

The role of education and extension services for organic and conventional farming in the region of Podkarpacie, Poland

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Abstract. Knowledge and know-how are the most important factors in many branches of the national economy. The same rules apply to organic agriculture. This was investigated in the Podkarpackie region in Poland. A survey revealed that lack of professional knowledge in the area of organic agriculture is seen as an important obstacle to running a farm. The process of conversion is assessed less strictly by farmers with higher education. Moreover, the direction of education is more important for proper farm management than its level. To succeed in running an organic farm, farmers emphasised two important issues. They are government subsidies and a well organised extension service.

Key words: Organic farming, education, extension service, development, Podkarpacie

INTRODUCTION

Modern agriculture demands knowledge. Therefore, the needs of modern agriculture can only be met by the farmers with proper education (Klepacki, 2005). Klepacki states that Polish farmers make mistakes in the technology of production due to lack of knowledge in this area. Moreover, knowledge and ecological awareness are particularly important not only for organic farmers (Runowski, 1995) but for consumers, processors, teenagers and children as well (Lampkin, 2002; Capporali, 2004).

Education and the age of the farmer play an important role in applying innovations on the farm (Uliszak, 2008). For organic farmers there is a dependency between the level of education and the economic outcome of organic farmers according to Stawicka and Wołoszyn (2007). The farmer should know the basics of sciences such as biology, chemistry, technology, techniques, economy and even sociology. The theoretical basics should go in tandem with practice. Only this combination between the traditional and scientific knowledge make the development of organic farming possible (Kucińska et al., 2007).

MATERIALS AND METHODS

In 2006, a survey was conducted among 99 farmers (66 organic and 33 conventional) from the area of Podkarpacie in Poland. Two comparable questionnaires were prepared: one adjusted for organic and one for conventional farmers. In the study,

farmers around the two biggest cities of the region i.e. Rzeszów and Mielec were involved. The questionnaire was conducted as a direct interview with farmers. Open (descriptive) and multiple choice questions were included.

RESULTS AND DISCUSSION

The average age of the organic farmers was 47 years, whereas conventional farmers were slightly younger. 25% of organic farmers were below 40 years of age, while 5% were below 26 (Fig. 1). There were 5% more of the conventional farmers below 40 and 12% more between the ages of 26 and 35 than in organic ones.

Interviewed farmers were invited to suggest recommendations for farmers who would like to convert to organic agriculture based on their experience gained during their work on the farm. Farmers wrote down their recommendations according to their own considerations. 34% mentioned that at the initial stage of conversion it is most important to be merits-related prepared to the new conditions of production. 20% stated that contact with an extension officer is crucial. Only a few percent (6.8%) said that checking the demands of the market is the most important (Table 1).

Extension services play a very important role in the process of improving the state of organic farming in Poland. Choosing between family support, help from advisors or colleagues, almost 75% of the surveyed claimed that at the beginning of the conversion it is most useful to get help from advisors, advice from colleagues, and support from the family was significantly less important, graded by 13.6 and 11.9%, respectively. However, in private discussion, farmers acknowledged that acceptance of their families is the first and basic factor in running an organic farm (Fig. 2). The results from the questionnaire show that 34% of organic farmers had secondary education as their highest education; almost the same number possessed vocational education. The level of education influences entrepreneurship and agricultural culture. Organic farmers with primary education (including persons having only agricultural courses) as highest level of education evaluated in 66.7% of the cases the conversion of their farms into organic ones, as a process running without major difficulties (Table 2).

