Ancuța MARIN, Rodica CHETROIU, Lidia IURCHEVICI

Institute for Agriculture Economy and Rural Development,
Academy of Agricultural and Forestry Sciences "Gheorghe Ionescu Sisesti"
marin.ancuta@iceadr.ro

RESEARCH ON INCREASING THE VALORIZATION OF FRUIT PRODUCTION

ABSTRACT

The paper presents some of the problems that Romanian fruit growers are facing in relation to the valorization of fruit production. In this regard, the Research Institute for Agriculture Economy and Rural Development conducted a survey addressed to small and medium-sized producers in Romania. 153 questionnaires were applied in 5 representative counties in terms of fruit production: Argeş, Constanța, Dâmbovița, Prahova and Vâlcea. The conclusions that come up to solve the problems of small producers with regard to the increase of production valorization are related to supporting their activity through subsidies, elimination of intermediaries from the production valorization chain, exemption or reduction of taxes for those in the first years of activity, modification of Romanian legislation to support producers and, last but not least, a better promotion of Romanian products.

Key words: fruits, fruit growers, fruit production.

JEL Classification: Q12, Q13.

1. INTRODUCTION

Romania has good soil and weather conditions for fruit production, yet the low level of technology applied on the farms, of professional training of farmers and production organization, as well as the significant amounts of fruit sold at farmgate or in the street trading networks are major impediments for the efficient valorization of these productions.

Fruit farm competitiveness depends to a large extent on the ratio of production for fresh consumption to production for agro-processing industry. The fruit preservation industry has a wide range of processing operations and products. Some of them are carried out with a lower mechanization level, in particular the cleaning, sorting and filling operations for certain assortments.

The main types of preserved products in the Romanian industry are: concentrated fruit juice, natural fruit juices, fruit preserved by sterilization, pasteurization, marmalade, jam, dehydrated and dried fruits. In the case of these canned products, there is a great diversification of the products resulting from industrialization, the variety of possible assortments exceeding 900. Generally, the Romanian products have been appreciated both on the domestic and export markets, due to their special taste, as they are natural products and no preservatives, dyes or other food additives being used in the technological process. In addition, low amounts of chemical inputs, of pesticides and herbicides are used in the agricultural production.

The production potential of the sector is affected due to the following considerations: large number of small-scale farms, low endowment of holdings with modern production and harvesting techniques, decrease of the areas planted with fruit trees and fruit shrubs, high fragmentation level of areas under fruit trees, lack of a coherent land consolidation strategy, low level of fruit plantations rejuvenation, associated with large areas of fruit plantations under decline, increased frequency of extreme weather events that adversely impacts production, the low yields per hectare.

At the same time, the production potential of the Romanian fruit sector is characterized by: numerous holdings, a large assortment of cultivated fruit-tree species and varieties, favorable soil and weather conditions for fruit trees and shrubs, increase of land areas under fruit trees, modernization of the processing units.

2. STATE OF KNOWLEDGE

Under the ADER Project 16.1.2 “Development models of short chains for the capitalization on the primary production-services-storing-processing-selling market chain”, developed by ICEADR in the period 2015–2018, proposals are also envisaged for improving the vegetable farming activity in Romania. The project aims at streamlining agricultural and agri-food market structures, creating short chain models of fruit production capitalization on the chain and stimulating farmers to association/cooperation by presenting them the existing opportunities. This project is in line with the general and specific objectives of the ADER Sectoral Program, namely: “Mechanization and automation of processes in agriculture and food industry” and “Development of local, regional and national systems for conditioning, storage, processing and sustainable commercialization of Romanian agricultural products”.

The paper presents the researches on the Romanian fruit growing activity, highlighting the opinions of the small and medium producers on aspects regarding fruit production and its valorization. Given that Romania is currently far behind European countries both in terms of diversity and presence on the market, we shall look at some of the opinions of those directly involved, as the sale on the traditional markets is most often suffocated by intermediaries. These two problems would basically have a common solution: association. Associations would make it easier for producers to gain access to the market by reducing or even eliminating the number of intermediaries, reducing losses by the efficient capitalization of agricultural production and creating a short chain of valorization based on the concept "from producer to consumer".

