Research paper

Cooperation of agricultural producers in the Republic of Moldova

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Acronyms and abbreviations

ACED	Agricultural Competitiveness and Enterprise Development Project
ACSA	The National Extension Service
AGROinform	the National Federation of Agricultural Producers
AGT	Association of Peasant Farms (Asociaţie de Gospodării Ţărăneşti)
AIPA	Agency for Interventions and Payments in Agriculture
APES	Association of Grape Producers and Exporters
CAPMU	Consolidated Agricultural Projects Management Unit
CNPF	The National Commission for the Financial Market (Comisia Naţională a Pieţei Financiare)
ENPARD	the European Neighborhood Program for Agriculture and Rural Development
EU	European Union
FNFM	The National Federation of Farmers
FPG	Fruit Producers' Group
GAP	Good Agricultural Practice
GD	Government Decision
GDP	Gross Domestic Product
GIZ	The German Federal Enterprise for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
GLOBAL G.A.P.	Worldwide standard that assures Good Agricultural Practice
GoM	Government of the Republic of Moldova
GT	Peasant farm (Gospodărie Ţărănească)
Ha	Hectares
IFAD	The International Fund for Agricultural Development
MAC-P	Moldova Agriculture Competitiveness Project
MDL	Moldovan Lei[1]
MAFI	Ministry of Agriculture and Food Industry
NBS	National Bureau of Statistics
NGO	Non Governmental Organization
PFAP	Moldova Private Farmers Assistance Program
RISP	The Rural Investment and Services Project
SCA	Savings and Credit Association
UAP	The Union of Agricultural Producers
UN	United Nations
USD	US dollar
VAT	Value Added Tax
WUA	Water Users' Associations

[1] The exchange rate of the Moldovan Lei to USD according to the National Bank of Moldova at 11.01.2017 was 20,1555 MDL to 1 USD

Executive summary

The horticultural sub-sector plays an important role in the economy of the Republic of Moldova. It is a generator of demand, thus enhancing the creation and development of added value in other branches of the national economy such as trade, construction and financial services. At the same time, it faces several challenges, particularly small scale production, insufficient productivity and quality, as well as limited access to finance.

At the same time, small scale farms, including subsistence and semi-subsistence produce a large part of high value-horticultural crops such as fruits, nuts, grapes, vegetables and potatoes that are mostly sold in open air agricultural markets. Meanwhile, the decrease of productivity in the horticultural sector is directly related to lack of investments, capital and credit availability, factors that have resulted in farmers applying low yield technologies and drastically reducing their use of agricultural inputs.

Besides the above mentioned problems, other major obstacles that hamper the development of cooperation in this field are very similar to general problems in agriculture such as the land consolidation, lack of the labor force, excessive bureaucracy, difficult access to financing sources, lack of strongly developed and supporting legislative framework, etc.

In terms of statistical aspects, there is big gap in elaboration of the official statistic data concerning the development of cooperatives in the Republic of Moldova.

Thus, cooperation is seen as one of the key solutions for the multiple problems faced by the cooperating agricultural producers in the horticultural sector, among which can be mentioned: the mentality that still links the notion of cooperative with those of kolkhoz; the lack of mutual confidence among cooperative members; necessity of enormous efforts for convincing people to cooperate; difficult process of establishing common vision referring to the objective of the cooperation; small share of success stories that could motivate farmers to associate; lack of management skills and of the integrity of the cooperative leader; difficult and slow decision making process inside the cooperative.

Cooperatives have become a social economic necessity, providing small-scale farmers a viable alternative to become competitive with big economic agents and increase bargaining power relative to suppliers of materials and agricultural markets.

At the same time, creation and development of cooperatives and other forms of associative agricultural producers must be seen as an evolutionary process that has as the main motivation factor socio-economic interests of small-scale agricultural producers.

Despite the various types of association forms the most viable forms proved to be production cooperatives and entrepreneurship cooperatives. However agricultural production cooperatives, due to the lack of sufficient organizational democracy, act rather as a form of land renting than as a form of agriculture producers integration.

Another important problem is related to the insufficient awareness of the farmers about the importance of mutual support and assistance for development of cooperatives and other forms of associative activity.

Introduction

The past political actions in the Republic of Moldova have a long-lasting negative impact on the institutional environment and/or popular attitude towards co-operatives. The previous experience of creating cooperative farms shows a quite negative image. Thus as in some other Central and Eastern European countries, co-operative firms were generally not based on self-organization principles, i.e. non-voluntary membership, but were used by governments for political reasons under the motto *'what we cannot nationalize, we co-operatize'* (Munkner, 2002).

In these countries, self-organization is still hindered by a lack of social and human capital, even though legal and taxation frameworks as well as the political environment may have become more supportive for co-operatives in recent years. (Groeneveld, 2016)

Co-operative philosophy believes in the possibility of a more egalitarian world. It is grounded in a worldview that human beings are social creatures who are willing and able to co-operate with one another for a greater good. Human relationships, community, and association are emphasized over property relationships. As a factor of production, labor has dignity and precedence over capital. Capital, if it enters the picture, should be a servant to labor (Bardswick eds., 2012)

Moldovan agricultural sector is composed of two major sub-sectors: corporate sector comprising large companies and the individual sector that includes peasant farms and household land in private property. Small farms, especially subsistence and semisubsistence farms generate a limited surplus of high value-added crops (fruits, nuts, grapes, vegetables, potatoes) that are mostly sold in open air agricultural markets. At the same time, large scale agricultural companies are specialized in the production of low value added crops (such as cereals, oilseeds, sugar beet), and employ limited labor force due to the high level of mechanized agricultural operations. This specialization has been driven by a number of factors such as the relatively low production cost of these crops, the availability of agricultural machinery allowing the rapid cultivation on large areas, relatively simple and cheap post-harvest facilities, as well as assured markets for these commodities.

The study on the development of the association and partnership of agriculture producers in the Republic of Moldova aims to provide valuable information on producers' cooperation in all three regions and provide analytical material for supporting the elaboration of policies, recommendations and learning documents. The research is based on a modern theoretical and applied approach in terms of methodology, with an emphasis on field research methods, like face-to-face interview, questioning and focus groups. The wide range of respondents determine the comprehensive character of questioning, allowing to identify the opportunities, major challenges and constrains for producers' cooperation. The use of this interactive methodology provides valuable knowledge for the design of the field support activities. Besides the above mentioned research methods, a series of other socio-economic tools have been used: analysis, synthesis, forecasts, comparative method, etc. The expected results of the research will provide a mapping of collective action groups and approaches supported by IFAD, other donors and national governments, as well as an analysis of socio-economic and environmental conditions that enable

agricultural producers to engage in collective action groups; potential partnerships for innovation and knowledge transfer in agriculture, success stories on collective action groups and approaches supported by IFAD and others.

Based on the project objectives, the research study will focus on horticulture2 sector and producers, and a focus on cross-cutting issues such as, poverty, gender and women empower, climate change and environmental issues should be kept in all chapters and stages of the research.

Understanding how collective action can help address the inefficiencies, coordination problems or barriers to market access is particularly important and this study will help at providing key learnings on how best to use collective actions to promote profitable and inclusive value chains.

Even the poorest farmers typically have some formal and informal connections to markets, although the main production may be subsistence oriented. Thus the key challenge is to ensure better and more profitable market integration for this group.

1 General description of the agricultural sector

1.1 Regional particularities of the agricultural production

1.1.1 Trends and development of the agro-food sector of the country

Agriculture is one of the key driving forces in shaping Moldovan landscape, nature and culture over centuries. Favorable climate and high quality soils historically have determined Moldova's agricultural specialization, particularly in the production of high value crops like fruits and vegetables. Agriculture contributed with 13% of the country GDP in the year 2014. About 31% of the active population of the country was engaged in agriculture in 2014.

However, the status of the agricultural sector has changed dramatically over the last two decades along with the disruption of production and distribution networks. Land areas used for high value crops have been reduced by two times. The shift in production has also been accompanied by significant reductions in land productivity.

This situation is directly related to lack of investments, capital and credit availability to the agricultural sector, factors that have resulted in farmers applying low yield technologies and drastically reducing their use of agricultural inputs, especially such as fertilizer and other agricultural chemicals.

Recent trends of the gross agricultural production in Republic of Moldova are characterized by high fluctuations of the gross agricultural product, depending first of all to changing climate and weather conditions (see figure 1).

[2] Garden crops (fruits, nuts, vegetables, culinary herbs and spices, beverage crops, and medical plants, ornamental plants), as well grains, oilseeds, fiber crops and industrial crops. Pasture grasses and forage crops are excluded taking in consideration the strong connection with livestock sector, which is not targeted by the project.

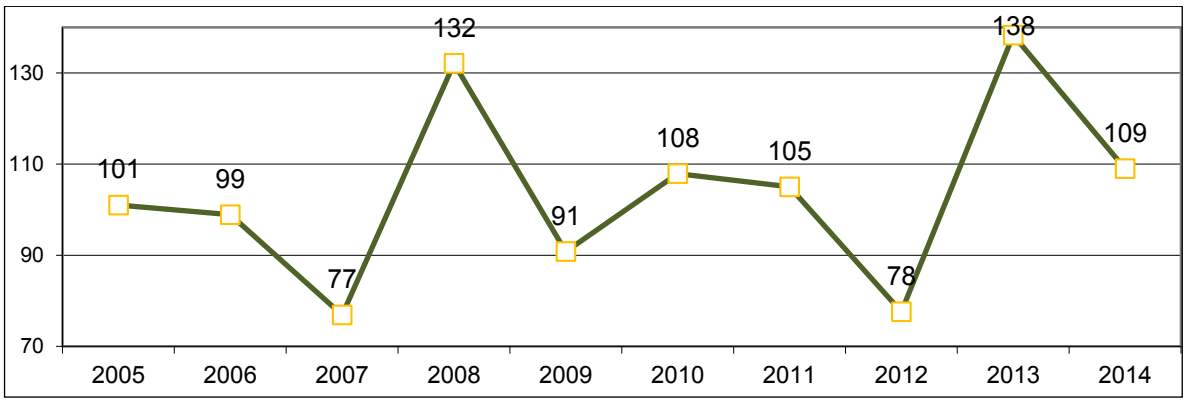

Figure 1. Index of the Global Agricultural Product 2005-2014 (previous year=100)
Source: elaborated by authors based on data of National Bureau of Statistics, 2016

1.1.2 Structure of agriculture sector

Crop production

The dominant position in the structure of agricultural production is the plant growing, which share in the total agricultural production is about two-thirds. The share of livestock production has declined in the 90s as a reaction to the appreciation of energy resources, liberalization of the market and disruption of the trade links with Russian Federation.

