

## IMPACT OF COVID-19 PANDEMIC ON CAPITALIZING THE PRODUCTION OF FAMILY FARMS IN CĂLĂRAȘI COUNTY, ROMANIA

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### Abstract

*The health crisis caused by Covid-19 generated, among many other effects, a series of dysfunctions in the agri-food system, respectively in farms, in the supply chains with inputs and agri-food products, at the level of food demand. In the existing context in the Romanian agriculture, with millions of family farms, mostly subsistence and semi-subsistence ones, we initiated the present study in Călărași county obtaining information on the main challenges facing family farms during the health crisis and we summarized the farmers' proposals regarding the expectations they have from the local and national authorities in order to ensure the conditions for capitalizing the farm products. The questionnaire was applied in the agri-food markets in Calarasi and Oltenita municipalities, as well as in 9 localities in Călărași county, with a population of over 5,000 inhabitants, where weekly markets and fairs for the exploitation of agri-food products are organized. 61 questionnaires were applied and analyzed, through the survey-interview carried out between June and August 2021. The main challenges they face refer to the change of consumption patterns, blockages in the peasant markets and the increase of online deliveries, syncope in the agri-industrial processing sector, the closure of the firms from HORECA, but also of the schools, canteens, etc. All these challenges had the effect, first of all, of reducing the farmers' income due to the agricultural production decline.*

**Key words:** COVID-19, crisis, economic effects, family farm, impact

### INTRODUCTION

In Romania, there is a long tradition regarding the development of a family-type agricultural activity, over time the family farms contributing both to obtain the agricultural products and to preserve the cultural-craft activities, on which the principles were based, including the development principles of the agri-tourism segment and environment protection [5].

Small subsistence and semi-subsistence farms are important in Romania because they support the food security and the rural population income. They have a much greater productive diversity than large farms and supply the agri-food markets of cities with fresh and quality products [1]. At the same time, they have a remarkable resilience and are important for the environment, because they use traditional, ecological technologies, less chemical inputs [3].

In addition to the state financial support needed to consolidate and increase the performance of family farms, farmers' access to knowledge and markets is particularly important. In turn, family farms in Romania must create as soon as possible their own structure of production and distribution chains directly to consumers [7]. An important exercise in this direction was carried out during the critical period of COVID 19, especially at the beginning of the pandemic, when consumers faced a crisis in the supply of food from globalist networks, moving to local food systems [2]. In fact, there was a first selection of local producers, able to obtain food and adapt to the new conditions of operation on the market, determined by the sanitary restrictions on public mobility (online orders, home delivery, invoicing with mobile means, card payment, etc.) [12]. Thus, it was found that the main challenges facing farms often reflect common issues to all types of small enterprises: poor endowment with

modern means of production, lack of a production planning system, lack of marketing knowledge to support the products sale, but also lack of technical means to prepare products for distribution on the market, lack of financial resources and poor power of market negotiation [9]. FAO warns that there is a risk of a food crisis that would primarily affect the most vulnerable farmers, especially small and medium-sized ones, who face challenges in accessing markets to sell the products and to purchase essential inputs. [11]. Incomes decrease, traffic restrictions and social distress imposed on the population in general led to a reduction in demand in agri-food fairs and markets. Moreover, social distancing measures led to increased costs for small farmers who sell their products directly in urban markets, as they have to buy protective equipment for themselves and stalls, as well as additional packaging [4]. If before COVID crisis, more than 20% of farmers' incomes came from the sale of agri-food products, animals and poultry, the pandemic caused an increase in costs for farmers and, as a result of the contraction in demand, a substantial reduction in agricultural producers whose welfare depends mainly on the sale of farm products [10].

## MATERIALS AND METHODS

As research methods, we used documenting, the analysis and data processing from a secondary analysis. These methods are based on the synthesis processes, induction and deduction, analogy and comparative analysis. Once the information was defined, known and interpreted, the next step was the detailed documenting of the interest field. In the analysis activity, the study of the documentation available for the field or for the analysed system is a starting point.

