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ECOLOGICAL AGRICULTURE IN POLAND. PERSPECTIVES AND OBSTACLES

1. Introduction

After the II World War, the development of agricultural methods has been rapid. The population was supposed to grow geometrically and food supply only arithmetically, hence it was necessary to establish new methods for more efficient farming and breeding. People, worried about a possible food crisis, started implementing new scientific solutions, the impact of which had not previously been predicted.

Nowadays, the long-term consequences of high-input, symptom-neutralising or enhancing agricultural practices are so obvious, that they can no longer be ignored. Due to the danger of adverse effects from genetically and chemically modified food, people have become more and more devoted to searching for new alternatives. One of them is ecological agriculture.

2. Definition of ecological agriculture

What does ecological agriculture really mean? Ecological agriculture is referred to as biological, organic, or biodynamic agriculture. In such a system of agriculture there exists a balanced system of vegetable production and animal husbandry within the boundaries of the farming establishment. Hence, all the products are obtained by the use of biological nutrients and minerals from the farm itself and not by the use of artificial fertilisers. Ecological agriculture creates products of the highest quality, and at the same time provides the best protection of the natural environment. On the other hand, it requires a greater expenditure of

work, good organisation and knowledge. Its main goal is to eliminate use of chemicals (fertilisers, pesticides, etc.) from agricultural production.

There are several means by which an ecological farm can grow vegetables and breed animals. Among them are special sowing procedures, "green" fertilisers, organic fertilisers and natural inorganic fertilisers. Mechanical, physical and biological methods for plant protection are also useful, as well as breeding farm animals, which are only fed with fodder of ecological origin and provided with special veterinary care.

Several conditions for ecological farming have been defined [Rundgren, 2002]:

- To produce a sufficient amount of food of high nutritional value.
- To economically exploit natural resources, in order to prevent adverse impacts on the environment.
- To preserve the natural fertility of soil.
- To ensure maximal recycling of nutrients and energy by means of the integration of urbanised areas, agro-eco systems and natural ecosystems.
- To use methods of cultivation in harmony with nature, which is rich in species with a high genetic variability within species.
- To establish animal breeding systems adopted to livestock farming in a natural way and to natural needs of life.
- To provide farmers with adequate social and economic conditions, to establish a good relationship between the farmer and the consumer.

3. Poland and its potential for ecological agriculture in comparison to the EU countries

Ecological agriculture has without any doubt several advantages over conventional farming. This method of land management is environmentally friendly and helps to maintain the biodiversity of species. This aspect is extremely important taking into account the existence of giant companies trying to find new markets for their genetically modified food. Poland is one of these potential markets. In the perspective of Polish accession to the EU, appropriate means should be undertaken to promote ecological agriculture and prevent agribusiness from marketing its products at all costs.

Some questions arise here: What are the possibilities for the development of ecological agriculture in Poland? What is the situation in Poland in comparison to other European countries? Finally, what has to be done in order to increase the number of ecological farms in Poland? I am going to try to answer these questions in this article.

3.1. Agriculture in Poland

Agricultural land constitutes 59 percent of the total area of Poland (18.5 million hectares) and belongs mainly to the private sector (92 percent). This means that individual farming methods affect the state of the environment of more than half the country. There are nearly two million private farms scattered throughout Poland, making any implementation of programmes in rural areas extremely difficult.

What is also quite specific to Poland is the percentage of people working in the agricultural sector. According to the table below, more than a quarter (26.7%) of Poles work in agriculture. The fact that agriculture produces only 6% of GDP confirms the need for structural reform of the Polish countryside.

Table 1. Percentage of people working in the agricultural sector

	Rural area	Agricultural production	Employment in agriculture	% of income spent on food
Poland	59.1	6.0	26.7	35
Hungary	66.5	5.8 (4.9)	8.2 (8.1)	24
Czech Rep.	54.3	2.9	4.1	31
Slovenia	38.7	4.4	6.3	23
Estonia	32.1	8.0	9.2	30
	% of area	% of GDP	% of employed	

Source: *Wprost*, 918, 2000.

