŀsɪ ʝ tœçſlstœts ųçſls'ə ' əďʒfiŀs ɢʝ ďʒtsɢďżtsʙ'ďżƶ ďʒʝ ďż ' ďżɣ ƶ lsʝ ďżçſųtsꞔ [80]. ʆ lstœçſďʒʘďż ďżʘďʒçſ tœʝ ʟƶďż lsʘlsçſ Ꞔ'ďż Ꞔtsfiŀs' ďʒʔꞔtsųçſls'ə Ꞔtœtsə' ʙƶɢʘʔų'ə ətsďżçſďżfrŋ Ꞔts' lsʘ ʧtsďżfrŋ Ꞔts' ďʒ̂ʷfrŋďżçſ⌐ ʧtstœ'ʜ əꞔʘʟƶʁ lsɪ ďżʘtœtsʟəçſlstsꞔ ʷʷ 'ʟ'tsďżtsɢ'ųďżtsɢts ďʒʔꞔtsųçſlstsʟƶ ə lsəʘtœçſďżtsʜďżtsʜtsʙtsətsɢts ə'Ꞔƶ. Ɉ 'ʜďżtsfrŋďżts ďʒɣ fiŀsʘlsʝ əçſ⌐ ə'ʜďʒďżďżtsfiŀsʝ ʔ, lsts əçſʷəďʒďżts, ʰ ts əʝ ďżçſųçſďżʘųɪ tsɢts ʧtsꞔʘʟďżçſꞔʘʙƶďżʘ ďżʘ11,3 % (p<0,05) ďʒʝ ďż tsʁ ƶ Ꞔtœtsə' ʙƶɢʘʔų'ə, ďżɣ ə Ꞔtœtsə' lsʝ ďżçſųtsꞔ tsʙts⌐ ʧtstœ'ʜ. ʊʘꞔ, ə ʜtsfrŋďż'ʜɣʝ ďżďż⌐ Ʒ . ʌ . ʆ ʝ ďż ďżçſꞔʘ ' frŋʧ'əʘls. [298, 303, 305] əçſʷəďʒďżts, ʰ ts ƶ ďżtsətsďżʘtœtsʜɣʝ ďżçſ⌐ lsʝ ďż'ls ųʝ tœətsďżts-fiŀsʝ ʧtsəts' ' ʰ ə'ųɪ Ꞔts' ʧtstœ'ʜ əďʒfiŀs ƶ Ꞔtœtsə' ʝ tœçſlstœts ųçſls'ə, ďʒʔꞔtsųçſls'ə ' ɢʝ ďʒtsɢďżtsʙ'ďżƶ ' əçſʰ çſʔ ʧtstœ'əďżďżts ʟ lsəʘtœçſďżʘďʒçſ 1- lsʘ 2-tœ'ųďżtsɢts ə'Ꞔƶ. ʆ lstœçſďʒʘďż ďżʘďʒçſ tœʝ ʟƶďż lsʘlsçſ əꞔʘʟƶʁ lsɪ ďżʘ lsʝ , ʰ ts ʜts 180 ʜtsʙçſ ɣçſlslsʷ Ꞔ'ďż Ꞔ'fiŀsɪ ďʒʔꞔtsųçſls'ə ʟďʒʝ ďż ƶəʘďżʘfrŋ (p<0,001) ə ʙƶɢʘʔų'ə ' lsʝ ďżçſųtsꞔ ə'ʜʧtsə'ʜďżts ďżʘ34,0 % ' 27,1 %, ʧtstœ'əďżďżts ʟ tsʜďżtsʜtsʙtsəçſďʒ ə'Ꞔtsďʒ ďżʘ 20,8 % ' 14,4 %, ʧtstœ'əďżďżts ʟ 30-ʜtsʙtsəçſďʒ [illegible] 14,7 %, [illegible] 60-[illegible] [186]. [illegible] [182].

[illegible] [121, 190]. [illegible] [541]. [illegible] 30- [illegible] 60- [illegible] 180 [illegible] 20,4% [illegible] 19,7% (p<0,01), [illegible] 16,3% [illegible] 15,8% (p<0,001), [illegible] [697].

[illegible]

ʙlʐǤǾʅʮ'ә, lsǾ ' lsʝ dʐʆʮtsʕ әtsdʐʆdʐ̈fɲʕts' lsʘ ʧtsdʐ̈fɲʕts' dʒ̑ʘʷfɲʝʐʆ̄ ʧtstɕ'ʜ ә'tɕtsǤ'ʜdʐts ʧ'ʜәʆʰ lʐәʘfɲʷ lʐ tɕ'ʟdʐ̈ ә'ʕtsә' ʧʝ tɕ'tsʜʆ: dʐʘ30-180 ʜtsʙʆ ʞʆlsls ʷ ә fɲʝtɕʝ ʜdʐ̈ tsdʒʐ dʐʘ12,2% ï 30,2% (p<0,001) lʐ ʙlʐǤǾʅʮ'ә ' dʐʘ12,0 % ï 22,7 % (p<0,001) lʐ lsʝ dʐʆʮtsʕ, ʧtstɕ'әdʐ̈dʐts ʟ tsʜdʐtsʜtsʙtsәʆdʒ ә'ʕtsdʒ ɿʘ dʐ̈lsʝ tɕʘlslʐtɕdʐʆʆdʒʆ ʜʞʝ tɕʝ dʐʘdʒʆ ә'ʜtsdʒs, ʰ ts ʧ'ʜәʆʰ ʝ dʐdʐ̈ʷ әdʒ'fɲlslʐ ʙ'dʐ̈ʘ lʐ fɲʆtɕtsәʘlsʮ' ʕtɕtsә' lsәʘtɕʆdʐ̈ fɲʧtɕʆʮʆdʐ̈' ʟʙ'dʐ̈ʰ ʝ dʐdʐ̈ʷ lʐlsәtstɕʝ dʐdʐ̈ʷ ʘdʐlsʆls'dʐ̈ ' ʷʕ dʐʘfɲʝdʐ̈ʜtsʕ ï ʧ'ʜәʆʰ ʝ dʐdʐ̈ʷ ʧtɕʆtɕtsʜdʐts' tɕʝ ʟʆfɲlsʝ dʐlsdʐtsfɲls' lsʘ 'dʒʐdʐ̈lsʝ lslʐ, tsfɲʕ'dʐ̈ʕʆ lʐ Ǥʘdʒdʒʘ ǤdʐtsʙlʐdʐdʐtsәʼǾ ʷ tɕǾʅʮ'' ʧʝ tɕʝ әʘʅʘ lsᶦ 'dʒʐdʐtsǤdʐtsʙlʐdʐ̈dʐʆ, ʷʕ' ' ʘdʐlsʆls'dʐʘdʒʆ [270]. ʃ lstɕʆdʒʘdʐ̈ dʐʘdʒʆ tɕʝ ʟlʐdʐ̈ lsʘlsʆ ' ʜtsʕʘʟtsdʒ әʆfɲlsʕts' 'dʐlsʝ dʐfɲʆәdʐtsfɲls' ʙ'dʐtsʕ-fɲʆdʐlsʝ ʟlʐᴮ ʮʆ̄ ʧtɕtsʮʝ fɲә lʐ lsʝ dʐ̈ls tsʙts̄ fɲlsʘlsʝ ʔ әtsdʐʆdʐ̈fɲʕts' lsʘʧtsdʐ̈fɲʕts' dʒ̑ʘʷfɲʝʐʆ̄ ʧtstɕ'ʜ.

ʋ ʧtɕtsʮʝ fɲ ʞʆlsls'ʜ'ʷdʐ̈dʐtsfɲls' tstɕǤʘdʐ̈ʟdʒ lsәʘtɕʆdʐ̈ ʧtsfɲls'ʔdʐts ʧʝ tɕʝ ʙlʐәʘ ʧ'ʜ ʙʝ ʟʧtsfɲʝtɕʝ ʜdʐ̈dʒ әʧdʐʆәtsdʒ tɕ'ʟdʐʆ̄ ʧtsʜtɕʘʟdʐʆʕ'ә, ʷʕ' ʟdʒ'dʐ̈ ᴮ lsᶦ Ǥtsdʒʝ tsfɲlsʘʟ ә lslʐ ʮʆ 'dʐ̈ lʐ fɲlststɕtsdʐlʐ ɿʘ ʮʆ̄ lʐdʒtsә әfɲlslʐʧʘ lsᶦ lʐ ʜ'ᴮ tɕʝ Ǥlʐdʐ̈lststɕdʐ̈ ʘʜʘʧlsʘʮ'ʔdʐts-ʕtsdʒʧʝ dʐfɲʘlststɕdʐ̈ dʒʝ̄ʘdʐ̈ʟdʒʆ, ʷʕ' ʧtsʧʝ tɕʝ ʜʞlʐᴮ lsᶦ ʘʙts ʕtsdʒʧʝ dʐfɲlʐᴮ lsᶦ ә'ʜʧtsә'ʜdʐ̈ ʟdʒ'dʐʆ әdʐlʐlstɕ'ʰ dʐ̈tsǤts fɲʝtɕʝ ʜtsәʆʰ ʘ' ʟʘdʐʝʞʘlsᶦ ә'ʜ 'dʐʜʆә'ʜlʐʘdʐ̈dʐʆ̄ tsfɲlsʙdʐʆәtsfɲlsʝ ʔ tstɕǤʘdʐ̈ʟdʒʐ [191]. Ɩ Ǿʙ'dʐ̈ʰ ʧtsәdʐtsᴮ dʒ'tɕtsᴮ ʮʝ ә'ʜtsʙtɕʘʅʘlsᶦ fɲʷ ә tsʙdʒ'dʐ̈ әlʐǤdʐʝ әtsʜ'ә, tsfɲʕ'dʐ̈ʕʆ, ʷʕ ә'ʜtsdʒs, tɕtsʟәʆlstsʕ fɲlstɕʝ fɲlʐ ә tstɕǤʘdʐ̈ʟdʒ' lsәʘtɕʆdʐ̈ fɲlʐʧtɕtsәtsʜʞlʐ'lsᶦ fɲʷ Ǥ'ʧtsǤdʐ̈ʕʝ dʒ''ᴮ [80]. ɼ tsfɲʝdʐ̈ʜʞlʐᴮ ʮʆ 'dʐlsʝ dʐfɲʆәdʐ̈fɲlsᶦ tsʙdʒ'dʐlʐ әlʐǤdʐʝ әtsʜ'ә ә tstɕǤʘdʐ̈ʟdʒ' lsʝ dʐ̈ls әtsdʐʆdʐ̈fɲʕts' lsʘʧtsdʐ̈fɲʕts' dʒ̑ʘʷfɲʝʐʆ̄ ʧtstɕ'ʜ ә ʕtɕʆlsʆʮdʐ̈ ʧʝ tɕ'tsʜʆ ʧtsfɲlsdʐʘlsʘdʐ̈ dʐtsǤts tsdʐlstsǤʝ dʐʝ ʟlʐ, ә'ʜʟdʐʘʮʘdʐʆ dʐʝ ʟdʐʘʮdʐʆʔ ʜ'ʘʧʘʟtsdʐ̈ ʕtsdʐʆәʘdʐ̈ ʕtsdʐʮʝ dʐlstɕʘʮ'' Ǥdʐ̈ ʕtsʟʆ lʐ ʕtɕtsә' lsәʘtɕʆdʐ̈ ʜts 60-ʜtsʙtsәtsǤts ә'ʕlʐ. ʉʧʝ ʕlstɕ tslstɕʆdʒʘdʐʆ̄ ʧtsʕʘʟdʐʆʕ'ә ʕ'dʐ̈ʕtsfɲls' Ǥdʐ̈ ʕtsʟʆ ʜʘ ʧ'ʜfɲlsʘәʆ ʧtɕʆʧlʐfɲlsʆlsʆ, ʰ ts ә'ʜʙlʐәʘ lsᶦ fɲʷ dʐʘtɕtsfɲlsʘdʐdʐ̈ʷ ʘdʐʘʝ tɕtsʙdʐtsǤts ʧtɕtsʮʝ fɲlʐ '' tsʕʆfɲʝdʐ dʐdʐ̈ʷ lʐ lsʝ dʐ̈ls tɕʘdʐdʐ̈ tsǤts ә'ʕlʐ. Ɩ ʘ180-lslʐ ʜtsʙlʐ ʞʆlsls ʷ ʕtsdʐʮʝ dʐlstɕʘʮ'ʷ Ǥdʐ̈ ʕtsʟʆ lʐ ʕtɕtsә' ʙlʐǤǾʅʮ'ә tsʙts̄ ʧtstɕ'ʜ ʧʝ tɕʝ әʘʅʘdʐʘ'' әʝ dʐʆʮʆdʐlʐ dʐʘ 10,0% ' 14,8% (p<0,01), lʐ lsʝ dʐʆʮtsʕ tsʙts̄ ʧtstɕ'ʜ ï dʐʘ7,1 % ' 7,7% ʧtɕʆ p<0,01, ʧtstɕ'әdʐ̈dʐts ʟ tsʜdʐtsʜtsʙtsәʆdʒә'ʕtsdʒ

ɪ fɲlsʘdʐtsәdʐʝ dʐts, ʰ ts әʧtɕtsʜtsәʞ ʧʝ tɕʰ tsǤts dʒ'fɲʮʷ әdʒ'fɲls ʧ'tɕlʐәʘlslʐ ʟdʒʝ dʐ̈ ʆәfɲ lʐ ʕtɕtsә' ʙlʐǤǾʅʮ'ә әtsdʐʆdʐ̈fɲʕts' ʧtstɕtsʜʆ dʐʘ12,0%, lʐ lsʝ dʐʆʮtsʕ ï dʐʘ4,0%, lʐ ʙlʐǤǾʅʮ'ә ʧtsdʐ̈fɲʕts' ʧtstɕtsʜʆ ï dʐʘ12,5%, lʐ lsʝ dʐʆʮtsʕ ï dʐʘ11,5%, ʧtstɕ'әdʐ̈dʐts ʟ tsʜdʐtsʜtsʙtsәʆdʒʆ lsʝ dʐ̈lsʘdʒʆ ʟ dʐʘfɲlslʐʧdʐʆdʒ ʧ'ʜәʆʰ ʝ dʐdʐ̈dʒ ʔtsǤts әʝ dʐʆʮʆdʐʆ lʐ 180-ʜtsʙtsәtsdʒʐ ә'ʮ' ʜts tɕ'әdʐ̈ʷ ʧʝ tɕʰ ts' ʜtsʙʆ ʞʆlslsʷ. ʃ lstɕʆdʒʘdʐ̈ tɕʝ ʟlʐdʐ̈ lsʘlsʆ Ǿʕlsʆәdʐtsfɲlsʷ ʝ tɕdʒʝ dʐls'ә dʒtsʞlʐlsᶦ әʕʘʟlʐәʘlsʆ dʐʘlsʝ, ʰ ts ә ʮʝ ʔ

[illegible] (30 [illegible]) [illegible] [241]. [illegible] 180 [illegible] 4,3% [illegible].

[illegible] [263]. [illegible] 5,52 [illegible] 5,83 [illegible] 5,80 [illegible] 5,62 [illegible] 30- [illegible] 60-[illegible] 180-[illegible] 9,8%, [illegible] 10,5%. [illegible] 6 [illegible]

[illegible]

[illegible] [65, 80]. [illegible] 30 [illegible] 2,6 [illegible] (p<0,01) [illegible] 180 [illegible] 1,35 [illegible] 30-[illegible] [65, 80]. [illegible] 30, 60 [illegible] 180 [illegible] 3,9 [illegible] (p<0,01), [illegible] 4,9 [illegible] (p<0,001) [illegible] 7,0 [illegible] (p<0,001); [illegible] 3,9; 5,1 [illegible] 7,3 [illegible] (p<0,001).

[illegible]

[illegible] [324, 325]. [illegible] 2,5; 5,0 7,5 [illegible].

[illegible] 16- [illegible] 18-[illegible] 11,7% [illegible] 5,5% (p<0,001) [illegible] 10,9% [illegible] 7,3% (p<0,01). [illegible]

[illegible] Cu, Co, Mn, Fe [illegible] Zn, [illegible] [330]. [illegible] 12 [illegible] [403, 410].

[illegible] 2 [illegible] 3 [illegible] 5,0 [illegible] 7,5 [illegible] 4 [illegible] 6 [illegible] 12,4% (p<0,001) [illegible] 16,8% (p<0,001), [illegible] 2 [illegible] 3 [illegible] 5,0 [illegible] 7,5 [illegible] 2 [illegible] 3 [illegible] 16 [illegible] 18 [illegible] 21,5% [illegible] 41,0% [illegible] 23,1% [illegible] 35,7% [illegible] p<0,01, [illegible].

[illegible] 5,0 [illegible] 2 [illegible] 17,1% (p<0,001) [illegible] 21,0% (p<0,001). [illegible] 2 [illegible] 2,6% [illegible]

[illegible] 2,5; 5,0 [illegible] 7,5 [illegible] 1, [illegible] 2 [illegible] 3 [illegible] 6,42%, 6,72% [illegible] 6,33% [illegible] p<0,001 [illegible] 2 [illegible] 3 [illegible] 16- [illegible] 18-[illegible] 7,9% [illegible] 9,4%

(p<0,001), [illegible] $_2$ [illegible] 14,8% (p<0,01) [illegible] 18,0% (p<0,001). [illegible]

[illegible] $_2$ [illegible] 7,1% [illegible] 21,7% [illegible] p<0,05 [illegible] p<0,01 [illegible] 18 [illegible] $_2$ [illegible] $_3$ [illegible] 8,0% [illegible] 8,5% (p<0,001) [illegible] [269]. [illegible] [263]. [illegible] 2, 4 [illegible] 6 [illegible] $_2$ [illegible] 26,0 %, 29,0 % [illegible] 37,6 %, [illegible] $_2$ [illegible] 16- [illegible] 18-

[illegible] 5,6% [illegible] 6,6% [illegible] p<0,01 [illegible] 5,0 [illegible].

[illegible] $_1$, [illegible] $_2$, [illegible] $_3$ [illegible].

[illegible] 5,0 [illegible] 7,5 [illegible] 5,0 [illegible] $_2$ [illegible].

[illegible] [1, 2, 3, 206, 207, 208, 209, 265, 266, 264, 263, 258, 277]. [illegible] (2008-2014) [illegible]

[illegible] [1, 2, 3, 59, 61, 62, 63, 83, 84, 127, 128, 206, 207, 208, 209, 228, 229, 263, 264, 277, 288].

[illegible] [61, 62, 63, 83, 84, 127, 128, 206, 207, 208, 209, 228, 229, 245, 263, 264, 277], [illegible].

[illegible] [356, 357] [illegible]

[illegible] [359, 361, 512].

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 5,0 [illegible] 14,6%, [illegible] 18,5% [illegible] p<0,001 [illegible] dǽ⁈ʙʻdžʰ ʬƖzdǻɥʻtsdǽ⊙dž dǽs-⊙ʕlsɖəʤ⌐ ʝtɐɖlstɐtsɥɖlsʻə. ʋ ɢtɐdžtʃʻ ʙƖzɢ⊙ʔɥʻə ʻʟ ʉl ʻ ʉ lsɖtʃtsʤ ɹlɼ ʕʻdžʕʻfnʲs ʝtɐɖlstɐtsɥɖlsʻə Ɩz ʕtɐtsəʻ ʟʙʻdžʰ Ɩzə⊙dǽ⊙fnʲ dǽ⊙11,3% ls⊙12,9 % tʃtɐɖ tɕ<0,01 ʟ⊙ tɐ⊙ƖzdǽsʕtʃtstʃƖzdžʷɥʻʾ çfnʲs⊙tɐɖ⌐è ʬtstɐʤʝtɐɖlstɐtsɥɖlsʻə, ʷʕʻ ʙʝtɐdžlsᶦ ⊙ʕlsɖəʤƖz Ɩzɥ⊙fnʲsᶦ Ɩz tʃtɐtsɥʝ fnʲ⊙⌐ tsʕfnɡɖɢʝ dǽ⊙ɥʾ, lstsʜʻ ʷʕ ɥ⊙fnʲsʕ⊙ çʤsdǽsʜɖ⌐è ʕdžlsɖdž ʕtɐtsəʻ ʙƖzdǽ⊙ əʻtɐtsɢʻʜdǽs dǽʝdǽ tsᴮ . ʎʝ əʕ⊙Ɩzʻ dǽ⊙lsʝ, ʰ ts ə tstɐɢ⊙dǽʟʤ ʙƖzɢ⊙ʔɥʻə ʉɹʈ lsɖtʃƖz ɹlɼ ʟ⊙ʕtstɐʝʕɥʾ tɐ⊙ɥʻtsdžƖz ʕtstɐʤsətsᴮ ʜtsʙ⊙ʕtsᴮ çʆ ʻʕtɐtsdžtʃtsəʻlsè ə Ɩzʤsə⊙⌐ ʙʝʟtʃtɐɖəɞʷʟdǽsɢts Ɩzlstɐɖʤ⊙dǽʷ tʃtɐts⌐tsʜɖlsᶦ ʙʻdžʰ ʻdǽsʝdǽfnɡɖəʤʔ tʃtɐtsɥʝ fnʝtɐɖlstɐtstʃtsʝʟƖz, tʃtstɕʻədžʷdǽs lsə⊙tɐɖdǽ⊙ʤɖ ʉ lsɖtʃƖz ɹlɼ .

ɩ⊙ ʕtstɐʝʕɥʾ tɐ⊙ɥʻtsdžƖz ʕtstɐʤsətsᴮ ʜtsʙ⊙ʕtsᴮ ʕtsdǽʝdǽstɐ⊙ɥʷ ɢʝdǽsɢdǽsʙʻdžƖz ə ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə tsʙts⌐ tʃtstɕʜ əʻtɐtsɢʻʜdǽs ʟtɐtsfnʲs⊙dǽ⊙dǽɖʰ ʝ Ɩz lsə⊙tɐɖdžʻʟ fnɡɖdž dǽɖʤɖ lsɖtʃ⊙ʤɖ ɹlɼ, tʃtɐtslsʝ dǽ⁈əɖʰ tsᴮ ʾʾ əʝdǽɖɥɖdǽ⊙əɖʷəɖdǽ⊙fnʲ Ɩz ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə $ɼ_2$ ɢtɐdžtʃɖ ʻʟ ʉɹ ɯlsɖtʃtsʤɹlɼ, ʷʕ⊙ ʟtɐtsfnʲs⊙dǽ⊙dǽ⊙7,9% (tɕ<0,001) ï Ɩz ətsdžɖdǽfnʲʕtsʾ ʻ dǽ⊙7,7% (tɕ<0,001) ï Ɩz tʃtsdžfnʲʕtsʾ, tʃtstɕʻədžʷdǽs ʟ tʃtsɥ⊙ʕtsʤ ʜtsfnɡdžʜƖz. ɩ⊙fnɡɖɥʝ dǽfnʲsᶦ ʝtɐɖlstɐtsɥɖlsʻə ɢʝdǽsɢdǽsʙʻdǽsʤ Ɩz ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə tsʙts⌐ tʃtstɕʜ Ɩzfnʲ⌐ lsɖtʃʻə ɹlɼ dǽ⊙lsdž ʟɢtsʜtsəƖzə⊙dǽʷ ʕtstɐʤsətsʾ ʜtsʙ⊙ʕɖ əʻtɐtsɢʻʜdǽs dǽʝ ʟʤdǽ ə⊙dǽ⊙fnʲ, lstsʜʻ ʷʕ fnʝtɐʝʜdžʔ tsʙɞ ʤɢʝ dǽsɢdǽsʙʻdžƖz ə ʝtɐɖlstɐtsɥɖlsʻ əʻtɐtsɢʻʜdǽs ʟʤʝdǽ Ɩzə⊙fnʲ, ʟ dǽ⁈dǽɖχɥɖʤ ʟdǽ⊙ɥʝdǽdžʷʤƖz ʙƖzɢ⊙ʔɥʻə $ɼ_2$ ɢtɐdžtʃɖ ʉɹ ɯlsɖtʃƖz ɹlɼ . ɹʝdǽɖɥɖdǽ⊙ɢʝdǽ⊙lstsʕtɐɖlsƖz ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə tʃts ʟ⊙ʻdǽʝdǽdǽ ʝʕfntʃʝtɐɖʤʝdǽslsƖz dǽ⊙ lsdž ʟɢtsʜtsəƖzə⊙dǽʷ ʕtstɐʤsətsʾ ʜtsʙ⊙ʕɖ çʆ ʻʕtɐtsdžtʃtsəʻlsè əʻtɐtsɢʻʜdǽs ʟtɐtsfnʲs⊙dǽ⊙ dǽɖʰ ʝ Ɩz lsə⊙tɐɖdžətsdžɖdǽfnʲʕtsʾ tʃtstɐtsʜɖ $ɼ_1$, ʻ $ɼ_2$ ɢtɐdžtʃ ʻʟ ʉɹʈ ʻ ʉɹ ɯlsɖtʃ⊙ʤɖ ɹlɼ əʻʜtʃtsəʻʜdǽs dǽ⊙2,0% ʻ 3,4% tʃtɐɖ tɕ<0,01. ɹ tʃʝtɕʰ Ɩz ɥʝtɐɢƖz, tslstɐɖʤ⊙dǽ tɐʝʟƖzdž ls⊙lsɖ əʕ⊙Ɩzᴮ lsᶦ dǽ⊙ lsʝ, ʰ ts ʟɢtsʜtsəƖzə⊙dǽʷ ʜtsʙ⊙ʕɖ, ʷʕ⊙ʤʻfnʲsɖlsᶦ ʟ⊙dǽʟts, tʃtsʟɖlsɖədǽs ətʃdǽɖəʘ dǽ⊙ ʤstɕʷts-ʬƖzdǻɥʻtsdǽ⊙dž dǽ tʃtsʕ⊙ʟdǽʕɖ ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə tsʙts⌐ tʃtstɕʜ. ɟ ts-ʜtɐdžɢʝ, tslstɐɖʤ⊙dǽ əʝdǽɖɥɖdǽɖ ɥɖfnɡdǽsəɖ⌐ ʟdǽ⊙ɥʝdǽ, dǽ⊙ dǽ⊙ tʃtsɢdžʷʜ, ʻ ə⊙ʅdǽɖəɖʤ ʬ⊙ʕlststɐtsʤ ʜdžʷ tsɥʻdǽɖ ʻdǽʜɖəʻʜƖz⊙dž dǽsʾ tɐʝ⊙ʕlsɖədǽsfnʲsʾ tstɐɢ⊙dǽʟʤƖz lsə⊙tɐɖdžʤ⊙əʻʜɢtsʜʻədž, tsfnʕʻdžʕɖ, tʃtɐɖ ʜʾ fnʲstɐʝ fnƖz fn⊙dǽʝ Ɩz ɢtɐdžtʃʻ lsə⊙tɐɖdžʉ lsɖtʃƖz ɹlɼ dǽsχʝ fntʃtsfnʲsʝtɕɢ⊙lsɖfnʲ tɐtsʟəɖlstsʕ ʙʻdžʰ əɖtɐ⊙ʅʝdǽɖ⌐ tsʟdǽ⊙ʕ ɢʻtʃtsʕfnʲʾ. ɩ⊙ ʜƖzdǻƖz ʜʝʷʕɖ⌐ ⊙lststɕʻə, ɥʝ ʻ dǽdǽlsƖzᴮ ɥɖʤ ʬ⊙ʕlststɐtsʤ ə ʟ⊙ʙʝʟtʃʝɥʝdǽ tsfnɡdǽsədǽsʾ ʬƖzdǻɥʾ ʬtstɐʤʝdǽdǽ⌐ ʝdǽʝdǽʝdǽsʻə [464, 466].

ɩ⊙ tsfnɡdǽsəʻ əɖəɥʝdǽdžʷ əʤʻfnʲsƖz ʙʻdǻ⊙ ə fnɡtɐtsə⊙lsɥʻ ʕtɐtsəʻ ʙƖzɢ⊙ʔɥʻə tsʙts⌐ tʃtstɕʜ əfnʲs⊙dǽsədǽʝdǽs, ʰ ts ə ʕʻdǽɥʻ ʜtsfnɡdžʜƖz dǽ⊙ lsdž lstɐɖə⊙dǽsɢts ʟɢtsʜtsəƖzə⊙dǽʷ ʕtstɐʤsətsʾ ʜtsʙ⊙ʕɖ çʆ ʻʕtɐtsdžtʃtsəʻlsè ʔtsɢts əʝdǽɖɥɖdǽ⊙ʟtɐtsfnʲs⊙dǽ⊙dǽ⊙5,5 % (p<0,001) Ɩz lsə⊙tɐɖdžʉɹ ɯlsɖtʃƖz ɹlɼ ətsdžɖdǽfnʲʕtsʾ tʃtstɐtsʜɖ ʻ dǽ⊙ 4,8% (p<0,001) ï Ɩz lsə⊙tɐɖdžʉl lsɖtʃƖz ɹlɼ tʃtsdžfnʲʕtsʾ tʃtstɐtsʜɖ, tʃtstɕʻədžʷdǽs ʟ tʃtsɥ⊙ʕtsʤ ʜtsfnɡdžʜƖz. ɟ tɐɖ ɥᶦ tsʤƖz, dǽ⊙lsdž lstɐɖə⊙dǽsɢts ʟɢtsʜtsəƖzə⊙dǽʷ ʕtstɐʤsətsʾ

HtsB Ꝺ ꝭ ʢ ɕ ɕ ɕ ɕ ʷ ɘ ɕ ʤ ɕ ʦ ɘ ʿ ʦ ʦ G ʿH ɕ ʤ ʟ ʦ ʦ ʄ ʧ ʘ ɕ ʑ ʷ ɘ ɕ ʒ ʄ ʧ ʑ ʷ ʷ ʦ ʘ ʢ ɥ ʿ ʾ ʘ ɕ ʑ B ʑ ɕ ʒ ɕ ʑ ɘ ʃ ʘ ɓ - G ɕ ʦ B ʑ ɕ ʑ ɕ ʑ ɘ, ʧ ʦ ɕ ɕ ɕ ʤ ʟ ɕ ʑ ʘ ɥ ɕ ʦ ɕ ʒ ʑ ʟ ɕ ɕ ʃ ɣ ʝ ɕ ʑ Ŭ- ʿ ʺ ¥ G ɕ ʦ B ʑ ɕ ʑ ɕ ʑ ɘ ʄ ɥ ʃ ʦ ʦ ɘ ʘ ʃ ʢ ɕ ʢ ʦ ʦ ɘ ʿ ʃ ɘ ʘ ʦ ɕ ɕ ʑ ʑ ʄ ɟ ʃ ɕ ʧ ʃ ʿ ɘ Ɉ ʅ ɼ ɘ ʦ ɕ ʑ ɕ ʑ ʄ ʢ ʦ ʾ ʃ ʘ ʧ ʦ ɕ ʑ ʄ ʢ ʦ ʾ ɕ ʒ ô ʷ ʄ ɥ ɕ ʑ ɕ ʧ ʦ ʦ ɕ ʿH Hts ɕ ʑ ɕ ʃ ɣ ɕ ʑ ɕ ʤ ɣ ʷ ʷ ʿ ʟ ʿ ʦ ɕ ʦ ʦ G ʿ ɥ ɕ ʦ ʾ ɕ ʦ ʦ ɕ ɕ ʒ ɕ.

ʅ Ꝺ ʡ ʘ ʦ ʘ ʢ ʃ ʝ ʦ ɕ ʑ ʰ ʿ ʟ ɕ ʒ ɕ ʑ ɕ Hts ʄ ɥ ɕ ʑ H ɣ ʑ ɘ ʘ ɕ ɕ ʷ ʦ ʘ ʢ ɥ ʿ ʡ ʄ ʧ ʦ ʄ ʧ ʝ ʦ ʿ G ʘ ɕ ɕ ʑ ʃ ɘ ʘ ɕ ɕ ɕ ɕ ɼ $_2$ G ɕ ɕ ʑ ʧ ɕ ʉ Ɉ ɯ ʃ ɕ ʧ ʧ ʑ Ɉ ʅ ɼ tsBts ʧ ʦ ʦ ɕ ʿH. Ɉ ʿHtsɕ ʦ, ʰ ts ʟ ʦ ʦ ʄ ʧ ʘ ɕ ʑ ʢ ʿ ɕ ʑ ʢ ʦ ʄ ʧ ʿ ʘ ɕ ʑ B ʑ ɕ ʒ ɕ ʑ ɘ ʿ ʧ ʦ ʢ ʘ ʟ ɕ ɕ ʢ ʦ ɕ ʒ ʧ ʿHɘ ɕ ʰ ʝ ɕ ʑ ʷ ʷ ʑ ɕ ʢ ɥ ʿ ʦ ɕ ʘ ɕ ʑ ɕ ɕ ɕ ʒ ʦ ɣ ɕ ɕ ɘ ʦ ʄ ʧ ʝ ʡ ʧ ʝ ɥ ʿ ɕ ʢ ɕ, ʷ ʢ ʘ ʄ ɥ ɕ ɕ ʝ ʟ ʑ ʿ ʘ ɕ ʑ B ʑ ɕ ʒ ɕ ɕ [502]. ʆ ʄ ʧ ʘ ɕ ʑ ʿ ɕ ʡ B ʿ ɕ ʰ ts ʷ ʦ ʘ ʢ ɥ ʿ B ʿ ɕ ʢ ʘ ʿ ʾ ɕ ʒ ʧ ʦ ɕ ʃ ʘ ɕ ʒ ʘ ɕ ʑ H ʝ ʃ ʦ ʢ ʄ ɥ ʢ ʘ ɥ ʡ ɕ ɘ ɕ ʘ ʄ ʧ ɕ ɘ ʦ ʄ ʧ ʿ. ʊ ʘ ʢ ɕ ɕ ʒ ɥ ɕ ɕ ʦ ɕ ʒ ʑ ʃ ɘ ʘ ɕ ɕ ɕ ʑ ʟ ʿ ʄ ɥ ɕ ʑ ɕ ɕ ɕ ʒ ɕ ʢ ʦ ʦ ʢ ʦ ɘ ɕ ɕ ʒ ɕ ʧ ʦ ʦ ɥ ʝ ʄ ɥ ʘ ɕ ʒ ɕ ɘ ɕ ʟ ɕ ʘ ɥ ʝ ɕ ʦ ʧ ʿHɘ ɕ ʰ ʝ ɕ ʑ ʷ ʿ ɕ ʃ ʝ ɕ ʑ ʄ ɥ ɕ ɘ ɕ ʦ ʄ ʧ ʿ B ʿ ɕ ʦ ʢ - ʄ ɥ ɕ ɕ ʃ ʝ ʟ ʑ ʁ ɥ ɕ ʧ ʦ ʦ ɥ ʝ ʄ ʧ ɘ ʟ ʘ ʑ ɕ ʒ ʦ ɘ ɕ ʟ G ʦ H ʦ ɘ ʑ ɘ ʘ ɕ ʑ ʷ HtsB Ꝺ ꝭ ʢ ɕ ç ʆ ʿ ʢ ʦ ʦ ɕ ʑ ʧ ʦ ɘ ʿ ʃ è ɕ ʘ ʦ ʄ ɥ ɕ ʦ ɘ ʿ ʄ ʧ ʦ ɕ ʝ ʡ ɕ ʒ ʦ ɕ ʦ ɥ ɕ ʦ ʾ ʢ ɕ ʄ ɥ ɕ ʃ ɕ ʟ ɕ ʒ ʢ ʦ ʦ ʝ ɕ ʝ ɕ ʝ ɕ ʦ ʘ ɕ ʒ ɕ.

ʅ Ꝺ ʡ ɘ ɕ ʰ ʝ ʟ ɕ ʘ ɥ ʝ ɕ ʑ ʷ ʢ ʦ ʝ ʷ ʿ ɥ ʿ ɕ ʦ ʘ ʘ ɕ ʑ B ʑ ɕ ʒ ɕ ʑ G ɕ ʦ B ʑ ɕ ʑ ɕ ʑ ʢ ʦ ʦ ɘ ʿ ɘ ɕ ʷ ɘ ɕ ʤ ɕ ʦ ʑ B ʑ G Ꝺ ʡ ɥ ʿ ɘ tsBts ʧ ʦ ʦ ɕ ʿH ɼ $_2$ G ɕ ɕ ʑ ʧ ɕ ʉ Ɉ ɯ ʃ ɕ ʧ ʧ ʑ Ɉ ʅ ɼ, ʘ B ʄ ʧ ʃ ɕ ʑ ʃ ɕ ʘ ɘ ʝ ɕ ɕ ɥ ɕ ɕ ʘ ʷ ʢ ʦ G ʦ B ʑ ɕ ʘ B ʿ ɕ ʰ ʘ ɘ ʄ ʝ ʦ ʝ H ɕ ʑ ʦ ɕ ʒ ʑ ɕ ʘ 20,3% (ʦ<0,001), ɕ ʑ ɣ ʑ ʃ ɘ ʘ ɕ ɕ ɕ ʑ ɼ $_3$ ʿ ɼ $_4$ G ɕ ɕ ʑ ʧ ʉ ʅ ʃ ʘ ʉ ʃ ɕ ʧ ʧ ʿ ɘ Ɉ ʅ ɼ. Ɉ ʝ ɕ ɕ ɥ ɕ ɕ ʘ ʘ ʢ ʃ ɕ ɘ ɕ ʦ ʄ ʧ ʿ ʃ ʦ ʘ ɕ ʄ ʘ ɕ ʒ ɕ ʘ ʟ ɘ ʄ ɥ ʃ ʦ ʦ ɘ ʘ ʃ ɥ ʿ ʢ ʦ ʦ ɘ ʿ B ʑ ɕ ʘ ʧ ʦ ʦ ʧ ʦ ʦ ɥ ʿ ʡ ɕ ʦ ʟ ʘ ɕ ʝ ɣ ɕ ʦ ʁ ɘ ʿH ʃ ɕ ʧ ʧ ʑ Ɉ ʅ ɼ, ʧ ʦ ʦ ʰ ts ʄ ʘ ʿH ɥ ɕ ʃ ʾʾ ɕ ʡ ɘ ɕ ʰ ʝ ʟ ɕ ʘ ɥ ʝ ɕ ʑ ʷ ʑ ʄ ɥ ʃ ʦ ʦ ɘ ʘ ʃ ɥ ʿ ʢ ʦ ʦ ɘ ʿ B ʑ G Ꝺ ʡ ɥ ʿ ɘ ɼ $_2$ G ɕ ɕ ʑ ʧ ɕ ʃ ʘ, Hts ʧ ʝ ɘ ɕ ʦ ʾ ɕ ʒ ʦ ɕ ɕ, ɕ ʒ ʦ ɣ ʝ ɘ ʢ ʘ ʟ ʑ ɘ ʘ ʃ ɕ ʧ ʦ ʦ ʦ ʝ G ʑ ɕ ʑ ʷ ʃ ʦ ʦ ʦ ɕ ɕ ʡ ɘ ʧ ɕ ɕ ɘ ʢ ʦ ʦ ɕ ɕ ʧ ʿ ɘ ʢ ʑ ɕ ʑ G ʦ ɕ ʦ ɘ ɕ ʦ G ʦ ɕ ʒ ʦ ʟ ʢ ʑ ɕ ʘ ʧ ʦ ʦ G ɕ ʦ ʟ ʦ ɘ ʘ ɕ ʑ ʧ ʦ ʦ H ʑ ʢ ʃ ɕ ɘ ɕ ʑ ʄ ʧ ʃ. ʇ ʿ H ʃ ɘ ʝ ʦ H ɣ ʝ ɕ ʑ ʷ ɕ ʒ ɕ ʘ ʾ ʦ G ʦ ʧ ʦ ɕ ʧ ʧ ʑ ʰ ʝ ɕ ʑ ʷ ʿ ɘ ʿ ʦ ʦ G ʿH ɕ ʤ ʟ ʦ ʦ ʄ ʧ ʘ ɕ ʑ ʷ ʢ ʦ ɕ ʑ ɥ ʝ ɕ ʃ ʦ ʦ ʘ ɥ ʿ ʾ ʈ ʅ ʂ ʃ ʘ ʄ ʧ ʿ ɘ ɘ ʿH ɕ ʦ ʰ ʝ ɕ ʑ ʷ ʈ ʅ ʂ / ɼ ʅ ʂ ɘ ʄ ɥ ʃ ʦ ʦ ɘ ʘ ʃ ɥ ʿ ʢ ʦ ʦ ɘ ʿ B ʑ G Ꝺ ʡ ɥ ʿ ɘ ɥ ʿʿ ʾ G ɕ ɕ ʑ ʧ ɕ tsBts ʧ ʦ ʦ ɕ ʿH. ʑ ts ʄ ʧ ʦ ʄ ʧ ʑ ʿ ʃ ʄ ɣ ʷ ɘ ʧ ɕ ɕ ɘ ʑ ʢ ʦ ʦ ɕ ɕ ʒ ʦ ɘ ʦ ʾ HtsB Ꝺ ꝭ ʢ ɕ ç ʆ ʿ ʢ ʦ ʦ ɕ ʑ ʧ ʦ ɘ ʿ ʃ è ɕ ʘ B ʿ ɕ ʢ ʦ ɘ ɕ ʡ tsB ɕ ʒ ɕ ʑ ɘ ʦ ʦ G ʘ ɕ ʑ ʟ ɕ ʒ B ʑ G Ꝺ ʡ ɥ ʿ ɘ ɕ ʘ ɘ ʿ H G ʦ H ʿ ɘ ɕ ʑ, ʃ ʦ ɘ ʘ ɕ ʦ ʦ ʟ ɘ ʝ ʦ ɕ ɕ ʑ ʃ ɕ ʑ ɘ ʘ G ʑ ɕ ʘ ʃ ʝ, ʰ ts ɥ ɕ ɕ ʢ, ʷ ʢ ɕ ʡ ɘ ʦ H ɕ ʃ ʁ Hts ʄ ʂ ɕ ʘ H ʑ HtsB Ꝺ ꝭ ʢ ɕ, ʿ ʄ ʂ ɕ ʘ H ʦ ɘ ʦ ʁ ɥ ʘ ʄ ʧ ɕ ɕ ʦ ʁ ʷ ʷ ʝ ʦ ɕ ʝ ɕ ʃ ɘ H ʝ G ʿH ʦ ʦ G ʝ ɕ ʘ ʟ ɕ, ʧ ʝ ʧ ʃ ɕ H ʘ ʟ ɕ, ʃ ʦ ʘ ɕ ʑ ʄ ʷ ʷ ʝ ʦ ʘ ʟ ɕ, ʢ ʘ ɕ B ʦ ʢ ʄ ɥ ɕ ɕ ʝ ʧ ʃ ɕ H ʘ ʟ ɕ, ʑ ʦ ʝ ʘ ʟ ɕ, ʢ ʘ ɕ B ʦ ʘ ɕ ʑ ʿ H ʦ ʘ ʟ ɕ [535, 540, 542, 543]. ʌ ʿ ʷ ʷ ʝ ʦ ɕ ʝ ɕ ʃ ɕ B ʝ ʦ ɕ ʑ ʃ ʑ ɥ ʘ ʄ ʧ ʃ ɘ tsB ɕ ʒ ɕ ʑ B ʿ ɕ ʢ ʿ ɘ ʃ ʘ ɘ ʑ G ɕ ʝ ɘ ʦ H ʿ ɘ. ʂ ʦ ɕ ʒ ʃ ʦ G ʦ, ɥ ɕ ɕ ʢ ʢ ʘ ʃ ʘ ɕ ʑ ʟ ʑ ʿ ʷ ʷ ʝ ʦ ɕ ʝ ɕ ʃ ɕ ʘ ɕ G ʿ ɕ ʘ ʟ ʑ, H ʝ G ʿH ʦ ʦ ʧ ʝ ʧ ʃ ɕ H ʘ ʟ ʑ, ʘ ɕ ʒ ɕ ʦ ʧ ʝ ʧ ʃ ɕ H ʘ ʟ ɕ, ʝ ɕ ʦ ɕ ɕ ʘ ʟ ʑ, ʃ ʦ B ʃ ʦ B ʝ ʦ ʝ ʑ ɥ ʘ ʄ ʧ ʃ ʑ ʧ ʦ ʦ ɥ ʝ ʄ ɥ ʘ ʡ ʢ ɕ ʑ ʃ ɕ ɕ ɕ ʦ G ʦ H ɕ ʘ ɕ ʑ ʷ ʃ ʘ ʦ ʢ ɕ ʄ ɥ ɕ ʝ ɕ ʑ ʷ ɘ ʑ G ɕ ʝ ɘ ʦ H ʿ ɘ. Ɉ ʿ ɕ ʑ ʧ ʿ H ɘ ɕ ʰ ʑ ʿ ʟ ʘ G ʘ ɕ ʑ ɕ ɕ ʡ ʝ ɕ ʝ ʦ ɕ ʝ ʃ ɕ ɥ ɕ ɕ ʡ tsB ɕ ʒ ɕ ʑ, ʘ ʃ ʘ ʢ ʦ ɣ ʦ ɕ ɘ ʝ ɕ ʑ ɘ ʑ G ɕ ʝ ɘ ʦ H ɕ ʦ G ʦ, B ʿ ɕ ʢ ʦ ɘ ʦ G ʦ ʃ ʘ ɣ ɕ ʦ ʦ ɘ ʦ G ʦ tsB ɕ ʒ ɕ ʑ ɘ.

ʇ ʦ ʦ ʃ ʘ ʢ ʝ ʟ ʘ ʢ ɕ ʑ ɥ ʝ ɕ ʑ ʷ ʄ ʘ ʿ H ɥ ɕ ʃ ʿ ʦ ɘ ʝ ɕ ʑ ɕ ʝ ʃ ʘ B ʦ ɕ ʑ ɥ ɕ ʦ ʾ ʝ ɕ ʝ ʦ G ʿ ʾ, ʷ ʢ ɕ ʡ ʑ B ʑ G Ꝺ ʡ ɥ ʿ ɘ ɘ ʦ ɕ ʑ ɕ ʑ ʄ ʢ ʦ ʾ ʃ ʘ ʧ ʦ ɕ ʑ ʄ ʢ ʦ ʾ ɕ ʒ ô ʷ ʄ ɥ ɕ ʑ ɕ ʧ ʦ ʦ ɕ ʿH ɕ ʘ ʃ ɕ ʑ ʃ ʦ ɕ ɕ ɘ ʘ ɕ ʦ G ʦ ʟ G ʦ H ʦ ɘ ʑ ɘ ʘ ɕ ʑ ʷ ʢ ʦ ʦ ɕ ɕ ʒ ʦ ɘ ʦ ʾ HtsB Ꝺ ꝭ ʢ ɕ ç ʆ ʿ ʢ ʦ ʦ ɕ ʑ ʧ ʦ ɘ ʿ ʃ è ɕ ʒ ʘ ɕ ʡ ɘ ɕ ʰ ʿ ʟ ɕ ʘ ɥ ʝ ɕ ʑ ʷ ʑ ʃ ɘ ʘ ɕ ɕ ɕ ʑ ɼ $_2$ G ɕ ɕ ʑ ʧ ɕ ʉ Ɉ ɯ ʃ ɕ ʧ ʧ ʑ Ɉ ʅ ɼ, ʰ ts, [illegible] 13,2 - 15,2%, 43,3 ï 27,7% [illegible] 34,4 ï 33,9 % [illegible] p<0,001. [illegible] [565, 566]. [illegible] [495].

[illegible] [455]. [illegible] 5,4 ï 6,8 % (p<0,01), 15,4 ï 20,0% (p<0,001) [illegible] 18,2 ï 21,6 % (p<0,001). [illegible] 21,8% (p<0,001), [illegible] 11,5% (p<0,05) [illegible] 21,8 % (p<0,001), [illegible]

[illegible] (2003-2010) [illegible] [85, 87, 88, 91, 92].

[illegible] p<0,01, [illegible]

[illegible] 5,0 [illegible] 8,0% (p<0,001), [illegible] 13,6% (p<0,001), [illegible] 40,9% (p<0,00).

[illegible]

[illegible]

[illegible]

[illegible]

ʧʦʢʘʟʤʢʘ ʤʘʔʜʦəʰ ʦɢʦ ʤʒ͡ʘʷʟʘ ʄʧɕʤʢ, ʷʢʘ ʒ ʙʒɢʘʔʮ'ə ʉ.ɪ ɯʅʢʧʒ .ɪ ɩ ɼ əʦʤʢʤʄʢʦ' ʅʘ ʧʦʤʄʢʦ' ʤʒ͡ʷʄʒʢ ʙʒʤʘ ʤʘʔəɕʰ ʦʁ , ʰ ʦ əʢʘʟʒ' ʤʘ ʧʦəʤʦʮ'ʤʤʄʅʲ ʙ'ʤʢ'ə ʤʒ͡ʷʟʦəʦ' ʅʢʘʤʢʤʢ, ʧʦʦ'əʤʤʦ ʟ ʅəʘʢʤʘʤʢ 'ʤ ɕ ʅɕʧ'ə .ɪ ɩ ɼ . ʃ ʅʢɕʤʒʘʤ ʦʝ ʟʒʤ ʅʘʅɕ əʢʘʟʒʁ ʅʲ ʤʘ ʅʝ , ʰ ʦ ʢʦʘ ʦʁ əʦʤʦɢʦʒʅʢɕʤʒʁ ʉʦʁ ʟʜʘʅʤʄʅʁ ʘʢʘʢʅʝ ʦɕʟʒəʘʤʦʄ ʤʒ͡ʷʄʅ, ʦʅʢɕʤʒʘʤ əʰʜ ʙʒɢʘʔʮ'ə ɼ₂ ɢʦʤʒʧɕ ʦʙʦ ʧʦʦ'ʜ, ʷʢɕʤʒ ʜʦʜʘʅʢʦəʦ ə ʦʘʮ'ʦʤəʤʦʄɕʤɕ ʢʦʦʤʒʦəʒ ʜʦʙʘʢʒ ɕʃ 'ʢʦʦʤʒʧʦə'ʅè, ʰ ʦ ʦʙʒʤʒʦəʤ ' əɕʰ ʒ ʄʅʢʦəɕʅ'ʄʅʲ ʤʒ͡ʷʄʘ ʅʘ ʟʤʝ ʤ ʝʤʤʷ əʅʦʘʅ əʦʜɕ (ʤʒ͡ʷʄʤʦɢʦ ʄʅʢʒ) ʧʦɕ ʅʝ ʧʤʦə'ʔ ʦʙʦʦʙʮ', ʰ ʦ ʒʟɢʦʜʮʒ'ʅʲ ʄʷ ʟ ʦʝ ʟʒʤ ʅʘʅʘʤʒɕ ʜʦʄʤʜʮ ʝ ʤ ʊʢʘʮʒʢʘʉ . ɸ . [510] ʅʘDoosti A. [614].

ʃ ʜʤɕʤʒ 'ʟ əʘʮ ʤɕəɕ ʧʦʢʘʟʤʢ'ə, ʷʢ' ʘʢʘʢʅʝ ʦɕʟʒʁ ʅʲ ʷʢ'ʄʅʲ ʤʒ͡ʷʄʘ ʙʒɢʘʔʮ'ə, ' ʢʦʤʝ ʤʅʦʘʮ'ʷ ə ʤʦʤʒ 'ʦʤə əʦʜʤ (ʦʤ), ʰ ʦ ʜʦʟəʦʤ' əɕʟʤʘʮɕʅɕ ʔʦɢʦ ʅʦəʘʢʤʔ əɕɢʤʷʜ ' ʧʦɕʜʘʅʤʄʅʲ . ʃ ʅʢɕʤʒʘʤ əʝ ʤɕʮɕʤɕ ʦʤ ʤʒ͡ʷʄʘ ə'ʜ ʙʒɢʘʔʮ'ə ʦ'ʟʤɕ ʅɕʧ'ə .ɪ ɩ ɼ ʄʢʤʘʜʘʤɕ 5,4 ï 5,7 ʦʜ. ʒ ʅəʘʢʤɕʤəʦʤɕʤʄʢʦ' ʧʦʦʦʜɕ ' 5,5 ï 5,7 ʦʜ. ï ʒ ʅəʘʢʤɕʤʧʦʤʄʢʦ' ʧʦʦʦʜɕ, ʰ ʦ ʜʘ ʤʦʮ ʤɕə'ʄʅʲ ʟʦʦʙɕʅɕ əɕʄʤʦəʦʢ ʧʦʦ ʜʦʙʦʒ ʷʢ'ʄʅʲ ʦʅʢɕʤʒʘʤʦɢʦ ʧʦʦʜʒʢʅʒ ʟʘ ʢʦʝʢʮ' ʦʘʮ'ʦʤʒ ʢʦʦʤʒʦəʦʁ ʜʦʙʘʢʦʁ ɕʃ 'ʢʦʦʤʒʧʦə'ʅè. ɿ ʘɢʘʤʦʤʒ ʤʦʮ ʤʘ ʧ'ʜʄʒʤʒəʘʅɕ, ʰ ʦ ʟʙʘɢʘʝ ʤʤʷ ʦʘʮ'ʦʤʒ ʙʒɢʘʔʮ'ə əʦʤɕʤʄʢʦ' ʅʘ ʧʦʤʄʢʦ' ʧʦʦ'ʜ ʢʦʦʤʒʦəʦʁ ʜʦʙʘʢʦʁ ɕʃ 'ʢʦʦʤʒʧʦə'ʅè ʒ ʢ'ʤ ʢʦʄʅʲ' 5,0 ʤɢ/ʢɢ ʢʦʤʝʢʦʦʤʒə ʄʧʦɕʷ' ʧ'ʜəɕʰ ʝ ʤʤ ʦ'əʤʷ ʧʦʦʜʒʢʅɕəʤʦʄʅʲ' ʅʘ ʙ'ʤʢʦəʦ-ʷʢ'ʄʤɕ ʘʢʘʢʅʝ ʦɕʄʅɕʢ ʤʒ͡ʷʄʘ ʅəʘʢɕʤ ʦ'ʟʤɕ ʅɕʧ'ə .ɪ ɩ ɼ ʤʘə'ʜɢʦʜ'əʤ ʟ ʤʘʔəɕʰ ɕʤʒɕ ʧʦʢʘʟʤʢʘʤʒɕ ʒ ʙʒɢʘʔʮ'ə ʉ.ɪ ɯʅʢʧʒ .ɪ ɩ ɼ ʦʙʦ ʧʦʦ'ʜ ə ʒʤʦəʘʔ ʙʝ ʟʧʦɕə͡ʷʟʤɢʦ ʒʅʢɕʤʒʘʤʤʷ.

ʋ ʟʘɢʘʤʒ ʤ ʁ ʉɕ ʦʅʢɕʤʒʘʤ ʦʝ ʟʒʤ ʅʘʅɕ, ʤʝ ʦʙ'ʜʤʦ ə'ʜʤʒ ʅɕʅɕ, ʰ ʦ ʷʒʤʢʮ'ʦʤʘʤ ʤʤʔ ʄʅʘʤʦʦʘʤʟʤʒ ʙʒɢʘʔʮ'ə əʦʤɕʤʄʢʦ' ʅʘ ʧʦʤʄʢʦ' ʤʒ͡ʷʄʤɕ ʧʦʦ'ʜ ʤʘ ə'ʜɢʦʜ'əʤ ʅ'ʄʤʦ ʢʦʝ ʤ ' ʟ ʅɕʧʦʤʦɢ'ʉʤɕʤɕ ʦʄʅʙʤɕəʦʄʅʷʤɕ əɕʰ ʦ' ʤʝ ʦʦʦəʦ' ʜ'ʷʤʒ ʤʦʄʅ': ʜʤ ʅəʘʢɕʤ ʄɕʤʤɕ ʒʦ'əʤʦəʘʮ ʝ ʤɕ ʅɕʧ'ə ʤʝ ʦʦʦəʦ' ʄɕʄʅʝ ʤɕ ʧʦɕʅʘʤʘʤɕʔ əɕʄʅʢɕʔ ʄʅʒʧ'ʤ 'ʤʅʝ ʤʄɕəʤʦʄʅ' ʧʦʅ'ʢʘʤʤ ʙ'ʦʤʦɢ'ʉʤɕ ʧʦʉʝ ʄʝ, ʤʘʄʘʤʤʝ ʦʝ ʜ, ʉʝ ʄʅʦʄʒ'ʅʲ ʄʷ ʅəʘʢɕʤ ʉ.ɪ ɯʅʢʧʒ .ɪ ɩ ɼ . ʋ ʅəʘʢɕʤʟ' ʄʤʘʙʢɕʤɕ ʤʝ ʦʦʦəɕʤɕ ʧʦʉʝ ʄʘʤɕ ʜɕʤʘʤʒʢʘʷ 'ʟ'ʦʤʦɢ'ʉʤɕ ʧʘʘʤʝ ʅʦ'ə ʦʦɢʘʤʟʤʒ, ʧʦʷə ʧʦəʝ ʜ'ʤʢʦəɕ ʦʝ ʘʢʮ'ʔ ' ʦ'əʝ ʤ ʝ ʤʜʦʢʦɕʤʦ-ʤʝ ʅʘʙʦʤʉɕ ʧʦʉʝ ʄʝ ' ʜʝ ʰ ʦ ʟʤʮ ʝ ʤɕʤ ʦʄʢ'ʤʢɕ ʜʤ ʟʤʤʤ ʷʒʤʢʮ'ʦʤʘʤ ʤʦɢʦ ʄʅʘʒ ʜ'ʤʤʢ ʢʦʦɕ ɢʦʤʦəʤʦɢʦ ʤʦʟʢʒ 'ʤ ʤʝ ʦʙ'ʜʤʘ ʤʝ ʤ ʘ 'ʤʅʝ ʤʄɕəʤʄʅʲ ʘʷ ʝ ʦʝ ʤʅʘʮ'. ʈ 'əʝ ʤ ʧʦʦʜʒʢʅɕəʤʦʄʅ' ʦʦɢʘʤʟʤʒ ʙʒɢʘʔʮ'ə ʤʘ ə'ʜɢʦʜ'əʤ ʅʘ ʷʢ'ʄʤ ʧʦʢʘʟʤʢɕ ʤʒ͡ʷʄʘ ʅʘʢʦʮ ʢʦʦʝ ʤ ʁ ʅʲ ʟ ʅɕʧʦʤʦɢ'ʉʤɕʤɕ ʦʄʅʙʤɕəʦʄʅʷʤɕ 'ɕ əɕʰ ʦ' ʤʝ ʦʦʦəʦ' ʜ'ʷʤʒ ʤʦʄʅ'.

