Features of Organic Farming and Its Economic Efficiency

VALENTINA AGAPIEVA
Assoc. Prof. VASKO KOPRIVLENSKI
Agricultural university – Plovdiv
E-mail: agapievavalentina@gmail.com

Особености на биологичното земеделско производство и неговата икономическа ефективност

ВАЛЕНТИНА АГАПИЕВА
Доц. д-р ВАСКО КОПРИВЛЕНСКИ
Аграрен университет – Пловдив
E-mail: agapievavalentina@gmail.com

Селското стопанство е отрасъл, който се характеризира със свои особености, произтичащи от естествените, икономическите, социалните и други условия на производството. Като съставна част на системата на селскостопанското производство биологичното производство на земеделска продукция притежава всички негови характерни черти. Едновременно с това, то се отличава с редица особености, които се обуславят от мястото и ролята му в единния възпроизводствен процес. Тези особености трябва да се имат предвид при анализа на икономическата ефективност на биологичното производство, както и при разкриване на факторите и резервите за нейното повишаване.

Целта на настоящата обзорна статия е да се разгледат специфичните особености на биологичното земеделие, които оказват влияние върху крайните производствени и икономически резултати, както и върху конструирането на методическия инструментариум за анализ и оценка на ефективността на биологичното земеделско производство.

Introduction

Organic agricultural production is subject to certain laws. Participation of live organisms by developing a kind of cycle of reproduction is the cause of the intertwining of natural, biological, agro-technical, organizational and economic processes in organic farming. Production of organic agricultural production has the following characteristics:

Organic Farms are Typically Small in Size

International experience shows that organic farms are generally are smaller in size compared to industrial farms, where production is put on an industrial basis. The small size of organic farms is due to the fact that the practice of organic farming requires specific knowledge, management experience and skills of farmers and farm workers. Studies in the USA show that nationally 56% of start-up farmers start their activity as producers of organic production (Walz, 1996). According to some authors owners of organic farms never became large agricultural producers (Lampkin and Pader, 1994). Despite these results, it was found that many farmers grow crops and prosper carry out business in small or medium-sized farms.

A Specific Feature of Organic Farming is Its High Labor Intensity

It stems from the specifics of the technology of organic production, hampering the mechanization of a number of highly responsible technical operations. Important role in enhancing the economic efficiency of organic production of agricultural products and to ensure normal conditions for reproduction is establishing proportions between the growth rates of labor productivity and wages. Organic production of agricultural products this is particularly important because it is very labor intensive and the cost of paying

occupy a relatively large share of total production costs.

Organic Farms Organize Various Industries and Have a Wide Specialization

Organic farms are characterized by a wide variety of crops that require putting more work: small vegetables, spices and more (Jolly, 1993). Thus achieving one of the main objectives of organic production – ensuring the optimal rotation, preservation and enrichment of soil fertility and break the natural evolution and population diseases and pests. The effect of typical seasonal organic farming is reduced through the integration of crop and livestock production in organic farms. Diversification leads to more uniform loading of the workforce and technology to reduce or prevent organizational and production problems, providing sufficient quantities of products at competitive prices and markets for organic produce biased marked expansion and development.

Organic Farms Incorporate Innovation into Practice

Since these farms are usually not capable of large capital expenditures often use small innovation in production technology. Research on the links between plant and animal show that the cost of keeping the animals halved and realize significant fuel savings and electricity for heating. Therefore, active human impact and characteristics of organic farming should be taken into account in determining the level and analysis of indicators of its economic efficiency.

Materials and Methods

Indicators and Analysis of Efficiency on Farms for Organic Agricultural Production

The main methodological points when measuring economic performance of organic production is limited to commensurability and comparison of the effect of the cost of its receipt. As a basic summary indicator of organic farming is adopted, the profitability of which basically follow the trends exhibited in other indicators. For the analysis and management of the overall production activity of organic farms or any part thereof, using different size and structure indicators, depending on the objectives set by the Manager (Koprivlenski, 1999). The essence of operational management requires the following system of economic indicators to determine the critical level of yield and economic efficiency of organic production of crops and animal groups: production costs, fixed costs, variable costs, average yield, cost per conversion, variable costs per unit of output, a critical level of production, value of total revenue, gross profit of 1 da, cost of production and profit rate. The calculation of the above parameters by using an algorithm for differentiation and assessment of operating costs in organic farm and criteria scheme (Koprivlenski, 2003). Algorithm to differentiate operating costs in organic farm includes four main stages: Development of detailed technical estimates allow for a manifestation of the biological capacity of the culture (group) and the potential of the technology used in their cultivation; Accurate accounting of the amount of production costs elements and technological units; Splitting the cost of the fixed and variable based on carefully selected criteria for evaluation; Determination of the critical level of the average yield and economic thresholds of efficiency of production of the crop (group). Assessment scheme operating costs and differentiation constant (FC) and variable (VC), includes the following major criteria: management capabilities, related to changes in the volume of production; respect to the ownership of the basic means; duration of use; point of committing; behavior in the unit; possibilities for referencing.

