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DEVELOPMENT OF ORGANIC FARMING IN POLAND – ECONOMIC AND LEGAL ASPECTS

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Abstract

The main aim of the article was to characterize development and legal frameworks of the organic farming in Poland. The study focuses mainly on such aspects as number and structure of organic producers, structure of lands employed in organic production, organization, productivity and profitability of organic farms in comparison to conventional farms and finally legal frameworks of organic agriculture in Poland and UE. In terms of economic aspects, it should be firstly noted that statistical data clearly shows that domestic organic agriculture sector has significantly developed since the accession of Poland to the EU. It should be also highlighted that conventional and organic farms differ in terms of productivity and profitability where all levels are higher for conventional forms. In terms of legal aspects, the study mainly focuses on analysis of complex legal provisions of both community and domestic law. The Council Regulation (EC) No 834/2007 defines basic and fundamental principles of community policy related to organic agriculture when domestic act on organic agriculture of 25th June 2009 constitutes structural system of organic agriculture's control.

Key words**:** *EU, farms, organic food, law, legal analysis, organic production, Poland, regulation*

INTRODUCTION

Adaptation of food productions levels and its development directions to consumer's expectations is one of most important aspects highlighted in modern concepts of agricultural development. Such pressure results from simple fact that desire to constantly improve food quality and tackle agricultural lands' degradation are more commonly recognized as main and strategical tasks of agricultural policy. Furthermore, better food quality is expected by majority of consumers, who expect specific directions of food and agricultural policies. Therefore, current Common Agricultural Policy introduces series of requirements related to agricultural activity, which task is to improve environmental conditions and promote environmentally-friendly technologies.

Organic production in agriculture is definitely fulfilling the idea of sustainable development. Organic methods of agricultural productions are compatible with requirements related to soil, plants and animals. Rejection of chemical production compounds connected with constant control over production processes guarantee that environment is properly protected

As it was indicated in many researches, demand for organic food has been constantly growing and consumers are willing to pay higher prices for organic products than for conventional ones [3]. These trends are stimulating development of organic food market and organic agriculture. Increase of demand for organic products translates to development of organic food market, which is particularly marked in case of highly developed countries [6, 7]. In the EU member states, following significant demand surplus and thanks to subsidies, organic production of food is dynamically developing. Similar trends may be observed in case of Poland, where number of organic farms has increased from 3760 in 2004 to 27093 in 2013.

Such development of organic agriculture wouldn't be possible without constituting proper and precise legal frameworks. The community legislator has faced serious challenge to propose and introduce such legal measures that would effectively and precisely

regulate and shape realties of organic agriculture in terms allowing to achieve expected development and environmental sustainability. Beyond the community law, in order to effectively exercise priorities of organic agriculture it is also necessary to create proper legal measures on national grounds that will guarantee direct enforcement of assumed policy.

MATERIALS AND METHODS

Economic aspects of organic agriculture's development analysis were based on data coming from reports of the Agricultural and Food Quality Inspection (AFQI). AFQI is supreme administrative authority that is responsible for creation and execution of domestic system of control overt organic agriculture. AFQI is legally obliged to systematically issue reports presenting substantial data regarding organic agriculture sector in Poland, including such issues as number and structure of organic farms or organic processors or area and structure of organic agricultural areas [1].

Furthermore, economic analysis of organic agriculture in Poland was also based on statistical data from Farming Accountancy Data Network (Polish FADN) [8]. Given data allows to compare aspects as: economics, organization and financial effectivity of organic and conventional farms.

In terms of legal aspects, the study was based on the analysis of legal frameworks shaping organic agriculture in both Poland and EU. The author, by the analysis of community and domestic law, intends to present how on the polish example organic agriculture is controlled and managed.