Romania is confronted with increased fruit imports, the main effect of which was felt at the level of prices and of producers' incomes implicitly. The lack of supply concentration and the absence of producer organizations in particular have resulted in a weak position of domestic producers in relation to imports. Among the factors generating crisis on the fruit market we can list: chaotic production, not complying with the market requirements, extreme weather events and various diseases and pests, imports from the EU and third countries that affect the fruit market, a poor promotion of fruits for consumers as well as of the role and importance of fruit consumption for the health of the population.

Most often, the processing industry was the main outlet for absorbing surplus production, due to the lack of vertical integration of the sector, by establishing permanent contractual relations between producers and processors. From here it could be deduced that the fresh product chain is much more vulnerable to crisis factors, regardless of their nature, than the processing industry. Given the small size of fruit farms and the lack of farmers' experience regarding the insurance system, the crisis prevention and management mechanisms play a very important role in saving producers' incomes.

Fruit growers are threatened by large hypermarkets and also by massive imports. On one hand, large chain stores refuse to buy the merchandise at a fair price, and on the other hand, the imports compete against domestic production. About 50–60% of the Romanian fruit production is sold on peasant markets organized in towns and at farmgate. Although prices have an increasing trend, even when farmers have concluded commercial contracts, the beneficiaries do not come to pick up the commodities until the prices have fallen.

The emergence of large stores chains, the change in consumer preferences for sorted, packaged and labeled products that comply with the food quality and safety principles continue to reduce the percentage of production sold at farmgate in favor of organized markets. However, this percentage has also decreased as a result of intensified trade through intermediaries. The Romanian fruit, even though they do not always have a commercial aspect that satisfies the consumers' requirements, have special nutritional qualities. Producer organizations have a decisive role in this respect, whose main objective is to concentrate the supply, in order to ensure a qualitative and quantitative valorization of the production obtained at a good price.

a) Fruit market is characterized by a specific behavior, which is different from other agri-food markets. This is due to its many peculiarities, out of which the most important are: fruit production is mainly obtained on the producers' households, on small areas, diversified as varieties.

b) Seasonality of fruit products. Fruit have different degrees of seasonality, entering the market at the harvesting moment, for short periods of time. In this regard, we can say that the fruit supply is rigid, mainly in the case of perishable fruits.
c) The existence of a weakly developed collection system.
d) Continuous demand for fruit, while the fruit supply is seasonal.

For this purpose, it is necessary to store them in natural or forced ventilation spaces equipped with refrigeration chambers and equipment for monitoring environmental conditions (temperature, humidity, carbon dioxide).

3. MATERIAL AND METHOD

In order to highlight the problems that the Romanian fruit producers are facing and the possible solutions considered by them, 153 questionnaires were applied in 5 representative counties in terms of fruit production: Argeş, Constanţa, Dâmboviţa, Prahova and Vâlcea. In this paper, we shall present aspects related to the farm areas, production planning, production valorization and revenues from the fruit sale.

