

## **RESEARCH ON THE FARMERS' ASSOCIATION IN THE CONTEXT OF SUSTAINABLE FRUIT GROWING**

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### **Abstract**

*Fruit growing sector in Romania is characterized by an aging exploitations, lack of storage and packaging of fruit and lack of associative forms.*

*In the context of a free market, the association is the only chance Romanian growers to become more competitive and how to capitalize production with acceptable sale price.*

*Most orchards share is size between 0 and 5 ha, representing 86% of total holdings fruit and manages approximately 52% of the surface.*

*Obsolete technologies, and lack of equipment determines obtain some much lower than the European average.*

**Keywords:** *association, farmers, sustainable fruit growing*

**JEL classification:** *Q10, Q12, Q13*

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### **1. Introduction**

The climate favors the cultivation landscape with a variety of plants, from high culture (wheat, corn, floral-Sun; rape) to those grown in some smaller areas such as melons, tomatoes field, sugar beet even plants grown under shelter (greenhouses and solariums).

Establishment and orchards care is a traditional activity with the vine that occupied and still occupy an important role in Romanian agriculture.

Orchards are established mainly in the plateau and hill areas but also occur in lowland areas, especially in areas around agglomerations. The most

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common tree species grown in Romania are: apple, cherry, apricot, nectarine, peach, sour cherry, plum, and walnut. Also, besides the aforementioned species are cultivated and a series of shrubs: blueberries, gooseberries, buckthorn, raspberry, currant, and blackberry.

Climate change is the increasing lately, has made possible the cultivation of trees and shrubs a little more exotic, such as kiwi, almonds, goji berries, aronia.

In Romania, the period of association or cooperatives of farmers is dismissed in its entirety because the communist past, when they were dispossessed of land. For this reason the association is very difficult, few are those who want to join, with above advantages offered by the union of all farmers in a given area and sector.

Risks encountered in this sector are the possibility of signing free trade agreements and increasing the international competitiveness of both the fruit brought from European Union countries (Poland, Greece, Italy, Spain) and the extra (Turkey, Moldova).

Increasing energy costs and labor, rural depopulation, production and insufficiently linked to local and European market are other risks that may affect the activity of the fruit growing sector.

Romania has many research institutes in the orchards and yet those who wish to invest in this area are moving towards varieties brought from other countries, which are not adapted to the conditions of our country.

## **2. Material and methods**

This paper aims to analyze the development of fruit growing sector in Romania by analyzing acreage, yields obtained, the production and consumption of fruit during the period 1990-2013.

The data allowed us to perform this analysis were collected by means of public institutions, including the National Institute of Statistics and Ministry of Agriculture and Rural Development.

The study was to research, analyze and interpret statistical data. These, together with extracts from the theoretical literature allowed the identification of mutations in agriculture occurred in the process of collectivization and privatization.

### 3. Results and discussions

Regarding the current situation analysis of fruit growing in Romania, it is noted that existing fruit exploitations are currently slow aging and regeneration, yielding Thus far lower yields and lower quality.

Technical equipment is a poor fruit-growing sector, as in all Romanian agricultural sector. Lack of equipment performance lead to the application of outdated technologies that lead to a drastic decrease in production and increased costs for growing, thus we are below the European average in the production of fruit per hectare.

Lack of storage, conditioning, sorting, processing and packaging production directly lead to exploitation of the field, at a selling price decreased compared to the selling price, if the existence of these spaces.

Banking financial institutions in Romania, few in number, have a credit line to help the Romanian farmers with affordable loans and interest to support investment in fruit growing sector.

