# Young Farmers and New Entrants in Bulgarian Agriculture – Profiling their Challenges and Needs

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#### **Abstract**

At the moment in Bulgaria there is no research focused on Young farmers and New Entrants after the CAP reform in 2013. There is foreseen financial support to young farmers through sub-measure 6.1 of the RDP 2014–2020. Increasing the number and share of young farmers is necessary both to ensure sustainable development and to facilitate structural changes in agriculture. In the current research is identified the profile of the young farmers (YFs) and new entrants (NEs). There were identified the basic factors that are barriers for entrance of YF and NE and the specific challenges and needs that will occur in future.

Key words: young farmers; new entrants; needs; challenges; RDP

#### 1. Introduction

Under the terms of the Rural Development Program (RDP), which started in 2012, farms have been able to increase their vitality and become more market-oriented (Nikolov, 2017). The attraction of more beneficiaries among small farms was important in terms of ensuring employment in rural areas and building a social buffer in times of economic crisis. One of the most effective measures under the Rural Development Program is to attract more young entrepreneurs to agriculture is measure 6.1. In the first phase of the implementation of the Rural Development Program, this measure was exhausted quickly, as the interest in it was enormous. Thanks to the measure in the sector, many farms, owned by young people, had a new vision for the development of modern agriculture. These farms later benefited from the other measures of the Rural Development Program and thus some of them achieved high competitiveness (Bachev, Koteva, 2017). Creating conditions for the entry of new players in the sector contributed to increasing the competitiveness of Bulgarian agriculture (Sutherland, Dirimanova, 2017). The sector has begun to introduce modern and innovative business models for young entrepreneurs that have given a modern look to agriculture. Nevertheless, it should be noted that a significant part of the farms of young farmers, after spending the financial support of RDP, have been abandoned (Radeva, 2017). The retention of most of the farms in the sector has not happened. Reasons for this can be found in the genesis of the business model of young entrepreneurs. Some of them started an agricultural business just to absorb the financial aid, another part due to lack of experience and competencies suffered a failure. Not a small part of young farmers due to a misconception about the market trends was sifted out. The second phase of the Rural Development Program also provided support for young farmers and aimed at attracting more entrepreneurs in agriculture (Yovchevska, 2016). At this stage, the program is still in operation, but it also encounters the same problems that young farmers have built up in the first

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phase. The lack of basic skills in farm management, the lack of a clear objective and strategy for imposing the business model of the farm and the high risk posed by the agricultural sector will contribute to the dropping of a significant number of new start farms (Kalchev, 2016). It is necessary to identify the support factors that will contribute to market success and sustainable development of start-ups in agriculture. This is why we believe that the present study has a significant impact both (1) in identifying these factors and (2) in proposing changes to the policies imposed on young people and new entrants in agriculture and rural areas in Bulgaria.

At the moment in Bulgaria there is no research focused on Young farmers and New Entrants after the CAP reform in 2013. There is foreseen financial support to young farmers through submeasure 6.1 of the Rural Development Program (RDP) 2014-2020. Increasing the number and share of young farmers is necessary both to ensure sustainable development and to facilitate structural changes in agriculture. Supporting young start-ups is one of the best opportunities for young people to enter agriculture. It is confirmed by high interest to the first admission under sub-measure 6.1 of the RDP 2014-2020, which took place in 2015. After selection process 1 381 young farmers were granted. The number of applicants was double and the budget was not adequate to support all applicants.

Taking into account the interest of the first submeasure admission 6.1, the trend of rejected aid applications due to a lack of budget will continue during the 2014–2020 programming period.

The aim of the current research is to identify the challenges and needs that young farmers and new entrant's faces in the conditions of the second phase of RDP and to give suggestions for improvement of the performance of their business models.

# 2. Methodological remarks

One of the basic issues of the research is to identify the profile of the young farmers (YFs) and new entrants (NEs). When we have the profile we are be able to point the basic factors that

are barriers for entrance of YF and NE and to identify the specific challenges and needs that will occur. We use the focus group approach to identify the challenges, barriers and needs that occur among the YFs and NEs.