[illegible] 5,0 [illegible] (Cu, Co, Zn, Mn, Fe) [illegible].

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

1. [illegible], 2004. [illegible] 6, [illegible] 3. [illegible] 73[illegible]81.

2. [illegible] 80-[illegible] [illegible], 2000. [illegible] 54.

3. [illegible] 03.00.13 [illegible], 2007. [illegible] 22 [illegible]

4. [illegible], 1959. [illegible] 6.

5. [illegible], 1961. [illegible] 34[illegible]38.

6. [illegible] VII [illegible], 1986. [illegible] 1. [illegible] 11[illegible]12.

7. [illegible], 1980. [illegible] 381 [illegible]

8. [illegible] 2004. [illegible] 6. [illegible] 8[illegible]9.

9. [illegible]

ʜʝ ʷlsʝ dž džsfŋsɕʃ tsɘʝ ɥ tɕʘʟdžɕʃɥdž ⊓ ʧtstɕtsʜ / ʄ . ʅ . ɸ džʜtɕʝ ʝ ɘ // ʉ ʝ dž fŋʂts⊓tsʟʷʔ fŋsɘʝ džɕdžʘʷ ʙɕʃtsdžsɢɕʃʷ. ї 1973. ї ʊ. 8, ¯ 2. ї ʉ . 193ї 198.

10. ɸ džʜtɕʝ ʝ džʂts ɻ . ʇ . ʌ ɕʃʙtɕʃdžsdžɕʃʟ / ɸ džʜtɕʝ ʝ džʂts ɻ . ʇ . ї ʄ . : ʄ ʝ ʜɕʃɥɕʃdžʘ 1979. ї 300 fŋ

11. ɸ tɕʰ ʘɘfŋʂɕʃʔ ʖ . ʁ . ʅ ʝ ʔ tɕtsdždž ʝ džʒ⊓ʘdžɕʃʟdžʒ ʧʘdʒʷlsɕʃ: fŋɕʃdžʘʕlsɕʃɥʝ fŋʂʘʷ ɕʃ ɢʝ džsdʒdžʘʷ ɢɕʃʧtslsʝ ʟʘ/ ɸ tɕʰ ʘɘfŋʂɕʃʔ ʖ . ʁ . // ɾ ɮtɕdžʘdžɘʳ fŋ ʝ ʔ dž tɕɘdžsʔ ʜʝ ʷlsʝ dž džsfŋsɕʃ. ї 2011. ї ʊ. 61., ¯ 6. ї ʉ . 660ї 675.

12. ɹ ʘɘfŋʂɕʃʔ ʈ . ʄ . ʄ ʘsʝ dʒʘsɕʃɥʝ fŋʂɕʃʔ ʘdžʘdžɕʃʟ ɕʃʟdʒʝ dž džɕʃʔ fŋʝ tɕʜʝ ɥdžsɢts tɕʃlsdʒʘʧtɕʃ fŋstɕʝ fŋʝ / ɹ ʘɘfŋʂɕʃʔ ʈ . ʄ ., ʂ ɕʃtɕʃdždžsɘ ʃ . ʀ ., ʂ dž ɥʕɕʃdžʉ . ɿ . ї ʄ . : ʅ ʘɮʕʘ 1984. ї 220 fŋ

13. ɹ ʘʟʘtɕʝ ɘɕʃɥ ɻ . ɕ . ʄ ʝ ʜɕʃʘstststɕdž ʝ džʒ⊓ʘdžɕʃʟdʒ tɕʝ ɢɮdžʷɥɕʃɕʃ ʜʳ ⊓ʘdžɕʃʷ ɕʃ ɕʃ⊓ ʕtstɕʝ ʕɥɕʃʷ ʧtɕʃ ʝ ʕfŋstɕʝ dʒʘdž dž ⊓ fŋsfŋstsʷdžɕʃʷ⊓ / ɹ ʘʟʘtɕʝ ɘɕʃɥ ɻ . ɕ ., ɹ tsɢʜʘdžsɘɕʃɥ ʋ . ɕ ., ʇ tsdžʂtsɘʘʀ . ʅ . ї ʃ . : ʄ ʝ ʜɕʃɥɕʃdžʘ 1979. ї 199 fŋ

14. ɹ ʘtɕʘʙʘ ʇ . ʇ ʳ ʕʘtɕdʒdžɕʃɘʘdžɕʃʝ ʙʳ ɥʕtsɘ ʕtsdžɥʝ džstɕʘsʘdʒɕʃ / ʇ . ɹ ʘtɕʘʙʘ // ʊɘʘtɕʃdždžɕʃɥlsɘts ʋ ʕtɕʘdžɕʃ. ї 2007. ї ¯ 8. ї ʉ . 28ї 30.

15. ɹ ʘtɕʘʙʘ ʇ . ʀ . ʕ ʕtsɢʝ dž ʟ ɕʃ ʘʕʕdžɕʃdʒʘsɕʃʟʘɥɕʃʷ ʕtɕɮʧdžsɢts tɕtsɢʘststs fŋʂtslsʘ/ ʇ . ʀ . ɹ ʘtɕʘʙʘ , ɸ . ɼ . ɻʝ ʕʕɕʃʝ ɘ // ʅ tsɘʻlsdž lsʝ ⊓džsdžsɢʻʼ ɘ lsɘʘtɕʃdždžɕʃɥlsɘʻ. ї ɼ dž ʧtɕtsʧʝ lstɕtsɘfŋ ʕ, 2004. ї ʉ . 37 ї 42.

16. ɹ ʘtɕʘʙʘ ʇ . ʄ ɕʃʕtɕtsʲ ɘtsdž ɥɕʃʷ ɢtsdž lsɕʃdžsɘ / ʇ . ɹ ʘtɕʘʙʘ , ɸ . ɻ tsɘlsɘʷdž // ʊɘʘtɕʃdždžɕʃɥlsɘts ʋ ʕtɕʘdžɕʃ. ї 2007. ї ¯ 9. ї ʉ . 34ї 36.

17. ɹ ʘdžsʘ ɕ . ʅ ʝ lstɕʘʜɕʃɥɕʃtsdždž ʝ ʕtstɕdʒʘ ɘ tɕʘɥɕʃtsdžʘ⊓ fŋʝ dž fŋʂts⊓tsʟʷʔ fŋsɘʝ dždž ⊓ ʞɕʃɘtslsdž ⊓ / ɕ . ɹ ʘdžsʘ ɻ . ɹ ʝ tɕɢdžʝ tɕ ɕ . ɹ ɮɥʕts. ї ʄ . : ʂ tsdžsfŋ 1984. ї 272 fŋ

18. ɹ ʘfŋsɘfŋ ʕɕʃʔ ʄ . ɿ . ʈ tsʟɘʝ ʜʝ dždžʷ fŋdž fŋ ʕtsɢtsfŋʧtsʜʘtɕfŋ ʕɕʃ⊓ lsɘʘtɕʃdž / ɹ ʘfŋsɘfŋ ʕɕʃʔ ʄ . ɿ ., ɹ ɮtɕʕʘs ʇ . ɟ ., ʇ ʻdždžɕʃɥɮʕ ɼ . ʊ. ї ɹ ʻdžʘʎ ʝ tɕʕɘʘ 2001. ї 400 fŋ

19. ɹ ʘ ʝ džʂts ʃ . ɯ ʇ ʘɢtsɘʻ lsʘ dždžʔdž ʧʘtɕʘdʒʝ lstɕʃ ʝ ʕfŋsʝ tɕʻ tɕɮ lsʝ džɕʃɥʲ ɮʕtɕʘdžfŋ ʕtsʼ ɥʝ tɕɘtsdžs-tɕʷʙtsʼ dʒsdžsɥdžsʼ ʧtstɕtsʜɕʃ / ʃ . ɯ ɹ ʘ ʝ džʂts, ʃ . ʄ . ʌdʒʝ dž džɕʃɥɕʃʔ // ʈ tsʟɘʝ ʜʝ dždžʷ ʻ ɢʝ dž lsɕʃʕʘlsɘʘtɕʃdž dʒʻʞ ɘʻʜ. lsʝ dʒʘs. džʘɮʕ. ʟʙ. ї ʂ . : ɸ ɢtɕʘtɕdžʘdžʘɮʕʘ 2005. ї ʇ ɕʃʧ. 39. ї ʉ . 41ї 47.

20. ɹ ʘ ʝ džʂts ʃ . ɯ ʃ ʻdžʔdžʘtsɥʻdžʂʘʝ ʕfŋsʝ tɕʻ tɕɮ ʕtstɕʻɘ fŋɕʃdʒʝ džsʘdž fŋ ʕtsʼ ʧtstɕtsʜɕʃ / ʃ . ɯ ɹ ʘ ʝ džʂts, ʃ . ʄ . ʌdʒʝ dž džɕʃɥɕʃʔ // ʈ tsʟɘʝ ʜʝ dždžʷ ʻ ɢʝ dž lsɕʃʕʘlsɘʘtɕʃdž dʒʻʞ ɘʻʜ. lsʝ dʒʘs. džʘɮʕ. ʟʙ. ʇ ɕʃʧ. 36: ʅ tsɘʝ ɘ fŋʝ dž ʕɥʻʼ, ɢʝ dž lsɕʃɥʻ lsʘʙʻtslsʝ ⊓džsdžsɢʻʼ lsɘʘtɕʃdž: dʒʘsʝ tɕ džʘɮʕ.- ɘɕʃtɕtsʙdž ʕtsdžʷ. ї ʂ . : ʅ ʘɮʕtsɘɕʃʔ fŋɸʻls 2002. ї ʉ . 26ї 28.

21. ɹ Ʊ ʝ dʑ̃ts ʆ . ɟ ʝ tɐfŋʃ ʝ ʕ lsɕʃɘɕʃ ɘɕʃʕtstɐɕʃfŋ̊sʘdʑdʑ ʷ fŋʃdʒ̃ dʑsʘdʑ fŋ ʕts ̓ ʭlzʜtsʙɕʃ / ʆ . ɹ Ʊ ʝ dʑ̃ts // ʊɘʘɐɕʃdʑdʑʃɥlsɘts ʋ ʕtɐʘdʑʃ. ı 2003. ı ¯ 9. ı ʉ . 11ı 13.

22. ɹ Ʊ ʝ dʑ̃ts ʆ . ɟ ʝ tɐfŋʃ ʝ ʕ lsɕʃɘɕʃ ɘɕʃʕtstɐɕʃfŋ̊sʘdʑdʑ ʷ fŋʃdʒ̃ dʑsʘdʑ fŋ ʕts ̓ ʭlzʜtsʙɕʃ / ʆ . ɹ Ʊ ʝ dʑ̃ts, ɯʊɕʃ ʱ ʝ dʑ̃ts, ʊ . ʇ ʝ tɐɢlzdʑ// ʊɘʘɐɕʃdʑdʑʃɥlsɘts ʋ ʕtɐʘdʑʃ. ı 2003. ı ¯ 9. ı ʉ . 11ı 13.

23. ɹ ʝ dʑ ʝ ɘ ɸ . ʆ ʷfŋʝdʑʘ ʏ tʃtɐtsʜlzʕlsɕʃɘdʑsfŋ̊s ᴵ fŋʃdʒ̃ʒ̃ dʑsʘdʑsɘ tɐʘdʑ ʭ ɢʝ dʑslsɕʃtʃtsɘ / ɸ . ɹ ʝ dʑ ʝ ɘ, ʀ . ʇ tstɐdʑsɘ, ʅ . ʈ ʘdʑʝ dʑɕʃdʑʘ// ʆ tsdʑsɥdʑsʝ ɕʃ dʒ̃ ʷ fŋʝdʑsʝ fʂ̃tslstsɘtsʜfŋ̊sɘts. ı 2004. ı ¯ 1. ı ʉ . 2ı 4.

24. ɹ ʝ tɐʝ ʏ dʑʘ ʏ ʅ . ʆ . ʅ ʝ ʔ lstɐts ʬ ɕʃdʑ ɕʃ ɕʃdʒ̃dʒ̃zdʑsdʑsɢɕʃɥʝ fʂ̃ɕʃʔ ɢtsdʒ̃ tsfŋ̊sʘʟ / ɹ ʝ tɐʝ ʏ dʑʘ ʏ ʅ . ʆ . ï ʂ ., 1988. ï 192 fŋ

25. ɹ ʻdʑsʟʝ tɐfŋ ʕɕʃʔ ʆ . ʈ tsʟɘʝ ʜʝ dʑdʑ ʷ lsʘ fŋʝdʑ ʕɥ ʷ dʒ̃ ʷ fŋʝdʑs ̓ ʭlzʜtsʙɕʃ ɘ ʋ ʕtɐʘdʑ / ʆ . ɹ ʻdʑsʟʝ tɐfŋ ʕɕʃʔ, ʖ . ʅ ʜtsɘɕʃɥʝ dʑ̃ts, ɟ . ʑ ʘɐʘdʑ// ʊɘʘɐɕʃdʑdʑʃɥlsɘts ʋ ʕtɐʘdʑʃ. ı 2004. ı ¯ 4. ı ʉ . 2ı 4.

26. ɹ ɕʃtsdʑsɢɕʃɥʝ fʂ̃ɕʃʝ dʒ̃ lstsʜ ʳ tsɥʝ dʑ̃ɕʃ tʃtɐtsʜlzʕlsɕʃɘdʑsfŋ̊sɕʃ ʏ ɕʃɘtslsdʑ ʭ / ʇ . ɼ . ʂ ʘɼ ʳ , ʆ . ʀ . ʂ ts ᴮ ʜʘ, ʊ . ʅ . ʂ tɐɕʃɘɕʃɥ, ɼ . ʉ . ʉ ʕdʑ ʷ tɐʝ ɘfʂ̃ʘ ʏ . ï ʆ lzɢʘdʑfʂ̃, 2009. ï 110 fŋ

27. ɹ ɕʃtsʭɕʃdʒ̃ɕʃɥʝ fʂ̃ɕʃʝ ʕtsdʒ̃ʃtsdʑʝ dʑs ʳ fŋ ʸ tɐls ʳ ɘʘdʑʃ ʷ ʕtɐtsɘɕʃ / ɸ . ʑ . ɹ ʳ ʰ ʝ ɘfʂ̃ɕʃʔ, ʆ . ɸ . ʊʝ tɐfŋʝ dʑsɘ, ʉ . ʆ . ʇ ʘdʑ ʷ dʑ[ɕʃ ʜtɕ]. ï ʉ ɘʝ tɐʜdʑsɘfʂ̃, 1990. ï 212 fŋ

28. ɹ ʻdʑs ʰ ɕʃɥ ᴵ ʕɕʃʔ ʅ . ʆ . ʆ fŋ̊sʙdʑɕʃɘtsfŋ̊s ʻ tɐtsʟɘʝ ʜʝ dʑdʑ ʟʘdʑdʑ ʷ dʒ̃ɕʃ ʭlzʜtsʙɕʃ tʃtsdʑfŋ ʕts ̓ dʒ̃ ʷ fŋʝdʑs ̓ tʃtstɐtsʜɕʃ ʉ ʅ ʎ ñɟ tsdʑfŋ ʕɕʃʔò ɾ ɕʃlstsdʒ̃ʃtɐfŋ ʕts ̓ tsʙdʑʘfŋ̊s ʻ / ʅ . ʆ . ɹ ʻdʑs ʰ ɕʃɥ ᴵ ʕɕʃʔ // ʈ tsʟɘʝ ʜʝ dʑdʑ ʷ ʻ ɢʝ dʑʝ lsɕʃʕʘ lsɘʘɐɕʃdʑ: dʒ̃ ʏ ɘʻʜ. lsʝ dʒ̃ dʑʘlzʕ. ʟʙ. ʅ ɕʃtʃ. 38 : ʈ tsʟɘʝ ʜʝ dʑdʑ ʷ fŋʝdʑ fŋ ʕtsɢtsfŋʃtsʜʘɐfŋ ʕɕʃʭ lsɘʘɐɕʃdʑʟʘdʑdʑ ʷ dʒ̃ʃ. ï ʂ . : ɸ ɢtɐʘɐdʑʘdʑʘlzʕʘ, 2005. ï ʉ . 211ï 213.

29. ɹ dʑ fŋ ʕ ʉ . ʆ . ʈ ʻɘʝ dʑ ʝ dʑʝ tɐɢʝ lsɕʃɥdʑsɢts ʏ ɕʃɘdʑʝ dʑdʑ ʻ ʙʘdʑʘdʑfŋʘtslsz, ʕʘdʑɥ ᴮ lsʘ ʬ tsfŋ̊ tstɐz ɘ ʙlzɢʘʔɥʻɘ ʘʙʝ tɐʜɕʃdʑʘdʑdʑfŋ ʕts ̓ tʃtstɐtsʜɕʃ / ʉ . ʆ . ɹ dʑ fŋ ʕ, ʆ . ʇ . ɟ tsɘtsʟdʑʕtsɘ // ʅ ʻfŋʝdʑʃʕ ɾ dʑtʃtɐstʃʝ lstɐtsɘfŋ ʕtsɢts ʜʝ tɐʏ ʘɘdʑsɢts ʘtɐʘɐdʑsɢts lzdʑɘʝ tɐfŋʃlsʝ lsz. ı 2003. ı ¯ 1. ı ʉ . 138ı 140.

30. ɹ tsʜdʑʘɐɥlzʕ ɯ ʆ . ʆ ə̃ ʷ fŋʝdʑʘ tʃtɐtsʜlzʕlsɕʃɘdʑfŋ̊s ᴵ ʙlzɢʘʔɥʻɘ tɐʻʟdʑʃʭ ɢʝ dʑslsɕʃtʃʻɘ, tsʜʝ tɐʏ ʘdʑʃʭ tʃtɐɕʃ tʃtsɢdʑɕʃdʑʘdʑ dʑsdʒ̃z fŋʭtɐʝ ʱ lzɘʘdʑdʑ fŋʃdʒ̃ dʑsʘdʑ fŋ ʕts ̓ ʭlzʜtsʙɕʃ ʟ ʰ ʘɐʘdʑ / ɯ ʆ . ɹ tsʜdʑʘɐɥlzʕ // ʅ ʘlzʕ.-lsʝ ʭdʑ ʙ ᴮ dʑ ï ʆ ᴵ ɘʻɘ, 2008. ï ʅ ɕʃtʃ. 97. ï C. 179ï 183.

31. ɹ tsʜtɐ ʷʰ tsɘʘ ʂ . ʅ . ɼ ʬ ʝ ʕlsɕʃɘdʑfŋ̊s ᴵ ɘɕʃʕtstɐɕʃfŋ̊sʘdʑdʑ ʷ fŋ̊sɘtstɐ ᴮ ɘʘdʑs ̓ tʃʻɘʜʝ dʑdʑs ̓ dʒ̃ ʷ fŋʝdʑs ̓ tʃtstɐtsʜɕʃ ʜdʑ ʷ tʃtɐtsdʒ̃ʃfŋʝdʑsɘtsɢts fŋʭtɐʝ ʱ lzɘʘdʑdʑ ʷ ɘ tɐʝ ɢʻtsdʑ ɸ ʈ ʂ tɐɕʃdʒ̃ / ʂ . ʅ . ɹ tsʜtɐ ʷʰ tsɘʘ // ʆ ʘlsʝ tɐʻʘdʑɕʃ ʕtsdʑ ʬ ʝ tɐʝ dʑɼ ʻ ̓ dʒ̃sdʑsʜɕʃʭ ɘɥʝ dʑʃʭ lsʘ ʘfŋʃʻtɐʘdʑsʻɘ (10 ʕɘʻlsdʑ ʷ, 2003 tɕ) / ɯdʑfŋ̊sɕʃlszls tɐtsʟɘʝ ʜʝ dʑdʑ ʷ ʻ ɢʝ dʑʝ lsɕʃʕɕʃ lsɘʘɐɕʃdʑ. ı ʏ lzʙɕʃdʑfŋ ʕʝ, 2003. ı ʉ . 6ı 7.

32. ɹ tsʜtɐ ʷʰ tsɘʘ ʂ . ʅ . ʉ ʕtstɐtsɥʝ dʑʃʔ tʃʝ tɐʻtsʜ tʃʻʜfŋʃfŋ̊z ʙlzɢʘʔɥʻɘ tʃʻɘʜʝ dʑdʑs ̓ dʒ̃ ʷ fŋʝdʑs ̓ tʃtstɐtsʜɕʃ, ʱ ts fŋ̊sɘtstɐ ᴮ ʻls ᴵ fŋ ʷ / ʂ . ʅ . ɹ tsʜtɐ ʷʰ tsɘʘ // ʆ ʘlsʝ tɕ ʕtsdʑ ʬ ʝ tɐʝ dʑɼ ʻ ̓

dʒsdʦнɋ⁼ ɘɥʝ dʑɋ⁼ lsʘʘfnʃ ʻteʘdʦsʻɘ. ï ʂ. : ɸ ɢteʘɐdʑʘdʑʘlʑʕʘ 2005. ï ʉ. 9ï 11.

33. ɹ tsʔʕts ɸ. ʃ. ɼ ʕfnʝ teɵ̂ tedʦ-ʕtsdʑnʝsɋlsʑɥʻʔ dʑ lsɋtʃɋ ʙlʑɢʘʔɥʻɘ tʃtsdʑfɲʕtsʾ dʒɵ̂ʷfnʝdʦʾ tʃtstetsнɋ /

ɸ. ʃ. ɹ tsʔʕts // ɿ ʙ ʻteʤʑɋʕ dʑʘlʑʕtsɘɋ⁼ tʃteʘɥᴵ ɺ ʻdʑdʑɋɥᴵ ʕtsɢts нʝteɣʘɘdʦɢts ʘɢteʘɐdʦɢts lʑdʑɘʝteɱɋlsʝlsʑ. ï ɺ ʻdʑdʑɋɥʷ, 2008. ī ɺ ɋtʃ. 34, ls. 3. ï ʉ. 98ï 102.

34. ɹ tsʔʕts ɸ. ʃ. ʃ fnʝsʙdʑɋɘtsfnʝsʻ tetsfnʝslʑ dʒsdʦнdʑʷʕlʑ tsʕteʝdʒɋ⁼ lsɋtʃʻɘ tʃtsdʑfɲʕtsʾ dʒɵ̂ʷfnʝdʦʾ tʃtstetsнɋ / ɸ. ʃ. ɹ tsʔʕts // ɼ tsʟɘʝнʝdʑdʑʷ ʻ ɢʝdʑlsɋʕʘlsɘʘɐɋdʑ ɺ ɋtʃ. 41 : ɼ ts 75-teʻɥɥʷ fnʝsɘtsteʝdʑdʑʷ ʊ ʕteʘdʑfɲʕtsʾ ʘʕʘнʝdʒʾ ʘɢteʘɐdʑɋ⁼ dʑʘlʑʕ : dʒʻɣɘʻнtsdʒɥɋʔ lsʝdʒʘlsɋɥdʑɋʔ dʑʘlʑʕtsɘɋʔ ʟʙ ʻteʤʑɋʕ. ï ʂ. : ɸ ɢteʘɐdʑʘdʑʘlʑʕʘ 2007. ï ʉ. 26ï 29.

35. ɹ tsʔʕts ʒ. ʄ. ɿ dʑdʒʻdʑdʑ ʷʕtsfnʝsʻ ʙlʑɢʘɘ-tʃdʑнdʑɋʕʻɘ ʙlʑteɋ⁼ tʃtsteʻн ʉlʑdʒfɲʕtsʾ tsʙdʑʘfnʝsʻ / ʒ. ʄ. ɹ tsʔʕts // ɺ ʻfnʝdʑɋʕ ʉlʑdʒfɲʕtsɢts dʑʘɥʻtsdʑʘlʑ dʦɢts ʘɢteʘɐdʦɢts lʑdʑɘʝteɱɋlsʝlsʑ. ʉʝteñʊɘʘɐɋdʑdʑɋɥlsɘtsò. ī ʉlʑdʒɋ, 2006. ī ɺ ɋtʃ. 10. ī ʉ. 12ī 17.

36. ɹ tsteɋfnʝsɘfɲʕɋʔ ɺ. ɸ. ʉɋdʒʝdʦʘlʑ fɲʕʘ ⁼lʑнtsʙʘ ʊ ʕteʘdʑɋ ʟ lstsɥʕɋ ʟtstedʑ tʃtetsʙdʑdʒɋ ʟʙʝteʝɣʝdʑdʑʷ tʃtstetsнdʦɢts ɢʝdʦʷtsdʑнlʑ ɘ fnʝlʑɥʘfnʝdʑɋ⁼ lʑdʒsɘʘ⁼ / ɺ. ɸ. ɹ tsteɋfnʝsɘfɲʕɋʔ // ɿ ʘlʑʕtsɘts-lsʝ⁼dʑɥdʑɋʔ ʙᴷ dʑlsʝdʑ. ī ¯ 94. ï ʌ., 2006. ī ʉ. 58ī 62.

37. ɹ lʑteʕʘls ɺ. ɿ. ʂ teɋlsʝteʻʔ ʻdʦʝɢteʘdʑdʦʾ tsɥʻdʑʕɋ tʃtetsнlʑʕlsɋɘdʦfnʝsʻ ʕtsteʻɘ dʒsdʦɥdʑɋ⁼ ʻ dʒsdʦɥdʦ-dʒɵ̂ʷfnʝdʑɋ⁼ tʃtsteʻн ʊ ʕteʘdʑɋ / ɺ. ɿ. ɹ lʑteʕʘls, ɿ. ɯɪʐ ʘteʘdʑ // ɺ ʻfnʝdʑɋʕ ʘɢteʘɐdʦʾ dʑʘlʑʕɋ. ï 2007. ï ¯ 10. ï C. 33ï 37.

38. ɹ lʑteʕʘls ɺ. ɿ. ʃ ʻdʑʔdʑʘ tsɥʻdʑʕʘ ʕtsteʻɘ ʟʘ lsɋtʃtsdʒ / ɺ. ɿ. ɹ lʑteʕʘls, ʒ. ɿ. ɿ tsdʑlʑtʃʘdʑ, ɯʃ. ʁ tsɘʝdʑʕtsï ʂ. : ɸ ɢteʘɐdʑʘdʑʘlʑʕʘ 2004. ï 88 fnʝ

39. ɹ lʑteʕʘls ɺ. ɿ. ʃ fnʝdʦɘdʑ tʃtsdʦɣʝdʑdʑʷ ʕtsdʑʝtʃɥʻʾ tetsʟɘɋlsʕlʑ dʒɵ̂ʷfnʝdʦɢts fnʕtslsʘɐfnʝsɘʘɘ ʊ ʕteʘdʑ / ɺ. ɿ. ɹ lʑteʕʘls, ʃ. ɺ. ɿ lʑʙʝɥᴵ, ʒ. ʌ. ʄ ʝdʑ dʑɋʕ // ɺ ʻfnʝdʑɋʕ ʘɢteʘɐdʦʾ dʑʘlʑʕɋ. ï 1999. ī ¯ 11. ï ʉ. 5ï 12.

40. ɹ lʑteʕʘls ɺ. ɿ. ʊ ʕteʘdʑfɲʕʘ ɥʝteɘtsdʦ-teʷʙʘ dʒsdʦɥdʑʘ tʃtstetsнʘ ɢʝdʑʟɋfɲ lsʘ ʰ dʑʷ⁼ɋ lʑнtsfnʕtsdʑʘdʑdʑdʑʷ / ɺ. ɿ. ɹ lʑteʕʘls, ʒ. ʌ. ʄ ʝdʑ dʑɋʕ, ɸ. ɿ. ʂ tedʑɢdʑʷʕ // ɺ ʻfnʝdʑɋʕ ʉlʑdʒfɲʕtsɢts dʑʘɥʻtsdʑʘlʑ dʦɢts ʘɢteʘɐdʦɢts lʑdʑɘʝteɱɋlsʝlsʑ. ʉʝteñʊɘʘɐɋdʑdʑɋɥlsɘtsò. ï ʉlʑdʒɋ, 2002. ī ɺ ɋtʃ. 6. ī ʉ. 13 ī 18.

41. ɹ lʑfnʝdʕts ʃ. ʊ. ʄ tsteʷtsʷ ʻʟʻtsdʦɢʻɥdʑ ʟdʒʻdʑɋ ɢʻtʃtsʷ ʻʟʘ dʑʘнdʑɋteʤʑɋʕʻɘ ʻ fnʝdʒʷdʑɋʕʻɘ lʑ lsɘʘɐɋdʑfnʝɋdʒʝdʦʘlʑ fɲʕtsʾ, ʘʙʝteнɋdʑʘdʑʘlʑfɲʕtsʾ tʃtsteʻн lsʘʾ⁼ tʃtsdʒʻfnʝʔ / ʃ. ʊ. ɹ lʑfnʝdʕts // ɿ ʘlʑʕtsɘɋʔ ɘʻfnʝdʑɋʕ dʑʘɥʻtsdʑʘlʑ dʦɢts ʘɢteʘɐdʦɢts lʑdʑɘʝteɱɋlsʝlsʑ. ī ʂ., 2000. ī ɺ ɋtʃ. 21. ī ʉ. 114ī 116.

42. ɹ ȴlstatsɘ ʅ . Ɉ . ʉ tsꞋteʘʤ ʤȥʃ lsʗtʃʘ tʤʘ ʧ ʮʗʗ lsʤʦʕ ʤʘ ʤʘtʤʟʕȴ ɸ ʂ ʊʈ ȴ ʕtstatsɘ. / ʅ . Ɉ . ɹ ȴlstatsɘ, ʃ . ɟ . ʐ ʝʰ ȴʕtsɘ // VIɯɯ Ɉ ʩʝʩʦʶ ʟʤ ʔ ʩʗʤʃtsʟʗȴʤʒ tʃts ʬʗʟʗtsʤtsɢʗʗ ʗ ʙʗtsꞋʗʤʒʗʗ ʤʘlsʘʮʗʗ : lsʝ ʟ. ʜtsʕʤ ï ʄ ., 1990. ï ʏ . 1. ï ʉ . 32ï 33.

43. ɹ ȴʰ ʘʤʩʘʸ ʊ. ʗ . ʈ ʝɢȴʤʷʮʗʷ ʘʤʒʗʤʦʕʗʩʤtslsʤtsɢts tʃʗlsʘʤʗʷ ʤʘlsʗtʤʶ ʱ ʗꞋ ʕtstatsɘ tʃteʗ ʘʜʘʃlsʗɘʤ Ꞌ tʤʘʮʗʷꞋ / ʊ. ʗ . ɹ ȴʰ ʘʤʩʘʸ, ʌ . ʀ . ʐ ʘʃʗtstɕ Ɉ . ɸ . ʂ tsɘʘʩʗʔ // VII Ɉ ʩʝʩʦʶ ʟʤ ʔ ʩʗʤʃtsʟʗȴʤʒ tʃts ʬʗʟʗtsʤtsɢʗʗ ʗ ʙʗtsꞋʗʤʒʗʗ ʤʘlsʘʮʗʗ : lsʝ ʟ. ʜtsʕʤ ï ʄ ., 1986. ï ʏ . 1. ï ʉ . 42ï 43.

44. Ɉ ʘʤ ʮʗʬ ʝtatsɘʘ ʉ . Ɉ . ʈ ʘʜʗtsʗʤʒʤʤtsʤtsɢʗʮʝʩʗʔ ʘʤʘʤʗʟ ȴtatsɘʤʷ ɢtsteʤʒtsʤtsɘ ʱ ʗlstsɘʗʜʤʔ tʃtsʜʏʝʤʜtsʮʤʔ ʗ ʤʘʜtʃtsʮʝʮʤʗʕtsɘʳ Ꞌ ʏʝʤʝʟ ȴ ʤʝlsʝʤʝʔ ʗ ʕtstatsɘ-tʃʝtɕtslsʝʤtsʕ ɘ ʟʘɘʗʩʗʤʒʩʝʗ tsls lsʗtʃʘɘʳ ʩʝ ʝʔ ʤʝtɕɘʤʔ ʜʝʷlsʝʤ ʤtsʩʝʗ (Ɉ l ʅ) ʗ lstsʤʩʘɘʝɢʝlsʘʗɘʤʔ ʤʝtɕɘʤʔ ʩʗʩʝʝʤʒ (Ɉ l ʉ): ʘlststʤʬ. ʜʗʩʤʘʩʝʗʩʘʤʗʝ ȴʮʝʤʔ ʩʝʝtʃʝʤʗ ʕʘʤʜ. ʙʗtsʤ ʤʘȴʕ: ʩtʃʝʮ. 03.00.01 "teʘʜʗtsʙʗtsʤtsɢʗʷ" / ʉ . Ɉ . Ɉ ʘʤ ʮʗʬ ʝtatsɘʘ ï ʄ ., 1989. ï 20 ʩʝ

45. Ɉ ʘʩʗʤ ʝɘʘ ʅ . l . ʃ tʃtʤʜʝʤʝʤʗʃ lsʗtʃʘ Ɉ l ʅ ʕtstatsɘ ɘ ȴʩʗtsɘʗʷꞋ tʃteʗɘʷʟʤtsɢts ʩʝʜʝteʏʘʤʗʷ / ʅ . l . Ɉ ʘʩʗʤ ʝɘʘ Ɉ . ɹ . ʂ ȴʤʗʕtsɘ // ɹ ʶ ʤʝlsʝʤ Ɉ l ʀ ʀ ʈ ʇ ʩʝ-Ꞌ. ʏ . ï ʃ ., 1975. ï ¯ 16. ï ʉ .10ï 11.

46. Ɉ ʘʩʗʤ ʕʻɘʩʝʕʗʔ ʉ . ɟ ʻɘʜʝʤʤȴ ʤʒʘʷʩʗʤȴ tʃtstatsʜȴ ɘʝʤʗʕtsʾ tatsɢʘstsʾ Ꞌȴʜtsʙʗ ʩʝɘtstɕʶ ʶ lsᶦ ɘ ʂ teʗʤȴ / ʉ . Ɉ ʘʩʗʤ ʕʻɘʩʝʕʗʔ, ʂ . ɹ tsʜtɕʷʰ tsɘʘ ɸ . ʐ ʝʤ tsɘ // ʊɘʘteʗʤʤʗʮlsɘts ʋ ʕteʘʤʗ. ï 2004. ï ¯ 4. ï ʉ . 20ï 21.

47. Ɉ ʘʩʝɘ ʈ .ʃ . Ɉ tʃʤʗɘ tʃʻteʗʜtsʕʩʗʤȴ ɢʻʜtatsꞋʤtsteʗʜȴ lsʘ ʘʩʕtsteʙʻʤtsɘtsʾ ʕʗʩʗʤtslsʗ ʤʘ ʕtstʤʕʮʶ tsʙʤʒʻʤȴ tʤʮtsɘʗʤʟʘ ʤʝlsteʘsts-ʤʝlsteʗlsʤtsɢts lstsʕʩʗʕtsʟȴ ȴ ʙʗʮʕʻɘ. / ʈ .ʃ . Ɉ ʘʩʝɘ // l ʘʤʕtsɘʗʔ ɘʻʩʗʤʗʕ ʤʘʮʻtsʤʘʤ ʤtsɢts ʘɢteʘteʤtsɢts ȴʤʝɘʝteʩʗlsʝlsȴ. ï ʂ . : l ɸ ʋ , 2002. ï ¯ 55. ï ʉ . 31ï 35.

48. Ɉ ʜtsɘʗʮʝʤʕts ʄ . ʌ. ʈ ʗʤʕ ʷʤtsɘʗʮʗʤʗ ʋ ʕteʘʤʗ: ʩʝʘʤ ʻ tʃʝteʩtʃʝʕlsʗɘʗ / Ɉ ʜtsɘʗʮʝʤʕts ʄ . ʌ., ʊʗʤʒʰ ʝʤʕts ʃ . ʃ . // ʈ tsʟɘʝʜʝʤʤʷ ʻ ɢʝʤʝlsʗʕʘ lsɘʘteʗʤ ʤʒʏɘʻʜ. lsʝʤʒʘs. ʤʘȴʕ. ʟʙ. ï ʂ . : ɸ ɢteʘteʤʘʤʘȴʕʘ, 2003. ï Ɉ ʗtʃ. 37. ï ʉ . 47ï 51.

49. Ɉ ʜtsɘʗʮʝʤʕts ʒ . ʄ ʘʷʩʗʤʘ tʃtatsʜȴʕlsʗɘʤʩʝʶ ʙʗʮʕʻɘ teʻʟʤʗꞋ lsʗtʃʻɘ ʩʗʤʒʝʤʘʤ ʩʝʕtsʾ tʃtstatsʜʗ ɘ ȴʤʒtsɘʘʕ tʃʝtʤʜɢʻteʘʷ ʂ ʘteʃʘs / ʒ . Ɉ ʜtsɘʗʮʝʤʕts, ʃ . ʐ tʃʘʕ, ɸ . ʂ ʘʤʗʤʕʘ// ʊɘʘteʗʤʤʗʮlsɘts ʋ ʕteʘʤʗ. ï 2004. ï ¯ 11. ï ʉ . 11ï 13.

50. Ɉ ʜtsɘʗʮʝʤʕts ʒ . ɟ tsʤʩʝʕʘ ʤʒʘʷʩʗʤʘ: ʬtsteʤʤɘʘʤʤʷ ʻ tʃʝteʩtʃʝʕlsʗɘʗ / ʒ . Ɉ ʜtsɘʗʮʝʤʕts, Ɉ . Ɉ ʗʰ ʤʝɘʩʝʕʗʔ, ʉ . ʉ tʃʝʕʘ// ʊɘʘteʗʤʤʗʮlsɘts ʋ ʕteʘʤʗ. ï 2007. ï ¯ 2.

ï ʉ. 58ï 60.

51. ɺ ʜtsɘɖʯʝ ʥ̶ts ʖ . ʈ ʝ ʧ tɐtsʜlʑ ʢ lsɖɘʥ lsʘ ʘʜʘʃ lsʘɥ ʔ ʥ tsfiʧsʙ ʥɖɘtsfiʝsʿ lsʝ ʥɖɥᴵ tɕʿʟʥɖ ʥʒ̂ʷ fiɠʥɖ ʧtstɕʿʜ ɘ lzʥʒsɘʘ ʂ tɐɖʥz / ʖ . ɺ ʜtsɘɖʯʝ ʥts, ʖ . ʂ tɐɖɘtstɐzɥʢts, ɺ . ɹ ʘlsʶ ʢ // ʊɘʘtɐɖʥʥɖʯlsɘts ʋ ʢtɕʘʥɖ. ï 2004. ī ¯ 1ī 2. ī ʉ. 22ī 23.

52. ɺ ʝ ʡ fiɠʒʘʥʀ . ʃ . ɺ ɘʝ ʜʝ ʥɖʝ ɘ ɖʥʒʥzʥsʥsɢɖʶ / ʀ . ʃ . ɺ ʝ ʡ fiɠʒʘʥ, ʃ . ʈ . ʌlzʜ, ʋ . ɹ . ɺ lzʜ; ʧʝ tɕ fiɲʘʥɢʥ ī ʃ . : ɺ ʳ fiɦ ʘʷ ʰ ʢtsʥʘ, 1983. ī ʉ. 49ī 54.

53. ɺ ʝ ʥɖɥʢts ɺ . ʃ . ʌ ʿʟʿtsʥsɢʿɥʥɖʡ fiʝsʘʥ tstɐɢʘʥʟʥz lsɘʘtɐɖʥ, ʙ ʿtsʥsɢʿɥʥʘ ɥʿʥʥfiʝsᴵ ʥʒsʥsʢʘ ʿ ʷʥsɘɖɥɖʥɖ lsʘ ʾ ʢtstɐʝ ʢɥʿʷ ʟʘ tɕʿʟʥɖ ʝ ʢtsʥsɢʿɥʥɖ lzʥʒsɘ fiʝtɐʝ ʜtsɘɖʰ ʘ/ ɺ ʝ ʥɖɥʢts ɺ . ʃ . ï ʃ ᴶ ɘʿɘ: ʂ ɘʘɐls, 2007 ï 294 fiɲ

54. ɺ ʝ ʥʝ ʜɖʢlstsɘʘ ʊ. ɩ . ʊɖʧ ɺ ɩ ɼ ɖ ʘʜʘʃ lsʘɥɖtsʥʥʘʸ fiʧtsfiʧsʙ ʥsfiʝsᴵ ʢtstɐtsɘ ʢ lzfiɠʥsɘɖʷʥʒ ʧtɐtsʥʒʳ ʰ ʥʝ ʥʥsʡ lsʝ ʥsʥsɢɖɖ / ʊ. ɩ . ɺ ʝ ʥʝ ʜɖʢlstsɘʘ, ɼ . ɸ . ʂ ʘɐʘʝ ɘʘ // XIV ʉ ʲ ʝ ʟʜ ɺ fiʝ fiʧsʶ ʟʥsɢts ʌ ɖʟɖtsʥsɢɖɥʝ fiʢtsɢts tsʙʰ ʝ fiʝsɘʘɖʥʝ ʥɖ ʀ . ʇ . ʇ ʘɘʥsɘʘ: lsʝ ʟ. ʥʘlzɥ. ʉ tstsʙʰ ʝ ʥɖʡ (ɹ ʘʢlz, 1983 ɢ.). ï ʃ . : ɩ ʘlzʢʘ, 1983. ï ʊ. 2. ï ʉ. 435.

55. ɺ ʝ tɐʙɖɥʢɖʡ ʈ . ɺ . ʊtɐʝ ɘtsʮ ʥsfiʝsᴵ ɖ fiʧsʥ / ʈ . ɺ . ɺ ʝ tɐʙɖɥʢɖʡ // ɾ lztɐʥʘlz ɘʳ fiɦ ʝ ʡ ʥʝ tɐɘʥsʡ ʜʝ ʷlsʝ ʥ ʥsfiʝsɖ. ï 2013. ï ʊ. 63, ¯ 1. ï ʉ. 6ī 13.

56. ɺ ʟʘ ʥʒsʟɘô ʷʟtsʢ ʢʿʥ ʢtsfiʝsʿ ʙ ʿʥʢʘ, ʘʢlsɖɘʥsfiʝsʿ ʷ ʝ tɐʥʝ ʥlsʿɘ ʧtsɥʘlsʢtsɘɖ ʥʘʥsʢ ɢʥʢtsʥʟlz ʢtɐtsɘʿ ʟ ʥʒsʥsɥʥsʶ ʧtɐtsʜlzʢlsɖɘʥfiʝsʶ ʢtstɕʿɘ lzʢtɕʘʥfiɲ ʢtsʾ ɥtstɐʥs-tɕʷʙtsʾ ʥʒsʥsɥʥsʾ ʧtstɐtsʜɖ / ʖ . ʇ . ʂ tɐtsʧɖɘʢʘ, ɿ . ɭ . ʑ ʝ tɐʙʘlsɖʡ, ɹ . ɸ . ʇ ʘɘʥɘ [lsʘ ʿʥ] // ʉ ʿʥ fiɲ ʢɖʡ ɢtsfiʧtsʜʘɕ. ï 2004. ï ¯ 1ï 2. ï ʉ. 21ï 23.

57. ɺ ʟʘɖʥʒsfiɸʷʟᴵ ʥʝ ʮ ʜlz ʜɖʥʘʥʒɖʢtsʡ lztɐtsɘʥʸ ɢtstɐʥʒsʥsɘ ɘ ʢtɐtsɘɖ ɖ fiʝ ʢtɐʝ ɥɖʝ ʡ ʥʒsʥsʢʘlz ʢtstɐtsɘ ɘ ʧʝ tɐɖtsʜ ʥʘʢlsʘɥɖɖ / ɸ ʥɖʝ ɘ ʃ . ʇ ., ɼ ʥʝ ʥ ʷʥsɘʘɺ . ʌ ., ɼ ʶ fiʝ ʥʒʙɖʥʌ. ɼ ., ʂ ʘɭ ʥʒlztɕʘlstsɘʘʃ . ʃ . // ɾ tsʢʥʘʜʳ ɺ ɸ ʉ ʌɩ ʀ ʃ . ï 1983. ï ¯ 2. ï ʉ. 24ī 26.

58. ɺ ɖʜʝ ɘ ɺ . ʂ tsʥʒʙɖʥʘɥɖtsʥʥʘ fiʧtsfiʧsʙ ʥsfiʝs ʥʘ tsʥʰ ʘʡ ʥʷ tɐɖʟɖʡ fiʢtslsts ɢtsɘʝ ʜts fiɲ ʧtstɐtsʜɖ ʟʘʥʝ fiʧs. ɹ ɖtsʥsɢɖɥʥʘʝ ʷ ʝ ʢlsɖɘʥsfiʝs ʥʘʧtɐtsʜlzʢɥɖʷlsʘɖ ɖʥʜʝ ʢfiɠɖ ʥʘʝ lsʝ tɐtsʟɖfiɲ/ ɺ . ɺ ɖʜʝ ɘ, ʁ . ʇ tsʧtsɘʘ// ɾ ɖɘtslsʥsɘtsʜɥʝ fiʢɖʝ ʥʘlzʢɖ. ī 2005. ī ʊ. 42, ¯ 4. ī ʉ. 79ï 81.

59. ɺ ɖʢtstɐɖfiʝsʘʥʥʸ ʥʝ lsʘʙtsʥlsʿɘ ʙ ʿʥʢtsɘtsɢts lsʘɘlzɢʥʝ ɘtsʜʥsɢts tsʙʥʒʥlz ʥʒsʥsɥʥsʶ ʟʘʥsʟtsʶ ʢtstɕʿɘ ʟʘʥʝ ʮ ʥs ɘʿʜ lsɖʧlz ɘɖʰ tsʾ ʥʝ tɐɘtsɘtsʾ ʜʿʷʥ ʥsfiʝsʿ / ɺ . ɯ ʂ ʘɐʧtsɘfiɲ ʢɖʡ, ɼ . ɯ ʂ tɐɖɘtstɐzɥʢts, ʈ . ɺ . ʇ tsfiʝstsʡ [lsʿ ʿʥ] // ɩ ʘlzʢtsɘɖʡ ɘʿfiɠʥʢ ɩ ʘɥʿtsʥʘlz ʥsɢts lzʥɘʝ tɐfiɠʃlsʝ lslz ʙ ʿtstɐʝ filztɐfiʝɘ ʿ ʧtɐɖtɐtsʜtsʢtstɐɖfiʝslzɘʘʥʸ ʋ ʢtɕʘʥɖ : ʟʙ. ʥʘʢ. ʧtɕ ï ʂ . ʉ ʝ tɕ, ɺ ʝ lsʝ tɐɖʥʘɐʥʘ ʥʝ ʜɖɥɖʥʘ, ʷʢʿfiʝsᴵ ʿ ʙʝ ʟʧʝ ʢʘʧtɐtsʜlzʢɥʾ lsɘʘtɐɖʥʥɖʯlsɘʘ ï 2013. ï ɺ ɖʧ. 188. ï C. 52ï 57.

60. Ɉ ɋɨɞɢɫɬɢɤɚ ɝ. ʊ. ʉ tsɘɟ tɕʰ ɟ dʑfɟɕɘtsɘ Ɵdʑɕɟ Ȼteɕfɕʤ tsɢts fɪɟ tɟ dʑsɢts fɕ tslɕɵʋ ȻteɵɋdʑȻ / ɝ. ʊ. Ɉ ɋɨɞɢɫɬɢɤɚ, ʀ. Ɉ. ʅ tsdʑɕƟ ɟ dʑ ts // ʅ tstslɟ ɕdʑɕʷ. ï 2002. ï ¯ 2. ï ʉ. 10 ï 13.

61. Ɉ dʒfɟs ɢdʑ ȻtsLɕ, dʑƟ lsƟlsʑ lsƟ tɟ tedʑɘƟlsʮ Ȼtetsɘ fɕɕdʑ tɕLdʑɕ lsɕtɟ ɘ ɘɕʰ tsʾ dʑɟ teɘtsɘtsʾ ʜtsʷdʑ dʑsfɟs / Ɉ. Ɉ. ʐ ɟ fɟɟ tedʑɟ ȻƟ, Ɉ. ʆ. ʊ tetsȻtsL, Ɉ. ɯʂ Ɵteɟ tsɘfɟ Ȼɋ [lsƟdʑ] // ɪ tsdʑsɢʷ lsɘƟteɕdʑ ï 2014. ï ʊ. 16, ¯ 2. ï ʉ. 157 ï 161.

62. Ɉ dʒfɟs ʟƟɢƟdʑ dʑsɢts ʙdʑƟ lsƟ Ɵdʑ ʙlzdʒdʑɘ lz Ȼtetsɘ Ȼtstɕɘ ʟ tɕLdʑɕdʒ lsɕtɟ tsdʒ ɘɕʰ tsʾ dʑɟ teɘtsɘtsʾ ʜʷdʑ dʑsfɟs / Ɉ. ɯʂ Ɵteɟ tsɘfɟ Ȼɋ, Ɉ. ʆ. ʊ tetsȻtsL, ɝ. ɯʂ teɕɘtstedʑʮ ts, Ɉ. ʄ. ʂ tsfɟɟ dʑts // ʂ tsdʑʷɟ teɟ dʑɕʷ tɟ tetsʷɟ fɟtefɟ Ȼts-ɘɕȻ dʑƟʜƟɕ Ȼtsɢts fɕ dʑƟʜlz, dʑƟlzȻtsɘɕ fɟ ɘtetsʙ lsdʑɕȻɘ Ɵfɟ teƟdʑsɘ ʅ ʅ ɯɘɟ lsɟ teɕdʑƟtedʑsʾ dʑɟ ʜɕʮɕdʑɕ lsƟʷȻtsfɟs ʙɟ ʟtɟ ɟ Ȼɕ tɟ tetsʜlzȻʮ lsɘƟteɕdʑdʑɕʮlsɘƟ, 5 ï 6 Ȼɘ lsdʑ 2006 tɕ, ʅ ɸ ʋ, ʂ ɕɘ, ʋ ȻteƟdʑƟ: ʊɟ ʟɕ ʜtstɟ tsɘ ʜɟ ʔ. ï ʂ. : Ɉ ɋʜƟdʑɕʮɕ ʮɟ dʑstɕ ʅ ɸ ʋ, 2006. ï ʉ. 41.

63. Ɉ dʒfɟs fɟ ʮtsɘɕdʑɕ ɘ fɕtetsɘƟlsʮ Ȼtetsɘ fɕɕdʑ lsƟ Ȼtstɕɘ tɕLdʑɕ lsɕtɟ ɘ ɘɕʰ tsʾ dʑɟ teɘtsɘtsʾ ʜʷdʑ dʑsfɟs / ɸ. ʆ. ʃ Ɵdʑfɕ Ɵdʑ, Ɉ. Ɉ. ʂ Ɵteɟ tsɘfɟ Ȼɋ, ʇ. Ɉ. ʂ Ɵteɟ tsɘfɟ Ȼɋ [lsƟdʑ] // ʅ ƟlzȻtsɘɕʔ ɘfɕdʑɕȻ ʃ ɘɘfɟ Ȼtsɢts dʑƟʮ tsdʑƟdʑ dʑsɢts lzdʑɘɟ tefɕlsɟ lsz ɘɟ lsɟ teɕdʑƟtedʑsʾ dʑɟ ʜɕʮɕdʑɕ lsƟ ʙtslsɟ dʑsdʑsɢʔ dʒɟ dʑ ʉ. 3. ʅ ʯ ɕʮ Ȼtsɢts. ï ʃ ɘɘ, 2014. ï ʊ. 16, ¯ 2, ʮ. 2. ï ʉ. 190 ï 196.

64. Ɉ tsɘȻ ʉ. ʆ. ʃ fɟsʙ dʑɕɘtsfɟs dʑtɟ ʜdʑsɢts ʯ ɕtedʑsȻɕfɕdʑslsdʑsɢts ʯ ɕɘdʑɟ dʑdʑʷ lsɟ dʑʷls / ʉ. ʆ. Ɉ tsɘȻ, ʉ. ɕ. ʇ ƟȻtsɘɕʮ // ɝ Ȼtsdʑsɢ ʮdʑ, lsɟ dʑsdʑsɢ ʮdʑ lsƟ fɟsʮ Ɵdʑ dʑs-ɟ Ȼtsdʑsdʒ ʮdʑ Ɵfɟ ɟ Ȼlsɕ ɟʷɟ Ȼlsɕɘdʑsɢts ɘɕȻtsteɕfɟsƟdʑdʑʷ dʒƟlsɟ tɕƟdʑ dʑs-lsɟ dʑʮdʑsʾ ʙƟʟɕ ɸ ʇ ʂ : dʒƟlsɟ tɕƟdʑɕ ʃ ʯ dʑƟtɕ dʑƟlzȻ.-tɟ teƟȻls. ʷtstedʑdʒ, 17 ï 18 ɘɟ tɕ 2008 tɕ. ï ʃ ɘɘ : ʃ ʅ ɸ ʋ, 2008. ï ʉ. 38 ï 42.

65. Ɉ tsɘȻ ʉ. ʁ. Ɉ tɟ dʑɕɘ dʑfɟ dʑdʑz lsƟ lsɕtetsȻ fɟ dʑz dʑƟɘ Ȼtsɘz ʜɕdʑƟdʒ Ȼz fɟ dʑsɟ ʟz lsƟ tetsʟʰ ɟ tɟ dʑɟ dʑdʑʷ ʙdʑ ɘ lz fɕɟ dʑɟ lsdʑɕ dʒôʷʟƟ ɘɟ dʑɕȻtsʾ tetsɢƟlstsʾ lzʜtsʙɕ / ʉ. ʁ. Ɉ tsɘȻ, Ɉ. ʅ. ɕ dʑsɘɕʮ // ʋ ȻteƟdʑfɟ Ȼɋʔ ʙts dʒʮdʑɕʔ ʯ lztedʑƟdʑ ï 1990. ï ¯ 1. ï ʉ. 25 ï 30.

66. Ɉ tsɘȻ ʉ. ʆ. Ɉ dʒfɟs dʑtɟ ʜdʑɕ Ȼtsdʒtɟ tsdʑɟ dʑlsɘ lz tɟ dʑƟʟdʒ Ȼtetsɘ lsƟ dʒsdʑsʮdʑʾ tɟ tetsʜlzȻlsɕɘdʑfɟs ʟƟɘɕȻtsteɕfɟsƟdʑdʑʷ lz teƟʮ tsdʑƟ Ȼtstɕɘ tetsfɕdʑɕdʑdʑs-ʯ ɕtetsɘɕ ʜtsʙ ƟɘtsȻ / ʉ. ʆ. Ɉ tsɘȻ, ʉ. ɕ. ʇ ƟȻtsɘɕʮ, ʄ. ʊ. ʄ Ɵtedʑlsɕdʑ // ʅ ƟlzȻ.-lsɟ dʑ ʙʁ dʑ dʑlsz ʙtsdʑ lsɘƟteɕdʑ ʋ ɸ ɸ ʅ. ï ʃ ɘɘ, 2004. ï Ɉ ɋtɟ. 5, ¯ 3. ï ʉ. 90 ï 94.

67. Ɉ tsɘȻ ʉ. ʆ. ɝ ʷɟ Ȼlsɕɘdʑfɟs ɘɕȻtsteɕfɟsƟdʑdʑʷ tetsfɕdʑɕdʑdʑs-tsdʑʔdʑɕ ʜtsʙ ƟɘtsȻ | teƟʮ tsdʑƟ dʑƟlszʁ ʮɕ Ȼtstɕɘ / ʉ. ʆ. Ɉ tsɘȻ, ʄ. ʊ. ʄ Ɵtedʑlsɕdʑ, ʉ. ɕ. ʇ ƟȻtsɘɕʮ // ʅ ƟlzȻtsɘɕʔ ɘfɕdʑɕȻ ʃ ɘɘfɟ Ȼtsʾ dʑƟʮ tsdʑƟdʑ dʑsʾ ƟȻƟʜɟ dʒʾ ɘɟ lsɟ teɕdʑƟtedʑsʾ dʑɟ ʜɕʮɕdʑɕ dʒɟ dʑ ʉ. 3. ʅ ʯ ɕʮ Ȼtsɢts. ï ʃ ɘɘ, 2005. ï ʊ. 7, ¯ 2, ʮ. 3. ï ʉ. 30 ï 33.

68. Ɉ tsɘȻ ʉ. ʆ. ʅ ƟɕɕʰɟdʑʯɕteɕʯɕtedʑȻɕfɕdʑslsɕlz teƟʮ tsdʑƟ ɢtsʜɘdʑ ɘɟ dʑɕȻtsʾ

tctsGʘlsts᾽ ⊐lzHtsBɋ / ʉ. ʆ. ɹ tsɘʕ, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ, ʆ. ʊ. ʄ ʘtdsɋdz// ɹ ʻfrɟdzɋʕ ʘGteʘtectɔts᾽ dzʘlzʕɋ. ī 2006. ī ¯ 8. ī ʉ. 83ī 86.

69. ɹ tsɘʕ ʉ. ʆ. ɿ ɘɋʯʘʔdz ʻ "LʘɅɋʱ ʝdz" ʯ ɋteɋ lz teʘʯʻtsdzʘɅ ʯ ɋɘdʑ dzdzʷ ɘʝdzɋʕts᾽ tctsGʘlsts᾽ ⊐lzHtsBɋ / ʉ. ʆ. ɹ tsɘʕ, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ, ʆ. ʊ. ʄ ʘtdsɋdz// ʊɘʘteɋdzdzɋʯlsɘts ʋ ʕteʘdzɋ. ī 2005. ī ¯ 9. ī ʉ. 27ī 30.

70. ɹ tsɘʕ ʉ. ʆ. ɿ dʒdzɋ ɘdʒfrɟslz dztʃʻHdzɋ⊐ ʻdztej Hʻʻdlsʻɘ lz tʃdzʘLdʒ ʕtetsɘʻ lsʘ dʒtsdzts ʯdzʘ tʃtetsHlzʕlsɋɘdzfrɟsᴵ LʘtʃʻHɘɋʱ ʝdztsGts teʻɘdzʷ lz teʘʯʻtsdzʘɅ ʕtsteʻɘ tetsfrɟdzɋdzdzts-ʯ ɋtetsɘɋ⊐ HtsBʘɓtsʕ / ʉ. ʆ. ɹ tsɘʕ, ʆ. ʊ. ʄ ʘtdsɋdz, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ // ɹ ʻfrɟdzɋʕ ʆ ᴵ ɘʻɘfrɟ ʕtsGts Hʝ teɋ ʘɓdztsGts ʘGteʘtectɔtsGts lzdzɘʝ tefrɟlsʝ lslz : frɟ te. çʘGtetsdztsdʒʷè. ī 2005. ī ¯ 9. ï ʉ. 189ī 195.