RESULTS AND DISCUSSIONS

Economic aspects of organic farming's development in Poland

1. Number and structure of organic producers

Development of organic agriculture in Poland before the accession had been relatively slow. Such weak trend had been shaped mainly by lack of financial aid, limited possibility to obtain higher sale prices and weak administration of organic products market. Faster development rate of organic production was initiated in years 1998-1999 when subsidies for farm control costs and direct payments to areas were introduced and first complex domestic legal frameworks of organic agriculture came into force [4]. However, particularly strong dynamic of organic agriculture may be observed only after 2004, i.e. since the accession of Poland into EU (Table 1). Both system of subsidies and size of common market caused that total number of organic producers in 2004-2013 increased from 3,760 to 27,093, i.e. sevenfold. Such trends and changes resulted mainly from growth of agricultural organic producers' number and since 2006 the trend has started to be more transparently linked also to other groups of organic producers, mainly connected to food processing (Table 2). According to data from 2012 (Table 2), the biggest business representation of organic producers was observed in fruit and vegetable processing (31.6%), cereal (23.6%) and other food and agricultural products (24.8%). Furthermore, as it is indicated in the Table 2, organic production is more often exercised by enterprises dealing with meat processing (7%), milk and cheese processing (4,7%) and plant and animal fat production (2,4%).

Table 1. Number of organic producers in Poland in 2004-2013

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total number of organic producers	3,760	7,182	9,194	12,121	15,206	17,423	20,956	23,847	26,376	27,093
In the agricultural production	3,760	7,182	9,187	11,870	14,896	17,091	20,582	23,449	25,944	26,598
Other producers	0	0	7	251	310	332	374	398	432	495

Source: own elaboration based on AFQI [1].

Table 2. The structure of organic processing companies in Poland in 2007-2012 (%)

Years	Fruit and vegetables processing	Processing of other agri-food products	Processing of grain mill products	Meat processing	Milk processing and cheese making	Plant and animal fats processing	Other
2007	28.0	16.0	19.0	7.0	2.0	2.0	26.0
2008	25.0	27.0	13.0	5.0	2.0	2.0	26.0
2009	33.0	24.3	21.9	6.6	2.4	2.4	9.4
2010	32.4	32.1	19.4	5.1	2.7	1.3	7.0
2011	32.0	25.8	23.0	6.5	3.0	1.8	7.9
2012	31.6	24.8	23.6	7.0	4.7	2.4	5.9

Source: own elaboration based on AFQI [1].

2. Areal structure of organic farms and area and structure of organically used land

Following significant growth of organic producer's number, also total area of organically used land experienced similar increase (Table 3). Total area of such lands increased in years 2004-2013 from 104.9 thousands ha to 669.9 thousands ha, i.e. over six fold. However, it may be concurrently observed that currently the growth dynamic of organic land area is fading. The majority of analyzed growth had been observed in three first years after the accession. Yearly growth for 2005 is estimated to 58% and in 2006 to 38%. At the same time, yearly growth observed for year 2012 was estimated only to 1.25% and such trend resulted mainly from fading number of lands being converted for need of organic production.

It should be also noted that increase of organic land area has been also translated to specific changes in structure of farms. As the data from Table 4 indicates, until 2008 the share of the smallest organic farms (to 5 ha) was growing in most dynamic pattern (from 19% to 36%), while the share of the biggest organic farms was decreasing (from 26% to 18% for farms between 10 to 20 ha and from 18% to 13% for farms between 20 and 50 ha). After 2008 trends in structure of organic farms were different as the share of the biggest farms experienced most transparent growth while the number of the smallest one was fading. Growth of organic farm's average area (in years 2008-2013 from 21.1 ha to 25.5%) should be considered as direct consequence of such direction of observed changes. It should be noted that average area of organic farm in Poland is clearly bigger than average area of conventional farm.

