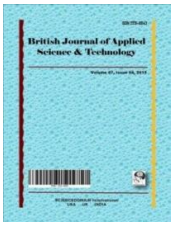

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Improving Human Capacity–One of the Ways to Overcome the Decrease in Organic Farming

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Authors' contributions

This paper is a result of collaboration among all of the listed authors. Author VZ was in charge of overall planning, coordination among all the authors, prepared the first manuscript draft and had maintained written communication between the authors. Authors LM and SM have worked on development of questionnaires and in collaboration with author NM had prepared the previews and statistical analysis. Author NM engaged herself in literature search as well. All authors read and approved the final manuscript.

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ABSTRACT

Aim: This paper tends to put a different perspective for the reasons that had contributed to the drop in interest for further development of organic farming in Macedonia. Anno Domini 2001 is the year considered as official beginning of organic farming in the Republic of Macedonia. Trainings were conducted, farmers associations were established and an umbrella National Association was established too. In 2005, organic farming got under the national subsidy program, but the very next 2006 was abandoned. But since then without interruptions organic farming enjoys steady and increasing governmental support. Since 2007, two National Programs were developed while the area under organic and number of organic growers recorded steady growth. Up to 2012, when first signs of losing the pace is recorded by having a drop in number of ha under organic was recorded and the number of organic growers too. The next year, 2013 was another disappointment for the

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sector, since the government had reduced the volume of support from € 2113000 in 2012 to € 1089430 in 2013. Reasons for the drop in interest are naturally various but one of the most significant is insufficient competent support farmers were receiving. Unfortunately, the national advisory service has very limited human capacity on this matter, and private advisors are much too small in number to cover the demand for advice.

Methodology: In order to obtain real-case data number of farms were interviewed for the practice they apply in their daily operations, in order to check their understanding of what organic farming is all about. The area of intervention was the East Planning Region in Macedonia. Then, subject of analysis were the advisors at the National Extension Agency who were asked to express their opinions on answers listed in a carefully designed questionnaire, which needed to provide answers on the level of knowledge advisors possess on organic farming.

Results: The results analysis on both of the surveys are driving to a conclusion that Ministry's opinion for the drop in interest has little value, since the amount of subsidies is quite high, yet farmers are giving up.

Conclusion: Specially designed program for introducing the principles of organic farming to the farmers is imperative before they would be invited to join this kind of agricultural production. Furthermore, in order to provide best possible competent support, advisors need to go through a carefully designed training procedure in order to increase their knowledge in the principles of organic farming.

Keywords: Organic farming; human capacity; drop in interest; competitiveness.

1. INTRODUCTION

Macedonia has limited farming resources. Given the fact that the western half of the country is mostly of mountainous character, it is an imperative to make most of the use of the available resources i.e. to develop cultivation of crops that would make most of country's long tradition in farming. Table 1 gives perspective on the full available land for agricultural production, followed by arable land, area under organic farming and its share in percent.

At the beginning of the organic movement in Macedonia it was believed that this long tradition in farming and depending on low use of inputs would be enough to obtain self-sustainable organic farming, or it could be used as a turning point for 'new beginning'. A beginning which was depending on the assumption that long-time cultivated crops would be most easy to be converted for production under organic principles. Fig. 1 gives impression of which these crops are [1].

In order to promote organic movement in its initial steps, Macedonian government had made a quite firm step supporting its development. As illustrated in Table 2, the support level had been and still is admirable, compared to neighboring countries [2].

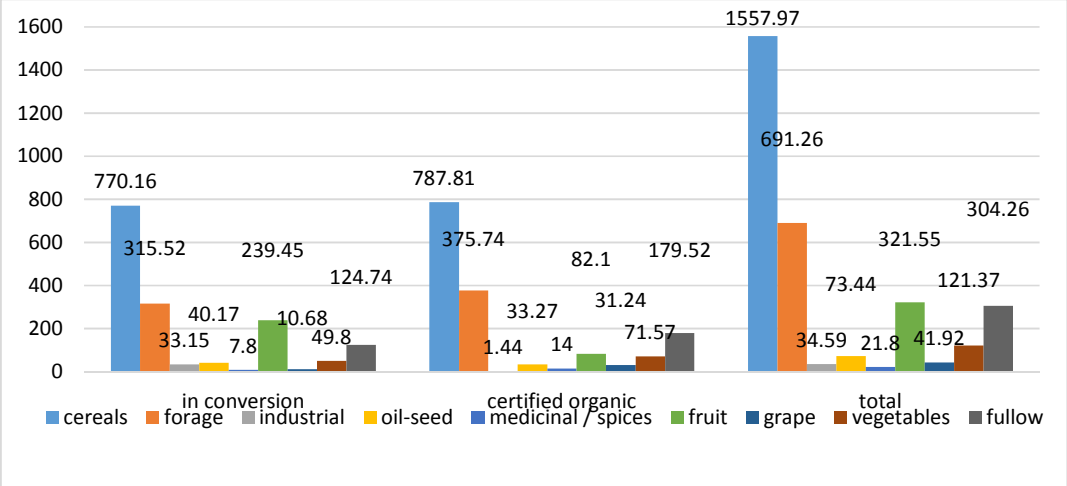

Fig. 1. Organic plant production in 2013 (ha)

