

R. Ostapenko, Candidate of Economic Sciences (Ph. D.), (*State Biotechnological University, Kharkov*)

V. Lozinskaya, Leading Economist (*JSC «AutoEnterprise», Kharkov*)

PRODUCTION AND SALES OF ORGANIC PRODUCTS IN UKRAINIAN

As organic farming gains more popularity across the world, it is important to discuss the underlying trends of its development in Ukraine, who is an important agricultural producer. Organic farming may have lower environmental pressures—therefore, we seek to identify the major trends in the production and sales of the organic agricultural products in Ukraine. In this study, data on the production structure, costs, and selling prices from Ukrainian enterprises are analyzed. Conventional and organic enterprises are contrasted in order to identify the possibilities for the development of organic agriculture in Ukraine.

In 2007, at the initiative of public organizations of the organic movement, with the support of the Ministry of Agrarian Policy of Ukraine, the certification body, Organic Standard, was established to deal with the review and issuance of licenses to enterprises and farmers who want to produce and sell organic products [1]. This certification body is recognized in the European Union (EU) and Switzerland [2].

Ukrainian organic agricultural area, producers, and sales volume and value constitute a small percentage of Ukraine's total agricultural production, as well as European and global organic agriculture (Table 1). Ukrainian organic agricultural exports include corn, wheat, barley, sunflower, soybeans, spelt, apples/juice, peas, millet, and rapeseed. Top importing countries are The Netherlands, Germany and United Kingdom.

The growth in organic production in Ukraine is one of the highest in the world: The growth rate exceeds the European one by 5.5 times and the global one—by 4.9 times [36]. About 90% of the organic products produced in Ukraine are exported. The most popular organic products exported from Ukraine include corn, wheat, barley, sunflower, soybeans, spelt, apples (juice), peas, millet and rapeseed.

The low penetration of the organic products in the Ukrainian market can be illustrated by a comparison to a developed economy—the United States (US). In Ukraine, the domestic retail sales of organic products total €29 million, which corresponds to €1 per inhabitant. As for the US, the domestic market is €40 billion—corresponding to per capita consumption of €122.

Table 1 – The profitability of organic agricultural enterprises in Ukraine, 2017

Cost per 1 Hectare	Revenue per 1 ha	Profit per 1 Hectare	Profit of Crop Farming per 1 Hectare	Cost Profitability (%)	Cost Profitability of Crop Farming (%)	Agricultural Land Area (ha)	Number of Employees per 1 ha
<176.0	247.6	89.2	93.7	43.5	59.4	2027.9	2.1
176.1–282.0	489.4	228.2	211.3	61.8	128.1	2029.7	2.7
282.1–387.0	525.9	159.0	153.3	38.8	53.8	3206.1	2.6
387.1–598.0	862.1	327.1	308.6	70.2	71.6	3894.1	3.2
>598.1	1270.7	290.7	308.2	40.0	32.2	1823.5	3.9
Average	658.5	218.8	213.3	52.0	57.6	2550.4	2.8

Thus, the Ukrainian organic products market comprises 0.072% of that of the US, and the rate of consumption per capita is 0.82% of that in the US. Cernansky argues that the US, as one of the global leaders in the production of corn, imports substantial quantities of organic corn for the needs of the feed industry and for the production of organic livestock products [3].

The Ukrainian enterprises are engaged in production and supply of different types of organic products. We use the data on the certificates issued by Organic Standard in order to quantify the different activities undertaken by Ukrainian enterprises. The highest number of certificates were issued for organic crop producers (mostly cereal growing). Beekeeping is the second most frequent type of certified production type, with five times fewer certificates issued if compared to crop farming (Figure 1). The least popular farming type is aquaculture. As regards the components of the supply chain, the foreign trade operations appear as the most important activity after production in terms of the number of certificates issued. Retail trade of the organic products was certified for 69 enterprises in Ukraine.

As it was mentioned above, Ukraine’s organic agricultural production is mainly oriented towards foreign markets. The EU is a market with favorable geographical location and developed logistics network. Therefore, it has become the most attractive market for export of Ukraine’s organic producers. In Ukraine, 489 organic producers have implemented standards equivalent to European Commission Regulations No 834/07 and 889/08.

Among the exported products, most of the total sales came from cereals (maize, wheat, barley, millet) and industrial crops (sunflower, soybean, and rapeseed). Table A1 presents detailed data on the export structure. The shares of crops in the national export structure fluctuate from 0.02% for sunflower to 5.5%

for millet. These values are rather low and should increase in case a successful policy for promotion of organic farming is implemented [4].

