

## **ECOLOGICAL AGRICULTURE IN POLAND**

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### **Abstract**

Ecological agriculture is system of rural production based on utilization natural processes, which gets on rural farm. Organic fertilizers for plants are fabricated in farm as well as pasture for animals. It is forbidden in ecological farm to use artificial fertilizers application, chemical pesticides and also all substance of chemical synthesis in pasture and organisms modified genetically. From rendered accessible data by Ministry of Agriculture and Rural Development result, that ecological agriculture spreads out in Poland permanently. Increment of ecological farms number is continuous. On day 31 December 2012, there was control of unit in year 2013 included certifying 26,5 thousand producers of ecological food. In that were 25,9 thousand of ecological producers farming on over 650 thousand hectare. There is growth about 10% of surface and numbers of farms relatively to 2011. In 2012, number of ecological farms amount to 25944. Majority of them was placed on north and northern east of Poland. When it comes to processing plants using ecological products, they were situated in middle and on east of Poland. Surfaces used for cultivation according to regulations about ecological agriculture in 2012 have totaled in amount over 661 687 ha. It is 10% more than in 2011. In period 2003-2011 surface of ecological application has grown 11-fold and it presents about 3.4% whole surface used agricultural in Poland. Average surface of ecological farms surpasses 26 ha presently, when it is much lower for conventional farms because one farm has about 10 ha middling.

**Key words:** *ecological agriculture, certification, ecological product, ecological farm.*

### **Introduction**

Ecological agriculture is characterized varied vegetable production and animal, moderate application of chemicalization of agriculture, it resists on crop rotation, vegetable leavings, manure, crop cultivated between main crops, organic wastes. Ecological agriculture is source many benefit for environment and for people. Fabricating of food of high quality is purpose, at in nature biological balance maintaining it. In order to achieve this purpose it is reduced for minimum influence of person on environment and this system of farming is realized to natural manner and for environment friendly (Golinowska, 2013). Control and certification is trump of ecological food. It gives guarantee for consumer, that products are fabricated ecological way and have high quality, as they have been produced according to regulations process of ecological production strictly defining, they are free from artificial fertilizers and GMO. Consumers have certitude, that they are not duped, when they are buying ecological products. System of control includes all periods i.e. production, storage, processing and sale of ecological food. Each can approach for system of farming to ecological manner, who is interested this system. There is for people, which promise, that they will obey criteria of ecological production. When somebody will approach for this system, it expresses agreement on facilities for control organ carrying inspection all building, as well as for farm or processing plant account books.

### Materials and methods

The main aim of this elaboration is presenting how to look ecological farming in Poland. The data concerned in years 2003 – 2012. This study is an example of desk research. During the research has been used documentary method (Stachak, 1997). The results have been presented in the form of descriptions and figures. The source data are secondary character and come from special bibliography and from the Internet web site of Polish Ministry of Agriculture and Rural Development (MinRol, 2014).

### Results and discussion

In order to approach for ecological agriculture, intention of taking of such activity it has to be reported in chosen unit certifying. After application it is period of permutation from conventional agriculture on ecological system and it is under control. For one-year cultivation control lasts 24 months, and for several years old cultivation- 36 months.

In farms waiting for certificate and with certificate there is every year control of farm. If farm worker gets good results during 2-year conducting of farm under control, he receives certificate. Products can be sell as ecological after his getting. Certificate is document informing, that farm uses method of production with requirements of ecological agriculture consistent. Development of ecological agriculture is dynamic and consumers play important role in development, because of them has followed fast increasing of ecological food. And that motivated owners of big farms to lead it in ecological system. Ecological agriculture is tied with lowest production capacity and procedures related with standards compound and certificates. (Golinowska, 2013).

Union support was main cause of increasing of interest with certificate ecological agriculture and in period of permutation, as well as increasing of surface cultivated with ecological methods. Big growth of number of ecological farm has followed from year 2004, as in 2004 it was 3760 this type of farm, but in 2010 it was already 20582. Surface of rural application has accrued from 82730 in 2004 for 519068 in 2010 (Łuczka-Bakuła, 2013).

The newest data from Ministry of Agriculture and Rural Development has informed, that ecological agriculture spreads out in Poland permanently (number of ecological farm accrues). According to data on day 31 December 2012 , there was 26,5 thousand ecological producers in Poland under control of certifying units and 25,9 thousand farms of them has over 650 thousand hectare. This is 10% more than in 2011. In 2012 there were 25944 ecological farms (MinRol, 2014).

