

ANALYSIS OF THE OPINION OF THE AGRICULTURAL PRODUCERS FROM THE FRUIT TREE GROWING SECTOR ON THE INTENTION TO JOIN IN AN ASSOCIATIVE FORM

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Abstract

The association in horticulture is the only way to succeed in this segment of agriculture, and generally designed to ensure fair incomes for farmers, coupled with their workload, however, bringing added value and in the Romanian economy. In this paper, the fruit tree growers were identified in relation to those issues, and answered a questionnaire. Before acting, to convince farmers in Romania to be part of an associative form, we must realize how they perceive the concept of association, and how to find the ideal solution to convince them that the association does not deprive them of their land, they will remain owners of the fruit tree plantations, and the association will help them to become more competitive in a free market.

Key words: agriculture, the association in horticulture, fruit growers, Romania

INTRODUCTION

After the events of 1989, the attention of the Romanian specialists and researchers in the field of agricultural economics was focused on cooperation, many of them sustaining that this is the main way to revive the Romanian agriculture, given the pressures of this very importance sector of our national economy [4].

Based on the theme, the relaunch of the agricultural sector generated an avalanche of papers on different aspects:

- condition of agriculture after 1989 and the effects of land reform [2];
- the situation and aspects of cooperatives in some European developed countries [10];
- studies on cooperatives before the 1st World War, in the interwar period or even at the beginnings of modern cooperatives in Romania [9];
- the signalled need for the development of cooperatives in agriculture [7];
- the harsh criticism on the Land Law of 1991, which, by its nature, is limited and incomplete, because of its content and uninspired application which fragmented the land in millions of arable plots etc. It led to the creation of one of the most

- disastrous situations for the Romanian agriculture pulling it back for decades [5];
- farm issues [8];
- the urgent need to create a legislative framework favourable to the development of viable and competitive agricultural holdings [6];
- rural development in general [1];
- the need for state support [3].

In the Romanian agriculture, the association existed before 1989, being applied by the socialist system by means of the agricultural cooperatives established by the confiscation of the agricultural land owned by farmers.

After the dissolution of the socialist regime, the land was given back to the old owners according to the Land Law issued in 1991. But this led to the division of the agricultural land in small plots which has become a big problem in the Romanian agriculture, as the modern technologies could not be applied. More than that, it has appeared the farmers' fear to join in associative forms and this fear still persists mainly among the older farmers. Currently, the association started with timid steps and uncertainty among farmers, registering an upward trend in the latest period compared with the period immediately following the revolution. These increases

were favored by the measures taken by the Ministry of Agriculture and Rural Development, which facilitates the absorption of European funds by forms of association, consisting primarily of producer groups and cooperatives.

In The National Rural Development Program in the period 2014-2020 were developed two sub-measures addressed exclusively to the fruit growing sector, including the fostering of association to obtain such financing.

By identifying the vision and opinions on association in the field of horticulture, we can determine the true reasons which make this process to be a difficult one.

Unfortunately, at present, the fruit growing sector, as well as the whole agricultural system in Romania is characterized by an excessive fragmentation of farms / orchards and by the small farm size because they are subsistence and semi-subsistence farms. In addition to these two aspects, we can mention the lack of irrigation, which could contribute to non-constant productions, due to the weather condition, the population aging in the rural areas, the young people who prefer to migrate to urban centres and not to practice agriculture/horticulture.

MATERIALS AND METHODS

To identify the vision of farmers on the association in the fruit growing sector, it was set up a questionnaire including 29 questions. The sample of individuals was represented by a total of 100 farmers in all regions, classified by region of origin, size of holding, forms of ownership, age and farm type.

The questions were focused mainly on the farmers' vision on how to conduct business in the form of association, their opinion on the legislation, the existing policies, rules for consultation and information and finally to analyze the farmers' opinions on the decisions drawn within the Trainers' Association.

Evaluation of the survey data was performed using association Test (Chi-square, Hi or χ^2). This test involves checking the hypothesis of association between: the responses to a questionnaire on alternatives of questions and checking a particular set of data that can

follow a known statistical distribution. The socio-economic problems apply after making some contingency tables the data are classified by one, two or more segmentation variables. It allows to highlight the existence /non-existence of a link between the collectivities of the association created by the segmentation of the studied variables. In this paper we present the most relevant information on the association of fruit growing sector.

RESULTS AND DISCUSSIONS

According to Table 1, from the total of 100 respondents, 30 % were from the South - Muntenia region, 25 % from the South-West - Oltenia region and 13 % from the North West area. At the opposite pole, there were the West and North-East regions with a rate of 8% and the regions Bucharest-Ilfov (4%) and the Central part (4%).