71. ɹ tsɘʕ ʉ. ʆ. ɿ dʒdzɋ ɘdʒfrɟslz dztʃʻHdzɋ⊐ ʕtsdʒtʃtsdʑ dlsʻɘ lz tʃdzʘLdʒ ʕtetsɘʻ Lʘ ɘɋʕtsteɋfrɟsʘdzdzʷ lz teʘʯʻtsdzʘɅ ʕtsteʻɘ ʕʘdz ʯʻʻɘɋ⊐ frɟsdʑʔ ʯ ɋtedzɋ⊐ ʕɋfrɟdztsls, tslsteɋdʒʘdzɋ⊐ ʻL tetsfrɟdzɋdzdzɋ⊐ tsdzʔ / ʉ. ʆ. ɹ tsɘʕ, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ, ʆ. ʊ. ʄ ʘtdsɋdz// ɹ ʻfrɟdzɋʕ ʆ ᴵ ɘʻɘfrɟ ʕtsGts Hʝ teɋ ʘɓdztsGts ʘGteʘtectɔtsGts lzdzɘʝ tefrɟlsʝ lslz : frɟ te. çʘGtetsdztsdʒʷè. ī 2006. ī ¯ 10. ī ʉ.190ī 194.

72. ɹ tsɘʕ ʉ. ʆ. ʉdlsʝ dzfrɟɘdzfrɟsᴵ tetsfrɟslz Bɋʯʕʻɘ lsʘ ʷʕʻfrɟsᴵ ʷdztsɘɋʯɋdzɋ lsʘ ɘɋʕtsteɋfrɟsʘdzdzʷ lz teʘʯʻtsdzʘɅ lsɘʘteɋdzHtsBʘɓtsʕ ⊐ʻdʒʻʯdzts "LʘɅɋʱ ʝdzɋ⊐" tetsfrɟdzɋdzdzɋ⊐ ʯ ɋteʻɘ. ʉ. ʆ. ɹ tsɘʕ, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ// ʆ ʷfrɟdztsʔ BɋLdʑ frɟ ī 2005. ī ¯ 9. ī ʉ. 76.

73. ɹ tsɘʕ ʉ. ʆ. ʂ ʘdz ʯʻʻɘʻ frɟsdz ʯ ɋtedzɋ⊐ ʕɋfrɟdztsls dzʘ tsfrɟdztsɘʻ tsdzʔ ï frɟsɋdʒdzdzʷlststeɋ tetsfrɟslz Bɋʯʕʻɘ / ʉ. ʆ. ɹ tsɘʕ, ʉ. ɕ. ɿ ʘɓʕtsɘɋʯ, ɹ. ɹ. ɹ ʘdz ʕtsɘfrɟ ʕɋʔ // ɹ ʯʝdz ʆ ᴵ ɘʻɘfrɟ ʕtsGts Hʝ teɋ ʘɓdztsGts ʘGteʘtectɔtsGts lzdzɘʝ tefrɟlsʝ lslz ɘɋtetsBdzɋʯlsɘlz. ī ʆ ᴵ ɘʻɘ, 2005. ī ɹ ɋtʃ. 5. ī ʉ. 87ī 88.

74. ɹ tsdzɋdzfrɟ ʕʘ dʒʘʷfrɟdzʘ tʃtstetsHʘ/ ʊ. ʉ. ɕ dzʕts, ɹ. ɿ. ɹ lzteʕʘls, ɹ. ɿ. ʆ lzʕʘ [lsʘ ʻdz] // ɿ dʑ dʒʻdzdz teʝ frɟlzteɋfrɟ ʋ ʕteʘdzɋ: dʒʘlsʝ teʻʘdzɋ dzʘlzʕ.-tʃteʘʕls. ʕtsdzʷ. ï ʂ. : ɸ Gteʘtectʘ dzʘlzʕʘ, 1998. ï ʉ. 66 ï 68.

75. ɹ tsdztsʱ ʝdzʕts ɹ. ʆ. ʂ ɘtstʃtetsfrɟlz frɟstedzʕlslztectɔts-ʷ lzdzʕ ʯɋtsdzʘdz dztsGts dʒtsHʝ dzɋtetsɘʘdzɋʷ Gʝ dʒɋʯʝ frʕtsGts frɟsfrɟstsʷdzɋʷ tʃteɋ dʒʝ lsGʝ dʒtsGdztsBɋdʑ dʒɋɋ / ɹ. ʆ. ɹ tsdztsʱ ʝdzʕts, ʅ. ʇ. ʉ ɋHtsteʷʕ // ʈ ʝ ʘʕlsɋɘdztsfrɟsᴵ ɋ teʝ Lɋfrɟsʝ dlsdztsfrɟsᴵ : ʷ lzdzHʘdʑ dlsʘdz dz ʝ ɋ tʃteɋʕ dzʘHdz ʝ ɘtstʃtetsfrɟ. ï ʂ., 1987. ï ʉ. 170.

76. ɹ tstsBteʘʯ ʝ dzɋʝ Hɘɋʯ ʝ dzɋʷ ɋ ʝ Gts tʃteʘʕlsɋʯʝ frʕtsʝ tʃteɋdʒʝ dʑ dzɋʝ / ʆ. ɸ. ʄ tsʕɋʝ dzʕts, ʆ. ɸ. ʏ ʝ tedlsʕtsɘʘ, ɸ. ɸ. ʌ tetsdztsɘ, ʆ. ɼ. ɹ tsBtetsɘ // ɾ lztedzʘdz ɘʳ frɟ ʝʔ dʑ teɘdztsʔ Hʝ ʷlsʝ dz dztsfrɟsɋ. ï 2013. ï ʊ. 63, ¯ 2. ï ʉ. 195 ï 205.

77. ɹ tstetsdzɋdz ʆ. ʇ. R LBteʘdzdz ʝ lstedzHʳ. ʉ teʘɓdzɋlsʝ dz dzʘʸ ʷ ɋLɋtsdztsGɋʷ ɘʳ frɟ ʝʔ

[illegible] 1989. [illegible] 267 [illegible]

78. [illegible] 2003. [illegible] 2. [illegible] 111–113.

79. [illegible] 2008. [illegible] 9, [illegible] 1–2. [illegible] 116–121.

80. [illegible] 2004. [illegible] 78. [illegible] 51–54.

81. [illegible] 2005. [illegible] 9. [illegible] 8–9.

82. [illegible] 2000. [illegible] 8. [illegible] 38–42.

83. [illegible] 2009. [illegible] 10, [illegible] 1–2. [illegible] 99–102.

84. [illegible] 2009. [illegible] 2. [illegible] 137–140.

85. [illegible] 2006. [illegible] 9. [illegible] 24–27.

86. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . Ɉ dʒ'fiʝs 'Ltsdʒj tɕ'ɘ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls lz dʒsdʑsɥ' ʕtstɕ'ɘ ʧtɕɕʃ ɘɘj нj dʑdʑ нts tɕʘɥ'tsdʑz tɕ'ʧʘʕtsɘts' tsdʑ' ʘвts ʕʘdʑ ɥ''ɘɋ⁼ fiʝsdʑ ʔ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls / ɯ Ɉ . Ɉ lzнdʒʘfiʂʘ, ʃ . Ɉ . ɉ tsdʑzвj ɥ' // ɟ j tɕj нɢ'tɕdʑ ' ɢ'tɕfiʝ ʕj ʟj dʒdʑ tɕtsв fiʝsɘts lsʘ lsɘʘtɕɕʃdʑdʑʃɥlsɘts: ʟв. dʑʘlzʕ. fiʝs. ï ʃ ᴵ ɘ'ɘ, 2007. ī Ɉ ɋʧ. 49, ɥ. 2. ī ʉ . 127ī 137.

87. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . Ɉ ʧdʑɕʃɘ ʕʘdʑ ɥ''ɘɋ⁼ fiʝsdʑ ʔ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls dʑʘ ʁ ɋtɕdʑsʕɋfiɋdʑslsdʑɕʃʔ fiʂdʑʘн ɘdʒ'fiʝslz tɕdʑвɥʷ lsʘdʒsdʑsʕʘʕtstɕ'ɘ / ɯ Ɉ . Ɉ lzнdʒʘfiʂʘ, Ɉ . ɯ ʂ ɋʰ ʕts // ʃ ʘsj tɕ'ʘdʑʃ IX ʋ ʕtɕʘ'dʑfiʝ ʕtsɢts в 'ts⁼'dʒ'ɥdʑsɢts ʟ'ʾʟнlz, 24ī 27 ʁ tsɘlsdʑʷ 2006. ī X., 2006. ī ʉ . 111ī 112.

88. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . Ɉ ʧdʑɕʃɘ ɘɘj нj dʑdʑʷ нts tɕʘɥ'tsdʑz ʕtstɕ'ɘ ʕʘdʑ ɥ''ɘɋ⁼ fiʝsdʑ ʔ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls dʑʘ dʒsdʑsɥdʑz ʧtɕtsнlzʕlsɕʃɘdʑfiʝsᴵ / ɯ Ɉ . Ɉ lzнdʒʘfiʂʘ, Ɉ . ɸ . ʏ ʘɕʕ'dʑ, Ɉ . ɯ ʂ ɋʰ ʕts // ɩ ʘlzʕ.-lsj⁼dʑ вᴷ dʑ ī ʃ ᴵ ɘ'ɘ, 2004. ī Ɉ ɋʧ. 5, ¯ 3. ī ʉ . 101ī 106.

89. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . ɾ ɋtɕdʑsʕɋfiɋdʑslsdʑɕʃʔ fiʂdʑʘн dʑʧ 'н'ɘ ɘdʒ'fiʝslz tɕdʑвɥʷ ' dʒsdʑsɥdʑsɢts ʁ ɋtɕdʑ ɘɋfiʝsʕtsʧtɕtsнlzʕlsɕʃɘdʑɕʃ⁼ ʕtstɕ'ɘ ʧtɕɕʃ ʟɢtsнtsɘlzɘʘdʑdʑ 'dʒ j ʕfiʝstɕdʑнtsɘʘdʑɕʃ⁼ fiʝs'ɘɋ⁼ вtsв'ɘ /1. Ɉ . Ɉ lzнdʒʘfiʂʘ, Ɉ . ɯ ʂ ɋʰ ʕts, Ɉ . ɸ . ʏ ʘɕʕ'dʑ// ɹ 'tsdʑsɢʷ lsɘʘtɕɕʃdʑ ī 2004. ī ʊ . 6, ¯ 1ī 2. ī ʉ . 92ī 96.

90. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . ɯtsdʒj tɕɕʃʟʘɥ'ʷ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls lz ɘdʒ'fiʝs' tɕdʑвɥʷ ʕtstɕ'ɘ ʧtɕɕʃ нtsвʘɘɥ' нts tɕʘɥ'tsdʑz tɕ'ʧʘʕtsɘts' tsdʑ' ʘвts ʕʘdʑ ɥ''ɘɋ⁼ fiʝsdʑ ʔ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls / 1. Ɉ . Ɉ lzнdʒʘfiʂʘ // ɩ ʘlzʕ.-lsj⁼dʑ вᴷ dʑ 'dʑlslz в'tsdʑ lsɘʘtɕɕʃdʑ' ɼ ɩ ɼ ʂ ɯɘj ls. ʧtɕj ʧʘɕ. lsʘ ʕtstɕdʒ нtsв. ī 2007. ī Ɉ ɋʧ. 8, ¯ 3ī 4. ī ʉ . 40ī 45.

91. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . ʃ 'ʧ'нdʑɕʃʔ ' ʁ ɋtɕdʑsʕɋfiɋdʑslsdʑɕʃʔ fiʂdʑʘн ʧdʑʘʟdʒɕʃ ʕtɕtsɘ' ' dʒsdʑsʕʘ ʕtstɕ'ɘ ʧtɕɕʃ ʟɢtsнtsɘlzɘʘdʑdʑ 'dʒ ʕʘdʑ ɥ''ɘɋ⁼ fiʝsdʑ ʔ ʁ ɋtɕdʑɕʃ⁼ ʕɋfiɋdʑsls / ɯ Ɉ . Ɉ lzнdʒʘfiʂʘ// ɩ ʘlzʕ.-lsj⁼dʑ вᴷ dʑ ɯdʑlslz lsɘʘtɕɕʃdʑ ʋ ɸ ɸ ɩ . ī 2006. ī ¯ 92. ī ʉ . 19ī 24.

92. Ɉ lzнdʒʘfiʂʘ ɯ Ɉ . ɟ tstɕ'ɘdʑʷdʑ dʑʘ⁼ʘɕʘʕlsj tɕɕʃfiʝsɕʃʕʘʁ ɋtɕdʑsʕɋfiɋdʑslsdʑsɢts fiʂdʑʘнlz dʒsdʑsɥdʑsɢts ʁ ɋtɕdʑ ʕtstɕ'ɘ ʧtɕɕʃ tɕ'ʟdʑɕʃ⁼ fiʝʧtsfiʝsвʘ⁼ ʟʘ⁼ɋfiʝslz dʑʧ 'н'ɘ / ɯ Ɉ . Ɉ lzнdʒʘfiʂʘ, Ɉ . ɯ ʂ ɋʰ ʕts, ʃ . Ɉ . ʂ dʑʧʘɥ // ɩ ʘlzʕ.-lsj⁼dʑ вᴷ dʑ ɯdʑlslz в'tsdʑ lsɘʘtɕɕʃdʑ' ɼ ɩ ɼ ʂ ɯɘj ls. ʧtɕj ʧʘɕ. lsʘʕtstɕdʒ нtsв. - 2005. - Ɉ ɋʧ. 6, ¯ 2. - ʉ . 41-43.

93. ɉ ʘtɕɕʃʕ ɩ . ʃ . Ɉ ʧdʑɕʃɘ j ʕfiʝstɕdʑнʘslz fiʝs' dʑʘdʒsdʑsɥdʑz ʧtɕtsнlzʕlsɕʃɘdʑfiʝsᴵ ʕtstɕ'ɘ : ʘlststɕj ʷʷ. нɕʃfiʝ dʑʘʟнtsвlzlslsʷ dʑʘlzʕ. fiʝslzʧj dʑʷ ʕʘdʑн. fiʝ - ɢ. dʑʘlzʕ : fiʝʧj ɥ. 06.02.02 "ɉ tsн'ɘdʑʷ fiʝ-ɢ. lsɘʘtɕɕʃdʑ' lsj⁼dʑsdʑsɢʷ ʕtstɕdʒ'ɘ" / ɩ . ʃ . ɉ ʘtɕɕʃʕ. ī X., 2005. ī 20 fiʝ

94. ɉ ʘtɕɕʃdʑ dʑʕts ʃ . ʉ . ʃ tsdʑsɥdʑʘ ʧtɕtsнlzʕlsɕʃɘdʑfiʝsᴵ ʕtstɕ'ɘ ɢtsdʑ lsɕʃdʑfiʝ ʕts' ʧtstɕtsнɕʃ /

ʆ . ʉ . ɻ ʘɔteɖʗɖʝ ɖʎts, Ʒ . ʇ . ʇ tsɖʣtʃʘɖʑ // ɪ ʿfɱʝʑʗʢ ʘɕteʘʈɛɖts˒ ɖʑʘɖʢʗɖ. ï 2005. ï ¯ 10. ï ʉ . 84.

95. ɻ ʘɔteɖʗɖʝ ɖʎts ʆ . ʉ . ʈ tsʟɘɖʗlstsʢ ɖʒtsɖtsʮɖts ʛts ɦʢtslsʘʈɛɦʝsɘʘ ɮ ɩ ʿʜʝ teɖʑʘɖʜʘ⁼ / ʆ . ʉ . ɻ ʘɔteɖʗɖʝ ɖʎts, Ʒ . ʇ . ʇ tsɖʣtʃʘɖʑ // ʊɘʘʈɛɖʗɖʑɖʗʮʝsɘts ʋ ʢteʘ˒ɖʑʗ. ï 2008. ï ¯ 2. ï ʉ . 13ï 14.

96. ɻ ʘɖʑʗʝ ɘ ɪ . ʌ . ɪ ɖʑʗʷɖʑʗʝ ʙɖʃtsɖtsɢɖʮʝ ɦʢɖ ʘʢlsɖʃɘɖtsɢts ɘʝʱ ʝ ɦʝsɘʘçʆ teʝ ɢts-ʉ lsɖʃɖʒè ɖʑʘ ɖʒʷɦɱʑʣʶ tʃteɑtsʜʑʢlsɖʃɘɖtsɦʝsʴ tslsʢʘʈɛɖʒɖʑɖʃɘʘ ɖʒ ⁼ ʙʳ ʮʢtsɘ / ɪ . ʌ . ɻ ʘɖʑʗʝ ɘ, Ʒ . ʀ . ʃ ʝ ɘʘ⁼ɖʗɖʑ ɻ . ɪ . ʇ ʘɔɖʝ ɖʎts // ʈ ʷʷʝ ʢlsɖʃɘɖʑʢtstɛɖʒʃ lsʘɢtsʜʿɘɖʑʷ. ï 2011. ï ¯ 4. ï C. 35ï 38.

97. ɻ ʘɖʑʣʰ ʢts ɯ ɸ . ɸ ɖʑʘɖʑʟ ɖʒtsɖtsʮɖts˒ tʃteɑtsʜʑʢlsɖʃɘɖtsɦʝsʿ ɢtsɖʑ lsɖʃɖʑɦʝ ʢts˒ ⁼ʑʜtsʙɖʃ ʟʘɖʑʙʿʞ ɖts˒ ɦʝ ɖʝ ʢʮʿ˒ ɘ ʑɖʒtsɘʘ⁼ ɸ ʊɩʊ ñɸ ɢteɑts-ʉ tsʶ ʟò ʈ ɖʑtʃteɑtstʃʝ lsteɑtsɘɦʝ ʢts˒ tsʙɖʑʘɦʝsʿ / ɯ ɸ . ɻ ʘɖʑʣʰ ʢts // ɪ ʿfɱʝʑʗʢ ʉ ʑɖʒɦʝ ʢtsɢts ʜʝ teʞ ʘɔɖʑtsɢts ʘɕteʘʈɛɖtsɢts ʑɖʑɘʝ teɦɱʃlsʝ lsʑ. ʉ ʝ teɕ ñʊɘʘʈɛɖʗɖʑɖʗʮʝsɘtsò. ï ʉ ʑɖʒɖ, 2006. ï ɪ ɖʃ. 10. ï ʉ . 23ï 27.

98. ɻ ʘɕʢʘɔɖ ʃ . ʌ . ɸ ʜʘʃlsʘʮɖʃtsɖʑɖʑ ʝ teʝ ʘʢʮɖɖ tsteɢʘɖʑʗʟɖʒʘ ɖ ɖʒɖtsɢtsʑteɑtsɘɖʝ ɘʘʸ teʝ ɢʑɖʑʷʮɖʷ ɢtsɖʝ tsɦʝsʘʟʘ / ʃ . ʌ . ɻ ʘɕʢʘɔɖ, ʈ . ɪ . ʂ ɘʘʢɖɖʑʘ // ʌ ɖʟɖtsɖtsɢɖʮʝ ɦʢɖʝ ɖ ʢɖʑɖʃɖʑʗʮʝ ɦʢɖʝ tʃteɑtsʙɖʝ ɖʒ ʘʜʘʃlsʘʮɖʃ tsteɢʘɖʑʗʟɖʒʘ ʮʝ ɖtsɘʝ ʢʘɖ ʞ ɖɘtslsɖtsɢts ʢ ɢɖʃtsʢɦɱʃɖ, ɢɖʃʝ teʝ teɖʒʗɖ, ɢɖʃtsʜɖʑʘɖʒʗɖ ɖ ɖʝ ɦʝ ʃʝ ʮɖʷʷ ɖʮʝ ɦʢɖʝ ɦʝ teʝ ʜɦʝsɘʘ ɘtsɦʝsʘɖtsɘɖʝ ɖʑʗʷ. ï ʆ . : ʆ ʝ ʜɢɖʟ, 1978. ï ʉ . 34ï 35.

99. ɻ ʘɕʢʘɔɖ ʃ . ʌ . ʈ ɖʘʃʘʟtsɖʑ ʘʜʘʃlsʘʮɖʃtsɖʑɖʑ ⁼ teʝ ʘʢʮɖʔ tsteɢʘɖʑʗʟɖʒʘ / ʃ . ʌ . ɻ ʘɕʢʘɔɖ, ʈ . ɪ . ʂ ɘʘʢɖɖʑʘ // ʆ ʘlsʝ ɖʒʘlsɖʮʝ ɦʢtsʝ ɖʒtsʜʝ ɖʑɖteɑtsɘʘɖʑʗʝ ʙɖʃtsɖtsɢɖʮʝ ɦʢɖ⁼ tʃteɑtsʮʝ ɦʝɦʝsɘ. ï ʆ . : ʆ ʝ ʜɢɖʟ, 1979. ï ʉ . 27ï 33.

100. ɻ ʝ ɖʝ lsɖʢʘʿ ɦʝ ɖʝ ʢʮʿʷ ʑ ɦʢtslsʘʈɛɦʝsɘʿ / ʆ . ɪ . ʅ ʑʙʝ ʮʴ, ɪ . ʇ . ɪ ʑteɕʘls, ʆ . ɕ . ɭ ʷʷʿɖʒʝ ɖʎts, Ʒ . ʇ . ʇ tsɖʣtʃʘɖʑ / ɻ ʝ ɖʝ lsɖʢʘʿ ɦʝ ɖʝ ʢʮʿʷ ɘ ʋ ʢteʘ˒ɖʑ ɖʑʘɖʒʝ ʞ ʿ lsɖʃɦʝʸʮtsɖʑlsʴ. ï ʂ . : ʃ tsɢtsɦʝ 2001. ï ʊ. 4. ï ʉ . 181ï 198.

101. ɻ ʝ tsteɢɖʝ ɘɦʢɖʔ ɪ . ʀ . ʌ ɖʟɖtsɖtsɢɖʷ ɦʝ ɖʑ ɦʢts⁼tsʟʷʔ ɦʝsɘʝ ɖʑɖʑ ⁼ ʞ ɖɘtslsɖʑ ⁼ / ɪ . ʀ . ɻ ʝ tsteɢɖʝ ɘɦʢɖʔ ï ʆ . : ɸ ɢteɑtstʃteɑtsɖʒʃʟʜʘls, 1990. ï 511 ɦʝ

102. ɻ ʝ teʘɦɱʃɖʒtsɘʘ Ʒ . ɸ . ʇ tsɘʝ ʜʝ ɖʑʮʝ ɦʢɖʝ ʷʷʷʝ ʢlsʳ ɖtsʢʘɖʑ ɖtsʔ ʘʢlsɖʃɘʘʮɖʃ ɖ ʙɖtsʢʘʜʳ teʝ ʮʝ tʃlststeɑtsɘ ɦʝ teɑtslstsɖʑɖʑʘ ɖ ʜtsʷʘɖʒɖʑʘ ɘts ʷteɑtsɖʑlsʘɖʑ ɖtsʔ ʢtsteʝ ʢtsʰ ʢɖ ɘ ɖʒtsʜʝ ɖʑɖ çtʃteʘɔʘɘʳ ʙtsteʘè tʃɖʰ ʝ ɘtsɢts tʃtsʜʢteʝ tʃɖʝ ɖʑʗʷ / Ʒ . ɸ . ɻ ʝ teʘɦɱʃɖʒtsɘʘ, ɪ . ɪ . ʉ ɖʜtsteɖʗɖʑʘ, ʢ . ʇ . ʂ ʑɖʝ ʰ tsɘʘ, ʊ. ʌ . ʆ ʝ teɖʃɦʝʘɖtsɘʘ // ʳ ʑteɖʑʘɖʑ ɘʳ ɦʝ ʝʔ ɖʝ teɘɖtsʔ ʜʝ ʷlsʝ ɖʑ ɖtsɦʝsɖ. ï 2013. ï ʊ. 63. ï ʉ . 34ï 40.

103. ɻ tsɘlsɘʷɖʑ ɸ . ʇ teɖʃʜʘlsɖʑɦʝsʴ ʜts ɦʝ ɖʝ ʢʮʿʔ ɖtsɢts ɘʜtsɦʢtsɖʑʘɖʝ ɖʑɖʑʷ ɘɖʟɖʑʘʮʘɖʑʗ ʟʘ lsɖʃʘɖʒʃ ʢtsɖʑɦʝsɖʃlsʑʮʿ˒ ɢtsɖʑ lsɖʃɖʑɦʝ ʢts˒ ⁼ʑʜtsʙɖ / ɸ . ɻ tsɘlsɘʷɖʑ // ʊɘʘʈɛɖʗɖʑɖʗʮʝsɘts ʋ ʢteʘ˒ɖʑʗ. ï

2006. ï ¯ 8. ï ʉ. 15ï 18.

104. ʈ tsʜ'ɘdʑ fŋdʑ fŋ Ϛtsɢtsfŋʃ tsʜʘɵfŋ Ϛɕʘ lsɘʘɵɕʃdʑ / ɯɯɯʙʘlsʑdʑdʑ, ɼ . ʆ . ʄ ʝdʑ dʑʆ ɥʑϚ, ʈ . ʆ . ɹ tsɢʜʘdʑsɘ, ɟ . ɿ . ʉ lstsdʑ tɢ ɥʑϚ [lsʘ'dʑ]. ï ʇ 'dʑdʑʆ ɥʷ : ɩ tsɘʘϚdʑɕɢʘ, 2007. ï 616 fŋ

105. ʈ tsdʑs–tstɕʆdʑfŋ Ϛɕʔ Ʒ . ɯ ʉ ʝ dʑ Ϛ ɥ'ʔ dʑs-ɢtsfŋʃ tsʜʘɵfŋ Ϛʘ tsɥ'dʑʘ ʙʑɢʘʔɥ'ɘ dʒʷ fŋdʑsɢts Ϛtsdʒsdʑsɢts fŋʆdʒ dʑsʘdʑ ɘ ʑdʒsɘʘ ʧʝ tɕ ʜɢ'tɕʘʷ ʂ ʘɵʃʘs / Ʒ . ɯ ʈ tsdʑs–tstɕʆdʑfŋ Ϛɕʔ // ʄ ʘsʝ tɕ'ʘdʑʆ V Ϛtsdʑ ʝ tɕ dʑɿ'' dʒsdʑsʜɕ ɘɥʝ dʑʆ lsʘʘfŋʃ 'tɕʘdʑs'ɘ. ï ʂ ., 2007. ï ʉ. 21ï 23.

106. ʈ tsdʑɿʘɕ dʑts ɯ ʇ . ɟ tɕtsʙdʑ dʒʆ ɘɕ Ϛtstɕʆ fŋsʘdʑ 'dʒʃ tstɕlsdʑ dʒsdʑs ɥdʑ Ϛtstɕ'ɘ / ɯ ʇ . ʈ tsdʑɿʘɕ dʑts, ʄ . ʁ . ʏ ʝ tsɘfŋ Ϛɕʔ // ʇ 'fŋdʑʆ Ϛ ʘɢtɕʘɵdʑs' dʑʘdʑϚɕ. ï 2005. ï ¯ 4. ï ʉ. 32 ï 38.

107. ʈ tsdʑɿʘɵtsɘ ʀ . ʀ . ʇ ʳ tɕʘ ɕɘʘdʑʆ lsʸ dʑsϚ ʟdʑʘdʒ dʑfŋtsʔ dʒʷ fŋdʑsʔ ʧtstɕtsʜʳ fŋ tɕʘʟdʑ dʒ ʑtɕtsɘdʑ dʒ Ϛtstɕdʒdʑ dʑʆʷ / ʀ . ʀ . ʈ tsdʑɿʘɵtsɘ // ɩ ʘʑϚtsɘɕʔ ɘ'fŋdʑʆ Ϛ ʃ ᴊ ɘ'ɘfŋ Ϛtsɢts dʑʘɥ'tsdʑʘdʑ dʑsɢts ʑdʑɘʝ tɕfŋʆlsʝ lsʑ ɘʝ lsʝ tɕʆdʑʘɵdʑs' dʒʝ ʜɕɥɕdʑʆ lsʘʙ'tslsʝ dʑsdʑsɢ'' 'dʒʝ dʑ ʉ. ɿ . ʈ ʞ ɕɥᴵ Ϛtsɢts.ï ʃ ᴊ ɘ'ɘ, 2008. ï ʊ. 10, ¯ 2, ɥ. 3. ï ʉ. 39 ï 41.

108. ʈ tsdʑɿʘɵtsɘʘ ɯ ɯ ɹ 'tsdʑsɢ'ɥdʑ ʧtsϚʘʟdʑʆ Ϛɕ ʘʜʘʃ lsʘɥ'' lsʝ dʑɕɥᴵ ʟdʑʘdʒʘʷ dʑfŋ Ϛtsɢts dʒʘʷ fŋdʑsɢts lsɕʧʑ ɘʝ dʑɕϚts' tɕtsɢʘsts' –ʑʜtsʙɕ ʜts ʑdʒsɘ fŋsʝ ʧdʑs' ʟtsdʑʆ ʋ Ϛtɕʘdʑʆ / ɯɯ ʈ tsdʑɿʘɵtsɘʘ // ɩ ʘʑϚtsɘts-lsʝ –dʑɥdʑʔ ʙᴿ dʑlsʝ dʑ. ï ʌ., 2006. ï ʇ ɕʧ. 94. ï ʉ. 104ï 107.

109. ʈ tsdʑɿʘɵtsɘʘ ɯ ʈ 'fŋs, tɕtsʟɘɕlstsϚ lsʘ ɘ'ʜlsɘtstɕdʑʘ ʟʜʘsdʑfŋsᴵ tɕ dʒsdʑsdʑʆ lsʝ dʑɕɥᴵ fŋsɘtstɕᴿ ɘʘdʑs' ʟdʑʘdʒʘʷ dʑfŋ Ϛts' dʒʘʷ fŋdʑs' ʧtstɕtsʜɕ / ɯ ʈ tsdʑɿʘɵtsɘʘ // ʊɘʘɵɕʃdʑdʑʆ ɥlsɘts ʋ Ϛtɕʘdʑʆ. ï 2005. ï ¯ 8. ï ʉ. 8ï 10.

110. ʈ tstɕʆʟtsdʑstsɘ ɟ . ʃ . ʉ lstɕ fŋŋɕ fŋʆfŋsʝ dʒʘ Ϛtɕtsɘɕ / ɟ . ʃ . ʈ tstɕʆʟtsdʑstsɘ, ʆ . ʀ . ɹ ʝ dʑslsʑfŋsɘʘ, ʄ . ʀ . ʌ ʝ ʜtslstsɘʘ ʄ . : ʄ ʝ ʜɕɥɕdʑʘ, 1983. ï 240 fŋ

111. ʈ tstɕʆdʑ ɸ . ʇ . ʆ fŋsʙʝ dʑdʑsfŋsɕ tɕʘʟɘɕlsɕʷ lsʸ dʑsϚ ʑϚtɕʘɕdʑfŋtsʔ dʒʷ fŋdʑsʔ ʧtstɕtsʜʳ / ɸ . ʇ . ʈ tstɕʆdʑ // ɩ ʘʑϚtsɘts-dʒlstsʜɕɥdʑ tsfŋdʑsɘɕ ʑʧtɕʘɘdʑdʑdʑʷ ʧtstɕtsʜtslsɘtstɕdʑʆdʒ ʧtɕtsɥʝ fŋsdʒ dʑʘ ɼ dʑʧtɕtsʧʝ lstɕtsɘʰ ɕdʑ : dʒʘsʝ tɕ'ʘdʑʆ ʋV (ʌɯʌ) dʑʘʑϚtsɘts-ɘɕtɕtsʙdʑʆɥts' Ϛtsdʑ ʝ tɕ dʑɿ'' (30 lstɕʘɘdʑʷ 2003 tɕ) / ɯdʑfŋsɕlsʑls lsɘʘɵɕʃdʑdʑʆ ɥlsɘʘ ɥʝ dʑstɕʘdʑ dʑʆ tɕʘʔtsdʑɘ ʋ ɸ ɸ ɩ . ï ɼ dʑʧtɕtsʧʝ lstɕtsɘfŋ Ϛ, 2003. ï ʉ. 113ï 115.

112. ʈ tɕʆʙʘdʑ ʇ . ʈ . ʂ dʑdʑɥdʑʘ ʙ'ts–'dʒʷ lsɘʘɵɕʃdʑ / ʈ tɕʆʙʘdʑ ʇ . ʈ ., ʏ ʑdʒʘϚ ʇ . ʆ ., ɩ ʝ dʒʆtɕtsɘfŋ Ϛɕʔ ʇ . ɯï ɼ dʑʧtɕtsʧʝ lstɕtsɘfŋ Ϛ, 2001. ï 160 fŋ

113. ʈ tɕʆɢtstɕᴵ ʷdʑ ʈ . ɸ . ɸ ɢtɕ fŋʆɘdʑsʝ ʧtsɘʝ ʜʝ dʑʆʝ ɘ dʒsʜʝ dʑ– dʑʘʞ ɕɘtslsdʑ – / ʈ . ɸ . ʈ tɕʆɢtstɕᴵ ʷdʑ // ɾ ʑtɕdʑʘdʑɘʳ fŋ ʝ ʔ dʑ tɕɘdʑsʔ ʜʝ ʷlsʝ dʑ dʑsfŋsɕ. ï 2012. ï ʊ. 62, ¯ 5. ï ʉ.

517ï 531.

114. ɭ teɑ[ɗʒ⊙Ϛ ɸ . Ɉ . ʋ нtsfŋ§tsɗℤ⊙ɗʝ ɗℤɗℤʷ teɑ[ɗℤ§tsəɑ[⊓ ə'нɗℤtsfŋɑ[ɗℤ.lz ɗʒ͡ôʷ fŋtsʈʃ teɑtsнlzϚlstsətsɗʒlz ʈʃ'нϚtsɗʒʈʃɗʝ Ϛfŋ ï ʰ ɗℤʷ⊓ нts ə'нteɑtsнɣ ʝ ɗℤɗℤʷ ɢ⊙ɗℤlzʟ' ɗʒ͡ôʷ fŋɗℤtsɢts fŋ§tsls⊙teɑfŋsə⊙/ ɸ . Ɉ . ɭ teɑ[ɗʒ⊙Ϛ // ʆ ʷfŋɗℤts? ʙɑ[ʟɗʝ fŋ ï 2008. ï ¯ 8. ï C. 110ï 111.

115. ɭ teɑ[ɥʶ Ϛ ɸ . ʀ . ʌ ɑ[ʙteɑ[ɗℤtsɗℤɑ[lsɑ[ɥʝ fŋ§⊙ʸ fŋɑ[fŋsʝ ɗʒ⊙ Ϛteɑtsəɑ[ɥʝ ɗℤtsəʝ Ϛ⊙ɑ[ɗʝ lstsнʳ ʝʸ ɗℤ⊙ʙtste⊙stsɗℤtsɢts ɑ[fŋfŋɗʝ нtsə⊙ɗℤɑ[ʷ / ɭ teɑ[ɥʶ Ϛ ɸ . ʀ . ï ʂ . : ι нtsteɑtsəôʷ, 1969. ï 160 fŋ

116. ɭ teɑtsɗʒʝ ɗℤ§ts ʆ . ʆ ʷfŋɗℤ⊙ʸ ʈʃteɑtsнlzϚlsɑ[əɗℤtsfŋsᴵ ɥɑ[fŋstsʈʃtsteɑtsнɗℤ ⊓ ɑ[ʈʃtsɗʒʝ fŋɗℤ ⊓ ʙʳ ɥ§tsə / ʆ . ɭ teɑtsɗʒʝ ɗℤ§ts, ʆ . ʂ ɑ[ʙϚ⊙ɗℤts, ʅ . ɾ ʝteʝ ʙɑ[ɗℤtsə // ι tstslsʝ⊓ɗℤɑ[ʷ. ï 2006. ï ¯ 2. ï ʉ . 18 ï 19.

117. ɭ lzʟ'ə ɯ Ɉ . ɼ ʝʷϚ' ʟ⊙ʙ'?ɗℤ ʈʃtsϚ⊙ʟɗℤɑ[Ϛɑ[ls⊙ Ϛtsɗℤɥʝ ɗℤlste⊙ɥ'ʷ ɗℤlzϚɗʝ ʾɗℤtsəɑ[⊓ Ϛɑ[fŋɗℤtslslz ɗℤ⊙?нtsəʰ tsɗʒlz ɗʒ͡ôʷʟ' fŋʈʃɑ[ɗℤɑ[' əɗℤlzlsteʰ ɗℤ⊓ tsteɢ⊙ɗℤ⊙⊓ ʙlzɢ⊙?ɥ'ə te'ʟɗℤɑ[⊓ ɢʝ ɗℤtslsɑ[ʈʃ'ə / ɯ Ɉ . ɭ lzʟ'ə, ʅ . ɯ ʆ ⊙teɥʝ ɗℤ§ts, Ɉ . ɟ . ʊϚ⊙ɥlzϚ // ʈ tsʟəʝ нʝ ɗℤɗℤʷ ' ɢʝ ɗʝ lsɑ[Ϛ⊙ lsə⊙teɑ[ɗℤ: ɗʒ'ɣ ə'н. lsʝ ɗʒ⊙ls. ɗℤ⊙lzϚ. ʟʙ. ï ʂ . : ɸ ɢte⊙teɗℤ⊙ɗℤ⊙lzϚ⊙, 2003. ï Ɉ ɑ[ʈʃ. 37. ï ʉ . 73ï 78.

118. ɭ lzʟ'ə ɯ Ɉ . ɼ ʝʷϚ' fŋlzɥ⊙fŋɗℤ ⊙fŋʈʃʝ Ϛlsɑ[teɑtsʟəʝ нʝ ɗℤɗℤʷ ʟ⊙ ɗℤɗℤʷɗʒɑ[lz ɗʒ͡ôʷ fŋɗℤtsɗʒlz fŋ§tsls⊙teɑfŋsə' ʋ Ϛte⊙ɗℤɑ[/ ɯ Ɉ . ɭ lzʟ'ə // ʈ tsʟəʝ нʝ ɗℤɗℤʷ ' ɢʝ ɗʝ lsɑ[Ϛ⊙lsə⊙teɑ[ɗℤ: ɗʒ'ɣ ə'нtsɗʒɥɑ[? lsʝ ɗʒ⊙ls. ɗℤ⊙lzϚ. ʟʙ. Ɉ ɑ[ʈʃ. 38. ʈ tsʟəʝ нʝ ɗℤɗℤʷ fŋɗℤ fŋ Ϛtsɢtsfŋʈʃtsн⊙teɑfŋ Ϛɑ[⊓ lsə⊙teɑ[ɗℤʟ⊙ ɗℤɗℤʷɗʒɑ[: ɗʒ⊙sʝ te'⊙ɗℤɑ[lsətsteɥts' нɑ[fŋ§lzfŋ'. ï ʂ . : ɸ ɢte⊙teɗℤ⊙ɗℤ⊙lzϚ⊙, 2005. ï ʉ . ʉ . 37ï 52.

119. ɭ lzʟ'ə ɯ Ɉ . ʈ tsʟteɑtsʙϚ⊙ ɥʝ ɗℤlste⊙ɗℤʟtsə⊙ɗℤts' 'ɗℤʷ tsteɗʒ⊙ɥ'?ɗℤts-⊙ɗℤ⊙ɗℤlsɑ[ɥɗℤts' fŋɑ[fŋsʝ ɗʒɑ[ñɥ ʝ ɗℤtsʷ tsɗℤн fŋʈʃʝ ɥ'⊙ɗℤʟtsə⊙ɗℤtsɢts ɗʒʷfŋɗℤtsɢts fŋ§tsls⊙teɑfŋsə⊙ʋ Ϛte⊙ɗℤɑ[ò / ɯ Ɉ . ɭ lzʟ'ə, ɸ . ɭ . ʂ tsfŋsʶ Ϛ // Ɉ 'fŋɗℤɑ[Ϛ ʉ lzɗʒfŋ Ϛtsɢts нʝ teɣ ⊙ɗℤtsɢts ⊙ɢte⊙teɗℤtsɢts lzɗℤəʝ tefŋɑ[lsʝ lslz // ɟ ʝ tefŋʈʃʝ Ϛlsɑ[əɑ[teɑtsʟəɑ[lsϚlz fŋ§tsls⊙teɑfŋsə⊙lz lsteʝ lsᴵ tsɗʒlz lsɑ[fŋ ɥtsɗℤlsls' : ʆ 'ɣ ɗℤ⊙te ɗℤ⊙lzϚ.-ʈʃte⊙Ϛls. Ϛtsɗℤʷ. (2 - 5 ɣ tsəlsɗℤʷ, 2001 te). ʉ ʝ te çʊə⊙teɑ[ɗℤɗℤɑ[ɥlsətsè. ï lzɗʒɑ[, 2001. Ɉ ɑ[ʈʃ. 5. ï ʉ . 61 ï 65.

120. ɭ lzʟ'ə ɯ Ɉ . ʉ lzɥ⊙fŋɗℤɑ[? fŋs⊙ɗℤ, ʈʃteɑtsʙɗʝ ɗʒɑ[ls⊙ ʈʃʝ tefŋʈʃʝ Ϛlsɑ[əɑ[te⊙ɥ'tsɗℤ⊙ɗℤ ɗℤtsɢts əɑ[Ϛtsteɑ[fŋs⊙ɗℤɗℤʷ ɢʝ ɗʝ lsɑ[ɥɗℤɑ[⊓ teʝ fŋlztefŋə fŋʈʃʝ ɥ'⊙ɗℤʟtsə⊙ɗℤɑ[⊓ ɗʒ͡ôʷ fŋɗℤɑ[⊓ ʈʃtste'н əʝ ɗℤɑ[Ϛts' teɑtsɢ⊙sts' ⊓lzнtsʙɑ[ə ʋ Ϛte⊙ɗℤɑ[/ ɯ Ɉ . ɭ lzʟ'ə // ʈ tsʟəʝ нʝ ɗℤɗℤʷ ' ɢʝ ɗʝ lsɑ[Ϛ⊙ lsə⊙teɑ[ɗℤ: ɗʒ'ɣ ə'н. lsʝ ɗʒ⊙ls. ɗℤ⊙lzϚ. ʟʙ. ï ʂ . : ɸ ɢte⊙teɗℤ⊙ɗℤ⊙lzϚ⊙, 2003. ï Ɉ ɑ[ʈʃ. 37. ï ʉ . 58ï 65.

121. ɭ lzɗʒʝ ɗℤɗℤɑ[? Ɉ . ɟ tsteɑtsнɗℤ ə'нɗʒ'ɗℤɗℤtsfŋs' əʝ ɗℤɑ[Ϛts' teɑtsɢ⊙sts' ⊓lzнtsʙɑ[ʟ⊙ ɗʒ͡ôʷ fŋɗℤtsʶ ʈʃteɑtsнlzϚlsɑ[əɗℤfŋsʶ / Ɉ . ɭ lzɗʒʝ ɗℤɗℤɑ[? // ʊə⊙teɑ[ɗℤɗℤɑ[ɥlsəts ʋ Ϛte⊙ɗℤɑ[. ï 2010. ï ¯ 10. ï C. 12ï 15.

122. ɭ lzʷ te'? ɼ . ʌ . ɼ ɑ[ɗℤ⊙ɗʒ'Ϛ⊙ʈʃtsϚ⊙ʟɗℤɑ[Ϛ'ə əlzɢ'ɗʝ ətsнɗℤtsɢts tsʙɗʒ'ɗℤlz Ϛteɑtsə' ɗʒtsɗℤtsнɗℤʷϚlz ətsɗℤɑ[ɗℤfŋ Ϛts' ɗʒ͡ôʷ fŋɗℤts' ʈʃtsteɑtsнɑ[/ ɼ . ʌ . ɭ lzʷ te'?, ʆ . ι . ɟ ⊙fŋ§⊙, ʆ . ɭ . ʆ ɑ[ɥlzϚ // ʅ ⊙lzϚtsəɑ[? ə'fŋɗℤɑ[Ϛ ʆ ᴵ ə'əfŋ Ϛtsɢts ɗℤ⊙ɥ'tsɗℤ⊙ɗℤ ɗℤtsɢts lzɗℤəʝ tefŋɑ[lsʝ lslz əʝ lsʝ teɑ[ɗℤ⊙teɗℤts' ɗʝ нɑ[ɥɑ[ɗℤɑ[ls⊙

ʙʻtslʝ⁼ʤtsʤtsɢʻ˒ ʻʤʝʤ ʉ. ɿ. ɻɣʠʯˡ ʢtsɢts. ï ʃ ˡ ɘʻɘ, 2013. ī ʊ. 15, ¯ 1, ʏ. 1. ī ʉ. 291ī 295.

123. ɼ Ɵʤʠʤɘfŋʢʠʔ ʆ. ɻtsfŋʄtsʜƟʈfŋʢts-ʢtsʈʠfŋʤ tsʟʤƟʢʠ ʤʒ̂ʷfŋʤts˒ ⁼ʫʜtsʙʠ ɘ ʫʤʒtsɘƟ⁼ ʏʝʈʤʑɢʻɘʰ ʠʤʠ / ʆ. ɼ Ɵʤʠʤɘfŋʢʠʔ, Ʒ . ɪ Ɵɥʤʒ·Ɵʤ// ʊɘƟʈʠʤʤʠɥlsɘts ʊ ʢʈƟʼʤʠ. ī 2004. ī ¯ 11. ī ʉ. 17ī 18.

124. ɼ Ɵʤʠʤɘfŋʢʠʔ ʆ. ʆ ∂ʷfŋʤ fŋʢtslsƟʈfŋlsɘts ʏʝʈʤʑɢʻɘʰ ʠʤʠ / ʆ. ɼ Ɵʤʠʤɘfŋʢʠʔ, ʆ. ɿ Ɵʢʈʝɘfŋʢʠʔ, Ʒ . ɪ Ɵɥʤʒ·Ɵʤ// ʊɘƟʈʠʤʤʠɥlsɘts ʊ ʢʈƟʼʤʠ. ī 2005. ī ¯ 9. ī ʉ. 6ī 7.

125. ɼ Ɵʤʢʝɘʠɥ Ɉ. ɭ. ʉlsƟʤ lsƟ ʈʝʈfŋʈʝʢlsʠɘʠ ʈtsʟɘʠlsʢʫ ɢƟʤʟʻ ʤʒ̂ʷfŋʤtsɢts fŋʢtslsƟʈfŋlsɘƟ / Ɉ. ɭ. ɼ Ɵʤʢʝɘʠɥ // Ɉʻfŋʤʢ ɼ ʠlstsʤʒʈfŋʢtsɢts ʤƟɥʻtsʤƟʤ ʤtsɢts Ɵʈʈtsʝʢtsʤtsɢʻɥʤtsɢts ʫʤɘʝʈfŋʠlsʝlsʫ. ï 2010. ï Ɉ ʠʈ. 2. ï C. 239ï 248.

126. ɼ ʝʔʤʢts ɩ. ʃ. ɸ ʜƟʃlsƟɥʠtsʤʤ ʝ ʈʝƟʢɥʠʠ fŋʠʤʈƟlstsƟʜʈʝ ʤƟʤtsɘtsʔ fŋʠfŋlsʝʤʒ ʫ ʢtsʈʈsɘ ɘ ʟƟɘʠfŋʠʤʒfŋlsʠ tsls ɘtsʟʈƟfŋlsƟ fŋlsƟʜʠʠ ʤƟʢlsƟɥʠʠ : Ɵɘlsʈʝʷ. ʜʠfŋ ʤƟ fŋlsʠfŋʢƟʤʠʝ ʫɥʝʤtsʔ fŋlsʝʈʝʤʠʢƟʤʜ. fŋ-x. ʤƟʫʢ: 03.00.13 / ɩ. ʃ. ɼ ʝʔʤʢts. ï ɼ ʫʙʈʈtsɘʠɥʳ, 1998. ï 15 fŋ

127. ɼ ʝʢʤƟʈƟɥʻʔʤʠʔ ʈƟlsʝʤls ʊ ʢʈƟʼʤʠ ʤƟʢtsʈʠfŋʤʫ ʤʒtsʜʝʤ ¯ 16028, ʆ ɟ ʂ ɸ 61 Ɉ 5 / 0476. ʉʈʈtsfŋʙ ɘʠʟʤƟɥʝʤʤʷ lsʠʈtsʤtsɢʻɥʤʠ⁼ tsfŋlsʙʤʠɘtsfŋlsʝʔ ɘʠʰ ts˒ ʤʝʈɘtsɘts˒ ʜʻʷʤ ʤtsfŋls˒ ɘʝʤʠʢts˒ ʈtsɢƟlsts˒ ⁼ʫʜtsʙʠ / ʂ tsfŋlsʝʤʢts Ɉ. ʆ ., ʂ Ɵʈʃtsɘfŋʢʠʔ Ɉ. ɯ, ʊʈtsʢtsʟ Ɉ. ʆ ., ʂ ʈʠɘtsʈʤɥʢts ɼ. ɯ, ɸ ʟƟʈ̂ʻɘ Ɉ. Ɉ. : ʈƟlsʝʤlstsɘʤƟfŋʤʠʢ ɩ ƟɥʻtsʤƟʤ ʤʠʔ ƟʈƟʈʤʠʔ ʫʤɘʝʈfŋʠlsʝ ls ï ¯ ʋ 2006 01168. ï ʟƟʸɘʤ 15.02.06 ; tsʈʫʙʤ 17.07.06, ɪ ʶ ʤ ¯ 7.

128. ɼ ʝʢʤƟʈƟɥʻʔʤʠʔ ʈƟlsʝʤls ʊ ʢʈƟʼʤʠ ʤƟʢtsʈʠfŋʤʫ ʤʒtsʜʝʤ ¯ 16138, ʆ ɟ ʂ ɸ 61 Ɉ 5/16. ʉʈʈtsfŋʙ tsɥʻʤʢʠ ɘʤƟfŋlsʠɘtsfŋlsʝʔ ʤʝʈɘtsɘʠ⁼ ʈʈtsɥʝfŋɘ ʫ ɘʝʤʠʢts˒ ʈtsɢƟlsts˒ ⁼ʫʜtsʙʠ / ɸ ʟƟʈ̂ʻɘ Ɉ. Ɉ ., ʂ Ɵʈʃtsɘfŋʢʠʔ Ɉ. ɯ, ʊʈtsʢtsʟ Ɉ. ʆ ., ʂ tsfŋlsʝʤʢts Ɉ. ʆ ., ʂ ʈʠɘtsʈʤɥʢts ɼ. ɯ: ʈƟlsʝʤlstsɘʤƟfŋʤʠʢ ɩ ƟɥʻtsʤƟʤ ʤʠʔ ƟʈƟʈʤʠʔ ʫʤɘʝʈfŋʠlsʝ ls ï ¯ ʋ20060 2200. ï ʟƟʸɘʤ 28. 02. 06 ; tsʈʫʙʤ 17. 07. 06, ɪ ʶ ʤ ¯ 7.

129. ɼ ʝʤʒɥʝʤʢts Ɉ. Ʒ . Ɉ ʤʠʷʤʠʝ fŋlsʈʝ fŋfŋlsɘʳ ⁼ fŋʠlsʫƟɥʠʔ ʤƟ tslsʢtsʈʤʒ ʢʈʤʈʤtsɢts ʈtsɢƟlstsɢts fŋʢtslsƟ fŋʈƟʟʤʠɥʤ ʤʒʠ lsʠʈƟʤʒʠ ʤʝʈɘʤtsʔ ʜʝʷlsʝʤ ʤtsfŋlsʠ / Ɉ. Ʒ . ɼ ʝʤʒɥʝʤʢts, ɻ. ʀ. ʆ Ɵʤʒlsɥʝʤʢts // ʊʝʟʠfŋ ʜtsʢʤƟʜtsɘ ʈʝfŋʈʫʙʤʠʢƟʤfŋʢtsʔ ʤƟʫɥʤts-ʈʈƟʢlsʠɥʝfŋʢtsʔ ʢtsʤʷʝʈʝʤʌʠʠ "Ɉ ʝlsʝʈʠʤƟʈʤ ʝ ʈʈtsʙʤʝʤʒ ʈʈtsʤʒ ʰ ʤʝʤʤtsɢts ʏʠɘtslsʤtsɘtsʜfŋlsɘƟ". ï ɪ ʝʤƟʸ ʌʝʈʢtsɘˡ, 1985. ï ʏ. 2. ï ʉ. 23ï 24.

130. ɼ ʝʤʒɥʫʢ ʆ. ɟ. Ɉ ʠʢtsʈʠfŋlsƟʤʤʷ ʻʤʒʈtsʈʤtsɘƟʤts˒ ⁼ʫʜtsʙʠ ɘ ʫʤʒtsɘƟ⁼ ʈʻɘʜʤʷ ʊ ʢʈƟʼʤʠ / ʆ. ɟ. ɼ ʝʤʒɥʫʢ // ɩ Ɵʫʢtsɘʠʔ ɘʻfŋʤʢ ʃ ˡ ɘʻɘfŋʢts˒ ʜʝʈɣƟɘʤts˒ ƟʢƟʜʝʤʒ˒ ɘʝlsʝʈʠʤƟʈʤts˒ ʤʝʜʠɥʠʤʠ ʻʤʝʤ ʉ. ɿ. ɻɣʠʯˡ ʢtsɢts. ī ʃ ˡ ɘʻɘ, 2002. ī ʊ. 4, ¯ 2, ɥ. 3. ī ʉ. 18 ī 21.

131. [illegible] // [illegible] X., 2002. [illegible]. 2, [illegible] 1. [illegible]. 250–253.

132. [illegible] // VII [illegible] ., 1986. [illegible]. 1. [illegible]. 53–54.

133. [illegible] in situ / [illegible] // [illegible], 2000. [illegible] .40–42.

134. [illegible] // [illegible] 4-[illegible] 2001. [illegible]. 1. [illegible]. 272–271.

135. [illegible] // [illegible]. 1998. [illegible] 2. [illegible]. 18–30.

136. [illegible], 2004. [illegible] 399 [illegible]

137. [illegible] // [illegible], 2000. [illegible]. 42. [illegible]. 244–245.

138. [illegible] // [illegible] ., 2000. [illegible]. 2. [illegible]. 120–121.

139. [illegible] R. R. [illegible] / R. R. [illegible] // [illegible]. 1963. [illegible] 6. [illegible] .74–76.

140. [illegible] // [illegible]

2003. ī Ɉ ɋʧ. 37 ī ɯ. 79ī 85.

141. ɼ tstatslsʳ Ş ɽ. ʃ. ɼʷj Şlsɋɘdʑfɪjs ɘɋŞtstaɋfɪjsʘdʑdʑʷ fɪjdʑŞɥʿɁdts-Ǥj dʑlsɋɥdʑɋ ʧʘtaʘdʒjlstaʿɘ ʧtaɋ lʑʜtsfɪjŞtsdʑʘdʑ dʑdʑ dʒʘʷfɪɥdʑɋ ʧtstaʿʜ / ɽ. ʃ. ɼ tstatslsʳ Ş // ʇ tatsʙdʑdʒɋ ʟtstsʿdʑjj dʑtaʾ lsʘ ɘjlsjtaɋdʑʘtadʑtsʾ dʒjʜɋɥɋdʑɋ : ʟʙ. dʑʘlʑŞ. ʧtaʘɥ / ʌʘdʑŞʿɘfɪjŞɋɁ ʟtstsɘjlsjtaɋdʑʘtadʑɋɁ ʿdʑfɪjsɋlsdʑls. ī ʍ., 2001. ī Ɉ ɋʧ. 8, ɥ. 1. ī ɯ. 87ī 89.

142. ɼ tstatsʷjjɘʘɽ. ɸ. ɻj dʑlsɋɥj fɪjŞʘʷ ʟdʑʘɥɋdʒtsfɪjs fɪjtatsɁ lʑŞtaʘɋdʑfɪjŞtsɁ ʧtstatsʜʳ / ɽ. ɸ. ɼ tstatsʷjjɘʘ // ʑ dʑʷɋ tatsʟɘɋlsŞlʑ lsɘʘtaɋdʑdʑɋɥlsɘʘ ɘ taɋdʑŞtsɘɋ lʑdʒtsɘʘ. ï ɼ dʑʧtatsʧjlstatsɘfɪjŞ, 2002. ï ɯ. 58ï 60.

143. ɼ tsɥj dʑŞts ɭ. Ɉ. ɹ ʿdʑŞtsɘɋɁ ʿ dʑʧʿʜdʑɋɁ tsʙdʒʿdʑlʑ Ştstaʿɘ ʧtaɋ ɘɋŞtstaɋfɪjsʘdʑdʑ ɘ ǤtsʜʿɘdʑjŞfɪjstadʑʜtsɘʘdʑtsʾ fɪjsʾ / ɭ. Ɉ. ɼ tsɥj dʑŞts // ɭ ʘlʑŞ.-lsjɋdʑ ʙʳ dʑ ɯdʑlslʑ ʙʿtsdʑ lsɘʘtaɋdʑ. ï 2004. ī Ɉ ɋʧ. 5, ¯ 1ī 2. ī ɯ. 14ī 17.

144. ɼ tsɥj dʑŞts ɭ. Ɉ. ʃ ʿʧʿʜdʑɋɁ ʿ ʞɋtadʑtsŞɋfɪjdʑtslsdʑɋɁ fɪjŞdʑʘʜ dʒtsdʑtsŞʘ ʧtaɋ ʟʘfɪjstsfɪjdʑɘʘdʑdʑ Şʘdʑ ɥʿʿɘɋ fɪjsdʑɁ ʞɋtadʑɋ Şɋfɪjdʑtsls ʿ ʟʘɋʰ jdʑtsǤts ʧtatslsjʾdʑdʑ / ɭ. Ɉ. ɼ tsɥj dʑŞts, Ɉ. ɻ. ɯ lstsʷdʑtsɘfɪjŞɋɁ // ɭ ʘlʑŞ.-lsjɋdʑ ʙʳ dʑ ɯdʑlslʑ ʙʿtsdʑ lsɘʘtaɋdʑʿ ɼ ɭ ɼ ʂ ɯɘjls. ʧtaʧ. lsʘŞtstadʒ ʜtsʙʘtsŞ. ī 2006. ī Ɉ ɋʧ. 7, ¯ 1ī 2. ī ɯ. 52ī 55.

