

AGRICULTURAL COOPERATIVE – VIABLE ALTERNATIVE FOR THE ECONOMIC-SOCIAL DEVELOPMENT OF SMALL AND MEDIUM FARMERS. CASE STUDY CĂLĂRAȘI COUNTY, ROMANIA

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Abstract

Romania has an agriculture in which approximately 37% of the population carries out their activity, with approximately 3 million plots, whose average surface is 1.5 ha, a fact that acutely requires the organization of farmers in associative forms, in order to modernize this important economic branch. Starting from these considerations, we analyzed, using the survey method based on a questionnaire, in 3 communes from Călărași county, the situation of farmers, on a structured sample based on the information taken from the Agricultural Register of the town halls, with a number of 238 respondents, having as its main objective the identification and drawing of development directions for small farmers, starting from the situation highlighted by means of processed and analyzed statistical data, but also by applying the opinion survey among small farmers. In order to evaluate the correlation of two important variables in the questionnaire, respectively, the farmer age and the farm size, the chi-square test was used, a test of statistical significance, through which we analyzed the frequencies for the measurable variables, on a nominal or ordinal scale. The possibility of association with other owners of farms in order to develop was analyzed: for the use of the land, the possibility of association being accepted by 46.2% of the respondents; for the association for the purpose of joint use of agricultural machinery, more than 33% support this possibility; for the valorization of agricultural products, over 30% want association with other farmers; 37% would associate for the joint rearing of animals; 34.5% want an association for the processing of agricultural products, 34.5% are followers of this association. We conclude that the organization of agricultural producers in associative forms opens new opportunities for economic development, by attracting local, zonal or regional advantages, and through collective bargaining power to increase the prosperity of the associated members and the communities they belong to. We also appreciate that among the factors of progress for the sustainable development of agriculture and the rural environment, an important place is occupied by the establishment and development of efficient associative structures, which contribute to the socio-economic stabilization of rural areas by favoring the development of agrarian structures integrated with market flows and economically efficient.

Key words: association, cooperative, development, farmer, rural area

INTRODUCTION

Agriculture is a field in which association and cooperation were and are more necessary than in any other field of human activity, the isolated farmer feeling practically powerless in the face of the circumstances that arise in a market economy [1, 7].

In the recent years, worldwide, due to the strategies of concentration or development, farmers farmers must choose the best action strategy, because in these uncertain conditions, only farms that have a secured market and are able to access and manage funds can be viable, profitable and competitive [4,14]. As an alternative and

opportunity, farmers should consider the possibility of some form of association, among which cooperatives, groups of producers and associations of producers stand out [3,7].

In this approach, the market economy is perceived as a place of cooperation where people organize themselves in order to obtain economic advantages, which individually could not have been achieved or would have required much greater efforts [2, 6].

They can benefit from the advantages resulting from the practice of cooperation only if their own entity is worth more in combination than separately [10, 17].

Cooperation, and by extension, its practical form of manifestation-cooperative, is an inexhaustible source of solutions both for it (as an institutional structure) and for the community in which it functions/manifests itself [2, 26].

It is obvious that Romanian agriculture takes place on two levels: - farms with legal personality, non-cooperative, commercial, with development and consolidation tendencies, adapted to the entrepreneurial sector; - the traditional peasant household, autonomous, poorly performing, with little mechanization, focused on self-consumption and with reduced commercial functions [4, 25, 28].

In this context, if the first category of farms operates exclusively on the basis of the rules established by the market economy, in which the competitive sector regulates the entire process, the second category of farms subscribes to the subsistence farm, in which the social function precedes its economic function, covering - self-consumption with own agricultural and food products, with fodder products for household livestock and only partially with availability for commercialization, not capitalized but properly [5, 11, 29].

In Romania, the problem related to the establishment of associations/cooperatives lies mostly in the ignorance of these terms. This notion is completely excluded in the view of the older farmers who confuse these forms of association with the CAPs, through which their properties were confiscated. The current awareness of young farmers regarding the advantages that the association brings remains, most likely, the most sustainable solution in this sense [29, 21].

