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## Conference Paper

The economic impact in the vegetables production sector (tomatoes) of the support scheme for the program to support tomatoes production in protected spaces for 2019

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# THE ECONOMIC IMPACT IN THE VEGETABLES PRODUCTION SECTOR (TOMATOES) OF THE SUPPORT SCHEME FOR THE PROGRAM TO SUPPORT TOMATOES PRODUCTION IN PROTECTED SPACES FOR 2019

ROZI LILIANA BEREVOIANU<sup>1</sup>, ANCUȚA MARIN<sup>2</sup>, STELIANA RODINO<sup>3</sup>

**Rezumat:** *The paper presents the evaluation of the economic impact of the support scheme for the Program for the support of the product tomatoes in protected areas for 2019, on the vegetable production sector, with an emphasis on the results of the production, the market effects, the impact on the consumers and their preference for the Romanian tomatoes, the evolution of the trade balance. In this context, the study is based on extensive scientific documentation regarding the impact of financing from the National Budget and the support schemes established under the European CAP regulations. The objective of this work is to disseminate the results obtained and to promote the continuation of the implementation of the program to support the tomato production in protected areas. This program can also be developed and implemented for other deficient products that can benefit from government support programs during 2019-2020.*

**Keywords:** *tomato support scheme, economic impact, tomato production*

**JEL classification:** *Q13, Q18, Q28*

## INTRODUCTION

In Romania, the vegetables sector has benefited from financial aid, both by direct payments and by the possibility of accessing European funds for investments at sector level. The payments granted to the sectors and the productions are mentioned in art. 52 paragraph (2) of Regulation (EU) no. 1307/2013, and applies to those that are considered economically, socially and environmentally important, and which are facing difficulties. Thus, among the vegetables for which such support was granted include potatoes, tomatoes and cucumbers intended for processing industry, but also vegetables cultivated in greenhouses and solariums. However, the investments were not sufficient to ensure the domestic supply of fresh vegetables, Romania being dependent on imports from countries such as the Netherlands, Turkey or Italy. The main solution to reduce the dependence on imported vegetables is represented by the increase of the cultivated areas with vegetables in protected areas, which would allow the cultivation during the off-season.

The support scheme "Minimis aid for the application of the support program for tomatoes cultivated in protected spaces" is a multiannual government program that is applied according to the provisions of Regulation (EU) no. 1408/2013. The farmers which are cultivating tomatoes in protected spaces have benefited from the de minimis aid scheme provided for this sector since 2017 by GD no. 39/2017, program that continued in 2018 through the Decision no. 943 from December 20, 2017 and in 2019 by Decision no. 107/2019. The minimis scheme for 2019 is similar to 2017 and is implemented by the County Agricultural Directorates (DAJ). The financial resources necessary to implement the minimis aid scheme are provided from the budget for 2019 and reach an amount of 233,190 thousand lei, representing the equivalent of 50,000 thousand euros.

## MATERIALS AND METHODS

The scientific research aims to develop methods and techniques of analysis with concrete, original solutions regarding the economic impact in the sector of vegetables production (tomatoes) through the support scheme for the Program for the support of tomatoes cultivation in protected spaces.