145. ɼ lʑʙɋdʑɋdʑʘ ɽ. ɽ. ɸ Şlsɋɘdʑtsfɪjs ɋ ɋʟtsʷjtadʒj dʑlsdʑ Ɂ fɪjʧjŞlstaǤ fɪjdʑʧjtatsŞfɪjɋʜʜɋfɪjdʑlsʘʟʳ ʵ taɋlstatsɥɋlstsɘ / ɽ. ɽ. ɼ lʑʙɋdʑɋdʑʘ, ʃ. ɕ. ɯ ʘdʑ dʑɋŞtsɘʘ, ʃ. ʌ. ɼʷɋdʒtsɘʘ// ʃ ʘʙtstaʘlstsʿtadʑtsj ʜjdʑts. ï 1983. ï ¯ 10. ï ɯ. 30ï 33.

146. ɼ lʑʜʘtaj ɘ Ɉ. ʇ. ʅ taj ʘŞlsɋɘdʑtsfɪjsɋ ɋ taj ʟɋfɪjsj dʑlsdʑtsfɪjsɋ fɪjɋfɪjsj dʒ Ştatsɘɋ ʧtaɋ Ǥɋʧts Şfɪjɋɋ / Ɉ. ʇ. ɼ lʑʜʘtaj ɘ // ʈ j ʘŞlsɋɘdʑtsfɪjs ɋ taj ʟɋfɪjsj dʑlsdʑtsfɪjs : ʷlʑdʑʜʘdʒj dʑlsʘdʑ dʑ j ɋ ʧtaɋŞdʑʘʜdʑ j ɘtsʧtatsfɪj. ï ʂ ɋjɘ, 1987. ï ɯ. 183.

147. ɼ lʑdʒj dʑŞts Ɉ. ɭ. ʌ lʑdʑŞ ɥɋtsdʑʘdʑ dʑʘʷ dʑ tsʜdʑtstatsʜdʑtsfɪjs Ǥʘdʒdʒʘʧtsdʑtsfɪj Ştstaʿtsɘʳ ɋ ʧtslsjdʑɥɋʘdʑtsɘ / Ɉ. ɭ. ɼ lʑdʒj dʑŞts // ɾ lʑtadʑʘdʑɘʳ fɪj jɁ dʑtaɘdʑtsɁ ʜjʷlsj dʑ dʑtsfɪjsɋ. ï 2012. ï ʊ. 62, ¯ 4. ï ɯ. 401ï 416.

148. ɼ lʑlsŞʘɈ. ʈ. ɼ Ştsdʑtsdʒʿɥdʑ ʧtsŞʘʟdʑɋŞɋ ɘɋtatsʰ lʑɘʘdʑdʑʷ ʙlʑǤʘɁɥʿɘ ʿ Şʘfɪjstaʘlsʿɘ ɘ lʑdʒtsɘʘ ʇ taɋŞʘtaʧʘlslsʷ / Ɉ. ʈ. ɼ lʑlsŞʘ, ɯ. ɻ. ʑ ʘdʑtsɘɋdʑts // ɭ ʘlʑŞtsɘɋɁ ɘʿfɪjdʑɋŞ ʃ ᴵ ɘʿɘfɪjŞtsǤts dʑʘɥʿtsdʑʘdʑ dʑtsǤts lʑdʑɘjtafɪjɋlsjlslʑ ɘjlsjtaɋdʑʘtadʑtsʾ dʒjʜɋɥɋdʑɋ lsʘ ʙʿtslsjɋdʑtsdʑtsǤʿɁ ʿdʒj dʑ ɯ.ɿ. ˆʞɋɥ Ştsǥts. ï ʃ ᴵ ɘʿɘ, 2008. ï ʊ. 10, ¯ 3, ɥ. 3. ï ɯ. 314ī 317.

149. ɼ lʑlsŞʘɈ. ʈ. ɿ ʘʙʿɁdʑʷŞtsfɪjsʿ ʙlʑǤʘɁɥʿɘ ʿ Şʘfɪjstaʘlsʿɘ lʑŞtaʘʾdʑfɪjŞtsʾ ɥtstadʑts-taʷʙtsʾ dʒtsdʑtsɥdʑtsʾ ʧtstatsʜɋ ʧtaɋ taʿʟdʑɋ fɪjʧtsfɪjsʙʘ ɘɋtatsʰ lʑɘʘdʑdʑʷ dʑʘ dʒʘʷfɪjs / Ɉ. ʈ. ɼ lʑlsŞʘ,

ʉ . ʇ . ʐ ʘʤʦʦɘɋʠʤʦ // ʉ ʽʣ ʄɲ ʢɋʔ ɢʦʄʧʃʦʜʘɕ ï 2006. ï ¯ 1ï 2. ï ʉ . 21ï 23.

150. ɼ ʑʪʢʘɪ . ʈ . ʄ ʦʦʦʨʦʤʦɢʽʯʤʠʔ ʄʢʤʘʜ ʤʘʃʽɘʪʑʰ ʙʑɢʘʔɥʽɘ ʽ ʢʘʃʪʦʨʘʪʽɘ / ɪ . ʈ . ɼ ʑʪʢʘ, ʉ . ʇ . ʐ ʘʤʦɘɋʠʤʦ: ʟʙ. ʤʘʑʢ. ʧʃʦʘɼ ʍʘʤʢʽɘʄɲ ʢʦʼ ʜʝʦʩ ʘɔʤʦʼ ʟʦʦɘʝ ʪʝʦʠʤʘʤʤʦʼ ʘʢʘʜʝʤʒʼ. ï ʍ., 2008. ï ɪ ɋʧ. 16, ʯ 1. ï ʉ . 51ï 54.

151. ɼ ʑʪʢʘɪ . ʈ . ʍʽʤʒʯʤʠʔ ʄʢʤʘʜ ʽ ʝ ʤʤʦɢʝ ʪʠʯʤʘʯʽʤʤʄʪʃ ʤɞʷʄʘʢʘʄʪʦʦɘʘʤʠ⁼ ʽ ʤʤʢʘʄʪʦʦɘʘʤʠ⁼ ʙʑɢʘʔɥʽɘ / ɪ . ʈ . ɼ ʑʪʢʘ // ʅ ʘʑʢʦɘɋʔ ɘʽʄʤʠʢ ʃʼ ɘʽɘʄɲ ʢʦɢʦ ʤʘɥʽʦʤʘʤʤʦʦɢʦ ʑʤʦɘʝ ʦʄʠʪʝʪʑ ɘʝʪʝʦʠʤʘʤʤʦʼ ʤʝʜʠʯʠʤʠ ʪʘʙʽʦʪʝ⁼ʤʦʤʦɢʽʔ ʽʤʝʤ ʉ .ʅ . ˆʯ ɋʯʃ ʢʦɢʦ. ï ʃʼ ɘʽɘ, 2008. ï ʊ . 10, ¯ 2, ʯ 5. ï ʉ .56ï 58.

152. ɼ ʑʪʢʘɪ .ʈ . ʉ ʦʦʤʦʦɘɋʔ ʄʢʤʘʜ ʤʘʃʽɘʪʑʰ ʙʑɢʘʔɥʽɘ ʽ ʢʘʃʪʦʨʘʪʽɘ / ɪ . ʈ . ɼ ʑʪʢʘ, ʉ . ʇ . ʐ ʘʤʦɘɋʠʤʦ // ʅ ʘʑʢʦɘɋʔ ɘʽʄʤʠʢ ʄ ɋʢʦʤʘɘʄɲ ʢʦɢʦ ʜʝʦʩ ʘɔʤʦɢʦ ʘɢʦʘʤʦɢʦ ʑʤʦɘʝ ʦʄʠʪʝʪʑ. ï ʄ ɋʢʦʤʘɘ, 2008. ï ʉ . 50ï 54.

153. ʈ ʧɋʷ ʘʤʦɘ ʇ . ɪ ʳ ʄʦʢʦʅ ʤʝʦɢʝ ʪʠʯʝ ʄʢɋʝ ʢʦʦʤʒʦɘʳ ʝ ʜʦʙʘʢɋ ʧʦɋ ɘʳ ʦʘ ɋɘʘʤʠɋ ʪʝʤʷʪ / ʇ . ʈ ʧɋʷ ʘʤʦɘ, ʅ . ɼ ʟʶ ʙʘ// ʄ ʦʤʦʯʤʦʝ ɋ ʤʒʷʄʠʤʦʝ ʄʢʦʪʦʦɘʦʜʄʪʦʦ. ï 1998. ï ¯ 6ï 7.ï ʉ . 4ï 8.

154. ʈ ʦʝ ʤʝ ʤʢʦ ɪ . ʄ ɘʷʄʠʤʑ ʧʦʦʦʜɋ ⁼ʑʜʦʙɋ / ɪ . ʈ ʦʝ ʤʝ ʤʢʦ // ʈ ʷ ʝ ʢʪɋɘʤʤ ʪɘʘʤɋʤʤʠɋʯʪɘʦ. ï 2006. ï ¯ 6. ï ʉ . 20ï 25.

155. ʈ ʦʸ ʤʝ ʤʢʦ ɪ . ʉ ʦɘʝ ʦʰ ʝ ʤʄʪʦɘʦʘʠɋʝ ʤʒʷʄʠʤʑ ⁼ ʧʦʦʦʜ ʄʢʦʪʘ / ɪ . ʈ ʦʸ ʤʝ ʤʢʦ, ɸ . ʅ ʝ ʤʝ ʧʑ⁼ɋʤʑ// ʄ ʦʤʦʯʤʦʝ ɋ ʤʒʷʄʠʤʦʝ ʄʢʦʪʦʦɘʦʜʄʪʦɘʦ. ï 2005. ï ¯ 6. ï ʉ . 17ï 19.

156. ʈ ʦɋʤʒʙʝ ʪʦɘ ʂ . ʊ . ʄ ʷʄʠʤʘʸ ʧʦʜʑʢʪɋɘʤʦʄʪʃ ʙʳ ʯʢʦɘ ⁼ʦʤʤʒʦɢʦʦʄʢʦʔ ɋ ɢʝ ʦʝ ʷ ʦʦʄʢʦʔ ʧʦʦʦʜ / ʂ . ʊ . ʈ ʦɋʤʒʙʝ ʪʦɘ, ɪ . ʇ . ʇ ʘʤʦʯʢɋʤʘ// ʅ ʦʦʪʝ⁼ʤʠʷ. ï 2005. ï ¯ 8. ï ʉ . 21ï 22.

157. ʈ ʷ ʝ ʢʪɋɘʤʘʢʦʦʤʒʦɘʘʜʦʙʘʢʘʜʤʷ ʦʘʯʽʦʤɘ ʧʦʦʦʄʠʤʠ⁼ ʄʦɋʤʦʤʒʘʦʢ / ɪ . ɪ . ʉ ʤʪɋʤʄɲ ʢɋʔ, ʉ . ʃ . ɪ ʦɘʢ, ʉ . ʗ . ʇ ʘʢʦɘɋʯ, ɪ . ɪ . ʇ ʘʤ ʢʦɘʄɲ ʢɋʔ // ɪ ʯʝ ʤ ʃʼ ɘʽɘʄɲ ʢʦɢʦ ʜʝʦʩ ʘɔʤʦɢʦ ʘɢʦʘʤʦɢʦ ʑʤʦɘʝ ʦʄʠʪʝʪʑ ɘɋʦʦʙʤʠʯʪɘʑ. ï ʃʼ ɘʽɘ, 2009. ï ɪ ɋʧ. 7. ï ʉ . 4.

158. ʈ ʷ ʝ ʢʪɋɘʤʄʪʃ ɘʧʤʠɋɘʑ ʷʦʄʷʘʪʑ ʤʒʘɢʤʶ -ʯɋʤʢʑ ʤʘ ʜʝ ʷʢʽ ʧʦʢʘʟʤʠʢɋ ʙʽʤʢʦɘʦɢʦ ʦʙʤʒʽʤʑ ʢʦʦʽɘ ʦʽʟʠʤ⁼ ʪɋʧʽɘ ɘɋʰ ʦʼ ʤʝʦɘʦʼ ʜʽʷʤʤʠʄʪʃʽ / ɪ . ɯ ʂ ʘʠʧʦɘʄɲ ʢɋʔ, ʅ . ʄ . ɸ ʤʪʦʘʧʯʝɘʘ, ɼ . ɯ ʂ ʦɋʘʦʦʤʑʯʢʦ [ʪʘ ʽʤ]// V ʄ ʽʯ ʤʘʤʦʜʤʠʔ ʂ ʦʤʤʦʝ ʄɲ ʄʧʝ ʯʽʘʤʄʪʃʽɘ ɘʝ ʪʝ ʦʠʤʘʤʤʦʼ ʤʝʜɋʯɋʤʠ, 3ï 5 ʯʦɘʪʤʷ 2007 ʦɕ, ʤʒ ʂ ɋʼ ɘ. : ʄ ʘʪʝ ʦʽʘʠɋ ʢʦʤʠʦʝ ʄʑ. ï ʂ . : ʅ ɸ ʋ, 2007. ï ʉ . 76ï 77.

159. ʈ ʷ ʝ ʢʪɋɘʤʄʪʃ ʟɢʦʜʦɘʑɘʘʤʤʷ ʜʽʔ ʤʠɋʤʒ ʢʦʦʦɘʘʤʒ ʧʦʜɘʽʔ ʤʠ⁼ ʄʑʤʤʷ ʘʪʽɘ

[illegible] / [illegible] // [illegible], 2003. [illegible] 65. [illegible] 9–14.

160. [illegible] // [illegible] 2005. [illegible] 2. [illegible] 252–254.

161. [illegible] // [illegible] 2003. [illegible] 37. [illegible] 93–97.

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164. [illegible] // [illegible] 41 : [illegible] 75-[illegible], 2007. [illegible] 46–49.

165. [illegible] / [illegible], 1983. [illegible] 128 [illegible]

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167. [illegible] / [illegible], 2002. [illegible] 407 [illegible]

168. [illegible] // [illegible], 1991. [illegible] 69.

169. [illegible] 2001. [illegible] 17. [illegible] 44ï 48.

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172. [illegible] 2003. [illegible] 6. [illegible] 26ï 31.

173. [illegible] 2007. [illegible] 9. [illegible] 24ï 26.

174. [illegible] 2002. [illegible] 36 [illegible] 64ï 65.

175. [illegible] 1996. [illegible] 51ï 52.

176. [illegible] 1998. [illegible] 74ï 75.

177. [illegible] 1999. [illegible] 11. [illegible] 5ï 11.

178. [illegible] 1998. [illegible] 99ï 100.

179. [illegible] 2011. [illegible] 61., [illegible] 2. [illegible] 133ï 151.

180. ʀ ʟɘʝ ʢtsɘ ʆ . ɽ . ʅ ʘʃteʘdʑʝdʑʆʝ fŋdʑʢʯʆtsdʑdʑs-tʃdʑdʒdʑdʑs? teʘʙtslsʳ tʃteʆ fŋsɘʝteʰ ʝdʑfŋsɘtsɘʘdʑʆʆ ɢtsdʑsɘʝdʑʢtsɘfŋtsɢts ʟʘtsʜfŋtsɢts lsʆtʃʘfŋtslsʘlʑʢteʘʆdʑfŋts? dʒʷfŋdʑs? tʃtstetsʜʳ / ʆ . ɽ . ʀ ʟɘʝ ʢtsɘ, Ɪ . ɻ . Ɪ ʘfŋʆdʑʯ, ɸ . ʉ . ʌ tsdʒʆdʑsɘʘ// ʇ tetsʙdʑdʒʆ ʟtstsʿdʑʝdʑteʿʾ lsʘ ɘʝlsʝteʆdʑʘtedʑs ʾ dʒʝʜʆʯʆdʑʆ : ʟʙ. dʑʘlʑʢ. tʃteʘʯᴵ / ʌʘteʢʿɘfŋʢʆ? ʟtstsɘʝlsʝteʆdʑʘtedʑʆ? ʿdʑfŋsʆlslʑls. ī X., 2001. ī Ɪ ʆtʃ. 8, ʯ. 1. ī ʉ . 94ī 97.

181. ʀ dʑ ʆdʑ ɽ . ʇ . ʀ ʟlʑʯʝdʑʆʝ fŋts?fŋsɘ dʑteɘdʑs? fŋʆfŋsʝdʒ / ʀ dʑ ʆdʑ ɽ . ʇ . ï ɕ tetsfŋdʑʘdʑ : ɕ tetsfŋdʑʘfŋ. ɢtsfŋ lʑdʑls, 1978. ï 68 fŋ

182. ʀ tʃtʃtsdʑʆlstsɘʘ ʊ . Ɪ . ɸ ʜʘʃlsʘʯʆtsdʑdʑ ʝ teʝʘʢʯʆʆ fŋteʜʝʯdʑs-fŋsfŋlʑʜʆfŋsts? ʆ fŋʆdʒʃʘlstsʘʜteʝdʑʘdʑsɘts? fŋʆfŋsʝdʒʢtstetsɘ-tʃʝteɘtslsʸdʑsʢ / ʊ . Ɪ . ʀ tʃtʃtsdʑʆlstsɘʘ// ɸ ʜʘʃlsʘʯʆʷ ʆ teʝɢlʑdʑʷʯʆʷ ʷʷʆʟʆtsdʑsɢʆʯʝfŋʆ tʃtetsʯʝfŋfŋsɘ ɤʆɘtslsdʑ ɘ tsʟʷ?fŋsɘʘ fŋtʃtetsdʒ ʰ dʑdʑdʑs? lsʝdʑsdʑsɢʆʝ? : fŋ. dʑʘlʑʯ. lste. ï ʆ ., 1985. ï ʉ . 31ï 35.

183. ʀ tʃtʃtsdʑʆlstsɘʘ ʊ . Ɪ . ʀ dʑʜʆɘʆʜlʑʘdʑ dʑ ʝ ʘʜʘʃlsʘʯʆtsdʑdʑ ʝ teʝʘʢʯʆʆ ʢtstetsɘ dʑʘ ʷʷʝtedʒʘ / ʊ . Ɪ . ʀ tʃtʃtsdʑʆlstsɘʘ // ɸ ʢlslʑʘdʑ dʑ ʝ tʃtetsʙdʑdʒ ɘʝlsʝteʆdʑʘtedʑs? dʑʘlʑʢʆ: lsʝʟ. ʜtsʢdʑ ï ʆ ., 1999. ï ʉ . 127ï 129.

184. ʀ tʃtʃtsdʑʆlstsɘʘ ʊ . Ɪ . ʉ ʆdʒʃʘlsts-ʘʜteʝdʑʘdʑsɘʘʸ ʘʢlsʆɘdʑsfŋsᴵ ʢtstetsɘ tʃteʆ dʑʘʢlsʘʯʆʆ. / ʊ . Ɪ . ʀ tʃtʃtsdʑʆlstsɘʘ // VIɯɯɪ fŋfŋsᴷ ʟdʑ ? fŋʆdʒʃtsʟʆlʑdʒ tʃts ʷʷʆʟʆtsdʑsɢʆʆ ʆ ʙʆtsʆdʒʆʆ dʑʘʢlsʘʯʆʆ : lsʝʟ. ʜtsʢdʑ ï ʆ ., 1990. ï ʏ . 1. ï ʉ . 68ï 70.

185. ʀ tʃtʃtsdʑʆlstsɘʘ ʊ.Ɪ . ʊʆtʃʳ ɘʳ fŋ ʝ? dʑteɘdʑs? ʜʝʷlsʝdʑ dʑsfŋsʆ, ʆ fŋʷʟᴵ fŋ teʝʘʢlsʆɘdʑsfŋsᴵ ᴷ ʆ tʃtetsʜlʑʢlsʆɘdʑsfŋsᴵ ᴷ fŋdʑ fŋtstsʟʷ?fŋsɘʝdʑdʑ ɤʆɘtslsdʑ . ī ʆ .: ʆ ɻɸɪʆ ʆɪ ʆdʒ ʉʢteʷʙʆdʑ, 1999. ï ʉ . 63ī 69.

186. ʀ fŋsʘdʒʘdʑsɘʘ ʊ . ʉ . ʌ lʑdʑʢʯʆtsdʑʘdʑ dʑʘʸ ɢʝdʒʘlstsdʑsɢʆʷ / ʊ . ʉ . ʀ fŋsʘdʒʘdʑsɘʘ ï ʆ . : ʆ ʝʜʆʯʆdʑ, 1973. ï 300 fŋ

187. ɯʘdʑʯʆʢtsɘ Ɪ . Ʒ . ʉ lʑʯʘfŋdʑʘ ɢʝdʑʘdʑsɢʿʯdʑʘ fŋstedʑʢlslʑteʘ ʘdʑlʑfŋʢtsʾ tʃtstetsʜʆ, tʃtsʢʘʟdʑʆʢʆ tetsʟɘʆlsʢlʑ ʙlʑɢʘ?ʯʿɘ ʿ ɢʝdʑlsʆʯdʑ dʒʘteʢʝteʆ teʿʟdʑʆ ɢʝdʑʘdʑsɢʿʯdʑʆ ɢtedʑtʃ / Ɪ . Ʒ . ɯʘdʑʯʆʢtsɘ, ɻ . ʆ . ʎ ʿdʑ?ʢts // Ɪ ʿfŋdʑʆʢ ʘɢteʘtedʑsʾ dʑʘlʑʢʆ. ī 2000. ī ¯ 1. ī ʉ . 44ī 46.

188. ɯdʑfŋstedʑʢʯʿʷ ʟ ʙtsdʑlslʑɘʘdʑdʑʷ ɘʝdʑʆʢtsʾ tetsɢʘlstsʾ lʑʜtsʙʆ dʒʷfŋdʑʆ tʃtsteʿʜ. ɯdʑfŋstedʑʢʯʿʷ ʟ ɘʝʜʝdʑdʑʷ tʃdʑdʒdʑsɢts tsʙdʑʢlʑ ɘ dʒʷfŋdʑsdʑlʑ fŋtslsʘtefŋsɘʿ / ʆ -ɘts ʘɢteʘte tʃtsdʑlsʆʢʆ ʋ ʢte; ʋ ʢte ʘʢʘʜ. ʘɢteʘte dʑʘlʑʢ.; ɼ ʝteɻ . dʑʘlʑʢ.-ɘʆtetsʙ. ʢtsdʑɻ. fŋte çfŋdʑʢʯʿʷè. ī ʂ ., 2003. ī 62 fŋ

189. ʂ ʘʢʘɽ . ʇ . ʂ tstetslsʢtsʯʝtʃtsʯdʑ ʝ ɤʆtedʑ ʝ ʢʆfŋdʑlsʳ ɘ tʃʆlsʘdʑʆʆ lsʝdʑʸls / ɽ . ʇ . ʂ ʘʢʘ// ʆ tʃlsʆdʒʆʟʘʯʆʷ ʢtstedʒdʑdʑʆʷ fŋ-. ɤʆɘtslsdʑ . ī ʆ . : ɸ ɢtetstʃtetsdʒʆʟʜʘls, 1991.

ī ʉ.96ī 106.

190. ȿ ƟнϚʰ Ɉ. ʆ. Ɉ ʿʕtsɘƟнϚʤƟʓʕƟ Ɵʓʤʦʕ ʕϚfɲʤslsʤsɢts fɲʕʤƟнʑ tʃʤƟʟʓϚ ʕtɕsɘ ʿ ʿ fɲʃʝtɕʓϚ вʑɢƟʔ ɥʿɘ Ɵвʝtɕнʤ Ɵʤʑfɲʕtsʾ tʃtstɕsнϚ / Ɉ. ʆ. ȿ ƟнϚʰ // ʈ tsʟɘʝнʝʤʤʷ ʿ ɢʝʤʝlsϚʕƟ lsɘƟɕϚʤ ʤʓʏɘʿн. lsʝʤʓƟls. ʤƟʑʕ. ʟв. ï ȿ.: ʅ ƟʑʕtsɘϚʔ fɲʿls, 2003. ī Ɉ Ϛʃ. 35 ï ʉ. 55ï 59.

191. ȿ Ɵʏ ʤʑtɕƟlstsɘƟ ʆ. ʆ. ʇ tsɘʳ ʰ ʝ ʤʝ ʤʓsʤsʮʤʔ tʃtɕsнʑʕlsϚɘʤsfɲϚ ʕtstɕsɘ ɢtstɕʤʓsʤƟʑ ʤ ʤʓϚ Ϛ ʤʓϚʕtɕsˡ ʤʝ ʤʓ ʤʤsʤ ʤʓϚ нtsвƟɘʕƟʤϚ / ʆ. ʆ. ȿ Ɵʏ ʤʑtɕƟlstsɘƟ // VIɯɯɪ Ɉ fɲʝfɲsᴮ ʟʳ ʔ fɲϚʤʃtsʟϚʑʤʓ tʃts ʬϚʟϚtsʤsɢϚϚ Ϛ вϚtsʭϚʤʓϚϚ ʤƟʕlsƟɥϚϚ : lsʝʟ. нtsʕʤ ï ʆ., 1990. ï ʏ. ɯɪï ʉ. 75ï 76.

192. ȿ ƟʤϚʤƟ ɸ. ɯʤlsʝʤfɲϚɘʤʝ ɘϚtɕsʰ ʑɘƟʤʤʷ tɕʝʤʓsʤsʤϚʭ вʑɢƟʔ ɥʿɘ fɲϚʤʓʝʤsƟʑ fɲʕtsʾ ʤʓʷfɲʤsʾ tʃtstɕsнϚ ƟʤʓtɕϚʕ Ɵʤʑfɲʕtsʾ fɲʝʤʝʕɥʿʾ ɘ ʑʤʓsɘƟʭ tʃʝtɕʝнɢʿtɕʷ ȿ ƟɕʃƟls / ɸ. ȿ ƟʤϚʤƟ// ʊɘƟɕϚʤʤϚɥlsɘts ʋ ʕtɕƟʾʤϚ. ī 2003. ī ¯ 11. ī ʉ. 19ī 20.

193. ȿ ƟʤϚʤƟ ɸ. ȿ. ʆ ʚʷfɲʤƟ tʃtɕsнʑʕlsϚɘʤfɲsˡ ʤʓsʤsнʤʷʕʑ ɘʝʤϚʕtsʾ tɕsɢƟlstsʾ ʭʑнtsвϚ ʟƟfɲʝtɕʝнʤtsɢts tɕʿɘʤʷ ɢtsнʿɘʤ / ɸ. ȿ ƟʤϚʤƟ// ʊɘƟɕϚʤʤϚɥlsɘts ʋ ʕtɕƟʾʤϚ. ï 2004. ï ¯ 6. ï C. 29ï 30.

194. ȿ ƟʤϚʤƟ ɸ. ȿ. ʆ ʚʷfɲʤƟ tʃtɕsнʑʕlsϚɘʤfɲsˡ ʤʓsʤsнʤʷʕʑ ʤʓʚʷfɲʤsʾ ʭʑнtsвϚ ʟ ɘϚʕtstɕϚfɲsƟʤʤʷʤʓ ɥʝtsʤlstsɘϚʭ ʤʓʤʝtɕƟʤ ʤϚʭ нtsвtɕϚɘ / ɸ. ȿ ƟʤϚʤƟ, Ɉ. ȿʝвʕts // ʊɘƟɕϚʤʤϚɥlsɘts ʋ ʕtɕƟʾʤϚ. ï 2004. ï ¯ 5. ï C. 30.

195. ȿ ƟʤϚʤƟ ɸ. ȿ. ʆ ʚʷfɲʤϚʔ fɲϚʤʓʝʤsƟʑнʤʷ tʃʝtɕʝнɢʿtɕʚʷ ȿ ƟɕʃƟls / ɸ. ȿ ƟʤϚʤƟ, ʖ. ʇtsʤsʭtstɕϚʤfɲʕϚʔ, ʉ. ʆ Ɵʕtsɘʿʔ ɥʑʕ // ɸ ɢtɕƟɕʤϚʔ lsϚʏнʝʤ. ï 2012. ï ¯ 32. ï C.12ï 13.

196. ȿ ƟʤϚʤƟɸ. ȿ. ʌ tstɕʤʑɘƟʤʤʷ fɲsƟн ʤʓʚʷfɲʤsɢts ʕtsʤʓsʤsɢts fɲϚʤʓʝʤsƟʤƟ/ ɸ. ȿ. ȿ ƟʤϚʤƟ, ʃ. Ɉ. ʑ tʃƟʕ, ʖ. Ɉ. Ɉ нtsɘϚɥʝʤts // Ɉ ʿfɲʤϚʕ ƟɢtɕƟɕʤʾ ʤƟʑʕϚ. ï 2011. ï ¯ 8. ï C. 34ï 38.

197. ȿ ƟʤϚʤƟ ʃ. ʅ. ʈ ʕtsʤsʤʓʿɥʤƟ ʝʷʝʕlsϚɘʤfɲsˡ ɘϚtɕsʰ ʑɘƟʤʤʷ ʤʓsʤsнʤʷʕʑ ɘʝʤϚʕtsʾ tɕsɢƟlstsʾ ʭʑнtsвϚ ʤʓʚʷfɲʤsɢts ʤƟʃtɕʷʤʕʑ tʃtɕsнʑʕlsϚɘʤsfɲsʿ ʟ ɘϚʕtstɕϚfɲsƟʤʤʷʤʓ tʃƟfɲsɘϚʰ ɘ ʑʤʓsɘƟʭ tʃʝtɕʝнɢʿtɕʚʷ ȿ ƟɕʃƟls / ʃ. ʅ. ȿ ƟʤϚʤƟ, ɸ. ȿ. ȿ ƟʤϚʤƟ // ɪ ʿtsʤsʤsɢʿɥʤ ʿ lsʝʭʤsʤsɢʿɥʤ ƟfɲʃʝʕlsϚ ɘϚtɕsвʤϚɥlsɘƟ lsƟ tʃʝtɕʝtɕsвʕϚ tʃtɕsнʑʕɥʿʾ lsɘƟɕϚʤʤϚɥlsɘƟɘ ʕtsʤlsʝʕfɲsʿ ʿɘtɕsʿʤlsʝ ɢtɕƟɥʿʾ. ï ȿ., 2009. ï C. 58ï 59.

198. ȿ Ɵʤвʑtɕ ʆ. ʈ. Ɉ ϚʕtstɕϚfɲsƟʤʤʷ ʤʓsʤsʮʤsᴮ ʟƟʤsʟtsᴮ tʃtsʃʝtɕʝнʤϚʕʿɘ ʤʓsʤsʕƟ ʤƟ tʃʝtɕʰ ʿʔ fɲsƟнʿʾ ʤƟʕlsƟɥʿʾ ʟƟ tstʃlsϚʤʓƟʑ ʤϚʭ ʑʤʓsɘ ʟƟвʝʟtʃʝɥʝʤsfɲsʿ tstɕɢƟʤʟʤʑ tʃtsʏϚɘʤϚʤʓϚ tɕʝɥtsɘϚʤƟʤʓϚ / ʆ. ʈ. ȿ Ɵʤвʑtɕ // ʅ Ɵʑʕtsɘts-lsʝʭʤʥɥʤϚʔ вᴮ ʤʝlsʝʤ ʿʤfɲsϚlsʑlsʑ

ʙʻtsdztsɢʻ̓ lsɘΘtecʃdz ï ʃ ᴶ ɘʻɘ., 2008. ï Ɉ ɖʧ.9, ¯ 3 ï ʉ. 57ï 61.

199. ʂ Θdʒ ʰ dʑʃʢtsɘ Ɉ . ʉ . ʉʧteΘɔtsʮdʑʃʢ ʧts ʢdzʃdʑʃʢts-ʙɖtsʭɖdʒʃʯʝ fɧtsʡ dzΘʙtsteΘtstsdzts ʡ ʜɖΘdztsfɲlsɖʢʝ / Ɉ . ʉ . ʂ Θdʒ ʰ dʑʃʢtsɘ. ï ʃ ɖdʑʃɧ : ᴊ ʝ dzΘdzfɲ, 2000. ï ʊ. 1. ï 494 fɲ

200. ʂ Θdʑʝ ɘ ʉ . ɼ . ʈ tsfɲls, teΘʟɘɖlsɖʝ ɖ dʒʷfɲdzΘʸ ʧtetsʜdzʢlsɖɘdztsfɲls ʙʳ ʮʢtsɘ-ʢΘfɲlsteΘlstsɘ ʢteΘfɲdzts ʡ fɲlsʝʧdzts ʡ ɖ fɲɖdʒdʒʝ dzlsΘdz fɧtsʡ ʧtstetsʜ ʧteɖ teΘʟdzɖʮdz ʭ lsʝ ʭdztsdztsɢɖʷʭ ɘʳ teΘ ɖɘΘdzʃʷ / ʉ . ɼ . ʂ Θdʑʝ ɘ // ɼ ʷʝ ʢlsɖɘdʑ lsɘΘtecʃdzdzʃʮlsɘts. ï 2008. ï ¯ 4. ï ʉ. 42ï 46.

201. ʂ ΘdzʜɖʙΘ Ɉ . ʃ . ɼ ʷʝ ʢlsɖɘdzfɲls ɘɖʢtsteɖfɲlsΘdzdzʸ ʢtstedʒɘ ʙɖʮʢΘdʒɖ ɘtsdzɖdzfɲ ʢtsʼ ʧtstetsʜɖ ʧteɖ teʻʟdzʡ ʢtsdzʝ dzlsteΘʮʻ̓ ʝ dʑ teɢʻ̓ ɘ fɲdzʭʻʡ teʝ ʮtsɘɖdz / Ɉ . ʃ . ʂ ΘdzʜɖʙΘ, Ɉ . ʃ . ʂ tsdzʷɢΘ // ʐ dzʭɖ ʧʻʜɘɖʰ ʝ dzdzʷ ʝ ʷʝ ʢlsɖɘdztsfɲlsʻ ɘɖʢtsteɖfɲlsΘdzdzʸ ʢtstedʒɘ : dʒΘlsʝ te. dzΘdzʢ.- ʧteΘʢls. ʢtsdzʷ. / uddfɲlsɖlsdzls lsɘΘtecʃdzdzʃʮlsɘΘ ï X., 1998. ï ʉ. 65ï 66.

202. ʂ ΘdzʜɖʙΘ Ɉ . ʃ . ʈ ʝ ΘdzʟΘʮʻʷ dʒʷfɲdztsɢts ʧtslsʝ dzʝʻΘdz ʙɖʮʢʻɘ ɘtsdzɖdzfɲ ʢtsʼ ʧtstetsʜɖ ʧteɖ ɘɖtetsʰ dzɘΘdzdz dzΘteΘʮʻtsdzΘʭ teʻʟdztsʼ ʝ dʑ tetsdzΘfɲɖʮʝ dztsfɲlsʻ / Ɉ . ʃ . ʂ ΘdzʜɖʙΘ, Ɉ . ʃ . ʂ tsdzʷɢΘ, ʊ. ʉ . ɽ dʑts // ɿ ʙʻtedzʃʢ dzΘdzʢtsɘɖʭ ʧteΘʮᴵ : uddfɲlsɖlsdzls lsɘΘtecʃdzdzʃʮlsɘΘ ï X., 1995. ï ʉ. 97ï 106.

203. ʂ Θʃɖdʑ ɘɖʮ ʃ . Ɉ . ʌ ɖʟɖtsdztsɢɖʮʝ fɧɖʝ tsfɲlsʙʝ dzdztsfɲlsɖ ɢdzΘʜʢɖʭ dʒ ʰ ʮ fɲlsfɲdzʜtsɘ dʒΘdztsɢts ʢtedzɢΘ ʢtetsɘtstsʙteΘ ʝ dʑʃʷ / ʃ . Ɉ . ʂ Θʃɖdʑ ɘɖʮ, ɸ . Ɉ . ʅ tsfɲΘteʝ ɘ, ʀ . Ɉ . ʂ tsɘΘdʑ ɘ // ʋ fɲʃʝ ʭɖ ʷɖʟɖtsdz dzΘdzʢ. ï 2000. ï ʊ. 37, ¯ 1. ï ʉ.17ï 49.

204. ʂ ΘteΘfɲʃʢ Ʒ . ʃ . ʇ tsdzʰ lsɖdzʃʟΘʮɖʷ dʒtsdztsʮdztsɢts fɧtslsΘ ɖ ɘʳ teΘ ɖɘΘdzʃʝ ɘʳ fɲlsʢtsʮʝ dzdz ʭ ʙʳ ʢtsɘ dzΘʋ ʢteΘʃdʑ / Ʒ . ʃ . ʂ ΘteΘfɲʃʢ, Ɉ . ʃ . ʉ ʝ tetsʢdztetsɘ // ɿ tstslsʝ ʭdzʃʷ. ï 1991. ï ¯ 3. ï ʉ. 2ï 8.

205. ʂ ΘteʃtsɘΘ ʆ . ɸ ʜΘʃlsɖɘdz ʡ ʧtsʜʭtsʜ ʢ ɖfɲʧtsdzʟtsɘΘdzʃᴷ fɲɖdʒdʒʝ dzlsΘdztsɘ ɘ ɟ tsɘtsdzʅ ᴶ ʝ / ʆ . ʂ ΘteʃtsɘΘ, ɼ . ɸ dzʃfɲɖdʒtsɘΘ// ɿ tstslsʝ ʭdzʃʷ. ï 2005. ï ¯ 1. ï ʉ. 17 ï 18.

206. ʂ Θteʃtsɘfɲʢɖʡ Ɉ . ɯ ɸ ʢlsɖɘdzfɲls ΘdʒdztslsteΘdzfɲʷ ʝ teΘ ʟ dz fɲɖtetsɘΘlsʮʻ ʢtetsɘʻ ʢtsteʻɘ ʟΘdʑ ʞ dzts ɘʻʜ lsɖʧdz ɘɖʰ tsʼ dʑ teɘtsɘtsʼ ʜʻʷdz dztsfɲlsʻ / Ɉ . ɯ ʂ Θteʃtsɘfɲʢɖʡ, Ɉ . ʃ . ʂ tsfɲlsʝ dʑts, ɼ . ɯ ʂ teɖɘtstedzʮʢts // ʅ Θdzʢtsɘts-lsʝ ʭdzʮdzʃʡ ʙᴷ dʑ lsʝ dz uddfɲlsɖlsdzlsdz ʙʻtsdztsɢʻ̓ lsɘΘtecʃdz ʻ ɼ ʝ teʞ Θɔdztsɢts dzΘdzʢtsɘts-ʜtsfɲdzʜdztsɢts ʢtsdzlstetsdz dztsɢts ʻdzfɲlsɖlsdzlsdz ɘʝ lsʧteʝ ʧΘteΘlsʻɘ lsΘ ʢtstedʒtsɘɖʭ ʜtsʙΘɔtsʢ. ï ʃ ᴶ ɘʻɘ, 2008. ï Ɉ ɖʧ. 9, ¯ 1ï 2. ï ʉ. 33ï 35.

207. ʂ Θteʃtsɘfɲʢɖʡ Ɉ . ɯ ʃ tsteʷtsdztsɢʻʮdz ʧtsʢΘʟdzʃʢɖ ʢtetsɘʻ fɲɔɖdʑ ʡ ʟ teʻʟdzɖdʒ lstsdzdzfɲlsdʒ Θɔlstsdztsdʒdztsʼ dʑ teɘtsɘtsʼ fɲɖfɲlsʝ dʒɖ ʟΘ dzdʒtsɘ ʟɢtsʜtsɘdzɘΘdzdzʸ dzΘdztsΘʢɘΘʭʝ dzΘlsʻɘ ʙʻtsɢʝ dzdzʃʭ dʒʝ lsΘdzɘ / Ɉ . ɯ ʂ Θteʃtsɘfɲʢɖʡ, ɼ . ɯ ʂ teɖɘtstedzʮʢts, ɟ . Ɉ . ʂ Θteʃtsɘfɲʢɖʡ // ʅ Θdzʢtsɘɖʡ ɘʻfɲdzʃʢ ʅ Θʮʻtsdzʃdz dztsɢts dzdzɘʝ tefɲɖlsʝ lsdz ʙʻtsteʝ fɲdzʈfɲɔ ʻ ʧteɖtetsʜtsʢtsteɖfɲlsdzɘΘdzdzʸ

υ ʕteϴ̀dɀ[: LB. dɀϴɫʕ. ʧteɑ ï ʂ . ʉʝ teɑ, Ɉ ʝ lsʝ teɑ[dɀϴadɀϴ dʒʝ Hɑʃɥɑ[dɀϴ ʷʕ ʽfɱʆ ʽ BʝLʧʝ ʕϴ ʧtetsHɫʕɥ ̓ lsəϴteɑ[dɀɀɑʃɥlsəϴ, 2013. ï Ɉ ɑʧ. 188, ¯ 1. ï C. 173ï 177.

208. ʂ ϴteʧtsəfɱ ʕɑʔ Ɉ . ɯ ʊɑʧɑ əɑʰ ts ̓ dʑteətsəts ̓ H ʽʷdɀ dɀtsfɱʆ ʽ lsϴ ədʒʽfɱʆ ə ʽdɀ dɀʃ ⸗ ϴdʒʽdɀtsʕɑfɱɖtsls ɫ ϴtelsʝ te ʽϴdɀ dɀʔ ʕtetsə ʽ / Ɉ . ɯ ʂ ϴteʧtsəfɱ ʕɑʔ // ʅ ϴɥ ʽtsdɀϴdɀ dɀtsGts ɫdɀəʝ tefɱɖlsʝ lsɫ B ʽtsteʝ fɱɫtefɱə ʽ ʧteɑteʧtsHtsʕtsteɑfɱʆɫəϴdɀdɀ υ ʕteϴ̀dɀ[. ʉʝ te ʽʷ ç əʝ lsʝ teɑ[dɀϴadɀϴ dʒʝ Hɑʃɥɑ[dɀϴ ʷʕ ʽfɱʆ ʽ BʝLʧʝ ʕϴʧtetsHɫʕɥ ̓ lsəϴteɑ[dɀɀɑʃɥlsəϴ. ï 2010. ï Ɉ ɑʧ. 151, ɥ. 1. ï ʉ. 107ï 111.

209. ʂ ϴteʧtsəfɱ ʕɑʔ Ɉ . ɯ ʌ ɫdɀʕɥ ʽtsdɀɫəϴdɀdɀ fɱɖfɱʆʝ dʒɑ[Gʝ dʒtsfɱʆϴLɫ ɫ ʕtste ʽə te ʽLdɀʃ ⸗ lsɑʧ ʽə əɑʰ ts ̓ dʑteətsəts ̓ H ʽʷdɀ dɀtsfɱʆ ʽ LϴɫdʒtSə fɱʆteʝ fɱɫ / Ɉ . ɯ ʂ ϴteʧtsəfɱ ʕɑʔ // ɹ ʽtsdɀtsG ʽʷ lsəϴteɑ[dɀ. ï ʃ ᴶ ə ʽə, 2010. ï ʊ. 12,ï ¯ 2. ï ʉ. 132ï 138.

210. ʂ ϴfɱʧ tetsə ʈ . ɕ dɀtsəɑʃɥɑ[dɀϴ ə ʽH ϴBʝ teHɑ[dɀϴdɀɫfɱə / ʈ . ʂ ϴfɱʧ ϴtetsə // ʊəϴteɑ[dɀɀɑʃɥlsəts υ ʕteϴ̀dɀ[. ï 2008. ï ¯ 1. ï ʉ. 33ï 35.

211. ʂ ϴɥɑ ɻ . ɼ . ɺ teɑɣ ɑlsls ʽəϴtsɥ ʽdɀϴʷʕtsfɱʆ ʽ ʰ ʕ ʽte ʽʷdɀts ̓ fɱɖtetsəɑdɀ[ɫ əʝ dɀʕts ̓ tetsGϴlsts ̓ ⸗ɫHtsBɑ / ɻ . ɼ . ʂ ϴɥɑ, ɸ . ʒ . ʃ ʝ HəʝH ʽə, ʒ . Ɉ . Ɉ Htsəɑʃɥʝ dɀʕts // ʈ tsLəʝ Hʝ dɀdɀ ʽ Gʝ dʑlsɑʕϴ lsəϴteɑ[dɀ: dʒʽɣ ə ʽH. lsʝ dʒϴlsdɀϴɫʕ. LB. ï ʂ . : ɸ Gteϴtedɀϴdɀɫʕϴ, 2003. ï Ɉ ɑʧ. 37. ï ʉ. 101ï 106.

212. ʂ ϴɥʳ ɻ . ɼ . R fɱʧtsdɀ Ltsəϴdɀʃʝʰʕɫteɑfɱʕtslsϴʧtsdʒʝ fɱʝʔ dʒʷfɱɖdɀ ⸗ ʧtstetsH Hdɀ ʽ əʳ teϴBtslsʕɑ ʕtsɣ / ɻ . ɼ . ʂ ϴɥʳ, R . ʊ. ɸ əteϴdʒʝ dɀʕts, R . ɻ . ʂ tsfɱʆtetsə // ʂ tsɣ ʝ ədɀts-tsBɫədɀϴ ʷ ʧtetsdʒ ʰ dʑdɀdɀtsfɱʆ ᴵ . ï 1982. ï ¯ 11. ï ʉ. 28ï 30.

213. ʂ ϴɥʳ ɻ . ɼ . ʃ ʝ lstsHʳ tsɥʝ dɀʕɑ Lϴ ɑlsdɀ ⸗ fɱɖfɱʆʝ dʒ tsteGϴdɀʃLdʒϴ dʒɑʑ ʕtsʧɑlsϴ ʰ ɑ⸗ / ʂ ϴɥʳ ɻ . ɼ ., ʂ tsᴷ Hϴʃ . R . ï ʃ ɫGϴdɀʕ, 2003. ï 95 fɱ.

214. ʂ ϴɥʝ fɱʆəts Gtsəʷ Hɑdɀ fɱɖdʒdʒʝ dɀlsϴdɀtsə dʒʷfɱɖdɀtsGts lsɑʧϴ / ʌ . ʂ ϴ dʒtsə, ʃ . ʂ ϴHʳ ʰ ʝ əϴ, ʉ. ʊᴷ dʑBϴʝ ə [ɑ Hteɑ] // ʃ tsdɀtsɥdɀtsʝ ɑ dʒʷfɱɖdɀtsʝ fɱʕtslstsətsHfɱʆəts. ï 2007. ï ¯ 6. ï ʉ. 18ï 20.

215. ʂ əϴ ϴɈ . ʃ ʹʷfɱɖdɀ ʽ LϴB ʽʔdɀ ʷʕtsfɱʆ ʽ ʧtsdʒʽfɱɖdɀʃ ⸗ ϴBʝ teHɑ[dɀϴdɀɫfɱʕɑ⸗ Bɑɥʕ ʽə ϴdʒʝ teɑʕϴdɀfɱ ʕts ̓ fɱʝ dʑʕɥ ̓ / Ɉ . ʂ əϴ ϴ, ɹ . ɻ teɑɥϴʔ, Ɉ . ʉʝ dɀ fɱ ʕɑʔ // ʊəϴteɑ[dɀɀɑʃɥlsəts υ ʕteϴ̀dɀ[. ï 2000. ï ¯ 1ï 2. ï ʉ. 25ï 26.

216. ʂ ʝ dɀdʑdɀɼ . ɼ . Ɉ dɀɑʷdɀʃʝ teϴfɱʆɑlsʝ dɀ dɀ ⸗ dʒϴfɱʝ dɀə teϴɥɑtsdʑ ɣ ɑətslsdɀ ⸗ dɀϴfɱʆfɱʆϴə dʒtsdɀtsʕϴ/ ɼ . ɼ . ʂ ʝ dɀdʑdɀ// ɽ ʷʝ ʕlsɑədʑ lsəϴteɑ[dɀɀɑʃɥlsəts. ï 2007. ï ¯ 3. ï ʉ. 50ï 53.

217. ʂ ɑəʝ dɀʕts ʃ . ʃ . Ɉ ʧdɀɑə dɀdɀʔdɀts ̓ dɀϴdʑɣ dɀtsfɱʆ ʽ dʒϴlstsɥdɀtsGts ʧtsGtsdɀəϴ̂ ʷ ʧtsdɀfɱ ʕts ̓ dʒϴ̂ ʷfɱɖdɀts ̓ ʧtstetsHɑ dɀϴə ʽHlsətstedɀ LHϴlsdɀfɱʆ ᴵ lsϴ ̓⸗ Gtsfɱʧ tsHϴtefɱ ʕʝ əɑʕtsteɑfɱʆϴdɀdɀ / ʃ . ʃ . ʂ ɑəʝ dɀʕts // ʃ ϴlsʝ te ʽϴdɀɑ ɯV ʕtsdɀʷʝ teʝ dɀɥ ̓ dʒtsdɀtsHɑ⸗ əɥʝ dɀʃ⸗ lsϴ ϴfɱʧ ʽteϴdɀls ʽə. ï

ʏ ƶʙ ɖɗʑ ɧ Ꞩ ȷ, 2006. ï ʉ. 33ï 35.

218. ʂ ɖɘȷ ɗʎ ʦ ʃ. ʄ. ɪ ʧ ɗɮ ɘ ʦʦʜ ɖɗʑʦ ʾ ɗʘɗȷ ɣ ɗʦ ɦʝʂ ʿ ɗʒʘʦ ʮɗʦɢʦ ʧ ʦɢʦɗʑɘ ɗʷ ʧʦɗʑ ɦ Ꞩʦ ʾ ɗʒ ɦʥʦ ʾ ʧʦʦʦʜɖ ɗʘ ɘ ʿʜʪɘʦʦʦ ɘʘɗʑ ɗʑ ʟʜʘʪɗʑ ɦʝʂ ʪʘ ʾ ɢʦ ɦʧʦʜʘʦ ɦ Ꞩ ȷ ɘɖ Ꞩʦʦɖ ɦʝʘɗʑ / ʃ. ʄ. ʂ ɖɘȷ ɗʎ ʦ // ʄ ʘʪȷ ʦʿʘɗɖ V Ꞩʦɗʑ ȷ ʦȷ ɗʎ ʿ ɗʒʦ ɗʦʜɖ ɘʮȷ ɗʎɖ ʪʘ ʘɦʧ ʿʦʘɗʦ ʿɘ / ʟʘʦȷ ʜ. ɪ. ɟ. ɪ ƶʦ Ꞩʘʪʘ ï ʂ. : ɸ ɢʦʘʦɗʘɗʑ Ꞩʘ, 2007. ï ʉ. 43ï 45.

219. ʂ ɖɘȷ ɗʎ ʦ ʃ. ʄ. ʃ ɦʝʂʙ ɗɖɘʦ ɦʝʂ ʿ ʬ ʦʦɗʒ ɘʘɗʑ ɗʒ ɦʥʦ ʾ ʧʦʦʜƶ Ꞩʪɖɘɗʦ ɦʝʂ ʿ ʪʘ ȷ Ꞩ ɦʝʂ ȷ ʦɘ ʦɗʎɖ ʦʟɗʘ Ꞩ ɗʒʦ ɗʦʜɗʑ Ꞩƶ ʧʦɗʑ ɦ Ꞩʦ ʾ ɗʒ ɦʥʦ ʾ ʧʦʦʦʜɖ / ʃ. ʄ. ʂ ɖɘȷ ɗʎ ʦ // ɪ ʿɦʥɗʎ Ꞩ ʘɢʦʘɗʦ ʾ ɗʘƶ Ꞩɖ. ï 2009. ï ¯ 6. ï C. 74ï 75.

220. ʂ ɖʦʜȷ ʔ ɼ. ɻ. ɼ Ꞩɦʧ ȷ ʦɖɗȷ ɗʎʘɗʑ ɗʦȷ ɖʟƶ ʮȷ ɗʎɖȷ ʧʦʦʮȷ ɦʧʦɘ ʬ ɖ Ꞩɦʘ ʮɖɖ ɖɗɗʒɗɗʑ Ꞩʦɗʒɖɗȷ Ꞩɦʦɘ ɗʘȷ ʦɖʪʦʦʮɖʪʘ ɖɗɗʒɗɗɖʟɖʦʦɘʘɗʑ ɣ ɖɘʦʪɗʑ / ɼ. ɻ. ʂ ɖʦʜȷ ʔ // ʈ ȷ ʘ Ꞩʪɖɘɗʦ ɦʝʂ ɦɖ ɦʝȷ ɗʒ Ꞩʦʦɘɖ ɖ ɦʝʂ ȷ ʜȷ ɗʎʪȷ ɗʑ ɗʦʔ ʪ Ꞩʘɗʎ ɘ ɗʦʦɗȷ ɖ ʧʦɖ ɗʘɗʑʰ ȷ ɗʎɖɖ ʬ ƶɗʎ ʮɖʔ. ï ʀ ʦ Ꞩƶʪɦ Ꞩ, 1987.ï ʉ. 63.

221. ʂ ɖɦȷ ɗʑ ʦɘ ʃ. ɹ. ʃ ʮʿɗʎ ʘ ɗʒ ɦʥɗʎ ʿ ʟʘʙ ʿʔ ɗʎ ʷ Ꞩʦɦʝȷ ʔ ʧʦɗʒ ɦʥɗʎ ʙɖʮ Ꞩ ʿɘ ɗȷ ʙ ȷ ʜɖɗʑ ɦ Ꞩʦ ʾ ʧʦʦʦʜɖ ʦʿʟɗʎ ɢȷ ɗʦʪɖʧʿɘ : ʘʪʦʦȷ ʬ. ʜɖɦ ɗʘ ʟʜʦʙƶʪʪʷ ɗʘƶ Ꞩ. ɦʝƶʧȷ ɗʑ Ꞩʘɗʑʜ. ɦ-ɢ. ɗʘƶ Ꞩ : ɦʧȷ ʮ. 06.02.04 ҫʪȷ ɗʦɗʦɢʿʷ ɘɖʦʦʙ ɗʎ ʮʪɘʘ ʧʦʦʜƶ Ꞩʪʿɘ ʪɘʘʦɖɗʎ ʮʪɘʘ ʃ. ɹ. ʂ ɖɦȷ ɗʑ ʦɘ. ï ʉ ƶɗʒɖ, 2000. ï 20 ɦ

222. ʂ ʿɗʜʷ ɪ. ɯ ʃ ʮʿɗʎ ʘʷ Ꞩʦɦʝʂ ʿ ɗʒʷ ɦʘ ʧʦɗʒ ɦʥʦɢʦ ɗʒʦɗʦʜɗʑ Ꞩʘɢȷ ʦȷ ʬ ʦʦʜɦ Ꞩʦ ʾ ʪʘ ʮȷ ʦɘʦɗʦ ʾ ɦʝȷ ʧʦɘʦ ʾ ʧʦʦʜ ʟʘ ɗȷ ʪʦʜʦɗʒ ʌ ɸ ʃ /ɪ ʃ ɿ / ɪ. ɯ ʂ ʿɗʜʷ // ɟ ȷ ʦɦʧ ȷ Ꞩʪɖɘɖ ʦʦʟɘɖʪ Ꞩƶ ɦ Ꞩʦʪʘʦɦʝɘʘƶ ʪʦȷ ʪ ʦɗʒƶ ʪɖɦʮʦɗʑʪʪʿ : ɦʧ ȷ ʮ. ɘɖʧ. ʜʦ ʄ ʿɣ ɗʘʦ ɗʘƶ Ꞩ.ī ʧʦʘ Ꞩʪ. Ꞩʦɗʑ. (2ī 5 ɣ ʦɘʪɗʑ 2001) // ɪ ʿɦʥɗʎ Ꞩ ʉ ƶɗʒɦ Ꞩʦɢʦ ʜȷ ʦɣ ʘɗʦɢʦ ʘɢʦʘɗʦɢʦ ƶɗʑɘȷ ʦɦɖʪȷ ʪƶ. ɦȷ ʦ ñʪɘʘʦɖɗʎ ʮʪɘʦò. ī ʉ ƶɗʒɖ, 2001. ī ʉ. 210ī 211.

223. ʂ ɗɖɗʎ ʮȷ ɦ Ꞩʘ ɗʘʙʦʦʘʪʦʦɗʘ ʜɖʘɗʦ ɦʝɖ Ꞩʘɘ ɘȷ ʪȷ ʦɖɗʘʦɖɖ / ʀ. ɟ. ʂ ʦɗʜʦʘɖɗ, ɭ. ɪ. ʂ ƶʦɖɗʦɘ, ɸ. ɻ. ʃ ʘɗʘʦɘ [ɖ ʜʦ] ï ʄ. : ɸ ɢʦʦʧʦʦɗʒɖʟʜʘʪ, 1985. ï 287 ɦ

224. ʂ ɗɗʑ ʮɗʑ ɗʘʙʦʦʘʪʦʦɗʑ ɗȷ ʪʦʜɖ ʜʦɦʥʜɣ ȷ ɗʑ / ɯ ʂ. ɿ ƶʧ ʘɗȷ ʮ, ɪ. ʌ. ʃ ʦɦ Ꞩʘɗȷ ɗʎ ʦ, ʉ. ɪ. ʃ ʿɦ ʦʦɘʘ[ʪʘʿɗʑ]. ï ʍ. : ɭ ʌ ɸ ʋ, 2001. ï 178 ɦ

225. ʂ ɗʷʟȷɘ ɻ. ɻ. Ꞩ Ꞩ ɻ ï Ꞩʦʦȷ ɗʑʪ ʘɢʦȷ ɦɖɘɗʦ ɦʝɖ ɖ ʪʦȷ ɘʦɣ ɗʦ ɦʝɖ ɘ ɗʒʜȷ ɗɖ ɦʝʮɖʘɗʑ ɗʑ ɘʟʘɖɗʒʜȷ ʔ ɦʝɘɖʔ / ʂ ɗʷʟȷɘ ɻ. ɻ., ɹ ʦɢʘʦɘ ɸ. ɪ., ʃ ɖʪʦʦʬ ʘɗʦɘʘ ʃ. ɻ. [ɖ ʜʦ] // ɾ ƶʦɗʘɗʑɘʳ ɦ ȷ ʔ ɗȷ ʦɘɗʦʔ ʜȷ ʷʪȷ ɗʑ ɗʦ ɦʝɖ. ï 2011. ï ʊ. 61., ¯ 6. ï ʉ. 716ï 724.

226. ʂ ʦʙɖɗʑɗʑ ɦ Ꞩʘ ɸ. ʄ. ɪ ʧ ɗɮ ɘ ʘ Ꞩʪɖɘɗʦɢʦ ʿ ʧʘɦɖɘɗʦɢʦ ɗʒʮʿʦɗƶ Ꞩʦʦʿɘ ʧʦɗʑ ɦ Ꞩʦ ʾ ɗʒ ɦʥʦ ʾ ʧʦʦʦʜɖ ɗʘ ɘ ʿʜʪɘʦʦɗƶ ʟʜʘʪɗʑ ɦʝʂ, ʦʿɦʝ ʿ ʦʦʟɘɖʪʦ Ꞩ ʪȷ ɗʷʪ ƶ

[illegible] // [illegible], 2006. ï [illegible]. 35ï 37.

