INVESTMENT ATTRACTIVENESS OF THE PLANT EXTRACTS MARKET OF UKRAINE

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Stepanova A. A., Pavlenko I. I. Investment Attractiveness of the Plant Extracts Market of Ukraine

Importance of the agro-industrial sector of Ukraine’s economy can hardly be overestimated, because it is one of the largest and most significant pillars of development of the country’s economy, where a significant share of added value is created and the bulk of the food resources is formed. It is also a sector that is export-oriented and determines the country’s position in the international arena. The agro-industrial sector is also one of the most important elements of the economic systems of most market economies in the world. The high quality of national products and its eco-friendliness adequately occupy a niche in the European agricultural markets. However, the «white spots» in the development of certain areas of agro-industrial sector, which are being successfully developed by other countries, are worth noting. The article carries out a study on the investment attractiveness of a special sector in the agro-industrial complex of Ukraine – the market of plant extracts. The prospects and capital intensity of the plant extracts market are highlighted. The basic provisions for the definition and classification of plant extracts and spheres for their application are specified. The market of plant extracts has been allocated, the dynamics of export-import of plant extracts have been analyzed, and the tendencies of this segment of the agricultural sector have been defined. Researches and the global tendencies in development of the plant extracts market are considered, and the basic provisions taking into account the Ukrainian characteristics are formed. Using the strategic management instrumentarium such as SWOT analysis, it has been demonstrated that the plant extracts market from a potential producer’s perspective is promising and allows the development of a variety of business strategies to run own business taking into account available possibilities at the maximum. Directions of further development in terms of building own business in the market of plant extracts as a promising niche in the national economy are suggested. The positions of public policy for plant extract market development are specified.

Keywords: the market’s investment attractiveness, extract, agro-industrial complex, plant extracts market, SWOT market analysis.

DOI: https://doi.org/10.32983/2222-4459-2019-12-171-177

Fig.: 6. Bibl.: 8.

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UDC 330.3; 336.5; 338.4; 339.1

JEL: O13; Q13; Q17

Stepanova A. A., Pavlenko I. I. Инвестиционная привлекательность рынка растительных экстрактов Украины

Важность агропромышленного сектора экономики Украины трудно переоценить, ведь он из крупнейших и наиболее значимых столпов развития экономики страны, где создается значительная доля добавленной стоимости и формируется основная часть продовольственных ресурсов. Кроме того, этот сектор, который является экспортоориентированным, и определяет позиции страны на международной арене. Агропромышленный сектор является также одним из важнейших элементов экономических систем большинства стран мира с рыночной экономикой. Высокое качество отечественной продукции и ее экологичность достойно занимают нишу на европейских рынках агропродукции. Однако стоит отметить «белые пятна» в развитии отдельных направлений агропромышленного сектора, которые успешно развиваются другие страны. В статье проведен анализ инвестиционной привлекательности именно такого сектора агропромышленного комплекса Украины – рынка растительных экстрактов. Освещены перспективность и капиталоемкость рынка. Выведены перспективы и классификация экстрактов растительного происхождения и их сфера использования. Выявлена динамика экспорта-импорта растительных экстрактов. В статье проводится анализ перспективности и капиталоемкости рынка растительных экстрактов и их сфера использования. Изучены перспективность и капиталоемкость рынка растительных экстрактов и их сфера использования.
The scientific potential of a country is based on the current state of its economy and determines competitiveness of business entities. The path of innovative development of Ukraine requires considerable research, searching for new sources of investment and optimizing the structure of investments, primarily, in strategically important areas and sectors. Taking into consideration the fact that Ukraine has great potential in agriculture, there are strong arguments for attracting funds both from Ukrainian and foreign investors, which will boost the competitiveness of business entities and the economy as a whole. Modern realities encourage enterprises and other organizations to find new ways, areas to ensure competitive advantages of their business activities. Indeed, embodying the latest investment projects can help overcome current challenges and gain advantages both in Ukrainian and international markets.

Cultivating plants and using Ukrainian raw materials to produce on their basis food, medical, cosmetic products, nutritional supplements (biologically active additives), etc., is one of the main prerequisites for the healthy functioning of the human body. The growing demand, favorable ecological and economic conditions for plant production positively influence the establishment and development of plant extracts market in Ukraine.

The aim of the article is to describe the investment attractiveness of the Ukrainian market for plant extracts.

Leading international organizations and agricultural holdings are engaged in investigating investment processes in the context of the sector under study [6]. The issues of stimulating investment activity to create a favorable investment climate and achieve the status of investment-attractive countries were considered by a number of scholars, including: G. Alexander, W. Behrens, J. Beily, L. J. Gitman, M. D. Joehnk, P. M. Hawranek, W. Sharp, K. E. Meyer, P. Sabluk, V. Andreychuk, L. Blank, T. Mayorova, A. Peresada, K. Savchuk, N. Khrushch, D. Chervanov, and others.