The focus group consists 12 participants -10young farmers and 2 farm advisors. The focus group was done at 22/08/2017 and consists of 12 participants – 9 young farmers, 1 policy maker and 2 farm advisors. The young farmers were from the Haskovo region of Bulgaria. The meeting also attended the chairman of the National Association of Young Farmers in Bulgaria. The farm advisors were from local office of the National Agriculture Advisory Services (NAAS). This agency has rights in the National RDP to support young farmers and new entrance. The policy maker was representative of local directorate of the ministry of agriculture. All participants of the focus group were familiar with the policy measures focused on YF and NE. All participants of the focus group have direct experience with the policy measures focused on YF and NE. Farmers is running project and advisors have supported them. Farmers are running project and advisors have supported them. The event took place in town of Plovdiv which is situated in region well known with good conditions for agriculture. The event took place in the city of Haskovo, which is situated in a well-known region with good conditions for agriculture. Duration of the discussion was 80 minutes. Duration of the discussion was 80 minutes.

# 2.1. Profiling the object of the study

Young farmers profile

A young farmer is considered as such when he first establishes a farm as a manager of that holding. The term "establishment of a farm manager" means a person who is not more than 40 years old at the time of the application, who possesses the relevant professional skills and competences and meets the eligibility criteria and the definition of establishment of a holding (Nikolov, Chopeva, Radev, Borisov, 2015)

Definition of establishment of a holding: Establishment of the holding is a period in which the following events are taken into account: the be-

ginning of the establishment, the period of application for support under the sub-measure and the end of the establishment of the holding (Nikolov, Chopeva, Radev, Borisov, 2015). Events are defined as follows:

The start of setting up a holding means one of the following events that occurred first:

- registration for the first time as a farmer under the Agricultural Producers Support Act;
- starting the breeding of animals on own/rented holding;
- land management for the production of agricultural and animal products;

Applicants may request assistance no later than 18 months from the date on which the startup of the holding has commenced.

The end of setting up the farm is considered to be the correct execution of the business plan and the submission of a second payment request.

Beneficiaries of the sub-measure receive a grant that is awarded in the form of a single premium:

First payment – up to  $\in$  12,500 after approval of the application for support;

Second payment – up to  $\in$  12,500 is paid only when the business plan is properly implemented.

Beneficiaries are farmers – natural persons, sole traders, Ltd., who meet the following eligibility criteria:

• Be registered as farmers under the Agricultural Producers Support Act;

The economic size of the holding is in the range of 8 000 to 16 000 SPVs (SPV – standard production volume means the value of production that corresponds to the average for a given area for each agricultural product). Any land taken into account when defining the initial minimum SPVs has a property document and/or a lease/lease agreement of at least 5 years;

- Be between 18 and 40 years of age at the date of submission of the application for assistance;
- To have the relevant professional skills and knowledge to be proven: completed secondary education in agriculture or veterinary medicine or secondary economic education with agricultural orientation; And/or tertiary education in agriculture or veterinary medicine or higher agricultural education with agricultural background;

And/or a certificate of at least 150 hours completed or a certificate of professional qualification in the field of agriculture;

- The farm meets the definition of a holding;
- To have proposed a business plan for the development of farm activities.

Assistance is provided for a maximum of 5 years only on a business plan submitted.

Payment of the last installment is only made when the business plan is implemented properly.

In the process of evaluation, projects are ranked and given priority to:

- Projects implemented by beneficiaries who have completed secondary and/or tertiary education in the field of agriculture, veterinary medicine or agricultural education with agricultural orientation;
- Projects implemented in the livestock sector;
- Projects implemented in the Fruit and Vegetables sector;
- Projects of young farmers whose holdings are in the process of transition to organic farming or have switched to organic production of agricultural products and foodstuffs within the meaning of Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and Labeling of organic products and repealing Regulation (EEC) No 2092/91;
- Young farmers' projects that create new jobs.

*New entrants – profile* 

The conditions for receiving start-up support for the development of small farms are defined in Measure 6.3 of the Rural Development Program Work Program 2014–2020 (January 2015). The document states that the number of small farms according to the national definition targeted by the Thematic sub-program is 85 770, which is 23.2% of all farms in Bulgaria. Almost all small farms operate as individuals or sole proprietors, with only 520 holdings that are legal entities. Of all small farms, 69.3% are up to 3,999 euros, and the remaining 30.7% are from 4,000 to 7,999 euros.