**Table 1: The evolution of land by use (%)**

Specification	Years								
	1990	1995	2000	2007	2009	2010	2011	2012	2013
<b>Total Land Fund</b>	100	100	100	100	100	100	100	100	100
<b>Agricultural area</b>	61,95	62,07	62,32	61,70	61,60	61,39	61,33	61,31	61,29
<b>Arable land</b>	39,64	39,17	39,35	39,53	39,53	39,45	39,35	39,40	39,39
<b>Pastures</b>	13,69	14,23	14,44	13,97	13,90	13,80	13,76	13,72	13,73
<b>Hayfields</b>	6,15	6,28	6,32	6,42	6,41	6,42	6,52	6,48	6,47
<b>Vineyards and vine nurseries</b>	1,16	1,23	1,14	0,91	0,90	0,90	0,89	0,88	0,88
<b>Orchards and nurseries</b>	1,31	1,16	1,07	0,87	0,86	0,83	0,82	0,83	0,82

Source: Data processing by the National Institute of statistic, Tempo-Online - series time;

At the country level total area covered with meadows is 6.5%, while the area occupied by vineyards and vine nurseries has fallen from around 1.2%, as it was in 1990, 0.88% in 2013. The orchards and nurseries decreased so that if in 1990, the area occupied by orchards was 1.31% of the total area countries in 2013, the orchards are restricted to 0.82% of the surface.

Orchards and nurseries meet, particularly in the south and southwest, so that in the year 2013, the area planted with orchards in the south is 21.02%, while in the South -west area occupied is 20.22% (Table 1).

**Table 2: The area cultivated with various crops in Romania (%)**

The main crops	Ani								
	1990	1995	2000	2007	2009	2010	2011	2012	2013
<b>Cereals for grains</b>	60,67	69,87	66,53	65,95	67,00	64,56	64,65	67,51	66,38
<b>Grain legumes</b>	1,38	0,68	0,49	0,56	0,49	0,48	0,52	0,55	0,54
<b>Oil plants</b>	6,96	8,75	12,56	17,23	15,90	18,06	18,22	15,65	17,47
<b>Vegetables - total</b>	2,30	2,32	2,75	3,26	3,39	3,36	3,26	3,21	3,17
<b>Fruit orchards</b>	2,45	2,45	2,43	2,01	1,84	1,86	1,73	1,77	1,81

Source: Data processing by the National Institute of statistic, Tempo-Online - series time;

Romania imported large quantities of vegetables from EU countries and outside, especially during the cold season.

As can be seen from Table 2 for the period 1990-2013 the area occupied by fruit orchards experienced a downward trend so that if in 1990 were established orchards 2.45% of farming land, surface 2013 Low fruit orchards occupied by 1.81%.

The areas occupied by fruit orchards are restricted and over the years it was found that the remaining orchards are aging and very small sums allocated for their maintenance.

**Table 3: The evolution of the species of fruit in Romania (%)**

Categories fruit	Ani								
	1990	1995	2000	2007	2009	2010	2011	2012	2013
<b>Plums</b>	30,94	27,52	42,25	34,32	40,34	44,02	38,76	37,57	39,42
<b>Apples</b>	47,02	49,84	37,68	43,78	39,12	38,94	41,92	41,02	39,51
<b>Pears</b>	5,08	6,87	5,43	5,79	5,00	4,25	4,52	4,81	5,14
<b>Peaches</b>	3,64	1,46	1,41	1,55	1,24	0,76	1,43	1,49	1,42
<b>Nectarine</b>	-	-	-	0,01	0,07	0,03	0,12	0,04	0,05
<b>Cherries and cherry</b>	4,66	6,59	5,67	6,00	5,13	4,95	5,53	6,25	6,19
<b>Apricots</b>	3,30	1,66	2,18	2,54	2,46	1,68	2,28	2,58	2,18
<b>Nuts</b>	1,79	2,48	2,42	2,35	2,90	2,42	2,37	2,71	2,44
<b>Strawberries</b>	1,25	1,39	0,90	1,52	1,66	1,51	1,28	1,40	1,78

Source: Data processing by the National Institute of statistic, Tempo-Online - series time;

Plum production in Romania has evolved in 2009-2010, so that in 2009 over 40% of the fruit produced in Romania were represented plum, plum production in 2010 increased by 4% compared to 2009. In 2012 production put in Romania fell by 6.44%, compared to 2010, and in 2013 the production of plums decreased by 4.6% compared to 2010.