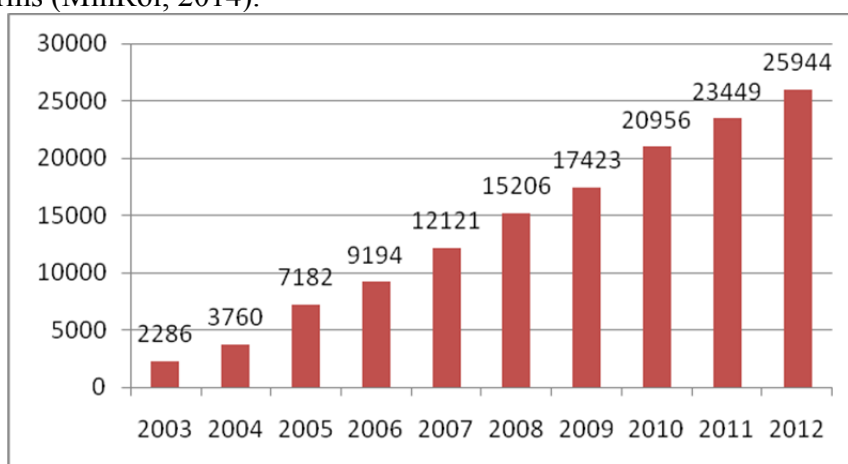


Chart 1. Change in the number of ecological farm in Poland (years 2003-2012).

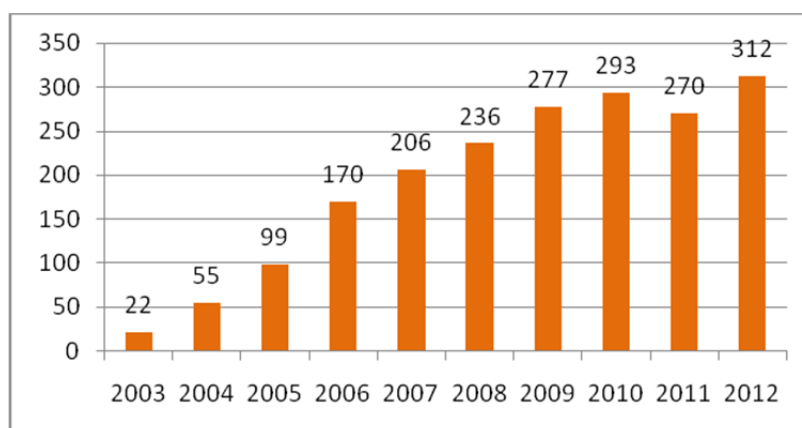


Chart 2. Number of farms that have caused increasing of number of processing plant.

Surface of cultivation according to regulations about ecological agriculture totals over 661687 hectare in 2012 and it is growth about 10% with reference to 2011. It presents 3,4% whole surface use agricultural in Poland. Average surface of ecological farm surpasses about 26 hectare when for conventional farms it is about 10 hectare (MinRol, 2014).

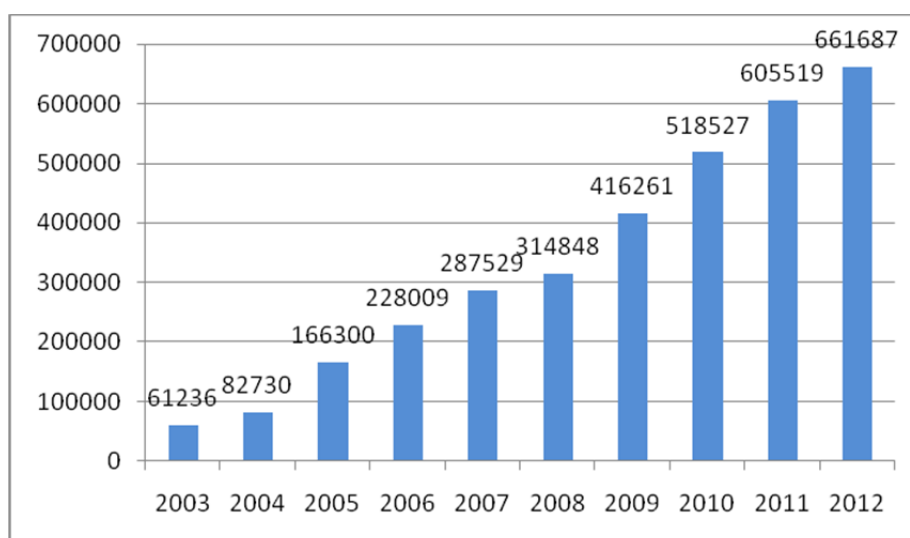


Chart 3. Surface of ecological farms in Poland.