The support provided to small farms is geared towards ensuring their sustainable development and growth. The measure supports all activities that can ensure this development, which are included in the business plan. This includes investments in the small holding related to its development and modernization, as well as running costs necessary to implement the business plan.

Sub-measure activities will contribute to meeting the needs of small farms identified in the strategy for: enhancing their viability; improving the protection of the environment and combating climate change and accelerating their modernization and technological upgrading;

The aid turns out to be a fixed amount that can be spent on investments and running costs needed to achieve the goals set in the business plan.

The aid granted under this sub-measure amounts to EUR 15 000 and represents payment in two tranches. First payment of EUR 10 000 after the approval of the application for support. Second payment of EUR 5,000 after verification of the implementation of the business plan. Applicants must meet the following eligibility requirements:

• Applicants must have received at least 33% of the total income for the transitional year from agricultural activities.

• Applicants must submit a business plan showing the initial state of the farm and information on the activities (including environmental sustainability and resource efficiency activities) that would help to achieve economic viability, such as investment, training, cooperation.

In the next table is shown the differences in to the YF and NE (Table 1).

# 2.2. Composition of the focus group and implementation of the survey

The focus group was done at 22/08/2017 and consists of 12 participants – 9 young farmers, 1 policy maker and 2 farm advisors. The young farmers were from the Haskovo region. The meeting also attended the chairman of the National Association of Young Farmers in Bulgaria. The farm advisors were from local office of the National Agriculture Advisory Services (NAAS). This agency has rights in the National RDP to support young farmers and new entrance. The policy maker was representative of local directorate of the ministry of agriculture. All participants of the focus group were familiar with the policy measures focused on YF and

**Table 1.** Differences between YF and NE

| Young farmers                               | New entrance                      |  |  |
|---|-----------------------------------|--|--|
| Profile                                     |                                   |  |  |
| Come from agricultural families             | Left other sectors                |  |  |
| Up to 40 years                              | Over 40 years                     |  |  |
| Have agrarian education                     | Do not have agrarian education    |  |  |
| Practical agricultural experience           | Practical agricultural experience |  |  |
| Motivation                                  |                                   |  |  |
| To develop the family business              | To create a new source of income  |  |  |
| To develop skills                           | To develop their own business     |  |  |
| To raise capital                            | To invest in accumulated capital  |  |  |
| Managerial approach                         |                                   |  |  |
| Cooperation, co-operation                   | Individualism                     |  |  |
| Innovative                                  | Traditional                       |  |  |
| Specialization                              | Risk diversification              |  |  |
| Share of those remaining in the agriculture |                                   |  |  |
| 33%   | 50%                               |  |  |
| 2010  |                                   |  |  |

Source: Own survey, 2018.

NE. All participants of the focus group have direct experience with the policy measures focused on YF and NE. Farmers are running project and advisors have supported them. The event took place in the city of Haskovo, which is situated in a well-known region with good conditions for agriculture. Duration of the discussion was 80 minutes.

#### 3. Results

# 3.1. Current policy measures

Measure 112 "Establishment of Young Farmers" is one of the measures under the RDP in which the targets set for the period before 2013 are met. During the entire period of application of the measure, there is a tendency for increased interest in this type of support for young farmers – producers starting their agricultural activity. The increased interest in the measure imposes in 2012 to be provide additional financial resources by reallocating funds from the budget of other RDP measures.

The high interest in measure 112 for the period of its implementation is indicative on the basis of the applications submitted for support. During

the period 2008–2015, 9 590 applications for assistance with a total cost of  $\in$  304 million were submitted. The total number of approved contracts is 5 829 contracts and the total amount of approved financial aid is 146 million euro.

Towards the end of 2015 it can be taken into account that the relative share of non-eligible applications under Measure 112 is relatively high. More than 33% of all applications submitted during the admission periods are ineligible for support, with the highest proportion of rejected applications for assistance due to lack of sufficient financial resources under the measure. This high percentage is mainly due to the lack of sufficient financial resources to cover the amount of 40 million euro requested by the applicants.

Despite the high percentage of non-approved applications, overall the measure observes the achievement of the indicators set in the RDP 2007–2013.