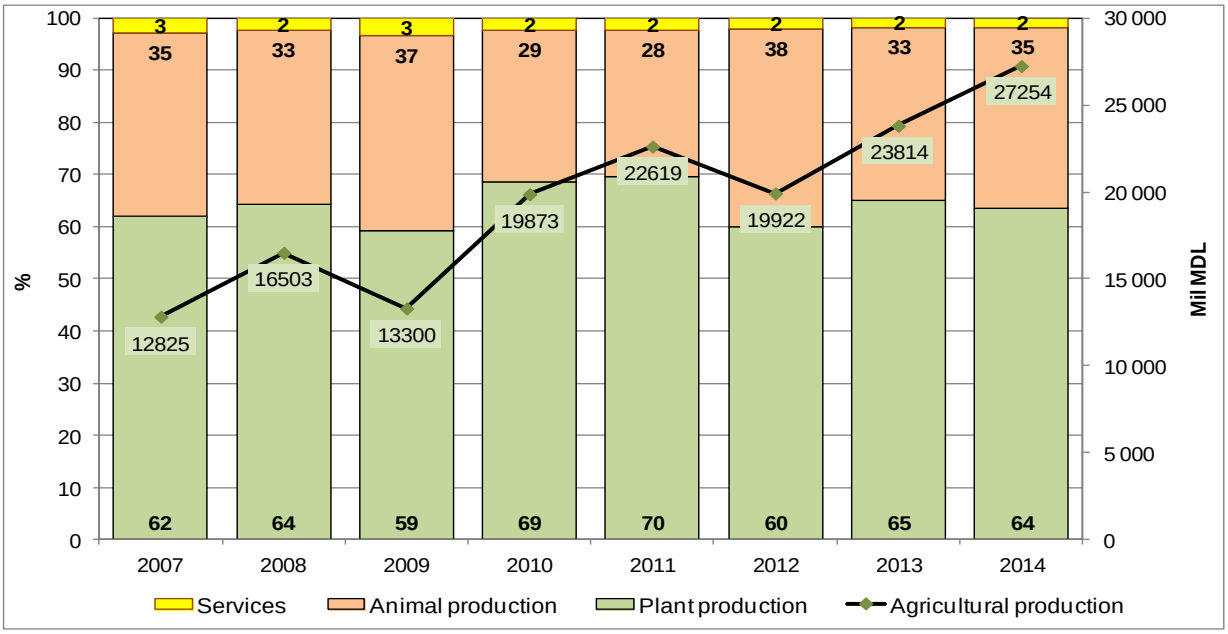

Figure 2. Structure of agricultural production, in all categories of producers 2007-2014, mil MDL, % to the total volume of agricultural production
Source: elaborated by authors based on data of National Bureau of Statistics, 2016

In Moldova, during the recent years a poorly diversified structure of sown areas was formed. Cereals and industrial crops occupy about 90% of the acreage. The dominance of corn and sunflower in the structure of seeded lands is present in almost all areas of the country, despite the fact that the soil and climatic conditions in many areas are unsuitable for cultivation of these crops. There is minimized the production of fodder crops on arable lands, which leads to the disruption

of crop rotation patterns, deterioration of livestock forage, increasing the pressure on the lands to a level that leads to their degradation.

Livestock

Livestock industry suffered the greatest losses during the economic crisis. The vast majority of livestock has been moved from large farms in the household plots and peasant farms, where the practice of extensive technologies of livestock production has led to a sharp decline in the production volumes. Recovery of the livestock industry potential is going with slower rhythms than of the plant growing sector.

The essence of changes in recent years in the structure of production in corporate farms consists in their abandonment of the milk and meat production. Simultaneously, feed crops and some of the technical crops, including tobacco, sugar beet, vegetables, potatoes, essential oil crops and medicinal plants have been excluded from these farms' crop rotations.

As a result the livestock production, but also production of vegetables, potatoes, tobacco, forage crops, and other products with high added value has decreased during the transition period.

1.1.3 Farm structure

A great part of the Moldovan agricultural sector is composed of two major sub-sectors: corporate sector comprising large companies and the individual sector that includes peasant farms and household land in private property.

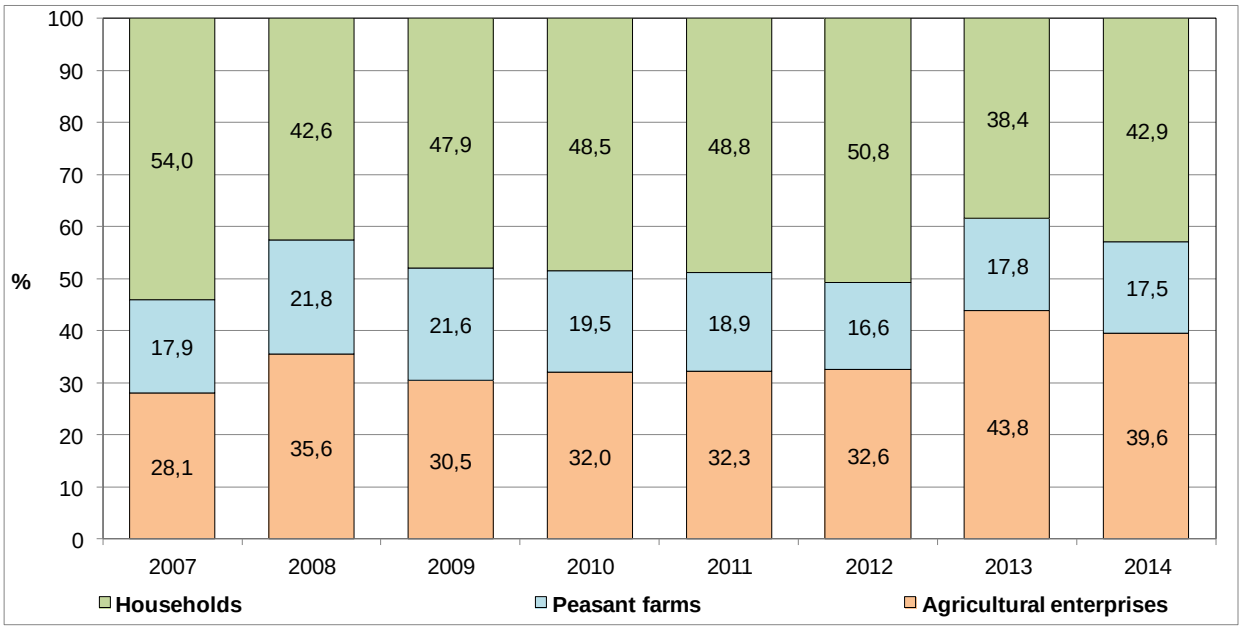

Figure 3. Structure of agricultural production, by categories of producers 2007-2014, % to the total volume of production

Source: elaborated by authors based on data of National Bureau of Statistics, 2016

On the one hand, small farms, especially subsistence and semi-subsistence farms generate a limited surplus of high value-added crops (fruits, nuts, grapes, vegetables, potatoes) that are mostly sold in open air agricultural markets.

In the same time large scale agricultural companies are specialized in the production of low value-added crops (such as cereals, oilseeds, sugar beet), and employ limited labor force due to the high level of mechanized agricultural operations. This specialization has been driven by a number of factors such as the relatively low production cost of these crops, the availability of agricultural machinery allowing the rapid cultivation on large areas, relatively simple and cheap post-harvest facilities, as well as assured markets for these commodities.

1.1.4 Agricultural products trade patterns and tendencies of development

The agri-food export structure is dominated by a few groups of products which reflect a rather primitive structure of the agri-food exports in which prevails wine production and raw material of plant origin such as nuts, grains and oil seeds. The most important export groups of products for Moldova agricultural sector are "Edible fruits and nuts", "Alcoholic and non-alcoholic beverages", "Oil seeds" and "Vegetable oil" (see figure 4).

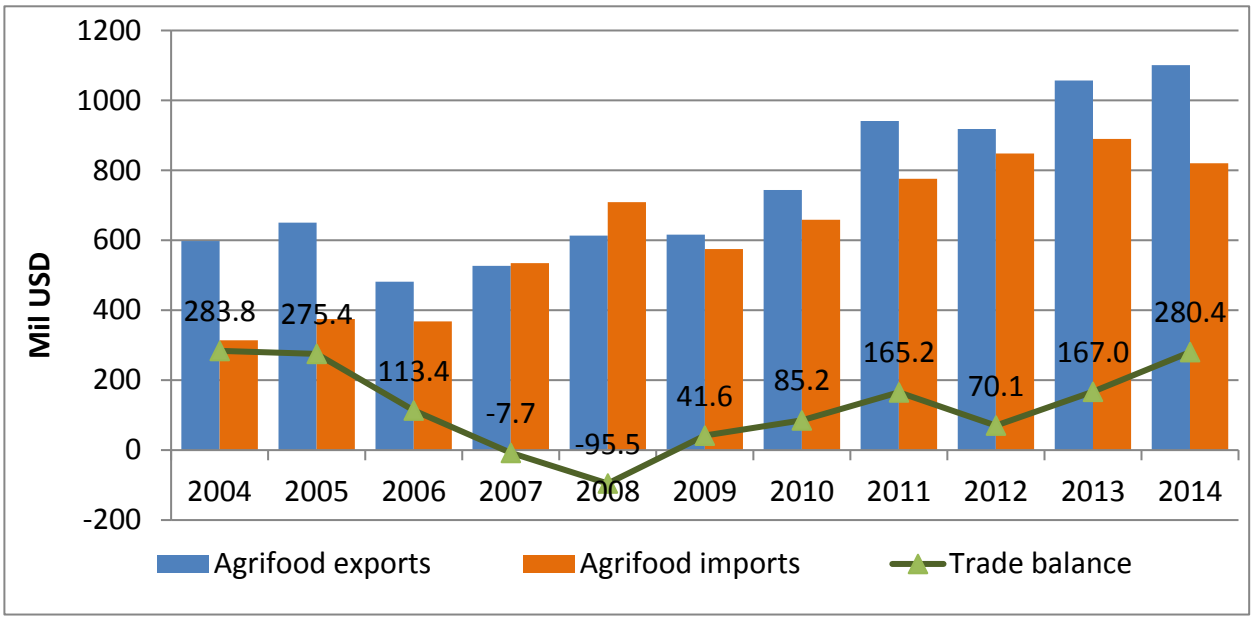

Figure 4. Total agricultural trade in the Republic of Moldova, 2004-2014, Mil. USD
Source: elaborated by authors based on data of National Bureau of Statistics, 2016

The average annual volume of agri-food exports for the period 2010-2014 amounted to about 922 million US dollars. Export geography includes 113 countries, of which the top five account for cca. 54% of total agri-food exports. These are the Russian Federation, Romania, Belarus, Ukraine and Italy

There are certain evident tendencies in the agri-food exports' development. Thus exports to Russian Federation decreased almost twice, from 242 mil. USD in 2010 to cca 131 mil. USD in 2014. In the same, time agri-food exports to other countries have an increasing trend. Thus, these exports to Romania, Belarus and Ukraine increased during the period on average with 58%, 76% and 37% respectively, while agri-food exports to Italy increased almost six fold during the same period. Per total agri-food exports of the Republic of Moldova have increased during the period of 2010-2014 with about 46% (see table 1).