227. [illegible] // [illegible], 2007. ï [illegible]. 45ï 47.

228. [illegible] : [illegible] 03.00.13 "[illegible]" // [illegible], 2006. ï 19 с.

229. [illegible] // [illegible], 2004. ï ¯ 78. ï [illegible]. 96ï 99.

230. [illegible] // [illegible], 2006. ï [illegible]. 37ï 39.

231. [illegible] // [illegible]. ï 2005. ï ¯ 8. ï [illegible]. 12ï 14.

232. [illegible] // [illegible]. ï 2013. ï [illegible]. 63., ¯ 1. ï [illegible]. 48-61.

233. [illegible] // [illegible], 2002. ï [illegible]. 36. ï [illegible]. 76ï 78.

234. [illegible]

lsэ⊙teɑʃdʑdʑʃɥlsэts : dʒʏэʿн. lsʝdʒ⊙ls. dʑ⊙lʑʕ. ʟв. / ɯdʑfiʝsɑʃlsʑls ʟʝdʒdʝtetsвfiʝsэ⊙ ʿ lsэ⊙teɑʃdʑdʑʃɥlsэ⊙ ʟ⊙ʕʿнdʑsɢts teʝɢʿtsdʑ.ї ʃ ɪ эʿэ : ʃ вtetsʰ ɑdʝ, 2002. ї ɪ ɑʈʃ. 43, ɥ. 2. ї ʉ. 70ї 74.

235. ʂ tsɢlʑls ʃ . ɯɕ ʕʿfiʝsɪ dʒ̂ʷfi⊙lʑ fiɱɑdʒ dʑs⊙dʑ fiʝ ʕɑ⊓ вɑɥʕʿэ teʿʟdʑɑ⊓ ɢʝ dʑslsɑʈʃʿэ / ʃ . ɯ ʂ tsɢlʑls, ɯ.ɪ . ʃ ⊙dʒɥ⊙ʕ, ʃ . ʃ . ɀ ⊙dʝэ⊙// ɩ ⊙lʑʕtsэɑʔ эʿfiɱdʑɑʕ ʃ ɪ эʿэfiʝ ʕtsʾ нʝteʏ ⊙эdʑsʾ ⊙ʕ⊙нʝ dʒʾ эʝlsʝteɑdʑ⊙teдʑsʾ dʒнɑɥɑdʑɑ ʿdʒ dʑ ʉ . ɩ . ˆʏɑɥɪ ʕtsɢts. ї ʃ ɪ эʿэ, 2003.ї ɪ ɑʈʃ. 5, ɥ. 3. ї ʉ . 43ї 46.

236. ʂ tsʏʝ эdʑɑʕtsэ ʉ . ɟ . ʀ ʟdʒ dʝ dʑɑʝ ʈʃ⊙te⊙dʒ lstetsэ dʒʏʈʃtsdʑʰ ⊙tedʑsʔ ⊙fiɱɑdʒ lsteɑɑ ʈʃteɑ dʒsнʝ dʑɑtetsэ⊙dʑɑɑ ⊙ɢteʝ fiɱʃэdʑsɢts ʈʃtsэʝ нʝ dʑɑʷ / ʉ . ɟ . ʂ tsʏʝ эdʑɑʕtsэ // ɾ lʑtedʑ⊙dʑ эʳ fiʝ ʝ ʔ dʝ teэdʑsʔ нʝ ʷlsʝ dʑ dʑsfiʝsɑ. ї 2012. ї ʊ. 62., ¯ 1. ї ʉ . 5ї 12.

237. ʂ tsʟɑte ɪ . ɪ ɑtetsвdʑɑɥlsэts ʷdʑsэɑɥɑdʑɑ э fiʝsʝ ʈʃtsэʿʔ ʟtsdʑ ʋ ʕte⊙dʑɑ / ɪ . ʂ tsʟɑte // ʊэ⊙teɑʃdʑdʑʃɥlsэts ʋ ʕte⊙dʑɑ. ї 2007. ї ¯ 9. ї ʉ . 13ї 16.

238. ʂ tsʟɑte ɪ . ɪ ɑfiʝsʕtsʈʃtetsнlʑʕlsɑэdʑ ʕtstetsэɑ ɥʝ dʑste⊙dʑ dʑsɢts ʟtsdʑ⊙dʑ dʑsɢts lsɑʈʃlʑ lʑʕte⊙dʑfiʝ ʕtsʾ ɥʝ teэtsdʑsʾ dʒsdʑsɥdʑsʾ ʈʃtstetsнɑ / ɪ . ʂ tsʟɑte, ʊ. ʃ tsэɥ⊙dʑ // ʊэ⊙teɑʃdʑdʑʃɥlsэts ʋ ʕte⊙dʑɑ. ї 2006. ї ¯ 1. ї ʉ . 12ї 14.

239. ʂ tsʟɑte ɪ . ɩ вʝ teʝ ʏʝ dʑdʑʸ ɢʝ dʑsʬ tsdʑнlʑ fiʝtetsʾ lʑʕte⊙dʑfiʝ ʕtsʾ ʈʃtstetsнɑ / ɪ . ʂ tsʟɑte // ʊэ⊙teɑʃdʑdʑʃɥlsэts ʋ ʕte⊙dʑɑ. ї 2006. ї ¯ 11ї 12. ї ʉ . 25ї 28.

240. ʂ tsʟɑte ɪ . ʉ . ʃ ∂ʷfiɱdʑ ʈʃtstetsнɑ ⊓lʑнtsвɑ э ʋ ʕte⊙dʑ / ɪ . ʉ . ʂ tsʟɑte, ʃ .ɯ ʉtsdʑsэʔtsэ. ї ɼ dʑʈʃtetsʈʃʝ lstetsэfiʝ ʕ: ñɟ tsdʑɢte⊙ʬ ʿfiʝsò, 1997. ї 325 fiʝ

241. ʂ tsʟɑte ɪ . ʉ . ʌ tstedʑэ⊙dʑdʑʸ dʒ̂ʷfiɱdʑsʾ ʈʃtetsнlʑʕlsɑэdʑsfiʝsʿ вlʑɢ⊙ʔɥʿэ teʿʟdʑɑ⊓ ɢʝ dʑslsɑʈʃʿэ э tsdʑstsɢʝ dʝ ʟʿ / ɪ . ʉ . ʂ tsʟɑte // ɪ ʿfiɱdʑɑʕ ⊙ɢte⊙tedʑsʾ dʑ⊙lʑʕɑ. ї 2007. ї ¯ 11. ї C. 27ї 31.

242. ʂ tsʟdʑsэ ɸ . ɩ . ʀ dʑsʝ dʑfiɱʃэdʑsfiʝsɪ эtsʟte⊙fiʝsdʑsɢts ʈʃtsэʳ ʰ ʝ dʑɑʷ fiʝ ʕteʝ lststedʑsʔ ⊙ʕlsɑэdʑsfiʝsɑ dʒsdʑsɥdʑsʔ ʏʝ dʝ ʟʳ ʕtstetsэ te⊙ʟdʑɑɥdʑsɢts lsɑʈʃ⊙ fiʝsteʝ fiʝfiʝslʑfiʝstsʔɥɑэtsfiʝsɑ. / ɸ . ɩ . ʂ tsʟdʑsэ, ɩ . ɩ . ɪ ɑʕlststetsэ⊙, ʕ . ɟ . ʂ tsʕtsteɑdʑ⊙ // VI ɪ fiʝ fiʝsʁ ʟdʑ ʔ fiɱɑdʒʈʃtsʟɑlʑdʒ ʈʃts ʬ ɑʟɑtsdʑsɢɑɑ ɑ вɑts⊓ɑdʒɑɑ dʑ⊙ʕls⊙ɥɑɑ : lsʝ ʟ. нtsʕdʑ ї ʃ ., 1982. ї ʉ .83ї 85.

243. ʂ tsʕtsteɑdʑ⊙ ʕ . ɟ . ɪ dʑɑʷdʑɑʝ вtsэɑfiʝsdʒ⊙lstslstetsʈʃɑdʑ⊙ dʑ⊙ dʒslststedʑʁ ɑ fiʝ ʕteʝ lststedʑʁ ʬ lʑdʑʕɥɑʁ dʒsdʑsɥdʑsʔ ʏʝ dʝ ʟʳ . / ʕ . ɟ . ʂ tsʕtsteɑdʑ⊙, ɩ . ʀ . ɪ ⊙fiɱɑdʑ ʝэ, ʊ. ʉ . ʇ lʑʰ ɑʕ // VIɯɯɪ fiʝ fiʝsʁ ʟʳ ʔ fiɱɑdʒʈʃtsʟɑlʑdʒ ʈʃts ʬ ɑʟɑtsdʑsɢɑɑ ɑ вɑts⊓ɑdʒɑɑ dʑ⊙ʕls⊙ɥɑɑ : lsʝ ʟ. нtsʕdʑ ї ʃ ., 1990. ї ʏ . 1. ї ʉ . 91ї 93.

244. ʂ tsʕtsteɑdʑ⊙ʕ . ɟ . ʂ tstedsɑʕ⊙dʑ dʑ⊙ʸ teʝ ɢlʑdʑʷɥɑʷ dʑ⊙ʕlstsɢʝ dʝ ʟ⊙ɑ dʑ⊙ʕlststʃtsʟ ʟ⊙/ ʕ . ɟ . ʂ tsʕtsteɑdʑ⊙// ʌ ɑʟɑtsdʑsɢɑɥʝ fiʝʕɑʔ ʏ lʑtedʑ⊙dʑ ї 1995. ї ʊ. 81. ї ¯ 12. ї ʉ . 54ї 63.

245. ʂ tsʕtsteɑdʑ⊙ʕ . ɟ . ʃ ʝ lstsнɑʕ⊙нэɑɢ⊙lsʝ dʑ dʑ ⊓ ʈʃɑʰ ʝэʳ ⊓ lʑfiɱdʑsэdʑ ⊓ teʝ ʬ dʝ ʕfiʝsэ

[illegible], 1964. ï ʉ.183ï 196.

246. [illegible], 1957. ï ʉ. 44ï 49.

247. [illegible], 1959. ï ʊ. 8. ï ʉ. 46ï 50.

248. [illegible] VII [illegible] 1986. ï ʏ. 1. ï ʉ. 109ï 110.

249. [illegible], 1986. ï 335 [illegible]

250. [illegible] 2006. ï ʊ. 52, ¯ 2 ï ʉ.227.

251. [illegible] 2007. ī [illegible]. 50. ī ʉ. 119ï 124.

252. [illegible] 2002. ī [illegible]. 36. ī ʉ. 78ī 80.

253. [illegible] 2002. ï ¯ 7. ī ʉ. 7ï 8.

254. [illegible] V [illegible]

Gfnʃ 'teʘdʑs'ə / LʘteʝH. Ɉ . ɬ . ɹ ƙteʢʘsʘ ï ȿ . : ɸ GteʘtedʑʘdʑʢʘꞮ, 2007. ï ʉ . 52ï 54.

255. ȿ tsdʒʃfnʃʘeʝ dʑts ɸ . ɼ . Ɉ LʘʃdʒsfɸWLɪ ʧtsʢʘLʘsʝ dʝʔ tetsfnsʘ, teʘLəʃlsʃW lsʝ dʑsʢ fŋ teʘLdʑʃɥdʑ dʒʃ lsʃʧʘdʒʃ lsteʘdʑfnʝ ɟ teteʃdʑʘ ʃ ʃ꞊ ʃfnʧtsdʑ LtsəʘdʑʃJ Hdʑ ʧtetsGdʑsLʘ dʒWfnʝdʑsʔ ʧtetsHƙʢlsʃədʑsfnsʃ / ɸ . ɼ . ȿ tsdʒʃfnʃʘeʝ dʑts, ɸ BHɟ dʑ ʆ ɟ Gʃ H // ɹ ʃtsdʑsGʃɥʝ fnʢʃɟ dʑʘƙʢʃ ə XXI əɟʢɟ : ʧtetsBdʝ dʒ ʃ lsʝ dʑHɟ dʑɹʃʃ teʘLəʃlsʃW : fnɸ. dʑʘƙɥ. lsteʆ ɟ ʞ Hƙdʑʘe. dʑʘƙɥ.-ʧteʘʢls. ʢtsdʑW., 15-17 Hɟʢʘ Bte 2005 G. : 2 ɥ. / ʧtsH tsBɦ . teʝH. ʧtetsW. ʉ . ʆ . ʊ fnʝdʒʘdʑsəʘʃ ʧtetsW. ɭ .. ɻ . ȿ ƙlsdʑʃdʑʘ ï ɹ ʃtefnʢ, 2006. ï Y.1. ï ʉ . 34ï 36.

256. ȿ tsdʑGʘ R . ʆ . ɬ te'tsteʃlsɟ lsdʑ dʑʘʧteWdʒʃ tetsLəʃlsʢƙ ʿ ʧ'Həʃɦ ɟ dʑdʑ ɟWɟʢlsʃədʑsfnsʿ dʒʘWfnʝdʑsGts fnʢtslsʘefnsəʘ ə ʊ ʢteʘdʑ / R . ʆ . ȿ tsdʑGʘ, ʊ. ʉ . ɕ dʑts // ɭ ʘƙʢtsəts-lsʝ꞊dʑɥdʑʃʔ Bʁ dʝlsʝ dʑ . ï ʌʘeʢ'ə, 2006. ï Ɉ ʃʧ. 94. ï ʉ . 170ï 174.

257. ȿ tsteʘBɟʔdʑʃʢtsəʘ ʉ . ɭ . ʆ tsHʃWʃʢʘɥʃW tsʧteʝHɟ dʝ dʑʃW ɬ ʆ ʃ ə teʝʘʢɥʃʃ fŋ ʊɹ ȿ / ʉ . ɭ . ȿ tsteʘBɟʔdʑʃʢtsəʘ// ʃ ʘBtsteʘstsʈedʑsɟ Hɟ dʑts. ï 1989. ï ¯ 7. ï ʉ . 8ï 9.

258. ȿ tsfnsʝ dʑts Ɉ . ʆ . ʃ ʘʢlsʘɥ'ʔdʑʘHtsdʒ'dʑʘdʑsʘƙ ʢtste'ə Lʘdʝʞ dʑs ə'H lsʃʧƙ əʃɦ tsʾ dʝteətsəts' H'Wdʑ dʑsfnsʿ : ʘlststeʝW. Hʃfŋ dʑʘLHtsBƙlslsW dʑʘƙʢ. fnsƙʧɟ dʑ ʢʘdʑH. əɟls. dʑʘƙʢ : fnʧɟɥ. 03.00.13 "W 'L'tsdʑsGW dʑ Hʃdʑʃ ʿ lsəʘeʃdʑ" / Ɉ . ʆ . ȿ tsfnsʝ dʑts ï ȿ ., 2006. ï 19 fŋ

259. ȿ tsfnsʁ ʢ ɬ . ɻ . ɬ tetsBdʝ dʒʃ teʝʘʢlsʃədʑsfnsʃ ʃ fnsəteʝdʒʝ dʑdʑ ɟ Htsfnsʃʞ ɟ dʑʃW dʝʔtetsWʃLʃtsdʑsGʃʃ. / ɬ . ɻ . ȿ tsfnsʁ ʢ // ʌ ʃLʃtsdʑsGʃɥʝ fnʢʃɟ dʑʘƙʢʃ - dʒʝHʃɥʃdʝ. ï ʃ . : ɭ ʘƙʢʘ, 1983. ï ʉ . 6.

260. ȿ tslsʢtsə Ɉ . ɬ . ʉ lsəststeʝ dʑdʑ ƙʢteʘdʑfnʢtsGts ʞ ʃtedʑsdʒsdʑsɥdʑsGts lsʃʧƙ ɥʝteətsdʑs' dʒsdʑsɥdʑs' ʧtstetsHʃ ə ƙdʒsəʘ꞊ ʆ ʃʢtsdʑʘəfnʢts' tsBdʑfnsʿ / Ɉ . ɬ . ȿ tslsʢtsə, ʈ . ɯ ʆ ʘ ɟ dʑts, ʃ . ɸ . ʎ ƙteʢtsəʘ, Ɉ . Ɉ . ȿ tsəʘdʝ dʑts // ʈ tsLəɟ Hɟ dʑdʑ ʿ Gɟ dʝlsʃʢʘ lsəʘeʃdʑ: dʒʞ ə'H. lsʝ dʒ LB. : ɭ tsəɟ ə fnʝ dʝʢɥ', Gɟ dʝlsʃɥʿ lsʘ B'tslsʝ꞊dʑsdʑsG' lsəʘeʃdʑ: dʒʘsʝ te'ʘdʑʃ dʑʘƙʢ.-əʃtetsB. ʢtsdʑW. ï ȿ . : ɭ tsəʃʔ fnɸ'ls, 2002. ï Ɉ ʃʧ. 36. ï ʉ . 96ï 97.

261. ȿ tsɥʝlsʢtsə ɸ . ɸ . ȿ ʘɥʝ fnsəʘdʒWfnʘƙ ɥʃfnststʧtstetsHdʑ ꞊ ʃ ʧtsdʒʝ fnʝdʑ ꞊ ʞ ʃətslsdʑ ꞊ / ɸ . ɸ . ȿ tsɥʝlsʢtsə // ɿ tstslsʝ꞊dʑʃW. ï 2007. ï ¯ 11. ï ʉ . 28ï 30.

262. ȿ teʘəɥ'ə ʈ . ʁ . ɹ 'tsdʑsG'ɥdʑʘtetsdʑ ɦ ʃlststʧtsH'Bdʑs' LʘdʑsLʃ / ʈ . ʁ . ȿ teʘəɥ'ə, ɼ . ʆ . ɕ dʑsəʃɥ// ɹ 'tsdʑsGW lsəʘeʃdʑ ï 2004. ï ʊ. 6, ¯ 1ï 2. ï ʉ . 19ï 34.

263. ȿ teʃətstedʑɥʢts ɼ . ɯ Ɉ dʒ'fns LʘGʘdʑ dʑsGts B'dʑʘ lsʘ ʘdʑBƙdʒ'dʑə ƙ ʢtetsəʿ ʢtste'ə L te'Ldʑʃdʒlsʃʧtsdʒəʃɦ tsʾ dʝteətsəts' H'Wdʑ dʑsfnsʿ / ɼ . ɯ ȿ teʃətstedʑɥʢts, Ɉ . ɯ ȿ ʘeʧtsəfnʢʃʔ, Ɉ . ʆ . ʊtetsʢtsL // ɭ ʘƙʢtsəʃʔ ə'fnʝdʑʢ ʃ ɹ ə'əfnʢts' dʑʘɥ'tsdʑʘdʑ dʑs' ʘʢʘHɟ dʒ' əɟlsʝteʃdʑʘedʑs'

ďǯнƈųƈďǻƒ ʻďǯďǻ ʉ. ʅ. ʇ ϟ ƈųɪ Ŝtsɢts. ï ʃ ɹ ɘʻɘ, 2006. ï ʊ.8., ¯ 4, ɥ. 2. ï ʉ. 116ï 119.

264. ʂ teƈƒɘtstďzɥŜts ɼ. ɯɪ ɫ tsŜʘʟďǻƒŜƈ Ŝtetsɘʻ Ŝtstɕɘ ʟ tɕʟďǻƒďǯ lstsďǻƒnʝsďǯ ʘɘlstsďǻtsďǯďǻts ďǻteɘtsɘts fnʝfnʝsǯ ďǯƒ / ɼ. ɯʂ teƈƒɘtstďzɥŜts, ɪ. ɯʂ ʘteƒtsɘfnŜƈʔ, ɪ. ʃ. ʊtetsŜtsʟ [lsʘʻďǻ] // ʅ ʘďǻŜtsɘƈʔ ɘʻfnďǻƒŜ ďǻʘɥʻtsďǻʘďz ďǻtsɢts ʘteʘteďǻtsɢts lzďǻɘǰ tefnʃlsǰ lsz. ï ʂ., 2005. ï ɪ ƈʃ. 89. ï ʉ. 251ï 254.

265. ʂ teƈƒɘtstďzɥŜts Ʒ. ʃ ∂ʷ fnďǻʘ ʧtetsнzŜlsƈɘďǻfnʝsɪ lsǰ ďǻƈɥɪ tɕʟďǻƒ⁼ ɢǰ ďǻtslsƈʃʻɘ fnʝsɘtstɕʳ ɘʘďǻts ʾ lzŜteʘʼďǻfnŜtsʾ fnƒďǯ ďǻlsʘďz fnŜtsʾ ďǯ∂ʷ fnďǻtsʾ ʧtstetsнƈ / Ʒ. ʂ teƈƒɘtstďzɥŜts // ʊɘʘteƈďǻďǻƒɥlsɘts ʋ Ŝteʘʼďǻƒ. ï 2002. ï ¯ 6. ï ʉ. 23ï 24.

266. ʂ teƈƒɘtstďzɥŜts Ʒ. ʌʘteʘŜ lsǰ teƈfnʝsƈŜʘ ʰ Ŝʻtɕ fnʃtetsɘƈďǻƒ lsǰ ďǻƈɥɪ fnʝsɘtstɕʳ ɘʘďǻtsʾ lzŜteʘʼďǻfnŜtsʾ fnƒďǯ ďǻlsʘďz fnŜtsʾ ďǯ∂ʷ fnďǻtsʾ ʧtstetsнƈ / Ʒ. ʂ teƈƒɘtstďzɥŜts // ʊɘʘteƈďǻďǻƒɥlsɘts ʋ Ŝteʘʼďǻƒ. ï 2005. ï ¯ 5. ï ʉ. 8ï 10.

267. ʂ teƈfnʘďǻtsɘ ɸ. ʌ. ɸ-ɘƈlsʘďǯƈďǻďz ʔ fnʝsʘlzfn tslsŜtstedǯtsɥďǻtsɢts ďǯtsďǻtsнďǻʷŜʘ Ŝteďzʧďǻtsɢts tetsɢʘlstsɢts fnŜtslsʘʧteƈ teʘʟďǻtsďǯ lztetsɘďǻ ƈ ƈfnʝstsɥďǻƒŜǰ ϟ ƈteʘɘ teʘɥƈtsďǻ⁼ / ɸ. ʌ. ʂ teƈfnʘďǻtsɘ., ʇ. ʇ. ɪ teʘɢƈďz// ʊǰ ʟʳ нtsŜďǻʘнtsɘ ɪ ʅ ʀ ʀ ʌ ɪ ƈɫ fn-⁼. ϟ ƈɘtslsďz ⁼ : ɸ Ŝlszʘďz ďz ǰ ʧtetsʙďǻďǯ ʙƈtsďǻtsɢƈƈɘ ϟ ƈɘtslsďǻtsɘtsнfnʝsɘǰ. ï ɪ tstetsɘfnŜ, 2000. ï ʉ. 135ï 136.

268. ʂ teďzʰ ƈďǻfnŜƈʔ ʃ. ɪ. ʌ tstedǯƈtetsɘʘďǻƒǰ ʧtsɘǰнǰ ďǻƒʷ ϟ ƈɘtslsďz ⁼ ɘ ďǻtstedǯ ƈ ʧʘlstsďǻtsɢƈ / ʃ. ɪ. ʂ teďzʰ ƈďǻfnŜƈʔ. ï ʃ. : ʃ ʇ ʋ, 1960. ï 264 fn

269. ʂ lzнteƈďz ɸ. ʇ. ʌ ǰ tedǯ ďǻlsʳ Ŝtetsɘƈ ƈ ʧtetsнzŜlsƈɘďǻtsfnʝsɪ Ŝtstetsɘ / ɸ. ʇ. ʂ lzнteƈďz // ɸ ɢteʘteďǻʘʷ ďǻʘzŜʘ ï 2001. ï ¯ 7. ï ʉ. 21ï 23.

270. ʂ lzʟďǻƒŜ ɪ. ʀ. ʀ ďǯďǯďzďǻtsɢǰ ďǻʟ, ɢǰ ďǯtsfnʝsʘʟ ƈ ďǻ fnʃǰ ɥƈʷ ƈɥǰ fnŜʘʷ teǰ ʟƈfnʝsǰ ďǻlsďǻtsfnʝsɪ tsteɢʘďǻƒʟďǯʘ / ɪ. ʀ. ʂ lzʟďǻƒŜ, ʅ. ɪ. ɪ ʘfnƒďz ǰ ɘ, ʅ. ʅ. ʎʳ ʙƈŜtsɘ. ï ʃ. : ʃ ǰ нƈɥƈďǻʘ 1989. ï ʉ. 16ï 17.

271. ʂ lztedǯ ʊ. ʈ ʘɥʻtsďǻʘďz ďǻ ɘƈŜtsteƈfnʝsʘďǻďǻʷ ďǯʷ fnďǻtsʾ ⁼lzнtsʙƈ lz ʷ ǰ tedǯ tefnŜƈ⁼ lsʘ ʻďǻнƈɘʻнlzʘďz ďǻƒ⁼ ɢtsfnʃtsнʘtefnʝsɘʘ⁼ ʃ ɹ ɘʻɘʰ ƈďǻƒ / ʊ. ʂ lztedǯ ï ɫ tetsʃtsʟƈɥʻʷ. ï 2013. ï ¯ 12. ï ʉ. 17ï 18.

272. ʂ lzlsŜʻďǻʘʃ. ɪ. ɪ ʧďǻƈɘ fnʝsďǻʰ ďǻƒŜtsɘtsʾ tsďz ʾ ʻɘʻlsʘďǯďǻ ɼ ʧteƈ нtsнʘɘʘďǻďz ʾ⁼ нts teʘɥʻtsďǻ ɢlzfnʝsŜ ďǻʘ ϟ ƈteďǻtsŜƈfnďǻtslsďǻƒʔ fnŜďǻʘн ʧǰ ɥʻďǻŜƈ ǰ ďǯʙtɕʻtsďǻɘ lsʘ 1- ʻ 3-нǰ ďǻƒ⁼ ɢlzfnǰ ďǻʷls / ʃ. ɪ. ʂ lzlsŜʻďǻʘ // ʅ ʘďǻŜ.-lsǰ⁼ďz ʙʳ ďz ɯďzlsz ʙʻtsďz lsɘʘteƈďz ʋ ɸ ɸ ʅ. ï 2004. ï ɪ ƈʃ. 5, ¯ 6. ï ʉ. 64ï 67.

273. ʃ ʘʙtstɕʘlststedz ǰ ƈfnʃfnďǻнtsɘʘďǻƒʷ ɘ ɘǰ lsǰ teƈďǻʘteƈƈ / ʧtsн teǰ н. ɪ. ɕ. ɸ ďǻtstsďǻtsɘʘƈ ɫ. ʅ. ɪ ďǻƈďǻtsɘʘ ï ʃ. : ʂ tsďǻtsfn 1974. ï 320 fn

274. ʃ ʘʙtstɕʘstststɕdẑ ʝ dʑ̧ lststsʜʳ ɕʃfŋfŋdẑ ʜtsɘʘdẑɕʃʷ ɘ ʕdẑɕʃdẑɕʃʕʝ : fŋʃtɕʘɘtsɥdẑɕʃʕ / tʃtsʜ tɕʝʜ. ɺ . ɺ . ʆ ʝdẑʰ ɕʃʕtsɘʘ. ï ʆ . : ʆ ʝʜɕʃɥɕʃdẑʘ, 1987. ï 368 fŋ.

275. ʃ ʘʙtstɕʘstststɕdẑ ʝ dʑ̧ lststsʜʳ ɕʃfŋfŋdẑ ʜtsɘʘdẑɕʃʷ fŋɕʃfŋlsʝ dʒ ɢʝ dʒtsfŋlsʘʟʘ/ ɺ . ɟ . ɪ ʘdẑʜʘ, ɿ . ʉ . ɪ ʘtɕʕʘɕʘdẑ, ɼ . ɼ . ʇ tsdẑʜʙʝ tɕɢ [ɕʃʜtɕ]; tʃtsʜ tɕʝʜ. ɼ . ɼ . ʇ tsdẑʜʙʝ tɕɢʘ ï ʊtsdʒʃʕ, 1980. ï 313 fŋ.

276. ʃ ʘʜɕʃʕʘ ɺ . ɯ ʆ ɥʻdẑʘ ʝʕfŋlsʝ tɕʘ̂ tɕdẑtsɢts lsɕʃtʃlz ʕtstɕʻɘ ʙlztɕts ʾ ʭlzʜtsʙɕʃ ʟʘ dʑ̧ lststsʜɕʃʕtsᵏ dẑdẑʔdẑts ʾ ʕdẑʘfŋɕʃʷ ʻʕʘɥʻʾ / ɺ . ɯ ʃ ʘʜɕʃʕʘ, ʃ . ʆ . ʌdʑ̧ dẑ dẑɕʃɥɕʃʔ, ʊ. ʃ . ʇ tɕɕʃɥʘ dẑʕts // ɺ ʻfŋdẑɕʃʕ ʉ lzdʒfŋʕtsɢts dẑʘɥʻtsdẑʘdẑ dẑtsɢts ʘɢtɕʘtɕdẑtsɢts lzdẑɘʝ tɕfŋɕʃlsʝ lslz. fŋʝ tɕ ñlsɘʘtɕɕʃdẑdẑɕʃɥlsɘtsò. ī ʉ lzdʒɕʃ, 2006. ī ɺ ɕʃtʃ. 10. ī ʉ . 82ī 87.

277. ʃ ʘdẑtsɘfŋʕʘ ʆ . ʇ . ʐ ɘɕʃʜʕʻfŋlsᴵ ʻ tʃtsɘdẑtslsʘ ɘɕʃʜtsᵏ ɘʘdẑdẑ ʕtstɕʻɘ tɕʻʟdẑɕʃʭ lsɕʃtʃʻɘ ɘɕʃʰ ts ʾ dʑ̧ tɕɘtsɘts ʾ ʜʻʷdẑ dẑtsfŋlsʻ lsʘlsɕʃtʃʻɘ ʕtsdẑfŋlsɕʃlslzɥʻʾ / ʆ . ʇ . ʃ ʘdẑtsɘfŋʕʘʷ // ʆ tsdẑtsɥdẑts-dʒ̂ʷfŋdẑ fŋʕtslsʘtɕfŋlsɘts : tɕʝ fŋʃ. dʒɣɘʻʜ. lsʝ dʒʘls. ʟʙ. ī ʂ . : ʋ tɕtsɣʘʔ, 1977. ï ɺ ɕʃtʃ. 45. ï ʉ . 64.

278. ʃ ʝdẑɕʃdẑʜɣʝ tɕ ɸ . ʃ fŋdẑtsɘʳ ʙɕʃtsʭɕʃdʒɕʃɕʃ / ɸ . ʃ ʝdẑɕʃdẑʜɣʝ tɕ ; tʃʝ tɕʝ ɘtsʜ fŋ ʘdẑdẑ ɼ lzʙɕʃdẑɕʃdẑtsʔ ʆ . ʇ . ï ʆ . : ʆ ɕʃtɕ, 1985. ï ʊ. 2. ï ʉ . 585ï 597.

279. ʃ ʝfŋdẑʕtsɘʘ ɯ ʒ . ʃ fŋdẑtsɘɕʃ tɕtsʙtslsɕʃ ʻ ɘɕʃtɕʻʰ ʝdẑdẑ ʟʘʜʘɥ fŋdẑ fŋʕtsɢts ɢtsfŋʃtsʜʘtɕfŋlsɘʘ ɘ fŋʝ tɕʝ ʜtsɘɕʃʰ ʻ ʝdʑ̧ ʕlstɕtsdẑdẑɕʃʭ lsʘʙdẑɕʃɥᴵ EXCEL : dẑʘɘɥ. tʃtsfŋʙ. / ɯ ʒ . ʃ ʝfŋdẑʕtsɘʘ, ɭ . ʆ . ʌʘtɕɥʝ dẑʕts. ï ɼ dẑtʃtɕtstʃʝ lstɕtsɘfŋʕ : ɟ tstɕtsɢɕʃ, 2002. ï 147 fŋ.

280. ʃ lzʕɘ̂ʷdẑɥlzʕ ɭ . ɺ . ʃ ʙˇtɕdẑdẑlslzɘʘdẑdẑ ɘʻʕlz ɘɘʝʜʝdẑdẑ ɘ fŋlsʘʜts tʃʝ tɕɘʻfŋlstsʕ lzʕtɕʘdẑfŋʕts ʾ dʒ̂ʷfŋdẑts ʾ tʃtstɕtsʜɕʃ / ɭ . ɺ . ʃ lzʕɘ̂ʷdẑɥlzʕ // ɭ ʘlzʕtsɘɕʃʔ ɘʻfŋdẑɕʃʕ ʃ ᴶ ɘʻɘfŋʕtsɢts dẑʘɥʻtsdẑʘdẑ dẑtsɢts lzdẑɘʝ tɕfŋɕʃlsʝ lslz ɘʝ lsʝ tɕɕʃdẑʘtɕdẑts ʾ dʑ̧ ʜɕʃɥɕʃdẑɕʃ lsʘʙ ʻtslsʝ ʭdẑtsdẑtsɢʻʾ ʻdʑ̧ dẑ ʉ . ɿ . ʇ ɣɕʃɥᴵ ʕtsɢts. ī ʃ ᴶ ɘʻɘ, 2005. ī ʊ. 7, ¯ 2, ɥ. 3. ï ʉ . 182ï 186.

281. ʃ lzʕʘ ɺ . ɟ . ɟ ɕʃlsʘdẑdẑ ʬtstɕdʒlzɘʘdẑdẑ dʒʘfŋɕʃɘlz dʒʷfŋdẑts ʾ ʭlzʜtsʙɕʃ dẑʘʋ ʕtɕʘdẑ / ɺ . ɟ . ʃ lzʕʘ , ʒ . ɺ . ɺ ʜtsɘɕʃɥʝ dẑʕts // ɟ ʝ tɕfŋʃʝ ʕlsɕʃɘɕʃ tɕtsʟɘɕʃlsʕlz fŋʕtslsʘtɕfŋlsɘʘlz lstɕʝ lsᴵ tsdʒlz lsɕʃfŋɥtsdẑlslsʻ : fŋʃʝ ɥ. ɘɕʃtʃ. ʜts ʆ ʻɣ dẑʘtɕ. dẑʘlzʕ.-tʃtɕʘls. ʕtsdẑʬ. (2-5 ɣ tsɘlsdẑ, 2001) ɺ ʻfŋdẑɕʃʕ ʉ lzdʒfŋʕtsɢts ʜʝ tɕɣʘɘdẑtsɢts ʘɢtɕʘtɕdẑtsɢts lzdẑlslz : fŋʝ tɕ çʊɘʘtɕɕʃdẑdẑɕʃɥlsɘtsè. ī ʉ lzdʒɕʃ, 2001. ī ɺ ɕʃtʃ. 5. ī ʉ . 98ī 100.

282. ʃ lzʕʻʷdẑɥlzʕ ɭ . ɺ . ɺ ʻʕ tslsʝ dʑ̧ dẑdẑ ʕtstɕʻɘ lzʕtɕʘdẑfŋʕts ʾ dʒʷfŋdẑts ʾ tʃtstɕtsʜɕʃ ʷʕ ʬʘʕlststɕ ɘtʃdẑɕʃɘlz dẑʘɘʻʜlsɘtstɕᵏ ɘʘdẑ dẑlz ʟʜʘlsdẑfŋlsᴵ ʾʭ tʃtslstsdʒʻɘ / ɭ . ɺ . ʃ lzʕʻʷdẑɥlzʕ // ɭ ʘlzʕ. - lsʝ ʭdẑʙᵏ dẑ / ɯdẑfŋlsɕʃlslzlsʙ ʻtsdẑtsɢʻʾ lsɘʘtɕɕʃdẑ. ī ʃ ᴶ ɘʻɘ, 2004. ī ɺ ɕʃtʃ. 5, ¯ 3. ī ʉ . 197ī 200.

283. ʃ ʳ fŋlsɘʘ ʃ . ʀ . ʀ fŋʃtsdẑ ʟtsɘʘdẑɕʃʝ ɢtɕʘdẑdẑɕʃtɕtsɘʘdẑdẑʔ tʃtsʜfŋlsdẑdʑ̧ ɥdẑɕʃʕtsɘtsʔ dẑlzʟɢɕʃ, tsʙtsɢʘ ʝdẑdẑtsʔ fŋlsʘʃfŋlstsɥdẑ dʒɕʃ dẑɕʃtʃɕʃʜʘdʒɕʃ, tʃtɕɕʃ tslsʕtstɕdʑ̧ ʙʳ ɥʕtsɘ / ʃ . ʀ .

ʃ ʳ fɲʂɘʘ // ʇ tsɘʳ ʰ ʝ dʑɕʝ ʧtstɕtsʜdʑ ꞊ ɕ ʧtɕtsʜʑʕlsɕɘdʑ ꞊ ʕʘɰʝ fɲʂɘ ʕtɕdʑʧdʑsɢts tɕtsɢʘlststsɢts fɲʕtslsʘ ï ʃ ., 1987. ï ʉ. 66ï 68.

284. ʃ ʁ dʑ ɰʝ dʑʕts ʄ . ʄ ðʷfɲdʑ ʷʕtsfɲʂʿ ʿ ʘʜʘʃlsʘɰʿʔdʑ ɘdʑʘfɲʂɕɘtsfɲʂʿ ʙʑɢʘʔɰʿɘ ʧtɕʃ fɲʂɘtstɕʝ dʑdʑ dʒðʷfɲdʑs᾿ ꞊ʑʜtsʙɕ / ʄ . ʃ ʁ dʑ ɰʝ dʑʕts // ʊɘʘɪɕɕdʑdʑɕɰlsɘts ʋ ʕtɕʘdʑɕ. ï 2003. ı ¯ 4. ï ʉ. 12ï 14.

285. ʄ ðʷfɲdʑʘʧtɕtsʜʑʕlsɕɘdʑfɲʂʳ ʧtsdʒfɲdʑɕ꞊ lsɘʘɪɕɕdʑʑʕtɕʘdʑfɲʕts᾿ ɰʝ tɕɘtsdʑs-tɕʷʙts᾿ dʒsdʑsɰdʑs᾿ lsʘdʒðʷfɲdʑɕ꞊ ʧtstɕʜ / ʁ . ı . ʉʿtɕʘɰʳ ʕɕʔ, ɯʃ . ʇ ʑtɕfɲʕɕʔ, ɭ . ɯʌ ʝʜtstɕtsɘɕɰ [lsʘʿdʑ] // ɪ ʿfɲdʑɕʕ ʉʑdʒfɲʕtsɢts dʑʘɰʿtsdʑʘdʑ dʑsɢts ʘɢtɕʘɪɕdʑsɢts ʑdʑɘʝ tɕfɲɕlsʝ lsʑ. ï 2010. ï ɪ ɕʧ. 12. ï C. 109ï 113.

286. ʄ ʘʕʘɪɕtsɘ ɸ . ʉ. ʄ ʝ lstsʜɕɰʝ fɲʕtsʝ ʧtsfɲʂʙɕʝ ʧts tsʧtɕʝʜʝ dʑʝ dʑɕʁ dʑʘdʑɕɰdʑ ꞊ lsɕʧʃtsɘ ɘʳ fɲ ʝʔ dʑtɕɘdʑsʔ ʜʝ ʷlsʝ dʑ dʑsfɲʂɕ ʑ ʕtɕdʑʧdʑsɢts tɕtsɢʘlststsɢts fɲʕtslsʘ ɘdʑʕʘdʒʝ tɕdʑ dʒ dʒʝ lststsʜtsdʒ / ʄ ʘʕʘɪɕtsɘ ɸ . ʉ. ï ʂ ʘʟʘdʑ, 1968. ï 30 fɲ

287. ʄ ʘʕɕdʑʘ ɼ . ʄ . ɪ ʟʘɕdʒsʜʝʔfɲʂɘɕʝ tsʕfɲɕlstsɰɕdʑʘ ɕ ʕʘlsʝ꞊tsdʑʘdʒɕdʑsɘʳ ꞊ dʑʝʔtɕtsɢtstɕdʒsdʑsɘ ɘ tɕʝ ɢʑdʑʷɰɕɕ ʷʑdʑʕɰɕɕ ʰ ɕlstsɘɕʜdʑsʔ ʞʝ dʑʝ ʟʳ / ɼ . ʄ . ʄ ʘʕɕdʑʘ ʀ . ɸ . ʂ tɕʘfɲdʑsɘfɲʕʘʸ // ʊʝʟ. ʜtsʕdʑʘʜtsɘ V ɪ fɲʝ tɕtsfɲfɲ ʕtsdʑʷ. ñl ʝʔtɕtsˡ dʑʜtsʕtɕɕdʑsdʑsɢɕʷ-2000ò ʧtsfɲʷʰ ʝ dʑdʑʘʸ 75-dʑʝ lsɕʁ ɸ . ʃ . ʇ tsdʑʝ dʑsɘʘ(18ï 20 ʘʃtɕʝ dʑʷ 2000 ɢ.). ï ʉʇ ʙ., 2000. ï ʉ. 86ï 87.

288. ʄ ʘdʑ ʕ ʄ .ʆ . ɸ ʜʘʃlsʘɰʿʔdʑs-ʕtsdʒʃʝ dʑfɲʘlststɕdʑ ʧtɕtsɰʝ fɲʃ ɘ tstɕɢʘdʑʟdʒ᾿ ɘʝ dʑɕʕts᾿ tɕtsɢʘlsts᾿ ꞊ʑʜtsʙɕ ʧʿʜ ɘʧdʑɕɘtsdʒ dʑʘʜdʑɕʰ ʕʑ dʑlstɕʘlsʿɘ ʟʘdʑʝ ʞ dʑs ɘʿʜ lsɕʧʑ ɘɕʰ ts᾿ dʑʝ tɕɘtsɘts᾿ ʜʿʷdʑ dʑsfɲʂʿ (ʟʘʜʘdʑɕdʒɕ ʘdʑsʝ tɕʿts-ɘʝ dʑsʟdʑs᾿ tɕʿʟdʑɕɰʿ) : ʘlststɕʝ ʷ. ʜɕfɲ dʑʘʟʜtsʙʑlsʷ dʑʘʑʕ. fɲʂʑʧʝ dʑʸ ʕʘdʑʜ. ɘʝls. dʑʘʑʕ : fɲʃʝ ɰ. 16.00.02. "ʇ ʘlstsdʑsɢʿʷ, tsdʑʕtsdʑsɢʿʷ ʿ dʒstɕʷ tsdʑsɢʿʷ lsɘʘɪɕɕdʑ" / ʄ .ʆ . ʄ ʘdʑ ʕ. ï ʂ ., 2003. ï 21 fɲ

289. ʄ ʘdʒɰʘʕ ɯɪ . ʄ ðʷfɲdʑʘʧtɕtsʜʑʕlsɕɘdʑfɲʂˡ ʙɕɰʕʿɘ tɕʿʟdʑɕ꞊ ɢʝ dʑslsɕʧʿɘ ɘ ʑdʒsɘʘ꞊ ʇ tɕɕʕʘɪʃʘlsʷ / ɯɪ . ʄ ʘdʒɰʘʕ, ʄ . ɯ ʂ tsɢʑls, ʆ . ʄ . ʐ ʘdʑʝɘʘ // ʅ ʘʑʕtsɘɕʔ ɘʿfɲdʑɕʕ ʃ ᴊ ɘʿɘfɲʕts᾿ ʜʝ tɕʞʘdʑs᾿ ʘʕʘʜʝ dʒ᾿ ɘʝ lsʝ tɕɕdʑʘɪɕdʑs᾿ dʒʝ ʜɕɰɕdʑɕ ʿdʒʝ dʑ ʉ. ı . ʇ ʞ ɕɰˡ ʕtsɢts. ï ʃ ᴊ ɘʿɘ, 2004. ı ʊ. 6, ɰ. 4. ï ʉ. 84ï 89.

290. ʄ ʘdʑ ʰ ɕdʑɸ . ʄ ʷfɲdʑʘʸ ʧtɕtsʜʑʕlsɕɘdʑsfɲʂˡ ɰɕfɲʂtsʧtstɕtsʜdʑ ꞊ ɕ ʧtsdʒʝ fɲdʑ ꞊ ʙʳ ɰʕtsɘ / ɸ . ʄ ʘdʑ ʰ ɕdʑ // ʄ tsdʑsɰdʑsʝ ɕ dʒʷfɲdʑsʝ fɲʕtslstsɘtsʜfɲʂɘts. ı 2007. ı ¯ 4. ı ʉ. 11ı 12.

291. ʄ ʘdʑsɕdʑʄ . ʊ. "ʅ ʘ꞊ɕʰ ʝ dʑ" tɕtsfɲdʑɕdʑdʑ tsdʑ᾿ ʑ tɕʘɰʿtsdʑʘ꞊ ʞ ɕɘdʑʝ dʑdʑʷ dʑʘʕlsʑʁ ɰɕ꞊ ʕtstɕʿɘ / ʄ . ʊ. ʄ ʘdʑsɕdʑ, ʉ. ʆ . ɪ tsɘʕ, ʉ. ɕ . ʇ ʘʕtsɘɕɰ // ɪ ɰʝ dʑ ʃ ᴊ ɘʿɘfɲʕtsɢts ʜʝ tɕʞʘdʑsɢts ʘɢtɕʘɪɕdʑsɢts ʑdʑɘʝ tɕfɲɕlsʝ lsʑ ı ɘɕtɕtsʙdʑɕɰlsɘʑ. ı ʃ ᴊ ɘʿɘ, 2004. ı ɪ ɕʧ. 4. ı ʉ. 57ı 59.

292. ʄ ʘdʑsɕdʑʄ . ʊ. ɪ dʒʿfɲʂ dʑʧʿʜdʑɕ꞊ ʕtsdʒʃtsdʑʝ dʑsʿɘ ʑ ʧdʑʘʟdʒ᾿ ʕtɕtsɘʿ ʟʘɘɕʕtstɕɕfɲʂʘdʑdʑʷ

[illegible] 2004. – [illegible] 6, [illegible] 2. – [illegible] 98–102.

293. [illegible] 2004. – [illegible] 1, [illegible] 1–2. – [illegible] 180–182.

294. [illegible] 2004. – [illegible] 54. – [illegible] 191–195.

295. [illegible] 1984. – [illegible] 83.

296. [illegible] 2000. – [illegible] 60–61.

297. [illegible] 1999. – [illegible] 40–49.

298. [illegible] 2003. – [illegible] 3. – [illegible] 2–4.

299. [illegible] 1997. – [illegible] 4. – [illegible] 8–9.

300. [illegible]

Ɉ. ʃ ƙƸʘ , Ɉ. ʐ ʝɘʮʝ ɖɕƫs // ʊɘʘɐɕʠɖɖʠʯɭsɘɫs ʋ ʢʈɘʘɖɕʠ. ī 2002. ī ¯ 4. ī ʉ. 19ī 20.

301. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. Ɉʽʜɢɫsʜʽɘʝɖƶ ɖƶ ɘɖƶʘfɭsʠɘɫsfɭsʽ ʭƙʜɫsʙʠ ʧɖƶʘɖƶsɘʠʭ ʧɫsɫɕʽʜ ʋ ʢʈɘʘɖɕʠ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // Ɉʽfɭɖɕʠʢ ʉƙɖʒfɭ ʢɫsɢɫs ʜʝɫɕɣʘɘɖƶsɢɫs ʘɢɫɕʘɐɖƶsɢɫs ƙɖƶɘʝɫɕfɭʠɭsʝɭsƙ : fɭʝɫɕ ñʊɘʘɐɕʠɖɖʠʯɭsɘɫsò. ī ʉƙɖʒʠ, 2006. ī Ɉ ʠʧ. 10. ī ʉ. 4ī 8.

302. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. Ɉʽʢɫsɘʽ ʟɖʒʽɖɕʠ ɖʒɫsɫɕʬɫsɖɫsɢʽʯɖƶsɢɫs fɭʢɖƶʘʜƙ ɖɕʘʧʽɘɭsƙʰ ʽ ɫɕʽʟɖɕsʧɫsɫɕʽʜɖɕʠʭ ʙƙɢʘʔʯʽɘ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // ʊɘʘɐɕʠɖɖʠʯɭsɘɫs ʋ ʢʈɘʘɖɕʠ. ï 2008. ï ¯ 6. ī ʉ. 7ī 15.

303. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. Ɉʧɖɕʠɘ fɭʧʘʜʢɫsɘɫsfɭsʽ ɖɕʘ ɫɕɫsʟɘʠɭsɫsʢ ɖƶɖƶʔɖɕʠʭ ɫsʟɖɕʘʢ ʝʢfɭsʝɫɕôʽɫɕƙ ʙƙɢʘʔʯʽɘ ɖʒôʷfɭɖɕʠʭ, ɖʒôʷfɭs-ɖʒsɖɫsʯɖɕʠʭ ɭsʘ ɖʒsɖɫsʯɖɕʠʭ ʧɫsɫɕʽʜ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // ʊʘɫɕʽʔfɭʢʠʔ ɖɕʘƙʢɫsɘʠʔ ɘʽfɭɖɕʠʢ. ï ʌʝɫɕfɭsɖƶ, 2008. ī Ɉ ʠʧ. 57. ī ʉ. 91ī 93.

304. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ɼ ɫsfɭɖƶʜɣʝɖɕƶʷ ɢʽfɭsɫsɖɫsɢʽʯɖɫsʾ fɭsɫɕƙʢɭsƙɫɕʠ ʰ ʢʽɫɕʠ ʙʠʯʢʽɘ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // Ɉʽfɭɖɕʠʢ ʘɢɫɕʘɐɖɫsʾ ɖɕʘƙʢʠ. ī 2007. ī ¯ 10. ï ʉ. 38ī 44.

305. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʄ ɫsʜʝɖƶ ɘʘɖɕƶʷ ɫɕɫsfɭsƙ ɖʒsɖɫsʜɖƶʷʢƙ ɖʒôʷfɭɖɕʠʭ ʧɫsɫɕʽʜ ɘʝɖɕʠʢɫsʾ ɫɕɫsɢʘɭsɫsʾ ʭƙʜɫsʙʠ ʧɫɕʠ ɘʽɭsʯʠʟɖƶʷɖɫsɖƶ ʧɫsɫɕɫsʜɫsɘʠʧɫɕɫsʙƙɘʘɖƶ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // Ɩ ʘƙʢɫsɘɫs-ɭsʝʭɖƶʯɖɕʠʔ ʙᴮ ɖʝɭsʝɖƶ ʉɖfɭsʠɭsƙɭsƙ ʙʽɫsɖɫsɢʽʾ ɭsɘʘɐɕʠɖƶ ï ʃ ᴵ ɘʽɘ, 2008. ī Ɉ ʠʧ. 9, ¯ 1ī 2. ī ʉ. 240ī 250.

306. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʄ ɫsɫɕʬɫsɖɫsɢʽʯɖɕʠʔ fɭʢɖƶʘʜ ʘɖƶʘɭsɫsɖʒʯɖɕʠʭ ʯʘfɭsʠɖƶɖɕʘʧʽɘɭsƙʰ ʽ ʙƙɢʘʔʯʽɘ ɖʒsɖɫsʯɖɕʠʭ, ɖʒsɖɫsʯɖɫs-ɖʒôʷfɭɖɕʠʭ ɭsʘ ɖʒôʷfɭɖɕʠʭ ʧɫsɫɕʽʜ ʋ ʢʈɘʘɖɕʠ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // Ɉʽfɭɖɕʠʢ ʉƙɖʒfɭ ʢɫsɢɫs ɖɕʘʯʽɫsɖɕʘɖƶ ɖɫsɢɫs ʘɢɫɕʘɐɖƶsɢɫs ƙɖƶɘʝɫɕfɭʠɭsʝɭsƙ : fɭʝɫɕ ñɭsɘʘɐɕʠɖɖʠʯɭsɘɫsò. ī ʉƙɖʒʠ, 2008. ī Ɉ ʠʧ. 6. ī ʉ. 65ī 76.

307. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʄ fɭsʙɖɕʠɘɫsfɭsʽ ʝʢfɭsʝɫɕôʽɫɕƙ ʙƙɢʘʔʯʽɘ ɖʒôʷfɭɖɕʠʭ ʧɫsɫɕʽʜ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // ʈ ɫsʟɘʝʜʝɖɕƶʷ ʽ ɢʝɖʝɭsʠʢʘɭsɘʘɐɕʠɖƶ: ɖʒɣɘʽʜ. ɭsʝɖʒʘɭs. ɖɕʘƙʢ. ʟʙ. ï ʂ. : ɸ ɢɫɕʘɐɖɕʘ ɖɕʘƙʢʘ, 2008. ī Ɉ ʠʧ. 42. ī ʉ. 164ī 186.

308. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʄ ʯʽɖɕʢʘ ʙƙɢʘʔʯʽɘ ɖʒsɖɫsʯɖɕʠʭ ɭsʘ ɖʒsɖɫsʯɖɫs-ɖʒôʷfɭɖɕʠʭ ʧɫsɫɕʽʜ ʋ ʢʈɘʘɖɕʠ ʟʘɘʽʢɫsɘɫsᴮ ʜʠɖɕʘɖʒʢɫsᴮ ʬɫsɫɕɖʒƙɘʘɖɕƶʷ ʙƙʜɫsɘʠ ɭsʽɖɕʘɘ ƙɖʒsɘʘʭ ʧɫsɫɕɫsʜɫsɘʠʧɫɕɫsʙƙɘʘɖƶʷ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // ʊɘʘɐɕʠɖɖʠʯɭsɘɫs ʋ ʢʈɘʘɖɕʠ. ī 2008. ī ¯ 1. ī ʉ. 24ī 28.

309. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʄ ʯʽɖɕʢʘ ʟʘʙʽʔɖɕʠʭ ʷʢɫsfɭsʝʔ ʙƙɢʘʔʯʽɘ ɖʒsɖɫsʯɖɕʠʭ, ʢɫsɖʒʙʽɖɫsɘʘɖɕʠʭ ɭsʘ ɖʒôʷfɭɖɕʠʭ ʧɫsɫɕʽʜ ʋ ʢʈɘʘɖɕʠ / Ʒ . ʌ. ʄ ʝɖƶ ɖɕʠʢ // ʊʘɫɕʽʔfɭʢʠʔ ɖɕʘƙʢɫsɘʠʔ ɘʽfɭɖɕʠʢ. ï ʌʝɫɕfɭsɖƶ, 2007. ī Ɉ ʠʧ. 54. ī ʉ. 93ī 99.

310. ʄ ʝɖƶ ɖɕʠʢ Ʒ . ʌ. ʌʽɖʒʯɖɕʠʔ fɭʢɖƶʘʜ ɭsʘʢƙɖƶɖɕʘɐɖɫs-ɭsʝʭɖɫsɖɫsɢʽʯɖƶ ʷʢɫsfɭsʽ ɖʒôʷfɭʘ

ʙƖɀɢʘʔ ɥʿɘ ʤʦsʤʦʋʯʤʑ�billboard, ʕtsʤʒʙ ʿʤʦɘʘʤʑʕ ʿ ʤʒ̂ʷ fɲʤʑʕ ʧtsʨʿʜ ƖɀʨʿʟʤʦsʤʒƖɀ ɘʿɥʿ / Ʒ . ʌ . ʆ ʝ ʤƖ ʤʑʕ // ʅ tsɘʿlsʤʑ lsʝʕʤʦsʤʦsɢʿʾ fɲʕtslsʘʨfɲɘʘ : ʤʒʘlsʝ ʨʿʘʤʑʕ ʆ ʿʮ ʤʑʘʨ. ʤʑʘƖʕ.-ʧʨʘʕls. ʕtsʤʑʷ. (4ї 6 ɘʝ ʨʝ fɲʤʑʷ, 2008 ʨ). ї ʆ ɋʕtsʤʘɘ, 2008. ї ʉ . 4ї 20.

311. ʆ ʝ ʤʑlsƖʕ ʌ . ɸ . ʌ ʿʟʿtsʤʦsɢts-ʙʿtsʕʿʤʒʯʤʑ ʘfɲʧʝ ʕlsɋ ɘɋʕtsʨɋfɲʘʤʑʷ ʨʿʧʘʕtsɘtsʾ tsʤʑʾ ɘ ɢtsʜʿɘʤʑ ʨʝ ʤʒsʤʑsʤʑʕ lsʝ ʤʑɋɥ / ʌ . ɸ . ʆ ʝ ʤʑlsƖʕ, Ɪ . ʇ . ʗ ʤʦsɘɋɥ // ʅ ʘƖʕ.-lsʝʕʤʑ ʙʶ ʤʑ ї ʍʘʨʕʿɘ, 2000. ї ʉ . 51ї 53.

312. ʆ ʝ lstsʜɋʕʘɘɋɘʝ ʜʝ ʤʑʤʑʷ ʟtsʤʑʘʤƖ ʤʦsɢts lsɋʧƖ ʤʒʷ fɲʤʑsʾ ʕƖʜtsʙɋ ɘ ʟʘʕʿʜʤʦsʤʒƖ ʨʝ ɢʿtsʤʑ / ʇ . ʒ ʕƖʨɋʤʑ, Ɪ . ʌ ʝ ʜʘʕ, Ɪ . ʃ ʨtsfɲ[lsʘʿʤʑ] // ɟ ʨtsʧtsʟɋɥʿʷ. ї 2003. ї ¯ 1. ї ʉ . 67ї 69.

313. ʆ ʝ lstsʜɋʕʘ ɘɋɘɥʝ ʤʑʤʑʷ ʝ ʕ fɲlsʝ ʨʘ̂ʿ ʨʤƖ ɘʝ ʤʑɋʕtsʾ ʨtsɢʘlstsʾ ʕƖʜtsʙɋ ɘ tsʤʑlstsɢʝ ʤʑʝʟʿ / ʁ . ɿ . ʉ ʿʨʘɥ ʕɋʔ, ɭ . ɯʌ ʝ ʜtstʨtsɘɋɥ, ʗ . ʅ . ɼ ʘʤʑɋʤʕʿɘ [lsʘ ʿʤʑ] // ʆ ʝ lstsʜɋʕɋ ʤʑʘƖʕtsɘɋʕ ʜtsfɲʤʑʜʮ ʝ ʤʑ ʿʟ fɲʝ ʤʑʝ ʕɥʿʾ, ɢʝ ʤʑʝ lsɋʕɋ lsʘʙʿtslsʝʕʤʦsʤʦsɢʿʾ Ɩ lsɘʘʨɋʤʑʤʑɋɥlsɘʿ. ї ʂ . : ɸ ɢʨʘʨʤʑʘ ʤʑʘƖʕʘ, 2005. ї ʉ . 98ї 102.