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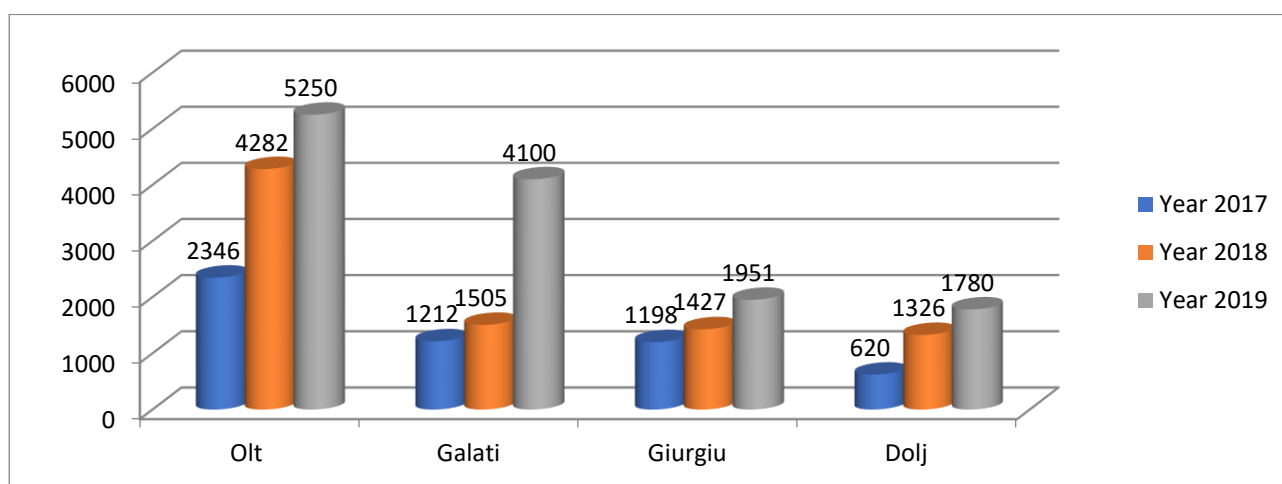
Thus, the paper involves the use of methodologies, techniques and equipment specific to an analytical study, data processing and data interpretation. As a method of collecting information, the quantitative survey was used, and as the investigation technique, the investigative one was used, structured as questionnaire. The survey is a questionnaire-based survey for collecting information regarding the problems that are facing the tomato producers.

## RESULTS AND DISCUSSIONS

During August-September 2019, an opinion poll was carried out among tomato producers for the identification of the *economic impact in the sector of vegetables production (tomatoes) through the support scheme for the Program to support the cultivation of tomato in protected spaces* and for collecting their opinions, in order to develop solutions / models for efficient commercial valorification of vegetables production. The questionnaire was applied to a number of 156 farms.

Based on the top counties ranked when analysing the number of farmers who benefitted from this support scheme, the questionnaire was applied to Olt, Galați, Giurgiu, Dolj (Figure 1.)

Figure 1 – Number of farmers who benefitted from tomatoes support scheme 2017 -2019



Source: MARD – Beneficiaries of the suport programme for tomatoes

The questionnaire was applied to a number of 156 respondents, sampled by gender, age, and occupation.

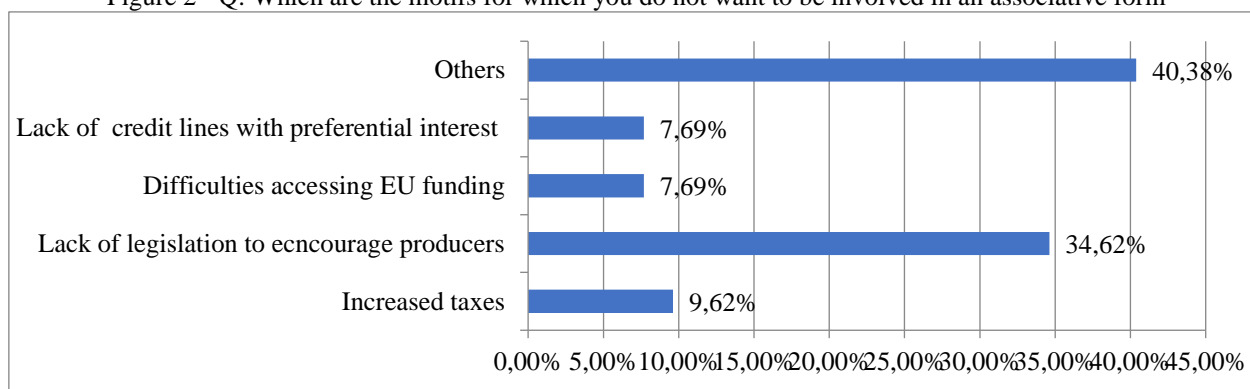
To summarize the results obtained, we will present in the following the most significant answers received from the respondents. All respondents started their activity (cultivation of tomatoes) after 1990, as follows: 11% started their activity in the period 1990-2000, 34% started their activity in 2001-2010, 55% started their activity the activity after 2010. One third of the respondents carry out their activity as natural persons, one third as Authorized Physical Person (PFA), and the rest are LLC or Individual enterprise, etc.