The majority of the approved projects under the measure under which the payment of financial aid has been paid are young farmers whose main activity is horticulture -34%, followed by perennials -25% and those growing field cultures -13% (see Table 2).

**Table 2.** Projects with payment under measure 112 by type of agricultural activity on 31.12.2015

| Type of agricultural activity                 | Number of applications approved for | Share | Public expenditure, (EUR million) |        |
|---|-------------------------------------|-------|-----------------------------------|--------|
|   |                                     |       |                                   |        |
| agricultural activity                         | payment                             |       | EAFRD                             | Total  |
| Field cultures                                | 762                                 | 13%   | 13.19                             | 16.49  |
| Horticulture                                  | 1956                                | 34%   | 31.57                             | 39.46  |
| Wines   | 89                                  | 2%    | 1.49                              | 1.87   |
| Perennials                                    | 1448                                | 25%   | 24.49                             | 30.61  |
| Milk  | 239                                 | 4%    | 3.4                               | 4.25   |
| Grazing livestock (excluding milk production) | 151                                 | 3%    | 2.05                              | 2.56   |
| Pigs  | 20                                  | 0%    | 0.339                             | 0.424  |
| Domestic birds                                | 75                                  | 1%    | 0.984                             | 1.23   |
| Mixed   | 424                                 | 7%    | 7.14                              | 8.93   |
| Others  | 662                                 | 11%   | 7.64                              | 9.55   |
| Total   | 5808                                | 100%  | 92.29                             | 115.37 |

Source: Ministry of Agriculture and Forestry, Bulgaria.

There was lack of interest in the start-up of livestock farming by young farmers. Livestock farms represent only 8% of the approved project proposals. The low relative share of livestock farms in approved projects under Measure 112 is mainly determined by the low purchase prices of production, higher legal requirements for livestock farming and the need for higher investment costs on farms.

This tendency for a small relative share of livestock farms is changing under sub-measure 6.1 of the RDP 2014–2020, and at the first intake in 2015. A relative share of this type of holdings was reported at about 40% of all applications submitted.

The data of the applications for assistance shows that the share of young female farmers is 42% and that of men 58%. These data generally follow the structure of all farms in the country where the share of male farmers is again predominant.

There was an admission under sub-measure 6.1 of the RDP 2014–2020 in 2015. The interest was very high. The budget was insufficient to support all applicants. More than 34 million euro is allocated to 1 381 young farmers. It is expected that there will be lack of budget of this sub-measure in the 2014–2020 programming period.

During the new programming period, there is again a high interest in the measure to support young farmers. The new measure places significantly more restrictive conditions that overcome the liberal nature of the old measure. Priority support procedures have been identified, clearer definition of concepts, the value of economic units updated, and minimum yield requirements. All these new requirements are provoked by the fact that during the previous programming period a very high percentage of the farms that received support were declared and after the end of the project period they ceased their activity as farmers. According to participants in a focus group on every three young farms, only one has continued to function.

Young farmers say that sub-measure 6.1 has been significantly improved over the same period in the previous programming period. However, some provisions create difficulties in the imple-

mentation of the projects. First of all, this is the requirement to respect the predetermined crops. "The farmer is not able to change crops independently that the market environment may have changed and the production of the selected crops is no longer profitable. This is formally met by the requirements, but the farm misses the opportunity to get better financial results." says Dimitar Dimitrov the chairman of the National Association of Young Farmers in Bulgaria.

The provision that, if both spouses are registered as farmers, one of them is added to the economic size of his farms, the same applies to the husband/wife. This often results in a holding whose size exceeds the maximum set for support.

The successful young farmer is the one who has a connection with agriculture created by his relatives. The farmer's young farm is set up as a continuation of the farming activity of older relatives who support the young farmer. The measure helps young farmers to enter the business, but the support of relatives is crucial in order to be able to cope with the challenges facing them.

Personal support is very important for providing the young farmer with farmland and financially secured business. As a result of the intensification of economic players and the investments made in agriculture, it is increasingly difficult to buy agricultural land that has an appropriate production potential. On the one hand, in the search for land, the most active are the cereal producers who, before the acquisition, used it for rent. On the other hand, the price of agricultural land has increased significantly since the start of the implementation of the CAP in Bulgaria, as the supply is very limited. In terms of financing the investment process, young farmers are also experiencing difficulties due to the fact that bank loans are granted against collateral that is liquid for the bank. Banks most often seek financial guarantees in excess of credit or real estate in urban areas. This problem is particularly acute in livestock farming, which requires large investment costs, and buildings and acquired production equipment are not accepted as collateral.