The documenting, the analysis and the data processing and the information obtained from the following sources: scientific papers in the field, reports and national and international studies on the socio-economic implications of COVID -19 health crisis, the official websites of the ministries managing this crisis, papers

from the literature, as well as a questionnaire-based survey.

We elaborated a questionnaire with 9 open and grid questions, respectively, 2 filter questions on the size of the farm and the age of the business administrator and 7 questions related to the implications of COVID-19 health crisis on how to capitalize the production, income, product demand agri-food and consumer behaviour, the opportunity to join agricultural cooperatives or producer groups, as well as their expectations from bodies empowered to support family farms. The questionnaire was applied in the agri-food markets in Calarasi and Oltenita municipalities, as well as in 9 localities in Călărași county, with a population of over 5,000 inhabitants, in which weekly markets and fairs for the exploitation of agri-food products are organized.

61 questionnaires were applied and analyzed, through the survey-interview carried out during June-August 2021.

By using the questionnaire, information was obtained on the main challenges faced by the family farms during the health crisis and we summarized the farmers' proposals on their expectations from local and national authorities to ensure the conditions of use of farm products. This information was used to supplement the survey data in the data collection process. The questions asked through the questionnaire and the survey also followed information on the desire of small farmers to join agricultural cooperatives and producer groups, respectively, as regards the advantages and disadvantages of this association.

## RESULTS AND DISCUSSIONS

COVID-19 pandemic, still ongoing, significantly affects the activity and sales of agricultural products by farmers.

These issues resulted from the survey interview based on the questionnaire, applied to 61 small producers of vegetables and fruits, respectively, canned vegetables, compotes, jams, fruit juice, sour soup, pickled cabbage, etc., but also dairy products, from meat and pastries, from the family farms of Calarasi

county, as presented in the answers to the 9 questions.

**1. In what category is your farm included, regarding the area exploited - up to 5 ha; between 5-10 ha; between 10 -30 ha; between 30-50 ha?** The results are presented in Fig. 1.

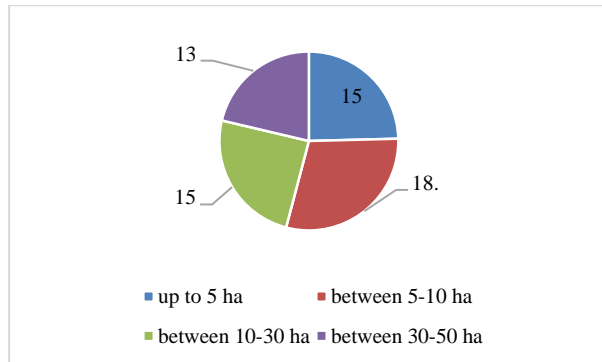


Fig. 1. Number of producers participating in the survey, on categories of farm size – no of producers  
 Source: Results of the survey.

For the questionnaire-based survey, we selected, for each category of the farm according to the size of the exploited area, an approximately equal number of respondents, between 13 and 19, so that the information collected should cover equally all categories of family farms.

**2. Mention the age category in which the farm administrator is included:**—up to 30 years; between 30-45 years; between 45-60 years; over 60 years (Figure 2).

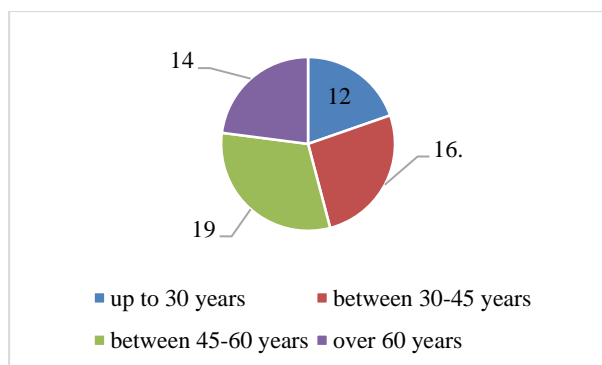


Fig. 2. Inclusion of producers participating in the survey, on age categories – no of producers  
 Source: Results of the survey.