Small and medium-sized producers have a low profitability compared to large producers, whose high productions ensure the possibility of selling their products in large food chains. This is also one of the reasons why small and medium producers are not allowed to sell the products obtained in these stores, due to the inability to offer a large quantity all year round [8, 12].

Through cooperatives, a reduction in product trading costs is achieved, and a reduction in

opportunistic behaviors is achieved, as well as limiting the risks deriving from these behaviors [9,29].

The acceptance of cooperative property must be done not in alternative or substitution relations to the other two forms of property in the economy (individual private property and public property), but in active partnership relations [11, 17].

The cooperative principles must be applied in their totality and unity to give personality and stability to the system, but also comparability with existing systems in other countries. Registering in a cooperative group must be done based on the use of scientifically based procedures and criteria, which take into account the profile and size of the activity, but also the entrepreneurial spirit, future projects, innovative spirit, professional and personal aspirations, etc. [13, 21]. Cohesion of the group represented by the cooperating members is a condition that guarantees the good functioning of these entities. As such, a cooperative that wants to be functional must be made up of similar entities or legal structures [8, 11].

In this context, the purpose of this study is the identification and drawing of development directions for small farmers, starting from the situation revealed through the processed and analyzed statistical data, but also by applying the opinion survey among small farmers from three communes of Călărași county.

MATERIALS AND METHODS

The specific objectives of the research consisted in: analysis of the current situation of small farmers; the structure of farms according to legal status and seniority; the share of farms distributed by surface size; the method of marketing the products; the possibility of association with other farm owners in order to develop.

A number of 238 farmers from Independența, Borcea and Dorobanțu communes were selected in the study sample, respectively, 90 from Independența commune, 80 from Borcea commune and 68 from Dorobanțu commune. The research was based on the survey method based on a questionnaire, physically applied,

at the farmer's residence, between February and April 2023, and the correlation of the information was verified by the χ^2 test.

The questions were structured on 2 levels, respectively, 4 filter questions, related to the age of the respondents, the age of the farm, the size and legal form of the farm and 4 groups of questions with predetermined answers, to simplify the process of completing and analyzing the answers, but also so that the respondents can choose the one that best reflects the situation pursued by the questions in the questionnaire. The age groups were structured in five levels, as follows: up to 30 years, between 31-40 years, between 41-50 years, between 51-60 years, over 60 years. Regarding the criterion on the structure of farm, according to the number of years since the establishment of the farm 7 groups of categories were used, and regarding the structure of farms distributed by surface size, 5 categories were determined.

In order to determine the cumulative distribution function that applies to statistical distributions we used the χ^2 ("hi-square") test of concordance, a general test that is applied

to grouped data or frequency data by associating the columns and rows of a two-entry table, cross frequencies, in which the data are classified according to one, two, or more segmentation variables being calculated after the compilation of contingency tables [18,19]. The significance threshold was chosen and the number of degrees of freedom of the table was calculated to the formula $(r-1)*(c-1)$; then, to take the value of χ^2 from the distribution table, theoretical χ^2 , to compare the obtained results and to determine if there to check the association between variables or the existence of a null hypothesis.[27]. The calculated χ^2 is compared with the theoretical χ^2 for different probability thresholds.

RESULTS AND DISCUSSIONS

A number of 238 persons answered the questions, of which, 90 from Independența commune, 80 from Borcea commune and 68 from Dorobanțu commune. Regarding their age, the largest percentage is occupied by those in the 41-50 age group, namely 29.4% of the total, as it can be seen in Table 1.

Table 1. Structure and share of respondents depending on age, on the 3 communes studied in Călărași county

Commune Age category	Independența		Borcea		Dorobanțu		Total	
	No	%	No	%	No	%	No	%
UM	No		No		No		No	
< 30 years	6		14		6		26	10.9
31-40 years	32		20		18		70	29.4
41-50 years	14		12		20		46	19.3
51-60 years	12		22		14		48	20.2
>60 years	26		12		10		48	20.2
Total	90		80		68		238	100

Source: Own determinations, based on questionnaire.

