

UDC 658.7:665:339.1

JEL Classification L66

Larysa V. Strashynska

## Logistics Support of the Domestic Market of Oil Crop and Oil

*The article examines the main results of logistical support of the domestic market of oilseeds and oil. The dynamics of shipments of oil crops and their processing products through the ports of Ukraine during the 2020/21 marketing year (MY) were analyzed. It was determined that the share of sunflower oil in the structure of the shipment occupies a significant specific weight, in contrast to rapeseed and soybean oil, where the main product of the shipment was rapeseed and soybean. The indicators of transshipment of vegetable oil during 2019–2021 were studied (with a cumulative total by month), which indicate that although the situation improved in 2020 compared to 2019, but in 2021 compared to 2020, transshipment volumes significantly decreased. The indicators of transshipment of vegetable oil by types of stevedoring companies of all forms of ownership were analyzed in terms of shipping directions in 2021 compared to 2020. The most powerful ports of Ukraine were determined based on transshipment results and their specific weight, as well as key shipping directions. The dynamics of transportation of oil-fat complex cargoes by railway transport was analyzed. It was revealed that in the structure of railway transportation of sunflower seeds for the period 2018–2021, priority was given to internal communication, and in the structure of transportation of vegetable oil, the export route traditionally prevailed. The main problems related to the implementation of railway transportation, including those related to the activities of JSC "Ukrzaliznytsia", are highlighted. The measures, the practical implementation of which will allow for an increase in the volume of cargoes transportation of oil and fat industry and processing products, are justified, and will also contribute to the improvement of logistics support in the market of oilseeds and oil in general.*

**Keywords:** market of oil crops and oil, cargo transportation, cargo handling volumes, sea ports, transportation of products, railway transport, indicators of oil transshipment, state stevedoring companies

DOI 10.37659/2663-5070-2022-9-68-76

## Formulation of the problem

The domestic oil and fat industry plays a significant role in the structure of the agricultural and food complex of Ukraine and has significant export potential. Despite the fact that in recent years there has been a partial decrease in the export of both oil crops and their processing products, in the future the prospects for the development of the industry will be related to its export orientation. In this aspect, the role of effective logistical support of the oil and fat industry and solving problems that arise during the transportation of oil crops and finished products is growing. After all, every year the total losses from unsaved cargo transportation of JSC "Ukrzaliznytsia" increase. All of the above requires a thorough analysis of the logistical support of the oil market and justification of measures to improve it.

## Analysis of recent research and publications

A significant number of domestic scientists and economists devoted their scientific works to the study of problems in the market of oilseeds and oil, as well as to the issues of the activities of oil and fat enterprises. In particular, the main trends in the development of oil crops and oil in Ukraine were studied by I. Chekhova, S. Chekhov, O. Maslak, V. Tymchenko, A. Pylypchenko, and N. Zingaiava. A. Pisotskyi and I. Sarafonova devoted their scientific works to the problems of forming a mechanism for regulating the activities of oil and fat processing enterprises. The question of the economic stability of enterprises of the oil and fat complex was reflected in the works of T. Poverlyak and O. Sheremet. O. Lozovsky's scientific work is devoted to the trends in the formation of export potential and the assessment of export opportunities of the oil and fat industry. The foundations of the formation of the concept of the logistics activity of agricultural enterprises were studied in the works of O. Sumets and V. Cihanovska. However, the issues of logistical support for the market of oil crops and oil, evaluation of the advantages and disadvantages of transporting products by various modes of transport and the problems that arise in this case remained outside the attention of researchers, what determines the relevance of the proposed article.

**The purpose of the study:** to analyze the main results of the activity of the ports of Ukraine regarding the transportation and transshipment of products of the oil and fat complex, to evaluate the efficiency of sea and rail transportation, as well as to determine the main problems related to logistics activities in the oil and fat industry, and to substantiate the ways of solving them.