Results and Discussion

World Economic Performance of Organic Crop Production

The organic crop production provides any previous culture conditions for production of the next, which is an important detail in the analysis of economic efficiency. One of the main priorities of the sub-sector is aimed at increasing net income through greater efficiency and by minimizing costs. Revenues from retail sales are formed by the passage of organic produce through channels of implementation and intermediaries until it reaches the end user, the price may be sig-

nificantly increased (Cook, 1991; Gibson, 1994; Supermarket Business, 1995; Value Line Publishing, 1996). According to several researchers, labor costs are 15% higher in organic farms (Lockeretz, 1978), although this depends largely on the size of the average crop yields. Other authors argue that labor costs associated with the technique, and management costs are also higher than in conventional farms (Dhillon and Palladino, 1981; Hanson et al., 1990). The final economic performance of organic farms are directly dependent on the level of fixed costs and the size of the variable costs, which requires their accurate reporting and calculation. Primary determinant of the level of crop yields from organic production are the management skills of the farmer. Hence the differences in the level of yields of various organic vegetable (Dabbert and Madden, 1986; Stonehouse, 1991; NRC, 1989). Overall, the average yields of organic production of crop production are lower than those of conventional generation (Crosson and Ekey, 1988; US Congress, 1983, Stanhill, 1990). In a number of publications point out that organic farming yields are higher (Dabbert and Madden, 1986; Stonehouse, 1991; NRC, 1989). Some authors believe that the yields of organic farming are not dissimilar from those of conventional production (Cavigelli and Kois, 1988, Temple et al., 1994). In support of this assertion and points made in the 2009 study of the famous author and consultant on organic farming Atina Diffley (fig. 1). In Canada, studies conducted in 80 certified organic farms in 1990 showed that virtually no proven differences between the obtained average yields on these farms and the farms producing output in industrial processes (Lampkin and Pader, 1994). In the UK, the results are also not clear (Vine and Bateman, 1981), and studies in Germany and Denmark show that the differences with conventional minimal in the cultivation of cereals, field beans and peas. Significant differences are observed in biological farming crops and potatoes (Koelsch, Stoeppler, 1990). It has been found that lower yields are observed during the transition from conventional to organic (Dabben and Madden, 1986; US Congress, 1983; Hanson et al., 1990; Lampkin, 1989) and fluctuate less than yields in the conventional production of plant production (Hanson et al., 1990). Currently, in the literature there is little information about differences in the gross profit of organic and conventional farms, but there is evidence to the effect that organic farming can provide either the same or better financial returns (Lampkin and Pader, 1994). These statements show data from 2009 Atina Diffley (fig. 2). Undoubtedly, the vegetation can be profitable, but clear evidence in this direction are needed for further research management and market conditions, which operates organic farm.