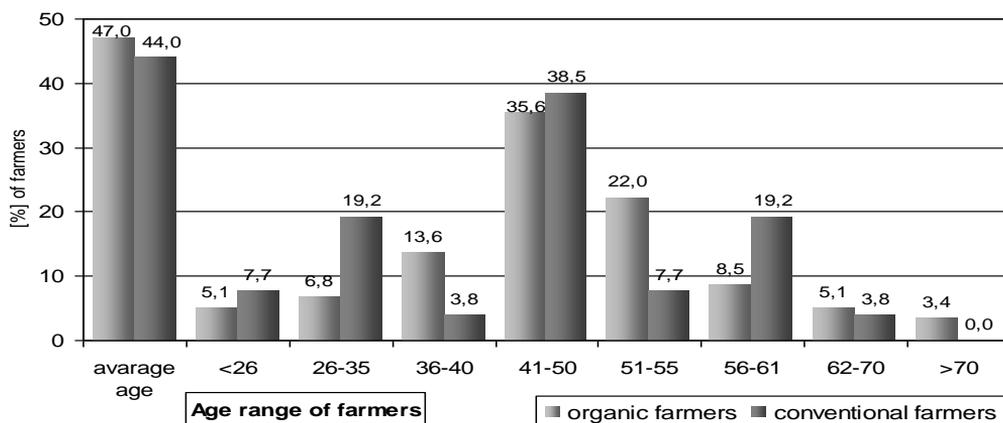


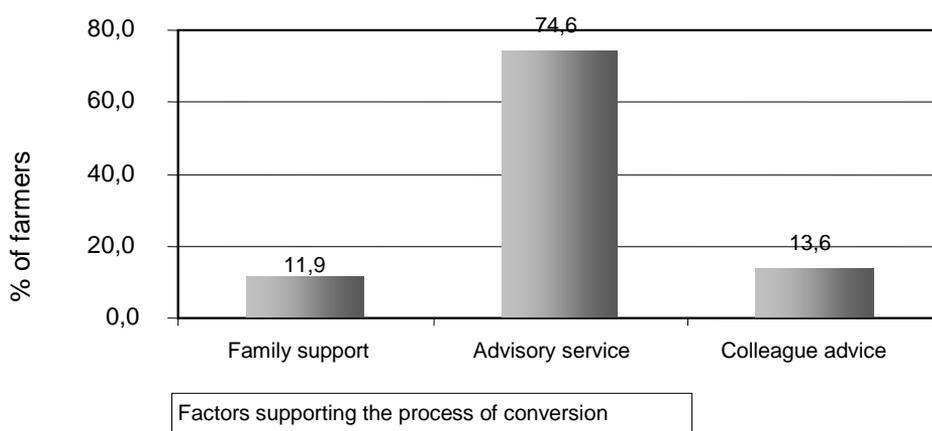
Fig. 1. The age of the farmers in the interview.

Table 1. The recommendations for running an organic farm.

Recommendation	% of responds
Merits-related preparation/coerces	34.1
Acquaintance with regulations	9.1
Contact with extension service	20.5
Care for content of soil organic matter	2.3
Good crop rotation - alfalfa	4.5
Get familiar with obstacles	4.5
Soil fertility analysis	2.3
Get in contact with another farmers	9.1
Analysis of market demands	6.8
Familiarize with issues concern ecological farming	2.3
Weed control	2.3
Cessation of using pesticides and artificial fertilizers	2.3

About 10% of the organic farmers had primary education (Fig. 3, 4), more than a half of them had no agricultural education, more than 11% had higher education. There was no-one in the surveyed groups who had not finished primary education. The conventional farmers had higher education than the organic ones. Almost all of them (84.4%) possessed at least vocational training considering both vocational and technical education (Fig. 3). 65% had agricultural education, which is a higher share compared to the organic farmers (Fig. 4).

Persons with secondary education assessed this process as most difficult in the surveyed groups, followed by the group with vocational education. Answers: 'very difficult' and 'difficult' comprised 80%. Farmers with higher education assessed the period of the conversion better. However, the correlation between the level of education and difficulties in the conversion period should be further examined. The study was not profiled in this direction and the statements 'difficult' and 'no bigger difficulties' can have been interpreted quite freely and subjectively by the respondents.

**Fig. 2.** Factors supporting the process of conversion ranked by organic farmers.

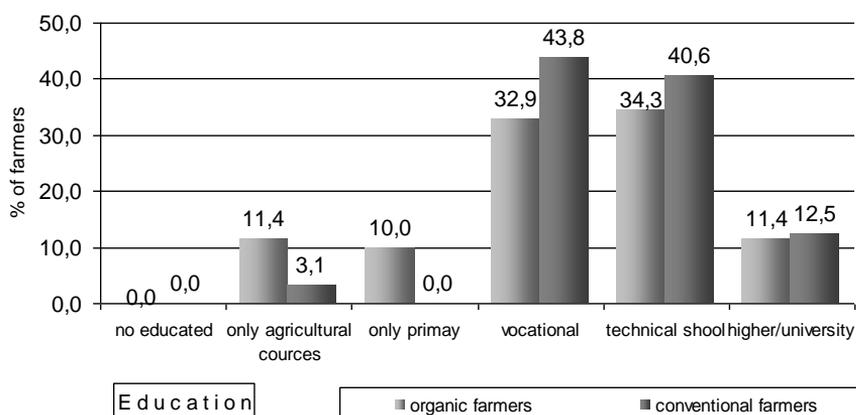


Fig. 3. Education among organic and conventional farmers.

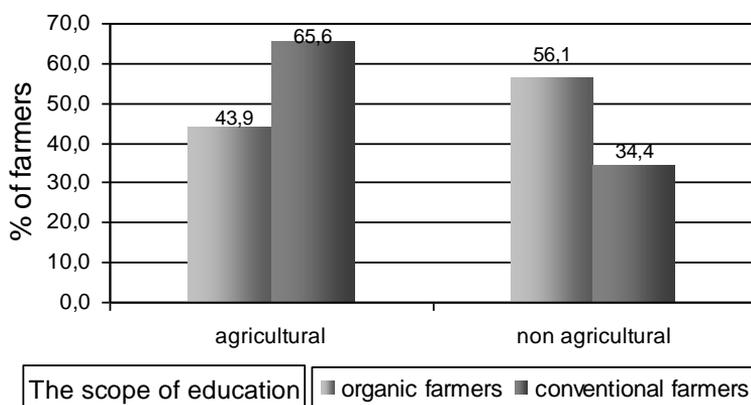


Fig. 4. Agricultural education among organic and conventional farmers.

