

*strategy of the Department of accounting and taxation development that aimed at the comprehensive updating of all spheres of its activity, the intensification of the educational process, deepening of research work with students, the growth of qualifications of future accountants and the prestige of the profession are outlined.*

**Keywords:** *department of accounting and taxation, personnel training, teaching staff, teaching and methodical work, research work*

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## **ANALYTICAL EVALUATION OF THE RAPESEED MARKET IN UKRAINE**

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**Abstract.** *In the article is analysed the rapeseed market in Ukraine. Strengths and weaknesses of the rapeseed market are defined as well as its prospects and threats of the external environment. The balance of rapeseed and its vegetable oil were estimated, in particular the internal processing of rape seeds and further exports, and the use of these products as raw materials for biodiesel.*

*Theoretical and methodological basis of the research are the provisions of economic theory, scientific developments of domestic and foreign scientists, legislative and regulatory acts of Ukraine, as well as statistical data.*

**Keywords:** *rapeseed market, rape oil, Ukraine, balance, export, import, biodiesel*

**Relevance of research.** Growth population in the world and limited energy supply put new challenges diversifying agriculture production for food, feed and energy purposes. This situation contributed to the strategic importance of growing oilseeds and their processing in Ukraine, and get world leadership in production and export of sunflower oil. Increased demand for oilseeds and vegetable oil is formed by the world market and a high level of prices that ensures their profitable production.

Conditions in agricultural markets are heavily influenced by macro-economic variables such as global gross domestic product (GDP) growth which supports demand for agricultural commodities and the price of crude oil that determines the price of several inputs into agriculture, and influences the demand for cereals, sugar crops, and vegetable oils through the biofuels market.

**Analysis of recent researches and publications.** The problems of the agrarian sector development, in particular the production of oilseeds and their processing in Ukraine, are devoted many national and foreign scientific works. Particular attention deserve the works of such scientists as: Kaletnik G., Kupchak P. M., Kuts T. V., Maslak O. I., Sabluk P. T., Skudlarski J., Shpychak O. M. etc.

Their work covers the issues of development of the oilseeds and vegetable oils markets in the context of prospects of global competition, trade, food safety, biofuels production, state regulation, logistics, etc. However, the analysis of scientific works on the production of oilseeds and their processing into vegetable oils showed that these areas, despite its significant strategic importance, have a number of problems that impede its growth in Ukraine. Success resolve of existing problems could be realized due to deeper analysis of tendencies and factors that influence on oilseeds and vegetable oils markets in Ukraine and abroad.

**Purpose.** The aim of the article is to evaluate Ukrainian rapeseed market in the context of its use for food, feed and biodiesel purposes at domestic level and worldwide; define rapeseed market strengths and weaknesses.

**Methods.** The theoretical and methodical basis of the research is the provision of economic theory, researches of Ukrainian and foreign scientists, state regulations in Ukraine, the statistics data.

To achieve the goal in this paper were used the following techniques and scientific methods: induction; deduction; statistical observation; methods of causation and abstraction.

**Results.** An important issues at the present stage of the agricultural sector in the market economy is the formation of its strategy on the provision population of food, industry - raw materials, livestock – valuable feeds. Crucial important factor in this is to save soil fertility.

Ukraine has 32.2 mln hectares of arable land, out of this 27 mln hectares are cultivated. Having one of the world's richest black soils, the so called chernozem, in fact around of 25% of the global black soil assets is concentrated in Ukraine. Favourable natural and climatic conditions contribute to the development of agriculture.

The main oil crops in Ukraine are sunflower, soybean and rapeseed. Traditionally, sunflower seeds are used to meet domestic demand in vegetable oils, and are also a strategic product for the export. Soybean and rapeseed are mostly export oriented commodities [3].

Important impetus for the development of the fat-and-oil complex in Ukraine can be called the Law of Ukraine No. 1033-XIV under the name "On rates of export duty on seeds of certain types of oilseeds", adopted in 1999, which provided the introduction of an export duty rate on sunflower seeds for 23%, thereby slightly reducing the rate of export growth. In the future, the export duty was reduced to 16% and since 2007 has decreased annually by 1% to a value of 10%, and today remains at 10 percent [2].