In the course of the research the following methods were applied: analysis and synthesis (to highlight contradictions in the agricultural sector), analysis of causal relationship (to identify the preconditions which formed in the crop production market), systems, historical and logical analysis (to identify the features of evolution of the relevant industry), graphical method (to illustrate the actual state of the investigated segment), various methods of statistical analysis. The information basis of the work is: monographs and periodical publications – both Ukrainian and foreign, Statistical Yearbooks.

The agricultural sector of Ukraine with its main component – farming – is the basis and backbone of the national economy, creating factors of stability and independence of the country including food, economic, environmental and energy security. It ensures the development of technologically interrelated industries and promotes reliable and efficient functioning of the agricultural and food market of the country. It is this sector of Ukraine that is most attractive in the field of investment. It should be noted that in the majority of developing countries it accounts for about half of the GDP volume, and the employment in the agricultural sector exceeds 40% [1]. Every year, the demand for agricultural products is growing, but not every country is doing everything it can to develop this sphere. In this sense, studying such a fairly narrow segment of the agro-industrial sector as the market for plant extracts is of interest. Currently, this segment is underdeveloped and largely import dependent. However, it has a great potential in the internal market, which, in the future, will provide for its entering international markets and exporting Ukrainian products.

The market for plant extracts is developing depending on the demand of the key industry consumers: manufacturers of nutritional supplements and medicinal plants, food, tobacco products and beer, cosmetic products.
Extract (Lat. Extractum) is a concentrated substance made by extracting a part of a medicinal plant or animal material that is representing mobile, viscous liquid or dry material.

Liquid extracts are liquid concentrated substance extracted of medicinal plant materials (MPM) using ethanol or water in the ratio of 1:1. Pharmaceutical companies prepare liquid extracts by weight (from 1 kg of raw material 1 kg of liquid extract is obtained) [7] (Fig. 1).

**Fig. 1. Classification of plant extracts**

Source: developed on the basis of [7].

Soft extracts are concentrated substance extracted of MPMs that presents viscous material with the moisture content of not more than 25–30%. They cannot be poured out of the container, in an attempt to do so they stretch out in a thread and then merge into a solid mass again [7].

Soft extracts, due to their high viscosity, are used as binding form-building agents in the manufacture of pills. They also may be added as flavors to syrups, oral solutions, elixirs. Soft extracts are used as intermediates for a number of dosage forms (oral solutions, pills) [7].

Dry extracts are concentrated substance extracted of MPMs, which present the bulk material with the moisture content of not more than 5%. They should be considered as the most rational type of extracts. They are easy to use and have the lowest possible weight [7].

Having analyzed government statistics on export/import of plant extracts, we received the data confirming a significant share of imports in this segment (Fig. 2, 3).

The analysis of the size of investments for the past years shows that capital investment in agriculture increased from UAH 11.063 billion in 2010 to UAH 64.243 billion in 2017. Their share in the structure of capital investments increased from 6 to 14% respectively [3].

Taking into consideration the fact that the plant extracts have a wide range of application, the demand for various essential oils in the international market increases by 6–8% annually. It was forecasted that in five years following 2017, the market would grow from USD8 billion to USD12.1 billion (Fig. 4). About 50% of the world’s essential oil consumption accounts for Europe. The second place is taken by North America (26%), the third one – by Asian-Pacific region (24%) [8].

Ukraine, being close to the most receptive market for essential oils and having good conditions for medicinal plants cultivation, can make use this to increase the exports of this product. However, this potential has not been fully realized so far. On the contrary, the results of the first 11 months of 2017 demonstrate a decline in the production of essential oils in our country by almost 30.5%, which happened due to a sharp rise in prices for imported raw materials [3].

However, the production of essential oils can be very beneficial, as evidenced by the example of Brazil, whose annual exports amounts to about 14.4 ths tons, or Germany – 4.26 ths tons [8]. However, when organizing an enterprise specializing in production of essential oils in Ukraine, it is necessary to carefully choose the type of raw material, which will affect the output and cost of the final product. For example, a kilogram of dried lavender contains about two grams of oil, while lemon balm flowers – ten times less. Moreover, various types of raw materials may differ significantly from each other in price.

The approximate distribution of the initial investment can be as follows (Fig. 5).

As for medicinal plants, marketers note that the Ukrainian market for medicinal plants is estimated at UAH500 mln per year, with products worth UAH250 mln being exported mainly to the European Union market [4].