314. ʆ ʝ lstsʜɋʕɋ ʜtsfɲʤʑʜʮ ʝ ʤʑ ʟ ʷʟʿtsʤʦsɢʿʾ ʿ ʙʿtsʕʿʤʒʾ fɲʤƖ fɲ ʕtsɢtsfɲʧtsʜʘʨfɲ ʕɋʕ lsɘʘʨɋʤʑ. ї ʃ ɹ ɘʿɘ, 1998. ї 131 fɲ

315. ʆ ʝ lstsʜʳ ɘʝ lsʝ ʨɋʤʑʘʨʤʦsʔ ʕʤʑɋʤʑɋɥʝ fɲʕtsʔ ʤʘʙtsʨʘlstsʨʤʦsʔ ʜɋʘɢʤʦsfɲlsɋʕɋ: ʉ ʧʨʘtsɥʤʑʕ / ʀ . ɟ . ʂ tsʤʑʜʨʘʕɋʤʑ, ɸ . Ɪ . ɸ ʨʕɋʧtsɘ, Ɪ . ʀ . ʃ ʝ ɘɥʝ ʤʕts [ɋ ʜʨ]; ʧtsʜ ʨʝ ʜ. ʀ . ɟ . ʂ tsʤʑʜʨʘʕɋʤʑʘ ї ʆ . : ʂ tsʤʦsfɲ, 2004. ї 520 fɲ

316. ʆ ɋʤʦsfɲlsɋɘɋʔ ɬ . ɼ ts ʟʤʒʤʑ ʜtsɘʕʿʤʑʤʑʷ ʤʑʘʔ fɲlsʿʔʕʿʰ ʿ ɢtsʤʑ lsɋʤʑfɲ ʕʿ ʕtsʨtsɘɋ, ʿʤʒʧtsʨlstsɘʘʤʑ ʟ ɼ ʘʤʑʾ / ɬ . ʆ ɋʤʦsfɲlsɋɘɋʔ, ɸ . ʉ ɋʜʝ ʤƖ ʤʑʕtsɘ // ʊɘʘʨɋʤʑʤʑɋɥlsɘts ʋ ʕʨʘʤʑɋ. ї 2006. ї ¯ 6. ї ʉ . 24ї 26.

317. ʆ ʿʕʨtsʝ ʤʑʝ ʤʒʝ ʤʑlstsʟɋ ʕƖʜtsʙɋ. ɸ ʤƖ lsʝ ʨʤʑʘlsɋɘʤʑ ʤʒʝ lstsʜɋ ʜʿʘɢʤʦsfɲlsɋʕɋ, ʧʨʷ ʿʤʘʕlsɋʕɋ / ɸ . ʆ . ʉ lsʘʜʤʑʕ, ɬ . ʁ . ʂ ʨʘɥʿɘ, ʆ . ʇ . ʃ ɋɥƖʕ [lsʘ ʿʤʑ] // Ɪ ʿfɲʤʑʕ ɹ ʿʤʦsɥʝ ʨʕʿɘfɲ ʕtsɢts ʜʝ ʨʮ ʘʤʦsɢts ʘɢʨʘʨʤʦsɢts ƖʤʑɘʝʨfɲlsʝlsƖ. ї ɹ ʿʤʘʌʝ ʨʕɘʘ, 2005. ї Ɪ ɋʧ. 33. ї ʉ . 239ї 248.

318. ʆ ʿʨtsʰ ʤʑʕtsɘ ɸ . ʉ lsɘtsʨʝ ʤʑʤʑʷ ʧʿɘʜʝ ʤʑʤʦsʾ ʤʒʷ fɲʤʑsʾ ʧtsʨtsʜɋ ɘʝ ʤʑɋʕtsʾ ʨtsɢʘlstsʾ ʕƖʜtsʙɋ/ ɸ . ʆ ʿʨtsʰ ʤʑʕtsɘ // ʊɘʘʨɋʤʑʤʑɋɥlsɘts ʋ ʕʨʘʤʑɋ. ї 2001.ї ¯ 9ї 10. ї ʉ . 10ї 11.

319. ʆ tsɋʤʑ Ɪ . ʆ . ɟ ʨtsfɲlstsʔ ɋ fɲʧʝ ɥɋʷ ɋɥʝ fɲʕɋʔ ʤʒʝ lstsʜ tsʧʨʝ ʜʝ ʤʑʝ ʤʑʷ ʘʕlsɋɘʤʦsfɲlsɋ ɢʤʑƖlsʘlsɋtsʤʑʧʝ ʨtsʕfɲʧʜʘʟʳ ɘ ɿ ʨɋlsʨtsɥɋlsʘʕ / Ɪ . ʆ . ʆ tsɋʤʑ // ʃ ʘʙtsʨʘlstsʨʤʦsʝ ʜʝ ʤʦs. ї 1986. ї ¯ 12. ї ʉ . 15ї 16.

320. ʆ tsʕʿʿɘ ɯʃ . ɸ ʤʒʤʦsʕɋfɲʤʦslsʤʑʔ fɲʕʤʘʜ ʤʒʷ fɲʘ ʙƖɀɢʘʔ ɥʿɘ lsʘʨʿʔfɲ ʕtsɢts lsɋʧƖ

ʧ‘əʜʝ ʤʥʦʼ ʤʒʷ ʄɥʤʦʼ ʧʦʨʦʜʗʃ / ɯ ʃ . ʆ ʦʢ‘‘ə // ʇ ʝʨʝʜɢ‘ʨʤʝ ʪʘɢ‘ʨʄʁʢʝ ʟʝʤʒʤʝʨʦʙʄʪʦʼʦ ‘ ʪəʘʨʃʤʥʃʯʪəʦ : ʨʝ ʄʧ. ʤʒʯʏ ə‘ʜ. ʪʝʤʒ ʤʘʑʢ. ʟʙ‘ʨʤʤʃʢ. ī ʂ . : ʋ ʨʦʏ ʘʔ, 2000. ī ɹ ʗʧ. 42. ī ʉ . 232ī 234.

321. ʆ ʦʢ‘‘ə ɯ ʃ . ʌʘʨʘʢ ʪʝʨʃʄʪʃʢʘ ʪəʘʨʃʤ ʪʘʨ‘ʔʄʁʢʦɢʦ ʪʃʧʑ ʧ‘əʜʝ ʤʥʦʼ ʤʒʷ ʄɥʤʦʼ ʭʑʜʦʙʃ / ɯ ʃ . ʆ ʦʢ‘‘ə // ʈ ʦʟəʝʜʝ ʤʤʑʸ ‘ ɢʝ ʤʝ ʪʃʢʘ ʪəʘʨʃʤ ʤʒʏ ə‘ʜʦʤʒʯʃʔ ʪʝʤʒʘʪʃʯʤʃʔ ʤʘʑʢʦəʃʔ ʟʙ‘ʨʤʃʢ : ɯʤʄʪʃʪʑʪ ʨʦʟəʝʜʝ ʤʤʑʸ ‘ ɢʝ ʤʝ ʪʃʢʘ ʪəʘʨʃʤ ī ʂ . : ʅ ʘʑʢʦəʃʔ ʄʚ‘ʪ, 2002. ī ɹ ʗʧ. 36 ī ʉ . 120ī 121.

322. ʆ ʦʨʦʟ ʆ . ɹ . ʃ ɥ‘ʤʢʘ ʢʦʨ‘ə ʧ‘əʤʯʤʦ-ʄʭ‘ʜʤʦɢʦ ʤʒʦʤʦɥʤʦɢʦ ʪʃʧʑ ʙʑʨʦʼ ʭʑʜʦʙʃ ʟʘ ʪʝʭʤʦʤʦɢ‘ɥʤʃʤʒʃ ʦʟʤʘʢʘʤʒʃ / ʆ . ɹ . ʆ ʦʨʦʟ, ʆ . ʃ . ʉ ʝʨʜʁ ʢ // ʅ ʘʑʢʦəʃʔ ə‘ʄɥʤʃʢ ʤʘɥ‘ʦʤʘʤʑ ʤʦɢʦ ʘɢʨʘʨʤʦɢʦ ʑʤʯəʝʨʄʃʪʝʪʑ. ī ʂ ., 2002. ī ɹ ʗʧ. 40. ī ʉ . 166ī 170.

323. ʆ ʦʄʢʘʤʝ ʤʢʦ ɹ . ʇ . ʉ ʪʨʤʢʪʑʨʤʦ-ʬ ʑʤʢ ɥ‘ʦʤʘʤʑ ʤ əʤʘʄʪʃəʦʄʪʼ ʝʨʃʪʨʦɥʃʪ‘ə ʑ ʟʜʦʨʦəʃʭ ‘ ʭəʦʨʃʭ ʤʘ ʘʤʝ ʤʒʁ ʪʝ ʤʑʪ ʪʘʼʭ ʟʤʒʤʃ ʧʨʃ ʤʢʑʘʤʤ: ʘʪʦʨʝ ʬ . ʜʃʄ ʤʘ ʟʜʦʙʑʪʪʷ ʤʘʑʢ. ʄʪʑʧʝ ʤʷ ʢʘʤʜ. əʝʪ. ʤʘʑʢ: ʄʧʝ ɥ. 16.00.01 ñʜ‘ʘɢʤʦʄʪʃʢʘ ‘ ʪʝʨʘʧ‘ʬ ʪəʘʨʃʤò / ɹ . ʇ . ʆ ʦʄʢʘʤʝ ʤʢʦ. ï ɹ ‘ʤʘʌ ʝʨʢəʘ, 1999. ï 18 ʄ.

324. ʅ ʘʑʤʝ ʤʢʦ ɹ .ɹ . ʃ ʄʪʙʤʃəʦʄʪʼ ʑʤʦəʤʦ-ʨʝ ʬ ʤʝ ʢʪʦʨʦʤʦʼ ʜ‘ʷʤ ʤʦʄʪʼ, ʪʃʧʃ ʤʝʨʦʦʦʼ ʄɥʃʄʪʝʤʒʃ ʪʘ ʭ ʟə'ʷʟʦʢ ‘ʟ ʜʝʷʢʃʤʒʃ əʝɢʝ ʪʘʪʃəʤʃʤʒʃ ʬ ʑʤʢ ɥ‘ʷʤʒʃ ʑ ʄʚʃʤʝ ʔ / ɹ .ɹ . ʅ ʘʑʤʝ ʤʢʦ // ʅ ʘʑʢʦəʃʔ ə‘ʄɥʤʃʢ ʤʘɥ‘ʦʤʘʤʑ ʤʦɢʦ ʘɢʨʘʨʤʦɢʦ ʑʤʯəʝʨʄʃʪʝʪʑ. ï ʂ . : ʅ ɸ ʋ , 2004. ï ɹ ʗʧ. 78. ï ʉ . 13ï 34.

325. ʅ ʘɥ ʢ ʆ . ɹ ʗʦʨʦʱ ʑəʘʤʤʑʸ ʙʃɥʢ‘ə ʤʘʤʒʷ ʄʪʪ ʟʘʨʟʤʃʭ ʑʤʒʦə ɢʦʜ‘əʤʑ / ʆ . ʅ ʘɥ ʢ, ʆ . ʇ ʨʃʭʦʜʝ ʢʦ // ʊəʘʨʃʤʤʃʯʪəʦ ʋ ʢʨʘʔʤʃ. ī 1998. ī ¯ 2. ī ʉ . 20ī 21.

326. ʅ ʘɥ ʢ ʆ . ʆ 'ʷʄɥʤʘʧʨʦʜʑʢʪʃəʤʑʄʝ ʙʃɥʢ‘ə ʟʘʨʟʤʃʭ ʄʧʦʄʪʙ‘ə ə‘ʜɢʦʜ‘əʤʑ / ʆ . ʅ ʘɥ ʢ, ʆ . ʇ ʨʃʭʦʜʝ ʢʦ // ʊəʘʨʃʤʤʃʯʪəʦ ʋ ʢʨʘʔʤʃ. ī 2003. ī ¯ 1. ī ʉ . 9ī 10.

327. ʅ ʘɥ ʢ ʆ . ʅ . ʆ ∂ʷʄɥʤʘ ʧʨʦʜʑʢʪʃəʤʑʄʝ ʙʃɥʢ‘ə, əʗʦʨʦʱ ʝʤʃʭ ʜʦ əʗʄʪʢʗʭ əʘɢʦəʃʭ ʢʦʤʒʜʃɥ‘ʔ ʧʨʃ ʜʬ ʝʨʝ ʤʑʏ‘ʔʦəʘʤʦʤʒʑ ʟɢʦʜʦəʑʘʤʤʑ ʢʦʤʑʝʤʤʦʨʘʪ‘ə /ʆ . ʅ . ʅ ʘɥ ʢ, ʆ . ɹ . ʇ ʨʃʭʦʜʝ ʢʦ // ʇ ʝʨʄʧʝ ʢʪʃʯəʃ ʨʦʟəʃʪʢʑ ʄʢʦʪʘʨʘʄʪʯəʘ ʑ ʪʨʝ ʪʝ ʦʤʒʑ ʪʃʄʑʸ ɥʦʤʑʪʪʃ : ʄʝ ʝ ɥ. əʗʧ. ʜʦ ʆ ‘ʏ ʤʘʨʘ ʤʘʑʢ.-ʧʨʘʢʪ. ʢʦʤʬ . (2ī 5 ʏ ʦəʪʤʸ, 2001 ʨ.). : ɹ ‘ʄɥʤʃʢ ʉ ʑʤʒʄʁ ʢʦɢʦ ʜʝʨʏ ʘʤʦɢʦ ʘɢʨʘʨʤʦɢʦ ʑʤʯəʝʨʄʃʪʝʪʑ : ʄʝʨ. çʊəʘʨʃʤʤʃʯʪəʦè. ī ʉ ʑʤʒʃ, 2001. ī ɹ ʗʧ. 5. ī ʉ . 107ī 110.

328. ʅ ʝ ʔʨʦʭʗʤʒʗɥʝ ʄʢʗʝ ʤʝ ʭʘʤʃʟʤʒ ʜʝ ʧʨʝ ʄɥʗəʤʦʧʦʜʦʙʤʦɢʦ ʧʦəʝʜʝ ʤʃʷ ʑ ʢʨ ʄ ʤʗʤʃʗ WAG/RIJ / ʂ . Ʒ . ʉ ʘʨʢʗʄʪʙəʘ, ʆ . ɸ . ʂ ʑʤʃʢʦə, ɹ . ʉ . ʂ ʑʜʨʗʤʃ, ɹ . ɹ . ʅ ʘʨʢʝ əʗɥ

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¯ 1. ī ʉ. 8ī 9.

349. ʇ Ꙩ϶Ꞩtsɘɋʯʉ. ϲ. ɸ ʤ́ʜɋ ʮ ɋteɖʑʆ꞊ Ꞩɋfɪɋʑsls ʤꙨtsfɪɋʑsɘ ʿ ꞨꙨʑsʤsɘɋ꞊ tsʤ̀ʔ ƶ teꙨʯʿtsʤ꙰꞊ ʮ ɋɘʤ̣ ʤʑʷ ʤsʤsʜʤʷꞨƶ ʮƶʔʤʆ꞊ / ʉ. ϲ. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ʆ. Ɪ tsɘꞨ // Ɪ ʯʝ ʤ ʃ ᴵ ɘʿɘfɪɟ Ꞩtsɢts ʜʝ teʮ Ꙩʤʑsɢts ꙨɢteꙨeʤsɢts ƶʤɘʝ teɪɋʆlsʝ lsƶ ɘɋtetsʙʤʆʯlsɘƶ.ī ʃ ᴵ ɘʿɘ, 2005. ī Ɪ ɋʧ. 5. ï ʉ. 86ī 87.

350. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ϲ. ɼʷʷ ʝ Ꞩlsɋɘʤfɪʝsᴵ ɘʿʜɢtsʜʿɘʤ lsꙨ ʷꞨʿfɪʝsᴵ ʷʤsɘɋʯɋʤʆ ʟꙨ ɘɋꞨtsteɋfɪʝsꙨʑʤʷ ƶ teꙨʯʿtsʤ꙰꞊ ʙɋʯꞨʿɘ tetsfɪɋʑɋʤʑs-ʮ ɋtetsɘɋ꞊ ʜtsʙꙨtsꞨ / ʉ. ϲ. ʇ Ꙩ϶Ꞩtsɘɋʯ // ʊʝ tsteʿʷ ʿ ʧteꙨꞨlsɋꞨꙨtetsʟɘɋlsꞨƶ ɸ ʇ ʂ : ʤꙨlsʝ teʿꙨʤɋ ʆ ʿʮ ʤꙨɑ. ʤꙨƶꞨ.-ʧteꙨꞨls. ʷʷ tsteʑʤʑ, 19-20 ɘʝ tɑ 2006 tɑ ī ʃ ᴵ ɘʿɘ, 2006. ī ʊ. 1. ī ʉ. 40ī 44.

351. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ϲ. ɼ ɋteʤsꞨɋfɪɋʑslsʤʆʔ fɪʧʝ Ꞩlstɑ ʤʧʿʜʿɘ ʧʿʜʰ Ꞩʿteʤsɢts ʮ ɋteƶ ʿ ʤsʤsꞨꙨ ʟꙨ ɘɋꞨtsteɋfɪʝsꙨʑʤ ƶ teꙨʯʿtsʤ꙰꞊ ɘʝ ʤɋꞨtsʾ tetsɢꙨstsʾ ꞊ƶʜtsʙɋ "ʟ꙰ɋʰ ʝ ʤʆ꞊" ʮ ɋteʤʆ꞊ Ꞩɋfɪɋʑsls / ʉ. ϲ. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ʆ. Ɪ tsɘꞨ, ʆ . ʊ. ʆ Ꙩʤlsɋʤ // Ɪ ʿfɪɋʑʆꞨ ʃ ᴵ ɘʿɘfɪɟ Ꞩtsɢts ʜʝ teʮ Ꙩʤsɢts ꙨɢteꙨeʤsɢts ƶʤɘʝ teɪɋʆlsʝ lsƶ : fɪʝ tɑ çꙨɢtetsʤsʤʷè ī 2007. ī ¯ 11. ī ʉ. 295ī 299.

352. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ϲ. ɿ ʤʤʆ ʮ ɋteʤsꞨɋfɪɋʑslsʤsɢts fɪʧʝ Ꞩlsteƶ ʤʧʿʜʿɘ teʑʙʯʝ ɘtsʾ teʿʜɋʤʆ ʟꙨ ʿʤsteꙨeʑʤʤꙨƶ ʤsɢts ɘɘʝ ʜʝ ʤʑʷ ʙɋʯꞨꙨʤʮ ɋtetsɘɋ꞊ ʜtsʙꙨtsꞨ tetsfɪɋʑɋʤʑsɢts ʧts꞊tsʜʮ ʝ ʤʑʷ / ʉ. ϲ. ʇ Ꙩ϶Ꞩtsɘɋʯ ʉ. ʆ. Ɪ tsɘꞨ // ɸ ɢtetsʙʿtsʤsɢʷ lsꙨʝ Ꞩtsʤsɢʷ. ī 2006. ī ʊ. 3, ¯ 1ī 2. ī ʉ. 55ī 58.

353. ʇ Ꙩʤʯʝ ʤꞨts ʆ. ʌ. ɿ ɘɵ̂ʷʟtsꞨ ʧtetsʜƶꞨlsɋɘʤʆ꞊ ʷꞨtsfɪʝsʝ ʔ ɘʝ ʤɋꞨtsʾ tetsɢꙨstsʾ ꞊ƶʜtsʙɋ ʟ lsɋʧtsʤ ɘɋʰ tsʾ ʤʝ teɘtsɘtsʾ ʜʿʷʤ ʤsfɪʝsʿ ʿ ʧtsɘʝ ʜʿʤꞨtsʶ lsɘꙨeɋʤ / ʆ. ʌ. ʇ Ꙩʤʯʝ ʤꞨts // ʈ tsʟɘʝ ʜʝ ʤʑʷ lsꙨ ɢʝ ʤʝ lsɋꞨꙨ lsɘꙨeɋʤ : ʤʮ ɘʿʜ. lsʝ ʤꙨls. ʤꙨƶꞨ. ʟʙ. ï ʂ.: ɸ ɢteꙨeʤꙨʤꙨƶꞨꙨ, 1999. ï Ɪ ɋʧ. 30. ï ʉ. 34ï 37.

354. ʇ Ꙩʤʯʝ ʤꞨts ʆ. ʌ. uʤlsʝ ʤfɪɋɘʤʝ ɘɋtetsʰ ƶɘꙨʑʤʷ ʤɵ̂ʷfɪɋʑʆ꞊ lsʝ ʤɋʯᴵ / ʆ. ʌ. ʇ Ꙩʤʯʝ ʤꞨts, Ɪ. Ƽ. ʇ tslsꙨʧʯƶꞨ // ʊʝ tsteʝ lsɋʯʤ ʔ ʧteꙨꞨlsɋʯʤ Ꙩfɪʧʝ Ꞩlsɋ ʧtstetsʜtslsƶlsɘtsteʶ ɘꙨʤ ʤsɢts ʧtetsʯʝ fɪƶ ƶ ʤsʤsʯʤsʤƶ lsꙨ ʤʷfɪɋʑsʤƶ fɪꞨtslsꙨefɪʝsɘʿ : ʤꙨƶꞨ.-ɘɋtetsʙ. Ꞩtsʤʷʷ. / uʤfɪʝsɋlslsʑ tetsʟɘʝ ʜʝ ʤʑʷ ʿ ɢʝ ʤʝ lsɋꞨɋ lsɘꙨeɋʤ. ī ʂ. : ɸ fɪʝsʯʿꙨʯʿʷ çʋ ꞨteꙨ̀ʤꙨè, 1995. ī ʉ. 195ī 196.

355. ʇ Ꙩʤsɘ ʀ. ʇ. ʆ ʙʰ ɋʝ lsɋʧʳ ɘʳ fɪɟ ʝ ʔ ʤʝ teɘʤsʔ ʜʝ ʷlsʝ ʤ ʤsfɪʝsɋ / ʀ. ʇ. ʇ Ꙩʤsɘ // ɼ ɘꙨʜʯꙨlsɋʤʝ lsʤʆʔ tsʧʳ ls tsʙʝ Ꞩlsɋɘʤsɢts ɋʟƶʯʝ ʤʆʷ ɘʳ fɪɟ ʝ ʔ ʤʝ teɘʤsʔ ʜʝ ʷlsʝ ʤ ʤsfɪʝsɋ (ʧtsɘʝ ʜʝ ʤʆʷ) ʮ ɋɘtslsʤ ꞊. ī ʆ. : ʆ ʝ ʜɢɋʟ, 1951. ï 505 fɪʝ

356. ʇ Ꙩʤsɘ ʀ. ʇ. ʌ ɋʟɋtsʤsɢɋʯʝ fɪꞨtsʝ ƶʯʝ ʤʆʝ ts lsɋʧꙨ꞊ ʤʝ teɘʤsʔ fɪɋfɪʝsʝ ʤ, lsʝ ʤʧʝ teꙨʤʝ ʤʑtsɘ lstsʮʝ : ʇ Ꙩʤsɘ ʀ. ʇ. ʧtsʤʑsʝ fɪʝsʙteꙨʤʆʝ lsteʑʜtsɘ / ʀ. ʇ. ʇ Ꙩʤsɘ. ï 1949. ï ʊ. 3. ï ʉ. 369ī 377.

357. ɟ ʘdʑsɘʘɸ . ɺ . ɺ dʑʃʷdʑʃj ɢʃʧʦʬ ʫdʑʮɥʃʃ ʱ ʃlsʦɘʃʜdʑsʡ ʞ j dʑ ʟʳ dʑʘfŋ ʢʨj ɥʃʶ dʒsdʑsʢʘ ʃ fŋʃdʑsj ʟ ʈ ɭ ʂ ɘ fŋ ʢʨj lsʦʨdʑ ʭ ʢdʑ lsʢʘʭ dʒsdʑsɥdʑsʡ ʞ j dʑ ʟʳ ʞ ɘʘɥdʑ ʭ ʞ ʃɘʦlsdʑ ʭ / ɸ . ɺ . ɟ ʘdʑsɘʘ // VII ɺ fŋ fŋsʶ ʟdʑ ʡ fŋʃdʒʃʦʟʃʫdʒ ʧʦ ʬʃʟʃʦdʑsɢʃʃ ʃ ʙʃʦʭʃdʒʃʃ dʑʘʢlsʘɥʃʃ : lsj ʟ. ʜʦʢdʑ ï ʄ ., 1986. ï ʏ . 2. ï ʉ . 29.

358. ɟ ʘdʑʘfŋ ʢ ɯ ʄ . ɺ ʧdʑʃɘ lsʃʧʫ dʑ ʨɘʦɘʦ˒ fŋʃfŋsj dʒʃ ʢʦʨʦɘʃ dʑʘ ˒˒ dʒsdʑsɥdʑ ʧʨʦʜʫʢlsʃɘdʑfŋsᴵ ʿ lsj ʭdʑsdʑsɢʿɥdʑfŋsᴵ / ɯ ʄ . ɟ ʘdʑʘfŋ ʢ // ʄ ʦdʑsɥdʑ lsʘ dʒʘʷfŋdʑ fŋʢʦlsʘʨfŋsɘʦ. ï 1998. ï ɺ ʃʧ. 88. ï ʉ . 28ï 31.

359. ɟ ʘdʑʘfŋ ʢ ɯ ʄ . ʄ ʿdʑdʑʃɘʿfŋsᴵ dʑʘʜʦʶ ʿ ɘdʒʿfŋsʫ ʞ ʃʨdʑ ɘ dʒsdʑsɥʿ ʢʦʨʿɘ ʨʿʟdʑs˒ dʑ ʨɘʦɘʦ˒ ʜʿʷdʑ dʑsfŋsʿ lsʘlsʿdʑs ʙʫʜʦɘʃ / ɯ ʄ . ɟ ʘdʑʘfŋ ʢ // ɺ ʿfŋdʑʃʢ ɼ dʑʧʨʦʧj lsʨʦɘfŋ ʢʦɢʦ ʜj ʨʞ ʘdʑsɢʦ ʘɢʨʘʨdʑsɢʦ ʫdʑ ɘj ʨfŋʃlsj lsʫ. ï 1998. ï ¯ 1ï 2. ï ʉ . 95ï 97.

360. ɟ ʘʨʘdʑʷʢ ʈ . ɟ . ʀ ʟdʒ dʑ dʑʃj ʞ ʃʨdʑsʢʃfŋdʑlsdʑsɢʦ fŋsfŋsʘʘdʑʃʧʃʜʦɘ ʧdʑʘʟdʒ ʢʨʦɘʃ ʫ lsj dʑʷls ɘ ʨʘdʑdʑ dʒ ɘʦʟʨʘfŋsj / ʈ . ɟ . ɟ ʘʨʘdʑʷʢ, ɺ . ʇ . ɕ dʑsɘʃɥ // ɭ ʘʫɥ.-lsj ʭdʑ ʙʶ dʑ ʋ ʢʨ ɭ ʀ ʀ ʬʃʟʃʦdʑ ʃ ʙʃʦʭʃdʒʃʃ fŋ-ʭ. ʞ ʃɘʦlsdʑ ʭ. ï 1986. ï ¯ 8. ï ʉ . 38ï 39.

361. ɟ ʘʨʱ ʫlsʃdʑ ʇ . ɺ . ʊʃʧʳ ɘʳ fŋ j ʡ dʑ ʨɘdʑsʡ ʜjʷlsj dʑ dʑsfŋsʃ, ʃʭ ʦʧʨj ʜj dʑ dʑʃj ʃ fŋʷʟᴵ fŋ ʧʨʦʜʫʢlsʃɘdʑ dʒʃ ʢʘɥj fŋsɘʘdʒʃ ʞ ʃɘʦlsdʑ ʭ / ʇ . ɺ . ɟ ʘʨʱ ʫlsʃdʑ, ʊ . ɺ . ʀ ʧʧʦdʑʃlsʦɘʘ ï ʌ ʨdʑdʑj : ʂ ʃʨɢʃʟfŋsʘdʑ, 1973. ï 72 fŋ

362. ɟ ʘfŋʢʘʄ . ɿ . ɸ ʢlsʃɘdʑfŋsᴵ fŋʫʧj ʨʦʢfŋʃʜʜʃfŋʒlsʘʟʃ lsʘɢdʑlsʘlsʿʦdʑj ʨʦʢfŋʃʜʘʟʃ ʢʨʦɘʿ ʙʫɢʘʡɥʿɘ ʨʿʟdʑʃʭ lsʃʧʿɘ ɘʃʱ ʦ˒ dʑ ʨɘʦɘʦ˒ ʜʿʷdʑ dʑsfŋsʿ ɘʦdʑʃdʑfŋ ʢʦ˒ dʒʘʷfŋdʑs˒ ʧʦʨʦʜʃ / ʄ . ɿ . ɟ ʘfŋʢʘ // ɭ ʘʫʢʦɘʃʡ ɘʿfŋdʑʃʢ dʑʘɥʿʦdʑʘdʑ dʑsɢʦ ʫdʑɘj ʨfŋʃlsj lsʫ ʙʿʦʨj fŋʫʨfŋɘ ʿ ʧʨʃʨʦʜʦʢʦʨʃfŋsʫɘʘdʑdʑʷ ʋ ʢʨʘdʑʃ. ï ʂ ., 2012. ï ʊ. 172, ɥ. 4. ï ʉ . 151ï 155.

363. ɟ ʘfŋʢʘʄ . ɿ . ɸ ʢlsʃɘdʑfŋsᴵ ʬj ʨdʒ dʑlsdʑʃʭ fŋʃfŋsj dʒ lsʘɘdʒʿfŋs ɢdʑʢʦɢj dʑ ʫ dʒʘʷfŋj ʟ ʦʟdʑʢʘdʒʃ PSE lsODFD / ʄ . ɿ . ɟ ʘfŋʢʘ// ɟ ʨʦɢʨʘdʒʘlsʘdʒʘlsj ʨʿʘdʑʃ ɼ ʨdʑɢʦ˒ dʒʿʞ dʑʘʨʦʜdʑs˒ dʑʘʫʢʦɘʦī lsj ʭdʑɥdʑs˒ ʢʦdʑʬj ʨj dʑʃʿ˒ ñʊj ʭdʑɥdʑ dʑʘʫʢʃ: fŋsʘdʑ, ʜʦfŋʷɢdʑ dʑdʑʷ ʿ ʧj ʨfŋʧj ʢlsʃɘʃ ʨʦʟɘʃlsʢʫ dʒʘʷfŋdʑs˒, ʦdʑʿī ʞ ʃʨʦɘʦ˒ lsʘdʒsdʑsɥdʑs˒ ɢʘdʑʟj ʡò, 20-21 ʙj ʨj ʟdʑʷ 2013 ʨʦʢʫ. ï ʂ ʃ˒ɘ.: ɭ ʋ ʌʊ, 2013. ï ʉ . 69 ï 71.

364. ɟ ʘfŋʢʘ ʄ . ɿ . ɸ dʑlsʃʦʢfŋʃʜʘdʑlsdʑʃʡ fŋsʘlsʫfŋ ʙʫɢʘʡɥʿɘ ʨʿʟdʑʃʭ lsʃʧʿɘ ɘʃʱ ʦ˒ dʑ ʨɘʦɘʦ˒ ʜʿʷdʑ dʑsfŋsʿ ɘʦdʑʃdʑfŋ ʢʦ˒ dʒʘʷfŋdʑs˒ ʧʦʨʦʜʃ / ʄ . ɿ . ɟ ʘfŋʢʘ// ɺ ʿfŋdʑʃʢ ʉ ʫdʒfŋ ʢʦɢʦ dʑʘɥʿʦdʑʘdʑ dʑsɢʦ ʘɢʨʘʨdʑsɢʦ ʫdʑɘj ʨfŋʃlsj lsʫ. ʉ j ʨʿʷ ñɺ j lsj ʨʃdʑʘʨdʑʘ dʒj ʜʃɥʃdʑʘò. ï 2012. ï ɺ ʃʧ. 7. ï ʉ .50ï 53.

365. ɟ ʘfŋʢʘ ʄ . ɿ . ɹ ʿdʑʦɘʃʡ fŋsʘlsʫfŋ fŋʃʨʦɘʘlsʢʃ ʢʨʦɘʿ dʒsdʑsʜdʑʷʢʫ ɺ ʦdʑʃdʑfŋ ʢʦ˒

dʒ̑ôʷ fngbs' ʧtstetsнcʃ / ʄ . ι. ɿ Gfn§ʘ// ɿ tetsʙ dɉ dʒʃ ʟtsts'dʐʮ ȷ dɉ teˊ' lsʘɘȷ lsȷ tecʃdʐʘtecbs' dʒȷ нcʃɥcʃdʐʃ : ʟʙ'tedʐʃʕ dʐʘbʕtsɘcʃ⁼ ʧteʘɥᴵ ʌʘteʕ'ɘfnj ʕts' нȷ teʮ ʘɔdʐs' ʟtstsɘȷ lsȷ tecʃdʐʘtecbs' ʘʕʘнȷ dʒ'. ʉ ȷ teʷ ñI ȷ lsȷ tecʃdʐʘtedʐ dʐʘbʕcʃò. ï ʌ., 2011. ï I cʃʧ. 23, ɥ. 2, ls.1. ï ʉ. 120ï 126.

366. ɿ Gfn§ʘʄ . ι. ɪ 'dʐʕtsɘ' ʷteʘʕɥ'' fnʃtetsɘʘlsʕcʃ ʕtetsɘ' ʙlzGʘʔɥ'ɘ ɘtsdʐcʃdʐfnj ʕts' dʒ̑ôʷ fngbs' ʧtstetsнcʃ ʟʘ teˊʟdʐʃ⁼ lscʃʧ'ɘ ɘcʃʰ ts' dɉ teɘtsɘts' нʷ dʐ dʐsfnls' / ʄ . ι. ɿ Gfn§ʘ// l ʘbʕtsɘcʃʔ ɘ'fngdʐʃʕ ɘȷ lsȷ tecʃdʐʘtecbs' dʒȷ нcʃɥcʃdʐʃ. ī ɪ 'dʐʘʎ ȷ teʕɘʘ, 2011. ï I cʃʧ. 8. ï ʉ.78ï 82.

367. ɿ Gfn§ʘ ʄ . ι. ɪ 'dʐʕtsɘts-ʷʕ'fngdʐʃʔ ʧtsʕʘʟdʐʃʕ ʷdʐsɘcʃɥcʃdʐʃ ʟʙʘGʘɥȷ dʐs' ʙ'tsdʐsG'ɥdʐs-ʘʕlscʃɘdʐʃdʒʃ teȷ ɥtsɘcʃdʐʘdʒʃ / ʄ . ι. ɿ Gfn§ʘ, ɯ ʉ. ʈ tsdʒʘ ʕts // ι ʙ'tedʐʃʕ dʐʘbʕtsɘcʃ⁼ ʧteʘɥᴵ I 'dʐdʐʃɥᴵ ʕtsGts dʐʘɥ'tsdʐʘdʐ dʐsGts ʘGteʘtecbsGts lzdʐɘȷ tefnʃlsȷ lsz. ʉ ȷ teʷ ñɔȷ ⁼dʐɥdʐ dʐʘbʕcʃò. ï I 'dʐdʐʃɥʷ, 2012. ī I cʃʧ. 3.ī ʉ. 170ī 175.

368. ɿ Gfn§ʘʄ . ι. ɪ 'ts⁼'dʒɥdʐ ʧtsʕʘʟdʐʃʕcʃ ʕtetsɘ' ʙlzGʘʔɥ'ɘ ɘtsdʐcʃdʐfnj ʕts' dʒ̑ôʷ fngbs' ʧtstetsнcʃ, ʟʘdɉ ɣ dʐs ɘ'н lscʃʧ'ɘ I l ɼ / ʄ . ι. ɿ Gfn§ʘ// l ʘbʕtsɘts-lsȷ ⁼dʐɥdʐʃʔ ʙᴷ dɉ lsȷ dʐ udʐfnlscʃlszlsz ʙ'tsdʐsG' lsɘʘtecʃdʐ ' ɼ ȷ teʮ ʘɔdʐsGts dʐʘbʕtsɘts-нtsfngbнdʐsGts ʕtsdʐstetsdʐ dʐsGts 'dʐfnlscʃlszlsz ɘȷ lsȷ tecʃdʐʘtedʐʃ⁼ ʧteȷ ʧʘteʘls'ɘ lsʘʕtstedʒsɘcʃ⁼ нtsʙʘɔtsʕ. ï ʃ ᴵ ɘ'ɘ, 2012.ī I cʃʧ. 13, ¯ 1-2. ï ʉ. 113ī 120.

369. ɿ Gfn§ʘ ʄ . ι. I dʐcʃʷ dʐʃȷ lscʃʧtsɘ ɘʳ fnj ȷ ʔ dɉ teɘdʐsʔ нȷ ʷlsȷ dʐ dʐsfnlscʃ dʐʘ ʘʕlscʃɘdʐsfnlsᴵ ʘfnʧʘtelsʘlsʘdʒʃdʐslsteʘdʐfnʷȷ teʘʟʳ cʃ ʘdʐʘdʐʃdʐʘdʒʃdʐslsteʘdʐfnʷȷ teʘʟʳ ɘ tsteGʘdʐʃʟdʒȷ ʙʳ ɥʕtsɘ ɘtsdʐ dʐfn§tsʔ dʒʷ fngbsʔ ʧtstetsнʳ / ʄ . ι. ɿ Gfn§ʘ // ʉ tsɘteȷ dʒȷ dʐdʐ ȷ lsȷ ⁼dʐsdʐsGcʃcʃ fnȷ dʐ fn§ts⁼tsʟʷʔ fnlsɘȷ dʐdʐsGts ʧtetscʃʟɘtsнfnlsɘʘ: dʒʘlsȷ tecʃʘdʐ ʕtsdʐʷȷ teȷ dʐɿcʃcʃ (ʇ tetsнdʐs, 17 dʒʘʸ, 7 cʃᴷ dʐʷ 2013 G.).ï ʇ tetsнdʐs : ʇ ʇ ɸ ʋ , 2013. ï ʉ. 268ï 271.

370. ɿ Gfn§ʘ ʄ . ι. I dʒfnls dʐʧ'нdʐʃ⁼ ʕtsdʒʧtsdɉ dʐs'ɘ lz ʧdʐʘʟdʒ ʕtetsɘ' ɘtsdʐcʃdʐfnj ʕts' dʒ̑ôʷ fngbs' ʧtstetsнcʃ ʟʘdɉ ɣ dʐs ɘ'н lscʃʧ'ɘ I l ɼ / ʄ . ι. ɿ Gfn§ʘ, ɼ . ʌ . ʇ lzʷ teʔ // l ʘbʕtsɘcʃʔ ɘ'fngdʐʃʕ ʃ lzGʘdʐfnj ʕtsGts dʐʘɥ'tsdʐʘdʐ dʐsGts ʘGteʘtecbsGts lzdʐɘȷ tefnʃlsȷ lsz. ʉ ȷ teʷ ñI ȷ lsȷ tecʃdʐʘtedʐ dʐʘbʕcʃò ï ʃ lzGʘdʐfnj ʕ, 2012. ī ¯ 37. ï ʉ. 101ï 108.

371. ɿ Gfn§ʘ ʄ . ι. I dʒfnls fnlzdʐ ʷG'нtecʃdʐ dʐʃ⁼ Gtedʐʧ lsʘ Gdʐlzlsʘls'tsdʐ lz ʙlzGʘʔɥ'ɘ I tsdʐcʃdʐfnj ʕts' dʒ̑ôʷ fngbs' ʧtstetsнcʃ teˊʟdʐʃ⁼ lscʃʧ'ɘ ɘcʃʰ ts' dɉ teɘtsɘts' нʷ dʐ dʐsfnls' ʟʘ н' ʙ'tsdʐsG'ɥdʐs-ʘʕlscʃɘdʐʃ⁼ teȷ ɥtsɘcʃdʐ / ʄ . ι. ɿ Gfn§ʘ // I 'fngdʐʃʕ ɿ tsdʐsʘɔfnj ʕts' нȷ teʮ ʘɔdʐs' ʘGteʘtecbs' ʘʕʘнȷ dʒ'. ï 2013. ï ¯ 1 ï ʉ.100ï 103.

372. ɿ Gfn§ʘ ʄ . ι. I ʧdʐcʃɘ ʄ 'ʕtetsdʐʧtsɘ'lsz dʐʘ Gȷ dʒʘlstsdʐsG'ɥdʐ ʧtsʕʘʟdʐʃʕcʃ lsʘ ʧtetsнlzʕlscʃɘdʐfnlsᴵ ʙlzGʘʔɥ'ɘ I tsdʐcʃdʐfnj ʕts' dʒ̑ôʷ fngbs' ʧtstetsнcʃ ʟʘdɉ ɣ dʐs ɘ'н lscʃʧ'ɘ ɘcʃʰ ts' dɉ teɘtsɘts' нʷ dʐ dʐsfnls' / ʄ . ι. ɿ Gfn§ʘ// l ʘbʕtsɘcʃʔ ɘ'fngdʐʃʕ ɘȷ lsȷ tecʃdʐʘtecbs' dʒȷ нcʃɥcʃdʐʃ. ī

ɹ 'dźʘɅ ʝ tɕʕəʘ, 2013. ï Ɉ ɋʈ. 12. ï ʉ. 56ï 60.

373. ɟ Ɠɦʂʘ ʄ . ɿ. Ɉ ʈʃdʐʆə lsɋʈʃ 'ə əɋʰ ts' dʝtɕətsəts' ʜ'ʷdź dʐsfɪʝs' dʐʘ ədʒ'fɪʝs ɓ-dźʈʃtsʈʃtɕslsʝ 'dźə, lstɕʆʘʯʆdʐdźʯʝ tɕtsdźə lsʘ=tsdʝ fɪʝsʝ tɕtsdʐ ə tstɕɢʘdźʟdʒ' ʙlzɢʘʔʯ'ə ətsdʐʆdʐfɪʝ ʕts' lsʘ ʈʃtsdźfɪʝ ʕts' dʒô ʷfɪɋʐʆ= ʈʃtstɕ'ʜ / ʄ . ɿ. ɟ Ɠɦʂʘ // ʅ ʘzʕtsəts-lsʝ=dźʯʐʆʔ ʙᴷ dʝlsʝdʐ ɯdʐʝsɋlslzlsz ʙ'tsdʐtsɢ'' lsəʘɕʆdʐ ' ɼ ʝ tɕʯ ʘɔdʐtsɢts dʐʘzʕtsəts-ʜtsfɪɋdźʜdʐtsɢts ʕtsdʐstɕtsdź dʐtsɢts 'dʐfɪʝsɋlslzlsz əʝ lsʝ tɕʆdʐʘɕdʐʆ= ʈʃtɕʝ ʈʃʘɕʘls'ə lsʘʕtstɕdʒtsəɋ= ʜtsʙʘɔtsʕ. ï ʃ ᴶ ə'ə, 2013. ï Ɉ ɋʈ. 14, ls. 1-2. ī ʉ. 48ï 54.

374. ɟ Ɠɦʂʘ ʄ . ɿ. ʇ ʝ dʒʘlststsdʐtsɢɋʯʝ fɪʂɋʔ ʈʃtɕtsʷɋdź ʕtɕtsəɋ ʙʳ ʯʕtsə ʈʃtsdʝ fɪʝʂtsʔ dʒʷfɪɋdʐtsʔ ʈʃtstɕtsʜʳ ə ʟʘɔɋfɪɋʆdʒtsfɪʝsɋ tsls lsɋʈʃtsə əʳ fɪʝ ʝʔ dʝ tɕədʐtsʔ ʜʝ ʷlsʝdź dʐtsfɪʝsɋ / ʄ . ɿ. ɟ Ɠɦʂʘ// ʋ ʯʝdʐ ʝ ɿʘʃɋfɪʂɋ. ī 2013. ï ʊ. 49, əʳ ʈ.1, ʯ. 1. ï ʉ. 129ï 131.

375. ɟ Ɠɦʂʘ ʄ . ɿ. ʇ ʝ dʒʘlststsdʐtsɢ'ʯdʐ ʈʃtsʕʘʟdʐʆʕɋ ʕtɕtsə' ʙlzɢʘʔʯ'ə Ɉ tsdʐʆdʐfɪʝ ʕts' dʒô ʷfɪɋdʐts' ʈʃtstɕtsʜɋ ʟʘdʝʯdʐts ə'ʜ lsɋʈʃ 'ə əɋʰ ts' dʝtɕətsəts' ʜ'ʷdź dʐtsfɪʝs' / ʄ . ɿ. ɟ Ɠɦʂʘ // ʅ ʘzʕtsəɋʔ ə'fɪɋdʐʕ ʃ ᴶ ə'əfɪʝ ʕtsɢts dʐʘʯ'tsdʐʘdź dʐtsɢts lzdźəʝ tɕfɪɋlsʝlsz əʝ lsʝ tɕʆdʐʘɕdʐts' dʝʜɋʯɋdʐʆ lsʘ ʙ'tslsʝ=dʐtsdʐtsɢ'' 'dʝdʐ ʉ. ɿ. ʇ ʯɋʯᴵ ʕtsɢts. ʉ ʝ tɕ'ʷ ñɪ 'tsdʐtsɢ'ʯdʐ dʐʘzʕɋò. ï ʃ ᴶ ə'ə, 2011. ï ʊ. 13, ¯ 4, ʯ. 2. ï ʉ. 176ï 182.

376. ɟ Ɠɦʂʘʄ . ɿ. ɼ ɋdʐʘdʒʆʕʘᴵ lststsdʐtsɢɋʯʝ fɪʂɋ= ʈʃtsʕʘʟʘlsʝ dʝʔ lsʝ dźʷls ʈʃtsdʝ fɪʝʂtsʔ dʒʷfɪɋdʐtsʔ ʈʃtstɕtsʜʳ ə tsdʐstsɢʝ dʝʟʝ /ʄ . ɿ. ɟ Ɠɦʂʘ// Stiinta Agricola. ï 2014. ī Nr. 1. ī ʉ. 95ī 102.

377. ɟ Ɠɦʂʘ ʄ . ɿ. ɼ ɋdʐʘdʒ'ʕʘ ʈʃtsʕʘʟdʐʆʕʘ tɕʅ ʷdʐtsəɋʯɋdʐʆ, ʟʘdʝʯdʐts ə'ʜ ʷʕtsfɪʝs' dʒô ʷfɪʘ, tslstɕʆdʒʘdʐtsɢts ʟ dʒtsdʝ dʐslz ʟʘʙtsᴷ lsʘ lz ʈʃʝ tɕ'tsʜ ʜtsʟtɕ'əʘdʐdźʷ / ʄ . ɿ. ɟ Ɠɦʂʘ, ʄ . ɼ ʘʯɋʰ ɋdʐ // 78 ʄ 'ʯ dʐʘɕtsʜdʐʘ dʐʘzʕtsəʘ ʕtsdʐʷ ʝ tɕʝ dʐʯ'ʷ dʒtsdʐtsʜɋ= lzʯʝ dʐʆ=, Ɠɦʈʃ 'tɕʘdʐls'ə çʅ ʘzʕtsə' ʟʜtsʙlzlsʕɋ dʒtsdʐtsʜ' ī əɋtɕ'ʰ ʝ dʐdź ʈʃtɕtsʙdʝdʒ =ʘɕʯlzəʘdʐdźʷ dź ʜfɪʝsəʘ lz ʌʌɯ fɪʝstsdźlsls'è, 2-3 ʕə'lsdźʷ 2012. ī ʂ .: ʅ ʋ ʌʊ, 2012. ī ʏ. 1. ī ʉ. 238ī 239.

378. ɟ Ɠɦʂʘ ʄ . ɿ. ɿʘʙ'ʔdʐ ʈʃtsʕʘʟdʐʆʕɋ ʷʕtsfɪʝs' ʙlzɢʘʔʯ'ə ətsdʐʆdʐfɪʝ ʕts' dʒô ʷfɪɋdʐts' ʈʃtstɕtsʜɋ ʟʘdʝʯdʐts ə'ʜ lsɋʈʃ 'ə əɋʰ ts' dʝtɕətsəts' ʜ'ʷdź dʐtsfɪʝs' / ʄ . ɿ. ɟ Ɠɦʂʘ, ɯ ʄ . ʄ ʘɕlsɋdʐ ʕ // ɿʙ'tɕdʐʆʕ dʐʘzʕtsəɋ= ʈʃtɕʘʯᴵ Ɉ 'dʐdʐʆʯᴵ ʕtsɢts dʐʘʯ'tsdʐʘdź dʐtsɢts ʘɢtɕʘɕdʐtsɢts lzdźəʝ tɕfɪɋlsʝlsz. ʉ ʝ tɕ'ʷ ñʊʝ=dźʯdʐ dʐʘzʕɋò.ī Ɉ 'dʐdʐʆʯʷ, 2013. ï Ɉ ɋʈ. 3. ï ʉ. 105ï 110.

379. ɟ Ɠɦʂʘʄ . ɿ. ɿƓɦʝstsfɪʝzəʘdʐdźʷ ʕtstɕdʒtsəts' ʜtsʙʘɔʕɋ ñʃ 'ʕtɕtsdźʈʃtsə'lsò dʒtsdʐtsʜdźʷʕlz əʝ dʐʆʕts' tɕtsɢʘlsts' =lzʜtsʙɋ tɕ'ʟdʐʆ= lsɋʈʃ 'ə əɋʰ ts' dʝtɕətsəts' ʜ'ʷdź dʐtsfɪʝs' : dʝ lstsʜɋʯdʐ tɕʝ ʕtsdʝ dʐʜʘʯ'' / ʄ . ɿ. ɟ Ɠɦʂʘ, ɼ . ʌ . ʇ lzʷ tɕ'ʔ. ï ʃ ᴶ ə'ə : Ɉ ɋʜʘɔdʐʆʯɋʔ ʯʝ dʐstɕʃ ʅ ʋ Ɉ ʄ lsʘ ɹ ʊ 'dʝdʐ ʉ.ɿ ʇ ʯɋʯᴵ ʕtsɢts, 2014. ï 60 fɪʝ

380. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ ʝ lsǾʙtsdžųdž tɐʝ ǾƗ ɥ˚ˀ tstɐǾdžLdʑ ʙlzǾ? ɥ˚ə ʧtsdžfnʝ Ɂts˒ dʒ̂ᵂfnɋdʑts˒ ʧtstɐtsʜɋ ʟǾdʑʝ ʞ dʑts ə˚ʜ lsɋʧ˚ə əɋʰ ts˒ dʑʝ tɐətsəts˒ ʜ˚ʷdʑ dʑtsfnʝs˚ ʧtɐɋ ʟǴtsʜtsəlzəǾdʑdʑ Ɂtstɐdʒsəts˒ ʜtsʙǾəɁɋ ñʃ ˚Ɂtɐtsdžʧtsə˚lsò/ ʃ . ʅ. ʇ Ǿnɉ§Ǿ, ʃ . ʇ. ʃ ɋɥdžɁ // ʅ ǾdžɁtsəɋ? ə˚fnɋdʑɋɁ ʃ ᴊ ə˚əfnʝ Ɂtsǵts dʑǾɥ˚tsdžǾdž dʑtsǵts lzdžəʝ tɐfnɋlsʝ lslz əʝ lsʝ tɐɋdʑǾɐdʑts˒ dʑʝ ʜɋɥɋdʑɋ lsǾ ʙ˚tslsʝ ⌐dʑtsdʑtsǴ˚ˀ ˚dʑʝ dž ɥ.ʅ. ʇ ʞ ɋɥᴵ Ɂtsǵts. ɥ ʝ tɐ˚ʷ ñI ʝ lsʝ tɐɋdʑǾɐdž dʑǾdžɁɋò. ï ʃ ᴊ ə˚ə, 2014. ï ʊ.16, ¯ 2, ɥ.2. ï ɥ. 271ï 277.

381. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ tsdžlststɐɋdʑ Ǵʝ dʒǾlstsdʑtsǴ˚ɥdʑtsǵts ʧtɐtsᵂ˚dž Ɂtɐtsə˚ dʒtsdʑtsʜdžᵂɁlz əʝ dʑɋɁts˒ tɐtsǴǾlsts˒ ⌐lzʜtsʙɋ ətsdʑɋdʑfnʝ Ɂts˒ dʒ̂ᵂfnɋdʑts˒ ʧtstɐtsʜɋ / ʃ .ʅ. ʇ Ǿnɉ§Ǿ // ʅ ˚fnɋdʑɋɁ ɥ lzdʒfnʝ Ɂtsǵts dʑǾɥ˚tsdžǾdž dʑtsǵts ǾǴtɐǾɐdʑtsǵts lzdžəʝ tɐfnɋlsʝ lslz. ɥ ʝ tɐ˚ʷ ñI ʝ lsʝ tɐɋdʑǾɐdʑǾ dʑʝ ʜɋɥɋdʑǾò. ï 2011. ï ʅ ɋʧ. 2. ï ɥ. 28ï 30.

382. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ ʙdʑʝ dʑʙʝ dʑɁtsə fnɋʧtɐtsəǾlsɁɋ Ɂtɐtsəɋ ʙʳ ɥɁtsə ətsdž dʑɋɁts? dʒᵂfnɋdʑts? ʧtstɐtsʜʳ tɐǾʟdž ⌐ lsɋʧtsə əʳ fnʝ ʝ? dʑʝ tɐədʑts? ʜʝ ʷlsʝ dž dʑtsfnʝsɋ / ʃ . ʅ. ʇ Ǿnɉ§Ǿ // ʃ ʝ ʞ ʜlzdʑǾɐtsʜdž ? əʝ fnʝsdʑɋɁ əʝ lsʝ tɐɋdʑǾɐɋɋ. ï 2013. ï ¯ 2. ï ɥ. 55ï 60.

383. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ ʙdʒdžždžʧ˚ʜ˚ə lz ʧdʑǾʟdʒ Ɂtɐtsə˚ ʙlzǾ? ɥ˚ə ətsdʑɋdʑfnʝ Ɂts˒ dʒ̂ᵂfnɋdʑts˒ ʧtstɐtsʜɋ ʟǾdʑʝ ʞ dʑts ə˚ʜ lsɋʧ˚ə əɋʰ ts˒ dʑʝ tɐətsəts˒ ʜ˚ʷdʑ dʑtsfnʝs˚ / ʃ . ʅ. ʇ Ǿnɉ§Ǿ // ʅ ˚fnɋdʑɋɁ ɾ ɋlstsdʒɋtɐfnʝ Ɂtsǵts dʑǾɥ˚tsdžǾdž dʑtsǵts ǾǴtɐtsʝ ɁtsdʑtsǴ˚ɥdʑtsǵts lzdžəʝ tɐfnɋlsʝ lslz: dʑǾdžɁtsəts-lsʝ tstɐʝ lsɋɥdʑɋ? ʟʙ˚tɐdʑɋɁ. ï ɾ ɋlstsdʒɋtɐ, 2012. ï ¯ 1, ls.3, ɥ.1. ï ɥ. 364ï 368.

384. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ ʙdʒdž tɐʝ ɥtsəɋdž lsǾ dʒ̂ᵂfnɋdʑǾ ʧtɐtsʜlzɁlsɋədžfnʝsᴵ ʙlzǾ? ɥ˚ə ʧtsdžfnʝ Ɂts˒ dʒ̂ᵂfnɋdʑts˒ ʧtstɐtsʜɋ tɐ˚ʟdʑɋ⌐ lsɋʧ˚ə əɋʰ ts˒ dʑʝ tɐətsəts˒ ʜ˚ʷdʑ dʑtsfnʝs˚ ʟǾ ʟǴtsʜtsəlzəǾdʑdʑᵂ Ɂtstɐdʒsəts˒ ʜtsʙǾəɁɋ ñʃ ˚Ɂtɐtsdžʧtsə˚lsò / ʃ . ʅ. ʇ Ǿnɉ§Ǿ// ᴊ ˚tsdʑtsǴ˚ʷ lsəǾɐɋdž. ï 2014. ï ʊ. 16, ¯ 1. ï ɥ. 85ï 97.

385. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ fnɋdʑtsəɋ ᵂ˚ʟ˚tsdʑtsǴ˚ˀ lsǾ Ǵ˚Ǵ˚˚dʑɋ ⌐ǾɐɥlzəǾdʑdžᵂ : dʑǾʙtstɐǾlststɐdʑɋ? ʧtɐǾƗlsɋɁlzdʒ / ʃ . ʅ. ʇ Ǿnɉ§Ǿ, ᴊ . ɯ ʇ Ǿdžlz⌐. ī ʃ ᴊ ə˚ə, ʅ ɋʜǾədʑɋɥɋ? ɥʝ dʑstɐ ʃ ʅ ʋ ʅ ʃ lsǾ ᴊ ʊ ˚dʑʝ dž ɥ. ʅ ʇ ʞ ɋɥᴵ Ɂtsǵts, 2014.ī 60 fnʝ

386. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ fnɋdʑtsəɋ ᵂ˚ʟ˚tsdʑtsǴ˚ˀ lsǾ Ǵ˚Ǵ˚˚dʑɋ ⌐ǾɐɥlzəǾdʑdžᵂ : dʑǾəɥǾdž dʑɋ? ʧtsfnʝʙdʑɋɁ / ʃ . ʅ. ʇ Ǿnɉ§Ǿ, ᴊ . ɯ ʇ Ǿdžlz⌐. ï ʃ ᴊ ə˚ə : ʅ ɋʜǾədʑɋɥɋ? ɥʝ dʑstɐ ʃ ʅ ʋ ʅ ʃ lsǾ ᴊ ʊ ˚dʑʝ dž ɥ. ʅ ʇ ʞ ɋɥᴵ Ɂtsǵts, 2014. ï 120 fnʝ

387. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ fnʝsʙ dʑɋəsfnʝs˚ ʟdʒdžʧtsɁǾʟdʑɋɁ˚ə ʙ˚dʑɁtsətsǵts tsʙdʒdʑlz lsǾ dʒ̂ᵂfnɋdʑǾ ʧtɐtsʜlzɁlsɋədžfnʝsᴵ ʙlzǾ? ɥ˚ə ʅ tsdʑɋdʑfnʝ Ɂts˒ dʒ̂ᵂfnɋdʑts˒ ʧtstɐtsʜɋ tɐ˚ʟdʑɋ⌐ lsɋʧ˚ə əɋʰ ts˒ dʑʝ tɐətsəts˒ ʜ˚ʷdʑ dʑtsfnʝs˚ ʧtɐɋ ʟǴtsʜtsəlzəǾdʑdʑ Ɂtstɐdʒsəts˒ ʜtsʙǾəɁɋ ñʃ ˚Ɂtɐtsdžʧtsə˚lsò / ʃ . ʅ. ʇ Ǿnɉ§Ǿ // ᴊ ˚tsdʑtsǴ˚ʷ lsəǾɐɋdž. ï 2013. ï ʊ. 15, ¯ 4. ï ɥ. 85ï 95.