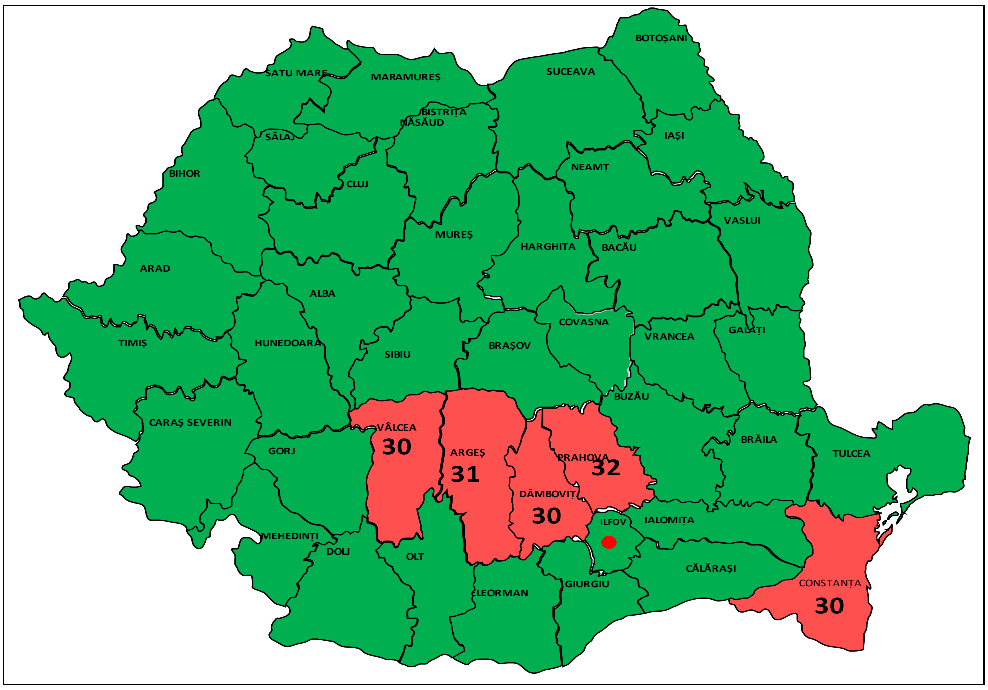


Figure 1 – Map with counties where questionnaires were applied.

The aim of the paper is to find out the pluses and minuses in the small fruit producers' activity with regard to production valorization and to identify the possibilities for increasing the value of their production.

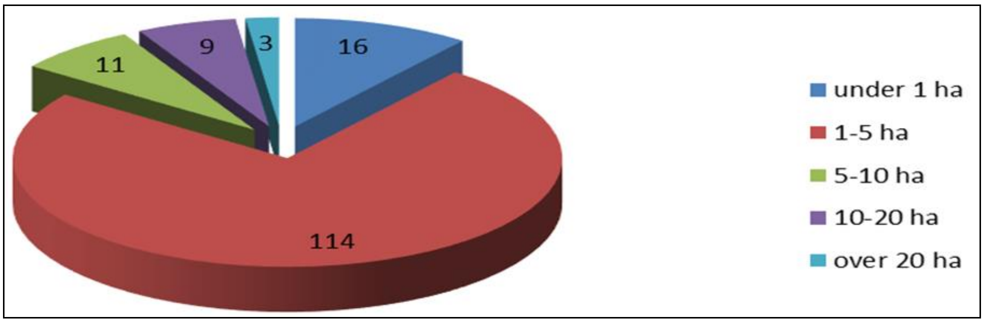
The research method used in this paper is the ”Questionnaire Survey”, a method commonly used in the last half of the century. Dr. R. Muchielli (1968) – a sociologist and psychologist – has set out 12 phases of the survey, which Prof. P. Golu synthesized into four sections: preparing the survey, writing and applying the questionnaire, processing and interpreting the results obtained, writing the final report.

In data processing, it is important to encode the answers and to analyze their content in order to determine the coding criteria, which makes it possible to create tables and process them (manually for small batches, electronically for bigger ones). Irrespective of whether or not assumptions are confirmed, the results must be presented objectively, using tables, charts, posters, slides etc.

4. RESULTS AND DISCUSSIONS

Following the survey conducted by the Research Institute for Agriculture Economy and Rural Development in March–April 2017, the problems of small and medium-sized fruit producers in Romania have been identified.

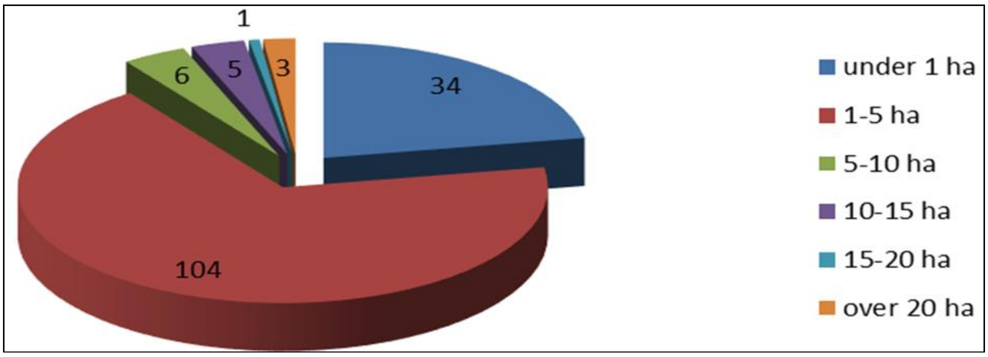
Most farmers participating in the survey (75%) have a holding of 1–5 ha, while only 3 operators have large holdings of over 20 ha, i.e. about 2% of all interviewees. The rest of farmers have holdings with areas of 5–10 ha (7%), 10–20 ha (6%) or under 1 ha (10%) (Fig.2).