Since 1999 ecological agriculture has been included in surcharges for surface of ecological cultivation, which was paid out from budget of state. When Poland entered for European Union, Poland received help from Union (Rural Development Plan 2004-2006, 2007-2013). Increase of variant and ecological surcharge have caused growth of activity of rural producer (Golinowska, 2013).

Rates of grants from Rural Development Plan 2004-2006 admitted for ecological agriculture on realization of package was differentiated in dependence if farm had certificate of correspondence or not. Rates totaled: the highest for fruit-growing was without certificate 1800 zloty<sup>1</sup>/ hectare and with certificate 1540 zloty/hectare, the lowest for permanent green applications 330 zloty /hectare and with certificate 260 zloty/hectare.

In 2004-2006, it was paid out within Rural Development Plan grants in height 830 million zloty. At that in 2004 it was paid about 35 million zloty and in 2010 it was 100 million zloty,

<sup>1</sup> Polish currency

that means triple increasing. Average rate of grant has grown from 511 zloty in 2004 to 609 zloty in 2006 and 782 zloty in 2010.

According to estimates average value of production of one ecological farm amounts to 37,985 thousand zloty in 2010. Sale of products as ecological, that is after high prices than not ecological products, total in converting into one farm 16,985 thousand zloty, that presents about 45%. So, every other one zloty was gotten from sale of product after long prices merely. The rest part was sold beyond the farm in the price of products conventional (Nowogrodzka et al., 2013).

Along with the increase in the area of farm a share of the leased earth is rising. In the biggest farms it was from 42 to 40%, because the rent of leased field is low (average price: 135-110 zloty/hectare). The share of the leased fields in farm to 30 hectares didn't exceed the 15%.

Edition of work were very high in smallest farms, personal work presented at that 85-87%. Edition of work diminished along with increasing of surface on 100 hectares fields. In very big farm sit was about 11 cases small than in the smallest farms. Alike value of asset diminished on 1 hectare when surface of field accrued. In the smallest farm it is twice small than in the biggest farms. After year 2008 value of asset has grown significantly in all groups of farms, big and small, as manner of pricing of land value has been changed (Nachtman, 2013).

Quality is one of most important feature of stock of land in agriculture, because it effects production capacity of production and it is condition of selection of proper plants and it effects productive results and economic farms. Researched ecological farms owned weak qualities of soils (Komorowska, 2012a).

No doubt, low quality of soil caused limitations in organization of production. Cereals predominated, especially rye, oat, corn mixtures and pasture plants. Participation of other plant was low enough- 8-10% in farms to 50 hectares and 3-6,5% in very big farms, but in 2010 there was some growth of their participation in comparison for worst year: 2009. Small farms had high participation of orchard in rural applications (9-10%), then they presented in big farms from 0,4 for 1,6% (farms 30-50 hectares) only. In very big farms, over 120 hectares, there was groth from 4,5% in 2008 for 7,6% in 2010. Cultivation of vegetable had small meaning in researched farms; in small and middling small farms they presented merely near 4% area of rural application. Pasture plants were important in structure of rural application in all farms, as it boned with animals cultivated in farms (Nachtman, 2013).

Cost have accrued in all researched farms about 9% in 2008 in comparison for 2007 and it was caused increasing of material cost, reward of mercenary work and estimates of expenditures of permanent centers (means) (amortization costs). Cost have gone down in 2009 year in researched farms about 2% on result of material cutting of cost, with production mainly related directly, and cost of rewards of mercenary work (Komorowska, 2012b).

### **Conclusion**

Ecological agriculture spreads out permanently. Big influence has on this interest of consumer, because farm workers will produce what consumers would like to buy. Unfortunately farm workers have problems with selling. Not everyone is interested in higher prices of ecological products. It has to be more expensive, as production has higher cost than conventional production. Although there are more and more consumers interested in that food every year.

Other problems are farm owners interested just in surcharges. They do not care about development of their farm and the market. That is the problem that authorities and European Union have to deal with.

Obtained results during presented research show strong incrementation of number of ecological farm in Poland during the period 2003-2012. Surface used has grown distinctly this

type distinctly farms also. It shows, that market of ecological food dynamically spreads out in Poland and farthest development depends on farm workers, as well as market conditions favorable and farthest supports of institutional national governments and European Union.

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