

**ECONOMIC EFFICIENCY AND PROSPECTS FOR BUSINESS  
PLANNING OF THE NON-TRADITIONAL POULTRY INDUSTRY –  
OSTRICH FARMING IN THE FARM DEVELOPMENT SYSTEM IN  
AGRICULTURE OF UKRAINE**

**Ya. S. Yanyshyn<sup>1</sup>, H. V. Markiv<sup>2</sup>, R. I. Sodoma<sup>3</sup>, T. O. Shmatkovska<sup>4</sup>**

<sup>1</sup> – Lviv representative office Old Polish University in Kielce  
Lviv, Ukraine, 79037, Lviv, B. Khmelnytskogo st., 212.;  
e-mail: yanyshynaroslav@gmail.com;

<sup>2</sup> – Lviv National Agrarian University  
Lviv, Ukraine 80381, Dublyany Zhovkivsky district, Lviv region,  
Volodymyra Velykogo st., 1; e-mail: g\_mark@ukr.net;

<sup>3</sup> – Lviv National Agrarian University  
Lviv, Ukraine 80381, Dublyany Zhovkivsky district, Lviv region,  
Volodymyra Velykogo st., 1; e-mail: sodomaruslana@gmail.com;

<sup>4</sup> – Lesya Ukrainka Volyn National University  
Lutsk, Ukraine 43025, Lutsk, Vinnichenko st., 28;  
e-mail: shmatkovska2016@gmail.com

**Ключевые слова:** сельское хозяйство, фермы, страусоводство, безотходное производство, продуктивность.

**Аннотация.** Раскрыть перспективы развития страусоводства в Украине. Статья посвящена вопросам производственной ценности, а также перспективам разведения страусов и использования в сельскохозяйственном производстве для различных видов птицефабрик, в частности особое внимание уделяется частным и фермерским хозяйствам Украины.

Установлено и доказано, что в современных условиях развития птицеводства в направлении расширения ассортимента и повышения биологической ценности продукции в Украине весьма актуальным является развитие страусино-го животноводства. В статье обосновывается, что при минимальных затратах можно получить практически безотходное производство с высоким уровнем рентабельности. Обосновано, что спектр использования получаемой продукции нетрадиционной отрасли птицеводства – страусино-го животноводства – обеспечивает полноценную реализацию продукции, которая станет сырьем для многих отраслей хозяйственной деятельности в Украине.

В статье представлены и обоснованы результаты бизнес-планирования такой нетрадиционной отрасли птицеводства, как страусоводство, факторы, которые на нее влияют, и перспективы ее дальнейшего развития в Украине.

**Key words:** agriculture, farms, ostrich breeding, waste-free production, productivity.

**Summary.** *The purpose of the article is to reveal the prospects of ostrich breeding in Ukraine. The issues their production value, and prospects of breeding and use in agricultural production for various forms of poultry farms, in particular, special attention is paid to private and farms in Ukraine.*

*It is established and proved that in modern conditions of development of the poultry industry in the direction of expanding the range and increasing the biological value of products in Ukraine is quite relevant development of ostrich breeding. The paper substantiates that at a minimal cost it is possible to obtain virtually waste-free production with a high level of profitability. It is substantiated that the range of the obtained products use of the non-traditional branch of poultry farming – ostrich breeding provides full realization, which will become the raw material for many branches of economic activity in Ukraine.*

*The article presents and substantiates the results of the business planning of such a non-traditional poultry industry as ostrich breeding and the factors that affect it and the prospects for its further development in Ukraine.*

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**Introduction.** In modern conditions, poultry farming is becoming increasingly popular in animal husbandry. This is quite a lucrative business. Modern poultry farming involves increasing the range of species composition of poultry in order to increase production and expand its range. Quite new for Ukraine branch – ostrich breeding – is also gaining special development. Recently, this type of poultry farming has become increasingly popular in the Ukrainian agricultural sector.

Research by scientists and practitioners is developing in the direction of improving the quality of ostrich products, storage, transportation, improving the conditions and methods of keeping poultry, and more. Significant contributions to the study of this problem have been made by researchers such as V. Beregovyi [1], E. Biletsky [2], G. Paskevich, J. Kirillov [5], Sakhatsky [6], O. Vasylieva [7], Ya. Yanyshyn [8].

However, the ostrich meat market is still in short supply: demand exceeds supply, and to fully meet it, it is necessary to slaughter up to 500-700 thousand ostriches annually, which producers are not yet able to do. The profitability of the industry reaches 200 %, primarily due to the relatively simple technological scheme of poultry farming, a sufficient level of productivity, and high product prices. This necessitates business planning, justification of the optimal size of production and sales, providing members of the farm maximum concentration of efforts to further improve product quality, reduce production and sales costs, stable profits.

Application of the most modern technologies will allow mechanizing production, and also to create such conditions for vital activity of this bird which will help to receive only high-quality products.