Compared to such giants as India and China, Ukraine’s volumes are negligible since the capacity of the European market is estimated at 600 ths tons per year.

In Ukraine, about 25–30 species of medicinal plants are cultivated in commercial volumes. However, there are more than 6000 species on the territory of our country. Majority of them do not represent a commercial interest, some cultures are being harvested in the volume of 200–300 kg [1]. But there are those the demand for which on the market is measured in tons.

All this and the socio-economic situation are the confirmation of the instability of the market. The massive outflow of the labor force, which can actively be involved in this market segment, lack of leaders and the competition in the industry, as well as prospects for doing business under favorable economic and political conditions allow to speak about investment attractiveness of the plant extracts market and related areas.

We know that the purpose of any business is to maximize profits. Bringing a product/service to market the entrepreneur must be sure that consumers will buy it and it compares favorably with that of competitors. To succeed, it is necessary to have comprehensive information about the economic environment in which the business structure is operating or going to operate. This has contributed to the development of a tool for strategic analysis – SWOT analysis – from the perspective of a po-
import, USD ths

Source: developed on the basis of [3].

Export, USD ths

Source: developed on the basis of [3].

tential manufacturer of plant extracts. However, it is difficult to take into consideration or predict all conditions of the external and internal environment, therefore, this analysis needs further improvement (Fig. 6).

This matrix is combining all information on strengths and weaknesses of a manufacture, its opportunities and threats it can face. This makes it possible to form a certain strategy and direction for the company to achieve the most efficient results and remove potential obstacles.

Thus, SWOT analysis is important for determining competitiveness and investment attractiveness, as well as strategic planning since this method is an effective, intelligible, cheap way to evaluate the position of an enterprise in the market. It allows, through systemizing problematic situations, better understanding the structure of resources; tracking the overall state of the business environment; using new potential opportunities faster than competitors; choosing the best way for development and avoiding threats; making adequate decisions on the development of an enterprise. Today, correct and timely made strategic decisions play a key role in the success of an organization. They have a decisive impact on competitiveness of products, companies, and the market.

**CONCLUSION**

In general, the strategic objective of establishing and developing the plant extracts market is based on providing guaranteed and balanced cultivation, harvesting, processing medicinal plants, and supplying plant raw materials and extracts to various sectors of the national economy: pharmaceutical, baking, dairy, meat industries, industry of fruit and vegetable and fruit preserves, oil and fat production, confectionery, fish processing, perfume and cosmetic production, and other industries. However, in the absence of adequate government support for this kind of farming, agricultural producers are not interested in growing plants and their further processing.
To bring the agricultural sector to a new level and enhance its investment attractiveness, Ukraine will have to carry out long-term reforms in all relevant spheres – from harmonizing the legislation in line with European and international standards and creating transparent mechanisms for its implementation to developing infrastructure and entering new markets. As noted above, the potential of the Ukrainian agricultural sector is huge – the production volume can be three times higher [5]. This potential may remain as an estimated value of the existing capacity and powers of this sector of Ukraine’s economy, but it can be realized as well. Of course, the second option is of priority; however, it is impossible to succeed without an active participation of investors, comprehensive investment proposals. Agriculture needs funding, participating in joint specialized partner programs and involving international financial organizations in its financing.

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| Opportunities (O)                                                                 | Threats (T)                                                                 |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 1. Taking key positions.                                                        | 1. Climate conditions.                                                     |
| 2. Entering new markets.                                                         | 2. Import dependence of this market.                                      |
| 3. Developing new price proposals.                                              | 3. Inadequate development of infrastructure of the branch.                |
| 4. Engaging scientific staff and developing new technologies.                   | 4. Lack of workforce and highly skilled staff.                            |
| 5. Developing and implementing new technologies.                                | 5. Changing market conditions.                                             |
| 6. Increasing efficiency of domestic production due to lower energy and material consumption of products. | 6. Inappropriate conditions for activities of all participants in the process and in the market. |
| 7. Enhancing Ukraine’s reputation in the international market as a country manufacturing environmentally friendly and safe products | 7. Unstable political and economic situation                               |

| Strengths (S)                                                                      | S & O Strategy                                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. Unlimited demand for these products in different sectors of the domestic economy and abroad. | 1. Cultivating the reputation of a reliable manufacturer that sells qualitative products. |
| 2. New underdeveloped segment of agriculture.                                     | 2. Occupying a significant share of the domestic market.                      |
| 3. Lack of competition.                                                            | 3. Using new technologies.                                                    |
| 4. High profitability.                                                             | 4. Ensuring rapid growth and conquering new markets.                          |
| 5. High level of quality control.                                                  | 5. Attracting highly qualified staff to enhances the company’s image         |
| 6. Application of modern technologies.                                              |                                                                               |
| 7. Promotion of ecological safety.                                                 |                                                                               |
| 8. Positive image                                                                  |                                                                               |