The overwhelming majority of the respondents (93%) consider that it is not necessary to adhere to an association form, while 1.79% belong to an association form, 3.57% belong to a group of producers, and 1, 79% are organized in cooperatives.

Unfortunately, more than half (67.31%) of the farmers who are not involved in an associative form are not interested in accessing such an organization in the future.

Regarding the motivation underlying the decision not to involve in an associative form, the first place is the lack of legislation to support the producers (34.62%), followed by high taxes (9.62%), the difficulties faced when applying for European funds (7.69%). Also, farmers claim the lack of loans with preferential interest for farmers belonging to an associative form (7.69% of the total participants in this study) (Figure 2).

Figure 2- Q: Which are the motifs for which you do not want to be involved in an associative form



Most of the participating farmers, ie 78.6%, own a farm with an area between 1-5 ha, while only 7 respondents own large farms, over 20 ha (12.5% of the total respondents). The remaining farmers own farms between 5-10 ha (7.14%) or 10-20 ha (1.79%).

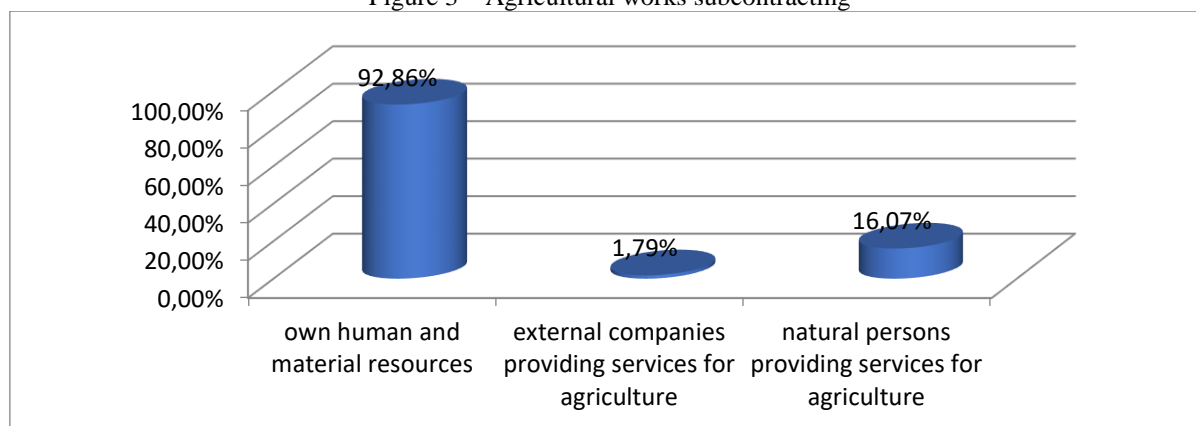
Of the 156 people surveyed, 37 (ie 66%) are cultivating vegetables in open field on areas less than 1 hectare, while 15 (26.8%) cultivate areas between 1-5 hectares.

Regarding the size of the cultivated protected spaces, the situation is different. Thus, the majority (57%) have greenhouses and / or solariums with surfaces between 1000-1500 square meters, almost a quarter cultivating vegetables in protected spaces over 2000 square meters.

The questioned farmers use varieties / hybrids of national origin or from import, and the seedlings are produced in a proportion of 86% in their own farm.

Regarding the mechanization of the works, mostly own resources are used (93%), and very rarely the agricultural work are done with companies specialized in providing services for agriculture, ( 1.79% of the total respondents). Almost 16% of the respondents use external individuals for providing the works (Figure 3).

Figure 3 – Agricultural works subcontracting



The structure of the human resources used reflects the fact that, generally, in farms with a small number of employees, family members are those who work on the farm, and only occasionally they employ seasonal workers or persons providing services for agriculture. Moreover, following the analysis of the questionnaires it was observed that the share of skilled workers is generally lower than that of unskilled workers.