Table 2. Structure and share of farms belonging to respondents, according to the number of years from the farm establishment, in the three studied communes

Specification	Independența		Borcea		Dorobanțu		Total	
	no	%	no	%	no	%	No.	%
< 10 years	22	24.4	8	10.0	12	17.6	42	17.65
11 to 15 years	10	11.1	12	15.0	22	32.4	44	18.49
16 to 20 years	6	6.7	16	20.0	10	14.7	32	13.45
21 to 25 years	14	15.6	3	7.5	6	8.8	26	10.92
26 to 30 years	14	15.6	24	30.0	6	8.8	42	18.49
31 to 35 years	18	20.0	10	12.5	6	8.8	34	14.29
> 35 years	6	6.7	4	5.0	6	8.8	16	6.72
Total	90	100.0	80	100.0	68	100.0	238	100.0

Source: Own determinations, based on questionnaire.

Respondents over 51 years old also have an important percentage, 40.4%, this percentage being stratified by two age groups, and respondents under 30 years old, registered only 10.9%, these data demonstrating the population's aging trend from the countryside. According to FAO, the farm is an economic unit of agricultural production, subject to a single management and which includes all the animals that are found and the land used totally or partially for agricultural production, regardless of the form of ownership, area or legal aspect.

From the analysis of the age of the farm (Table 2), it is found that over a third of the farms are less than 15 years old, so that 21 farms are less than 10 years old (more than half of them are part of the Independența commune) and 22 farms with age between 11 and 15 years (half are part of Dorobanțu commune).

An important percentage is held by farms established 26-30 years ago, respectively, 18,49% of the total. As it can be seen from Table 2, in our case study we also have farms with a long history of 35 years, and of course, with a vast experience in agriculture, which proves once again the agricultural profile of the three communes studied.

According to the data of the National Institute of Statistics, in Romania, there were 2.887 million farms using 12.8 million hectares of agricultural land, at the level of 2020 [24]. In only 10 years, the number of farms decreased by 25.2%, while the agricultural area used

decreased by 4.1%. From a legal point of view, the number of farms without legal personality in the same year was 25.3% lower than in 2010, and those with legal personality decreased by approximately 17% [24]. This reduction in the number of farms made ca the average agricultural area per farm to increase from 3.45 ha in 2010 to 4.42 ha in 2020. This tendency to reduce the number of farms also had implications on the structure of farms, by reducing the share of those with smaller used agricultural area of 0.1 ha from 10.3% to 4.3% in the same period and the increase in the share of those who used areas larger than 10 ha from 2.2% in 2010 to 4.2% in 2020 [24].

By category of farms: the used agricultural surface that returned on average to a farm without legal personality was 2.73 ha, compared to 1.95 ha in 2010; the used agricultural surface that returned on average to a farm with legal status was 194.78 ha, compared to 190.78 ha in 2010 [23].

Still, the size of 2.73 ha is considered far too small for the sustainability of a family as well as for the practice of a rational agricultural system both from a phytotechnical point of view and the use of modern work equipment. The production profile, however, allows small farm to produce much more, in the case of vegetable cultivation, of vineyards and orchards. Moreover, the small peasant farms are mostly mixed, they raise animals and practice either the cultivation of plants, field crops or fruit trees.

Table 3. Structure of farms according to legal status of respondents farm

Specification	UM	Independenta	Borcea	Dorobanțu	Total	
					No.	%
family farm without legal status	no	34	23	29	86	36.13
	%	39.53	26.74	33.73	100	x
authorised natural person (PFA/I.L.)	no	56	57	39	152	63.87
	%	36.84	37.5	23.66	100	x
Total	no	90	80	68	238	100
	%	37.8	33.6	28.6	100	x

Source: Own determinations, based on questionnaire.

Regarding the legal status of the farms studied, as shown in Table 3, 36.13% are part of the group of family farms without legal status and 63.87% are registered as Authorized Natural Persons or as Individual

Enterprises, an encouraging aspect regarding the ability to understand small farmers regarding the advantages of association and cooperation in agriculture.