Table 2. Evaluation of the conversion period in relation to level of education in percent.

Evaluation of the conversion period in percent of education level)					
	Very difficult	Difficult	No bigger difficulties	Rather easy	Easy
Primary	0.0	0.33	66.7	0.0	0.0
Vocational	26.6	40.0	26.6	6.6	0.0
Secondary	23.8	57.1	14.3	4.7	0.0
Higher	0.0	50.0	50.0	0.0	0.0

Table 3. Evaluation of the conversion period in relation to the type of education in percent.

Evaluation of the conversion period in percent of education					
	Very difficult	Difficult	No bigger difficulties	Rather easy	Easy
Agricultural education	21.0	26.3	47.4	5.30	0.0
No agricultural education	25.9	51.8	18.5	3.7	0.0

Analysing the results from the survey it was noticed that there seems to be a relationship between the type of education and the assessment of the difficulty during the conversion period (Table 3).

About half of the farmers with agricultural education (47%) assessed the conversion process of their farm with no bigger difficulties. Half of the farmers with no agricultural education found the conversion difficult (52%). Because our hypothesis was that agricultural education can ease a conversion, the aim of the next questions was to find out the willingness to get and the scope of the presumptive training of the organic farmers, 75% stated that they need further agricultural training (Fig. 5). But only 3% of organic farmers said that the lack of proper agricultural education is the main obstacle in running the farm (Tab. 5). 7% of the organic farmers answered that they do not need further education (Fig. 5).

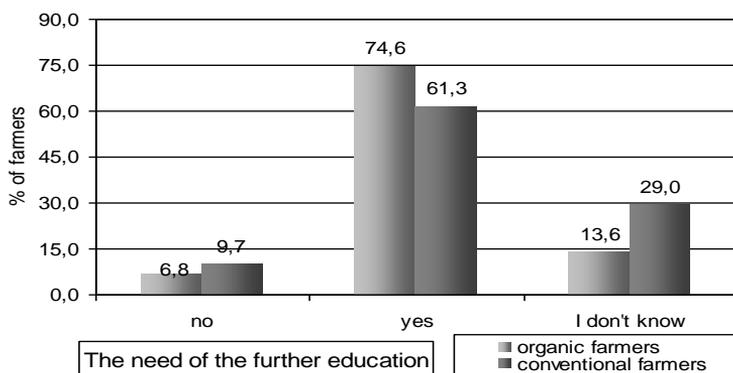


Fig 5. The need of the further education among organic and conventional farmers.

There were various answers to the question about the kind of training e.g the basics of ecology, agribusiness and marketing, animal production, processing or production of herbs. The farmers would also like to take part in trips to the model farms in neighbouring countries. The will of the farmers to train themselves should be taken into account by the extension services (Table 4).

Table 4. Type of training the surveyed farmers would like to take part in.

Additional training	Number of responses
General in organic production	8
Agribusiness and marketing	5
Trainings abroad	2
Organic animal production	2
Agrotourism	1
Biodynamic agriculture	1
Organic fertilisation	1
Herbal and vegetable production	1
Processing of goat milk	1
Postgraduate training	1

Table 5. The obstacles in running an organic farm.

Obstacle	Rated by organic farmers in percent
I do not want to do it anymore	1.2
Running the farm is a bad business	12.5
Lack of capital	26.2
Lack of working force	19.6
Lack of knowledge	3.0
Difficulties in selling the products in good prices	17.9
Low productivity of the soil	13.1
Others	6.5

The farmers were also asked to provide factors that have a negative influence on their farms. The producers stated that the income they get from their farms, which is very often supplemented by income from a secondary job and government subsidies are not enough to secure financial viability of the farm. The result is low investment and the systematic impoverishment of e.g. machinery, and buildings. This phenomenon affects 26% of the surveyed, who consider the lack of capital as the most important factor limiting production (Table 5). Other limiting factors are lack of labour force – mentioned by almost 20% of the organic farmers; problems with selling the products (18%) and low soil productivity (13%).

CONCLUSIONS

The results show that for the development of the farm, agricultural education is more important than the general level of education. Organic farmers in the area of Podkarpackie consider the lack of capital, labour and difficulties in selling organic products at a premium price as the basic factors limiting the development of organic farming.

However, to support organic farming, agricultural education has an important role to overcome the problems faced by organic farmers. Agricultural education should focus on ecology, agribusiness, economy, marketing and agronomy.

To succeed with conversion of the farm, the organic farmers mentioned that it is important to be merits-related prepared. To give farmers help in preparing and conducting the conversion the help of advisors seems to be both demanded by farmers and helpful.

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