## Materials and methods

The following general scientific methods of research were used when conducting a study of the logistics activities of the enterprises of the oil and fat complex: analysis and synthesis, induction and deduction — when monitoring the operation of the ports of Ukraine, as well as when assessing the dynamics of shipments of oil crops and their processing products; system analysis — when studying the transshipment of vegetable oil by types of stevedoring companies and shipping directions; generalization — when determining the problems of cargo transportation by rail transport and when justifying measures to ensure the preservation of cargo and increase the volume of transportation; argumentation — when substantiating the evidence and persuasiveness of the conclusions. Among the empirical methods of research, the following methods can be distinguished: measurement — when assessing the structure and volumes of railway transportation in relation to the export direction and domestic connections; comparison — when evaluating indicators of transshipment of vegetable oil.

## Presentation of the main results of the study

According to the monitoring data of the ports, from the beginning of the 2020/21 marketing year (MY) to June inclusive (for sunflower and soybean MY: September–August, for rapeseed MY: July–June) until the end of June 2021, the sea ports of Ukraine shipped for export 11,016.3 thousand tons of oil and processed products, including 7384.5 thousand tons of sunflower and processed products, 1,212.8 thousand tons of soybeans and processed products and 2307.0 thousand tons of rapeseed and processed products.

The main volume of shipments of sunflower products was traditionally made up of oil and meal, soybeans, rapeseed. During the II quarter of 2021 (April–June), there were no shipments of sunflower seeds, soybean oil, as well as rapeseed and its processing products. In particular, sunflower seeds were not exported due to the ban introduced at the state level after record exports in the first months of the MY, rapeseed and its processing products were practically absent in the domestic market during the specified period (active rapeseed exports took place in August–November 2020 after a massive influx to the market of the new crop, and by the beginning of January 2021, the main volume of the crop was exported abroad), and the interest of importers in soybeans was absent due to unattractive prices.

Since the beginning of 2020/21 MY, 4,406.4 thousand tons of vegetable oil were transshipped through the ports for export, including sunflower oil — 4,370.4 thousand tons or 99.2 % of the total volume, soybean oil — 33.0 thou-

sand tons (0.7%) and rapeseed oil — 3.0 thousand tons (0.1%). The most active export of oil crops and their processing products since the beginning of the 2020/21 MY was observed in October–November 2020 (Table 1).

Since the beginning of 2020/21 MY, the port of Mykolaiv has been the leader in terms of transshipment of oil and processed products for export (4.5 million tons). The second place is occupied by the port of Chornomorsk (2.27 million tons), the third is the Pivdenny port (1.35 million tons) [4].

Traditionally, the main product transshipment of the oil complex is sunflower oil, the monthly dynamics of which have changed somewhat over the past three seasons. After the record figure in November 2020/21 MY, in other months except December, it was significantly lower than last year. At the same time, September, March, April and June showed an anti-record for the last two seasons.

According to the data of the State Enterprise “Ukrainian Sea Ports Authority” (USPA) based on

**Table 1.** Dynamics of shipments of oil crops and their processing products through the ports of Ukraine since the beginning of 2020/21 MY