Table 3. The area of organic land in Poland in 2004-2013 [thous. ha]

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
The area of organic land in conversion	58.1	127.6	152.9	150.3	136.1	163.4	210.9	229.4	204.5	176.9
The area of organic farmland after the conversion period	46.8	38.6	75.1	137.1	178.7	252.7	308.0	376.0	457.0	492.9
The total area of organic agricultural land	104.9	166.3	228.0	287.5	314.9	416.2	519.0	605.5	661.6	669.9

Source: own elaboration based on AFQI [1].

Table 4. The structure and size of organic farms in Poland in 2004-2012

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
up to 5 ha	19.0	26.0	26.0	28.0	36.5	33.6	23.7	21.1	19.3
5-10 ha	25.0	24.0	26.0	25.0	23.5	22.2	24.3	24.2	24.1
10-20 ha	26.0	24.0	21.0	19.0	18.0	19.3	22.0	23.8	25.5
20-50 ha	18.0	16.0	15.0	15.0	13.0	14.1	16.5	17.1	17.4
50-100 ha	7.0	6.0	8.0	8.0	6.0	7.2	9.0	9.2	9.1
> 100 ha	5.0	4.0	4.0	5.0	3.0	3.7	4.5	4.7	4.6
average area of farms (ha)	27.9	23.2	24.8	24.2	21.1	24.4	25.2	25.8	25.5

Source: own elaboration based on AFQI [1].

Changes in number and structure of organic farms in Poland were also connected to alterations of organically used lands' structure. As the data from Table 4 indicates, in period of years 2009-2012 the areal shares of pasture and meadow (from 45.1% to 35.35), cereal (from 21.2% to 18.6%) and fruits and berries (from 16.1% to 8.9%) decreased while the share of land dedicated to feed plants experienced significant growth (from 13% to 33.7%).

Changes in number and structure of organic farms in Poland were also connected to alterations of organically used lands' structure. As the data from Table 5 indicates, in period of years 2009-2012 the areal shares of pasture and meadow (from 45.1% to 35.35), cereal (from 21.2% to 18.6%) and fruits and berries (from 16.1% to 8.9%) decreased while the share of land dedicated to feed plants experienced significant growth (from 13% to 33.7%).

However, it should be also highlighted that grassland still represents important areal share in organic farmlands. Share of such areas is almost two time bigger than average domestic values. Takin into consideration values related to cereals, it should be also noted that its share is almost three times lower than average value and results mainly from weak yields and poor quality cause by ineffective plant protective measures. Similar remarks can be addressed to fruit, vegetable and berries production where its relatively low share results mainly from poor farm specialized equipment and very time-consuming production Furthermore, accessibility to plant health products in Poland is relatively limited and such fact impede possibility to lower damages caused by pests and diseases [5].

Table 5. Organic land use structure [%] in Poland in 2009-2012

Participation in the agricultural area [%]	2009	2010	2011	2012
meadows and pastures	46.1	42.3	38.2	35.3
feed plants	13.0	20.6	28.5	33.7
cereals	21.2	19.6	18.1	18.6
fruit and berry crops	16.1	13.3	11.9	8.9
vegetables	0.9	1.0	1.2	1.4
other	2.7	3.2	2.1	2.1

Source: own elaboration based on AFQI [1].

3. Economics, organization and profitability of organic farms in Poland

Table 6 present statistical data regarding basic determinants of economics, organization and profitability of conventional and organic farms in Poland coming from data gathered by Polish FADN in 2012 [8]. Considering all gathered data, firstly it may be observed that average organic farm had less agricultural area than in case of average conventional entity (39.2 and 48.4 ha). Thus, it may be assumed that average level of production of organic farms was lower than in case of conventional.

Main consequence of such differences may be observed in case of revenues from plant production per area. In case of conventional farms, revenues from 1 ha of plant production were estimated to 4,379 PLN, while at the same time, revenues of organic farms from 1 ha of plant production were 58% lower and were 1,834 PLN.