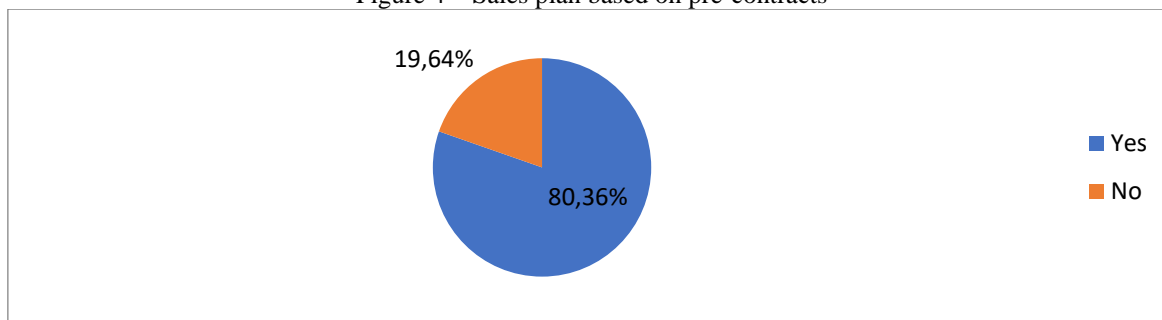
The fertilizers used in the current agricultural practices, are classified both in the category of synthetic chemicals and in organic fertilizers. The questioned vegetables farmers do not exclusively use chemical fertilizers, they apply 34% organic fertilizers, the rest using a mixed (chemical + organic) variant.

In the case of the phytoprotective treatments used by the farmers who participated in this study, an overwhelming majority of those applying conventional treatments, insecticides and pesticides in the category of synthetic chemicals (over 82%) was observed. A number of 150 producers from the 156 respondents replied that the main irrigation method used is "drip", 3 use the "sprinkler" method and 3 "furrow irrigation".

The market for the tomatoes harvested is another aspect taken into consideration when conducting this study. Both pre-harvest activities, such as pre-contracts for marketing the production, as well as the actual sales activity, from the point of view of the sales chains, and of the realized revenues, were taken into account.

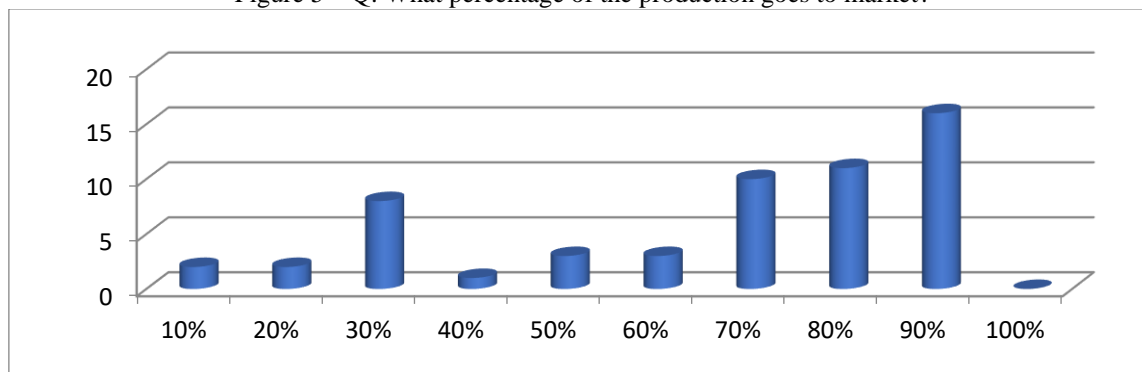
Thus, it is observed that 80% of the respondents plan their production structure based on contracts concluded in advance, having a well structured, predictable management plan, following the achievement of well established indicators (Figure 4).