| Product name                                            | Volume of shipments, thousand tons              |       |       |       |                                            |
|---------------------------------------------------------|-------------------------------------------------|-------|-------|-------|--------------------------------------------|
|                                                         | from the beginning of the 2020/21 MY till March | April | May   | June  | in total since the beginning of 2020/21 MY |
| Oil crops and processing products — in total            | 9175.0                                          | 654.0 | 688.0 | 499.3 | 11016.3                                    |
| Sunflower and processed products — in total, including: | 5682.0                                          | 560.0 | 662.0 | 480.5 | 7384.5                                     |
| • Sunflower seeds                                       | 216.0                                           | 0.0   | 0.0   | 0.0   | 216.0                                      |
| • Sunflower oil                                         | 3276.0                                          | 337.0 | 467.0 | 290.4 | 4370.4                                     |
| • Sunflower meal                                        | 2192.0                                          | 223.0 | 195.0 | 190.1 | 2800.1                                     |
| Soy and processed products — in total, including:       | 1109.0                                          | 59.0  | 26.0  | 18.8  | 1212.8                                     |
| • Soy                                                   | 1040.0                                          | 56.0  | 16.0  | 18.8  | 1130.8                                     |
| • Soybean oil                                           | 33.0                                            | 0.0   | 0.0   | 0.0   | 33.0                                       |
| • Soybean meal                                          | 38.0                                            | 3.0   | 10.0  | 0.0   | 51.0                                       |
| Rapeseed and processing products — in total, including: | 2334.0                                          | 0.0   | 0.0   | 0.0   | 2334.0                                     |
| • Rapeseed                                              | 2307.0                                          | 0.0   | 0.0   | 0.0   | 2307.0                                     |
| • Rapeseed oil                                          | 3.0                                             | 0.0   | 0.0   | 0.0   | 3.0                                        |
| • Rapeseed meal                                         | 27.0                                            | 0.0   | 0.0   | 0.0   | 27.0                                       |

\* Compiled by the author based on the data of sea ports of Ukraine

the results of January–June 2021 in the total volume of cargo handling in Ukrainian ports, the share of transshipment of vegetable oil was 3.8%, which corresponds to the indicator of 2.536.31 thousand tons. According to the results of the II half-year of 2021 (January–June), in comparison with the same period of 2019 and 2020, a significant monthly overall decrease is observed in volumes of transshipment of vegetable oil by 19.9% and 25.1%, respectively (Table 2).

Compared to 2020, transshipment decreased due to shipments for export (–28.7%). Significant

growth was observed in all other shipping directions: import — by 53.3%, transit — by 79.7%, internal communication — by 36.2% (Table 3).

During January–June 2021, state stevedoring companies transshipped a small amount of vegetable oil — 3.9% of the national transshipment volume. The specific gravity of private stevedores at USPA berths is 57.7% of the volume, and at their own berths — 37.1% (Table 3).

According to USPA data, in 2020 the total volumes of transshipment of vegetable oil by port exceeded the indicators of 2019 only in

**Table 2.** Indicators of transshipment of vegetable oil in 2019–2021 (with cumulative total by months)

| Month of the year   | Transshipment volume, thousand tons |         |         | Change of 2021 to 2020, % | Change of 2021 to 2019, % |
|---------------------|-------------------------------------|---------|---------|---------------------------|---------------------------|
|                     | 2019                                | 2020    | 2021    |                           |                           |
| January             | 447.36                              | 496.7   | 475.27  | -4.3                      | 6.2                       |
| January – February  | 1007.07                             | 1102.72 | 949.88  | -13.9                     | -5.7                      |
| January – March     | 1574.74                             | 1629.09 | 1354.28 | -16.9                     | -14.0                     |
| January – April     | 2116.13                             | 2300.66 | 1696.85 | -26.2                     | -19.8                     |
| January – May       | 2603.21                             | 2803.24 | 2193.08 | -21.8                     | -15.8                     |
| January – June      | 3167.63                             | 3386.81 | 2536.31 | -25.1                     | -19.9                     |
| January – July      | 3586.77                             | 3850.68 | —       | —                         | —                         |
| January – August    | 3933.22                             | 4109.90 | —       | —                         | —                         |
| January – September | 4253.96                             | 4479.49 | —       | —                         | —                         |
| January – October   | 4784.62                             | 5015.53 | —       | —                         | —                         |
| January – November  | 5337.27                             | 5707.10 | —       | —                         | —                         |
| January – December  | 5814.52                             | 6207.89 | —       | —                         | —                         |