Table 1. Macedonia's agricultural production resources [3,4,5,6]

	Agricultural land (ha)	Arable land (ha)	Area under organic (ha)	% of land under organic
2010	1121000	509000	5228	0.47
2011	1120000	511000	6580.92	0.59
2012	1268000	510000	4663.08	0.37
2013	1268000	509000	3167.85	0.25

Table 2. Support of organic farming through national budget over the years

Year	MKD	€
2005	6.000.000	97.561
2006	0.00	0.00
2007	11.000.000	178.862
2008	36.500.000	598.360
2009	66.938.000	1.098.360
2010	70.800.000	1.160.656
2011	110.000.000	1.788.618
2012	130.000.000	2.113.000
2013	67.000.000	1.089.430

Such significant financial support should've contributed with higher interest and expanded production over the years. But, instead of that, as illustrated in Table 1, for the past couple of years nothing of such did happen. On the contrary, there is a drop in number of farms and area.

The advisory service in Macedonia exists in three forms. The first channel for transferring knowledge and information is through state's Advisory service (NEA), which covers country's territory. The second one is through several private advisors, but their number is far too small to provide national coverage. The third form is through the input suppliers, who offer services mostly in area in pesticides, fertilizers etc., whose knowledge on organic principles is under serious doubt.

2. MATERIALS AND METHODS

As far as method is concerned, a direct approach (visit on-site) was used in both of the cases, when institutions and individuals were a research subject. Farmers, 983 of them in the East Planning Region were interviewed on their farming practice in a search of an answer can they or can they not be a focus group in a quest for reaching sustainable organic farming practice in the region. Then, employees in NEA's two Regional offices with 10 working units. In both cases questionnaire was developed. In the first poll, data collectors were given instruction to record only what the interviewed person expresses not entering own opinion or interpretation. Two groups of farmers were targeted - small and medium. Large farms were not targeted since their number is small and are not interested in converting into organic. NEA employee poll was conducted through personal visit to all of working units [1]. Questionnaires were given to the advisors at the arrival and before proceeding to giving answers, they were instructed for the way they should provide the answers and were told for the significance on their sincere answer.

Before the interviewing process took place, full training was given to the persons that were selected to visit the farm families and NEA advisor. Special attention was given to the necessity to have no influence, what-so-ever, while obtaining answer form the interviewing person (farmer/advisor). It was clearly stated that the interviewers must not, in any case make any suggestion to the farmer/advisors while asking for an answer from the questionnaire.

3. RESULTS AND DISCUSSION

Two subjects for analysis were taken under consideration. The first subject were 983 farms and they were polled in a search of an answer on their capacity to convert from conventional into organic. Among various things that were point of interest some them were aimed focused in finding if farmers understand the principles of organic farming, what is their educational level, gender, average age?

In the East planning region people that deal with agriculture are older than 50 years (44% of the examinees). Young farmers (20-30 years old) that make living of agriculture is only 4%. Gender structure points to the deep traditionalism of Macedonian rural population since 93% were male and only 7% were female who were making decision with regard to the farm management. A far as education is concerned, the poll shows that only 3% of them have higher education, 46% are with secondary education and most of them are with elementary education. An interesting

issue was with the trick-question on which 97% answered that they are producing organically. But, on the next question 'which fertilizer do you apply?' vast majority gave wrong answer stating that they apply NPK fertilizers. Finally, asked if they have any professional assistance, 86% of them gave negative answer, meaning advisory service did not reach them; 6% answered that they consider the advices given by NEA's subject matter specialist; 3% were using input suppliers as a source for information and finally, 3% were using Ministry of Agriculture's employees as a source [1].

In 2013, own research on National Extension Agency's (NEA) working units on advisors' capacities was conducted. Results on two key questions are presented in Tables 3 and 4. The result in Table 4 can be confusing unless noted that the interviewed persons were asked to offer maximum 3 answers.

Table 3 points to the fact that NEA is heavy centralized "top-down" institution. These institutions are hardly responding to the needs of the farmers and municipalities in which they have their own offices. Enjoying governmental support, top-down institutions tend to keep satisfied the "customer" who is providing money for salaries and in every case it is the government. Driven by this situation, it is of no surprise that high number of interviewed sample (63%) responded that they are filling subsidy application forms, a task which can be performed by private sector or high-school educated person.

As far as training facilities are concerned, only one exists and that one serves the purposes for students' practical work of the Faculty of Agriculture at Goce Delchev University in Shtip. There is no training facility for life-long learning at all. According to own research and data obtained by NEA, there are only 18 advisors on national level that provide support in organic farming. Numbers far below necessary level, compared to the number of operators that exist.