Table 4. Structure and share of respondents farms, distributed by surface dimensions

Specification	UM	Independența	Borcea	Dorobanțu	Total	
					No.	%
< 5 ha	no	26	8	10	42	18.49
	%	59.09	18.18	22.73	100	x
5,1 -10 ha	no	40	24	18	82	34.45
	%	48.78	29.27	21.95	100	x
10,1 ha-20 ha	no	14	14	12	20	16.81
	%	35	35	30	100	x
20,1 ha -30 ha	no	4	22	14	20	16.81
	%	10	55	35	100	x
>30 ha	no	6	12	14	16	13.45
	%	18.75	37.5	43.75	100	x
Total	no	90	80	68	238	100.0

Source: Own determinations, based on questionnaire.

Table 5. Correlation between respondents age and farms size

Age	UM	Farm size(ha)					al	
		< 5	5.1 -10	10.1 -20	20,1 -30	>30	No.	%
< 30 years	Nr.	8	10	2	x	6	26	10.92
31-40 years	Nr.	24	16	12	8	10	70	29.41
41-50 years	Nr.	6	14	10	6	10	46	19.33
51-60 years	Nr.	6	20	2	16	4	48	20.17
>60 years	Nr.	x	22	14	10	2	48	20.17
Total	Nr.	44	82	40	40	32	238	100
	%	18.49	34.45	16.81	16.81	13.45	100	x
Indicators	Test χ^2	Significance threshold					N	
	\leq	0.2	0.1	0.05	0.01	0.001		
CHIINV (Chi theoretical)	\geq	20.47*	23.54	26.3	32	39.25	N	
CHIINV (Chi calculated)	21.82							

Source: Own determinations, based on questionnaire.

From Table 4, it emerges that the farms studied, in most of them, subscribe to the national statistics: 34.45% are part of the 5.1-10 ha category, of which almost half are from Independența commune; 18.49% have an area of less than 5 ha, more than half being part of Independența commune; farms in the 20.1-30 ha and 10.1-20 ha categories are with a percentage of 16.8%; in the second category, 55% of the farms are from Borcea commune; with an area larger than 30 ha, 16 farms are registered, 13.45% of the total, the majority being from Dorobanțu commune.

As the national statistics highlights, young farmers (under 30 years old) represent only 7% of the total population of farmers, exploiting a percentage of 7% of the SAU [4, 3].

At the other extreme, farmers who have passed the retirement age (over 65 years old)

represent 40% of the total number of farmers and exploit 30% of the SAU.

From the data presented in Table 5, in the communes studied, as in the national statistics, only a percentage of 10.9 are under 30 years of age, and almost all of them have farms with an area of up to 5 ha. Among those aged between 31-40, a third own farms with an area between 5.1 and 10 ha. Farms with an area between 5.1-10 ha are owned by respondents over 50 years old, which confirms the data above, and for those who have farms larger than 10 ha, the majority are respondents from the same age category. Thus, an insignificant correlation between the size of the farm and the age of the holder is found.

In the rural area, in the vast majority of cases, products are sold through direct sales. The direct sale of agricultural products has always existed, but it holds a small proportion (6-8%)

of the total activities of selling agricultural products, depending on the type of agricultural product and the producing region. [21]. Thus, approximately 70% of the

domestic agricultural harvest is sold directly even if there are much more profitable options for producers [24].

Table 6. Structure of forms of selling vegetal products in respondents farms

Specification	UM	Independența		Borcea		Dorobanțu		Total	
		No	%	no	%	No	%	No	%
Direct sell	No.	71	85.5.	62	87.3	53	84.1	186	85.7
Contract sell	No.	12	14.5	9	12.7	10	15.9	31	14.3
Total	No.	83	100.0	71	100.0	63	100.0	217	100.0
Persons surveyed	No.	90	100.0	80	100.0	68	100.0	238	100.0
Persons who do not sell	No.	7	7.77	9	11.25	5	7.35	21	8.82

Source: Own determinations, based on questionnaire.

As it results from the data presented in Table 6, more than 85% of the analyzed farms capitalized the production directly at the time of harvesting, a situation distributed almost symmetrically among the 3 municipalities, with a percentage between 84.1% and 87.3% of the total of those who sold the obtained production.