Table 1. Development of the agri-food exports to top 10 major destination countries and total World, 2010-2014, millions USD, %

Nr.	Country	2010	2011	2012	2013	2014	2014/2010, (%)
1	Russian Federation	242,1	243,8	235,0	197,1	131,1	54,1
2	Romania	61,5	101,0	79,4	86,4	97,4	158,4
3	Belarus	69,2	62,6	69,0	75,9	121,8	176,0
4	Ukraine	52,9	92,2	68,7	88,9	72,5	137,0
5	Italy	13,6	45,7	57,2	41,0	81,0	594,6
6	United Kingdom	24,3	49,1	22,7	42,0	43,2	177,7
7	Poland	20,3	41,8	35,4	36,0	34,3	169,1
8	Germany	23,0	36,1	19,6	44,8	42,0	183,0
9	Turkey	27,0	22,2	16,1	45,1	52,4	194,1
10	Kazakhstan	23,7	26,9	29,0	29,9	37,7	159,5
	Other 103 countries	174,6	195,7	246,7	328,5	351,8	201,5
	Total World	**732,2**	**917,1**	**878,9**	**1015,5**	**1065,4**	**145,5**

Source: *Elaborated by authors based on UN Comtrade data base [7]*

1.1.5 Review of environment and natural recourses

The territory of Republic of Moldova can be divided into three agro-ecological zones:

- the North part of the country is a hilly zone with forests, step and meadow vegetation. It has the most fertile soil with a high water holding capacity,
- the Central part of the country is hilly and has deep valleys, less fertile soil, and is best for perennial crops like orchards and vineyards
- the Southern region has steppe to meadow terrain with both highly fertile and not as fertile types of soils. Due to higher temperatures and lower rainfall, this latter zone has only marginal production in the absence of irrigation.

Undulating plains with fertile *chernozem* soils and productive agricultural land primarily characterize Moldova's terrain. Almost every second hectare of land is above the average quality of which about 27% of agricultural land is of extremely good quality. However, the quality of soils is decreasing gradually due to erosion processes and intensive use of industrial agricultural techniques. The low level of crop rotations and reduced use of organic fertilizers have led to a profound negative balance of humus and bio-elements in soils.

Arable land and permanent crops cover 2,02 million ha and represent 66% of total country area. The zonal particularities of the soil are represented by three types of soil: *chernozem* (70% of total), brown and grey soils.

Along with decreasing soil quality, the quality of water is also declining and detrimentally affects the productivity of agricultural land. In spite of the numerous reservoirs, stagnant surface water volume and river flow is low. The main sources are rainwater and water from the snow melt. Water resources are comprised of the surface waters of rivers, lakes and groundwater. A total area of 76,214 ha covered by water, including ponds (36718 ha). The largest water resources are trans-

boundary rivers: Nistru river (about 57%) and Prut river (10%). The quality of the water from Nistru and Prut rivers is acceptable and can be used for irrigation.

Small rivers and ponds are usually polluted, have a high mineralization and hardly can be used for irrigation. For irrigation purposes, only the water from rivers is suitable for use, while the water from inland ponds is mainly unsuitable. A higher degree of mineralization along with a higher water deficit is observed in the southern part of the country.

The Republic of Moldova has a moderately continental climate. However the climate is highly variable, that often creates problems for agriculture sector such as droughts, floods, frosts and hail. One of the most important effects of the climate change is droughts that cause significant decline of the yields of crops and livestock. The high incidence of extreme events and vulnerability to the climate change requires investment and measures for resilience.

1.1.6 Knowledge transfer system

In the last decade considerable efforts to create a professional and effective rural extension service in Moldova have been made. At present a number of organizations and institutions provide a wide range of extension services. Among the most important one could mention the National Extension Service (ACSA), the National Federation of Agricultural Producers (AGROinform), the National Federation of Farmers (FNFM) and a large number of professional associations.

The Agricultural extension services network (ACSA) was created in 2002 with the World Bank support and so far has been financed from the state budget, the World Bank and the Swedish International Development Cooperation Agency. Since June 2013, the Government took over full financing of the network extension. Rural extension network is managed from the head office, located in Chisinau, and consists of 35 regional offices, 75 regional consultants and 350 local consultants operating within municipalities. Network services are currently offered free of charge to farmers, while the institution itself is totally dependent on state funding.

Unfortunately, there are currently limited institutional connections between the components of knowledge in agriculture in Moldova and information system, for example, between institutions of agricultural research, extension and education / training. These three components work independently involvement and collaboration is limited to involvement of researchers and professors as consultants in short-term projects of the extension service. In Moldova there is no a permanent platform for communication and cooperation, aimed at serving the common needs of the private sector. There are no mechanisms through which the extension service could influence the agricultural research agenda.

It is important to maintain and expand the coverage of the extension network, together with the diversification and improvement of its services. The service extension should further extend and diversify its services in order to cover the information needs of the whole value chain from production to the market, on the one hand, and to develop services provided on commercial basis, on the other hand. It is important to strengthen the extension system through creation of the new services, emphasizing entrepreneurship, economic diversification in rural areas and family social services.

The research and innovation in agriculture is currently represented by eight scientific institutes, including the State Agrarian University of Moldova. Research institutes are subordinated to both the Ministry of Agriculture as well as to the Academy of Sciences and are funded, basically from the state budget.

Taking into account the outdated research equipment, insufficient financial resources and aged staff existing research institutes are in a state of survival. There is no clear and transparent procedure of selection for research topics that should be targeted to the real sector demands. Therefore it is important to create closer connections between research and development sector and the agrifood business needs. At present the research and innovation system in agriculture is not oriented towards the private sector and is relatively isolated, which makes it vulnerable.

Agricultural science and innovative policy development aims to stimulate obtaining new knowledge, highly productive biologic material, intensify innovation activities in agro-industrial sector and creating conditions for absorbing local and foreign innovations through the range of measures .

- RDI activities focused on priority directions of development of the sector;
- stimulating innovative scientific activities in order to create new varieties and hybrids of plants and highly productive breeds of animals, applying advanced farming and processing of raw materials;
- promote the creation and implementation of a system of economic incentives for attracting and absorbing innovations in the sector;
- deepening economic research to ensure scientific support for the sustainable development of the agribusiness sector;
- modernization of training and retraining of staff with higher and medium agro-industrial sector and bring the contents and quality of education to market requirements;
- supporting the development of technological transfer and extension network in agro-industrial sector. (Government of the Republic of Moldova, 2008).

1.1.7 Major challenges for sector development

Horticulture is an important sub-sector that can exploit the potential of the country. Horticulture, including the primary production and processing industry has a multiplier role in the economy, generating demand and stimulating the creation of added value in other branches of national economy such as trade, construction and financial services.

The horticultural sub-sector faces several challenges, namely, small scale production, large diversity of cultivars, insufficient productivity and quality, limited access to finance. It also faces bottlenecks in limited entrepreneurship capability and inadequate skilled and competent human resources.

Excessive fragmentation of agricultural land underlies a number of problems for the country's horticultural sector. In particular, the division of land into small plots did not allow intensification of the horticultural production and highlighting of the scale effect in the use of agricultural technologies, supply of inputs, processing, transportation, storage and marketing of horticultural products.

Specific climate conditions affect seriously the horticultural production because of often droughts, stormy rains associated with hail, early spring or autumn frosts.

Irrigation is limited to small areas closer to larger rivers Nistru and Prut and some inland water reservoirs, due to high costs of irrigation water and insufficient quality of the water for irrigation.

The further development of the horticulture is strongly linked to creation and maintaining of a critical mass of population endowed with entrepreneur spirit, knowledge and specialized training, skills and able to work in conditions of the market economy. Creation of the human potential in the horticulture sub-sector is a long lasting and capital consuming process.

1.2 State policies and strategic priorities for the development of the horticulture sector and rural development

Horticultural production is reflected in the strategic development documents as a priority area. Strategy on agricultural and rural development of the Republic of Moldova for the period 2014 - 2020, approved by Government Decision 409 of 06.04.2014, aims, within the overarching objective no. 1 "Increasing competitiveness of the agri-food sector through market restructuring and modernization" to ensure: restructuring and modernization of farms, including those specializing in horticultural production; strengthening cooperation between farmers and agricultural business (wholesalers, retailers); facilitating farmers' access to capital markets; Improved assistance for farmers and creation of an integrated system in agriculture by ensuring synergies between field research, education and agricultural extension.

The Action Plan for the implementation of the National Strategy for Agricultural and Rural Development for the years 2014-2020, approved by Government Decision 742 of 10/21/2015 provide a range of activities, implementation of which will have a direct impact over the development of the horticultural sector.

The financing agreement between the Moldovan government and the European Commission on implementation of the Programme ENPARD Moldova - Support for Agriculture and Rural Development provides funding for the agricultural sector amounted to 64 million euro for the period 2015-2018. The bulk of the money, 53 million Euros are granted by the European Commission for the sector budget support component (supplementing the budget for agricultural subsidies) and 11 million Euro as part of a complementary support.

The impact of the budget support from the European Commission on the horticultural sector and rural areas will be determined by the following planned outcomes: institutional strengthening and capacity building of institutions responsible for developing and implementing agricultural and rural policy; transposition of standards and requirements for quality, safety and control of the European Union into national legislation; increasing the competitiveness of agricultural production by investments in modernizing agriculture and the food and feed chain; improve education services, research and extension in the agr-food sector, including facilitating the development of information systems; improving sustainable land and water management practices; reducing agricultural regions affected by natural disasters and mitigation of climate change; facilitating

investment in physical infrastructure and rural services; increasing employment opportunities in rural areas; reduction of the geographic and gender disparities.

The agriculture and rural development represent one the key priorities of the developing on which the National Development Strategy Moldova 2020 is focused.

The basic goal of development in the sector, established by the Strategy, is to increase the competitiveness of the Moldovan agri-food products at the level that is produced in the EU. In this regard the continuous increasing of the productivity, adoption of the new technologies, sustainable development of the rural area and increase of the quality of the agri-food products are foreseen.

The policies implemented in the sector have four strategic goals:

1. Diversified agriculture production with high added value
2. Food security and safety
3. Maintenance of the natural recourses and of the land
4. Ensure a base for sustainable rural economy and raising the employment of labor in rural areas.

The structure and design of the National Strategy for Agricultural and Rural Development for the period 2014-2020 reflect the Moldova aspiration for a closer alignment with the EU policy framework and markets. The strategy rests on three pillars:

(i) enhancing sector competitiveness through structural transformation and agri-food market modernization;
(ii) ensuring the sustainable management of natural resources in agriculture; and
(iii) improving the quality of life in rural areas.

While better food security is not an objective per se, it remains a concern that transpires throughout the document. Measures such as investments in farm modernization, promotion of water saving technologies and climate resilient farm practices, as well large scale investments into the rehabilitation of the irrigation sector can be generally seen as conducive to better food security outcomes.