Figure 4 – Sales plan based on pre-contracts



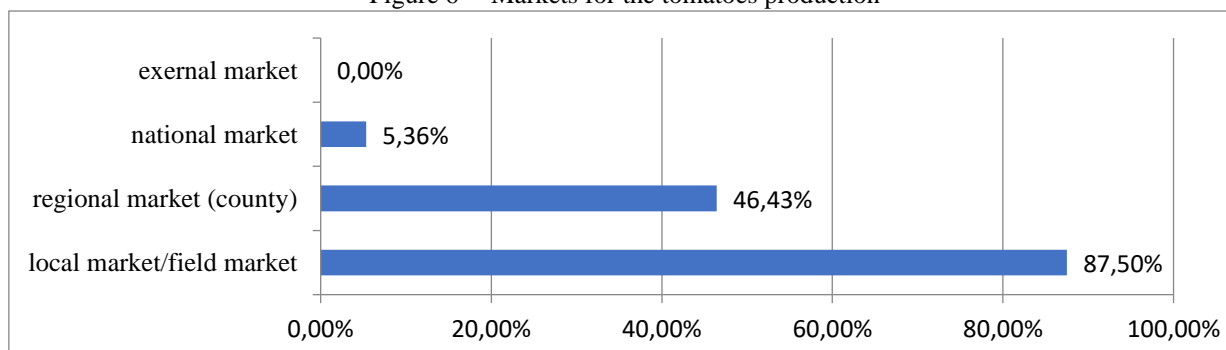
In the case of tomatoes, most of the production obtained goes to sale, even though a percentage is usually kept for self-consumption. A number of 103 (66.02%) of the interviewed producers are selling between 70-90% of the obtained production (Figure 5).

Figure 5 – Q: What percentage of the production goes to market?



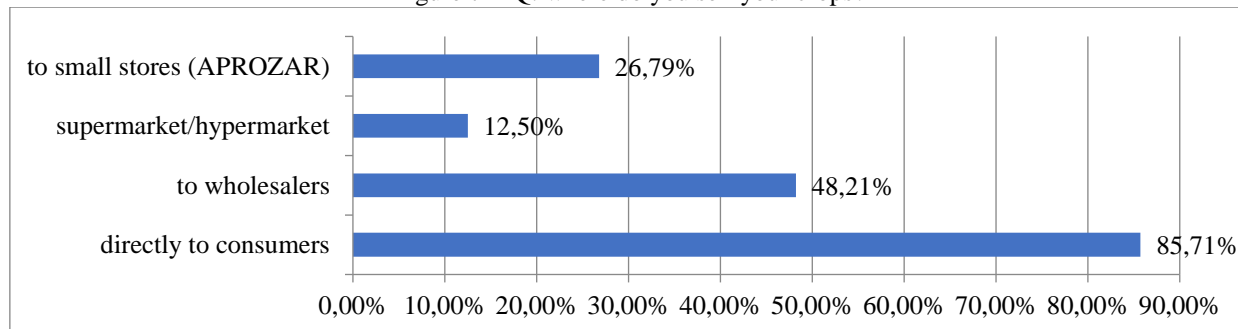
The results showed that the tomatoes are sold either in local markets / at the „farm field”, in county or national markets. None of the responding farmers export the obtained production. Most farmers (over 87%) market their products in local markets, probably to wholesale buyers (Figure 6).

Figure 6 - Markets for the tomatoes production



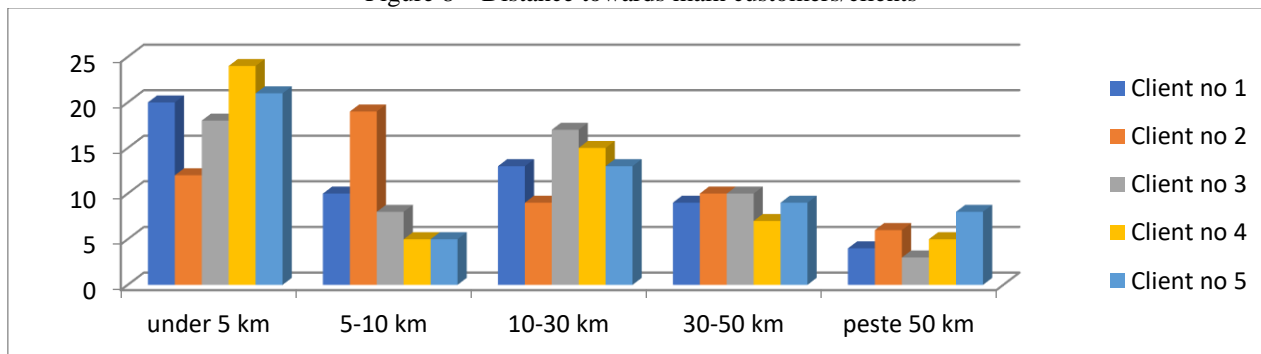
A very small number of producers have access to the large supermarket / hypermarket networks, (12.50% of the 156 respondents), the vast majority (about 86%) trading their production directly to consumers (Figure 7).