It should be noted that the number of farmers over the age of 45, in a percentage of 54.1%, in our study, exceeds the number of those included in the age categories up to 45 years.

**3. If you were affected by COVID -19 crisis, mention 4 major effects of the crisis on your business (Figure 3).**

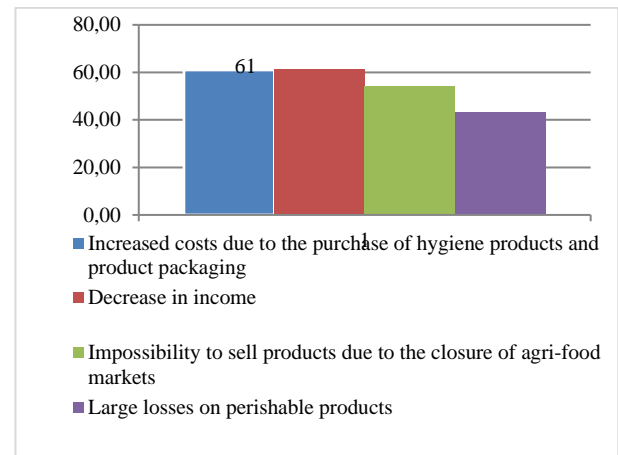


Fig. 3. COVID-19 crisis effects on the family farm business – no of producers  
 Source: Results of the survey.

Most of the respondents mentioned as effects of COVID-19 crisis on the sale of products, the following aspects: the increase of costs as a result of the purchase of hygiene products and product packaging -61 producers; decrease of income -61 producers; the impossibility of selling the products as a result of the closure of the agri-food markets -54 producers and high losses on perishable products - 43 producers.

**4. How much did the income decrease compared to 2019, before the crisis:** -up to 20%; between 20-40%; between 40-60%; over 60%? (Figure 4).

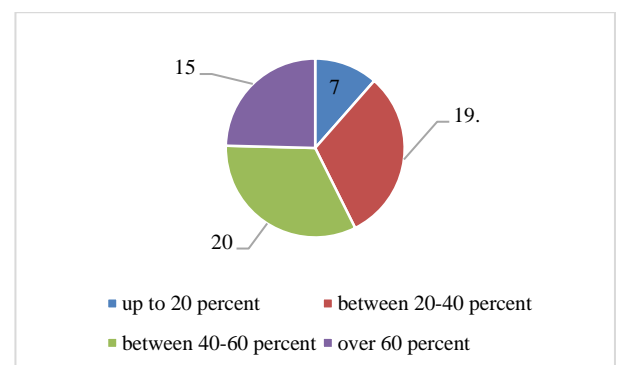


Fig. 4. Appreciations on the reduction of family farm incomes during the crisis - no. of producers  
 Source: Results of the survey.

We note that 39 of the surveyed producers estimate that the income of family farms in the context of Covid-19 pandemic was

reduced by 20-60%, and 15 of them even mention a percentage of over 60% of the decrease in farm income. The worst affected were farmers who worked an area of over 10 ha and who did not have adequate long term storage space for the obtained production.

**5. How did you capitalize the products in the conditions of closing the markets/peasant/agri-food fairs? (Figure 5).**

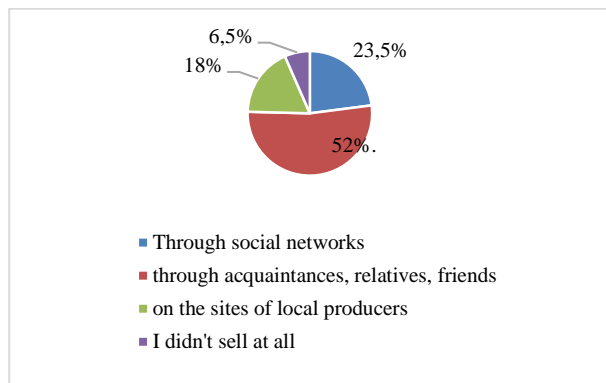


Fig. 5. Modality of capitalizing the family farms products during the crisis - % producers  
 Source: Results of the survey.