Subsidies to agricultural producers provided by the state through cooperatives and producer groups are aimed to encourage more competitive farms, but also and to better target agricultural supply. Increasing the concentration of agricultural supply reduce the number of traders that is more acceptable for both food industry enterprises and distribution companies because it facilitates the supply of agricultural products raw and direct negotiation with cooperatives or producer groups.

Since 2006 in the Republic of Moldova have been developed a number of strategic documents on sustainable development of the agricultural sector. However their implementation did not result in significant changes in the development of the agri-food sector.

1.3 Legal framework for agricultural associations' development

The legislative framework on the association of agricultural producers has undergone several changes since 1992, when the first law on entrepreneurship and businesses was adopted, that provided the meaning of the entrepreneurship cooperative, which is an enterprise founded by at

least five legal entities and (or) individuals engaged in entrepreneurial activities, which aims to help its members to obtain profit. It comprised few ideas on the association and just in 2001 the law on business cooperatives provided more general stipulation on the association process. In 2013 the expected law on agricultural producer groups and their associations was adopted, that comprised a wide range of principles of association of agricultural producers.

The first law comprising stipulations on the association of households is the **Law No. 1353 of 11.03.2000 on households (farms), published: 08/02/2001 in the Official Gazette no. 14-15 Art. No: 52.**

According to the law, a household has the right to participate in a commercial society and be a member of an entrepreneurs' cooperative. Also, it has the right to become a member of non-commercial societies (associations, unions).

Chapter IX of this law makes provisions on associations of households and unions of associations. Thus, in order to coordinate activities, training, improvement, consulting and informing members, to attract investment, to represent and defend the common economic and professional interests, the farms have the right to unite according to the territorial or production principle in association of farms; at the same time, associations have the right to form Republican unions of farms.

Article 28 of this law also stipulates that the assets of the association and union are formed of constitution fees and of their membership fees, fees for the services they provide, donations and other revenues not prohibited by law.

Being the first law on this issue, it did not provided for detailed criteria for associations. Although it describes the aims, tasks of the leading bodies of associations and several provisions on the reorganization or liquidation of the association, it is lacking in specific provisions such as: conditions for the establishment of associations, principles of organization, limits of the mandatory number of members, association models, income distribution models, etc.

Another law tangential approaching the association of agricultural producers issue is the **Law No. 73 of 12.04.2001 on business cooperatives, published: 03.05.2001 in the Official Gazette no. 49-50, Art. No. 273**

The law establishes the legislative framework and general principles for the development of business cooperatives, concerning relations of creation, activity, reorganization and liquidation of cooperatives, as well as associations and their unions.

Chapter XV of the law defines the particularities of agricultural service cooperatives. Article 87 states that there are considered agricultural service cooperatives those cooperatives whose members, by at least three quarters, including people with auxiliary personal households, are producers of agricultural products.

The first law directly concerning the association process came up in 2002 – the **Law No. 1007 of 25.04.2002 on production cooperatives, published: 06.06.2002 in the Official Gazette no. 71-73, Art. No. 575**

Cooperative production according to the law is an enterprise founded by five or more natural persons for the purposes of jointly manufacturing activity and other economic activity, based mainly on personal labor of its members and cooperation participation shares in its capital. The

size of payments and net profit of cooperative members are determined proportionally to the intake work of one of them and / or in accordance with the size of their participation and agricultural land - property of the cooperative member, used by the cooperative. At the same time, the law provides for the possibility to create unions based on two or more cooperatives for protection of interests of members.

Article 62 of the Law sets peculiarities of agricultural production in cooperatives. According to it, is considered as agricultural production cooperative the cooperative whose agricultural production produced within it account for at least 50% of the annual sales volume, including products from its primary processing. Members of the cooperative farm, in accordance with the law, transmit to the cooperative, voluntarily, the agricultural land belonging to them, for a period of at least one year. Meanwhile, cooperative farm has the right to buy agricultural land from other owners, including the members of the cooperative, which become the common property of the cooperative members.

The main law concerning agricultural producer groups and their associations came in 2013 - the **Law No. 312 of 12.20.2013 on agricultural producer groups and their associations, published: 25.02.2014 in the Official Gazette no. 47-48 Article No: 90**

The law establishes the legal framework for the organization, recognition and operation of groups of farmers, aimed at valorization of production of group members, improving the efficiency of their production planning, concentration of supply, organization of sales of agricultural products and the terms of financial support, related to their organization and functioning. Producer groups are any legal person, except non-profit organizations composed of farmers and recognized by the competent authority whose primary goal is the joint sale of agricultural products of the group members.

Article 3 of the law determines objectives of the establishment and operation of producer groups, these being: strengthening cooperation / association between farmers, increase income from agricultural activities, the sustainable growth of economic performance and competitiveness in agriculture, reducing production costs and stabilizing producer prices, increasing exports of agricultural products and foodstuffs.

According to the law, two governmental bodies are identified with a direct impact on agricultural producers: ministry of Agriculture and Food Industry and The agency of Interventions and Payments for Agriculture.

Principles of organization of producer groups are based on: association and operation based on free willing of the agricultural producers and of interest and action units of the group for sale of products of group members, the functioning of producer groups under the rules of fair competition and stability, the organization and functioning of each producer group around a single product or a group of homogeneous products, stimulation, including financial, of producer groups from the state and from other development partners, and prevention of double taxation on production sold through the producer group, assuming the responsibilities of producer groups as a prerequisite for obtaining financial support from the state.

Article 7 of the law stipulates conditions for the establishment and activity of the producer groups:

- A producer group may constitute in one of the types of organization under the laws in force, consisting of at least 5 members, farmers, none of whom may hold more than 20% of votes at the general meeting.
- Membership of a producer group may be acquired by any farmer who declares his intention in writing to pay the fee established according to the statute of the group and to commercialize its own product or group of homogeneous products within the group, as follows:

a) 50% - in the first year;
b) 60% - in the second year;
c) 75% - in the third and following years of activity.

Besides the existence of agricultural producers groups, the present law makes an emphasis on the possibility of groups to create associations with the status of non-profit organizations in order to promote common interests. In case that the association of producers groups will decide on carrying out some business activity, the concerned association will be reorganized in a commercial society (company), that will have to obey other rules of activity.

In terms of advantages of cooperation, cooperatives and associations are eligible for preferential access to some government subsidy programs that are not always available to individual farmers. At the same time, in regard to the fiscal aspect, according to the Tax Code of the Republic of Moldova, VAT exemptions refer to services delivered by agricultural service cooperatives, established in accordance with art. 87 of Law No. 73-XV from April 12, 2001 on business cooperatives, the members of this cooperative, provided that at least 75% of the total value of the goods and services delivered by the cooperative are goods and serviced delivered to its members and goods delivered by its members by the cooperative.

In conclusion, although the law on agricultural producer groups and associations emerged just in 2013, the previous existing laws provided for general stipulation on the collective organization. Among all the existing forms of cooperation in the Republic of Moldova, production and entrepreneur cooperatives are still remaining one of the most preferable for farmers, having a series of advantages that especially small farmers have the possibility to benefit from them. The legislative framework although is already settled from the normative and regulation point of view, has some space for improvement, mainly in terms of tax aspects (tax for income, VAT exemptions, etc.).

2 The state of play in the development of the agricultural producers' association

2.1 Preconditions for creation of agricultural associations

During the last decades of the soviet period the agricultural sector in the Republic of Moldova was characterized by high concentration and intensity of production. The largest part of the agricultural production (viticulture, wine, fruit, vegetables, sugar, vegetable oil, tobacco, etc.) was supplied for different regions of the Soviet Union. During the soviet period the dominant part of the agricultural production was grown in large scale collective of state farms (Lerman, Csaki and Moroz, 1998).

After the collapse of the Soviet Union the situation started to change rapidly shifting from the collective and state sector to the private one. In 1992 was launched a major reorganization of collective farms that assumed also the exit of peasants from collective farms (kolkhozes) and state farms (sovkhozes). Those peasants who exited kolkhozes and sovkhozes were assigned land and property. Soon after this the first peasant farms were recorded. By 1997 about 70 collective farms were reorganized and some 70 thousand peasants received ownership documents for their land. Later, in 1998, when the agricultural production system was largely ruined the national program «Land» was launched with the financial support of donors. However the first reforms in agriculture were largely simulated (Selari, 2009).

One can state that the agricultural reform began unorganized and without a sound legal framework. In such conditions without a clear proprietorship over the land and other assets the property of the state and collective farms was to a large extent stolen.

In livestock sector even before agricultural privatization program started the major part of the livestock herd was already owned by the private sector (Gorton, Dumitrashko and White, 2005).

The status of the agricultural sector has changed dramatically over the last two decades along with the disruption of production and distribution networks. Land areas used for high value crops have been reduced by two times. The shift in production has also been accompanied by significant reductions in land productivity.

Analysis of data from the General Agricultural Census 2011 shows that the major part (about 2/3) of the agricultural land is cultivated by large agricultural farms that hold more than 100 ha of land. Large scale agricultural farms are specialized mainly on cereal and technical crops production oriented towards export markets.

Another important share of agricultural land (37%) is cultivated by households and small farms with less than 10 ha of land (see figure 5).

Small scale peasant farms have a significant share in total agricultural production. Together with population households they deliver essential quantities of agricultural products. A significant part of the production of corn, potatoes, vegetables, fruits and grapes are concentrated in the community of small-scale farmers that supply predominantly the local market (see table 2).

The status of livestock sector is also determined by the situation in households and small scale peasant farms, which account for the bulk of livestock number (93 % of cattle, 95% of dairy cows, 62% of pigs, 97% of sheep and goats, and more than 97% of horses, rabbits and bee families.

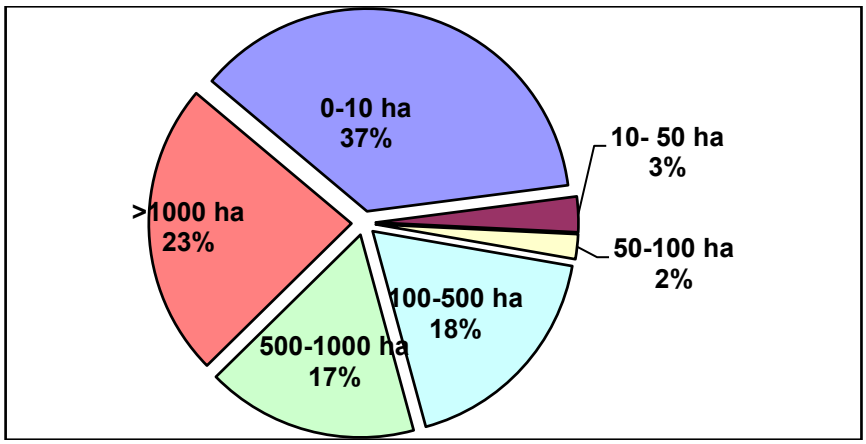

Figure 5. Structure of the agricultural land use according to the farm size, 2011, ha, %
Source: elaborated by authors based on data from the General Agricultural Census, 2011

Subsequently, the largest part of animal production is also originating from households and small scale peasant farms (see table 18 in Annex).