\* Compiled by the author based on the data of USPA

**Table 3.** Transshipment of vegetable oil by types of stevedoring companies in terms of shipping directions in 2021 compared to 2020, thousand tons (January–June)

| Direction of transshipment | Sea trade ports, in total |         | State stevedoring companies at USPA berths |       | Private stevedoring companies at the berths of USPA |         | Stevedoring companies at their own berths |        |
|----------------------------|---------------------------|---------|--------------------------------------------|-------|-----------------------------------------------------|---------|-------------------------------------------|--------|
|                            | 2020                      | 2021    | 2020                                       | 2021  | 2020                                                | 2021    | 2020                                      | 2021   |
| In total                   | 3386.81                   | 2536.31 | 138.07                                     | 99.55 | 1973.37                                             | 1463.49 | 1270.32                                   | 939.93 |
| Export                     | 3228.66                   | 2300.98 | 138.07                                     | 99.55 | 1834.38                                             | 1270.81 | 1251.16                                   | 897.28 |
| Imports                    | 93.93                     | 144.00  | —                                          | —     | 93.93                                               | 144.00  | —                                         | —      |
| Transit                    | 8.95                      | 16.08   | —                                          | —     | 8.95                                                | 16.08   | —                                         | —      |
| Internal connection        | 55.27                     | 75.25   | —                                          | —     | 36.11                                               | 32.60   | 19.16                                     | 42.65  |

\* Compiled by the author based on the data of USPA

Odesa port (+6.3 %) due to imports and transit, while exports were not carried out during the six months. With a general decrease in transshipment indicators (–39.8%) due to a reduction in exports, the Pivdennyi port increased import transshipment by 1.5 times and transit transshipment by almost 80%.

According to the results of transshipment of vegetable oil for the first half of 2021, the most powerful with a total share of 94% are the Mykolayiv port, the specific weight of which was 57%, the Pivdennyi port (20%) and Chornomorsk port (17%). In the import direction, the oil was transshipped by the Pivdennyi and Odesa ports. Traditionally, Ukraine imports only tropical oils (palm, coconut) and olive. China, India, the Netherlands and France were the key destinations for shipments of oil and refined products in April-July 2021.

As for the sphere of transportation of goods in the oil and fat industry by rail, in the structure of rail transportation in 2020, the products of the oil and fat complex made up 3 %, including 2 % — sunflower seeds and oilseeds, meal, soy, 1 % — vegetable oil.

After analyzing the dynamics of transportation of oil-fat complex cargoes, except oil, during 2018–2021, it's worth noting that in the last year alone, a decrease of 400 thousand tons was observed, while the dynamics were positive for vegetable oil.

The share of railway transportation in relation to the production volumes of the main crops of the oil and fat complex in 2020 is: meal — 31.4%, rapeseed — 49.8%, soybeans — 26.3%, sunflower seeds — 7.1%. In 2020, by type of cargo of the oil and fat complex, the volume of meal transportation by rail amounted to 2,111 thousand tons (+161 thousand tons or +8% to 2019). In the 4 months of 2021, volumes amounted to 789 thousand tons (–41,000 tons or –5% compared to January-April of the previous period). In 2020, the volume of rapeseed transportation by rail amounted to 1,398,000 tons (–263,000 tons or –16% to 2019). In the 4 months of 2021, volumes amounted to 14 thousand tons (+12 thousand tons or 6 times compared to January-April of the previous period). In 2020, the volume of transportation of sunflower seeds by rail transport amounted to 927 thousand tons (+143 thousand tons or +18% to 2019). In the 4 months of 2021, volumes amounted to 390 thousand tons (+110 thousand tons or +39%

compared to January-April of the previous period). In 2020, the volume of transportation of soybeans by rail transport amounted to 727 thousand tons (–444 thousand tons or –38% to 2019). In the 4 months of 2021, volumes amounted to 194 thousand tons (–30 thousand tons or –13 % compared to January – April of the previous period) [4].