Table 1. Distribution of interviewees by age and region

Region	How old are you?				Total
	Years				
	< 30	30 - 45	46 - 60	> 60	
Region Bucuresti - Ilfov	0%	4%	0%	0%	4%
Region Central	0%	0%	0%	4%	4%
Region North-East	4%	0%	4%	0%	8%
Region North - West	0%	4%	4%	5%	13%
Region South - East	0%	4%	4%	0%	8%
Region South - Muntenia	5%	5%	15%	5%	30%
Region South - West Oltenia	0%	5%	15%	5%	25%
Region West	0%	0%	4%	4%	8%
Total	9%	22%	46%	23%	100%

Source: Data from the questionnaire.

In terms of age, we find that 46% persons were between 46 and 60 years old, followed by those aged over 60 years. As one can notice, the young people under 30 years and between 30-45 years old represented only 31%.

Regarding the accession to an associative form, about 36 % respondents of the questioned ones replied that they want to adhere to a form of association, 5% persons take into account this possibility, while 59% persons said that they do not want to adhere to a form of nationally recognized association.

The reluctance of the respondents to be part of an associative form is determined mainly by the lack of information. People do not know the real advantages of the association and do not agree to be part of such an organization.

Those who wish to join an associative form are orchardists in the South - Muntenia and South-West - Oltenia. These fruit growers are directly interested to be part of an association, primarily because they saw or heard how is running a business in a fruit growing association in the developed countries of Europe (Poland, France, Italy etc.). Conversely, those who do not want to be part of an associative form are farmers from the regions Bucharest-Ilfov, Center, North-East and West.

Table 2. The structure of farmers based on their opinion on the wish to join an associative form in the fruit growing sector

Do you want to adhere to an associative form?				
Region	Yes	I will think about it	No	Total
Region Bucuresti - Ilfov	4%	0%	0%	4%
Region Central	0%	0%	4%	4%
Region North-East	4%	0%	4%	8%
Region North - West	4%	0%	9%	13%
Region South - East	0%	0%	8%	8%
Region South - Muntenia	10%	5%	15%	30%
Region South - West Oltenia	10%	0%	15%	25%
Region West	4%	0%	4%	8%
Total	36%	5%	59%	100%

Source: Data from the questionnaire.

If we analyze the intention of farmers to join an associative form depending on the surface, we see that most interested to be part of an association are the orchardists whose farms have an area between 5 and 20 hectares, between 2 and 5 hectares and those who have between 20 and 50 hectares. The ones who are less interested in the association are those holding a fruit tree plantation of less than 2 hectares and those whose holdings is larger than 50 ha.

Table 3. The structure of farmers in the fruit growing sector based on their opinion on joining an associative form according to orchards size

Do you wish to adhere to an associative form?						
Once owned harvesters area						
Specification	Unit Size	Yes	I will think about it	No	Total	
		No.	No.	No.	No.	%
< 2 ha	No.	0	5	32	37	37%
2 - 5 ha	No.	12	0	12	24	24%
5 - 20 ha	No.	19	0	5	24	24%
20 - 50 ha	No.	5	0	5	10	10%
> 50 ha	No.	0	0	5	5	5%
Total	No.	36	5	59	100	100%
	%	36%	5%	59%	100%	
Standardized residue						
< 2 ha	No.	-3.65	2.32	2.18		
2 - 5 ha	No.	1.14	-1.10	-0.57		
5 - 20 ha	No.	3.52	-1.10	-2.43		
20 - 50 ha	No.	0.74	-0.71	-0.37		
> 50 ha	No.	-1.34	-0.50	1.19		
Chi-square calculated =	50.46***	The critical value (theoretical) =		13.36	p > 0.1(*)	
Degrees of freedom (df) =	8			15.51	p > 0.05(**)	
Cramer's V =	0.50	Pearson's C =		20.09	p > 0.01(***)	
					0.58	

Source: Data from the questionnaire.

The statistical association test (Chi-square = 50.46***; The critical value = 20.09 with a probability <0.01) on the opinion of those who want to join an associative form, depending on the area of orchards taken into property of those surveyed. There is a significant difference between the opinion of those who want to join an associative form and the surface of orchards. The analysis of R (residue standardized) showed significant differences regarding the holdings size: the farmers with less than 2 hectares considered all the three answers and the ones owning between 5 and 20 hectares are divided about joining an associative form. However, it was concluded that the opinion of those who want to join an associative form is influenced by orchards surface they hold (Table 3).