Thus almost 65% of the total meat production is produced by these agricultural holdings, including 90% of beef production, 69% of pork production, 95% of mutton and lamb, and about 51% of poultry meat production. Households and small scale agricultural holdings produced also about 96% of the total milk, 62% of eggs and 98% of total wool production in 2014 (NBS, 2015).

Table 2. The share of peasant farms and households in the total vegetal production, 2006-2014, %

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Wheat	31,5	23,5	29,7	32,9	29,2	28,3	23,7	26,4	25,3
Sun flower	38,9	33,4	31,7	33,2	30,2	31,9	29,9	17,0	25,6
Corn	88,8	91,3	83,8	89,9	84,5	80,9	80,9	65,0	69,5
Potatoes	96,1	88,6	90,7	88,9	83,4	84,6	83,0	85,2	84,9
Vegetables	83,5	80,2	78,9	84,5	83,9	84,0	82,5	84,8	83,6
Fruits	58,1	52,1	50,5	57,9	59,8	62,2	60,0	49,1	51,3
Grape	80,2	80,0	77,8	79,7	85,7	78,6	78,2	72,5	76,7

Source: own calculations based on NBS data, 2015a

In the same time expansion of small scale livestock production creates considerable impediments in terms of compliance with hygiene standards, feed and environmental protection rules.

Small scale agricultural farms are poorly equipped and lack the experience necessary to penetrate the markets of the EU and other countries. A typical characteristic for this type of agricultural holdings is the small size of cultivated areas, and a large diversity between technological levels, varieties, quality and quantity of products, and access to markets.

However the process of "soviet type" collective farms' creation was not stopped after the collapse of the Soviet Union. Even in the post soviet period were registered a number of attempts to re-launch kolkhozes. The peak in creation of the post soviet kolkhozes was registered in 1993 and was followed by a rapid decrease until 1996 when none of newly created kolkhozes was registered by the State Registration Chamber. At present a couple of so called "kolkhozes" still activate in

the Republic of Moldova but under the legal form of production cooperative, because the national legislation does not allow creation of agricultural enterprises under the legal form of "kolkhoze" based on the public property.

Another form of collective action in the agricultural production that occurred in the Republic of Moldova in the post soviet period was AGT[3] that was supposed to create an alternative for those small scale farms that would like to work jointly in different fields of agricultural production. The peak in development of this type of collective enterprises was reached during the period of 1994-1997, after which the process of AGT development decreased rapidly till 2001 when none of these type of association was registered anymore. Interesting to mention that the law on Law on peasant farms that stipulates and regulates development of the peasant farms and associations of peasant farms was approved by the Parliament of Moldova in 2000 when the process of creation of AGT was already stopped (see figure 6).

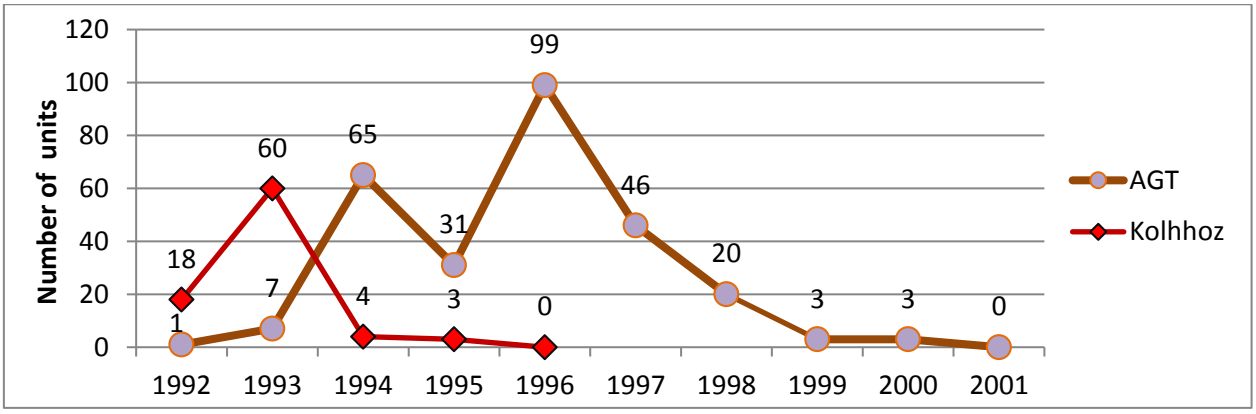

Figure 6. Development of kolkhozes and association of peasant farms in the Republic of Moldova, 1992-2016

Source: elaborated by authors based on data from the National Land Cadastre 1995-2002

Agricultural production cooperatives were initially seen as de jure and de facto heirs of former collective farms created in Soviet times. Thus can be explained the rapid growth of the number of agricultural production cooperatives from 116 units recorded in 1995 to 572 cooperative in 1999 (almost 5 time increase!), and of the share of processed agricultural lands from approx. 5% in 1994 to almost 37% in 1998 (more than 7 times increase) in just five years.

However the legal limitations, but also a rather negative image of Soviet type collective farms kept by a large part of the rural population, have significantly reduced the potential of these agricultural production units. Subsequently during the next four years (1999-2002) the number agricultural production cooperatives decreased from 572 units in 1999 to 64 in 2002 (almost 9 times), and the acreage of cultivated land from 37% in 1999 to approx. 2% in 2002. The average area of an agricultural cooperative is continuously decreasing from about 1530 ha of agricultural land per cooperative in 2001 to about 530 ha in 2014. According to the National Land Cadastre on January 1, 2015 the bulk of private agricultural land (38.9%) is cultivated by companies with limited liability. Peasant farms owns about 33 percent of the agricultural land, while agricultural

[3] AGT is the abbreviation from the "Asociatia de Gospodarii Taranesti" meaning the Association of Peasant Farms

cooperative hold about 8.4% of private agricultural land, respectively (National Land Cadastre, 2015).

During the period of 2002-2006 the number of registered agricultural production cooperatives increased due to the strong state financial support, but after the 2006 the number of newly created agricultural production cooperatives is continuously decreasing to some 2-3 cooperatives per year. The decreasing trend of the number of newly created agricultural production cooperatives proves that this organization form is not very suitable for agricultural producers. Worth to mention that the increase of the number of agricultural production cooperatives during the period of 2004-2008 was linked primarily to the state supported program aimed to creation of the cooperatives that were supposed to supply technical services to small scale agricultural producers. However very soon these "cooperatives", despite the heavy state budgetary support, proved their unsustainability and were gradually transformed in limited liability companies.

The most important institutional structures of the agro-food production and processing sector are based on vertically integrated „top-down" relations that integrate agricultural production and processing. Another type of organization that has demonstrated its vitality is the entrepreneurship or marketing cooperatives that join efforts of many small scale agricultural producers in order to increase their bargaining power, to penetrate new markets and obtain the necessary financing. Empirical evidence indicates that further these cooperatives tend to integrate vertically based on a "bottom-up" approach toward processing the agricultural raw material and marketing of semi-processed or ready for consumption final products. The peak in development of the agricultural entrepreneurship cooperatives was registered during the period of 2000-2002 when about 180 new cooperatives were created under the auspices and with the support of the PFAP project. With the end of this project the process of cooperatives' creation entered into a stagnation phase that lasted since 2004 till 2012 when again due to the financial support of the MAC-P project a new wave of agricultural entrepreneurship cooperatives stared to be created (see figure 7).

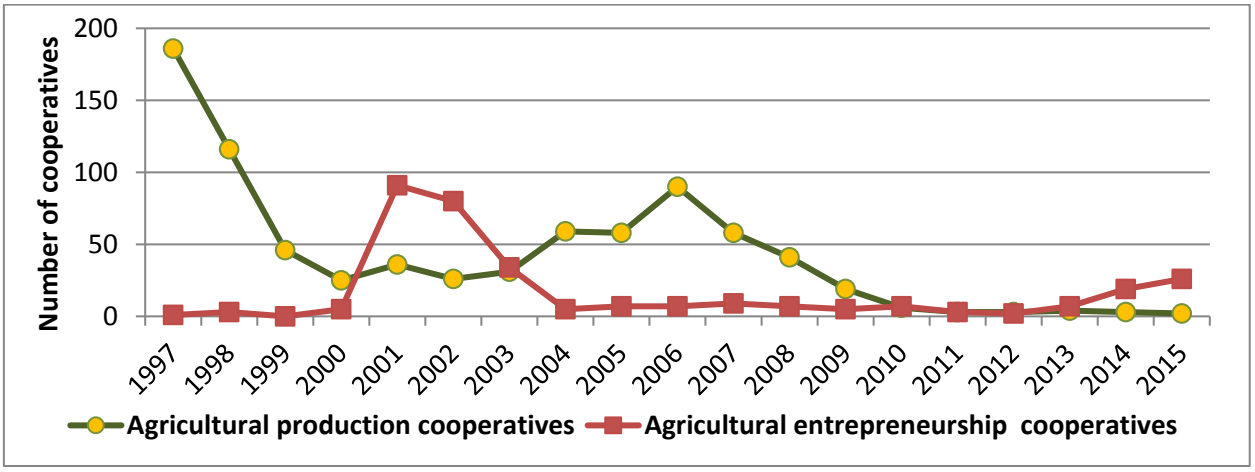

Figure 7. Number of cooperatives registered by the State Registration Chamber, 1997-2015
Source: elaborated by authors based on data from the State Registration Chamber

Besides entrepreneurship and production cooperatives in the agricultural of the Republic of Moldova have been created also some other forms of collective action such as Savings and Credit

Cooperatives and Water Users Associations which also represents some forms of associative organizations in agriculture and rural area.

The first savings and credit associations (SCA) were created in 1997 in the framework of the Rural Investment and Services Project (RISP), financed by World Bank. SCA by definition is a a non for profit, non commercial, independent, specialized institution that provides financial services exclusively to its members. The SCAs main principle is "one member – one vote" irrespective of member contribution to the owner's equity. The range of financial services provided of SCAs is strictly limited to savings mobilizations from members and lending exclusively to members, as well consulting services related to the provision of financial services. (Chiriac, 2003).

As per January 1, 2017 there were 288 SCA and two central associations of SCAs with valid licenses issued by the National Commission for the Financial Market/CNPF (CNPF, 2017).

Rehabilitation of central irrigation systems was one of the objectives of the Compact Agreement signed in early 2010 between the Government of Moldova and the Millennium Challenge Corporation. To deliver on this objective, the U.S. Government has invested about 80 million USD in the rehabilitation of 10 irrigation systems that had to irrigate more than 15 thousand hectares of land farmed by about 9 thousand farmers. Moreover 11 Water Users' Associations (WUA) were established to manage the rehabilitated irrigation systems, bringing together about 7 thousand agricultural producers.

WUAs were established according to the law Nr. 171 of July 9, 2010, which regulates the management transfer of the irrigation systems based on a 30 year term management transfer agreement.

