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CURRENT SITUATION AND DEVELOPMENT PROSPECTS OF OIL AND FAT PRODUCTION IN UKRAINE

The article describes the current state, trends and problems of the oil and fat industry enterprises of Ukraine. The author reviews a whole series of problems which relate to the development of these enterprises. It is stressed in the paper, that the optimal use of significant processing capacities and retention of leading status of Ukraine in the oil's export require solutions to improve production efficiency. Achieve this goal is possible by improving organizational and economic conditions and the conducting the modernization of enterprises. The author considers information about the processing of oil crops and production volume of Ukrainian oil and fat enterprises. Determined market share of major oil producers. Identified tendencies of development and capacity utilization, more than half of which is accounted for large industrial groups. Considered the characteristic features in the activity of the enterprises in a highly competitive. Described the state of the material and technical base of the enterprises of oil industry rate of renewal and depreciation of fixed assets.

Keywords: oil and fat industry, production capacity, production volume, production structure.

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СУЧАСНИЙ СТАН ТА ПЕРСПЕКТИВИ РОЗВИТКУ ОЛІЙНО-ЖИРОВОЇ ГАЛУЗІ В УКРАЇНІ

Стаття описує сучасний стан, тенденції та проблеми, які притаманні підприємствам олійно-жирової промисловості України. Автор розглядає цілий ряд проблем, які стосуються розвитку даних підприємств. У статті підкреслюється, що оптимальне використання значних переробних потужностей та утримання лідируючого статусу України по експорту олії потребують вирішення проблеми підвищення ефективності виробництва. Досягнути цього можливо лише

покращенням організаційно-економічних умов та проведенням модернізації підприємств. Автор розглядає відомості про переробку олійних культур та обсягам продукції, яка вироблена олійно-жировими підприємствам України. Визначено долю на ринку провідних виробників олії. Виявлено тенденції розвитку та використання виробничих потужностей, більша половина який припадає на великі промислові групи. Розглянуто характерні особливості в діяльності підприємств в умовах жорсткої конкуренції. Описано стан матеріально-технічної бази підприємств олійно-жирової промисловості, темпи оновлення та знос основних засобів.

Ключові слова: олійно-жирова промисловість, виробнича потужність, обсяг виробництва, структура виробництва.

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СОВРЕМЕННОЕ СОСТОЯНИЕ И ПЕРСПЕКТИВЫ РАЗВИТИЯ МАСЛО-ЖИРОВОЙ ОТРАСЛИ В УКРАИНЕ

Статья описывает современное состояние, тенденций и проблемы, которые присущи предприятиям масло-жировой промышленности Украины. Автор рассматривает целый ряд проблем, которые касаются развития данных предприятий. В статье подчеркивается, что оптимальное использование значительных перерабатывающих мощностей и удержание лидирующего статуса Украины по экспорту масла требуют решения проблемы повышения эффективности производства. Достичь этого возможно только улучшением организационно-экономических условий и проведением модернизации предприятий. Автор рассматривает сведения по переработке масличных культур и объемам произведенной продукции масло-жировыми предприятиями Украины. Определена доля на рынке основных производителей масел. Выявлены тенденции развития и использования производственных мощностей, большая половина которых приходится на крупные промышленные группы. Рассмотрены характерные особенности в деятельности предприятий в условиях жесткой конкуренции. Описано состояние материально-технической базы предприятий масло-жировой промышленности темпы обновления и износ основных средств.

Ключевые слова: масло-жировая промышленность, производственная мощность, объем производства, структура

производства.

Formulation of the problem in general terms. Economically developed formed and essential part of Ukrainian manufacturing industry is oil and fat branch, the modern structure of which is formed by the enterprises (factories, plants, companies) specialized in processing oilseeds (sunflower, rape, soybean) and the production of oil and fat products.

The development of oil and fat industry enterprises and optimal use of significant processing capacities require solving the problem of increasing production efficiency, their stable and maximum load as this will determine the efficiency of using the existing resources and equipment. Therefore there is a need for a thorough analysis and generalization of the current trends of functioning of the enterprises which form the oil and fat industry of Ukraine.

Analysis of recent research and publications. An important contribution to the study of the problems of operation and maintenance of oil and fat enterprises was made by such scholars as L.V. Babenko, I.V. Dragan, A.M. Ivanytska, A.V. Karpenko, M.H. Koretsky, D.I. Nikitchyn, A.A. Poberezhna, E.A. Shcherbak, O.M. Shpychak, V.V. Yurchyshyn and others.