Source: Questionnaire data processing.

Figure 2. Structure of sample by holding size.

22% of the 153 farmers participating in the study established orchards on an area of less than 1 ha. For the remaining farmers, the trend of areas under orchards is in line with the total area of holding, with a majority of about 70% 1–5 ha area under orchards, and approximately equal shares (4%) under 5–10 ha and 10–20 ha (Fig. 3).

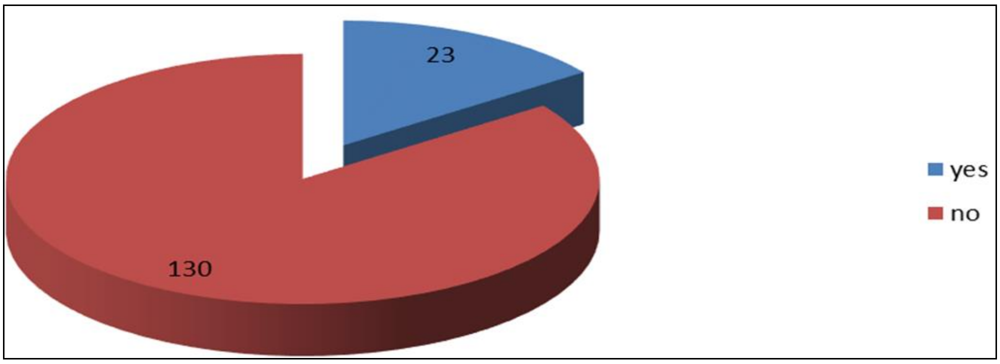


Source: Questionnaire data processing.

Figure 3. Area under orchards.

In terms of crop diversity, more than half of holdings grow apple and plum trees. As the questionnaire shows, apple trees are the most cultivated species, with 29%, followed by plums with 26%. At a large distance, with relatively equal percentages of 6–9%, strawberries, pear, walnut, apricot and peach trees are grown.

The marketing is another aspect taken into account in this study. Pre-harvest activities were taken into consideration, such as contracts for the sale of production, and the sales activity in terms of sale channels and revenues obtained. Thus, it can be noticed that only 15% of respondents plan their production structure on the basis of contracts concluded in advance, thus pursuing a well-structured, predictable management plan and reaching well-established indicators.

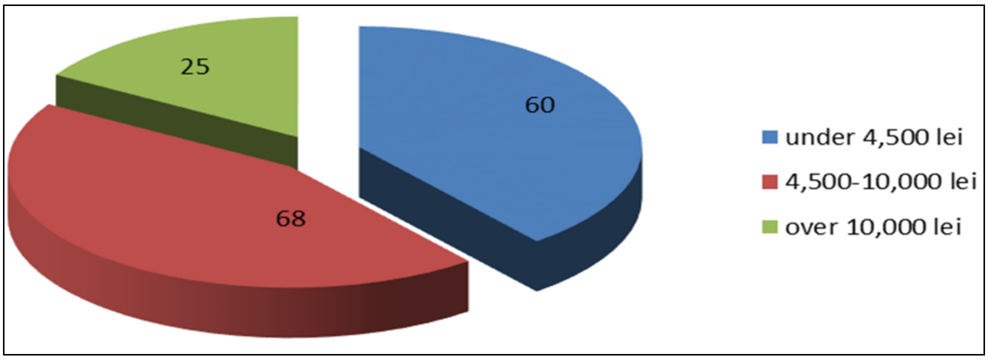


Source: Questionnaire data processing.

Figure 4. Production planning based on pre-contracts.

In the case of fruit, the largest part of the production is sold, even though a percentage is usually kept for self-consumption. If we talk about apple production, 50% of producers sell more than 80% of the obtained production.