The relevant policy intervention concerning the oilseeds exports was the Law №6776-D that foresees from 1 March 2018 in Ukraine will not reimburse VAT taxation by the rapeseed, soybean and sunflower export, however temporarily exempted from VAT taxation exports of soybeans from 1.09.2018 to 31.12.2021 and rapeseed from 1.01.2020 to 31.2021). The necessary of the regulation is

stressed for development the domestic processing rapeseed and soybean for vegetable oil for further export, thus add surplus to supply chain.

Rapeseed is attractive culture for the market, where the demand is constantly growing. Agrarians are actively responding to all market changes, choosing this commodity as a direction in production activity [1]. Due to the high demand of EU countries, rapeseed has become very interesting for the domestic agricultural market. High interest for rapeseed in many countries caused by the good adaptability of this plant to moderate climate, high productivity of modern varieties, progressive growing technology, growing demand for oils as the main raw material for the production goods of wide consumption, where SWOT analysis of rapeseed production determines its strengths, weaknesses, opportunities and treats (Table 1).

### 1. SWOT analysis of rapeseed market in Ukraine

<p style="text-align: center;"><b><u>Strength</u></b></p> <p>land resources; demand on external markets, partially EU; high technology processes that is used for production; yield increase; high prices</p>	<p style="text-align: center;"><b><u>Weaknesses</u></b></p> <p>- state regulation in the context of export; not sufficiency of working assets in producers;</p>
<p style="text-align: center;"><b><u>Opportunities</u></b></p> <p>increase demand on external markets; production growth; export growth; costs decrease due to implication of new technologies; prices increase</p>	<p style="text-align: center;"><b><u>Threats</u></b></p> <p>price and demand volatilities on the global market; weather conditions.</p>

Demand for rapeseed worldwide was caused mainly by policy requirements on biofuels development in many countries. Since 2005/2006 MY when biofuels programs began to realize, harvested area of Ukrainian rapeseed rapidly growth and in 2017/2018 MY equalled to 792 thousand hectares, which provided 2207 thousand tons of its production (Table 2).

It is worth noting that approximately 90% of rapeseed goes for export, mainly to EU as raw materials for biodiesel production.

Domestic consumption of this commodity remains on the low level and in 2017/2018 it amounted to 9% of total production. Such small part of consumption is determined by low demand on domestic market and vice versa high demand worldwide. Another factor is that sunflower market ensures vegetable oil needs in Ukraine.

However, favourable world prices for oilseeds attract agricultural enterprises to grow rapeseed investing in its production.

Recently yield of this crop considerable increased and in 2017/2018 equalled to 2.79 tonnes per ha that is almost twofold compare to 2005/2006 MY.

## 2. Rapeseed balance sheet for Ukraine, thousand MT\*

Marketing year	2005/2006	2008/2009	2011/2012	2014/2015	2017/2018
Area Harvested (thousand ha)	195	1380	833	880	792
Beginning Stocks	2	2	1	50	21
Production	285	2837	1437	2200	2207
Imports	3	5	3	2	5
Total Supply	290	2880	1441	2252	2233
Exports	187	2637	1208	1963	2000
Crush	94	238	160	270	200
Food Use Dom. Cons.	0	0	0	0	0
Feed Waste Dom. Cons.	4	3	3	1	2
Domestic Consumption	98	241	163	271	202
Ending Stocks	5	2	70	18	31
Total Distribution	290	2880	1441	2252	2233
Yield (tones/ha)	1.46	2.08	1.73	2.5	2.79

\*Source: Own calculation based on USDA-FAS [7].

Evaluate the rapeseed market, it is important to determine the niche of rapeseed for vegetable oil processing on domestic market (Table 3). Domestic consumption of rapeseed totally goes for processing into rape oil. In 2017/2018 MY 200 thousand tons of rapeseed was crushed for rape oil, more than twofold compare to 2005/2006 MY. Produced rape oil mostly goes for export, e.g. in 2017/2018 MY 81% of was exported. Domestic consumption of rape oil is very low, for instance in 2014/2015 MY it was amounted 6% to the total production, in 2017/2018 MY – 20%. Saturation of the domestic market for vegetable oil ensures by means of sunflower and traditionally population consume oil from this commodity.