**Materials and methods.** The theoretical and methodological basis of the study is the analysis of the work results of leading domestic and foreign scientists on ostrich breeding and possible prospects for development in Ukraine.

To assess the state of the market of ostrich products involved methods of analysis and synthesis, grouping, balance; when establishing promising production volumes – estimated, normative, to substantiate the principles of effective development of the industry – modelling, comparative analysis. In general, in the article, all the materials are processed using a set of research methods.

The data collection process was carried out in Ukraine, with focus on the period 2020.

The research methods used in the analysis process are divided into two categories:

- theoretical methods – consist of studying materials in the field of ostrich breeding, and funding of relevant programs;
- practical methods – consist of data collection and analysis in the financing of relevant programs for breeding ostriches.

The efficiency of ostrich business by farms, personal farms is based on the concentration and intensification of agricultural production.

**Results and discussions.** Breeding African ostriches are one of the most profitable branches of agriculture in Ukraine. And although the demand for products from ostrich farms in our country is not very high, it is growing steadily.

Ostrich business – profitable one-time use of funds. This is due to the following factors: the live weight of healthy individual averages about 160 kilograms [7].

The life expectancy of ostriches can reach 70 years, with the female can reproduce up to 30 years, and males – up to 40 years [1].

In our climate, females lay eggs in the period from March to early October. In the first season, the number of eggs from one bird is 10-30 pieces. In the following – 50-80 pieces.

Ostrich farm is in the TOP-3 of Ukrainian exotic farms, as shown in Figure 1.

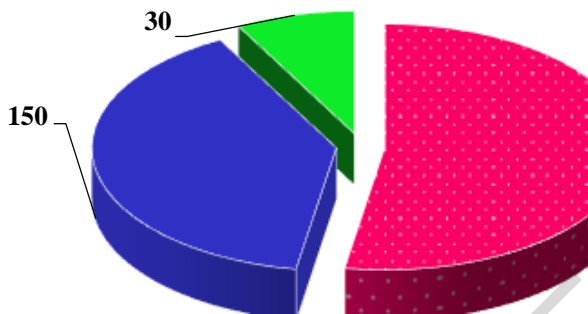


Figure 1 – TOP-3 of Ukrainian exotic farms

*Source: Own design.*

Multi-vector business.

One of the directions of the development of the ostrich economy can be breeding of young and breeding stock for sale. Others produce meat and eggs. The third is to receive additional income from tourism.

Ostrich in the agriculture of our country seems to be a very unusual phenomenon for an ordinary farmer. This fact determines the still very low competition in the ostrich meat market. Many do not believe that this is a very promising company that will provide the farmer not only with a high stable income, but also teach certain skills in breeding ostriches. Therefore, as always, the first will be better and more experienced.

Recently, ostrich breeding has become increasingly popular in Ukraine. New and new ostrich farms are emerging throughout the country.

In recent years, new ostrich farms have been created in Ukraine in modern management conditions, which, in our opinion, is a very positive phenomenon.

More and more people are interested in these unusual birds. However, at the moment it is not always possible to find complete and comprehensive information on all aspects of management. There are often questions about products that can be obtained from ostriches, where they are used, and so on.

Ostrich farming, as a branch of agriculture, began to spread from Africa, as it is the historical homeland of ostriches. The best species for domestication was the African ostrich (*Strutio Camelius*). Birds of this species were the least aggressive and unpretentious to the conditions of detention.

Over the last 10 to 20 years, ostrich farming has spread to Europe and North America. Thus, ostrich farming, as a branch of agriculture, is currently developed in countries such as the United States, Canada, Belgium, Portugal, Italy, Slovenia, Denmark, Poland, and many others [8].

It should be noted the great success of Poland in the field of ostrich breeding. In less than 10 years of the industry's existence in this country, the number of farms specializing in ostrich breeding reaches two hundred.

Ostrich breeding in Ukraine is a waste-free production with the profitability of up to 150 %.

Ostrich farm can earn in 3 areas (Fig. 2):

- Breeding – breeding ostriches for sale, advice on ostrich breeding.
- Commodity farm – breeding ostriches for the production of final products: meat, offal, skin, fat, shells, feathers.
- Tourist destination – conducting excursions with tastings, sale of finished products and souvenirs, a restaurant on the farm.

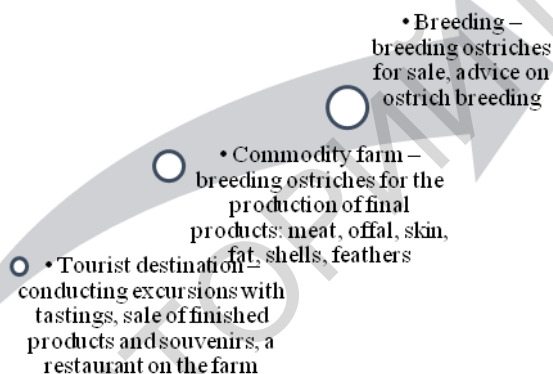


Figure 2 – Components of the formation of profitability of an ostrich farm in Ukraine

Source: Own design.