In the structure of railway transportation of sunflower seeds for the period 2018–2021 (January – April), priority was given to domestic connections. At the same time, it is worth noting that in the first 4 months of 2021 (January – April), 53.2 thousand tons were exported, which significantly exceeds the indicators of 2020 (30.0 thousand tons) and 2018 (25.3 thousand tons). For soybeans and meal, the export direction was decisive. The maximum volumes of soybeans were exported in 2019 (948.8 thousand tons), and meal — in 2020 (1,855.6 thousand tons), which slightly exceeded the indicators of the previous period (1,757.8 thousand tons).

In the structure of railway transportation of vegetable oil, the export direction traditionally prevails, which, with the exception of 2018, on average is twice the domestic one, which is due to the export orientation of the market for the main type of oil — sunflower.

In January – April 2021, the total volume of domestic railway transportation of vegetable oil amounted to 289.15 thousand tons and decreased compared to the same period of 2020 (303.92 thousand tons) by 5.1%, as well as by 7.8% compared to 2019 (311.70 thousand tons).

As for export shipments, their volume in January – April 2021 amounted to 582.87 thousand tons, which is 22.8% less than in the same period of 2020 and 13.1% less than in the same period of 2019.

In Ukraine, as one of the leading production countries of vegetable oil, there is an increase in demand both for this product and for certain types of its transportation. Traditionally, the main volumes of sunflower oil are exported by sea. However, when transporting small batches of edible oil to the oil filling terminals of ports, as well as during internal movement, it is impossible to do without rail transportation.

Over the past years, the share of the use of wagons of JSC "Ukrzaliznytsia" in the structure of railway transportation of both vegetable oil and meal, as well as oil raw materials, remains

insignificant. According to the market operators, non-systematic actions of "Ukrzaliznytsia" lead to the fact that the number of private wagon owners — shippers of their own goods — is growing disproportionately fast in the country. "Kernel" enterprise is one of the powerful owners of grain trucks and tanks, which has at least 3.5 thousand of this equipment in stock. In 2019, the PJSC "Polohy Oil Extraction Plant" began purchasing grain wagons to create its own fleet of wagons.

The need for own fleet of wagons arises from the current state of the railway transport industry. In particular, almost 50% of the wagons in the working fleet have already exhausted their normative service life. Here we need to add about 10% of wagons with a previously extended service life, whose life is extended again at the request of their owners (the service life of some of them is extended by 6 years several times, and often the age of the vehicle exceeds the standard period by 1.5–2 times). A negative role is played by the unpredictable tariff policy of "Ukrzaliznytsia", the constant increase in the size of the wagon component in the tariff, which increases transportation costs, and the adoption of other unreasonable decisions also leads to an increase in the costs of shippers. Also, the problem worsened in connection with the reduction of inactive stations.

It is also worth noting that, at least since 2012, there have been problems with the supply of meal for export due to "Ukrzaliznytsia" limiting the supply of grain trucks for its transportation.

Thus, from the point of view of shippers, the need to purchase their own wagons is influenced by:

- market condition (fleet deficit/surplus);
- shortage of locomotives (due to problems with traction rolling stock and infrastructure, the rotation of wagons has increased);
- presence/absence of long-term transportation contracts;
- the forecast of write-off of the fleet.

In addition, experts note the problems of shortage of locomotives and downtime. This also increases the turnaround time of wagons and interferes with the rhythmic expansion of the wagon fleet.

The second main type of cargo exported, in addition to vegetable oil, is oilseed meal, which is transported by grain wagons.

The total fleet of grain carriers in Ukraine is 30,512 cars, of which the fleet of grain carriers owned by JSC "Ukrzaliznytsia" is 11,617 cars or 38% of the total fleet of grain carriers. The park of other owners is 18,891 units or 62%. The fleet of grain trucks belonging to other owners has increased almost 10 times over the past 6 years (since 2014), while the fleet of the carrier JSC "Ukrzaliznytsia" remains practically unchanged.