During the pandemic crisis, as a result of the closure of agri-food markets and fairs, 32 producers (52% of the survey participants) capitalized the products through acquaintances, relatives and friends, and 41.5% of the surveyed producers used social networks and agricultural producers' sites, as seen in Figure 5.

**6. Do you think that digitizing the production sale is an effective solution? Mention the advantages and disadvantages of this way of selling (Figure 6).**

Regarding the opportunity to capitalize the products through online platforms, a number of advantages and disadvantages were mentioned, respectively, they are not advantages because all buyers want to see the goods when they buy it but not the pictures on the internet (31.1% ); you can have constant customers (11.5%); you can sell them from home; high transport and packaging costs (24.6%); it takes time to travel to the client (18%); declining sales; you must have knowledge of PC operation and marketing (14.8%) etc.

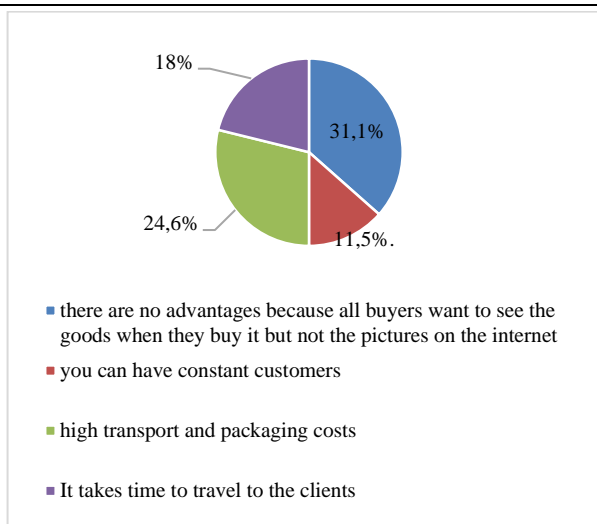


Fig. 6. Appreciations on digitalizing the family farm production sale - % of no producers  
 Source: Results of the survey.

It is needed to provide adequate knowledge among farmers, respectively, knowledge and skills on modern and innovative methods of processing and marketing of agricultural products, by organizing courses and information events with this specific [8]. In addition, there is support for the continuation of activities aimed at digitizing the production sale, especially for small farmers, such as the “basket with vegetables”, online platforms, etc; Particular attention should be paid to support the transport of these products as the vast majority of farmers who joined such platforms claim high transport costs; This crisis also highlighted the need for farmers to acquire the minimum IT knowledge required in the use of IT products (interactive maps, creative local platforms, interactive networks) [6].

**7. Do you think that consumer behaviour changed during this period? Mention 3 factors in this regard (Figure 7).**

Agricultural producers mention that consumer behaviour changed, in the sense that they bought products in larger quantities in certain periods and there were days when they did not sell anything (39.3%); changing the rate between fresh products and basic products (37.7%); the hygiene conditions in which the products were capitalized were very important (27%).

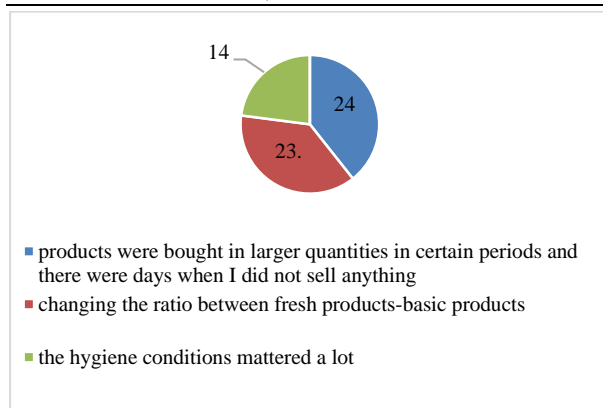


Fig. 7. Appreciations on the modification of consumption behaviour during Covid-19- crisis - no. of producers

Source: Results of the survey.