In 1995, Romania recorded a large apple production, over 49% of all apple fruit was represented. In 2011 and 2012 yields obtained are similar, over 41% of fruit in Romania was represented by apples, while in 2013 apple production drops below 40%.

Pear production in Romania has fluctuated so that the highest production recorded in 2007, when 5.79% of total fruit production in the country was represented by the pear. In 2013 there is a lower proportion of pear production in the total production of fruits by 0.65% compared to reference year 2007 (Table 3).

Peaches recorded a downward trend, in terms of their share in total fruit production, so that if in 1990 the share of total fruit production was 3.64% in 2013 share of total fruit production decreased by 2.23%, compared to 1990.

In 2011, the share of total fruit production nectarines was 0.12%. In 2012 recorded a decrease in their share of 0.07% compared to 2011.

The production of cherries and sour cherries registered a swing trend. So the highest share in total fruit was recorded in 1995, when 6.59% of total fruit production was the production of cherries and sour cherries. In 2013 the production of cherries and sour cherries decreased by 0.40% compared to 1995.

Apricots represented in 1990, 3.3% of fruit being produced in Romania. In 2013, production of apricots and engrafted share in total production decreased by 1.12% compared to 1990.

The most representative share of nut production, the total production was recorded in 2009, when 2.9% of the total production was the production of nuts. In 2013 the share of nut production decreased by 0.45% compared to 2009.

The lowest share of strawberry production was recorded in 2000, when only 0.9% of total fruit production was the production of strawberries. In 2013 the share of strawberry production has doubled, reaching 1.78% of total fruit production.

Poor association and cooperation for the production, especially the joint exploitation of fruit, is another important factor that negatively impacted capitalization production, product quality, supply of inputs and hence revenues growers.

According to information provided by the Ministry of Agriculture and Rural Development, in 2013 there were only 14 associative forms - three

producer organizations and 11 producer groups, of which only 8 cover products of the fruit tree.

Given the structural problems of horticulture (small size and fragmentation of farms large number of small holdings, etc.) and climate change adaptation and a low level of market requirements, farmers association and cooperation are important to increase power negotiating the purchase of machinery and agricultural technologies, increasing access to credit, introducing innovations and new management ideas.

#### **4. Conclusions**

Romanian orchardists must tie in organized structures that are designed to ensure connection to the markets, in order to improve and adapt production to market requirements both and consumer preferences.

The main objective of the association is harnessing members' products, so the manufacturer has no duty to sell production, which contributes to a better integration of agro-food producers in the market and short supply chains, aiming to eliminate intermediaries. The creation of short supply chains is necessary for the promotion and sale of production close to the source, either individually or jointly.

Support for producer groups is the way in which farmers can cooperate to improve the market share, increase revenue, and increase the viability and overall competitiveness. Because of possible cooperation between small farmers are innovative actions that cannot be made outside of associative forms such as the development of new methods for preserving food production to improve food safety, product, better suited to market requirements and methods of use and waste water purification environmental protection.

Romanian Government and the European Union, the National Rural Development Programme 2014-2020, supports investments in fruit exploitations creating two sub-measures dedicated exclusively to this sector: sub-measure 4.1.A Investment in fruit exploitations and sub 4.2.A Investment in processing / marketing products fruit growing sector.

This fruit-growing sector financing measures aimed at increasing competitiveness through provision of fruit farms and equipment, creation,

modernization and / or expansion of processing units, establishment of orchards, conversion of existing plantations and increasing the area occupied by nurseries. All submissions are subject to a **double blind review process**. Papers will be evaluated for originality, significance, clarity, and contribution. After the official acceptance of your full paper is issued, please complete your registration and hotel reservation as soon as possible.

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