Another group of young farmers who successfully start and continue agricultural business are

those who have accumulated money capital as a result of work abroad and return to Bulgaria. This group is small in size, but the number of its members is expected to grow. Such farmers are most often targeted at organic production.

The training provided for the measure is not enough. It is necessary to focus on building entrepreneurial and risk management skills. Such courses should be funded by RDP measures.

a. How much have these supports been successful (evidence to identify indicators of success) – In the past Measure 121 one of the success factors of the measure was the easy way to apply for relatively small land in the sector of vegetables (garden and field). There were no average yield requirements.

b. Why they think their country went with special options and whether the other options would have been more effective – A special guarantee fund was developed under the program. Unfortunately, this fund did not work for the young farmers.

c. Differences in the measures implemented before 2013 and after 2013, what was more appropriate – During the new period, priorities have been formed in relation to particular sectors such as livestock, vegetables, fruit growing.

# 3.2. Challenges to YFs and NEs

Weak influence on the purchase price.

The major weakness of YF's farms is their weak influence on the purchase price of agricultural produce. The small size of scale of these farms does not allow formation of large batches of quality production, thus losing the competitive advantage of servicing the market. In general, the marketing function is not performed by the owner of the farm and he completely delegates the problem to wholesaler. Direct sales in the farm have a small share and do not have a significant impact on earnings. Strongly expressed individualism in sales is a critical factor deterring joint marketing, which is one of the opportunities for YFs to have greater power in negotiating purchase prices.

High production costs.

Despite the small size of the farm, YF fail to effectively plan and control their costs and to be

price-competitive in the market. Supply of raw materials takes place at high prices, as the quantities are small and the lack of timely information on price trends does not allow of YFs to optimize their costs. The main structural costs are: irrigation fees, seed and planting material, and costs of plant protection chemicals and fertilizers. High irrigation costs limit the number of seasonings, which reflects on the level of the yield. Lower average yields also determine higher production costs, making the farmer less competitive on the market. The high prices of pesticides and fertilizers determine the increase of direct costs. The efficiency of the fertilizers and plant protection products is low because of the poor quality control, which forces YF to treat agricultural crops more often to achieve better production results. Farmers point out that governmental control is not very effective on trade activity and there is a significant number of "gray" firms in the sector. Because of the small size of production, YF are fining great difficulties to negotiate favorable prices for the resources they put into production.

There is no desire for co-operation.

YF are generally unwilling to cooperate – 86% of respondents say they are not cooperative members and they are unwilling to do so. The main reason for this is that they have no confidence in this organizational form of doing business. YF prefer to make individual management decisions by being responsible for their own property.

There is no experience in applying for Structural Funds and inability to work with administrative documents. Generally among YF there is no experience in managing the administrative documents accompanying their activities. The main reasons for this are: unwillingness to complicate the farm management by spending more time for preparation of proposals for funding; Low awareness of the required administrative documents; Lack of time for administering the documents; The availability of many consultancy companies providing this service. A major problem in this area is the preparation of the project proposals for application under the RDP measures and the subsequent management of the project documentation.

# Low degree of mechanization.

The small size of the YF's holding is the major factor that restricts investments in agricultural machinery and mechanization. Despite the several measures of RDP, the low profitability of YF and the reluctance of the banking sector to lend to YF loans hamper investment in this area. Income is insufficient to ensure co-financing of this type of investment on the YF's holding. The use of entirely own funds in the provision of operational capital does not make it possible to incur large investment costs. Farmers say that they would increase the mechanization of production if they can predict market prices of agricultural products next season.

# Shortage of qualified workers.

YFs identify as a major problem the finding of qualified seasonal labor. They mainly uses own labor, which limits the recruitment of qualified staff. The low profitability of YFs is also one of the barriers which interferes the attractive payment to the seasonal workers. YFs cannot afford to pay for consultancy in the field of marketing and financing so they do these activities on their own.