Significant differences between conventional

and organic farms can be also noted in the case of animal production, density and units. Taking into consideration each of above aspects, it is apparent that conventional farms are dominating. Generally, it can be stated that these brunch of agricultural production has relatively weaker importance for organic farms, as it can be supported for instance by law stocking density (0.5 LU/ha)

Table 6. Indicators of organization, productivity and profitability of organic and conventional farms by 2012.

Specification	Farms	
	conven-tional	Organic
Agricultural area (ha)	48.4	39.2
Plant production (PLN/ha):	4,379.4	1,834.4
Stocking density (LU/ha)	1.6	0.5
Animals total (units),	31.8	14.7
Milk yield of cows (litres)	6,052	3,394
Animal production (PLN/1LU)	4,708	3,175
Land productivity (Value added/ha. PLN)	3,959	2,939
Labour productivity (Value added / employees. PLN)	81,934	58,813
Land profitability (Farm income/ha. PLN)	2,510	2,046
Work profitability (Farm income/ employees. PLN)	71,077	52,111
subsidies/farm income (%)	47.2	78.8

Source: Polish FADN [8].

Lower animal production in case of organic farms may be also observed in the case of milk production, where average milk yield for conventional farms was estimated to over 6,000 litres while organic production of milk was estimated only to 3,400 litres. Relatively low animal production of organic farms can be also proved by indicators concerning value of animal production per livestock number (PLN/1LU). In this case, conventional production was 4,708 PLN and organic production was 32% lower and was estimated to 3,175 PLN.

Highlighted differences in organization and productivity transfer to similar differences in productivity measured with value added and in profitability of farms. Data proves that land and labour productivity (3,959 PLN/ha and 81,934 PLN/employee) were higher for conventional farms. Higher productivity rates experienced in conventional agriculture also transferred to relatively higher work and land profitability of conventional farms (2,510 PLN/ha and 71,077 PLN/employee).

At the same time, average land profitability (2,046 PLN/ha) and work profitability (52,111 PLN/ha) of organic farms were 18% and 27% lower. It is also worth mentioning that income situation of organic farms in Poland is significantly determined by measures of Common Agricultural Policy of the European Union, as in 2012 subsidies share in farms' income in case of organic farms

Legal aspects of organic farming in Poland

1. Community law frameworks of organic agriculture.

The Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products constitutes direct legal frameworks of community organic agriculture policy [2]. The regulation has complex character and should be considered as set of legal principles, tasks and directives shaping such aspects as: managing organic farms, organic production, labelling, system of control and certifying such activities and trade with third countries.

As it is indicated in the regulation, its basic task is to impose effective legal measures assuring constant development of organic production which will not violate order and principles of internal market's competitiveness (art. 1 of the Regulation) [2]. Is should be also noted that community legislator has also regulated all stages of organic activities – from production, through processing and preparation, to distribution and control of sold organic products (art. 1 and 2 of the Regulation) [2]. As it appears, analyzed regulation has simple task to comprehensibly regulate all vital aspects of organic agriculture. Such policy seems to be reasonable as only complex measures may guarantee effective development and control

of organic production.

As it may be observed in the regulation, common organic production has clearly defined goals and tasks. Articles 3-22 of the regulation present precise definition of tasks and goals related to organic production, starting from general principles and aspects and ending on rules related to specific issues [2]. To sum up, the basic aim of organic production in to create sustainable system of organic agriculture control guarantying best quality of products and not causing and damage or danger to environment and people (art. 3 of the regulation)[2]. It should be also noted that management in organic agriculture has to include such values as: biological diversity, responsible use of natural resources and proper condition of soil, water, plants and animal (art. 3(a) of the regulation) [2]. Turning to rules of organic production, firstly it should be indicated that such production should be generally based on maximal and sustainable exploitation internal resources with concurrent minimal use of external sources (art. 4 of the regulation) [2]. It is also necessary to highlight that community legislator do not recognize economic and financial aspects as the most important and leading principles and tasks of organic production.