2.2 Collective actions and approaches supported by the donors

Private Farmers Assistance Program (PFAP)

In the framework and with the support of PFAP program during the period of 2001-2002 have been registered about 180 of business cooperatives. A large part of these cooperatives signed agreements with PFAP and/or APA Business Centers for assistance with financial management, business plan development, applications for bank loans and grants, and business evaluation. Other services provides to created cooperatives included:

- assistance in organizing accounting and preparing financial statements,
- market researches and marketing assistance,
- legal assistance, including preparation of contracts, assistance in settling commercial disputes and consultations on legal aspects related to private businesses,
- business plan development,
- preparation of grant and credit applications.

Moldova Agriculture Competitiveness Project (MAC-P, November 2012 - June 2017)

The Project's Objective is to enhance the competitiveness of the country's agro-food sector by supporting the modernization of the food safety management system; facilitating market access for farmers; and mainstreaming agro-environmental and sustainable land management practices. The activities are aimed at: (i) strengthening country capacity to manage the increasingly complex food safety agenda; (ii) increasing levels of farmer organization and improving post-harvest infrastructure; and (iii) promoting adoption of sustainable land management practices by farmers and ensuring a strengthened response by the authorities to soil degradation challenges.

Second component of the Project entitled "ENHANCING MARKET ACCESS POTENTIAL" would finance activities aimed at improving marketability and market integration of Moldova's high value agricultural products – specifically in the horticultural sector – where the country has proven comparative advantages in the production of fruits and vegetables. This support is expected to translate into an increased share of quality products that meet safety and quality standards for target markets, and therewith strengthen the sector's relative competiveness and consequently its income generation potential.

Rural Financial Services and Marketing Programme (IFAD IV)

The goal of the Rural Financial Services and Marketing Programme (RFSMP) is to reduce rural poverty in Moldova through creating enabling conditions for the poorer and poorest members of rural society to increase their incomes through greater access to markets and employment.

Sub-component 2.3 „Financing of PFIs for medium loans to rural processors, wholesalers, and possibly producer/marketing associations for investment purposes" operating in the value chain having strong linkages with primary target groups and where investments under the given sub-component can offer impressive indirect benefits to primary target groups through higher demand for their products and generating new jobs . Credits would constitute up to USD 100.000 for the maximum maturity period of up to 7 years. In case of this sub-component, PFIs would finance 15% from the portfolio, while clients the other 20 %. According to data from 23.05.2013, at this sub-component, the revised allocation of the loan proceeds amounted to 1 570 000 SDR.

Rural Financial Services and Agribusiness Development Project (IFAD V)

The program was launched in July 2011 with an implementation period of 60 months. The project has a national character and is implemented in all localities of Moldova, except mun. Chisinau, Balti and administrative-territorial units from Transnistria.

Project goal: to reduce rural poverty in Moldova by creating favorable conditions for the poorest members of rural society in order to increase their income through improved access to markets and jobs. Among the project beneficiaries can be mentioned interest groups of farmers, official associations of producers, associations, local authorities.

Thus in according to the report from 2013, 1 cooperative was financed in the amount of 112, 99 thousand USD.

Development of Marketing Cooperatives Program funded by People in Need (2004 - 2016)

Project's goal is to secure continual presence of agricultural products from small and medium-sized farmers on the local market. PIN wants to ensure food safety and improve the quality of life of these producers. The project intends to help the cooperatives to optimize their existing conditions and business strategies, by providing them with know-how in the area of management and marketing of agricultural products.

"Moldovan Orchard" Project (2014 - 2020)

The project aims at the creation and modernization of orchards and equipment to improve resource efficiency in the production, processing, post-harvest handling and logistics, training and specific research for the sector development. Among the beneficiaries can be also mentioned agricultural producers associations. The financed activities are related to mechanization of primary production processes of horticultural production, modernization of post-harvest processes, improvement of the phyto-sanitary control, etc.

2.3 State policies, support measures, and regulation of the producers cooperation initiatives and activity

Experience has shown that government policies can impede or enhance independent cooperative development. For encouraging the development of cooperatives, public policy has multiple levers with a significant effect. In support of cooperative development, policy could opt for indirect measures, for instance through provisions in business and organization law that make it relative easy to establish a cooperative. Also, more direct measures can be taken, for instance in the form of subsidies or grants to producer organizations (Bijman, 2012).

By identifying policy measures that affect cooperatives and their development, we aim to provide more insights into policy measures that might contribute to creating a conducive policy environment for the development of cooperatives and producer organisations.

In the last decade a set of strategic planning documents approved and implemented in the agricultural sector have had a serious over the process of the farms association. The first attempt of developing a comprehensive program for rural development in Moldova was the National Program "Moldovan Village" 2005–2015 (GD No. 242 of 01.03.2005, repealed by GD 796 of 25.10.2012). The Program was elaborated to ensure the implementation of the Economic Grow and Poverty Reduction Strategy (Law No 398 02.12.2004).

Like many strategic policies at that time, program implementation was hampered by the lack of coordination with the financial resources available. By covering a wide range of rural development issues, yet there were no clear priorities among them, and this led to confusion and a number of distortions during implementation.

The Program recognized the importance of developing the value added agricultural activities for the increasing of the revenue of agriculture producers. Among priority areas for Governmental support were the following value chains – viticulture and wine industry, fruits and vegetable

production and processing industry, tobacco and tobacco industry, medical and essential oil plants, fruit plants and vine propagating material and planting material, seeds production, and ensuring technical endowment of the agriculture sector and service sector developing, including technical services, irrigation, plant protection, extension services.

The Program has established as a priority the necessity of optimization the dimension of agricultural exploitations by stimulation of the association of agriculture producers. Several tools were identified and established as priorities: stimulation of the long term land renting and selling of the land; ensuring vertical and horizontal integration of the farmers in different organizations, including cooperatives by establishing of the producers groups, producers associations and buying and distribution cooperatives, negotiation of wholesale purchasing contracts.

The action Plan for the implementation of the Program reflected only two actions in this regard: to ensure methodological and practical assistance for the consolidation of the agricultural land and establishing of 2-3 pilot production cooperatives in each rayon.

Following a national Program for Land Consolidation was adopted (GD No 554 of 22.05.2006) and the Regulation on land consolidation, approved by GD 1075 of 01.10.2007.

The Regulation, as a basis for further pilot project and implemented activities, has established several basic methods to be applied for the land consolidation: land selling/purchasing, land exchange, long term leasing, association, land merging, and method of borders redefining.

The association method was defined as establishment of an agreement between the land owners for join cultivation of the land or for contracting of third parties services in this regard.

In the process of Program implementation the following main activities were prioritized and monitored by the MAFI: the establishment of the agricultural production cooperatives, of technological stations for mechanical servicing, the long term leasing and land selling/purchasing contracts, the numbers of cooperative enterprise established, and vertical integration on the value chain by supporting for marketing and processing facilities establishment.

The two main instruments seeing for stimulation of agriculture producer's cooperation had a direct impact for land consolidation and increasing of the number of large agricultural producers. The technological stations for mechanical servicing has contributed to the mechanization of the agriculture but failed as a concept of producers association, being transferred or transformed over the time into limited liability companies.

As a matter of fact agricultural production cooperatives, due to the lack of sufficient organizational democracy, act rather as a form of land renting than as a form of agriculture producers integration.

National Strategy for Sustainable Development of the Agro-Industrial Complex, 2008–2015 (Government Decision No. 282 of March 11, 2008) maintain the basic approach of the "Moldovan Village". The Program is keeping the focus on land consolidation and by establishing as a priority the necessity of the integration through the value chain of the agricultural producers and establishing of the marketing cooperatives.

In 2013, the Government has established the first financial support measures addressed to the producers groups. The first regulation for subsidies provided that farmers can benefit from increased subsidies for the establishment of vineyards if they are: a) compact, b) are established

by a group of producers (at least 5), c) are designed to produce consistent quantities of grapes both for processing and export, d) have an area of at least 25,0 ha on flat land and 12,0 ha land on the slopes. In this case agricultural producers could benefit of additional 10 thousand lei (cca. 800 USD) per hectare.

In 2013, the Government, through its subsidy policies implemented by AIPA, has established first financial support measures addressed to the producers groups.

By the subsidy regulation for the year 2013 and 2014, approved by the GD 152 of 26.02.2013 and GD 135 of 24.02.2014, were established increased support (starting with 10%) for the producers groups registered as business cooperatives for the plantation of the vineyards, investments for production in protected land and for investments in postharvest infrastructure.

Starting with the year 2015 the subvention policies were revised in order to implement the provisions of the Law No 312 of 20.12.2013 on producers groups and their associations. The delay in application of the provisions of the law was determined by a late adoption of the procedures for the recognition of the producers groups, adopted by MAFI order 76 from 28.04.2015. Separate support measure was established for stimulation for the establishment and activity of the producers groups. Based on this, the producers groups registered according to the Law 312 of 24.02.2014 could benefit for upper limits for the investment measures (40-50% higher than for ordinary producers) and increased value of financial support (10% higher).

In addition, the subsidy regulation for 2016, adopted by GD No 910 of 05.08.2016 established the application of the support measures reflected in the article 19 of the Law 312 on producers groups and their associations (Measure 1.8). The producer groups can benefit of financial support during the first 5 years of their activity, starting with 5% from total production sold through the producer group by the members during the first year of activity, and with a gradual decreasing to 4%, 3%, 2%, 1% in each following year from group activity.

3 Driving factors with impact on developing collective actions of the agriculture producers

In order to identify the key features of the agricultural cooperatives and other forms of associative activities a survey of agricultural producers was carried out. In the framework of survey 50 members, 45 non members and 43 former members of cooperatives have been interviewed using a semi structured questionnaire. For collection of qualitative information 10 focus groups with members, non members and former members of cooperatives from different regions of the country were carried out.

The general information about evolution of associative sector, major problems, risks and possible solutions was collected through in depth interviews with 19 key persons working in the field of agricultural cooperatives creation, support and development.

3.1 Overview of survey results

As major findings one can state that the average age of the interviewees is about 51 years with small deviation as 52 years for members of cooperatives, 47 years for non members of cooperatives and 54 years for former members of cooperatives.