| Weaknesses (W)                                                                    | W & O Strategy                                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. Long payback period.                                                           | 1. Forming and introducing modern tools to protect the Ukrainian market and defend interests of domestic producers. |
| 2. High probability of bankruptcy associated with incorrect choice of a product for cultivation and extraction. | 2. Applying new technologies for more efficient operation.                   |
| 3. Low awareness of public and potential customers.                               | 3. Employing marketing tools to improve customer awareness.                  |
| 4. Untimely fulfillment of supply contracts.                                      | 4. Optimizing the organizational structure to reduce organizational costs    |
| 5. Lack of economic incentives at the state level.                                |                                                                               |
| 6. Ineffective incentive system.                                                   |                                                                               |
| 7. High level of quality control.                                                 |                                                                               |

| S & T Strategy                                                                     | W & T Strategy                                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. Diversifying the product range, which reduces the risk of crop failure or changes in market conditions. | 1. State protection and support of the industry, the lack of which can lead to a chaotic development of the business entities engaged in the branch. |
| 2. Reducing production costs due to using new technologies and energy saving.     | 2. Enhancing motivation of employees, the lack of which could lead to a significant reduction in productivity. |
| 3. Developing and implementing government programs and projects for promoting the development of the industry and ensuring its protection | 3. Reducing the expenses since high expenses could cause a significant increase in the cost of goods and result in losing customers, markets, etc. |

Fig. 6. SWOT correlation matrix of the plant extracts market from the prospective of a potential manufacturer

Source: developed by the authors.
Петренко О. І. Морські контейнерні перевезення: світові тенденції

У статті досліджено стан та основні тенденції розвитку морських контейнерних перевезень у світі; проаналізовано динаміку та структуру морських контейнерних перевезень за регіонами світу, найбільшим серед яких є Азія; визначено динаміку контейнерних вантажоточок та відлою 20 міст з найбільшими контейнерно-групообробними портами; визначено роль контейнерних перевезень у розвитку глобальної морської торгівлі. Встановлено, що обробка контейнерних вантажоточок залишається зосередженою у великих портах. Загальна пропускна здатність 20 найбільших портів світу зросла у 2018 р. становила 347,8 млн TEU. Шанхай залишається найпотужнішим контейнерним портом у світі, найбільше зростання спостерігається в Сінгапурі. Лише п'ять портів за межами Азії представлені серед 20 провідних контейнерних портів, а саме: Антверпен, Гамбург, Лос-Анджелес, Лонг-Бич та Роттердам. Очікується подальший розвиток контейнерних перевезень з Китая, що, в свою чергу, може спричинити скорочення обсягів та вантажопотоків на Транстихоокеанському маршруті. У морських контейнерних перевезеннях спостерігаються тенденції до створення альянсів між операторами навігації, лінійними компаніями для спільної експлуатації причалів, що висуває нові вимоги до адаптації та технічної оснащеності портів. Вертикальна інтеграція та подальше розширення транспортних ліній у періодичних операціях посилює конкуренцію між перевізниками. Встановлено, що розвитку морських контейнерних перевезень сприяє зростання економічної активності у світі, реструктуризація ланцюга поставок на користь великих суден і альянсів перевізників, цифровізація та модернізація транспортної інфраструктури, новітнє суднобудування, економічна інтеграція та інформатизація. Ключові слова: морські контейнерні перевезення, світові контейнерні потоки, порт, обработка контейнерів, морський транспорт.

DOI: https://doi.org/10.32983/2222-4459-2019-12-177-184
Рис.: 2. Табл.: 2. Бібл.: 19.
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Петренко О. І. Морські контейнерні перевезення: світові тенденції

The article explores the status and major trends in the development of container shipping traffic in the world; analyzes the dynamics and structure of container shipping traffic by regions of the world, the largest of which is Asia; determines the dynamics of container freight flows, allocating 20 cities with the largest container freight turnover; defines the role of container shipping in the development of global maritime trade. It is determined that the processing of container freight flows remains concentrated in large ports. The total capacity of the world’s 20 largest ports is growing and makes 347,8 million TEU in 2018. Shanghai remains the most powerful container port in the world, the largest growth is observed in Singapore. Only five ports outside Asia are represented among the top 20 container ports, namely Antwerp, Hamburg, Los Angeles, Long Beach and Rotterdam. Further development of container traffic from China is expected, which in turn may lead to a reduction in volumes and freight flows on the Trans-Pacific route. In the container shipping...