JSC "Ukrzaliznytsia" notes the following among the main problems of grain cargo transportation by rail:

- surplus of grain trucks on the market;
- the market rate of payment for the use of grain trucks is below the economically reasonable level (the owners actually receive losses from the operation of grain trucks; the payment rate for the use of the own grain truck of the carrier "Ukrzaliznytsia" in May 2021 was set at the level of UAH 150/day without VAT, which is practically level of the marginal, that is, it is equal to the actual level of costs for maintaining the car — UAH 111/day without VAT);
- theft of grain cargoes, decommissioning of wagons (total losses from unsaved cargo transportation in 2020 amounted to UAH 57.0 million (UAH 23.9 million or +70% compared to 2019). Compared to 2019, a two-fold increase is observed losses due to non-preserved grain. In 2020, a total of 461 acts were drawn up for grain shortages with an estimated cost of UAH 9.9 million, compared to 131 acts for UAH 3.3 million as a result of 2019. The total loss from unsaved cargo transportation in the 1st quarter of 2021 amounted to UAH 9.0 million against UAH 11.4 million (UAH 2.4 million or 21% compared to the 1st quarter of 2020). According to the results of the 1st quarter of 2021, losses due to non-preserved grain amounted to UAH 1.5 million (increased by 17.5 times). 117 commercial acts were drawn up for an estimated amount of UAH 3.1 million. against 45 acts for 0.9 million hryvnias. for 3 months of 2020. The estimated cost of the shortage increased by 3 times compared to the same period of the previous year;
- reorientation of grain cargoes to road transport;

- demolition of the infrastructure and rolling stock of "Ukrzaliznytsia";
- low capacity of port railway stations.

In view of the specified situation and with the aim of ensuring the safety of cargo, the following measures are proposed:

- intensify interaction with the National Police (taking into account the provisions of the joint order of the Ministry of Internal Affairs and the Ministry of Infrastructure dated March 2, 2020 No. 204/175);
- repeated application to the Ministry of Infrastructure of Ukraine for consideration of the project on increasing liability for "interference in the operation of railway transport" (increasing administrative liability for theft and damage to elements of railway infrastructure);
- conducting joint operational work of the National Police and the Military Guard against organized criminal groups.

In 2020, JSC "Ukrzaliznytsia" introduced a number of measures to restore the transportation volume of the oil and fat industry products, which include:

- removal of restrictions on the shipment of goods;
- introduction of a market rate review mechanism;
- work with senders/receivers;
- long-term contracts.

It is worth noting that in the 1st quarter of 2021 (January – March) "Ukrzaliznytsia" accelerated by 17.5% (or by 1.5 days) the total turnover of freight cars (the average time spent by a car for one transportation) to 7.1 days. A number of other indicators of cargo operation have also been improved. In particular, the regional speed of the train is accelerated by 1 km/h. and is 37.3 km/h.

In addition, the operation of locomotives has improved — each locomotive travels 470 km per day, which is 8 km more than in the 1st quarter of 2020. At the same time, the productivity of the locomotive is 1.249 thousand ton km gross, while in the 1st quarter of 2020 it was 1.236 thousand tons km gross.

In March 2021, "Ukrzaliznytsia" accelerated the turnover of freight cars by almost 14%, which was 6.9 days against 8 days in March 2020.

In March, it was also possible to reduce the turnover of already loaded cars from 3.3 to 3 days.

Taking into account all of the above, measures to increase the volume of cargo transportation of oil and fat industry, processing products, as well as products of the flour industry should include the following:

- provision of a 20% discount to the railway tariff by the Tariff Commission of "Ukrzaliznytsia" for guaranteed volumes of sunflower seed transportation, taking into account the lower specific weight and, accordingly, less loading compared to grain (seeds — 400–420 kg/m<sup>3</sup>, grain — 680–750 kg/m<sup>3</sup>);
- stimulation of "doubled operations" (unloading of raw materials — loading of finished products), including during export transportation;
- switching volumes from road transport to rail transport over short distances (200–300 km) by unifying tariffs taking into account the revision of the *kl* coefficient (the coefficient that adjusts the cost of transportation depending on the intensity of cargo operations).