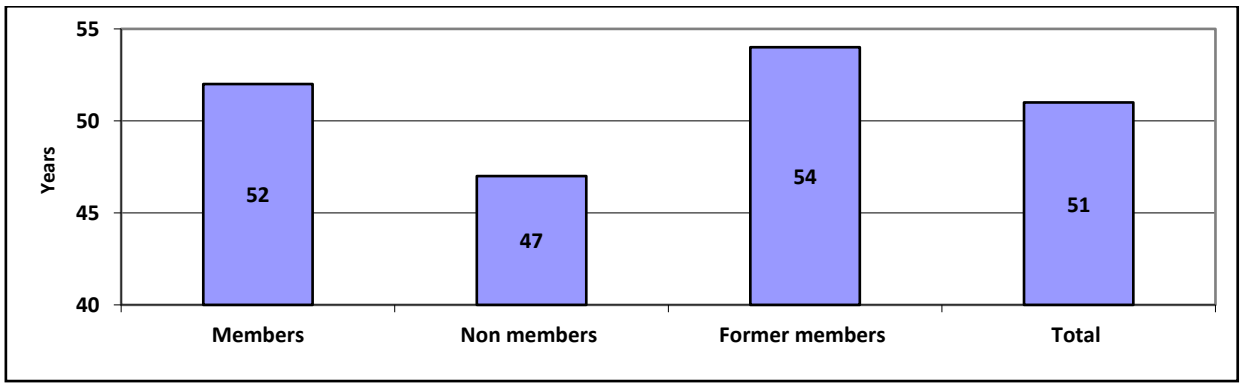

Figure 8. Average age of interviewees, years
Source: elaborated by authors based on own data

The gender analysis of the interviewed members, former members and non members of the agricultural cooperatives shows that the gender balance is more visible among members of cooperatives, while among non members of cooperatives or especially among former member of cooperatives the share of male persons is obviously higher (see figure 9).

This can lead to the conclusion that women are more compatible with work in cooperatives than men that is why the share of men among former members is so high.

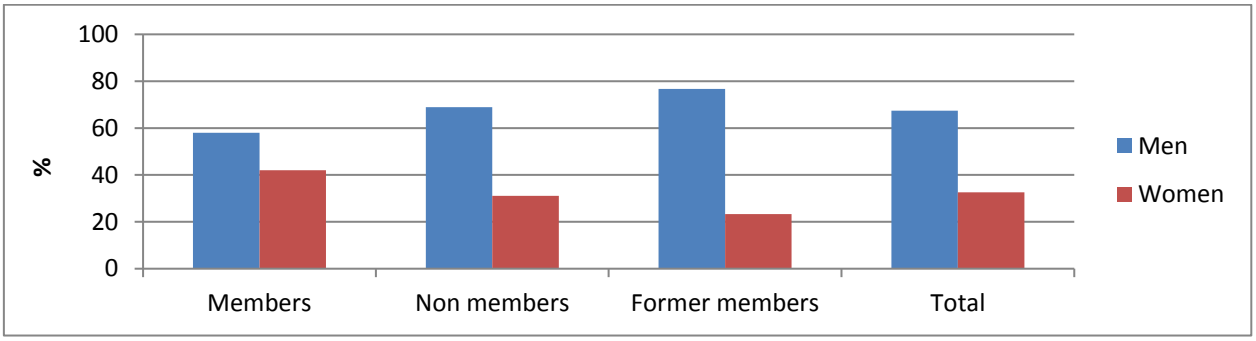

Figure 9. Gender structure of the interviewed members, former members and non members of the agricultural cooperatives
Source: elaborated by authors based on own data

The average experience in agricultural activities of interviewed persons is about 15 years that speaks about a rather good experience in agriculture.

Interviewed members of cooperatives have on average a 6 year experience and interviewed former members a 7-year experience of cooperative activity. The average number of members of cooperative is 28 members for existing cooperatives and 101 members in case of former members. This can lead to the conclusion that at present in the Republic of Moldova cooperatives that have on average about 30 members are more viable than those that have about 100 members.

A large part of the interviewees (about 29%) beside the agricultural activities have also another sources of revenues among which the most spread are providing technical services, lending storage or refrigerating capacities etc. In the same time about 71% of interviewees count only on the agriculture as main income source.

There are some obvious similarities concerning the size of the land owned by members and former members of the agricultural cooperatives that vary around the value of 9,1-9,5 hectares. This gives a hint concerning the average size of the potential members of agricultural cooperatives in conditions of the Republic of Moldova. In the same time the acreage of the land owned by non members of agricultural cooperatives is about 50 hectares (see figure 10).

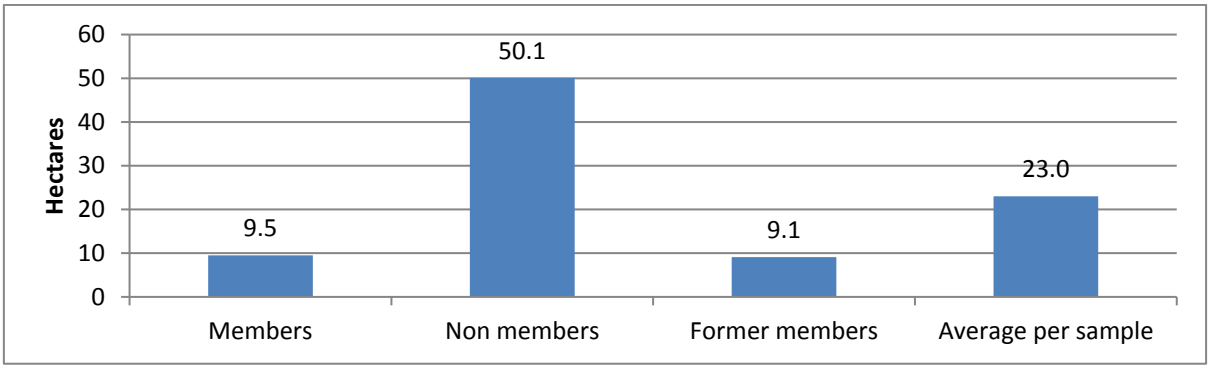

Figure 10. Average acreage of the land owned by interviewed members, former members and non members of the agricultural cooperatives, hectares
Source: elaborated by authors based on own data

In the same time a large number of farms work on the rented land. Thus about 50% of interviewed members of cooperatives, 36% of the former members of cooperatives and about 44% of the non members of cooperatives rent land for agricultural activities. The acreage of the land rented vary from about 30 hectares in case of the former members of cooperatives to about 258 hectares for non members of cooperatives (see figure 11). This picture again gives a hint that farms with an acreage larger than average are less motivated to cooperates with other farms or at least with those that are have smaller land areas.

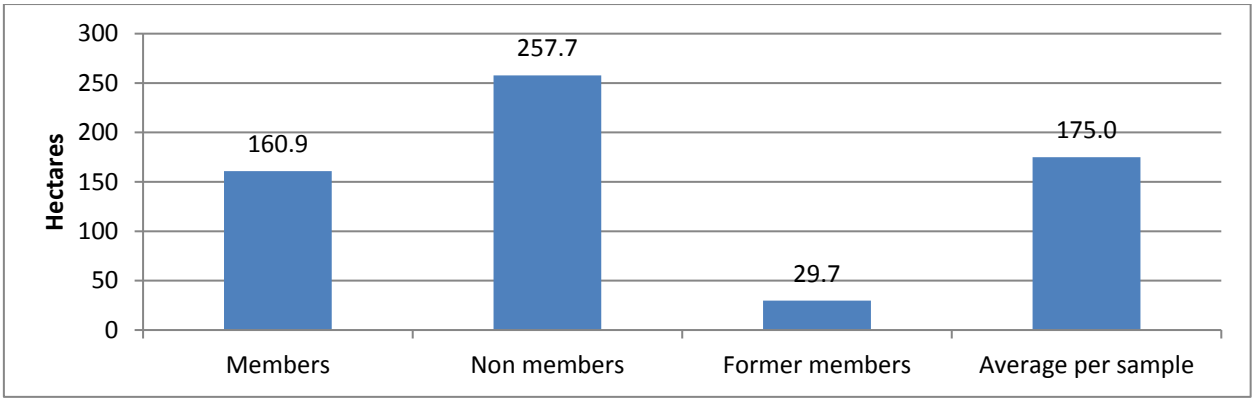

Figure 11. Average acreage of the land rented by interviewed members, former members and non members of the agricultural cooperatives, hectares
Source: elaborated by authors based on own data

Cooperatives play an unimportant role as a main market outlet for the majority of the responders. Thus even in case of interviewed members of cooperatives less just about 6% of responders mentioned cooperatives as a main market outlet, while in case of non members or former members of cooperatives no positive answers were registered at all. This shows the week commercial

orientation of the existing cooperatives comparing with wholesale companies and markets, open air agricultural markets, collecting companies, processing factories and other market outlets (see figure 12).

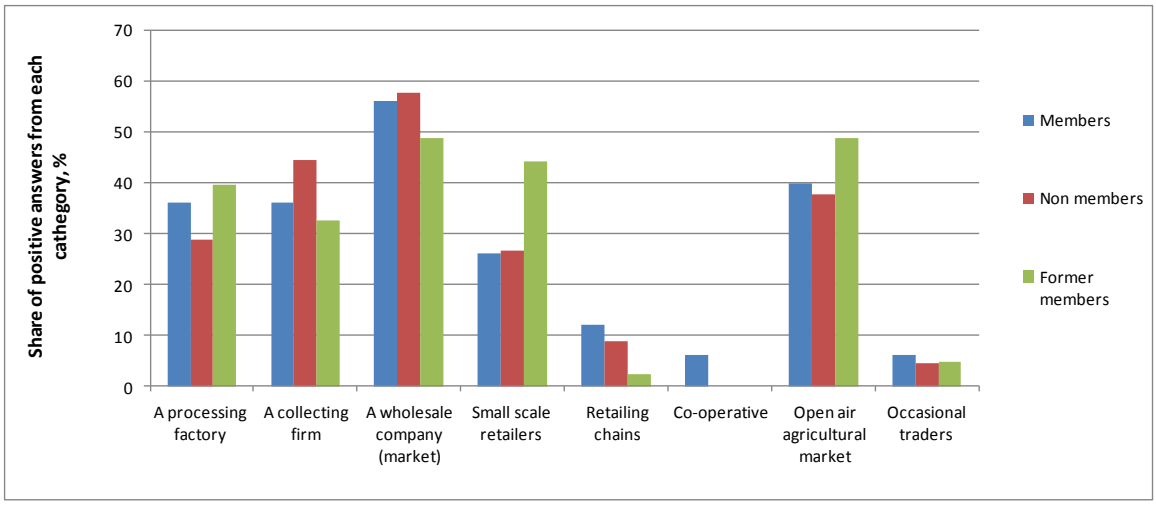

Figure 12. Main market outlets for interviewed members, former members and non members of the agricultural cooperatives, %
Source: elaborated by authors based on own data

The most important activities that are coordinated through the agriculture producer group are related to trainings, input purchasing and marketing activities. To a less extent are coordinated through the cooperative such activities as: lobbying, production, storage, and transportation. Financing, packing and processing are the least coordinated activities inside the cooperatives to which belongs interviewed members of cooperatives (see figure 13).