Highlighting previously unsolved aspects of general problem. Nevertheless, the issue of developing, increasing the efficiency of oil and fat industry enterprises operation in the current environment and preventing the loss of Ukraine's leading status in sunflower oil export in the world need further investigation.

Formulation of objectives. The purpose of this article is to analyze the trends, current state, problems and prospects currently inherent to the companies of oil and fat industry.

Basic material. The food industry is one of the most important industries in Ukraine. The state economy and security, standards of living depend on the level of development, stability and functioning oil and fat industry. Oil and fat complex is one of the largest sectors of the food industry in Ukraine. Oil and fat enterprises included in the first five branches of the food industry in terms of production.

Oil and fat industry is the most attractive sector of processing industries of Ukraine. The increasing demand for vegetable oils in the world market encourages active expanding the domestic refining capacity. Over the past 15 years there have been built 27 plants producing oil and oil

and fat products. [2] There was invested more than 1 billion US dollars into the development of enterprises. But it was not always like that. In the mid 90's domestic oil and fat industry was quite fragmented. In this market, there were many plants with obsolete technological equipment. The paradox of that time was that having enough raw materials Ukraine imported oil.

The turning point for the industry was 1999, when export duty was established for exporting sunflower seeds from Ukraine at the rate of 23%. This was a favorable condition for the development of Ukrainian oil and fat industry. During the period of 1998-2012 the capacities for processing oilseed by Ukrainian companies increased from 2.5 million tons to 12.8 million tons and there has been growth of major oil and fat products manufacturing [5].

According to the State Statistics Service about 1200 entities are involved in processing oilseeds in Ukraine. However, about 92% of oil is produced by 26 plants of high capacity (oil extraction with the capacity more than 1000 tons per day), which have 27 extraction lines with the total production capacity of 35535 tons/day and more than 50 companies of low capacity (press ones with production capacity from 50 to 1000 tons per day) with the total production capacity of 6987 tons/day [4].

Table 1

Average annual production capacity of the oilseeds processing enterprises, thousand tons

Groups of plants	2008	2009	2010	2011	2012	2013
Extraction	5541,2	5805,5	7577,9	7603,1	7867,2	11139,5
Pressing	388,6	2426,0	1506,2	1896,2	1881,5	2180,1
Together	5929,8	8231,5	9084,1	9499,3	9757,7	13319,6

As seen from Table 1, according to the results of 2013 the average capacity of the oilseeds processing enterprises in Ukraine amounted to 13319.6 thousand tons, which is 2.25 times more than in 2008.

Thus the average annual production capacity of extraction plants during this period increased by 2.01 times and amounted to 11139.5 thousand tons, while that of pressing plants - by 6.44 times and reached 2180.1 thousand tons. The capacities for processing oilseed by extraction plants were 10021.3 thousand tons, soybean seeds - 1118.3 thousand tons.

Compared to 2012 the average annual production capacity of oilseeds processing enterprises increased by 3561.9 thousand tons. This is due to the fact that in December 2012 two new companies started producing unrefined sunflower oil: Oil Extraction Plant OJSC "Gradoliya" with capacity of 700 tons per day and Oil-Press Factory "Vinnytska Ptahofabryka" - 500 tons per day. And with active development in 2013 of new production facilities at such enterprises as Vinnytsia Oil Extraction Plant, LLC "Oliyar", "Oil Extraction Plant Satellite", "Delta Wilmar" and others.

The key place in the oil and fat industry is occupied by oilseeds processing. The production base of domestic enterprises allows processing different types of oilseeds, but the leader is the sunflower, whose relative share in 2013 descended and was 91.7 % (Table. 2).

Table 2

Structure of processed oilseeds in Ukraine in 2008-2013

Oilseeds type	2008	2012	2013			
	Processing volume, tons	Relative share, %	Processing volume, tons	Relative share, %	Processing volume, tons	Relative share, %
Sunflower	4042602	95,95	8419054	95,45	7612517	91,70
Soybean	95948	2,28	388401	4,40	574474	6,90
Rape	72952	1,73	1411	0,02	115075	1,39
Flax	1718	0,04	7686	0,09	384	0,01
Mustard	-	-	3467	0,04	-	-
Together	4213220	100,00	8820019	100,00	8305450	100,00

Characteristic feature of the activity of oil companies is the high level of competition that is due the dynamic development of the existing large companies that sell products under well-known brands, as well as the creation of new enterprises with foreign investment and significant interests vested.