# Low credit worthiness and insufficient operational capital.

Seasonal production determines uneven earnings on farm holdings. This also determines the YF's weak financial stability over the year. The low income levels and the low value of farm assets that can serve as pledge are the main barriers for YFs to obtain credit to secure their own business. Another reason for the low creditworthiness of YFs are the delays in government payments, which make the financial management of the farm even more difficult. Farmers in these conditions ensure production by using their own funds. The main source of operational capital on YF's holdings is the accumulated income from previous years. The inability to attract external capital limits the development of the YF's holdings.

### Insufficient risk management skills.

YF do not define risk management as a primary concern in the management of the farm.

This is the main reason he do not develop skills and gain experience in this area. Although small farms operate at higher levels of risk, YFs are reluctant to implement risk management. Major problems define this unwillingness to implement sufficient risk management are: the distrust to the insurance organizations; high insurance costs, which cannot easily be covered by the operating capital of the farm; low awareness of the mechanisms for risk management and lack of traditions of their implementation.

### Poor awareness of market trends.

Lack of information about the market situation is the main reason for reducing the ability of YFs to respond quickly and appropriately to market trends. Reasons for this poor information are: not enough time is set aside for market research because the YF put more effort and time in the operational management of the farm; not invest time and money in collecting market information; YF sold mainly production on the local market, which does not reflect the trends in the market of agricultural products in the country.

# Low investment activity.

Investment activity of YF's farms is low due to limited access to credit. YF prefer to established routine in the management of the farm based on their own experience, which gives them a sense of security. They are not motivated to expand and prefer to benefit from planning a small volume production. The insufficient income, which under these conditions is a major source of funding, deters the major investments in YF's holdings. YF are eager to spend more income for their own needs unless to invest in larger productivity for which there is no market access.

# Unstable market prices.

The market for agricultural products is determined by high dynamics of prices for a relatively short period of time. This determines more difficulties on management of sales of agricultural products. The main reason for the low income and the reluctance to increase the size of production for YF's holdings are the unstable market price.

#### Unfair competition.

The presence of unfair competition in the agricultural sector determine the following practices: unauthorized import of agricultural production with poor quality and low market prices; receiving subsidies from the "fictitious" farms; Sales of agricultural products in unregulated markets; not accounted costs, by farmers and by their input suppliers and customers (traders of agricultural products). All these practices make YF's farms not competitive on the market.

### Rising prices of resources.

The prices of essential inputs in agriculture is increased dramatically in recent years. Major share in production cost takes the fees for irrigation and the costs for fertilizers and plant protection. Lowering these costs is limited due to the small size of the YF's holdings which does not allow them to negotiate better prices. Frequent droughts and deteriorating irrigation infrastructure in Bulgaria define higher price on water resources used in agriculture holdings. These factors put YF's farms in terms of survival and a strong dependence of natural disasters.

# Global Climate Change.

Bulgaria is falling into the drought zone and risks related to natural disasters. The trend of increasing global temperature will lead to a change in the specialization of farms; an increase in production costs; an increase in losses of agricultural production and wastage; to labor migration in related sectors and industries.

# Strong market power of supermarkets and distributors.

The majority of the risk in agricultural sector is delegated to the YFs, which receive the smallest margin in whole value chain. Distributors of agricultural products is have a stronger market power due to the lack of real competition at this point in the supply chain. The inability of YFs to offer big quantity of agro-products on the market through cooperation put them in unfavorable conditions in trade negotiations.

Underdeveloped elements of the trade in agricultural products (no futures contracts, auctions, etc.).

The system of agricultural markets in the country is not very well developed. There is no presence of other elements of the trade in agricultural products like futures contracting, auctions, etc. These factors hinders the sales of agricultural products, the competition between farmers and traders to make transactions. There are a network of agricultural markets but this network does not functioning as such and does not benefit trade in agricultural products.

#### Lack of access to credit.

Banking has a low market activity of credit needed by agriculture. On the other hand the few banks that offer credit resource to the YFs and NEs want high value pledge on loans and impose higher interest rates. This limits the investment activity of farms and makes it difficult to raise operating capital needed to cover operational costs.

In the next table can see the influence of existing measures to overcome the challenges in front of the YF and NE.