Earlier, there were warnings that the expectation to obtain sustainable development of the organic farming would be unreal if depended only by 'pumping' subsidies and not followed by the remaining forms of structural support systems [2]. But, as it appeared to be, none of the national authorities were following recommendations on this issue and had continued with their own development plan which had contributed to the drop in number of operators and area under organic farming, as indicated in Fig. 2 [7,3,8,9,10,11].

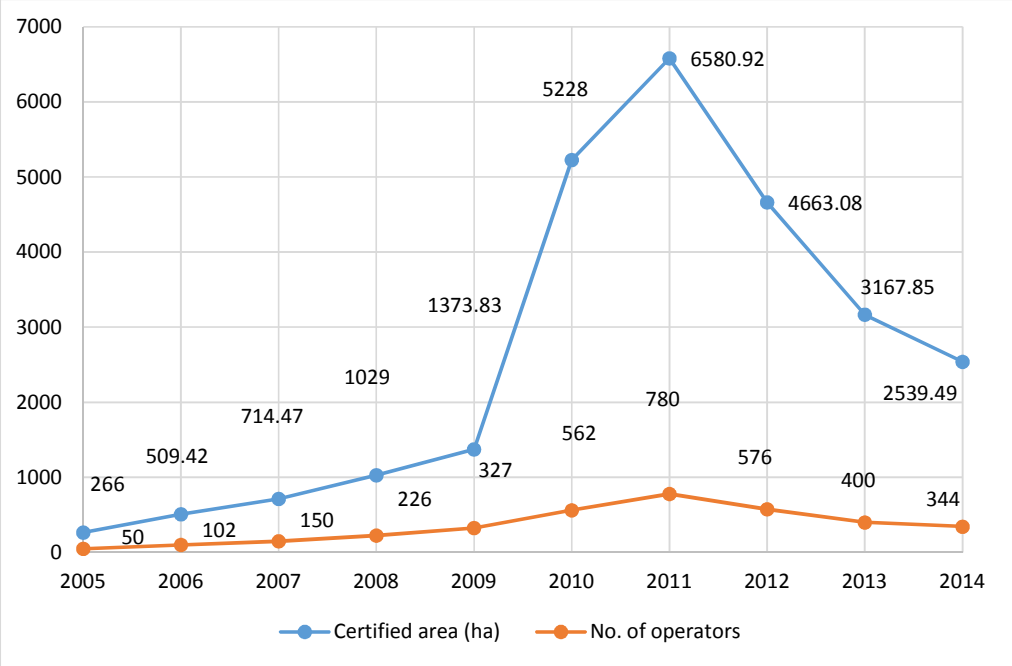

Fig. 2. Certified area and number of organic operators through the years

Table 3. Structure of highest number of performed activities (Own research, 2013)

Client request	6%
Own working plan	22%
Headquarter	72%
Ministry of agriculture, forestry and water economy	0%
Payment agency	0%
Local municipality	0%

Table 4. In which of the following areas you obtain highest cooperation with your clients? (Own research, 2013)

Crop growing technique	40%
Plant protection	68%
Animal feed	18%
Farm economy	18%
Subsidy applications	63%
Rural development	0%
Development of value added products	0%
Processing technologies	0%

Instead of allocating some of the funds in institutional and human development, which would've contributed to the development by performing market or environmental analysis, the authorities kept to their primary idea of attracting famers to join this movement only through higher level of subsidies, yet doing nothing to provide conditions to market the obtained production.

4. CONCLUSION

If the Republic of Macedonia is to use its full potential in exploring natural conditions for organic farming, including collection of indigenous species on higher elevation couple of things need to be done. Firstly, the number of advisors with competences in organic farming need to increase dramatically. Two higher education institutions have MSc courses in their educational programs, so NEA and the private advisors should consider further specialization of their staff. Secondly, the Government offers significant assistance to the farmers through the subsidy program. Since this approach is not recording any positive response (not recording increase in area and production), a part of that program can be diverted in establishing Farmer Field Schools (FFS) in which not only farmers, but other professionals as well can expand their knowledge as well. Thirdly, Tables 3 and 4 clearly points strong centralization of NEA. In order to improve the performance in organic sector, this institution needs to become socially, rather than to remain governmentally responsive. This would mean, decentralizing activities are imminent so the working units, operating in each of the country's 30 major cities would recognize the farmers in their vicinity and municipality & companies from the cities they live in as primary client group. Fourthly, and perhaps finally, since there is no program that would work with youth, special programs for rural youth must be developed. These programs must train youngsters in leadership skills, farm management, market research and opportunities since if left to the tradition, they will inherit the same mentality of their predecessors, who tend to say "their care is to produce, while the state's role is to sell" – something which was a trade mark of the previous system. System that existed 'till 1991.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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