The organic enterprises show higher levels of revenue per 1 ha of agricultural land (658.5 €/ha against 519.6 €/ha in conventional enterprises). The same applies to the profits: Organic enterprises show the average value of 218.8 €/ha, whereas 148.9 €/ha is observed for conventional enterprises. The profit per hectare fluctuates with the cost level. Again, the influence of the labor intensity is evident.

Note: Profit of Crop Farming refers to the results of the crop farming excluding livestock farming. Cost Profitability = Profit per 1 hectare/Cost per 1 hectare 100%. Source: Calculated by the authors using the State Statistical Reporting of Ukrainian Enterprises.

In the case of Ukraine, we can note the declining returns to labor if comparing different groups of conventional and organic farms once the most optimal scale size is exceeded (Figure 1a).

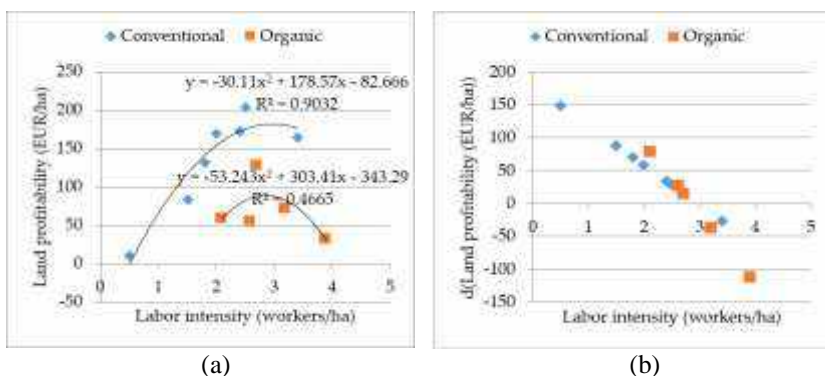


Fig. 1. Labor—profit relationship in Ukrainian agricultural enterprises, 2017. (a) Levels; (b) marginal responsiveness (change in land profitability due to change in labor intensity)

The results suggest that the economies of scale exist in the production of both organic and conventional products. Indeed, the largest farms (in terms of the labor force) show decreasing returns to scale. Nevertheless, another observation is that organic farms operate at an inferior technology compared to conventional farms, in the sense that the same amount of labor can produce a lower profit, in general. A deeper analysis of data in Table 1 suggests that there are two options for organic farms in terms of the optimal scale size as the declining profit per hectare is observed for medium- and high-intensity organic farms. Furthermore,

organic farms are more labor-intensive than conventional farms, which further reduces the profitability.

The organic products market in Ukraine has been growing rapidly. There is a significant discrepancy between conventional and organic enterprises from the viewpoint of the size of the sown area, the level of economic efficiency and the intensity of production. Further development of the organic products market is highly dependent on growth in the income of the domestic population and state support for producers.

The low difference in prices for conventional and organic products (e.g., milk) indicates the absence of developed markets for organic production in Ukraine. In order to further develop organic farming specialized in production of the aforementioned products, the support schemes are required. In particular, the direct sales promotion may help to supply the organic production to the domestic markets, whereas large scales measures are needed to support exports of the organic products.

Information sources:

1. Wikipedia. Organic Farming. Available online: https://en.wikipedia.org/wiki/Organic_farming (accessed on 18 December 2019).

2. Organic Standard—More than 10 Years of Leadership and Reliability. Available online: <https://organicstandard.ua/en> (accessed on 16 December 2019).

3. AgroPortal. Organic Ukraine in Infographic. 13 March 2019. Available online: <https://agroportal.ua/en/publishing/infografika/organicheskaya-ukraina-v-infografike/> (accessed on 29 October 2019).

4. Cernansky, R. We don't Have Enough Organic Farms. Why Not? Available online: <https://www.nationalgeographic.com/environment/future-of-food/organic-farming-crops-consumers/> (accessed on 2 February 2020).

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V. Vovk, dr, adiunkt (Stanisław Staszic State University of Applied Sciences in Piła, Poland)

DIGITALIZATION AS A MEANS OF STRENGTHENING THE COMPETITIVENESS OF MEDICAL INSTITUTIONS

From the perspective of the way services are provided, it is commonly assumed that the health care market is heterogeneous. In this market, health services are offered by both public and private institutions [1]. However, even with this supply, the cost of the health care market is constantly increasing, due to either a lack of funding for public institutions or high prices charged by private providers. The ever-increasing cost of the health care market will