### 3.3. Needs of YFs and NEs

The YFs and NEs identifying the following obstacles to improving their own competitiveness—limited access to some production resources and high production costs; insufficient labor force; low mechanization of production; limited market access; competitive imports of agricultural products and frequently changing regulations; lack of experience in managing projects funded by the measures of RDP.

#### Access to land.

A major limiting factor in increasing the size of the farm of YFs and NEs is available agricultural land. Farmers point out that agricultural land prices have increased significantly and even using different measures of RDP that supporting them they cannot afford to buy one. Lease of agricultural land is also difficult because of the long periods of lease contracts required to receive financial assistance under various measures of RDP. According to YFs and NEs hiring proce-

Table 3. Influence on existing measures in challenges for YF and NE

| Challenges   | Are sufficiently addressed by the existing measures | No sufficiently addressed by the existing measures |
|--|---|--|
| 1. Weak influence on the purchase price  |   | ✓  |
| 2. High production costs   |   | $\checkmark$                                       |
| 3. There is no desire for co-operation   |   | $\checkmark$                                       |
| 4. There is no experience in applying for Structural Funds and inability to work with administrative documents | ✓   |  |
| 5. Low degree of mechanization   | $\checkmark$  |  |
| 6. Shortage of qualified workers   |   | $\checkmark$                                       |
| 7. Low creditworthiness and insufficient operational capital   | ✓   |  |
| 8. Insufficient risk management skills   | $\checkmark$  |  |
| 9. Poor awareness of market trends   |   | $\checkmark$                                       |
| 10. Low investment activity  | $\checkmark$  |  |
| 11. Unstable market prices   |   | $\checkmark$                                       |
| 12. Unfair competition   |   | $\checkmark$                                       |
| 13. Rising prices of resources   |   | $\checkmark$                                       |
| 14. Global Climate Change  |   | $\checkmark$                                       |
| 15. Strong market power of supermarkets and distributors   |   | $\checkmark$                                       |
| 16. Underdeveloped elements of the trade in agricultural products (no futures contracts, auctions, etc.).      |   | ✓  |
| 17. Lack of access to credit   | ✓   |  |

Source: Own survey, 2018.

dure of municipal land is clumsy. Large grain producers compete YFs and NEs on management of land resources in the sector.

# Access to irrigation.

Due to the poor condition of the irrigation systems in the sector, the access to water resources needed for agricultural production is limited. High fees for irrigation (from 10 to 25 euro/ ha) increase the production costs and lower the competitiveness of YF's holdings. One option for YF is drilling and through gravity irrigation to ensure the production. This alternative requires additional investment costs (drilling) as well as knowledge of legislation regulating this kind of activity. On the other hand gravity irrigation leads to higher rate of deceases of the plants and increase spending on plant protection activities. YF's holdings are not able to invest in the creation of drip irrigation or purchase of irrigation equipment due to lack of funds.

Access to production innovation.

There are also restrictions on access to efficient plant protection products and fertilizers. Most farmers have no confidence in the quality of offered and fertilizers and products. The low efficiency of the plant protection products, leading to more frequent use, and this affects production costs. Traders often cheat and refuse to issue invoices to the farmers. In this way farmers then cannot declare these costs.

#### Access to credit.

Low levels of income of YF's holdings and willingness to achieve financial stability with very limited own resources objectively restricts the structural development of holdings. The banking sector has high requirements on the provision of agricultural credit and thus restricting the access of farmers to credit. This is the main reason YFs and NEs cannot invest in the purchase of specialized equipment and attachments. Another critical

factor for the successful development of farms is market access for agricultural products. Farmers say that this market is highly dominated by resellers that offer low purchase prices in purpose to achieve a higher margin in value chain. Another factor that determines the lower purchase price of YFs and NEs is the competitive import of agricultural products from Greece, Turkey and FYRM.

The above-identified needs of YFs and NEs required to take the following major decisions:

- Effective state control over the resource suppliers and traders of agricultural products;
- Operating state guarantees for credit for YFs and the creation of conditions to establish credit cooperatrions, guarantee and insurance funds;
- More measures with advance payments and increase the amount of these payments;
- A simplified regime for YFs and NEs wanting to lease municipal land;
- A clear presentation of the rules for applying for individual measures necessary documents and requirements to specify in advance;
- State support in hiring additional labor on farms;
- Measure 6.1. has social functions and provide useful secondary effects. In future the budget of the measure to be expanded.
- Promoting the development of local agricultural markets, of which the right to sell agricultural products have only registered farmers;
- Encouraging local processing enterprises to work with local raw materials;
- To increase the capacity of NAAS in order to meet the expectations of farms to provide more technical assistance 9.2.