### 8. Do you think that your association within an agricultural cooperative or producer group would be a feasible solution in crisis situations?

At this question, only 33 of the 61 producers interviewed answered that it would be a good solution to facilitate the sale of products, especially perishable ones, according to the procedures and standards imposed by the hygiene and food safety requirements. The association can lead to an increase in the degree of technologization of farms, a more efficient organization of production, an improvement of the farmers' position in the value chain and increased negotiation power, but also to facilitate communication between farmers and provide access to marketing and products online sales services, counselling, training and consulting.

The establishment of producer groups in the agricultural sector aims at improving and adapting the production to market requirements and consumer preferences [10]. The main objective is to capitalize the members' products and relieve the producer of the burden of selling production, which directly contributes to a better integration of agri-food producers in the market and in short supply chains.

### 9. What are your expectations from the local authorities regarding the capitalization of the products obtained in your farms? (Figure 8).

As mentioned in Figure 8, 41 agricultural producers want the local authorities to maintain the safe functioning of peasant

markets adapted to the pandemic; the support of the authorities is needed to ensure the continuity of sales in terms of hygiene and safety for both farmers and consumers.

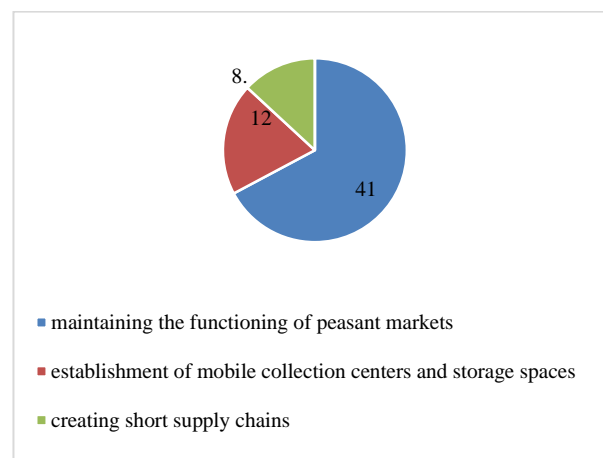


Fig. 8. Expectations of small producers, from the local authorities during Covid-19 crisis - no. Of producers

Source: Results of the survey.

12 producers, among those interviewed, mention that they expect from the local authorities, the establishment of mobile collection centres and storage systems that could help reduce crop losses. This investment is of critical and medium- and long-term strategic importance for the development and resilience of national food chains [6].

It is also worth mentioning the strengthening of partnerships between national authorities and economic actors, between local farmers and the main national retail networks - the Romanian Farmers Club considers absolutely necessary the responsibility and solidarity of the national retail networks for the reconsideration and consolidation of the partnership with the Romanian farmers, first of all by ensuring the priority and fast access to the shelf of the agri-food products provided by them [10]. The creation of short supply chains opens up market opportunities for farmers and other rural entrepreneurs to diversify the product range, promote and sell products in local markets or close to the source of production, either individually or jointly [12].

## CONCLUSIONS

From the survey-interview based on the questionnaire on the capitalization of the production of family farms during COVID-19 crisis, the following conclusions resulted:

-Limiting farmers' access to markets to capitalize the production resulted from the imposition of transport restrictions and quarantine measures. There were major problems with the sale of fresh food. The traffic jams and travel checks led to a reduction of income and a significant loss of perishable crops.