The specified measures are possible only after the adoption of relevant decisions by the board of "Ukrzaliznytsia".

## Conclusions

A feature of the functioning of the oil and fat subcomplex in Ukraine is the high level of specialization and concentration of manufacturing enterprises, which creates favorable conditions for the formation of a high level of economic efficiency, as well as its significant export potential in terms of the ability to produce products competitive on the world market by using them as comparative national advantages, as well as new competitive advantages based on the achievements of scientific and technological progress.

According to the concept of free trade, goods or industries characterized by comparative advantages are competitive on the world market. Products of the oil-fat subcomplex form a significant part of Ukrainian exports. The assessment of the structure of shipments of oil crops and products of their processing through the ports of Ukraine during the 2020/2021 MY shows that

the share of sunflower oil compared to sunflower seeds is significantly greater and is 59.2% against 2.9%. However, the reverse trend is observed for soybean and rapeseed oil, the share of which in the structure of shipments is quite insignificant (2.7% and 0.1%, respectively) compared to the export of the seeds of these crops. So, in this case, the main export agro-industrial goods are agricultural raw materials, and not products with a deeper level of processing. As a result, this turns the economy into a commodity appendage of developed countries and leads to the loss of a significant part of added value, which contributes to high levels of unemployment, low wages, loss of deductions to social funds and other negative socio-economic phenomena. Given the above-mentioned problem of diversification of exports in the direction of increasing the share of deep processing products, it becomes of primary importance.

In addition, as the analysis showed, transshipment of vegetable oil by sea trade ports, as well as by stevedoring companies of various forms of ownership during 2020–2021, significantly decreased. The volume of railway transportation of vegetable oil by domestic connections decreased by 5.1% during the specified period, export transportation by 22.8%. This situation was the result of certain problems regarding logistical support, despite the fact that in 2020 “Ukrzaliznytsia” introduced a number of measures to restore the volume of transportation of oil and fat industry products. The measures proposed in the article and their practical implementation will allow to increase the volume of transportation of oil and fat industry cargoes and processing products and will contribute to the improvement of logistics in the market of oilseeds and oil as a whole.