More than half of the production capacity of oil and fat industry accounts for large industrial groups, whose share in total production is constantly increasing.

The major players in the oil and fat market in Ukraine are "Kernel Group", "Cargill", "Bunge", "Creative Group" "MHP", "Vioil" in the management of which there are large oil extracting plants (Fig. 1).

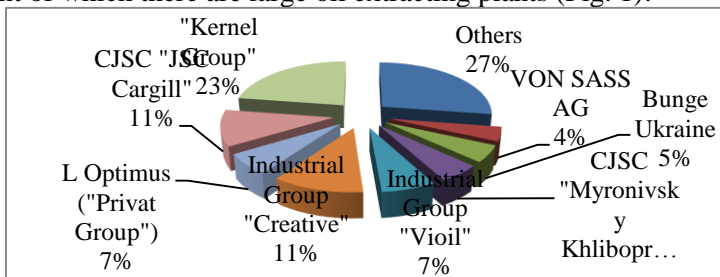


Figure 1. Contribution of major manufacturers of unrefined oil in Ukraine in 2013

These operators have vertically integrated production structure. The system of elevators, their agricultural companies give them competitive advantages due to the guaranteed supply of raw materials and cost savings, primarily related to transportation.

The extension of production capacities led to a shortage of raw materials for processing and incomplete production capacities utilization. According to the data [4] the production capacity utilization of oil and fat enterprises for the period from 2008 till 2013 remained at around 75 % (Fig. 2).

In 2013, the capacities were uploaded to 72.8 %, which is significantly less than in 2012. The capacity loading in processing sunflower seeds was 74.8 %, and in processing soybeans - 72.8 %.

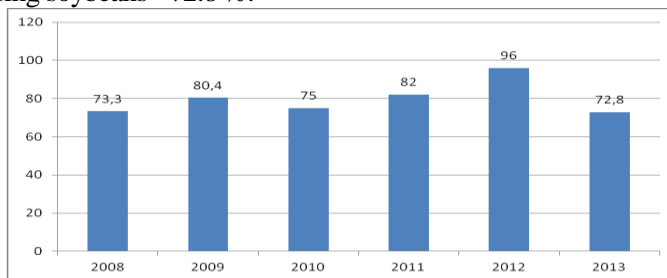


Figure 2. The production capacity utilization of oil and fat enterprises in 2008-2013, %

The sunflower is the engine of the industry. Characteristically, the area under crops of this culture in recent years has increased more than

doubled, while production increased four times, mainly due to increased productivity.

Table 3

Production and export of basic types of oilseeds and oil and fat products [2]

Oilseeds type	2013		2014		2015 (prognosis)	
	Production of, thousand tons	Export, thousand tons	Production of, thousand tons	Exports, thousand tons	Production of, thousand tons	Exports, thousand tons
Sunflower	8366,8	128,0	11050,5	69,8	10000	100
Rape	1204,4	1261,0	2351,7	2242,8	2200	2000
Soybean	2405,2	1323,1	2774,3	1261,5	3500	1700
Total	11976,4	2712,1	16176,5	3574,1	15700	3800

Sunflower oil produced relatively little, because it is still competitive. However, competition for markets intensifies. In general, the world's 230 million hectares sown oilseeds, among them 118 million hectares of soybean, 33 million hectares of rape and 26 million hectares of sunflower. Pay attention to productivity, which we have relatively lower [2].

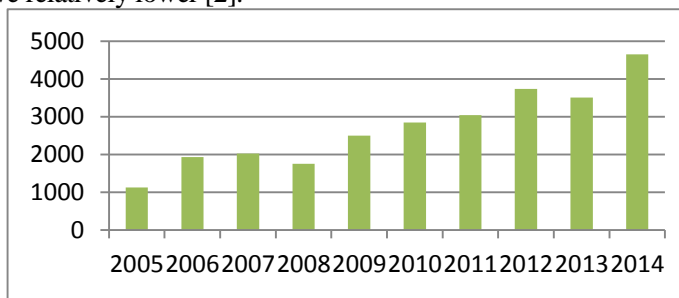


Figure 3. The production of Ukrainian sunflower oil in 2005-2014, thousand tons

Ukraine remains the market leader of the sunflower oil market. 71 million tons of oil all: 44 million tons of palm, 9.6 - soy, 4 – rape are sold in the world. Sunflower in the structure of sales takes the third place. The Ukrainian sunflower oil covers almost 60% in the volume of world exports. Our advantage is that this industry is export-oriented, because people consume only 20% of produced oil in the country.