388. ʇ Ǿnɉ§Ǿ ʃ . ʅ. ʃ ɥ˚dʑɁǾ ⌐˚dʒɥdʑtsǵts fn§dʑǾʜlz ʷdʑtsəɋɥɋdʑɋ ʟʙǾǴǾɥʝ dʑts˒ ʙ˚tsdʑtsǴ˚ɥdʑts-

[illegible] / [illegible] // [illegible] : [illegible], [illegible], [illegible] : [illegible], 22–23 [illegible] 2013 [illegible], 2012. – [illegible] 32–33.

389. [illegible] / [illegible] // [illegible]: [illegible]. – [illegible], 2012. – [illegible] 24, [illegible] 4, [illegible] 2. – [illegible] 64–68.

390. [illegible] / [illegible] // [illegible]. – 2014. – [illegible] 1. – [illegible]: http: //www.nbuv.gov.ua/e-Journals/nd/2014-1/41snpbab.pdf

391. [illegible] / [illegible], [illegible] // [illegible]. – [illegible], 2012. – [illegible] 14, [illegible] 3. – [illegible] 218–223.

392. [illegible] / [illegible] // [illegible]. – 2013. – [illegible] 10. – [illegible] 25–28.

393. [illegible] / [illegible] // [illegible]. – 2013. – [illegible] 6. – [illegible] 10–17.

394. [illegible] / [illegible] // [illegible]. – [illegible], 2012. – [illegible] 13, [illegible] 3–4. – [illegible] 26–32.

395. [illegible] : [illegible]

ʧtsfŋʙ dʑʆʢ / ʆ . ꞁ. ꟸ ᏅꞃꞘꝊ ï ʃ ᴊ ɘʿɘ : ɼ tsʙ teꝊfŋʧ teꝊɔꝊ, 2010. ï 135 fŋ

396. ꟸ ᏅꞃꞘꝊ ʆ . ꞁ. ʌ ʿʟʿtsdʑtsɢʿʯdʑʆʔ fŋsꝊlsʑfŋ tsteɢꝊdʑʟdʑ ʙʑɢꝊʔʯʿɘ ⅃ tsdʑʆdʑfŋ ʢtsʾ dʒɵʷfŋdʑtsʾ ʧtstetsʜʆ ʟꝊdʑʮ dʑts ɘʿʜ lsʆʧʿɘ ɘʆʰ tsʾ dʑteɘtsɘtsʾ ʜʿʷdʑ dʑtsfŋsʿ / ʆ . ꞁ. ꟸ ᏅꞃꞘꝊ // ꞁ Ꮕʑʢtsɘts-lsʝ꞊dʑʯdʑʆʔ ʙᴷ dʑlsʝdʑ udʑfŋsʆlsʑlsʑ ʙʿtsdʑtsɢʿʾ lsɘꝊteʆdʑʿ ɼ ʝteɼ Ꝋɔdʑtsɢts dʑꝊʑʢtsɘts-ʜtsfŋdʑʜdʑtsɢts ʢtsdʑtstetsdʑ dʑtsɢts ʿdʑfŋsʆlsʑlsʑ ɘʝlsʝteʆdʑꝊtedʑʆ꞊ ʧteʝʧꝊteꝊsʿɘ lsꝊ ʢtstedʒtsɘʆ꞊ ʜtsʙꝊɔtsʢ. ï ʃ ᴊ ɘʿɘ, 2011. ï ⅃ ʆʧ. 12, ¯ 3-4. ï ʉ. 29ï 35.

397. ꟸ ᏅꞃꞘꝊ ʆ .ꞁ. ɼ lstsdʑtsɢʿʯdʑ ʧtsʢꝊʟdʑʆʢʆ lsʝdʑʷls ⅃ tsdʑʆdʑfŋ ʢtsʾ dʒɵʷfŋdʑtsʾ ʧtstetsʜʆ ɘ tsdʑtstsɢʝdʑʟʿ / ʆ . ꞁ. ꟸ ᏅꞃꞘꝊ // ꞁ Ꮕʑʢtsɘʆʔ ɘʿfŋdʑʆʢ ʃ ᴊ ɘʿɘfŋ ʢtsɢts dʑꝊʯʿtsdʑꝊdʑ dʑtsɢts ʑdʑɘʝtefŋʆlsʝlsʑ ɘʝlsʝteʆdʑꝊtedʑtsʾ dʒʝʜʆʯʆdʑʆ lsꝊ ʙʿtslsʝ꞊dʑtsdʑtsɢʿʾ ʿdʒʝdʑ ʉ. ꞁ. ʇʮʆʯᴵ ʢtsɢts. ʉʝteʿʷ ñ⅃ ʝlsʝteʆdʑꝊtedʑ dʑꝊʑʢʆò. ï ʃ ᴊ ɘʿɘ, 2013. ï ʊ. 15, ¯ 3, ʯ. 3. ï ʉ. 406ï 411.

398. ꟸ Ꮕfŋdʑʯʝdʑʆts ʆ . ʆ . ꟸ tsteʿɘdʑdʑdʑꝊ꞊ꝊteꝊlsʝteʆfŋsʆʢꝊʧtetsʜʑʢlsʆɘdʑʆ꞊ ʷʢtsfŋsʝʔ ʢtsteʿɘ ɘdʑlsteʿʰ dʑtsʧtstetsʜdʑʆ꞊ lsʆʧʿɘ ʧʿɘʜʝdʑtsʾ dʒɵʷfŋdʑtsʾ ʧtstetsʜʆ ʟꝊꝊdʑꝊdʑtsɢʿʯdʑʆ꞊ ʑdʒtsɘ ɢtsʜʿɘdʑ / ʆ . ʆ . ꟸ Ꮕfŋdʑʯʝdʑʆts // ꞁʙʿtedʑʆʢ dʑꝊʑʢtsɘʆ꞊ ʧteꝊʯᴵ ⅃ ʿdʑdʑʆʯᴵ ʢtsɢts dʑꝊʯʿtsdʑꝊdʑ dʑtsɢts ꝊɢteꝊtedʑtsɢts ʑdʑɘʝtefŋʆlsʝlsʑ : fŋʝte çfŋdʑfŋʢtsɢtsfŋʧtsʜꝊtefŋʢʿ dʑꝊʑʢʆè. ï ⅃ ʿdʑdʑʆʯʷ, 2012. ï ⅃ ʆʧ. 3. ï C. 122ï 126.

399. ꟸ Ꝋsʝdʑts dʑꝊ ʢtsteʆfŋdʑʑ dʒtsʜʝdʑ ¯ 84445 ʋ ʢteꝊdʑꝊ ɸ 01 ʂ 67/02, ɸ 23 ʂ 1/18 ʉʧtsfŋʙ ʧʿʜɘʆʰ ʝdʑdʑʷ ʧtetsʜʑʢlsʆɘdʑtsfŋsʿ ʙʑɢꝊʔʯʿɘ dʒʷfŋdʑʆ꞊ ʧtsteʿʜ ɘ ʑdʒtsɘꝊ꞊ ʜʝʷʷʿʯʆlsʑ dʒʢtetsʝdʑdʒʝdʑtsʿɘ / ʆ . ꞁ. ꟸ ᏅꞃꞘꝊ, ɼ . ʌ . ʇʑʷteʔ, ʆ . ʇ. ʃ ʆʯʑʢ // ʟꝊʸɘdʑʆʢ lsꝊʧꝊsʝdʑtstsɘdʑꝊfŋdʑʆʢ ʃ ᴊ ɘʿɘfŋʢʆʔ dʑꝊʯʿtsdʑꝊdʑ dʑʆʔ ʑdʑɘʝtefŋʆlsʝls ɘʝlsʝteʆdʑꝊtedʑtsʾ dʒʝʜʆʯʆdʑʆ lsꝊʙʿtslsʝ꞊dʑtsdʑtsɢʿʾ ʿdʒʝdʑ ʉ. ꞁ. ʇʮʆʯᴵ ʢtsɢts. ï ¯ u201303763 ; ʟꝊʸɘdʑ 26.03.13 ; tsʧʑʙdʑ 25.10.13, ᴊᴷ dʑ ¯ 20..

400. ꟸ Ꝋsʝdʑts dʑꝊ ʢtsteʆfŋdʑʑ dʒtsʜʝdʑ ¯ 92226 ʋ ʢteꝊdʑꝊ ɸ 01 ʂ 67/02 ʉʧtsfŋʙ ɘʆʷɘdʑdʑdʑʷ lsꝊ ɘʿʜʙtsteʑ ʷʷʑdʑʯʿtsdʑꝊdʑ dʑts tsʜdʑtsteʿʜdʑʆ꞊ ɢtedʑʧ ʙʑɢꝊʔʯʿɘ dʒɵʷfŋdʑʆ꞊ ʧtsteʿʜ ɘʝdʑʆʢtsʾ tetsɢꝊstsʾ ꞊ʑʜtsʙʆ / ʆ . ꞁ. ꟸ ᏅꞃꞘꝊ, ɼ . ʌ . ʇʑʷteʔ, ʆ . ʇ ʃ ʆʯʑʢ // ʟꝊʸɘdʑʆʢ lsꝊ ʧꝊsʝdʑtstsɘdʑꝊfŋdʑʆʢ ʃ ᴊ ɘʿɘfŋʢʆʔ dʑꝊʯʿtsdʑꝊdʑ dʑʆʔ ʑdʑɘʝtefŋʆlsʝls ɘʝlsʝteʆdʑꝊtedʑtsʾ dʒʝʜʆʯʆdʑʆ lsꝊ ʙʿtslsʝ꞊dʑtsdʑtsɢʿʾ ʿdʒʝdʑ ʉ. ꞁ. ʇʮʆʯᴵ ʢtsɢts. ï ¯ u201401326 ; ʟꝊʸɘdʑ 11.02.14 ; tsʧʑʙdʑ 11.08.14, ᴊᴷ dʑ ¯ 15.

401. ꟸ Ꝋstsdʑtsɢʿʷ dʒʿdʑteꝊdʑ dʑtsɢts tsʙdʒʿdʑdʑ teʝʯtsɘʆdʑ ʑ ʢtsteʿɘ ʧʿʜ ɘʧdʑʆɘtsdʒ dʑɢꝊsʆɘdʑʆ꞊ ʝʢtsdʑtsɢʿʯdʑʆ꞊ ʷʷꝊʢlststeʿɘ ʜtsɘʢʿdʑdʑʷ / ʉ. ꟸ. ɼ tsdʑʯᴵ ʢʆʔ, ʆ . ɯ ʎ ɘʿdʑ꞊tsɘfŋʢʆʔ, ⅃ . ꞇ. ʂ tsdʑfŋdʑʆʢ, ʆ . ɯ ꟸ Ꝋɔdʑdʑʆts // ꞁ Ꮕʑʢtsɘʆʔ ɘʿfŋdʑʆʢ dʑꝊʯʿtsdʑꝊdʑ dʑtsɢts ꝊɢteꝊtedʑtsɢts ʑdʑɘʝtefŋʆlsʝlsʑ. ï ʂ ., 2005. ï ⅃ ʆʧ. 89. ï ʉ. 234ï 237.

402. ꟸ ʝdʑ꞊Ꝋsʆʔ ʆ . ʉ. ʈ ʝʟʑdʑ lsꝊsʆ ʿdʑtstetsʜʑʢʯʿ dʑdʒʝʯᴵ ʢtsʾ ʯtstedʑts-teʷʙtsʾ ʧtstetsʜʆ /

ʆ . ʉ . ɿ ʝ dʑ ͞ Ꙩsɖʔ, ʃ . ʆ . ɿ ʽHHlzBdʑꙨ // ɿ B ʽtɑdʑʃʕ dʑꙨlʑʕtsɘɖ͞ tʃtɑꙨɥᴵ ɺ ʽdʑdʑʃɥᴵ ʕtsGts Hʝtɑɣ Ꙩɘdʑ sGts ꙨɢtɑꙨtɑdʑsGts lzdʑɘʝ tɑʄɥʃlsʝ lsz. ı ɺ ʽdʑdʑʃɥᵂ, 2008. ı ɺ ɖʈʃ. 34, ʊ. 3. ı ʉ . 65ı 69.

403. ɿ ʝtɑʝɘꙨɑɖɖʒ sʄʝsᴵ ɖ ɖʄʈʃtsɖʑ Ltsɘ Ꙩdʑʃʝ tʃɖlsꙨsʝ dʑ dʑ ͞ ɘʝ ʱ ʝʄʝsɘ ʕtstɑdʒ Ꙩ tʃtɑɖ ʄʂꙨtɑdʒdʑɖɘꙨdʑʃɖ Bʳ ɥʂꙨdʒ tɑꙨʃʄʈsɘtsʔ dʒʑʕɖ ɖ tɑꙨʃʄʈꙨ / ɩ . ɸ . ɕ ɥʕts, ɺ . ʌ . ʈ Ꙩɦɥɖʕtsɘ, ɺ . ʂ . ɻ lztɑɖdʑ[ɖ Htɕ] // ɿ tstslsʝ ͞ dʑʃɥʝ ʄʂꙨᵞ dʑꙨlʑʕꙨɪ ʝ dʑtstɑzʄʝɥɖ. ı 1990. ı ¯ 31. ı ʉ . 54ı 57.

404. ɿ ʝtɑʄʈʃʝ ʕlsɖɘɖ LBʝtɑʝɣ ʝ dʑdʑᵞ Gʝ dʑsᵂ tsdʑɦlz ʄʝtɑts᾽ lʑʕtɑꙨ̓dʑʄʝ ʕts᾽ ͞ lzHtsBɖ / ɸ . ɿ . ʂ tɑlzGdʑᵞʕ, ɹ . ɭ . ɿ tsHtsBꙨ̧ ʈ . ʆ . ʉ lstsᵂdʑsɘ [lsꙨ ʽdʑ] // ʈ tsLɘʝ Hʝ dʑdʑᵞ lsꙨ Gʝ dʑʝ lsɖʕꙨ lsɘꙨtɑɖdʑ: dʒ ɣ ɘ ʽH. lsʝ dʒꙨs. dʑꙨlʑʕ. LB. ï ʂ ., 2002. ı ɺ ɖʈʃ. 36. ï ʉ . 100ı 101.

405. ɿ ʝtɑʄʈʃʝ ʕlsɖɘɖ dʒsdʑsɥdʑsGts ʄʂtslsꙨʕtɑʄʝsɘꙨ dʑꙨ tʃ ʽɘHdʑ ʋ ʕtɑꙨ̓dʑʃ / ʆ . ɿ lzBʝɥᴵ, ɺ . ɹ lztɕʕꙨs, ʒ . ɿ tsdʑzʈʃꙨdʑ[lsꙨ ʽdʑ] // ʊɘꙨtɑɖdʑdʑʃɥlsɘts ʋ ʕtɑꙨ̓dʑʃ. ı 2000. ı ¯ 5ı 6. ı ʉ . 4ı 6.

406. ɿ ʝtɑʄʈʃʝ ʕlsɖɘɖ lʑʕtɑꙨ̓dʑʄʝ ʕts᾽ dʒꙨ̂ᵂ ʄɥdʑs᾽ / ɯ ɻ lzL ʽɘ, ʒ . ɺ Htsɘɖɥʝ dʑʕts, ʆ . ʏ ɖtɕʕtsɘꙨ[lsꙨ ʽdʑ] // ʊɘꙨtɑɖdʑdʑʃɥlsɘts ʋ ʕtɑꙨ̓dʑʃ. ï 2007. ı ¯ 2. ï ʉ . 55ı 57.

407. ɿ ʝtɑʱ ɖdʑɺ . ɸ . ʋ tɑtsɘʝ dʑ Gɖʈʃtsᵂɖ LꙨtɑdʑ ͞ ɖ lsɖtɑʝ tsɖHdʑ ͞ Gtstɑdʒsdʑsɘ ɘ ʕtɑtsɘɖ lz ʕtstɑtsɘ tʃtɑɖ tɑꙨLdʑ ͞ ᵂɖLɖtsdʑsGɖɥʝ ʄʂɖ͞ ʄʈsʄʝstsᵂdʑʃᵂ͞ / ɺ . ɸ . ɿ ʝtɑʱ ɖdʑ // ʉɖdʒʃtsLɖlzdʒ tʃts tʃtɑtsBdʑʝ dʒʝ ʄɥɖdʑsʝ LꙨtstɑGꙨdʑʃɥʝ ʄʂɖ͞ ɘʝ ʱ ʝʄʝsɘ dʒsdʑsʕꙨ: lsʝ L. HtsʕdʑI ï ʌ tɑlzdʑʝ : R dʑɖdʒ 1971. ï ʉ . 73ï 74.

408. ɿ ʝlstɑɖɥʕts ʆ . ɸ . ɿ tɑtsdʒɖʄɥdʑsɘʝ ʄʂtɑʝ ʱ lzɘꙨdʑdʑᵞ dʑꙨɿ tɑɖʕꙨtɑʃꙨsls᾽ / ʆ . ɸ . ɿ ʝlstɑɖɥʕts, ɯʉ . ʃ lzɥɖdʑ // ɿ ʝtɑʄʈʃʝ ʕlsɖɘɖ tɑtsLɘɖlsʕlz ʄʂtslsꙨtɑʄʝsɘꙨlz lstɑʝ lsᴵ tsdʒz lsɖʄʝᵂɥtsdʑlsls᾽ : ʄʈʃʝ ɥ. ɘɖʈʃ. Hts ʆ ʽɣ dʑꙨtɕ dʑꙨlʑʕ.-tʃtɑꙨʕls. ʕtsdʑᵂ. (2 - 5 ɣ tsɘlsdʑ, 2001 tɕ) // ɺ ʽʄɥdʑʃʕ ʉ lzdʒʄʝ ʕtsGts Hʝtɑɣ ꙨɘdʑsGts ꙨɢtɑꙨtɑdʑsGts lzdʑlsz. : ʄʝʝtɕ çʊɘꙨtɑɖdʑdʑʃɥlsɘtsè. ı ʉ lzdʒɖ, 2001. ı ɺ ɖʈʃ. 5. ı ʉ . 126ı 132.

409. ɿ ʽHʈʃꙨdʑꙨʊ. ɹ ɖɥʕɖ lʑʕtɑꙨ̓dʑʄʝ ʕts᾽ ɥʝ tɑɘtsdʑs᾽ dʒsdʑsɥdʑs᾽ tʃtstɑtsHɖ / ʊ. ɿ ʽHʈʃꙨdʑꙨ̧ ʆ . ʉ lstɕʽ͞ Ꙩ// ʊɘꙨtɑɖdʑdʑʃɥlsɘts ʋ ʕtɑꙨ̓dʑʃ. ı 2008. ı ¯ 5. ı ʉ . 18ı 20.

410. ɿ dʑꙨsꙨdʑsɘʄʝ ʕɖʔ ʈ . ɯ ɺ ʈʃdʑɖɘ ʕꙨdʑ ɥ ʽʽɘɖ͞ ʄʈsdʑʝʔ ɣ ɖtɑdʑʃ͞ ʕɖʄɥdʑsls dʑꙨ dʑʈʃ ʽHdʑʃʔ, B ʽdʑʕtsɘɖʔ tsBdʒ dʑ lsꙨ ʄʂdʑꙨH dʒsdʑsʕꙨ lz ɘɖʄʈsʕtsʈʃtɑtsHlʑʕlsɖɘdʑʃ͞ ʕtstɕʽɘ / ʈ . ɯ ɿ dʑꙨsꙨdʑsɘʄʝ ʕɖʔ // ɩ Ꙩlʑʕ.-lsʝ ͞ dʑ Bᴷ dʑ ɯdʑlsz B ʽtsdʑ lsɘꙨtɑɖdʑ ʽ ɼ ɩ ɼ ʂ ɻ ɘʝlsʈʃtɑʝʈʃ. lsꙨ ʕtstɑdʒsɘɖ͞ HtsBꙨɘtsʕ. ı 2005. ı ɺ ɖʈʃ. 6, ¯ 1. ı ʉ . 142ı 145.

411. ɿ dʑs͞ ɖdʑʄʂɖʔ ɩ . ɸ . ʈ lʑʕtsɘtsHʄʝsɘts tʃts Bɖtsdʒʝ lstɑɖɖ Hdʑᵞ Ltstslsʝdʑdʑʃʕtsɘɖʕtsɘ / ɩ . ɸ . ɿ dʑs͞ ɖdʑʄʂɖʔ ï ʆ . : ʂ tsdʑsʄʝ 1969. ï 256 ʄʝ

412. ɿ tsɘtsLdʑʕtsɘ ʆ . ɻ . ɼ ᵂʝ ʕlsɖɘdʑʄʝsᴵ tʃtɑtsHlʑʕlsɖɘdʑsGts ɘɖʕtstɑɖʄʝsꙨdʑdʑᵞ ʝ dʑʝtɑG᾽ tʃtsɣ ɖɘdʑʃ͞ tɑʝ ɥtsɘɖdʑtɑꙨɥ ʽtsdʑɘ dʒsdʑsHdʑᵞʕtsdʒ͞ lzHtsBɖ dʒꙨ̂ᵂ ʄɥdʑʃ͞ tʃtstɕʽH / ʆ . ɻ . ɿ tsɘtsLdʑʕtsɘ // ɩ Ꙩlʑʕtsɘɖʔ ɘ ʽʄɥdʑʃʕ ʃ ᴵ ɘ ʽɘʄʝ ʕts᾽ dʑꙨɥ ʽtsdʑꙨdʑ dʑs᾽ ꙨʕꙨHʝ dʒ᾽ ɘʝ lsʝ tɑɖdʑꙨtɑdʑs᾽ dʒʝ Hɖɥɖdʑʃ

ʿdʒ̧ dʑ̃ ʉ. ɿ. ʇ ʞ ɖʯᴵ Ⴥtsɢts. ï ʊ. 7, ʯ. 3. ï ʃ ᴶ ɘʿɘ, 2005. ï ʉ. 223ï 226.

413. ɟ tsʜɘɖɢɖdʑ̃ʘ ɼ. ɭ. ʌʘteʘⴥlsʝ teɖfŋʃⴥʘ ʧtetsʯʝ fŋʘ ɘtsfŋʧteɖʷlsɖʷ Ⴥtstetsls Ⴥɖ ɖdʑsʝ teɘʘdʑtsɘ ɘteʝ dʒ̧ dʑɖ / ɼ. ɭ. ɟ tsʜɘɖɢɖdʑʘ, ɻ. ɸ. ʃ ʷtsɘʝ ʯⴥɖʔ // ɼ ɮtedʑʘdʑ ɘʳ fŋ ʝʔ dʑ̧ teɘdʑtsʔ ʜʝ ʷlsʝ dʑ̃ dʑtsfŋʃɖ. ï 2010. ï ʊ. 60, ¯ 4. ï ʉ. 430ï 438.

414. ɟ tsdʑ̃ tsɘɖʔ ʃ. ɻ. ʃ ʚ̂ʷfŋdʑʘ ʧtetsʜɮⴥlsɖɘdʑ̃fŋsᴵ ɘɖʙteⴥɮɘʘdʑɖ ɘʿʜfŋsʘ ʯɖ ɮ tetsfŋʃʿ ʙɖʯⴥʿɘ ɮⴥteʘdʑfŋ Ⴥtsʾ ʯtstedʑts-teʷʙtsʾ dʒtsdʑtsʯdʑtsʾ ʧtstetsʜɖ / ʃ. ɻ. ɟ tsdʑ̃ tsɘɖʔ, ɻ. ʃ. ʃ ʿʯᴵ Ⴥɖʔ // ɿʙ ʿtedʑɖⴥ dʑʘɮⴥtsɘɖ ʧteʘʯᴵ ɻ ʿdʑdʑɖʯᴵ Ⴥtsɢts ʜʝ teʞʘɘdʑtsɢts ʘɢteʘtedʑtsɢts ɮdʑ̃ɘʝ teʃŋʃlsʝ lsɮ. ï ɻ ʿdʑdʑɖʯʷ, 2004. ï ɻ ɖʧ. 16. ï C. 91ï 96.

415. ɟ teⴥlsɖʯdʑʘ teʝ ʟɮdʑ̃ lsʘlsɖɘdʑ̃fŋsᴵ dʑtsɘʿlsdʑ̃ lsʝ tsteʾ lsʘ dʒ̧ lstsʜtsdʑtsɢʾ fŋ dʑ̧ Ⴥʯʾ / ʃ. ɻ. ɿɮʙʝ ʯᴵ, ɻ. ɟ. ᴊ ɮteⴥʘs, ʃ. ɕ. ɭ ʷʷ ʿdʒ̧ dʑⴥts [lsʘ ʿdʑ] // ɻ ʿfŋdʑɖⴥ ʘɢteʘtedʑtsʾ dʑʘɮⴥɖ. ï 2002. ï ¯ 12. ï ʉ. 73ï 77.

416. ɟ teⴥlsɖʯdʑ̃ teʝ Ⴥtsdʒ̧ dʑʜʘʯʾ ʧts fŋsɘtsteʝ dʑdʑ̃ , ɢtsʜʿɘdʑ̃ lsʘ ɮlsteɖdʒʘdʑdʑ̃ fŋsʘʜʘ dʒ̂ʷfŋdʑtsʾ ɮʜtsʙɖ / ɻ. ɟ. ᴊ ɮteⴥʘs, ʖ. ʌ. ʃ ʝ dʑ̃ dʑɖⴥ. ï ʂ. ; ɟ ʝ teʝ ʷfŋdʑʘ-ʌdʒ̧ dʑ̃ dʑɖʯᴵ Ⴥɖʔ : ᴊ ʃ ʊ, 1998. ï 41 fŋ

417. ɟ tetsʙdʑ̧ dʒʘtetsʟɘɖlsⴥɮ fŋʃʝ ʯʿʘdʑ̃ʟtsɘʘdʑtsɢts dʒ̂ʷfŋdʑtsɢts fŋⴥtslsʘtefŋsɘʘʋ Ⴥteʘdʑɖ / ɼ. ʃ. ɼ tstetslsᵞ Ⴥ, ɻ. ʇ. ɟ tedʑʜdʑ̃Ⴥtsɘ, ɻ. ʃ. ɟ tsʧtsɘʘ, ʖ. ɯʂ teɖɘtstedʑʯⴥts // ʐ dʑ̃ʷɖ tetsʟɘɖlsⴥɮ lsɘʘteɖdʑdʑɖʯlsɘʘ ɮ teɖdʑⴥtsɘɖ ɮdʒsɘʘ : dʒʘsʝ teʿʘdʑɖ dʑʘɮⴥ.-ʧteⴥls. Ⴥtsdʑʷ. ï ɼ dʑ̃ʧtetsʧʝ lstetsɘfŋ Ⴥ, 2001. ï ʉ. 31ï 33.

418. ɟ tetsɢteʘdʒʘ tetsʟɘɖlsⴥɮ ɢʘdʑɮʟʿ fŋʃʝ ʯʿʘdʑ̃ʟtsɘʘdʑtsɢts dʒ̂ʷfŋdʑtsɢts fŋⴥtslsʘtefŋsɘʘ ʋ Ⴥteʘdʑɖ dʑʘ1997ï 2005 tetsⴥɖ / ʃ. ɻ. ɿɮʙʝ ʯᴵ, ɻ. ʃ. ɟ ʘʙʘs, ɻ. ɟ. ᴊ ɮteⴥʘs [lsʘ ʿdʑ]. ï ʂ., 1997. ï 78 fŋ

419. ɟ tetsɢteʘdʒʘ fŋ dʑ̧ Ⴥʯʾ ɮʜtsʙɖ ɘtsdʑɖdʑfŋ Ⴥtsʾ dʒʷfŋdʑtsʾ ʧtstetsʜɖ dʑʘ ʧʝ teʿtsʜ 2003-2012 tetsⴥɖ / ʊ. ʉ. ɕ dʑⴥts, ʃ. ɻ. ɿɮʙʝ ʯᴵ, ɻ. ɟ. ᴊ ɮteⴥʘs [lsʘ ʿdʑ] ; ɘʿʜʧtsɘ. ʟʘɘɖʧ. ʊ. ʉ. ɕ dʑⴥts. ï ʂ. : ɸ ɢteʘtedʑʘdʑʘɮⴥʘ, 2003. ï 80 fŋ

420. ɟ tetsɢteʘdʒʘ fŋ dʑ̧ Ⴥʯʾ ɮʜtsʙɖ ʧtsdʑ̃fŋ Ⴥtsʾ dʒ̂ʷfŋdʑtsʾ ʧtstetsʜɖ dʑʘ ʧʝ teʿtsʜ 2002 ï 2010 tetsⴥɖ / ɻ. ʃ. ᴊ ʿdʑtsʰ ɖʯᴵ Ⴥɖʔ, ʖ. ʌ. ʃ ʝ dʑ̃ dʑɖⴥ, ɻ. ɸ. ɟ ɖʰ tsdʑⴥʘ [lsʘ ʿdʑ]. ï ʂ. : ɸ ɢteʘtedʑʘdʑʘɮⴥʘ, 2003. ï 42 fŋ

421. ɟ tetsʜɮⴥlsɖɘdʑ̃fŋsᴵ ʿ dʒ̂ʷfŋdʑ̃ ʷⴥtsfŋsʿ ʙɮɢʘʔ ʯʿɘ ʧteɖ ɘɖⴥtsteɖfŋsʘdʑdʑ̃ dʒʿfŋʝ ɘɖ ɘɖfŋsⴥtsʧtetslsʝ ʾdʑtsɘɖ Ⴥtstedʒʿɘ ɮ teʘʯʿtsdʑʘ / ʖ. ɯ ʉʘʯ dʑⴥts, ɯ ʃ. ʉʘʯɮⴥ, ʃ. ʇ. ʉʘʯ dʑⴥts [lsʘ ʿdʑ] // ɭ ʘɮⴥtsɘɖʔ ɘʿfŋdʑɖⴥ dʑʘʯʿtsdʑʘdʑ dʑtsɢts ɮdʑ̃ɘʝ teʃŋʃlsʝ lsɮ ʙʿtsteʝ fŋɮtefŋɘ ʿ

[illegible]. – [illegible]., 2009. – [illegible] 132. – C. 204–212.

422. [illegible] // [illegible]. [illegible]., 2008. – [illegible] 42. – [illegible] 62–68.

423. [illegible] // [illegible], 2005. – [illegible] 22. – C. 102–107.

424. [illegible] / [illegible]. – [illegible], 1997. – 189 [illegible]

425. [illegible] // [illegible] 2003. – [illegible] 1. – [illegible] 141 – 143.

426. [illegible] // [illegible]. – 2002. – [illegible] 4. – [illegible] 57– 58.

427. [illegible] // [illegible] (2 – 5 [illegible]) // [illegible], 2001. – [illegible] 5. – [illegible] 148– 151.

428. [illegible] // [illegible], 2004. – [illegible] 18. – C. 58–61.

429. [illegible] // [illegible]. – 2004. – [illegible] 11– 12. – C. 23–25.

430. [illegible] //

ꞁ ʘʑʢ.-lsʝ꞊ʤ ʙʶ ʤ ї 2008. ї Ɉ ʠʧ. 97. ї C. 283ї 286.

431. ʇ tɘʑʜʤʢʦɘ Ɉ. ʍʘtɘʘʢlsʝ tɘʠʃfiʝsʠʢʘ ʤʒʷfiʠʤʦʾ ʧtɘtsʜʑʢlsʠɘʤʦfiʝsʿ ʡ ʰ ʢʿtɘʷʤʦʾ fiʠʧtɘtsɘʠʤʠʃ ʙʠʮʢʿɘ tɘʿʟʤʠʃ꞊ lsʠʧʿɘ fiʠʠʤʒʝ ʤʦʘʤ fiɉ ʢtsʾ ʧtstɘtsʜʠ ʧtɘʠ ɘʠtɘtsʱ ʑɘʘʤʤ ʟʘ lsʝ꞊ʤʦʤʦɢʿʿʶ ʤʒʷfiʠʤʦɢʦ fiʢtslsʘtɘfiʝsɘʘ/ Ɉ. ʇ tɘʑʜʤʢʦɘ // ʊɘʘtɘʠʤʤʃʮlsɘts ʋ ʢtɘʘʤʠʃ. ī 2003. ī ¯ 1. ī ʉ. 18ī 20.

432. ʇ ʑfiʝstslsʠʤʘ ʈ. ʄ tsʤʦʮʤʘʷ ʧtɘtsʜʑʢlsʠɘʤʦfiʝsᴵ fiʠʠʤʒʝ ʤʦʘʤʦɘ tɘʘʟʤ꞊ ɘʤʑlstɘʠʧtstɘtsʜʤ꞊ lsʠʧʦɘ / ʈ. ʇ ʑfiʝstslsʠʤʘ// ɿ tstslsʝ꞊ʤʠʷ. ī 2006. ī ¯ 3. ī ʉ. 19ī 20.

433. ʇ ʷlsʢʠʤʉ. ꞁ. Ɉ tsʟtɘʘfiʝsʤʘʸ ʜʠʤʘʤʒʠʢʘtɘtsfiʝsʘlsʸ ʤʦʢ ɘtsʤ ʤfiʢtsʡ ʧtstɘtsʜʳ ʧtɘʠ tɘʘʟʤʦʡ ʠʤlsʝ ʤfiʠʠɘʤʦfiʝsʠ ɘʳ tɘʘʱ ʠɘʘʤʠʷ / ʉ. ꞁ. ʇ ʷlsʢʠʤ// ʇ tɘtsʙʤʝ ʤʒʠ ʟtstsʿʤʮʝ ʤʝ tɘʿʾ lsʘ ɘʝ lsʝ tɘʠʤʘtɘʤʦʾ ʤʝ ʜʠʮʠʤʠ : ʟʙ. ʤʘʑʢ. ʧtɘʘʮᴵ. ī X., 2001.ī Ɉ ʠʧ. 8, ʮ. 1. ī ʉ. 113ī 117.

434. ʈ ʘʝ ɘfiʢʠʡ Ɉ. Ɉ. ʈ ʘʟɘʠlsʠʝ lsʝ tstɘʠʠ fiʠfiʝsʝ ʤʒʦɢʝ ʤʝ ʟʘʇ. ʂ. ɸ ʤʦ꞊ʠʤʘ/ Ɉ. Ɉ. ʈ ʘʝ ɘfiʢʠʡ // ʊʝ ʟʠfiɉ ʜtsʢʤʘʜtsɘ: ʈ ɸ ʄ ꞁ / ʄ lsʜʝ ʤʝ ʤʠʝ ʤʝ ʜʠʢts-ʙʠtsʤʦɢʠʮʝ fiʢʠ꞊ ʤʘʑʢ ʠ ʜtɘ. ї ʄ ., 2002. ї ʉ. 23.

435. ʈ ʝ ʘʢlsʠɘʤʦfiʝsᴵ tstɘɢʘʤʠʟʤʒʘʠ lsʠʧ ʤʝ tɘɘʤʦʡ fiʠfiʝsʝ ʤʒ / ʈ. ɼ .ʂ ʘɘʝ ʮʢʠʡ, ꞁ. ʌ. ʉ tsʤʦʜʶ ʢ, ʉ. ʀ. Ɉ tsɘʢ [ʠ ʜtɘ]. ї ʂ ., 1961. ї 328 fiɉ

436. ʈ ʝ ʟʑʤ lsʘlsʠ ʢtsʤʒʧʤʝ ʢfiʠʤʦʾ ʿʤʜʠɘʿʜʑʘʤ ʤʦʾ tsʮʿʤʢʠ ɘʝ ʤʠʢtsʾ tɘtsɢʘlstsʾ ꞊ʑʜtsʙʠ ʤʒ̂ʷfiʠʤʠ꞊ ʧtstɘʿʜ ʿ lsʠʧʿɘ fiʑʙɵ̂ʢlsʿɘ ʧʤʝ ʤʒʿʤʤʦʾ fiʠʧtɘʘɘʠ ʑ lsɘʘtɘʠʤʤʃʮlsɘʿ ʟʘ2007 tɘʿʢ / ʄ. Ɉ. ɪ ʿʤʦlsʑfiɉ ꞁ. Ɉ. ʂ ʑʜtɘʷɘfiɉ ʢʘ, ɯɪ. ʈ ʑʟʿɘ [lsʘʿʤ]. ї ʂ. : ɸ tɘʿfiʝsʝ ʡ, 2008. ї 116 fiɉ

437. ʈ ʝ ʰ ʝ lsʤʮʝ ʤʢts ʄ. Ɉ ʧʤʠɘ ʤʘtstɘɢʘʤʟʤʒʢʑtɘʮʘlstsʢʠfiʠʝ ʤʠ꞊ ʢtstɘʤʒtsɘʠ꞊ ʞ ʠtɘʿɘ lsʘʾ꞊ ʟʤʝ ʰ ʢtsʜʞ ʝ ʤʤ / ʄ. ʈ ʝ ʰ ʝ lsʤʮʝ ʤʢts // ʊɘʘtɘʠʤʤʃʮlsɘts ʋ ʢtɘʘʤʠʃ. ī 2008. ī ¯ 4. ī ʉ. 34ī 36.

438. ʈ tsʞ ʜʝ fiʝsɘʝ ʤfiʢʘʸ Ɉ. ʀ. ʂ ɘtsʧtɘtsfiʑ ts ʜɘʑ꞊ ɘʠʜʘ꞊ lststɘʤʒtsʟʤ꞊ fiʝsfiʝstsʷʤʠʡ / Ɉ. ʀ. ʈ tsʞ ʜʝ fiʝsɘʝ ʤfiʢʘʸ // ɼ ʠʷʝ tɘʝ ʤʌʠʘʤ ʤ ʝ ʧtɘtsʙʤʝ ʤʒ ʧfiʠ꞊tsʷʠʟʠtsʤʦɢʠʠ ʠ ʝ ʝ ɢʝ ʤʝ lsʠʮʝ fiʢʠʝ ʘfiʧʝ ʢlsʳ : fiɉ. ʗls. ї ʄ ., 1975. ї ʉ. 145.

439. ʈ ʑʙʘʤ Ʒ. ɼ. ɼ tsfiʂʿʜ tɘtsʙtslsʠ ʟ fiʠʠʤʒʝ ʤʦʘʤ fiɉ ʢtsʶ ʧtstɘtsʜtsʶ ʿ fiʑʮʘfiʠʤfiʝsᴵ / Ʒ. ɼ. ʈ ʑʙʘʤ// ꞁ ʘʑʢtsɘʠʡ ɘʿfiʠʤʠʢ. ī 2000. ī ¯ 21. ī ʉ. 12ī 14.

440. ʈ ʑʙʘʤ Ʒ. ɼ. ʉ ʠʤʒʝ ʤʦʘʤ fiɉ ʢʘ ʧtstɘtsʜʘ ɘ ʋ ʢtɘʘʤ lsʘ ʧʝ tɘfiʧʝ ʢlsʠɘʠ ʾʾ ɘʠʢtstɘʠfiʝsʘʤʤʸ / Ʒ. ɼ. ʈ ʑʙʘʤ // Ɉ ʿfiʠʤʠʢ ʉ ʑʤʒfiɉ ʢtsɢts ʤʘʮʿtsʤʘʤ ʤʦɢts ʘɢtɘʘtɘʤʦɢts ʑʤʢɘʝ tɘfiʠʠlsʝ lsʑ : fiɉ tɘ ñlsɘʘtɘʠʤʤʃʮlsɘtsò. ї ʉ ʑʤʒʠ, 2002. ī Ɉ ʠʧ. 6. ī ʉ. 192ī 193.

441. ʈ ʑʙʘʤ Ʒ. ɼ. ʢ ɘtsʤ ʮʠʷ fiʠʠʤʒʠʒʝ ʤʦʘʤ fiʢtsʡ ʧtstɘtsʜʳ fiʢtslsʘ tsʧʳ ls ʠ ʧʝ tɘfiʧʝ ʢlsʠɘʳ ʝ ɢts ʠfiʧtsʤʟtsɘʘʤʠʷ / Ʒ. ɼ. ʈ ʑʙʘʤ ī ʂ. : ɸ ɢtɘʘtɘʤʘʤʘʑʢʘ, 2002. ī 296 fiɉ

442. ʈ ƨɥʢtsɘʘ ʈ. ʆ. ʆ fŋʂʙʝ dʑdʑfŋʂɕ ɢtsdʒ tsfŋʂʘʟʘ fŋʨʘ ʙʝ tɕʝ dʒ dʑdʑ ⁓ ʢtɕ fŋ ʈ. ʆ. ʈ ƨɥʢtsɘʘ, ʆ. ɸ. ɟ ɕɢʘɕʝ ɘʘ// ɼ ƨtɕdʑʘdʑɘ fŋ ʝʔ dʑ tɕɘdʑʔ ʜʝ ʷlsʝ dʑ dʑfŋʂɕ. ï 2011. ï ʊ.61, ¯ 3. ï ʉ. 365 ï 377.

443. ʉ ʘtɕʘdʑʈƨʢ ɹ. ɹ ɕtɕts ƨɘʘdʑdʑ dʑsdʑsʜdʑʢƨ ɹ ʈ ʌ dʒɸ fŋʨʑɢts dʑʘʃ tɕ dʒƨ ʧtɕtsʜƨʢlsɕɘdʑfŋʂ / ɹ. ʉ ʘtɕʘdʑʈƨʢ, ɹ. ɟ tsʜtɕ ʟʢts // ɸ ɢtɕtsʙ ʟdʑ fŋfŋ tsɢtsʜdʑ. ï 2010. ï ¯ 21. ï C. 42ï 45.

444. ʉ ʘdʒslsɕdʑ ɹ. ɟ tɕts dʑʢlsɕʢʘ dʑʘtɕdʑ ʝ dʑɕ tsʙdʒ ʝ dʑʘ dʒɕʢtɕts dʑ dʒ ʝ dʑstsɘ ƨ ʁ ɕɘtslsdʑ ⁓ / ɹ. ʉ ʘdʒslsɕdʑ. ï ʆ.: ʂ tsdʑfŋ, 1981. ï 143 fŋ.

445. ʉ ʘƨdʑ fŋʘ ɭ. ɹ. ʉ ɕɢdʑʘdʑ tsʃʘfŋʨʑfŋʂɕ lststɕdʒʟls dʑɕlstɕ tɕɕɕɥ fŋƨ ʘlsɕɘʘɥɕ ʧtɕɕdʑ ʁ ʘ ʝ ɢts ʜtɕʘ, ɘ ʟ ɘʘ dʒƨ ɕfŋʨʑʜtsɘʘlsʝ dʑ fŋɕdʒʧtsɘʝʜʝ dʑɕʝ dʒ/ ɭ. ɹ. ʉ ʘƨdʑ fŋʘ, ʗ. ɹ. ɹ ʝ dʑʟtstɕtsɘ // ɼ ƨtɕdʑʘdʑɘ fŋ ʝʔ dʑ tɕɘdʑʔ ʜʝ ʷlsʝ dʑ dʑfŋʂɕ. ï 2012. ï ʊ. 62, ¯ 4. ï ʉ. 475ï 485.

446. ʉ ʙtɕtsʜtsɘ ʌ. ʉ. ʆ ɢtstɕdʒsdʑʘdʑ dʑʔ tɕ ɢƨdʑ ɥɕɕ ʧtɕtsdʒ ʁ ƨlstsɥdʑɢts tsʙdʒ dʑʘ dʑɕʧɕʜtsɘ ƨ tsɘʝɥ / ʌ. ʉ. ʉ ʙtɕtsʜtsɘ // ɟ ʝ tɕɘ ʔ ɹ fŋ fŋʂ ʟdʑ ʔ fŋɕdʒʧtsʟɕƨdʒʧts dʑɕʧɕʜdʑsdʒƨ tsʙdʒ dʑƨ ƨ fŋï ⁓. ʁ ɕɘtslsdʑ ⁓ ɕ ʧlsɕɥ: lsʝ ʟ. ʜtsʢdʑ ï ɹ tstɕtsɘfŋ, 1972. ï ʉ. 73ï 74.

447. ʉ ɘʝ ʁ ʝ dʑʈtsɘ ɸ. ʀ. ɭ tstɕdʒɕtɕtsɘʘdʑdʑsʝ ʢtstɕdʒdʑ dʑɕʝ fŋ dʑ fŋtsʟʔ fŋʂɘʝ dʑdʑ ⁓ ʁ ɕɘtslsdʑ ⁓ / ɸ. ʀ. ʉ ɘʝ ʁ ʝ dʑʈtsɘ // ʉ ʧtɕʘtsɥdʑɕʢ. ï ɼ dʑ ʧtɕtsʧʝ lstɕtsɘfŋ: ɭ ʘƨʢʘ ɕ tsʙtɕʘʟtsɘʘdʑɕʝ, 1998. ï 292 fŋ.

448. ʉ ɘʝ ɥɕdʑ ʂ. ɹ. ʈ ʘʟɘʝʜʝ dʑɕʝ ɕ ʢtstɕdʒdʑ dʑɕʝ ʢtɕƨʧdʑɢts tɕtsɢʘstsɢts fŋtslsʘ dʑʘ ʋ ʢtɕʘɕdʑ / ʂ. ɹ. ʉ ɘʝ ɥɕdʑ, ɹ. ʀ. ʂ tsfŋʂʝ dʑts // fŋʙ. dʑʘƨɥ. lstɕ. ï ʂ., 1983. ï ʉ. 30ï 33.

449. ʉ ɘɕtɕɕʜʝ dʑts ɭ. ɿ ʘʙʔ dʑ ʢtsfŋʂ ʙƨɢʘʔ ɥɘ dʒ fŋʨʑɕ⁓ ʧtstɕʜ / ɭ. ʉ ɘɕtɕɕʜʝ dʑts // ʊɘʘtɕɕdʑdʑɕɥlsɘts ʋ ʢtɕʘdʑɕ. ï 2008. ï ¯ 1. ï ʉ. 36ï 37.

450. ʉ ɘɕtɕɕʜʝ dʑts ɭ. ɟ. ʈ fŋʂ tɕtsʟɘɕlstsʢ dʒsdʑsʜdʑʢƨ dʒfŋʨʑɕ⁓ ʧtstɕʜ ɘ ƨdʒsɘʘʢ ɟ tsdʑfŋfŋ ʋ ʢtɕʘdʑɕ / ɭ. ɟ. ʉ ɘɕtɕɕʜʝ dʑts // ʆ ʘsʝ tɕʘdʑɕ V ʢtsdʑʝ tɕʝ dʑʈ dʒsdʑsʜɕ⁓ ɘɥʝ dʑɕ⁓ lsʘ ɢfŋʧtɕʘdʑsɘ. ï ʂ.: ɸ ɢtɕʘtɕdʑʘdʑʘƨʢʘ, 2007. ï ʉ. 88ï 90.

451. ʉ ɘʟ dʒ ʁ ʜƨ ʘlsɕɘdʑfŋʂ dʒsdʑʘdʒɕdʑsʝ tɕɕɥʝ fŋɕ⁓ dʑʔ tɕtsdʑsɘ fŋʂɘtsdʑʘ dʒʟɢʘ ɕ fŋʧʝ ʢlstɕʘdʑ dʑʔ dʒs dʑfŋʂ tɕɕlsdʒsɘ ʢ ʢ ʈ ʙtsʜtɕfŋʂɘƨ ʝʔ ʢts ʢɕ// ɸ. ʆ. ʂ ƨdʑɕɥʝ dʑts, ʖ. ɸ. ɼ ƨ ʘɘʘ, ʆ. ʀ. ʂ tsdʑlsɕdʑsɘʘ [ɕ ʜtɕ] / ɼ ƨtɕdʑʘdʑɘ fŋ ʝʔ dʑ tɕɘdʑʔ ʜʝ ʷlsʝ dʑ dʑfŋʂɕ. ï 2013. ï ʊ. 63, ¯ 5. ï ʉ. 579ï 589.

452. ʉ ɘʟ lsɕʧʘdʑ tɕɘdʑʔ ʜʝ ʷlsʝ dʑ dʑfŋʂɕ fŋʧtɕtsʜƨʢlsɕɘdʑfŋʂ ɕ ƨfŋʂtsʔ ɥɕɘtsfŋʂ ʢtstɕtsɘ ʢ dʒʘfŋʂɕlsʘdʒ / ʢ. ɟ. ʂ tsʢtstɕɕdʑʘ, ʢ. ɹ. ʊƨdʒʘdʑsɘʘ, ɸ. ɸ. ɟ tsʧtsɘʘ [ɕ ʜtɕ] //

[illegible]. ï 1988. ï ¯ 9. ï ʉ. 28ï 30.

453. [illegible] / [illegible] // [illegible] 7-[illegible] [illegible], 1970. ï ʉ. 45ï 47.

454. [illegible] / [illegible], 2002. ï 203 [illegible]

455. [illegible] / [illegible], 1981. ï 278 [illegible]

456. [illegible] / [illegible] // [illegible]. ï 2007. ï ¯ 7. ï ʉ. 2ï 4.

457. [illegible] / [illegible] // [illegible]. ï 2012. ï ʊ. 64, ¯ 4. ï ʉ. 67ï 77.

458. [illegible] / [illegible] / [illegible]. ï 2012. ï ʊ. 62, ¯ 2. ï ʉ. 185ï 197.

459. [illegible] / [illegible] // [illegible]. ï 1980. ï [illegible]. 3, ¯ 15. ï ʉ. 119ï 122.

460. [illegible] / [illegible]. ï 2012. ï ʊ. 62, ¯ 2. ï ʉ. 185ï 197.

461. [illegible] / [illegible] // [illegible]. ï 2007. ï ¯ 7. ï ʉ. 48ï 51.

462. ɐ ʠʤʝ ʤʮsʘʤ fɲ ʢʘ ʧtstætsнʘ // ʆ ʝ lstsнʠ fɲʝ ʤʝ ʢʯʾ ʒʢtæʘ̓ʤʄɲ ʢtsʾ ʯʝ tæɘtsʤʮs-tæʷʙtsʾ ʤʓsʤʮsʯʤʮsʾ ʧtstætsнʠ. ï ʂ ., 2005. ï ɐ. 8ï 14.

463. ɐ ʠtætsʤʓʷlsʤʄʠʢtsɘʘ ʅ . ɸ. ɺ ʠtætsʙʤʄʠʯlsɘts ʷʤtsɘʠʯʠʤʄʠ ʧtæʠ tæʿʟʤʄʠ⁼ fɲʧtsfɲsʙʘ⁼ ʒlstæʠʤʓʘʤʒʷ ʙʠʯʢʿɘ fɲsɘtstæʶ ɘʘʤʮsʾ ʟʤʘʤʓʷʤʄɲ ʢtsʾ ʤʓʷfɲʤʮsʾ ʧtstætsнʠ / ʅ . ɸ. ɐ ʠtætsʤʓʷlsʤʄʠʢtsɘʘ // ʇ tætsʙʤʝ ʤʓʠ ʟtstsʿʤʒʝ ʝ ʤʝ tæʿʾ lsʘ ɘʝ lsʝ tæʠʤʘtæʤʮsʾ ʤʝ нʠʯʠʤʄʠ : ʟʙ. ʤʘʒʢ. ʧtæʘʯᴵ . ï X., 2002. ï ɺ ʠʧ. 11, ʯ. 1. ï ɐ. 323ï 327.

464. ɐ ʿtæʘʯᴵ ʢʠʔ ʁ . ʅ. ʅ ʘʟtsʝ ʤʝ tæʠʝ lsʠʯʤʒ ʧtætsʯʝ fɲʧ lsʘtsʙʤʓʿʤʒtæʝ ʯtsɘʠʤʒʿ ʝ ʤʝ tæɢʾ ʒ ʙʒɢʘʔʯʿɘ ʟʘ⁼ʿнʤʮsɢts ɘʤʒlstæʿʰ ʤʒ tsʧtstætsнʤʮsɢts lsʠʧʒ ʒʢtæʘ̓ʤʄɲ ʢtsʾ ʯtstæʤʮs-tæʷʙtsʾ ʤʓsʤʮsʯʤʮsʾ ʧtstætsнʠ / ʁ . ʅ. ɐ ʿtæʘʯᴵ ʢʠʔ, ɺ . ɺ . ʌ ʝ нtstætsɘʠʯ // ɺ ʿfɲʤʄʢ ʏ ʝ tæʢɢfɲ ʢtsɢts ʿʤʄɲsʠlsʒlsʒ ɸ ʇ ɺ . ï ʏ ʝ tæʢɢfɲʧ, 2005. ï ɺ ʠʧ. 5. ï ɐ. 61ï 71.

465. ɐ ʢtstæʢʠʤʘʀ . ʂ ʘʯʝ fɲsɘts ʤʓʷfʘʙʳ ʯʢtsɘ tæʘʟʤʠʯʤʒ ⁼ ɢʝ ʤʮslsʠʧtsɘ / ʀ . ɐ ʢtstæʢʠʤʘ ɸ. ʅ ʝ ɢtæʝ ʝ ɘʘ ɸ. ʌʤʒʤʧtsɘ // ʆ tsʤʮsʯʤʮsʝ ʠ ʤʓʷfɲʤʮsʝ fɲʢtslstsɘtsнfɲsɘts. ï 2004. ï ¯ 5. ï ɐ. 14ï 15.

466. ɐ ʤʒɘʿʤʄɲ ʢʘ ʃ . ʅ. ɸ ʤʝ ʤʓʾ ʢtstæʿɘ ʒ ʟʘ⁼ʿнʤʒʔ ʙʿtsɢʝ ts⁼ʿʤʓʯʤʒʔ ʟtsʤʒ ʋ ʢtæʘ̓ʤʄʠ: ʘɘlststæʝ ʬ. нʠfɲ ʤʘʟнtsʙʒlslsʷ ʤʘʒʢ. fɲsʒʧʝ ʤʒʷ н. ɘʝ ls. ʤʘʒʢ: fɲʧʝ ʯ. 16.00.01 ñнʿʘɢʤʮsfɲsʠʢʘʿ lsʝ tæʘʧʿʷ lsɘʘtæʠʤɘ / ʃ . ʅ.ɐ ʤʒɘʿʤʄɲ ʢʘ ï ɪ ʿʤʘʎ ʝ tæʢɘʘ 2011. ï 43 fɲ

467. ɐ ʤʝ lsʘʤʘ ʅ . Ʒ . ɺ ʧʤʠɘ fɲsʘʙʿʤʒʟʒʶ ʯtsɢts ɘʿнʙtstæʒ ʤʘ ʧtsʤʒɢʝ ʤʮs-tsʙʒʤʓsɘʤʝ ʤʒ tsʟʤʘʢʠ ɢtsʤʒ lsʠʤʄɲ ʢtsʾ ⁼ʒнtsʙʠ tæʿʟʤʄʠ⁼ ɢʝ ʤʝ tæʘʯʿʔ / ʅ . Ʒ . ɐ ʤʝ lsʘʤʘ // ʅ ʘʒʢtsɘʠʔ ɘʿfɲʤʄʢ ʃ ᴵ ɘʿɘfɲ ʢtsɢts ʤʘʯʿtsʤʘʤʒ ʤʮsɢts ʒʤʒɘʝ tæfɲʧlsʝ lsʒ ɘʝ lsʝ tæʠʤʘtæʤʮsʾ ʤʝ нʠʯʠʤʄʠ lsʘ ʙʿtslsʝ ⁼ʤʮsʤʮsɢʾ ʿʤʝ ʤʒ ɐ. ʅ. ʅ ʮ ʠʯᴵ ʢtsɢts. ï ʃ ᴵ ɘʿɘ, 2008. ï ʊ. 10, ¯ 2, ʯ. 3. ï ɐ. 175ï 180.

468. ɐ ʤʒlsʠʤʄɲ ʢʠʔ ɺ . ɺ . ɾ ʠtæʠ ʿ ʮ ʠtætsɘʿ нtsʙʘɘʢʠ ʒ tæʘʯʿtsʤʘ⁼ ɢtsнʿɘʤʒ fɲɸʠʤʮsʤʓʘtsʢ / ɺ . ɺ . ɐ ʤʒlsʠʤʄɲ ʢʠʔ, ɐ. ɕ. ʇ ʘɘʢtsɘʠʯ ɐ. ʆ . ɺ tsɘʢ // ɺ ʿfɲʤʄʢ ʃ ᴵ ɘʿɘfɲ ʢtsɢts нʝ tæʮ ʘɘʤʮsɢts ʘɢtæʘtæʤʮsɢts ʒʤʒɘʝ tæfɲʧlsʝ lsʒ : fɲʝ tæ ç ʘɢtætsʤʮsʤʓʷè. ï 2007. ï ¯ 11. ï ɐ. 286ï 290.

469. ɐ tsʝ ɘtsʝ ʤʓɢfɲʤʮs ð tæʝ ʢtsʤʓʝ ʤʒнʘʯʠʠ ʧts ʢʘʯʝ fɲsɘʒ, ⁼tæʘʤʝ ʤʄʠʶ ʠ ʧtæʠʤʓʝ ʤʝ ʤʄʠʶ // ɽ ʬʝ ʢlsʠɘʤʒ ʢtstæʤʓʠ lsʘɢtsнʿɘʤʒʷ. ï 2006. ï ¯ 1. ï ɐ. 42ï 45.

470. ɐ tsʤʮsɘᴵ ʝ ɘʘʊ. ʃ . ʀ ʤʄɲʒʤʒʷtæʤʘʷ ʘʢlsʠɘʤʮsfɲsᴵ ʢtætsɘʠ ʒ ʤʘʢlsʠʧtæʒʶ ʰ ʠ⁼ ʢtstætsɘ / ʊ. ʃ . ɐ tsʤʮsɘᴵ ʝ ɘʘ// ʅ ʘʒʯʤʮs-lsʝ ⁼ʤʄʠʯ. ɪ ʶ ʤʤʝ lsʝ ʤʒ ʅ ʅ ʀ ʮ ʠɘtslsʤʮsɘtsнfɲsɘʘ ʃ ʝ fɲsfɲsʝ ʧʠ ʠ ʇ tsʤʝ fɲ ʷ ʋ ɐɐɽ . ï 1977. ï ¯ 18. ï ɐ. 76ï 84.