Figure 7 - Q: where do you sell your crops?



The main clients of the farmers taken in the study are located in the immediate vicinity of the farm (under 5 km). However, there are also farmers who have clients within a 50 km range of their own farm, with no rule in the distribution of customers (Figure 8).

Figure 8 – Distance towards main customers/clients



The revenues obtained from the sale of tomatoes are either very low, under 4,500 lei (44.64%) or over 10,000 lei (46.43%), the extremes being explained by the existence of a large number of small and very small farms, and the high incomes can also be put on account of the support scheme granted for tomatoes (Figure 9).

The issue of financing needed to carry out agricultural activity was also addressed through the use of own resources or access to funds available through national programs or EU funds. For the most part, the activities are supported by own funds. 70% of those surveyed are running their activity from own funds in a percentage of 70-90%), the differences being covered by bank loans, supplier credits and / or subsidies (Figure 10).

Figure 9 – Revenues from selling the harvested tomatoes

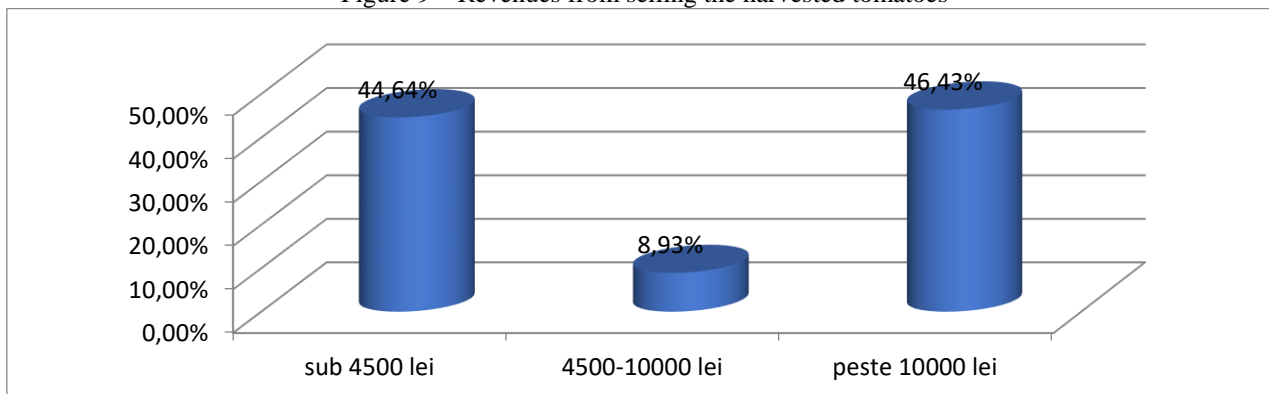
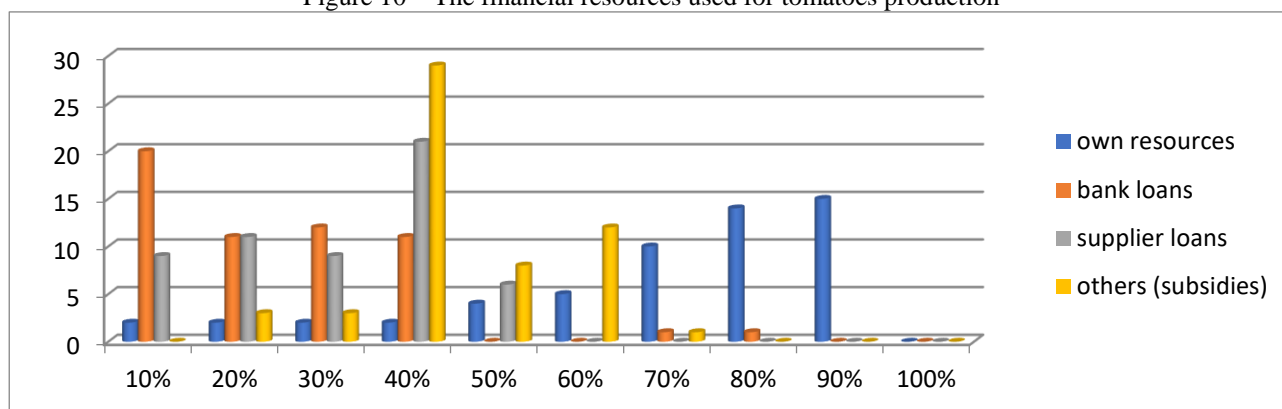