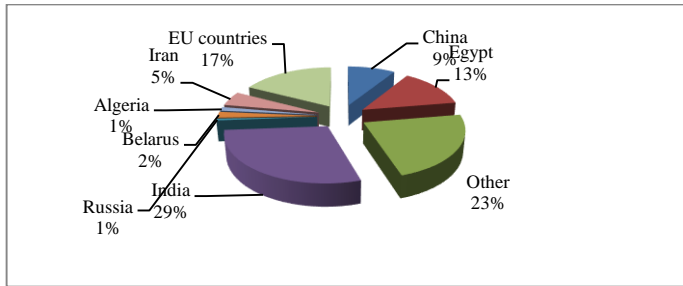


Figure 4. Main importers of Ukrainian sunflower oil in 2013 [2]

The study held shows that despite the development of oil and fat enterprises, the area still has a lot of problems, the main among which are the following.

The condition of material and technical resources of oil and fat industry enterprises is not sufficient enough. A significant number of obsolete, inefficient, worn-out equipment is operated in the area. Slow tempo of updating the active part of fixed assets in recent years have led to the fact that the share of worn equipment that has been in operation for over 20 years in the industry is more than 70-80 %.

According to the statistical bulletin "Balance of fixed assets", in 2011 and 2012 the percentage of fixed assets depreciation in the industry in general was accordingly 50.3 and 49.3% % [1].

Depreciation and decommissioning of fixed assets is ahead of their commissioning, more than a third of the equipment worked more than two depreciation periods, the productivity of such equipment is 2-3 times lower than similar modern equipment of the developed countries.

Outdated and insufficient technical equipment causes the production, such as sunflower oil from 1 ton of raw materials in Ukraine is 20-30 % less than in the developed countries.

The available options for oil production technology are based on a single mechanism, the essence of which is in the processing of refined oil by hydration agent. The hydration lines operating in Ukraine are energy intensive (the power of separator is average 30 kW/h), with expenditure of cooling water and steam.

Higher prices for fuel and energy resources, as well as the operation of most companies on customer-supplied raw materials has led to the fact that energy consumption is the decisive share of their enterprise costs.

One of the ways to increase energy efficiency for oil and fat industry enterprises is the use of industrial waste - sunflower husk. Previously, it was taken out into heaps, part was given to poultry for bedding. Today companies made husk processing an industrial process and each year produce from it about 600-700 thousand tons of pellets, part of which are used for heating the plant, part – is exported, in particular to Poland. Oilseeds processing enterprises are nearly the only ones who save a significant amount of gas, replacing it with alternative fuel - husk. Its main advantage is high calorific value, which is close to coal, and in ash-content is ten times lower, in addition, sulfur emissions during the combustion of sunflower husk is virtually none, making it environmentally friendly fuel [3].

Conclusions. Oil and fat industry of Ukraine is one of the leading ones in agro-industrial complex of the country. The key part of it is held by oilseeds processing and vegetable oils production, which can be considered almost zero waste production. The demand for oil not only as for exported product, but also food and technical product of the domestic market is constantly increasing, which leads to the increase of processing capacity and production volumes. In its turn, despite considerable crop and planting acreage, outrunning processing capacity extension have led to a shortage of raw materials for processing and incomplete production capacities utilization. Fierce competition between processing enterprises, in its turn, is the factor of maintaining the level of purchase cost for oilseeds.

The state of material and technical base of small businesses is unsatisfactory. Most part of their equipment is obsolete unproductive and worn. The productiveness of work on such equipment is 2-3 times lower than that of modern equipment in the developed countries.

Thus, maintaining Ukraine on top of the global oil market requires the oil-processing industry enterprises to increase the quality of oil products and make them compliant with European and international standards. Achieving this can only be reached by improving the organizational and economic conditions for enterprises modernization, which will transfer the enterprises to a higher level of technological structure.

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