It should be also indicated that organic agriculture should not focus only on productivity and profitability. As the community legislator states, organic agriculture should be based on such aspects as: biological diversity, ecological sustainability, combating soil erosion, recycling or natural animal and plants production (art. 5 of the regulation) [2].At the same time, any use of GMO or ionizing radiation is prohibited in organic production (art.9 and 10 of the Regulation) [2].

Besides general directives and determinants of organic production, the regulation also defines specific rules concerning such aspects as: processing of organic food (art.6), farm production (art. 11), plant production (art. 12), seaweed production (art. 13), animal production (art. 14), aquaculture animal production (art. 15) or products and substances with authorized use in organic farming (art. 16) [2]. As it can be clearly observed, community legislator intends to comprehensively regulate production aspects of organic agriculture. Specific frameworks should guarantee that only products of desired quality can operate on internal market labelled as organic products.

Finally, it is worth highlighting that the regulation also shapes two other aspects of grave importance to organic agriculture and production. The regulation introduces legal frameworks of complex system dedicated to labelling and identifying organic products. In the light of community law not each product of organic agriculture can be considered as organic product. Only after specific process of labelling and indications, given product with defined identification number and logo can be recognized as organic product (art. 23 -25 of the regulation) [2].

It should be also noted that community legislator also intends to ensure efficient and proper exercise of organic policy through legal obligations burdening each EU member state to create system of control over domestic organic agriculture system (art. 27 of the regulation) [2]. Domestic systems of supervision over organic farming should be considered as necessary element of common organic policy as only authorities of each EU member state are able to effectively assure exercising common goals on national ground.

Consequently, it should be highlighted that any common policy in order to be properly exercised requires constituting functional legal frameworks on national grounds. Enforcement of strict ecologic and quality requirements demands proper regulations adapted to specific realities.

2. Domestic legal frameworks of control and supervision over organic agriculture.

In view of the fact that general principles, rules and standards of organic production have been regulated under community law, basic obligation of any EU member state is to create efficient system of control and supervision over organic production. Polish authorities accomplished majority of the obligation by adoption and execution of the Act of 25th June 2009 on organic agriculture [9]. As it is already indicated in art. 1 of the

act, given bill regulates mostly tasks and jurisdiction of public administration authorities and other organizational units involved in domestic system of control over organic agriculture and in exercising provisions of the Regulation No 834/2007 [9]. The act mostly regulates such issues as system of authorities involved in the supervision and their prerogatives and powers.

We can distinguish three types of authorities operating within the system:

a) Chief Inspector of Agricultural and Food Quality Inspection with provincial inspectors, jointly creating Agricultural and Food Quality Inspection (AFQI),

b) certifying authorities and

c) cooperating authorities among which we can list Trade Inspection, Veterinary Inspection and State Plant Health and Seed Inspection Service.

AFQI creates core of domestic system of supervision over organic agriculture in Poland. AFQI exercises following tasks:

1) supervision over authorized certifying authorities and over organic production,

2) release to free circulation of organic products from third countries on internal market by shipment inspection and control certificates,

3) gathering, storing and processed data regarding organic producers,

4) managing applications for derogation of organic production rules,

5) temporary operating as certifying authority up to 60 days,

6) informing organic producers about revoking of authorization granted to competent certifying agency and

7) preparing qualification exams for organic agriculture inspectors and maintaining register of such inspectors [1].

The Chief Inspector is head of AFQI and is supreme body of public administration in sector of organic production. According to the act, Chief Inspector is responsible for following aspects:

a) compiling formal notification from regarding beginning of activity in organic agriculture (art. 3(2) of act),

b) revoking authorizations for certifying authorities (art. 6(3) of the act),

c) supervision over certifying authorities – data gathering, audits, inspections, audit conclusions and instructions (art 8(2) of the act),

d) supervision over organic production (art. 8(3) of act) and

e) issuing authorizations of derogation of defined production conditions (art. 11 of the act) [9].