#### Innovation needs.

Basic needs of YF's holdings in the field of innovation are the following: the need-to-date market information; providing more access to new technologies and knowledge.

YF's and NE's show major interest in organic production and local foods. The transition from conventional to organic production by farms is limited by the high cost of certification, high prices of plant protection products and fertilizers that are allowed to be used in this type of production, and low awareness of market trends. Anoth-

er limiting factor is the lack of experience and knowledge in the development of organic production. Another need of YFs and NEs is innovation in guarding the farm during seasonal. Overcoming these obstacles requires the following steps:

- Subsidizing the cost of certification of organic production in farms;
- Implementing system to-date market information. There is a system called AMIS (Agriculture Market Information System), but it actually does not work and it is not popular among YFs;
- Promoting technology transfer from research organizations to farms by active support of NAAS, which may be helping to bind link between science and production;
- Promoting the creation of local structures between universities and farms for the creation and testing of new products and technologies;
- Promotion of biological production and local foods through YFs, such as successful form of agricultural business.

### 3.4. Barriers for YFs and NEs

Barriers in risk management.

The main sources of risk to the holdings of YFs and NEs are natural disasters, volatile market price, financial risk and theft of agricultural production. Generally farmers do not give priority to risk management in managing the overall activities of the farm, but reported its importance. The use of insurance organizations in sharing those risks of farming is not a popular measure. Reasons for this are the low confidence of farmers to the activities of these organizations, higher insurance costs and low interest of insurance organizations to impose their products in the agriculture sector. Risk management is necessary to take the following support actions:

- Higher levels of subsidizing insurance payments of farmers;
- Higher activity of insurance organizations in the process of sharing risk in agricultural activity;
- To create mutual guarantee and insurance funds with the active participation of the state;
- Encouraging cooperation among farmers for the marketing of products;
- Creation of joint structures among the local population to guard the local farms.

Barriers for the implementation of marketing. YF's holdings practically do not perform marketing functions. This activity is limited to the search for effective ways of distribution of production in the shortest possible time. This is due to ignorance of the marketing approach as an effective approach to the management of the farm, and inability to make marketing costs. Major obstacles in carrying out the marketing functions of the farm are; low volume production, which implies marketing functions and more commercial skills in marketing of products; lack of real functioning agricultural markets; the presence of the

Main measures that need to be taken to encourage the marketing are:

"gray" sector; inability to standardize production.

- Promoting the development of marketing cooperatives;
  - Creation of local agricultural markets;
- Creation of standard contracts for the sale of agricultural products with mandatory elements such as delivery times, production quantities and purchase prices;
- Setting standards for the quality of agricultural production;
- Introduction of short food chains and vertical integration of processing plants.

#### 4. Conclusion

The results of this analysis can be summarised in several aspects related to maintaining and improving the economic viability of YFs and NEs in the future. One of the aspects is to increase the size of their farms. It can be done by development of the land market. Another way is to develop market services like information systems, supply chain, marketing and processing. These tasks can be achieved effectively by stimulating collaboration and networking by the government. Networking in value proposition is the key for sustainable development of the actors in the sector. Encourage the YFs and NEs in networking and collaboration by the state will be able to solve the issues that every start up faces in agriculture. In this context the state should contin-

ue the efforts to develop credit cooperatives as a source of financial services for YFs and NEs. Finally, the role of the National Agricultural Advisory Service (NAAS) in providing counselling to YFs should be expanded. In this context, the network of this structure should be revised in order to maximise coverage and consulting of YFs and NEs. Credit cooperatives composed of YFs can also be involved in this process by providing support for those services. Modern agriculture cannot develop effectively without science and research. YFs and NEs are not capable to optimise their operations without information and professional education. In this regard, the development of agricultural science, education and research should be encouraged. Application of innovation, knowledge and education are the key ingredients of the success of YFs and NEs.

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