-Change in consumption habits / patterns and consumer behavior: in this period of crisis there was an increase in both basic food products and ready-to-eat products that can be stored. These trends led to difficulties in selling perishable agricultural products and reduced income for many farmers;

- Strong growth in electronic commerce.

For many small farms, the sale of agricultural products was critical. Since the beginning of the crisis, part of society became aware of the need to support, in particular, small local farmers, and consumption of nearby farms was promoted on social media. Both online product sales and home delivery have accelerated.

-The closure of HORECA sector also affected many farmers who had contracts with these units (mainly for dairy, fruit and vegetables, wine, etc.).

-Excessive agricultural products - production goes to waste - reduced consumer income, diminished need for food products, the closure of schools and canteens led to a surplus of agricultural products.

## REFERENCES

- [1]Alexandri, C. (coord.), 2017, Agriculture and Rural Area - Evaluation 10 years after Accession, the Romanian Academy Publishing House, Bucharest, pp.11.
- [2]Asimionesei, L., 2020, The first national study for Covid-19 crisis impact evaluation on the farms in Romania. <https://amazag.ro/primul-studiu-national-de-evaluare-a-impactului-crizei-covid-19-asupra-fermelor-din-romania/>, Accessed on 23.11, 2021.
- [3] Cretu, D., Iova, R.A, Nastase, M., 2020, Impact of european funds accessing on economic and social

development. Case study. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development Vol. 20(2), 175-181.

[4]FCC Knowledge/Economics, 2020, <https://www.fcc-fac.ca/en/knowledge/ag-economics/coronavirus-and-agri-food-markets-4-connections.html>, Accessed on 03.12, 2021

[5]Hera, C., Otiman, P.I. (coord.), 2017, Chapter „Project 5. Food security and safety”, in Development strategy of Romania for the next 20 years: synthesis, coordinator: Acad. Ionel-Valentin Vlad, Bucharest, the Romanian Academy Publishing House, pp.27.

[6]ILO, 2020, Monitor 1st Edition. COVID-19 and the world of work: Impact and policy responses, [https://www.ilo.org/wcmsp5/groups/public/---dgreports/--dcomm/documents/briefingnote/wcms\\_738753.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/--dcomm/documents/briefingnote/wcms_738753.pdf), Accessed on 03.12, 2021.

[7]Iova, R.A., Crețu, D., Oltenacu, N., 2016, Sustainable development strategy of rural area by the community participation - Case study, Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 16(1), 227-223.

[8]Iova, R.A, Cretu, D., 2013, Perception of the life quality in the rural communities in Romania. Case study. Călărași County, Lambert Academic Publishing, p.58.

[9]Maliszewska, M., Mattoo, A., van der Mensbrugge, D., 2020, The Potential Impact of COVID-19 on GDP and Trade A Preliminary Assessment, Policy Research Working Paper, World Bank, <http://documents.worldbank.org/curated/en/295991586526445673/pdf/The-Potential-Impact-of-COVID-19-on-GDP-and-Trade-A-Preliminary-Assessment.pdf>, Accessed on 12.11, 2021

[10]Mediafax, 2020, Agriculture, between drought and epidemic, <https://www.mediafax.ro/economic/agricultura-intre-seceta-si-epidemie-60-din-productia-de-cereale-compromisa-19094720>, Accessed on 02.11, 2021.

[11]Schmidhuber, J., Pound, J., Qiao, B., 2020, COVID-19: Channels of transmission to food and agriculture. Rome, FAO, [https://ec.europa.eu/romania/news/20200331\\_schema\\_ue\\_scoli\\_ro](https://ec.europa.eu/romania/news/20200331_schema_ue_scoli_ro), Accessed on 13.11, 2021.

[12]USDA, 2020, Romania: Preliminary assessment of COVID 19 on Romanian Food and Agriculture, Foreign Agricultural Service, 9 April 2020, <https://www.fas.usda.gov/data/romania-preliminary-assessment-covid-19-romanian-food-and-agriculture>, Accessed on 12.12, 2021