As a result: 14 products and services that you can earn [7] such as:

- Meat and offal
- Ostrich chicks
- Breeding stock
- Eggs are edible
- Eggs for incubation
- Fat
- Feathers.
- Shell
- Ostrich skin products
- Sausages
- Decorative products
- Excursions
- Consultations for novice farmers.

To ensure future stable product sales, it is best to find potential buyers before an ostrich farm opens. Ukraine is not yet economically ready for mass trade in ostrich products, so the farmer must look for outlets on their own.

To sell poultry, you need a license to sell meat. In the first years of breeding, you can sell ostriches on farms that already have contracts for the sale of meat with restaurants and shops. The wholesale price will be lower, but you will save money on licenses and sales organizations.

The main areas where it is possible to search for buyers:

- health food stores – meat;
- gourmet restaurants – meat, eggs;
- garment factories that sew leather products – leather;
- cosmetic companies – fat;
- companies specializing in interior design and decor items – feathers, shells;
- jewellery manufacturers – feathers;
- dance groups – feathers;
- pharmaceutical companies – fat;
- transplant centres – tendons, cornea;
- tourists – excursions, excursions with tastings, sale of meat, eggs, ostrich sausages, souvenirs from eggs and feathers;
- farmers who want to breed ostriches – chicks, breeding stock, eggs for incubation, advice on breeding ostriches[8].

One of the most lucrative options, which requires additional costs – to open your own retail online and/or offline store, where you will sell finished products.

In the future, the farm should improve and expand the markets for its products by opening its own regional stores, as well as involving intermediary organizations for the sale of products in other areas.

It is planned to sell feather and leather raw materials for export on the basis of offers received from foreign intermediary companies and in accordance with the agreements of intent.

The structure of costs for product promotion will be as follows:

- costs for transportation of products – 35 %;
- costs for loading, unloading – 10 %;
- storage costs – 30 %;
- administrative expenses – 7 %;
- costs for order processing – 9 %;
- costs for product packaging – 9 %.

The calculation of the cost of production based on the two-year production cycle of the project is shown in Table 3.

Table 3 – Calculation of profit and profitability of ostrich breeding in Ukraine

|    |   |                |
|----|---|----------------|
| 1. | Turnover  | 978 245,20UAH  |
| 2. | Sales tax   | 48 912,26 UAH  |
| 3. | Income from sales   | 929 332,94 UAH |
| 4. | Costs   | 856 668,25UAH  |
| 5. | The result of the activity in the first year of activity of the farm or family farm | 72 664,69 UAH  |

Source: Own research.

The high profitability of the farm is obvious, but the percentage of its rate depends on the strategy chosen by the farm. Eventually, it will be higher in the self-reproduction of livestock. It is known that there is an opportunity to achieve one hundred percent return on an ostrich farm, ie a double «rise» of invested funds during one annual production cycle.

A farm can sell its products on the territory of its own and other regions, as well as to clients with whom long-term contracts have been concluded. The volume of products on the market will be determined depending on demand. Schematically, the implementation process is shown in Figure 5.

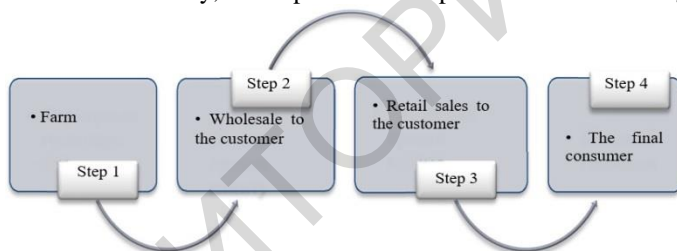


Figure 5 – Schematic representation of the process of selling products kept from ostrich breeding, depending on market demand

Source: Own research and design.

This scheme is focused on substantiating the conditions of the first stage of economic development (improvement of the walking detachment, purchase of uterine ostriches in two families) (6 individuals: 2 males and 4 females) and young ostriches in the amount of 40 heads), their maintenance and production preparation. to the second stage (organization of own incubation production of young birds). The amount of investment in the first stage of the project – 900 thousand UAH.

**Conclusions.** An important strategic issue for the future development of ostrich breeding is to determine the markets for products, as well as production volume, product prices, its cost, the requirements of the processing industry and the possibility of processing ostrich products.

In today's market of demand for ostrich meat, the following areas can be identified:

- restaurants and catering establishments;
- certain categories of the population, the financial level of which allows to consume exotic products;
- processed meat; hot and cold smoking.

An important aspect of the market strategy of the industry is the emphasis on the dietary characteristics of ostrich meat. It is possible to create a circle of consumers and sell meat without intermediaries; sale of whole carcasses in specialized shops, restaurants, to order; selling poultry directly to distributors and brokers working on the development of this specific market.

Under such conditions, the development of the industry in Ukraine can be competitive and promising for agriculture in the country.

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