There are some crucial problems resulting from the structure of agriculture. These are fragmentation of farms, failure of small farms that cannot be economically efficient, and hidden unemployment. Moreover, there is a wide discrepancy in the level of development between regions, in terms of production intensity, farm surface area, and infrastructure, which is caused mainly by historical factors.

3.2. Ecological agriculture in Poland: the present situation and perspectives for development

Ecological agriculture is a great opportunity to solve the problems mentioned above. Since 1999, Polish farmers, who have decided to convert their farms into ecological ones, can obtain state support in the form of subsidies. According to the new law (the Decree of 22nd May 2002)

subsidies for organic farms and farms converting into organic farms are as follows:

Table 2. Subsidies for organic farms and farms converting into organic farms

No.	Kind of crop	Subvention per ha in Polish Zloties/Euros	
		under conversion*	organic farms*
1	Vegetables	500/125	400/100
2	Arable land	200/50	150/37
3	Orchards	550/137	450/112
4	Berries	550/137	500/125
5	Meadows and pastures	80/20	50/12

* subsidy for farms of surface: up to 50 ha: 100% of the sum for 1 ha, from 50 ha to 100 ha: 50% of the sum for 1 ha, over 100 ha: no subsidy.

Source: Ministry of Agriculture and Rural Development.

These subsidies have significantly increased the number of ecological farms. In 1989 there were only 27 certified organic farms, while in 2001 there were almost two thousand (1,787). Despite the fact that the subsidies have influenced the rise in the number of farms, they have not changed the structure of these farms to a great extent. The most common size of an organic farm is up to 5 ha.

Table 3. Number and size of farms in Poland

Size of farm [ha]	Up to 5	5-10	10-20	20-50	50-100	More than 100	Total number of farms
Number of farms	548	546	374	196	72	51	1,787

Source: *Produkcja rolna...*, 2002.

Though the number of ecological farms in Poland is increasing, we are far behind the EU countries, as well as some accession countries. As the table below shows, the number of organic farms in Poland is very small in comparison with for example Austria or Germany, not to mention Italy. If we take into account the fact that the majority of these farms are less than 10 ha, the situation seems to be even worse. Moreover, the ratio of the number of organic farms to the number of conventional farms is the smallest in Poland.

There are several reasons for the existing situation. Firstly, there is a lack of advisers and extension services. Farmers rarely have any

Table 4. Organic farms in different countries

Country	Area of organic farms [ha]	Area of organic farms [%]	Number of organic farms	Number of organic farms [%]
Austria	285,500	11.3	18,292	9.3
Denmark	174,600	6.51	3,525	5.58
Finland	147,943	6.6	4,983	6.4
Germany	632,165	3.7	14,703	3.28
Greece	31,118	0.6	6,680	0.81
Italy	1,230,000	7.94	56,440	2.44
Sweden	193,611	6.3	3,589	4.01
UK	679,631	3.96	3,981	1.71
Poland	44,886	0.3	1,787	0.07
Czech Republic	218,114	5.09	654	2.37

Source: *Organic Farming in Europe...*, 2001.

knowledge about organic farming and the possibility of converting their farm into an organic one. Secondly, there exist strong opponent lobbies and forces (e.g. chemical industries, some farmers' unions, parties), which act against the propagation and implementation of ecological agriculture. Thirdly, there is a fast growing "grey-market" with dubious labelling and even examples of fraud, which distracts the consumer from "real" ecological products.

What is more, Polish farmers are not always interested in the development of their farms. They count on help from the government and the EU. After accession to the EU, a Polish farmer will receive up to 480 PLN (120 EURO) of subvention per hectare of a livestock farm. For every hectare used for other purposes (e.g. for growing beetroot or potatoes), a farmer will be given about 200 PLN (50 EURO) in subventions. These subventions will, in most cases, serve as a social benefit and this may prevent Polish agriculture from being modernised. What is sad is that Poland may follow the pattern of Greece, which has consumed most of its EU funds instead of using them for modernisation and development. Will the fate of ecological agriculture in Poland be the same as in Greece (only 0.81% of farms are of organic character)? Time will show.

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