Only 14.3% of the respondents who sold the obtained production had distribution contracts, a situation distributed almost identically among the 3 communes, with percentages between 12.7% and 15.9%. We note the fact that there is also a percentage of approximately 9% of the respondents, who did not sell the obtained production but used it for their own consumption and for animal feed.

At the level of the agricultural farm, a specific aspect can be observed in terms of the consumption of agricultural products, because, according to the statistics, at the national level, in the year 2020, the elderly participate in the maintenance of the farmers, but also the relatives who live in the city - 3,259 people/household returned to the rural environment, and 3,016 people returned to the South-Muntenia Development Region [23,24].

From the analysis of the distribution of the products obtained, in the communes studied, it is found that out of the total of those surveyed, 232 persons consume products from

the farm but also actively participate in the activity in the farm and a number of 152 people are the persons who are part of the category of children and old persons who consume but do not help in the agricultural activity (Table 7).

The ratio of 0.66 between the number of adults and the number of children, the old, etc., indicates that there are many dependents, especially the old.

This number of persons who do not participate in production is very high, unlike other countries of the European Union, where almost all family members are involved in agricultural activity.

As it results from the centralized information in Table 8, it is interesting that for the use of the land, the possibility of association is accepted by 46.2% of the respondents, almost half of them being from Dorobanțu commune; for the association for the purpose of joint exploitation of agricultural machinery, more than 34% agree, 80% being from the communes of Independența and Borcea and 17% from the commune of Dorobanțu; for the joint sale of agricultural products, over 31% would like to associate with other farmers; 38% of the total consider an association for animal breeding; and an association with the purpose of processing agricultural products, is desired by 35.34% are followers of this association, almost half of those who

answered affirmatively are from Independența commune.

Table 7. Correlation between people who worked on the farm and the number of people who consumed agricultural products

Specification	No./farm.	Independența	Borcea	Dorobanțu	Total	
		No.	No.	No.	No.	%
Number of adults who consumed, but also worked in the farm	1	12	2	8	22	9.5
	2	44	30	36	110	47.4
	3	14	26	12	52	22.4
	4	12	14	6	32	13.8
	5	4	6	4	14	6.0
	6	x	x	2	2	0.9
Total	no	86	78	68	232	100.0
	%	37.1	33.6	29.3	100.0	X
Number of children, old, other relatives who live in the farm and who only consumed in the farm	1	28	20	18	66	43.4
	2	20	20	26	66	43.4
	3	2	10	0	12	7.9
	4	2	x	2	4	2.6
	5	x	x	2	2	1.3
	6	x	x	2	2	1.3
Total		52	50	50	152	100.0
<i>Relation No of children, the old etc/No of adults</i>	%	0.60	0.64	0.74	0.66	X

Source: Own determinations, based on questionnaire.

We consider that the desire for association should be used for the creation of agricultural cooperatives in the directions given by the respondents, because one of the great challenges facing the agricultural sector at European level is the increase in the number and variety of viable and sustainable agricultural enterprises economically speaking.

In this sense, agricultural cooperatives can be considered preferred vehicles through which farmers join forces, create organizational structures that take over functions related to production, both upstream (financing, credit, input purchases, etc.) and downstream - especially through commercialization of production, which ensures a better future for them [15,16]. Cooperatives and groups of producers benefit from access to subsidies and European Funds with the role of support and development of agriculture in Romania [21, 22].

PNDR support granted within s.M 4.1. "Investments in agricultural holdings" open to it is also addressed to farmers from the categories of natural persons, individual and family businesses, but also to legal entities,

with the aim of increasing the performance of farms, in terms of the competitiveness of the activity, the diversification of production and the increase of product quality, the transformation of small and medium-sized units into commercial units, compliance with standards community.

The final objective is to increase the added value of agricultural products by processing them at the farm level and selling them directly to consumers, respectively, the promotion of integrated agri-food businesses. These facilities can be divided into two categories: cooperative facilities and facilities for cooperative members. If the cooperative carries out product processing activities and/or obtaining of genetic material the production of genetic material, animal breeding, are exempt from paying the profit tax in the first 5 years from the date of entry into production. In Călărași county, according to the data provided on MADR website, in the National Register of Agricultural Cooperatives (RNCA), in 2021, 57 cooperatives were established, of which only half had submitted a balance sheet a year ago [20].