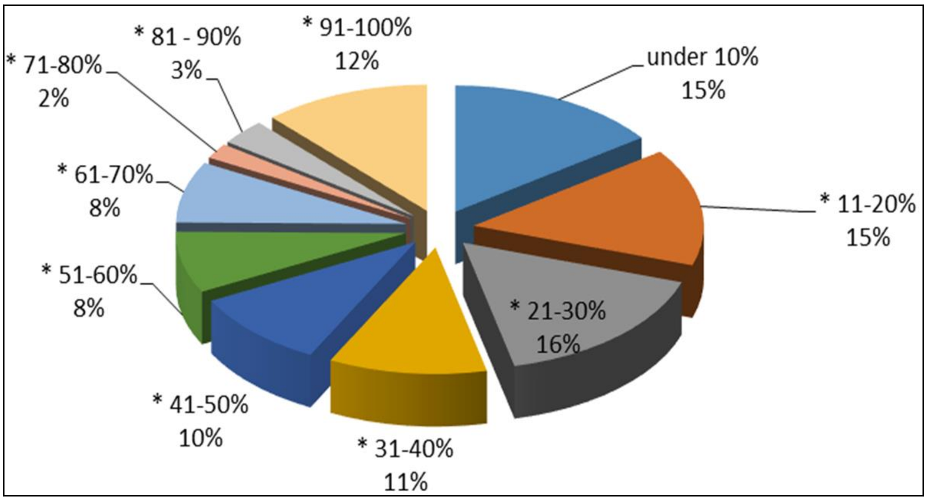
The revenues from fruit production sale are worth 4,500–10,000 RON/year for 45% of respondents, under 4,500 RON/year for 39% and over 10,000 RON/year for only 16% of respondents. (Fig. 5).



Source: Questionnaire data processing.

Figure 5. Level of revenues obtained from fruit sales.

Generally, it can be seen that the share of incomes obtained from the sale of fruit production in total income of holding is low. Thus, two-thirds of respondents get less than 50% of their total income from selling their fruit production. Only 12% of farmers earn over 90% of their income from selling their fruit production.

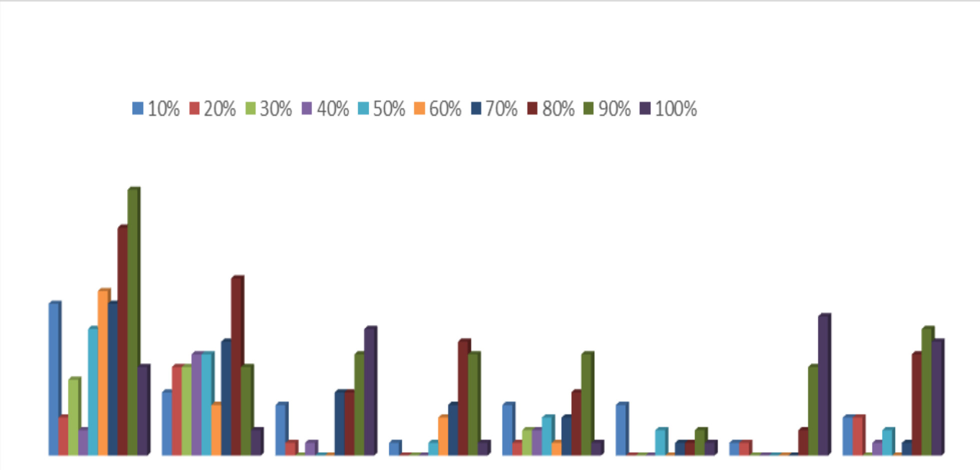


Source: Questionnaire data processing.

Figure 6. Share of income from fruit sales in total income of holding.

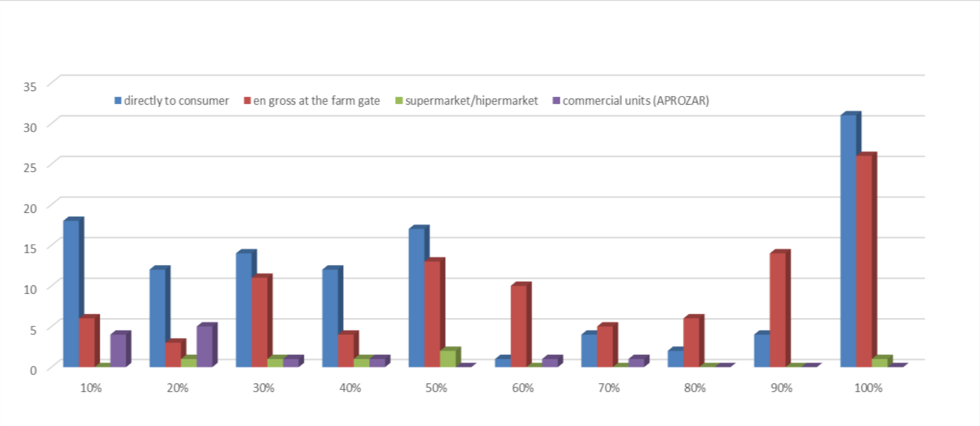
Production is sold either on local markets (at farmgate or on communal markets) and on county or national markets. None of the surveyed farmers export their production.