## 3. Oil rapeseed and rapeseed cake balance sheet for Ukraine, thousand MT\*

Rapeseed oil					
Marketing year	2005/2006	2008/2009	2011/2012	2014/2015	2017/2018
Crush	94	238	160	270	200
Beginning Stocks	3	9	11	39	0
Production	37	94	64	108	80
Imports	0	0	0	1	1
Total Supply	40	103	75	148	81
Exports	22	36	14	112	65
Industrial Dom. Cons.	0	0	0	1	1
Food Use Dom. Cons.	17	60	15	5	15
Domestic Consumption	17	60	15	6	16

\*Source: Own calculation based on USDA-FAS [7].

Partial interest rapeseed and rape oil became as raw material for biofuels production. However, biofuel production in Ukraine doesn't play important role, despite the adoption in 2009 the law on promotion the production and use of biofuels [5]. It was intended to stimulate biofuels production and use. It assumes an increase of alternative fuels share to 20% of total fuel consumption in Ukraine until 2020. Another is National Action Plan on Renewable Energy to 2020 that set the overall objective of the development of this sector in Ukraine to 2020 – contribution renewable energy sources (RES) in gross ending energy consumption that has to be reach to 11% until 2020 in according to commitments of Ukraine as a member of the Energy Community [6].

Analysing the share of RES in gross final energy consumption in Ukraine, by the data of the State Statistics Service of Ukraine, reached to 3.62% in 2013, including biomass - 2.28% that is 63% of all renewable energy sources, or 1.61 mln t of oil equivalent (Table 4). There is could be noted that for the share of biofuels was appeared in the gross final consumption in Ukraine from 2013 according to the data of the State Statistics Service of Ukraine. Thus, in 2013 biofuels in the final energy consumption of biofuels/waste were 4.2% and in next year we can observe decrease of its share.

#### 4. Share of RES and biomass in energy balance in Ukraine\*

Indexes	Years					
	2010	2011	2012	2013	2014	2015
Biofuels / waste in the gross final energy consumption, mln t of oil equivalent	0,98	1,04	1,03	1,12	1,20	1,29
Biofuels / waste in the gross final energy consumption, %	1,40	1,40	1,40	1,6	2,00	2,52
Share of biofuels/wastes in the total energy consumption in agriculture,%	0,84	0,72	0,92	0,72	0,75	0,97
Share of biofuels used in road transport to the total sum biofuels/waste in the gross final consumption,%	-	-	-	4,20	3,41	2,70

\*Source: Own calculation based on State Statistics Service of Ukraine [8].

The development of RES production and consumption are obvious, because every year is increased their number in the energy balance of the country. However, until now the productions of transport fuels not become widespread because of its unprofitable production in compare to petroleum products prices.

**Conclusions and perspectives.** Ukrainian rapeseed market is export oriented, where approximately 90% of rapeseed production goes for export. Tariff rate for the export is 0% that attracts agrarians to entrance into this market. The global demand is constantly growing that ensure agricultural enterprises benefits at the local market. Internal factors of such interest caused by efficiency of its production, moderate climate for plant, progressive technologies by growing, high prices etc. External factors define mostly by the global demand for rapeseed and rape oil for biodiesel production. Tight connection with the global market could bring

positive as well as negative consequences. For instance, changes in EU biofuel policy, where until 2030 production of conventional biofuels should be decreased to 3.8%, could change situation of rapeseed and rape oil markets [4].

However, the rapeseed market is perspective in the short term, given the stable and high price positions of the commodity, the possible growth of its processing in the domestic market. Future researches could be developed in the aspect of efficiency definition of the rapeseed market in Ukraine.