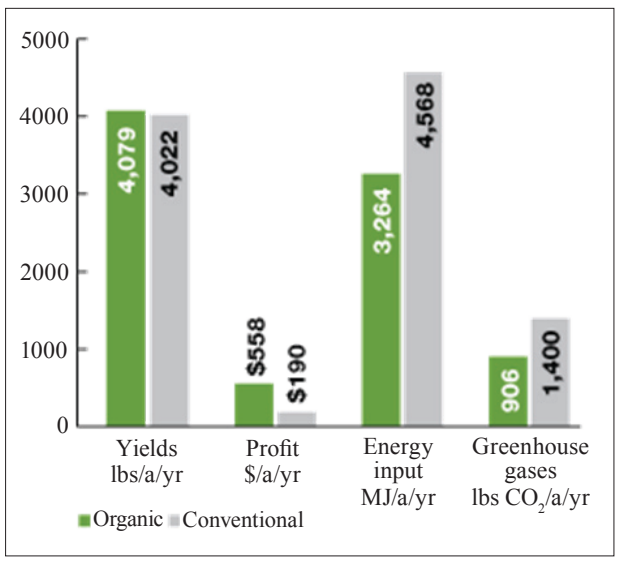

Fig. 1. Yields

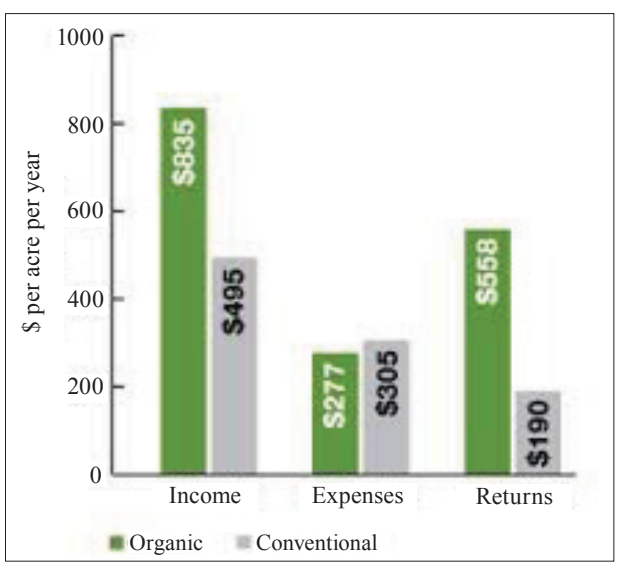

Fig. 2. Return

World Economic Performance of Organic Livestock Production

Organic farmers growing tendency to include in its manufacturing activities and livestock as a source of additional income and increase soil fertility. Successfully integrating livestock with crop and implemented effective balance of inter-branch relations. Organic poultry production is developing very fast in the farms of the United States and is oriented to a specific consumer segment (Walsh, 1996). Industrial poultry production in the United States accounts for 97% of the total poultry, with options for five-six cycles a year. According to some authors in organic production are possible three or four production cycles per year. Therefore, due to the greater efficiency of this process, the overall yield with the conventional procedure may be greater than that of the organic.

Organic beef and pork, unlike poultry in the world is still in its early stages of development. There is still no clear empirical evidence for that pasture rearing calves and pigs leads to higher economic performance. However, trends in organic production of beef and pork increased. It was found that the choice of breed is of utmost importance. Observations in Denmark and England have shown that organic producers prefer specialized breeds (Channel, Island, etc.) Which are offset low productivity with higher fat content (Holdan, 1989). According to research in organic cattle in Europe, productivity of cattle feed in them is about 10% lower than that of traditional. Other data show that total revenue per ha of organic dairy farms are lower, but the total costs are reduced and this leads to a 24% better return on organic farms.

Conclusion

Based on the study can be made the following important conclusions about the economic effectiveness of the application of organic production in agriculture:

• Transformation of conventional agriculture to organic is a key and critical time for each organic farm.

• Stronger cross-links in organic farms provide prevention against possible manufacturing, financial and market risk.

• Competent farm management is one of the most important factors in realizing high economic performance of organic farming.

• The use of raw materials from our own production, with a smaller volume of output is the key to increasing profitability in organic farms.

• The social impact of the development of organic agriculture is expressed both in the environment and in providing greater biodiversity.

• The assessment of the economic efficiency of organic farming and comparative analysis with conventional production, raise significant technical and methodological issues for research in this area.

• Economic performance of organic plant production and livestock are received in the comparable conventional farms. Higher purchase prices of production faster than the decrease in yields and productivity, provide higher economic efficiency of organic farming.

• The rapid development of organic farming in the last 20 years driven by the pressure of market forces, forcing farmers to look for equivalent alternatives to conventional agriculture. Due to increased consumer demand for organic products, the number of organic farms is steadily increasing worldwide.

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V. AGAPIEVA, V. KOPRIVLENSKI
Agricultural university – Plovdiv

(Summary)

Agriculture is an industry that is characterized by its own peculiarities arising from natural, economic, social and other conditions of production. As an integral part of the system of agricultural production, organic production of agricultural products has all its features, as at the same time, it has many features that are determined by the place and its role in the single reproduction process. These features should be taken into account when analyzing the economic efficiency of organic production, as well as disclosure of the factors and reserves for its improvement. The purpose of this review article is to examine the specific characteristics of organic farming, which affect the final production and economic results as well as the construction of methodological tools for analysis and evaluation of the effectiveness of organic farming.

Key words: organic farming, features, efficiency, organic production

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