Specific tasks of Chief Inspector can be exercised by provincial inspector after obtaining direct authorization (art. 8(6) of the act) [9].

In practical view of analyzed control system, the most important role is exercised by certifying authorities. Each farmer willing to begin organic production is obliged to file proper application form to competent certifying authority (art. 4(1) of the act) [9]. It should be noted here that each certifying authority can operate in the system only after obtaining direct authorization from Minister of Agriculture (art. 5(1) of the act) [9].

Main task of certifying authorities is to carry out certifying process of organic producer during which such authority enjoys series of important prerogatives enabling it to examine all elements of factual and legal situation. Certifying units maintain registers of organic producers and submits monthly reports to the Chief Inspector regarding data applications and changes in structure of the producers (art. 4(6) and 17 of the act) [9]. It should be also noted that among from registry and application processing, certifying units are also entitled to exercise specific control acts within the common control system (art. 7(1) of the act) [9]. As certifying authorities enjoy regional jurisdiction and competence, exactly these units constitute fundaments of domestic control system.

During analysis over role of certifying units, it is also wroth to focus on requirements related to the post of inspector controlling organic producers on behalf of given unit. As the act clearly indicates, only individuals listed in official registry maintained by the Chief Inspector can be inspectors (Art. 21(1)(2) of the act)[9]. Required qualification are defined as: sufficient theoretical and practical knowledge, issue of special qualifying

decision (art. 21(3) of the act) passing state exam (art. 21(4) of the act) and constant skill improvement (art. 21(4a) of the act) [9]. We may observe that domestic legislator introduces series of competence requirements that are aimed at guaranteeing professionalism and precision of common control system over organic agriculture.

Finally, it is worth highlighting that each certifying unit shall be liable for serious abuse or negligence. The act introduces harsh financial penalties for defined violations, abuses or negligence which value can range from 10 to 20 times average monthly wage in national economy for previous year and its size in dependent on gravity of misconduct (Art. 24 of the act) [9]. As it appears, national legislator also introduce set of negative legal measures that are aimed at guaranteeing proper functioning of common control system.

CONCLUSIONS

Since accession of Poland into EU structure we may observe specifically apparent dynamic of development of organic agriculture. Size of internal sales market and subsidies schemes have caused that in years 2004-2013 number of domestic organic producers experienced significant growth of over 700%.

Dynamic changes in number of organic producers and organic land areas in domestic agricultural system were also transferred to changes in structure of farms. Before 2008 the smallest organic farms had enjoyed biggest growth, while the number of biggest farms had been reduced. After 2008 the trend changed and biggest organic farms started to gain bigger share in total value while share of smallest farms started to decline. Clear growth of average organic land area should be considered and direct consequence of such turn of trends.

It should be also stated that organic and conventional farms differs from each other in terms of productivity and profitability. According to data from Polish FADN, land and work productivity were 35% and 39% higher in case of conventional farms than in case of organic farms. Furthermore, income situation of organic farms in Poland has been significantly determined by subsidies. In 2012 in Poland, average share of subsides in income of organic farms was estimated to over 78.8% while in case of conventional farms this share was only about 50%.

The statistical data proves that organic agriculture is gaining more attention and importance on internal market. This long-term importance of this sector has caused that community legislator introduced complex legal frameworks of organic production policy and forced domestic authorities to constitute proper regional frameworks and exercise goals of common policy. The Regulation No 834/2007 defines general goals, principles, rules, tasks, directions and standards of organic production and agriculture. Accomplishing of these direction is fully dependent on proper policies introduced on national grounds. In case of Poland, regional legal frameworks of common policy related to organic agriculture is expressed by the act on organic production. The act introduces regional structure exercising task of creation system of supervision that should guarantee that only products of desired quality will be circulating on the internal market labelled as organic products.

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