### References

1. Kupchak, P. M. (2014). Perspektyvy rozvytku vyrobnytstva olii v Ukraini / P. M. Kupchak // Ahrosvit, 22, 54–58.
2. Makarchuk, O. H. (2015). Maslenychnyye kultury v kontekste proyzvodstva byotoplyv v Ukrayne y Polshe / O. H. Makarchuk ta in. // Molodyi vchenyi, 11 (26), 80–86.
3. Shpychak, O. M. (2009). Tsina i tsinoutvorennia na ahroprodovolchu produktsiiu: navch. posib. / O. M. Shpychak, O. V. Bondar. – K. : NNTs IAE, 238.
4. Directive (EU) 2015/1513 of the European Parliament and of the Council of 9 September 2015 [Electronic source] / Access: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L1513>
5. Law of Ukraine (2009): “On amendments to some laws of Ukraine to promote the production and use of biofuels” from 21.05.2009 №1391-VI.
6. National Action Plan on Renewable Energy to 2020 [Electronic source] / Access: <http://zakon2.rada.gov.ua/laws/show/902-2014-%D1%80>
7. Statistical data of agricultural products worldwide [Electronic source] / Access: <http://www.fas.usda.gov>.
8. Ukrstat. Statistical data of the State Statistics Service of Ukraine [Electronic source] / Access: <http://www.ukrstat.gov.ua>.

## АНАЛІТИЧНА ОЦІНКА РИНКУ РІПАКА В УКРАЇНІ

О. Г. Макаrchук, Я. Скудларски

**Анотація.** Проаналізовано ринок ріпака в Україні. Наведено сильні і слабкі сторони ринку ріпака, а також визначено перспективи і загрози зовнішнього середовища. Оцінено баланс ріпака та олії на його основі для надання обґрунтованих висновків, зокрема внутрішньої переробки насіння для подальшого експорту, а також використання даних продуктів як сировини для біодизелю.

Теоретичною і методичною основою дослідження є положення економічної теорії, наукові розробки вітчизняних і зарубіжних вчених, законодавчі та нормативні акти України, а також статистичні дані.

**Ключові слова:** ринок ріпака, рапсове масло, Україна, баланс, експорт, імпорт, біодизель

## АНАЛИТИЧЕСКАЯ ОЦЕНКА РЫНКА РАПСА В УКРАИНЕ

О. Г. Макаrchук, Я. Скудларски

**Аннотация.** Проанализирован рынок рапса в Украине. Приведены сильные и слабые стороны рынка рапса, а также определены перспективы

и угрозы внешней среды. Оценен баланс рапса и масла на его основании для предоставления обоснованных выводов, в частности внутренней переработки семян рапса для дальнейшего экспорта, а также использования данных продуктов в качестве сырья для биодизеля.

Теоретической и методической основой исследования являются положения экономической теории, научные разработки отечественных и зарубежных ученых, законодательные и нормативные акты Украины, а также статистические данные.

**Ключевые слова:** рынок рапса, рапсовое масло, Украина, баланс, экспорт, импорт, биодизель

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## РОЗВИТОК РИНКУ СТРАХОВИХ ПОСЛУГ ДЛЯ АГРАРНОГО ВИРОБНИЦТВА В УМОВАХ ВПРОВАДЖЕННЯ ІННОВАЦІЙ

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**Анотація.** Майбутній розвиток України неможливий без вирішення низки питань стосовно підвищення конкурентоспроможності аграрного сектора та забезпечення продовольчої безпеки країни, що неможливо досягти без використання страхування як фактора стабілізації аграрного виробництва. При цьому першочерговим завданням є визначення напрямку розвитку ринку страхових послуг для аграрного виробництва в умовах впровадження інновацій та з урахуванням глобальних змін в агробіоценозах та природно-кліматичних умовах.

Під час написання статті було застосовано такі методи дослідження: абстрактно-логічний та діалектичний (для теоретичних узагальнень та формування висновків); аналізу і синтезу (для деталізації об'єкта дослідження, оцінки динаміки, структури та ефективності змін у страхуванні ризиків у сільськогосподарському виробництві); історичний та логічний (для визначення напрямів подальшого розвитку).

Проведене впродовж 1995–2017 років дослідження свідчить про зростання масштабності впливу ризиків на зменшення обсягів врожаю сільськогосподарських культур, зокрема, ступінь впливу післядії засобів захисту рослин перевищує ступінь негативного впливу природно-кліматичних умов. Як наслідок, вимоги до господарств щодо страхування виробничої діяльності повинні бути різними і обов'язково враховувати технології вирощування сільськогосподарських культур. Унаслідок високих ризиків аграрного виробництва, страхування врожаю потребує підтримки з боку держави. Ефективність державного субсидування страхових платежів