471. ɐ tsʤʮsɘᴵ ʝ ɘʘ ʊ. ʃ . ʋ tætsɘʝ ʤʒ lsʠtætsʢfɲʠʤʘ ɘ ʢtætsɘʠ ʢtstætsɘ ɘ ʟʘʠfɲʠʤʓsfɲsʠ tsls tsʙʝ fɲʧʝ ʯʝ ʤʮsfɲsʠ lsʢʘʤʝ ʔ ᴵʤʝ tæɢʠʝ ʔ / ʊ. ʃ . ɐ tsʤʮsɘᴵ ʝ ɘʘ ɺ . ɺ . ʎ ʶ ʧʢts // VI ɺ fɲʝ fɲsʶ ʟʤʒ ʔ fɲʠʤʓʧtsʟʠʒʤʓʧts ʬ ʠʟʧtsʤʮsɢʠʠ ʠ ʙʠts⁼ʠʤʓʠʠ ʤʘʢlsʘʯʠʠ : lsʝ ʟ. нtsʢʤʒ ï ʆ ., 1982. ï ɐ. 158ï 159.

472. ʉ tsdʣsʰ ȷ dʤ̶ts ɺ . ɸ . ɺ dʑʃʷdʑʃȷ ʜtsʙʘtsʕ ʞ ʗteʘ ʗ dʒsʯȷ ɘʗdʑ ɘ teʘʮʗtsdʑ dʑʘ ʕʘʯȷ fŋsɘts ɢtsɘʷʜʗdʑ ʗ ȷ ȷ fŋʙȷ fŋtsʗdʒsfŋsᴵ / ɺ . ɸ . ʉ tsdʣsʰ ȷ dʤ̶ts // ɟ teʦdʒʳ ʰ dʑ dʑdʑ ȷ dʑ lstsʜʳ ʧteʦʗʟɘtsʜfŋsɘʘdʒʷfŋʘɘ ʖtsʟʷʡ fŋsɘʘ ʉ ʗʙʗteʗ ʗ ɼ ʘdʑ dʑ ɢts ɺ tsfŋstsʕʘ ʉ ʗʙʗtefŋʕtsȷ tslsʜȷ dʑ dʑʃȷ ɺ ɸ ʉ ʌɭ ʀ ʃ . ï ɭ tsɘtsfŋʃʙʗtefʕ, 1982. ī ʉ .48ī 55.

473. ʉ tsdʣsʰ ȷ dʤ̶ts ɺ . ɸ . ʕ ʬʬ ȷ ʕlsʗɘdʑ ȷ ʗfŋstsʯdʑʃʕʗ ˩ dʑ teɢʗʗ ɘ teʘʮʗtsdʑʘʖ tslsʕtstedʒsʯdʑ ʖ ʙʳ ʯʕtsɘ / ɺ . ɸ . ʉ tsdʣsʰ ȷ dʤ̶ts // ʀ dʑʜlʑfŋsteʗʘdʑʃʟʘʮʗʷ ʧteʦʗʟɘtsʜfŋsɘʘ dʒʷfŋʘī 1987. ī ¯ 5. ī ʉ .154ī 157.

474. ʉ ʧȷ ʕʘ ʉ . ʄ ɗʷfŋdʑ fʕtslsʘtefŋsɘts ï ʧȷ tefŋʧȷ ʕlsʗɘdʑʘ ɢʘdʑʟᴵ dʑɘʿɘfŋʕtsɢts dʒʘdʑsɢts ɟ tsdʑfŋfŋʷ / ʉ . ʉ ʧȷ ʕʘ, ɯʃ ʗʕʗlsʗdʑ, ɸ . ɪ tsʡʕts // ʊɘʘteʗdʑdʑʃʯlsɘts ʋ ʕteʘdʑʃ. ï 2005. ī ¯ 8. ï ʉ . 3ï 5.

475. ʉ ʧȷ ʕʘ ʉ . ʄ ɗʷfŋdʑ fʕtslsʘtefŋsɘts ɘ ʋ ʕteʘdʑ ī ʧȷ tefŋʧȷ ʕlsʗɘdʑʘ ɢʘdʑʟᴵ / ʉ . ʉ ʧȷ ʕʘ // ʊɘʘteʗdʑdʑʃʯlsɘts ʋ ʕteʘdʑʃ. ī 2003. ī ¯ 9. ī ʉ . 13ī 15.

476. ʉ ʧȷ ʕʘ ʉ . ʄ fŋsʙdʑʃɘtsfŋsʿ ʧtsteʦʜtslʑlsɘtsteʳ ᴷ ʯtsɢts ʧteʦʯȷ fŋlʑ ɘ dʒʷfŋdʑsdʑ fʕtslsʘtefŋsɘʿ ɟ tsdʑfŋfŋʷ ʋ ʕteʘdʑʃ / ʉ . ʉ ʧȷ ʕʘ // ʊɘʘteʗdʑdʑʃʯlsɘts ʋ ʕteʘdʑʃ. ī 2003. ī - ¯ 5. ī ʉ . 25ī 27.

477. ʉ ʧȷ ʕʘ ʉ . ʉ . ʇ ȷ dʑ lsʗʯdʑ ʘfŋʧȷ ʕlsʗ fŋsɘtsteȷ dʑdʑʷ dʑdʑʡ ʧtsdʑfŋʕtsɢts ʟtsdʑʘdʑ dʑsɢts lsʗʧlʑ dʒʷfŋdʑsʾ ʖlʑʜtsʙʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ, ɼ . ʊ . ɺ ʿdʑdʑʃʯlʑʕ // ɭ tsɘʿ dʑ lstsʜʗ fŋdʑʕʯʾ ʿ ɘʿʜlsɘtsteȷ dʑdʑʷ ɘʗfŋsʕtsʧteʦʜlʑʕlsʗɘdʑʖ ʧtsteʰ ʿ lsʗʧʿɘ lsɘʘteʗdʑ: dʒʘlsȷ teʿʘdʑʗ dʑʘlʑʕ.-ɘʗteʦʙ. ʕtsdʑʷ. (29 - 30 lsteʘ. 1996 te). ī ʂ . : ɸ fŋsʯʿʘʯʿʷ çʋ ʕteʘdʑʘ, 1996. ï ʉ . 154.

478. ʉ ʧȷ ʕʘ ʉ . ʉ . ɼ ȷ ʷʕʿ lsȷ tsteȷ lsʗʯdʑ ʿ ʧteʘʕlsʗʯdʑ ʘfŋʧȷ ʕlsʗ ʧtsteʦʜtslsɘtsteʯtsɢts ʧteʦʯȷ fŋlʑ ʧtsdʑfŋʕtsʾ dʒʷfŋdʑsʾ ʧtsteʦʜʗ ɘȷ dʑʃʕtsʾ teʦɢʘstsʾ ʖlʑʜtsʙʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ // ɺ ʿfŋdʑʃʕ ʘɢteʘtedʑsʾ dʑʘlʑʕʗ. ī 2003. ī ¯ 11. ī ʉ . 46ī 49.

479. ʉ ʧȷ ʕʘ ʉ . ʉ . ɼ ʷʕʿ tsfŋsʙdʑʃɘtsfŋsʿ fŋsɘtsteȷ dʑdʑʷ ʧtsdʑfŋʕtsʾ dʒʷfŋdʑsʾ ʧtsteʦʜʗ ɘȷ dʑʃʕtsʾ teʦɢʘstsʾ ʖlʑʜtsʙʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ // ʇ ȷ dʑ lsʗʕʘʿ fŋdʑʕʯʿʷ ɘ ʋ ʕteʘdʑ dʑʘdʒ ʞ ʿ lsʗfŋʷʯtsdʑlsᴵ : ɘ. 4- ʖ ls. ī ʂ . : ʃ tsɢtsfŋ, 2001. ī ʊ. 1. ī ʉ . 277ī 280.

480. ʉ ʧȷ ʕʘ ʉ . ʉ . ʄ fŋsʙdʑʃɘtsfŋsʿ fŋsɘtsteȷ dʑdʑʷ dʑdʑʡ ɘ ʧtsdʑfŋʕʿʡ dʒɗʷfŋdʑʡ ʧtsteʦʜʿ ɘȷ dʑʃʕtsʾ teʦɢʘstsʾ ʖlʑʜtsʙʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ // ɟ teʦʙdʑ dʒʗ teʦʟɘʗlsʕlʑ lsɘʘteʗdʑdʑʃʯlsɘʘ: dʒʞ ɘʿʜ. lsȷ dʒʘls. ʟʙ. dʑʘlʑʕ. ʧteʘʯᴵ .. ï ʂ . : ɸ ɢteʘtedʑʘdʑʘlʑʕʘ, 2000. ī ɺ ʗʧ. 2 : ï ʉ . 126ï 129.

481. ʉ ʧȷ ʕʘ ʉ . ʉ . ɟ tsdʑfŋʕʘdʒʷfŋdʑʘʧtsteʦʜʘɘȷ dʑʃʕtsʾ teʦɢʘstsʾ ʖlʑʜtsʙʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ// ɯdʑfŋsʗlslʑls ʘɢteʦȷ ʕtsdʑsɢʿʾ lsʘʙʿtslsȷ ʖdʑsdʑsɢʿʾ ʋ ɸ ɸ ɭ . ī ʂ ., 1999. ī 261 fŋ

482. ʉ ʧȷ ʕʘʉ . ʉ . ʉ ȷ dʑ ʕʯʡdʑ ʧteʗʡtsdʒʃ ɘʗɘȷ ʜȷ dʑdʑʷ ʧtsdʑfŋʕtsʾ dʒʷfŋdʑsʾ ʧtsteʦʜʗ / ʉ . ʉ . ʉ ʧȷ ʕʘ // ɭ tsɘʿ dʑ lstsʜʗ fŋdʑʕʯʾ ʿ ɘʿʜlsɘtsteȷ dʑdʑʷ ɘʗfŋsʕtsʧteʦʜlʑʕlsʗɘdʑʖ ʧtsteʰ ʿ lsʗʧʿɘ lsɘʘteʗdʑ: dʒʘlsȷ teʿʘdʑʗ

[illegible] (29 - 30 [illegible]. 1996 [illegible]). – [illegible], 1996. – [illegible]. 153.

483. [illegible] / [illegible] // [illegible] – 2002. – [illegible] 2. – [illegible]. 55–59.

484. [illegible] / [illegible] // [illegible] (22 – 23 [illegible], 1995 [illegible]). – [illegible], 1995. – [illegible]. 203–204.

485. [illegible] / [illegible] // [illegible] – 2004. – [illegible] 1. – [illegible]. 10–13.

486. [illegible] / [illegible] // [illegible]. – 2002. – [illegible] 8. – [illegible]. 32–34.

487. [illegible] / [illegible] // [illegible]. – 1995. – [illegible] 6. – [illegible]. 15–16.

488. [illegible] / [illegible] // [illegible]. – 2005. – [illegible] 4. – [illegible]. 12–14.

489. [illegible] / [illegible] // [illegible]. – 2004. – [illegible] 3. – [illegible]. 15–17.

490. [illegible] / [illegible] [illegible]; [illegible] 1977. – [illegible]. 63–64.

491. [illegible] / [illegible] // [illegible]. – 2003. – [illegible] 9. – [illegible]. 28–33.

492. [illegible] / [illegible] // [illegible]. – [illegible], 2010. – [illegible]. 151. – [illegible]. 270–273.

493. ʉ lstsdžʷ tɕuļʑʢ ʇ . ı . ı ʘɢtslsʿɘdžʷ ʢtstɕdʒʻɘ ʿ dʑstɕdʒsɘʘdʑʘ ɢtsнʻɘdžʷ fŋdž fŋ ʢtsɢtsfŋʃtsнʘɕfŋ ʢɖʭ lsɘʘɕɖdʑ / ʇ . ı . ʉ lstsdžʷ tɕuļʑʢ, ʃ . ʈ . ɹ tsʷ tɕfŋ ʢɖʔ. ï ʃ ᴵ ɘʿɘ : ñʂ tsdʑtsfŋ, 1989. ï 188fŋ

494. ʉ lstsʷ dʑsɘfŋ ʢɖʔ ɪ . ʈ . ʇ tɕtsʙʿtslsɖʢɖ ɢʘ ʿdʒdʑdʑʘ fŋʃfŋsʝ dʒʘ ʰ dʑdʑʢtsɘts-ʢɖʰ ʢtsɘtsɢts lstɕʘʢlsʑ tʃlsɖųʿ / ɪ . ʈ . ʉ lstsʷ dʑsɘfŋ ʢɖʔ, ɯ ɸ . ʂ tsdʑtsdʒʻʿ ųᴵ // ʉ lʑųʘfŋdʑ tʃlsʘʭʿɘdʑɖųlsɘts. ï 2011 ï ¯ 1. ï ʉ . 21ï 25.

495. ʉ lstsʷ dʑsɘfŋ ʢɖʔ ɪ . ʈ . ʌ lʑdʢųʿtsdʑʘdʑ dʑɖʔ fŋsʘdʑ lstsdʢtsɢts ʢɖʰ ʝųdʑɖʢʘ lsʘ tsfŋsʙdʑɖɘtsfŋsʿ tʃtɕtsųʝ fŋɘ ʘнʘʃlsʘųʿʾ lʑ dʒsdʑtsнdžʷʢlʑ ɘʝ dʑɖʢtsʾ tɕtsɢʘsts ʾ ʭlʑнtsʙɖ tʃtɕɖ fŋstɕʝ fŋʘʭ : ʘlststɕʝ ʬ. нɖfŋ dʑʘʟнtsʙlʑlslsʷ dʑʘlʑʢ. fŋslʑtʃʝdžʷ н. ɘʝls. dʑʘlʑʢ: fŋʃʝų. 03.00.13 ï ʬʿʟʿtsdʑtsɢʿʷ dž нɖdʑɖ ʿ lsɘʘɕɖdʑ / ɪ . ʈ . ʉ lstsʷ dʑsɘfŋ ʢɖʔ. ï ʃ ᴵ ɘʿɘ, 2000. ï 36 fŋ

496. ʉ lstɕʘsʝ ɢʿʷ tɕtsʟɘɖlsʢlʑ dʒʷ fŋdʑsɢts fŋʂtslsʘɕfŋsɘʘɘ ʋ ʢtɕʘdʑ / ʄ . ɪ . ı lʑʙʝųᴵ , ɪ . ʇ . ɹ lʑtɕʢʘs, ʖ . ʌ . ʄ ʝdž dʑɖʢ [lsʘ ʿdʑ] ; ʟʘ tɕʝ н. ʄ . ɪ . ı lʑʙųʷ, ɯ ɪ . ʈ lʑʟʿɘʘ ï ʂ . : ɸ ɢtɕʘɕdʑʘdʑʘlʑʢʘ, 2005. ï 176 fŋ

497. ʉ lstɕʿʭʘʃ . ʆ . ʄ ʿdʑdʑɖɘʿfŋsᴵ tsʟdʑʘʢ dʒʘʷ fŋdʑsʾ tʃtɕtsнlʑʢlsɖɘdʑtsfŋsʿ ɘʝ dʑɖʢtsʾ tɕtsɢʘstsʾ ʭlʑнtsʙɖ lʑʢtɕʘdʑfŋ ʢtsʾ ųʝ tɕɘtsdʑsʾ dʒsdʑtsųdʑsʾ tʃtstɕtsнɖ / ʃ . ʆ . ʉ lstɕʿʭʘ // ʊʘtɕʿʔfŋ ʢɖʔ dʑʘlʑʢtsɘɖʔ ɘʿfŋdʑɖʢ. ï 2008. ï ɪ ɖtʃ. 61. ï C. 100ï 104.

498. ʉ lstɕʿʭʘ ʃ . ʆ . ʆ ųʿdʢʘ dʒʘʷ fŋdʑsʾ tʃtɕtsнlʑʢlsɖɘdʑtsfŋsʿ ʙɖųʢʿɘ lʑʢtɕʘdʑfŋ ʢtsʾ ųʝ tɕɘtsdʑsʾ dʒsdʑtsųdʑsʾ tʃtstɕtsнɖ / ʃ . ʆ . ʉ lstɕʿʭʘ, ʊ . ɪ . ʇ ʿнʃʘdʑʘ// ɪ ʿfŋdʑɖʢ ʘɢtɕʘɕdʑsʾ dʑʘlʑʢɖ ʇ tɕɖųtstɕdʑsdʒstɕʘʷ. ï 2009. ï ɪ ɖtʃ. 1. ï C. 191ï 195.

499. ʉ lstɕdʑʢlslʑtɕdʑs-ʬ lʑdʢųɖtsdʑʘdʑ dž ʝ tsfŋsʙʝ dʑdʑtsfŋsɖ tɕtsʙtslsʳ dʒsʟɢʘtʃtɕɖ ɘʳ tʃtsdʑdʑ dʑɖɖ ɖ tʃtɕʝ нfŋsʘdʑ dʑɖɖ нɘɖɢʘsʝ dʑ ɢʳ ʭ dʑʘɢtɕdʑʟtsʢ lʑ ʟнtstɕtsɘʳ ʭ dž нʝʔ ʢʢʈ ɖ ʬʃ ɽɼ ɖfŋdʑнtsɘʘdʑɖʷ / ʈ . ʄ . ɹ tsdʑнʳ tɕʝɘʘ, ɽ . ɪ . ʐ ʘɕtsɘʘ, ʃ . ɸ . ɾ ʘtstɕtsdʢtsɘʘ, ʄ . ɪ .ʏ ʝdžʷ dʑɖdʑʘ / ɾ lʑtɕdʑʘdʑɘʳ fŋ ʝʔ dʑtɕɘdʑsʔ нʝʷ lsʝ dž dʑsfŋsɖ. ï 2013. ï ʊ. 63., ¯ 3. ï ʉ . 316ï 328.

500. ʉ lʑʭɖʭ ʈ . ʊ. ʉ tstslsdʑsʰ ʝdʑɖʝ tɕʝ ɢlʑdžʷ lststɕdʑ ʭ dʒʝ ʭʘdʑɖʟdʒsɘ ɖdʒdʒdʑdʑdʑsʔ, dʑ tɕɘdʑsʔ ɖ ᴵ dʑнtsʢtɕɖdʑdʑsʔ fŋʃfŋsʝ dʒ tʃtɕɖ fŋstɕʝ fŋʝ / ʈ . ʊ. ʉ lʑʭɖʭ // XV fŋʝʟн ɘfŋfŋsᴿ ʟdʑsɢts ʬɖʟɖtsdʑtsɢɖųʝ fŋʂtsɢts tsʙʰ ʝfŋsɘʘɖdʒʝ dʑɖ ʀ . ʇ . ʇ ʘdʑtsɘʘ ï ʃ . : ʅ ʘlʑʢʘ, 1987. ï ʊ. 1. ï ʉ . 293.

501. ʉ lʑʭtsʔ ʢtstɕdʒsɘtsʔ ʞɖtɕ "ʉ ʘrtstʿnts" / ɸ . ʆ fŋdʒʘdžʷ dʑ, ɸ . ʐ lsʝ dʑ, ɽ . ʀ tɕɢɖdʑʘ[ɖ нtɕ] // ʇ lsɖųʝ ɘtsнfŋsɘts. ï 2005. ï ¯ 3. ï ʉ . 15ï 17.

502. ʊʘɕʘdʑ dʢts ɸ . ʈ . ʅ ʝʔ tɕts-ɢtstɕdʒsdʑʘdʑ dʑ ʔ fŋsʘlʑfŋ ɖ tʃtɕtsʷ ɘdʑ dʑɖʝ ɢʝ dʑ lsɖųʝ fŋʂtsɢts tʃtslsʝ dʑʅɖʘdʑʘ dʒsdʑtsųdʑsʔ tʃtɕtsнlʑʢlsɖɘdʑtsfŋsɖ ʞɖɘtslsdʑsɢts /

[illegible] // VI [illegible] : [illegible], 1982. [illegible] 169–170.

503. [illegible] / [illegible] // [illegible]: [illegible], 1967. [illegible] 41–48.

504. [illegible] ([illegible]) [illegible] / [illegible] // [illegible] 1960. [illegible] 2. [illegible] 259–263.

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506. [illegible] / [illegible] [[illegible]] // [illegible] 2005. [illegible] 11. [illegible] 13–14.

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509. [illegible] / [illegible] // [illegible] (10 [illegible], 2003 [illegible]) / [illegible], 2003. [illegible] 56–57.

510. [illegible] / [illegible] // [illegible]: [illegible], 2013. [illegible] 188, [illegible] 2. [illegible] C. 179-183.

511. [illegible], [illegible] / [illegible], [illegible], [illegible] [[illegible]] //

[illegible]. – 2010. – № 10. – C. 23–26.

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514. [illegible] / [illegible] // [illegible]. – 2004. – № 1–2. – C. 9.

515. [illegible] 10.9-0049 2990-001:2013 [illegible] 15.05.2013, [illegible] 25.05.2013, [illegible] 05.06.2013. – [illegible], 2013. – 20 [illegible]

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517. [illegible] 20.1- 00492990 – 003:2013. [illegible] 15.05.2013, [illegible] 25.05.2013, [illegible] 05.06.2013. – [illegible], 2013. – 29 [illegible]

518. [illegible] / [illegible] // [illegible]. – 2012. – № 4. – C. 27–31.

519. [illegible]

⁐lzHtsBcʃ / ɸ . ʄ . ʋ Gcl̷ʑɘj cl̷ts // ɹ ʻtstɕj fɪlytɕfɪʃ ʻ tʃtɕʃtɕtsHtsʕtstɕʃfɪlsl̷ɘʘclʐcl̷ʷ. ï 2011. ï ¯ 3. ï C. 80ï 87.

520. ʋ Gcl̷ʑɘj cl̷ts ɸ . ʄ . ʆ fɪtjsBclʐʃɘtsfɪjsʻ fɪjsɘtstɕj clʐclʐʷ ʻ tʃtɕtsHlʐʕlsʃɘcl̷fɪjsᴵ fɪʃclʒj clʐsʘcl̷ fɪj ʕtsʾ clʒɵ̂ʷfɪclʐsʾ tʃtstɕtsHcʃ / ɸ . ʄ . ʋ Gcl̷ʑɘj cl̷ts, ʉ . ʇ . ʐ ʘclʐtsɘcʃclʐs, ɼ . ʇ . ʇ j tɕʻG // ʉ ʻcl̷ fɪj ʕcʃʔ Gtsfɪʃtsʜʘɕ ï 2005. ï ¯ 11ī 12. ï C. 24ï 26.

521. ʌ j Hʘʕ ɺ . ʄ ∂ʷfɪclʐʘ tʃtɕtsHlʐʕlsʃɘcl̷fɪjsᴵ Bcʃɥʕʻɘ ɥtstɕclʐs-tɕʷBtsʾ tʃtstɕtsHcʃ tɕʻLclʐsGts lsʃtʃlʐ / ɺ . ʌ j Hʘʕ // ʇ tɕtstʃtsLcʃɥʻʷ. ï 2002. ï ¯ 11. ï C. 62ï 63.

522. ʌ j Hʘʕ ɺ . ʈ ʻfɪjs ʞ cʃɘtsʾ clʒʘfɪʃ lsʻclʘ BlʐGʘʔɥʻɘ tʃtscl̷fɪj ʕtsʾ clʒʷfɪclʐsʾ tʃtstɕtsHcʃ / ɺ . ʌ j Hʘʕ, ʁ . ʉ ʻtɕʘɥᴵ ʕcʃʔ // ʊɘʘlɕʃclʐclʐʃɥlsɘts ʋ ʕtɕʘclʐʃ. ī 2003. ī ¯ 11. ī ʉ . 18.

523. ʌ j Htstɕtsɘ ɺ . ʇ . ʌ tstɕclʒʐɘʘclʐclʐʷ clʒɵ̂ʷfɪclʐsʾ tʃtɕtsHlʐʕlsʃɘclʐsfɪjsʻ clʐʘHtɕj clʒsclʐsclʐʃ⁐ lsj cl̷ʷls tʃʻH ɥʘfɪjɘcʃʕtstɕʃfɪjsʘclʐclʐʷ ʕtsclʒʻʕtstɕclʒlʐ ç ʇ tɕj Hfɪjsʘclɕsj tɕè / ɺ . ʇ . ʌ j Htstɕtsɘ, ʊ . ʉ . ʉ ʘBʘHcʃclʐ // ʊj ⁐clʐsclʐsGʻʷ ɘcʃtɕtsBclʐʃɥlsɘʘ ʻ tʃj tɕj tɕtsBʕcʃ tʃtɕtsHlʐʕɥʻʾ lsɘʘlɕʃclʐclʐʃɥlsɘʘ ï 2009. ï ɺ cʃtʃ. 1. ï C. 27ï 33.

524. ʌ j Htstɕlʐʕ ʈ . ʉ . ɸ Hʘʃlsʘɥcʃtsclʐclʐ j tʃtɕtsɥj fɪjfɪj lʐ ʕtstɕtsɘ tʃtɕʃ tʃtɕʃclʒj clʐj clʐʃcʃ ʘclʒcʃclʐʘLcʃclʐʘcʃ ʷʷj clʐʘLj tʃʘclʒʘ/ ʈ . ʉ . ʌ j Htstɕlʐʕ, ɺ . ʀ . ʊtɕj lsj ɘcʃɥ, ɺ . ʇ . ʈ ʘHɥj cl̷ʕtsɘ [cʃ Htɕ] // ɹ cʃtsclʐsGcʃɥj fɪʕcʃj tsfɪclʐsɘʳ ɘʳ fɪjsʕtsʔ tʃtɕtsHlʐʕlsʃɘclʐsfɪjscʃ fɪj-⁐. ʞ cʃɘtslsclʐ ⁐ : clʒʘlsj tɕcʃʘclʐ clʒj ʞ HlʐclʐʘtɕtsHclʐsʔ ʕtsclʐʷʷj tɕj clʐɥcʃcʃ. ï ɹ tstɕtsɘfɪʕ, 1991. ï ʏ . 2. ï ʉ . 29ï 39.

525. ʌ cʃclʐʃclʒsclʐsɘ ɺ . ʀ . ʈ lʐʕtsɘtsHfɪjsɘts tʃts tsBʰ jʔ cʃ ʕclʐʃclʐʃɥj fɪʕtsʔ ʷʷcʃLcʃtsclʐsGcʃcʃ / ʌ cʃclʐʃclʒsclʐsɘ ɺ . ʀ . ï ʆ . : ʆ j H. cʃclʐʷʷ tstɕclʒ ʘGj clʐsfɪjsɘts, 2002. ï 958 fɪj

526. ʌ cʃclʐʃtʃtʃtsɘʘʃ . ɸ . ɸ Hʘʃlsʘɥcʃʷʕtstɕtsɘ tɕʘLclʐʃɥclʐsGts lsʃtʃʘfɪjstɕj fɪjfɪjslʐfɪjstsʔɥcʃɘtsfɪjscʃ. / ʃ . ɸ . ʌ cʃclʐʃtʃtʃtsɘʘ // ʌ cʃLcʃtsclʐsGts-Bcʃtsʻcʃclʒʃɥjfɪʕcʃj tsfɪclʐsɘʳ tɕj ʘclʐʃLʘɥcʃcʃ Gj clʐj lsʃɥj fɪʕtsGts tʃtslsj clʐɥcʃʘclʘclʒsclʐsɥclʐsfɪjscʃ : fɪjs. clʐʘlʐɥ lstɕ ï ʃ ., 1988. ï ʉ . 13ï 20.

527. ʌ cʃclʐʃtʃtʃtsɘʘʃ . ɸ . ʉ j ʕtɕj lststɕclʐʘʷ cʃ clʒslststɕclʐʘʷ Hj ʷlsj cl̷ clʐsfɪjsᴵ Htsclʐʔ ɘʳ clʒj clʐʃ lʐ ʕtstɕtsɘ tɕʘLclʐʃɥclʐsGts lsʃtʃʘ clʐj tɕɘclʐsʔ fɪʃfɪjsj clʒʳ (lsʃtʃʘ fɪjstɕj fɪjfɪjslʐfɪjstsʔɥcʃɘtsfɪjscʃ) /ʃ . ɸ . ʌ cʃclʐʃtʃtʃtsɘʘ, ʕ . ʇ . ʂ tsʕtstɕʃclʐʘ// ʉ j cl̷ fɪʕts⁐tsLʷʔfɪjsɘj clʐclʐʘʷ Bcʃtsclʐsɢcʃʷ. ï 1986. ï ¯ 7. ï ʉ . 43ï 45.

528. ʌ cʃclʐclʐʃtʃtsɘʘ ʃ . ɸ . ɺ tsLtɕʘfɪjsclʐ j cʃLclʒj clʐj clʐʃʷ tʃtɕtsHlʐʕlsʃɘclʐsfɪjscʃ ʕtstɕtsɘ tɕʘLclʐʃɥclʐsGts lsʃtʃʘfɪjstɕj fɪjfɪjslʐfɪjstsʔɥcʃɘtsfɪjscʃ ɘ lʐfɪclʐsɘcʃʷ⁐ lstɕʘHcʃɥcʃtsclʐclʐsʔ lsj ⁐clʐsclʐsGcʃcʃ / ʃ . ɸ . ʌ cʃclʐʃtʃtʃtsɘʘ// ɹ ᴮ clʐ ɺ ʅ ʀ ʀ ʈ ʇ ɼ . ï ʃ ., 1983. ï ɺ ʳ tʃ. 62. ï ʉ . 14ï 18.

529. ʌ ʻLʻtsclʐsGʻɥclʐ tsfɪclʐsɘcʃ Lʘfɪjstsfɪlʐɘʘclʐclʐʷ clʒʕtɕtsj clʐj clʒj clʐsʻɘ lʐ lsɘʘlɕʃclʐclʐʃɥlsɘʻ lsʘ ɘj lsj tɕʃclʐʘlɕclʐʔ clʒj Hcʃɥcʃclʐ ɘ LʘʻHclʐsclʒlʐ tɕj GʻtsclʐʻⅣ / ʈ . ʁ . ʂ tɕʘɘɥʻɘ, ɸ . ʄ . ʉ lsʘHclʐʃʕ, ʄ .

Ɫ . ȿ dž ʯ₰tsɘfɲ ₰ʘ[lsʘ ʻdʑ] // ʌ ʻʟʻtsdʑsɢʻʯdʑʃʔ ɣ lztedʑʘdz ï 2006. ï ʊ. 52, ¯ 2. ï ʉ.228.

530. ʌ tstedʑzɘʘdʑdzʷ ɢj dʑsʷ tsdʑʜlz ʻdʒʃtstedsdʑʃ₸ dʒʷfɲdʑʃ₸ ʧtsteʻʜ ɘ ʊ ₰teʘʼdʑ / ɯ Ɫ . ʯ lzʟʻɘ, ʃ . ʇ . ʏ ʗtɘ₰tsɘʘ, ʅ . ɯ ʃ ʘeʉj dʑ₰ts, ʅ . ʙ . ʈ j ɘdʑ ₰ // ʈ tsʟɘj ʜj dʑdzʷ ʻ ɢj dʑj lsʗ₰ʘ lsɘʘeʗdʑ: dʒʼɣ ɘʻʜ. lsj dʒ dʑʘlz₰. ʟʙ. ï ȿ .: ʅ ʘlz₰tsɘʗʔ fɲɒʻls, 2002. ï Ɫ ʗʧ. 36. ï ʉ. 55ï 56.

531. ʌ tstedʑzɘʘdʑdzʷ dʒôʷfɲdʑsɢts ₰tsdʒsdʑsɢts lsʗʧlz fɲʗdʒj dʑlsʘdz fɲ₰tsʼ ʧtstetsʜʗ ʜdzʷ ʧj tej ʜɢʻteôʷ ȿ ʘeʧʘls / ɸ . ȿ . ȿ ʘdʑʗdʑ₰ʘ, Ʒ . ɯ ʯ tsdʑs₸tsteʗdʑfɲ ₰ʗʔ, Ʒ . Ɫ . Ɫ ʜtsɘʗʯj dʑ₰ts [lsʘ ʻdʑ] // Ɫ ʻfɲdʑʃ₰ ʘɢteʘedʑsʼ dʑʘlz₰ʗ. ï 2010. ï ¯ 12. ï C. 31ï 33.

532. ʌ lztedʒʘdʑj ʯᴵ Ʒ . ʉ . ʇ j tej lsteʘɘdʑfɲlsᴵ ʧtsɣ ʗɘdʑʃ₸ tej ʯtsɘʗdʑ lsʘ dʒôʷfɲdʑʘ ʧtetsʜlz₰lsʗɘdʑfɲlsᴵ ʙʗʯ₰ʻɘ ʧteʗ ʟɢtsʜtsɘlzɘʘdʑdʑ ₰tsdʒʙʻ₰tstedʒʼɘ ʻʟ ɘdʒʼfɲlstsdʒ ʯj tsdʑlstsɘʗ₸ lsdzʷ ʻɘ / Ʒ . ʉ . ʌ lztedʒʘdʑj ʯᴵ // ȿ tstedʒʗ ʻ ₰tstedʒsɘʗtetsʙdʑʃʯlsɘts. ï 2009. ï ¯ 65. ï C. 111ï 116.

533. ʌʘeʘ₰tsʟ ɼ . ʇ . ʊj dʒʧj teʘlslzteʘʗ fɲsdʑ / ɼ . ʇ . ʌʘeʘ₰tsʟ // ɾ lztedʑʘdz ɘʳ fɲ j ʔ dʑj teɘdʑsʔ ʜj ʷlsj dz dʑsfɲlsʗ. ï 2013. ï ʊ. 63, ¯ 1. ï ʉ. 113ï 125.

534. ʌʘeʘ₰lsj teʗfɲlsʗ₰ʘ ₰tsteʻɘ-ʧj teɘʻfɲlsts₰ lz₰teʘʼdʑfɲ₰tsʼ ʯtstedʑs-teʷʙtsʼ dʒsdʑsʯdʑsʼ ʧtstetsʜʗ ʟʘ lsʗʧtsdʑsɢʻʯdʑʃdʒʗ tsfɲsʙdʑʗɘtsfɲlsʷdʒʗ ɘʗʰ tsʼ dʑj teɘtsɘtsʼ ʜʻʷdz dʑsfɲlsʻ / Ɫ . ʃ . ʐ ʘʧtsʰ dʑʃ₰, ʈ . Ɫ . ʇ tsfɲlstsʔ, Ɫ . ɯ ȿ ʘeʧtsɘfɲ ₰ʗʔ, ɼ . ɯ ȿ teʗɘtstedʑʯ₰ts // ʇ tetsʙdʑj dʒʗ ʟtstsʻdʑɣ j dʑj teʼ lsʘ ɘj lsj teʗdʑʘedʑsʼ dʒj ʜʗʯʗdʑʃ : ʟʙ. dʑʘlz₰. ʧteʘʯᴵ ʌʘe₰ʻɘfɲ₰tsʼ ʜj teɣ . ʟtstsɘj ls. ʘ₰ʘʜ. ï ʌ. : ʈ Ɫ Ɫ ʌɼ ʅ Ɫ ɸ, 2009. ï Ɫ ʗʧ. 19, ʯ 2, ls. 2. ï ʉ. 156ï 159.

535. ʌʘʯʘlslzteʷdʑ Ʒ . ʉ . ʉɘʷʟᴵ lsʗʧtsɘ Ɫ ʅ ɼ fɲtej ʧtetsʜlz₰lsʗɘdʑ dʒʗ ₰ʘʉj fɲlsɘʘdʒʗ ₰tstetsɘ / Ʒ . ʉ . ʌʘʯʘlslzteʷdʑ, ɪ . ɸ . ȿ ʘeʘj ɘ // ɾ ʗɘtslsdʑsɘtsʜfɲlsɘts. ï 1984. ï ¯ 3. ï ʉ. 49ï 51.

536. ʎ ɘʻɢlzdʑ ɸ . ʊ. ʏ ʗ ʧtslsteʻʙdʑs tetsʟɘʗɘʘlsʗ dʒʷfɲdʑj fɲ₰tslsʘefɲlsɘts / ɸ . ʊ. ʎ ɘʻɢlzdʑ, ʃ . ʯ . ʇ tsɘtsʟdʑ₰tsɘ, ʉ . ʃ . ɪ dz fɲ ₰ // ʇ j tefɲʧj ₰lsʗɘʗ tetsʟɘʗls₰lz fɲ₰tslsʘefɲlsɘʘ lz lstej lsᴵ tsdʒlz lsʗfɲʷʯtsdʑlslsʻ : fɲʧj ʯ. ɘʗʧ. ʜts ʃ ʻɣ dʑʘe dʑʘlz₰.-ʧteʘ₰ls. ₰tsdzʷ. (2 - 5 ɣ tsɘlsdzʷ, 2001 te) // Ɫ ʻfɲdʑʃ₰ ʉ lzdʒfɲ ₰tsɢts ʜj teɣ ʘɘdʑsɢts ʘɢteʘedʑsɢts lzdʑɘj tefɲʗlsj lslz : fɲj te çlsɘʘeʗdʑdʑʃʯlsɘtsè. ï ʉ lzdʒʗ, 2001. ï Ɫ ʗʧ. 5. ï ʉ. 198ï 199.

537. ʎ ʗdʒʙʘdz ₰ ʃ . ʌ . ʃ ôʷfɲdʑʘ ʧtetsʜlz₰lsʗɘdʑfɲlsᴵ ɘʻʜɢtsʜʻɘj dz dʑsɢts dʒsdʑsʜdzʷ₰lz ɘj dʑʗ₰tsʼ tetsɢʘlstsʼ ₸lzʜtsʙʗ teʻʟdʑsɢts teʻɘdzʷ ʘʜʘʧlsʘʯʻʼ / ʃ . ʌ . ʎ ʗdʒʙʘdz ₰, ɯ ʃ . ʃ ʰ ʗʧ₰ts // ʉ ʻdz fɲ ₰ʗʔ ɢtsfɲʧtsʜʘe. ï 2006. ï ¯ 3ï 4. ï C. 8.

538. ʎ ʻdʑʔ₰ts ʯ . ʃ . ɸ dʑʘdzʟ ɢj dʑj lsʗʯdʑsʼ fɲlstedʑ₰lslzteʗ ɘtsdʑʗdʑfɲ ₰tsʼ dʒôʷfɲdʑsʼ ʧtstetsʜʗ ʟʘ ɢj dʑj lsʗ₰ts-ʙʻts₸ʻdʒʼʯdʑʃdʒʗ dʒʘe₰j teʘdʒʗ / ʯ . ʃ . ʎ ʻdʑʔ₰ts // Ɫ ʻfɲdʑʃ₰ ɪ ʻdʑsʯj te₰ʻɘfɲ₰tsɢts ʜj teɣ ʘɘdʑsɢts ʘɢteʘedʑsɢts lzdʑɘj tefɲʗlsj lslz. ï ɪ ʻdʑʘʎ j te₰ɘʘ, 1999. ï Ɫ ʗʧ. 8, ʯ 2. ï ʉ. 194ï 198.

539. ʎ ʻfɳʘɪɐɕʢ ʃ . ʁ . ʃ ʻʧʻʜɕ ʤʒsʤʦʢʘ ʧʈɐɕ ʟɢʦʜʦɘʟʐɘʘʤʐʤ ɘɕʃɳʢʦʧʈɐʦʜʐʢlsɕʃɘʤʐʃʤʒ ʤʘʢlsʐʶ ʯɕʤʒ ʢʦʈɐʦɘʘʤʒ ʙʦʈɐʦʰ ʤʘ ʟ ʤʘɳjʤʐʷ ʈɕʻʧʘʢʐ ʙʝʟʝʈɐʐʢʦɘʦɢʦ ɳʦʈɐlsʐ / ʃ . ʁ . ʎ ʻfɳʘɪɐɕʢ, ɯɸ . ɼ ʐʙɕʤʢʘ// ɿ ʘʐʢ.-lsʝ=ʤʐʙʶ ʤɪ 2004. ɪ ʅ ɕʧ. 5, ¯ 3. ɪ ʉ. 139.

540. ʏʝʈɐʝʧʘʤʐɘ ʅ . ʅ . ʂ ʦɳɐʝʤʐʘʷ ʦʯʝʤʢʘlsʈɐʘʤʐɳʧʦʈɐlsʘʤʒʝlsʘʙʦʤʐɕlsʦɘ ɘ ʢʤʝlsʢʐ in vivo ʧʦ ʜʘʤʐʤʐ ʤʒɕʟʤʒʝʈɐʝʤʐɕʷ ɕ= ʘɐlsʝʈɐɕʦ-ɘʝʤʐʟʤʐɢʦ ʙʘʤʐʘʤʐɳʘ/ ʅ . ʅ . ʏʝʈɐʝʧʘʤʐɘ, ʊ . ʖ . ʊʦʢʘɐʝɘ, ɿ . ɿ . ʄ ʘʢʘɕ // ʈ ʦɳɳɕʔɳʢɕʔ ʬɕʟɕʦʤʦɢɕʯʝɳʢɕʔ ʮʐʈɐʤʐʘʤʐ ï 2003. ï ʊ. 89, ¯ 8. ï ʉ. 1021ï 1028.

541. ʏʝʈɐʤʐɕʢʦɘɳʢɕʔ ʅ . ɿ . ʅ ʦʧʈɐʦɳɳ ʤʝʈɐɘʤʐʔ ʈɐʝɢʐʤʐʷɕɕ ɳɕɳlsʝʤʒ ʢʈɐʦɘɕ / ʅ . ɿ . ʏʝʈɐʤʐɕʢɢʦɘɳʢɕʔ, ɸ . ɕ . ɕ ʈɐʦʰ ʝɘɳʢɕʔ. ï ʄ . : ʄ ʝʜɢɕʟ, 1953. ï 222 ɳ.

542. ʏʝʈɐʤʐɘʘʅ . ʅ . ʉʦʜʝʈɐʮ ʘʤʐʝ ɳɐʦʙʦʜʤʐ = ʘʤʒɕʤʐʢɕɳʤʐlsls ɘ ɳɳ ɘʦʈɐʦlsʢʝ ʢʈɐʦɘɕ ʢʦʈɐʦɘ ɘ ʟʘɘɕɳɕʤʒɳlsɕ ʦls ʬɕʟɕʦʤʦɢɕʯʝɳʢʦɢʦ ɳɳɳlsʦʷʤʐɕʷ ɕ ʧʈɐʦʜʐʢlsɕɘʤʐɳlsɕ / ʅ . ʅ . ʏʝʈɐʤʐɘʘ// ʅ ʶ ʤʐʝlsʝʤʐ ʅ ɿ ʀ ʀ ʅ ʇ . ï ʅ ʦʈɐʦɘɳʢ, 1988. ï ʅ ʳ ʧʐɳʢ 2. ï ʉ. 33ï 35.

543. ʏʝʈɐʤʐʷɘɳɳ ʢɕʔ ʉ. ʅ . ʄ ɗʷɳɕʤʘ ʧʈɐʦʜʐʢlsɕɘʤʐɳlsɪ ʙʐɢʘʔʯʻɘ ʧʈɐɕ ɘʻʜɢʦʜʻɘʤʐ ʧʻʜ ɘʧʤʐɕɘʦʤʒ ʰ lsʐʯʤʐʦʾ ʘʝʈɐʦʻʦʤʐʟʘʯʻʾ lsʘ ʐʤʐlsʈɐʘʷʻʦʤʝlsʦɘʦɢʦ ʦʧʈɐʦʤʒʤʝʤʐʷ / ʉ. ʅ . ʏʝʈɐʤʐʷɘɳɳʢɕʔ, ʃ . ʅ . ʉʦʢʈɐʤʐls // ʅ ʻfɳʤʐɕʢ ɼ ʤʐʧʈɐʦʧʝlsʈɐʦɘɳɳʢʦɢʦ ʜʝʈɐʮ ʘɘʤʐʦɢʦ ʘɢʈɐʘʈɐʤʐʦɢʦ ʐʤʐɘʝʈɐɳɕlsʝlsʐ. ï 2007. ï ¯ 2. ï C. 148ï 151.

544. ʏɕʤʐɕʤʐʘʷʤʐ ʃ . ʁ . ʀ ʤʐʜɕɘɕʜʐʘʤʐ ʤʐʦ-lsɕʧʦʤʐʦɢɕʯʝɳʢɕʝ ʦɳɳʙʝʤʐʤʐʦɳlsɕ ʧʈɐʦɢʤʐʦʟɕʈɐʦʳ ɘʘʤʐɕʷ ʐ ɳɳʙʘʢ ɘʦ ɘʈɐʝʤʒʷ ɘʳ ʙʦʈɐʘ ʤʒʝʮʜʐ ɘʝʈɐʦʷlsʤʐʦɳlsɪʶ ɕ ʯʝʤʐʤʐʦɳlsɪʶ ʧʦʜʢʈɐʝʧʤʝʤʐɕʷ / ʃ . ʁ . ʏɕʤʐɕʤʐʘʷʤʐ, ʃ . ɸ . ʇ ʈɐʝʦʙʈɐʘʮʝʤʐʢʘʷ, ʅ . ʌ. ʄ ʝʈɐʮ ʘʤʐɘʘ// ɼ ʐʈɐʤʐʘʤʐʳ ɳɳ ʝʔ ʤʝʈɐɘʤʐʔ ʜʝʷlsʝʤʐ ʤʐʦɳlsɕ. ï 2010. ï ʊ. 60, ¯ 4. ï ʉ. 438ï 446.

545. ʏʐʢɕʯʝɘ ʀ . ʇ . ʉɕʤʒʧʘʦʤʒɕʤʒʝlsɕʯʝɳʢɕʝ ɘʝʰ ʝɳlsɘʘ ʙʝʤʢʦɘʦɢʦ ʧʈɐʦɕɳ=ʦʮ ʜʝʤʐɕʷ / ʀ . ʇ . ʏʐʢɕʯʝɘ. ï ʄ . : ʄ ʝʜɢɕʟ, 1958. ï 182 ɳ.

546. ʏʐʧʈɐɕʤʘ ʃ . ʅ . ʇ ʈɐʦʜʐʢlsɕɘʤʐ ʷʢʦɳlsʻ ʢʦʈɕʻɘ ɳɕʤʒʝʤʐʦʘʤʐ ɳɳʢʦʾ ʧʦʈɐʦʜɕ ʘɳlsʦʈɕʻʔ ɳɳʢʦʾ ɳʝʤʝʢʯʻʾ ɘ ʐʤʒʦɘʘ= ʉʐʤʒʰ ɕʤʐɕ / ʃ . ʅ . ʏʐʧʈɐɕʤʘ // ɿ ʙʻʈɐʤʐɕʢ ʤʘʐʢʦɘɕ= ʧʈɐʘʯɪ ʅ ʻʤʐʤʐɕʯʷ ʢʦɢʦ ʜʝʈɐʮ ʘɘʤʐʦɢʦ ʘɢʈɐʘʈɐʤʐʦɢʦ ʐʤʐɘʝʈɐɳɕlsʝlsʐ. ɪ ʅ ʻʤʐʤʐɕʯʷ, 2008. ɪ ʅ ɕʧ. 34, ʊ. 3. ɪ ʉ. 94ɪ 97.

547. ʏʐʧʈɐɕʤʘʃ . ʇ . ʅ ʻʢʦɘʘʜɕʤʘʤʒʢʘʤʒʈɐʷʦʤʐʦɢʻʯʤʐʦɢʦ lsʘʙʻʦ=ʻʤʒʻʯʤʐʦɢʦ ɳʢʤʘʜʐ ʢʈɐʦɘʻ ʐ ʙʐɢʘʔʯʻɘ ʘʝʈɐʜɕʤʐʘʤʐɢʐɳɳʢʦʾ ʧʦʈɐʦʜɕ / ʃ . ʇ . ʏʐʧʈɐɕʤʘ, ʁ . ɿ . ʉʻʈɐʘʯɪ ʢɕʔ // ʅ ʻfɳʤʐɕʢ ʉʐʤʒɳɳʢʦɢʦ ʜʝʈɐʮ ʘɘʤʐʦɢʦ ʘɢʈɐʘʈɐʤʐʦɢʦ ʐʤʐɘʝʈɐɳɕlsʝlsʐ : ɳɳʈɐ. çlsɘʘʈɐɕʤʐʤʐɕʯlsɘʦè. ɪ ʉʐʤʒɕ, 2001. ɪ ʉ. 204ɪ 205.

548. ʏ lztʃ tɐɕʃ dɀ۞ ʃ . ʇ . ɪ ʿʕ tsɘʘ ʜɕʃ dɀ۞ ʒʕʘ dʒʷ fɲɖʑs ̛ tʃ tɐtsʜlzʕ lsɕʃ ɘ dʑsfɲʝs ̒ ʙlzɢ۞ʔ ɥʿɘ ʘʙ ʝ tɐʜɕʃ dɀʘdɀɢlzfɲ ʕ ts ̛ tʃ tstɐtsʜɕʃ / ʃ . ʇ . ʏ lztʃ tɐɕʃ dɀ۞ // ʈ tsʟɘ ʝ ʜ ʝ dɀdzʷ ̒ ɢ ʝ dʑ lsɕʃ ʕʘ lsɘʘtɐɕʃ dɀ : dʒʹɣ ɘʿʜ. lsʝ dʒ۞s. dɀ۞lzʕ. ʟʙ. ɪ ʂ . : ɸ ɢtɐʘtɐdɀ۞ dɀ۞lzʕʘ, 2003. ɪ ɪ ɕʃ tʃ . 35 ɪ ʉ . 156ɪ 159.

549. ʏ lztʃ tɐɕʃ dɀ۞ ʃ . ʇ . ɿ ۞ʕ tsdʑsdʒʹtɐdʑsfɲʝs ̒ ʬtstɐdʒlzɘʘdɀdzʷ dʒɔ̂ʷ fɲɖʑs ̛ tʃ tɐtsʜlzʕ lsɕʃ ɘ dʑsfɲʝs ̒ lz ʙlzɢ۞ʔ ɥʿɘ tɕʿʟdɀʃ ⁼ tʃ tstɕʿʜ / ʃ . ʇ . ʏ lztʃ tɐɕʃ dɀ۞ // ʈ tsʟɘ ʝ ʜ ʝ dɀdzʷ ̒ ɢ ʝ dʑ lsɕʃ ʕʘ lsɘʘtɐɕʃ dɀ : dʒʹɣ ɘʿʜ. lsʝ dʒ۞s. dɀ۞lzʕ. ʟʙ. ï ʂ . : ɿ ۞lzʕ tsɘɕʃ ʔ fɲ ʾls, 2002. ɪ ɪ ɕʃ tʃ . 36 ɪ ʉ . 197ï 198.

550. ʏ lztʃ tɐɕʃ dɀ۞ ʃ . ʇ . ʌ tstɐdʒlzɘʘdɀdzʷ dʒɔ̂ʷ fɲɖʑs ̛ tʃ tɐtsʜlzʕ lsɕʃ ɘ dʑsfɲʝs ̒ lz lsɘʘtɐɕʃ dɀ tɕʿʟdɀʃ ⁼ ɢ ʝ dʑslsɕʃ tʃ ʿɘ ɘ ʝ dɀʃ ʕ ts ̛ tɐtsɢ۞sts ̛ ⁼lzʜtsʙɕʃ ɘ lzdʒsɘ۞⁼ ʇ tsdʑfɲʝʷ / ʃ . ʇ . ʏ lztʃ tɐɕʃ dɀ۞ // ɪ ʿfɲɖʑʃ ʕ ʘɢtɐʘtɐdʑs ̛ dɀ۞lzʕ ɕʃ . ï 2003. ï ¯ 1. ï ʉ . 79ï 80.

551. ʐ ʘdɀɕʃ dʒsɘ ɭ . ɸ . ɪ ʟ۞ɕʃ dʒsfɲʷʟ ᴵ tsʙʰ ʝ ɢts ʙ ʝ dʑ۞ fɲ ɘtstɐtslsʕɕʃ ʕ tɐtsɘɕʃ ʘdɀɢdʑ tɐfɲʕɕʃ ⁼ ʕ tstɐtsɘ tɐ۞ʟdɀ ⁼ lsɕʃ tʃ tsɘ ʕ tsdɀfɲʝsɕʃ lslzɥɕʃ ɕʃ fɲɕʃ ⁼ tʃ tɐtsʜlzʕ lsɕʃ ɘ dʑsfɲʝs ᴵ ᴮ / ɭ . ɸ . ʐ ʘdɀɕʃ dʒsɘ // 6 fɲʝ ʝ ʟʜ ʋ ʕ tɕ tsʙʰ ʝ fɲʝsɘʘ ɢ ʝ dʑ lsɕʃ ʕ tsɘ ɕʃ fɲʝ dʑ ʕ ɥɕʃ tsdʑ tɐtsɘ ɕʃ dʒ ʝ dɀʃ ɭ . ʀ . ɪ ۞ɕʃ dʑsɘ۞ lsʝ ʟ. ʜtsʕ dɀ ï ʂ ., 1992. ï ʊ. 1. ï ʉ . 214ï 215.

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[illegible] 1.

[illegible] (MÑm n=10)

[illegible]	[illegible]							
	[illegible]		30-[illegible]		90-[illegible]		180-[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	35,3Ñ1,9	31,9Ñ1,6	43,3Ñ1,9	41,3Ñ2,1	48,5Ñ2,9	43,8Ñ2,7	64,6Ñ4,1	56,7Ñ3,8
[illegible]	131,5Ñ6,1	129,3Ñ5,6	391,7Ñ17,9	406,4Ñ20,4	543,4Ñ24,5	528,6Ñ23,7	584,6Ñ29,8	578,4Ñ27,6
[illegible]	ð	ð	82,3Ñ3,8	78,1Ñ3,2	311,3Ñ13,4	295,6Ñ11,9	343,8Ñ17,5	336,7Ñ18,4
[illegible]	ð	ð	9,1Ñ0,4	8,1Ñ0,3	11,2Ñ0,7	9,8Ñ0,6	47,9Ñ2,1	46,1Ñ2,4
[illegible]	ð	ð	39,8Ñ1,6	36,8Ñ1,4	46,3Ñ1,9	43,9Ñ2,0	45,7Ñ2,5	44,2Ñ2,3
[illegible]	ð	ð	260,5Ñ21,6	283,4Ñ26,2	174,6Ñ19,1	179,3Ñ20,1	147,2Ñ14,6	151,4Ñ17,1
[illegible]	1273,2Ñ12,4	1278,8Ñ14,2	1007,0Ñ21,1	990,3Ñ19,8	848,1Ñ17,9	867,6Ñ18,4	790,8Ñ16,1	804,9Ñ15,3
[illegible]	ð	ð	170,7Ñ6,5	163,2Ñ5,7	385,2Ñ8,3	376,1Ñ7,4	432,4Ñ8,1	427,1Ñ9,4
[illegible]	ð	ð	836,3Ñ18,7	827,1Ñ16,9	462,9Ñ13,2	491,5Ñ14,9	358,4Ñ7,3	377,8Ñ8,1

ţ tsнÖlstsҪ 2.

ţ lstsdtsɢʽųdź ţʃtsҪÖʟdźʃҪʃ lsʝ dźʷls ţʃtsdźfiŧҪtsʾ dʒ̂ʷfiʧtsʾ ţʃtstatsнʃ ɘ tɕʽʟdź ţʃʝ tɕʽtsнʃ ţʃtsfiʝsdźÖlsÖdź dźsɢts tsdźtsɢʝ dʑ ʟdź(MÑm n=5)

ɨ tsҪÖʟdźʃҪʃ, ᴞɘ./нtsвdź	ʃ̣ ʜdźsнtsвtsɘʽ		30-нtsвtsɘʽ		90-нtsвtsɘʽ		180-нtsвtsɘʽ	
	ɪ dźɢÖʔ ųʽ	lsʝ dźʃųҪʃ	вdźɢÖʔ ųʽ	lsʝ dźʃųҪʃ	вdźɢÖʔ ųʽ	lsʝ dźʃųҪʃ	вdźɢÖʔ ųʽ	lsʝ dźʃųҪʃ
ţ dźᴞtsɘÖÖlsʃɘdźfiʝsᴵ	34,7Ñ1,7	33,6Ñ1,9	48,8Ñ2,4	45,9Ñ2,8	50,2Ñ3,6	48,4Ñ3,2	68,5Ñ4,8	59,9Ñ4,2
ʉ lsÖdźfiʝstsʷdźdź dź ls.ų.:	130,2Ñ5,8	128,6Ñ5,3	387,6Ñ16,6	403,3Ñ18,9	541,4Ñ22,8	528,1Ñ22,7	584,3Ñ29,4	578,3Ñ27,3
ÖҪls ţʃtɕʃʔ dʒÖdźdźʷ Ҫtstɕdʒdź		ð	81,2Ñ3,6	78,7Ñ3,3	307,7Ñ12,7	296,9Ñ12,2	341,9Ñ17,8	335,6Ñ17,1
ÖҪls ӽ dźɘÖdźdźʷ	ð	ð	9,0Ñ0,4	8,2Ñ0,3	10,8Ñ0,8	9,5Ñ0,5	48,4Ñ2,3	46,5Ñ2,5
ÖҪls ţʃtɕʃʔ dʒÖdźdźʷ ɘtsнʃ	ð	ð	39,1Ñ1,3	36,3Ñ1,2	46,1Ñ1,8	43,2Ñ1,8	45,4Ñ2,1	44,1Ñ2,2
вʝ ʟнʽʷdź dźʃʔ fiʝsÖdź	ð	ð	258,3Ñ11,3	280,1Ñ14,1	176,7Ñ7,5	178,5Ñ8,2	148,6Ñ7,2	152,1Ñ5,5
ʉ lsÖdźdʝ ӽ Ödźdźʷ dź ls.ų.:	1275,1Ñ22,6	1277,8Ñ24,1	1003,0Ñ20,5	990,8Ñ19,2	848,5Ñ17,6	863,5Ñ18,1	787,2Ñ15,6	801,8Ñ14,6
ÖҪls ӽ dźɘÖdźdźʷ	ð	ð	169,5Ñ6,2	164,4Ñ5,9	380,1Ñ8,1	374,2Ñ6,9	430,1Ñ7,6	425,6Ñ7,1
ɘʽнţʃtsųʃdźsҪ, fiʝsdź	ð	ð	834,1Ñ14,3	826,4Ñ13,3	468,4Ñ9,5	489,3Ñ11,2	357,1Ñ8,0	376,2Ñ7,5

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