Figure 10 – The financial resources used for tomatoes production

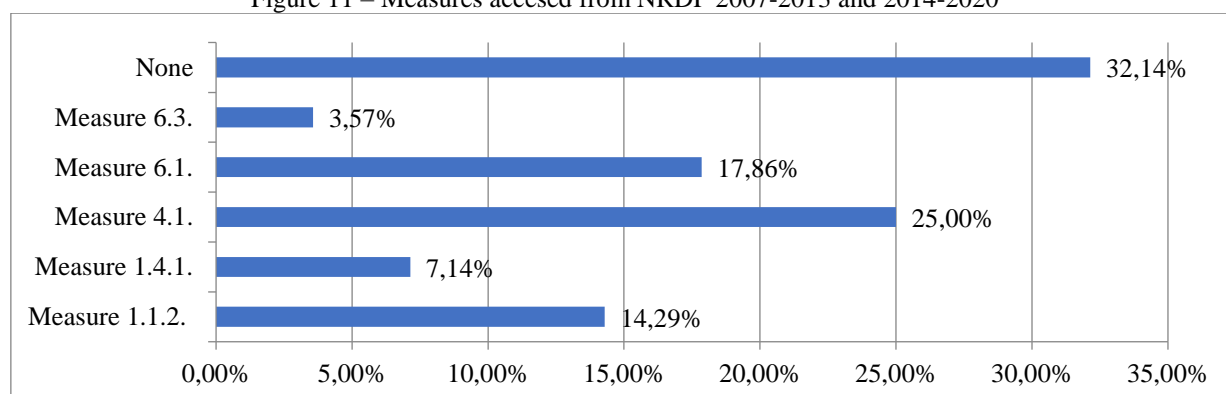


Most of the respondents (75%) are currently receiving subsidies from APIA. When asked if the activity could be profitable under the conditions of no subsidies, only 19.64% of the farmers claimed that they could face the market.

Moreover, over half of the farmers (57.14%) consider the support provided by the government as insufficient, 3.57% consider it insignificant, while only 39% consider the support provided by the government as sufficient.

The interviewed farmers are relatively well connected to the present realities, a percentage of almost 52% of them have already accessed EU funds. Also, the majority (67.86%) accessed funds from NRDP program, the most accessed measures being: 1.1.2. "Modernization of agricultural holdings" of the 2007-2013 program, 4.1. "Investments in agricultural holdings" and 6.1. "Support for the installation of young farmers" from the 2014-2020 program (Figure 11).

Figure 11 – Measures accessed from NRDP 2007-2013 and 2014-2020



For the creation of the framework of application of Regulation (EC) no. 1221/2008 from 5 December 2008 amending Regulation (EC) no. 1580/2007 establishing the norms of application of the Regulations (EC) no. 2200/96, (EC) no. 2201/96 and (EC) no. 1182/2007 of the Council in the fruit and vegetables sector regarding the marketing standards, published in the Official Journal of the European Union (OJ L 336 of 13/12/2008), the technical regulation "Quality and marketing requirements for fresh fruits and vegetables" was adopted. This fact led to the implementation of the *Support Scheme for the program to support cultivation of tomatoes in protected spaces*. A share of 71.43% of the farms surveyed in this study benefited of „tomatoes program”.