## References:

1. Bochko, O. (2022). Marketynh i lohistyka u stanovlenni tsyfrovoy ekonomiky Ukrainy: Monohrafiia [Marketing and logistics in the formation of the digital economy of Ukraine: Monograph]. O. Zen.
2. Hurch, L. (2020). Lohistyka: Navch. posib. dlia studentiv VNZ [Logistics: A study guide for university students] (2nd ed.). Vyd-vo NTU.
3. Kozar, L. (2016). Lohistyka vantazhnykh perevezen u prykladakh na zaliznychnomu ta avtomobilnomu vydakh transportu: Navch. posib. [Freight transportation logistics in examples of rail and road modes of transport: Study guide]. UkrDUZT.
4. Logistika maslozhirovoj produkczii i sy'r'ya v Ukraine v sentyabre-iyune 2020/2021 MG i yanvare-iyune 2021 g., deyatel'nost' AMPU i novy'e proekty` [Logistics of oil and fat products and raw materials in Ukraine in September-June 2020/2021 MY and January-June 2021, USPA activities and new projects]. (2021). Maslozhirovoj Kompleks [Fat-and-oil Complex], 2(73), 20–32.
5. Lozovskiy, O. (2016). Otsinka ta perspektyvy rozvytku eksportnykh mozhlyvostei oliino-zhyrovoy haluzy Ukrainy [Evaluation and prospects for the development of export opportunities of the oil and fat industry of Ukraine]. Economic Forum, 3, 43–50.
6. Maslichny`j sezon 2020/21 — Ispy`tanie na prochnost` dlya proizvoditelej podsolnechnogo masla Ukrainy [Oilseed season 2020/21 is a strength test for sunflower oil producers in Ukraine]. (2021). Maslozhirovoj Kompleks [Fat-and-oil Complex], 2(73), 7–8.
7. Negoda, A. (2020). Mizhnarodna lohistyka u skhemakh: Navch. posib. [International logistics in schemes: Study guide]. KNU.
8. Orhanizatsiia ta lohistyka perevezen: Pidruchnyk [Organization and logistics of transportation: textbook]. (2021). Oldi Plus.
9. Sumets, O. (2014). Eventualni stsenarii rozvytku APK Ukrainy yak osnova formuvannia kontseptsii lohistychnoi diialnosti silskohospodarskykh pidpriemstv [Possible scenarios of the development of the agricultural industry of Ukraine as a basis for the formation of the concept of the logistics activity of agricultural enterprises]. Visnyk KhNAU [KNAU Bulletin], 3, 207–216.
10. E'konomicheskie pokazateli raboty` maslozhirovogo kompleksa Ukrainy` v sentyabre-iyune 2020/21MG [Economic performance of the oil and fat complex of Ukraine in September-June 2020/21MY]. (2021). Maslozhirovoj Kompleks [Fat-and-oil Complex], 2(73), 9–19.
11. Strashynskiy, V., Sheremet, O., & Strashynska, L. (2023). Current state and prospective development directions of the domestic market of oil and oil and fat products: A qualitative aspect. Scientific works of National University of Food Technologies, 29(1), 67–83. [http://sw.nuft.edu.ua/Archiv/2023/swnuft\\_29\\_1.pdf](http://sw.nuft.edu.ua/Archiv/2023/swnuft_29_1.pdf)

Страшинська Л. В.

### Логістичне забезпечення вітчизняного ринку олійних культур та олії

У статті розглянуто основні результати логістичного забезпечення вітчизняного ринку олійних культур та олії. Проаналізовано динаміку відвантажень олійних культур та продуктів їх переробки через порти України протягом 2020/21 маркетингового року (МР). Визначено, що частка соняшникової олії в структурі відвантаження займає значну питому вагу на відміну від ріпакової та соєвої олії, де основним продуктом відвантаження були ріпак та соя. Досліджено показники перевалки рослинної олії протягом 2019–2021 рр. (з наростаючим підсумком по місяцях), які свідчать про те, що хоча у 2020 р. порівняно з 2019 р. ситуація покращилася, але у 2021 р. порівняно з 2020 р. обсяги перевалки суттєво знизились. Проаналізовано показники перевалки рослинної олії за видами стивідорних компаній всіх форм власності в розрізі напрямків відвантаження у 2021 р. порівняно з 2020 р. Визначено найпотужніші порти України за підсумками перевалки та їх питому вагу, а також ключові напрями відвантажень. Проаналізовано динаміку перевезень вантажів олійно-жирового комплексу залізничним транспортом. Виявлено, що в структурі залізничних перевезень насіння соняшника за період 2018–2021 рр. пріоритетним було внутрішнє сполучення, а в структурі перевезень рослинної олії традиційно переважало експортне спрямування. Виокремлено основні проблеми щодо здійснення залізничних перевезень, в тому числі, пов'язані з діяльністю АТ "Укрзалізниця". Обґрунтовано заходи, практична реалізація яких дозволить забезпечити збільшення обсягів перевезень вантажів олійно-жирової промисловості та продуктів переробки, а також сприятиме покращенню логістичного забезпечення на ринку олійних культур та олії в цілому.

**Ключові слова:** ринок олійних культур та олії, перевезення вантажів, обсяги вантажообробки, морські порти, транспортування продукції, залізничний транспорт, показники перевалки олії, державні стивідорні компанії