Table 8. Structure of activities desired, for the association with other farm owners

Specification		Independența		Borcea		Dorobanțu		Total	
		No.	%	No.	%	No.	%	No.	%
1. for joint use of land use	yes	38	42.2	28	35	44	64.7	110	46.22
	no	52	57.8	52	65	24	35.3	128	53.78
2. for the joint operation of agricultural machinery	yes	36	40	32	40	12	17.6	80	34.48
	no	54	60	48	60	56	82.4	158	65.52
3. for the sale of agricultural products	yes	34	37.8	16	20	22	32.4	72	31.03
	no	56	62.2	64	80	46	67.6	166	69.97
4. for the animal breeding	yes	36	40	12	15	40	58.8	88	37.93
	no	54	60	68	85	28	31.2	150	62.07
5. for processing of agricultural products	yes	40	44.4	24	30	18	26.5	82	35.34
	no	50	55.6	56	70	50	73.5	156	64.66
6. in other fields	yes	12	13.3	8	10	10	14.7	30	10,35
	no	78	86.7	72	90	58	85.3	208	89.65
Total		90	100	80	100	68	100	238	100.00

Source: Own determinations, based on questionnaire.

CONCLUSIONS

Regarding the cooperation, the European experience, with special reference to the developed countries in the west of the continent, is rich, effective and can be considered a reference model, a context in which an analysis of all social relations and effects, of national and European legislation, is required. of the factors and economic levers that can contribute to the development of cooperation, to find the ways, methods and means to increase the efficiency of the added value, for the sustainable and efficient development of agriculture.

From our study, it results that there are activities for which the desire of the respondents to associate is found in about 50% of those surveyed, who are aware that if they are part of associative forms, new opportunities for economic development will be opened to them, by attracting local zonal or regional advantages, and they can use the collective power to increase personal prosperity, their families and the communities they belong to, because they have democratically established rights, and this represents one of the greatest benefits.

However, you should be informed that the strength of the cooperative does not result

from the size of its property or the associated members, but from the intensity of the relations between the cooperative and its members, respectively its market partners, that the success of these structures is given by the unity of interests of the cooperative members and not by the work in common, because many claim that they have too small farms to enter into a form of association.

The cooperative must not be tied to the land, especially when it is addressed to persons with small and very small properties, and its activity must be found, with priority, in the sphere of covering the markets, especially the agri-food ones, as well as in the collection area, processing, storage, etc., aspects that our respondents do not master but consider as constraints rather than opportunities.

The idea must be promoted that the homogeneity of the group represented by the cooperative members is a condition that guarantees the good functioning of these entities and, as such, a cooperative that wants to be functional must be made up of similar entities or legal structures.

We appreciate that among the factors of progress for the sustainable development of agriculture and the rural environment, an important place is occupied by the establishment and development of efficient

associative structures, which contribute to the establishment of value-added creative sectors in Romanian agriculture, predictable and perennial.

We need the promotion of agricultural cooperatives as a model of success in structuring a better governance of Romanian agriculture to ensure the security, sovereignty, food safety of the population and increase the competitiveness of Romanian farmers on the single European market, cooperatives being alternatives for economic-social balancing, with a major impact in balancing the trade balance, increasing the value added to primary production and strengthening the role of farmers in the agricultural and food chain. It should be noted that by joining to agricultural cooperatives, small and medium farmers have the most to gain, but this does not exclude that among them there are also above-average farmers who joined the cooperative and worked in the cooperative since many years. In order for cooperative members, small and medium farmers to have results, it is necessary for that cooperative to have a high negotiating capacity, to be consolidated or to be stimulated to consolidate. Otherwise, experience shows us that they will have the same results and fate as the small farmers who compose them.

As it also results from our study, beyond the advantages offered by belonging to an associative form, in Romania, appropriate legislation is important, but also the removal of psychological obstacles that stand in the way of the establishment and operation of agricultural cooperatives, barriers that relate to the existence of certain behavioral traits of small farmers, who have a certain level of training and professional training, and who hardly give up their individual convictions to think collectively and in the interest of all members of the associative structure.

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