The Pearson's C and the Cramer's V, showed that between the opinion of those farmers who want to join an associative form and orchards surface (Pearson's C = 0.58; Cramer's V = 0.50) there is a significant relationship. Regarding the purpose followed to join an associative form, 32% questioned persons answered „supply“, 22% persons answered "trade", 18% replied "storage" and 28 % answered "processing". As one can see, the orchardists' answers to this question reflected the real needs of the fruit growing sector. The main weaknesses of the fruit growing sector in Romania remain input supply and processing (Table 4).

Table 4. The structure of farmers in the fruit growing sector based on their purpose to join an associative form by region

Which is the purpose of your accession to an associative form?					
Region	Supply	Trade	Storage	Processing	Total
Region Bucuresti - Ilfov	4%	0%	0%	0%	4%
Region Central	0%	0%	4%	0%	4%
Region North-East	4%	0%	4%	0%	8%
Region North - West	5%	0%	0%	8%	13%
Region South - East	4%	4%	0%	0%	8%
Region South - Muntenia	5%	10%	10%	5%	30%
Region South - West Oltenia	10%	0%	0%	15%	25%
Region West	0%	8%	0%	0%	8%
Total	32%	22%	18%	28%	100%

Source: Data from the questionnaire.

In Bucuresti-Ilfov region, 4% of the interviewees answered that farm input oblige them to associate each other. Those who believe that supply should be provided by the association are those belonging to the South-

West Oltenia and North-West. Those who believe that marketing is the reason to be associated were from Muntenia and South-West of Romania. Those farmers from the South-East and North-Muntenia believed that the association should help them to better assure the products storage. The farmers from the North-West and South-West Oltenia believes that the association should assure fruit processing.

Of those who have a fruit tree plantation of less than 2 hectares, 28% persons said that the accession to an associative form should solve the problem of Supply and 9% persons answered that the association must help them in the product marketing. Those farmers

whose orchards exceed 50 hectares believed that the association should process the fruits obtained in the association.

Those farmers who have between 2 and 5 hectares believed that the four variants should be the goal of the accession to an associative form, while those who have between 2 and 50 hectares considered that the storage and processing is a goal in joining the organization's profile (Table 5).

The orchardists whose farms have between 5 and 20 hectares of orchards had the opinion that the association should assure the marketing, storage and processing of the fruits.

Table 5. The structure of farmers in the fruit growing sector based on their purpose of joining an associative form by orchard size

Which would be the purpose of your accession to an associative form?							
Once owned harvesters area							
Specification	Unit size	Supply	Trade	Storage	Processing	Total	
		No.	No.	No.	No.	No.	%
< 2 ha	No.	28	9	0	0	37	37%
2 – 5 ha	No.	4	8	8	4	24	24%
5 – 20 ha	No.	0	5	5	14	24	24%
20 – 50 ha	No.	0	0	5	5	10	10%
> 50 ha	No.	0	0	0	5	5	5%
Total	No.	32	22	18	28	100	100%
	%	32%	22%	18%	28%	100%	
Standardized residue							
< 2 ha	No.	4.70	0.30	-2.58	-3.22		
2 – 5 ha	No.	-1.33	1.18	1.77	-1.05		
5 – 20 ha	No.	-2.77	-0.12	0.33	2.81		
20 – 50 ha	No.	-1.79	-1.48	2.39	1.31		
> 50 ha	No.	-1.26	-1.05	-0.95	3.04		
Chi-square calculated =	87.93***	The critical value (theoretical) =			18.55	p > 0.1(*)	
Degrees of freedom (df) =	12				21.03	p > 0.05(**)	
Cramer's V =	0.54	Pearson's C =			26.22	p > 0.01(***)	
						0.68	

Source: Data from the questionnaire.

The statistical association test (Chi-square = 87.93***; the critical value = 26.22 with a probability <0.01) reflected the opinion of the farmers from the fruit growing sector on the purpose of joining an associative form based on the area of the fruit tree plantation. It was noticed a very significant link between the opinion of the farmers in the fruit growing sector on the goal of accession to an associative form and the orchards surface. The R (residue standardized) showed that the farmers owning less than 2 ha would aim to join an association for supply, storage, food processing, and the ones owning between 5 and 20 ha aim sourcing and processing, the farmers owning between 20-50 ha need supplying and the ones with over 50 ha wish

products processing. Therefore, the answer to this question was determined by the orchard surface owned by farmers.

Between the goal of accession to an associative form and the orchards surface we found a Pearson's C = 0.68 and Cramer's V = 0.54., reflecting that the surface owned by farmers is an important decision factor to join an associative form (Table 5).