Most farmers sell products on local markets, probably to wholesalers. However, there are farmers who exclusively reserve their production to one of these distribution channels. A very small number of producers have access to large supermarket / hypermarket networks, while only one of the 153 interviewed farmers sells exclusively to the supermarket.



Source: Questionnaire data processing

Figure 7. Share of sold fruit production (the difference represents self-consumption).



Source: Questionnaire data processing.

Figure 8. Fruit production capitalization modalities.

The main customers of the surveyed farmers are either in the proximity of the holding (less than 5 km) or potential contractual customers, at more than 50 km distance. However, there are also farmers who have customers at a distance of 5–50 km from their holding, no rule existing in the distribution of customers.

5. CONCLUSIONS

After the systematization and interpretation of the survey results, a series of conclusions can be drawn regarding the activity carried out by the 153 Romanian fruit growers, which can be generalized at the level of the whole sector:

- 75% of fruit growers own a holding with an area of 1–5 ha, while larger holdings of over 20 ha are owned by only 3 operators, i.e. about 2% of all interviewed farmers.
- In terms of crop diversity, more than half of holdings grow apple and plum trees.
- Only 15% of respondents plan their production structure on the basis of contracts concluded in advance.
- Most of the obtained output is sold, and a small percentage is usually kept for self-consumption.
- The incomes from the sale of fruit production are 4,500–10,000 RON/year for 45% of respondents, under 4,500 RON/year for 39% and over 10,000 RON/year for only 16% of respondents.
- Only 12% of farmers earn over 90% of the income from fruit production.
- Production is sold either on local markets (at farmgate or on communal markets), on county or national markets. None of the surveyed farmers export their production.

The gradual adaptation of the Romanian agricultural market to the Single Market rules began with the legislative harmonization. The regulations apply to all stages of the food chain, from production and processing to transport, distribution and supply of fresh and processed horticultural products.

The materialization of this project is related to the need to create an interface between research and the fruit tree chain, in order to find viable solutions for solving the existing dysfunctionalities in the valorization chain. The project will help stimulate the association / cooperation of agricultural fruit producers, create jobs and improve the quality of the production sold.

As regards the creation of short chains, we recommend the following:

- improving the efficiency of fruit processing and marketing, resulting in high-quality products that contribute to increasing competitiveness and value added;
- improving the competitiveness of processed agricultural products; encouraging the development of new markets for agricultural products;

- increasing efficiency through the use of modern technologies;
- improving the quality of processed products in compliance with EU requirements;
- creating new jobs.

The first step in creating short production chains should be made by small producers themselves. The trend in Europe is the short chain along three directions – fresh, local and seasonal. Small and medium-sized agricultural producers in Romania need support to form associative structures and to be sustainable on the longer term in particular.

As regards the project elaboration and implementation, there are both research-development units, educational units and associative organizations with concerns in this field. We believe that the results of the project can have a significant impact on the chain, in the context of efforts to comply with EU standards in the field and to strengthen the policies for the development and adoption of necessary legislation that regulates and exercise control over the most equitable application of criteria and mechanisms to create short chains. Potential beneficiaries: Ministry of Agriculture and Rural Development and agricultural producers.

REFERENCES

1. *** *Modele de dezvoltare a lanţurilor scurte de valorificare pe filiera producţie primară-servicii-depozitare-procesare-piaţă de desfacere,* Proiect Sectorial ADER 16.1.2.
2. *** *Strategia naţională pentru programele operaţionale în sectorul de fructe şi legume, perioada 2018-2020*, MADR, Direcția Generală Politici Agricole și Strategii, http://www.madr.ro/docs/agricultura/legume-fructe/strategie-legume-fructe-2018-2020.pdf.
3. www.insse.ro.
4. www.madr.ro.
5. http://faostat3.fao.org/browse/FB/CC/F.