In the next period 64.29% of the respondents intend to access EU funds or national support programs for vegetables cultivation, while 10.71% have not yet decided.

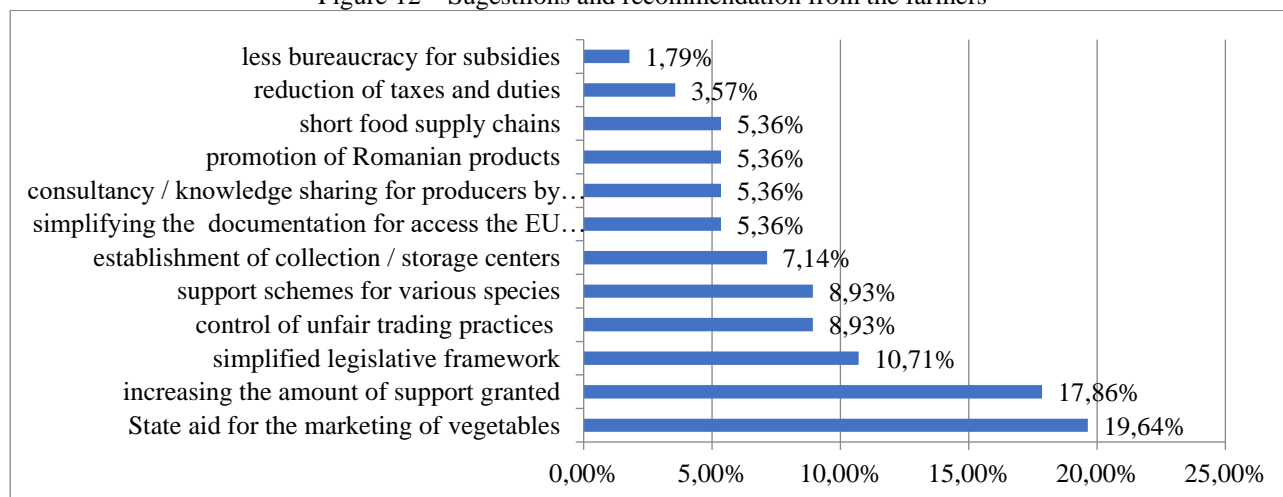
Most of the questioned farmers (73%) consider that the authorities have to get more involved by increasing the amount of support granted for various vegetables, possibly increasing the number of vegetables whose cultivation should be supported. As many as 50% of those interviewed believe that the intensive promotion of Romanian products would lead to an increase of the demand and

respectively of the consumption of local products. Last but not least, adopting more flexible legislation, more in line with their concrete needs, would be beneficial for all farmers in Romania.

Farmers accuse the lack of support legislation for small and medium-sized producers (loans with preferential interest, over-bureaucracy in accessing loans and in general any kind of support). The inexistence of storage facilities for fresh production, leads to important losses.

In this context, the questioned farmers come with a series of suggestions and recommendations (Figure 12).

Figure 12 – Sugestiions and recommendation from the farmers



## CONCLUSIONS

Analysing the responses resulted from the survey among tomato producers, the following conclusions are stated:

- The profile of the Romanian vegetables farmer is: male, between the ages of 30-60, with specialized studies.
- Vegetables farmers are not organized in associative forms, the production is fragmented in small and very small farms (under 5 ha).
- The agricultural works are carried out by own means, using the family members as a labor force.
- The problems raised by farmers are related to the valorisation of the production, their activity not being profitable without the support granted through the „tomatoes programe”.

The economic impact in the sector of vegetables production (tomatoes) through the support scheme for the program to support tomatoes in protected spaces, with emphasis on the results from production, the market effects can be expressed by:

- the positive effect on increasing the number of farmers (doubling them);
- the positive effect on increasing cultivated areas with tomatoes;
- the positive effect on increasing vegetables production in general, of tomatoes in particular (+ 18.45%) in 2 years after the support scheme was first implemented;
- the positive effect on the price increase from the producers point of view, generating higher revenues

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