Regarding the profit distribution in the associative form, 48% of the interviewed persons answered that the decision should be drawn by the majority, while 38% considered that the profit should be distributed based on the decision of all the association members and 14 % persons thought that the profit should be automatically reinvested (Table 6).

Among those who believe that profit should be reinvested automatically, about 14 % belonged to the South Muntenia region, while those who believed that the decision should belong to the majority, 15 %, belonged to the South-West Oltenia.

Table 6. Structure of farmers based on their opinion on profit distribution in the associative form by region

How should the profit be distributed in the associative form?				
Region	By decision of the majority	By decision of all members	It should be automatically reinvested	Total
Region Bucuresti - Ilfov	0%	0%	4%	4%
Region Central	4%	0%	0%	4%
Region North-East	8%	0%	0%	8%
Region North - West	4%	9%	0%	13%
Region South - East	8%	0%	0%	8%
Region South - Muntenia	5%	15%	10%	30%
Region South - West Oltenia	15%	10%	0%	25%
Region West	4%	4%	0%	8%
Total	48%	38%	14%	100%

Source: Data from the questionnaire.

Those farmers who considered that the profit should be distributed by the majority of the association members had small and very small farms, less than 2 ha and between 2 and 5

hectares. The farmers who believed that the decision should be taken unanimously were represented by those owning less than 2 hectares.

Regarding the distribution of profit within the Association related to the orchard surface, the statistical association test (Chi-square = 60.79*** and the critical value = 20.09 with a probability <0.01) proved that there is a very significant link between the growers' opinion on the of profit distribution and the surface of orchards on the studied topic and the analysis of R (residue standardized) observed significant differences especially between those growers with areas less than 2 ha and the ones owning orchards larger than 50 ha who believed that profit should be reinvested. Some farmers with 20-50 ha thought that profit should be distributed according to the decision of the majority. Therefore, the profit distribution is conditioned by the orchards surface owned by respondents (Table 7).

Table 7. Structure of growers based on their opinion on the profit distribution in the association by holding

How should the profit be distributed in the association?						
Once owned harvesters area						
Specification	Unit size	By decision of the majority	By decision of all members	It should be automatically reinvested	Total	
		No.	No.	No.	No.	%
< 2 ha	No.	18	19	0	37	37%
2 – 5 ha	No.	16	4	4	24	24%
5 – 20 ha	No.	14	10	0	24	24%
20 – 50 ha	No.	0	5	5	10	10%
> 50 ha	No.	0	0	5	5	5%
Total	No.	0	0	0	0	0%
	%	0%	0%	0%	0%	0%
Standardized residue						
< 2 ha	No.	0.06	1.32	-2.28		
2 – 5 ha	No.	1.32	-1.70	0.35		
5 – 20 ha	No.	0.73	0.29	-1.83		
20 – 50 ha	No.	-2.19	0.62	3.04		
> 50 ha	No.	-1.55	-1.38	5.14		
Chi-square calculated =	60.79***	The critical value (theoretical) =		13.36	p > 0.1(*)	
Degrees of freedom (df) =	8			15.51	p > 0.05(**)	
Cramer's V =	0.55	Pearson's C =		20.09	p > 0.01(***)	
				0.61		

Source: Data from the questionnaire.

Also, the interpretation of Pearson's C respectively Cramer's V confirmed that between the growers' opinion on the profit distribution in the association and the area of the orchards that respondents hold there is a significant link (Pearson's C = 0, 61, Cramer's V = 0.55). But there is no link between the growers' opinion regarding the profit sharing in the form of association and the orchards area (Table 7).

CONCLUSIONS

Unfortunately, the word "association" has left deep scars on Romanian farmers, who after 25 years refuse or do not really know the benefits and advantages offered by association. This has emerged from the questionnaire and most of the respondents were represented by orchardists of over 60 years and whose level of knowledge is quite limited. However, those

who are not interested to join an association are those whose surface is below 2 hectares, therefore they have subsistence and semi-subsistence farms, and those whose farms have over 50 hectares.

The main purpose of the association is supply and processing. If they belong to an association, the farmers could get inputs at lower prices because they can buy a larger quantity and therefore production costs will be lower. Also, the products processing within an association creates value added to the products produced, and this contributes to a higher selling price and sales.

The better promotion and dissemination of the association advantages could help farmers to be aware of the offered facilities and decide easier to join, and this will contribute to the development of agriculture and the economy of Romania. The association is one of the viable solutions to relaunch the Romanian agriculture.

The development of a National Strategic Plan for Agricultural Development on medium and long term need to take into consideration those aspects which the creation of associative forms in agriculture and horticulture.

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