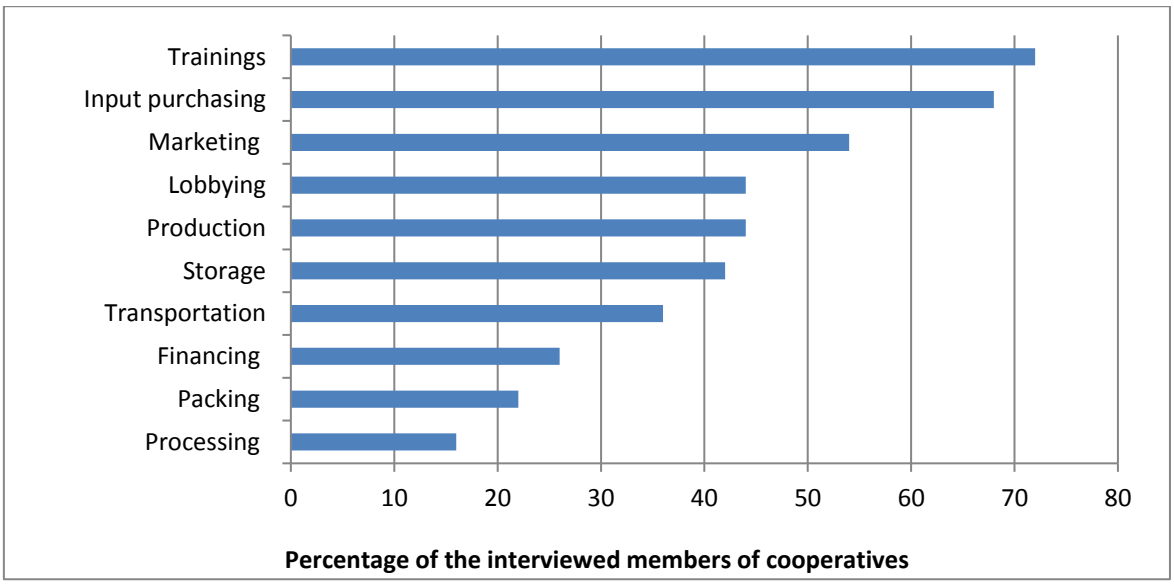

Figure 13. The most important activities coordinated through tyhe cooperative by active members, %
Source: elaborated by authors based on own data

There are some significant differences between activities coordinated through cooperation at present members and former members of cooperatives. First of all this is the degree of personal

involvement in common activities that in case of those most important reached the level of 60-70% of interviewed active members and only about 30% of former members.

The second difference is related to the structure of priorities. Thus in case of active members these are "Trainings", "Input purchasing" and "Marketing" activities, while former members mentioned among the most important "Input purchasing", "Production", "Transportation" and "Marketing" activities (see figure 14).

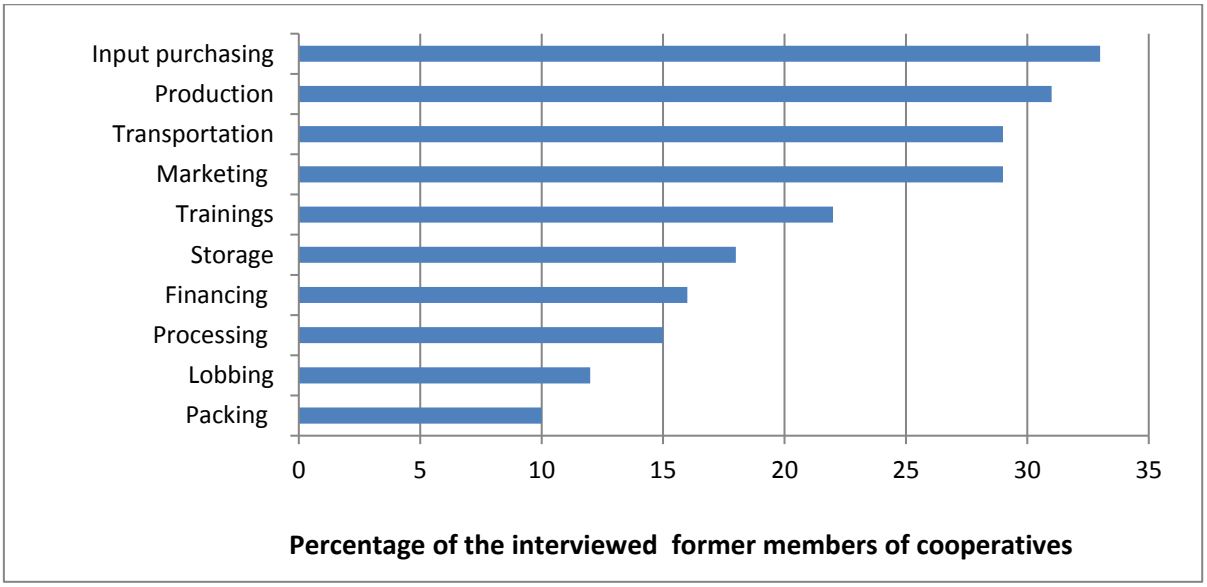

Figure 14. The most important activities that were coordinated through the cooperative by former members, %

Source: elaborated by authors based on own data

The opinion of non members concerning the most important factors that could motivate them to establish or join a cooperative is focused more on such issues as:

- getting a better prices for such agricultural inputs as seeds, fertilizers etc.
- having a better organized post harvest and sales activities
- better access to agricultural machinery and equipment
- better access to post harvest infrastructure
- access to credits and grants

A smaller importance is given to improvement of knowledge and skills, better access to infrastructure of roads, irrigation and energy, and better organized agricultural production. The least important issue is the mutual support and assistance (see figure 15).

This fact could lead to the conclusion that primarily focus in activities of cooperatives has to be put on trainings and activities related to the increase of mutual understanding and trust.

The level of participation in the decision making processes of cooperatives is rather high among interviewed members of cooperatives. Thus only 12% of these respondents mentioned that they do not participate in the process of decision making, but they are interested to be involved in this process. In the same time 30% mentioned that they are involved in the decision making process but at insufficient level, while 58% mentioned that they are satisfied with the level of involvement in the decision making process.

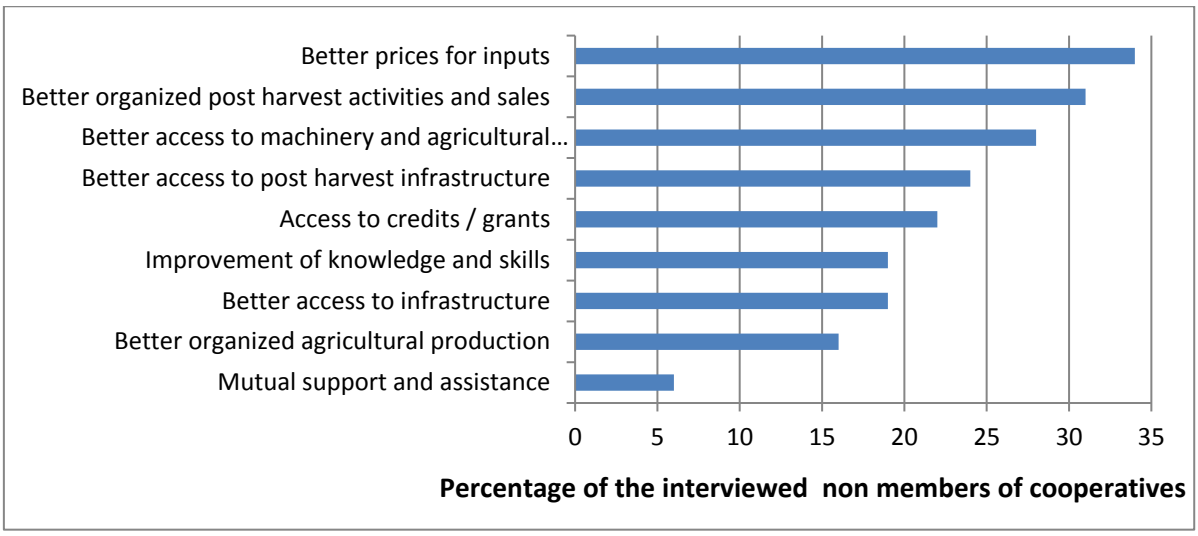

Figure 15. Factors that could motivate non members to establish or join a cooperative, %
Source: elaborated by authors based on own data

Interviewed members of cooperatives show a high level of trust to decisions made by the management of cooperative. Thus 78% of respondents mentioned that they are confident and 14% of respondents mentioned that they are very confident in the decisions made by the management of cooperative. Just 4% of these respondents mentioned that they are not confident and other4% that they are not confident at all in the management decisions. What is important to mention is the lack of neutral evaluation of the level of trust in the decisions made by the management of cooperative (see figure16).

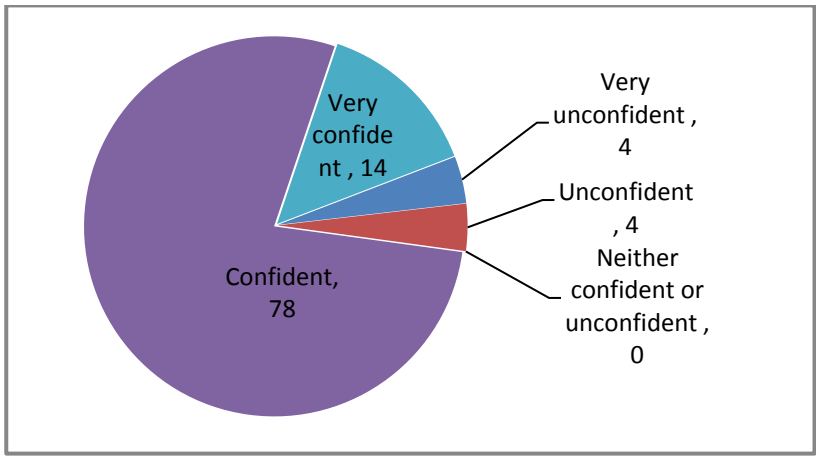

Figure 16. The level of trust of cooperative members to decisions taken by the cooperative management, %
Source: elaborated by authors based on own data

Among the most frequently mentioned reason for leaving a cooperative were mentioned the lack of mutual trust between agricultural producers. Another reason was the lack of effective communication and mutual support between cooperative members. Closely related to this is the lack of understanding between the producers on sales and processing the agricultural land.

In some cases the reason for leaving the cooperative was the lack of management skills of the administrator and the fact that all incomes were going into the pocket of the cooperative administrator.

Lack of market outlets for large quantities of agricultural products and therefore the unstable economic situation of the cooperative members also were mentioned as a negative factor. As a

result of different negative factors many cooperatives were disbanded and in the situation when there were no other cooperative in their region many agricultural producers decided to work individually.

In the opinion of the non members of cooperatives the main risks of the cooperation among farmers are related to the "Lack of mutual trust between agricultural producers" – 87% of respondents, the "Lack of proper management abilities for cooperative in my village" – 67%, "Lack of supporting policies at central and local level", -60% and the "Unclear statute of the proprietorship over the cooperative assets" – 58% of respondents. "

Some other risks such as "Lack of knowledge about advantages and disadvantages of the cooperation between agricultural producers", "Lack of success stories of cooperation in my field of horticultural production", "Difficult coordination of the common production and marketing policies", "Insufficient communication between members of the cooperative" and the "Lack of technical support for members of cooperatives", are perceived as being less important (see figure 17).

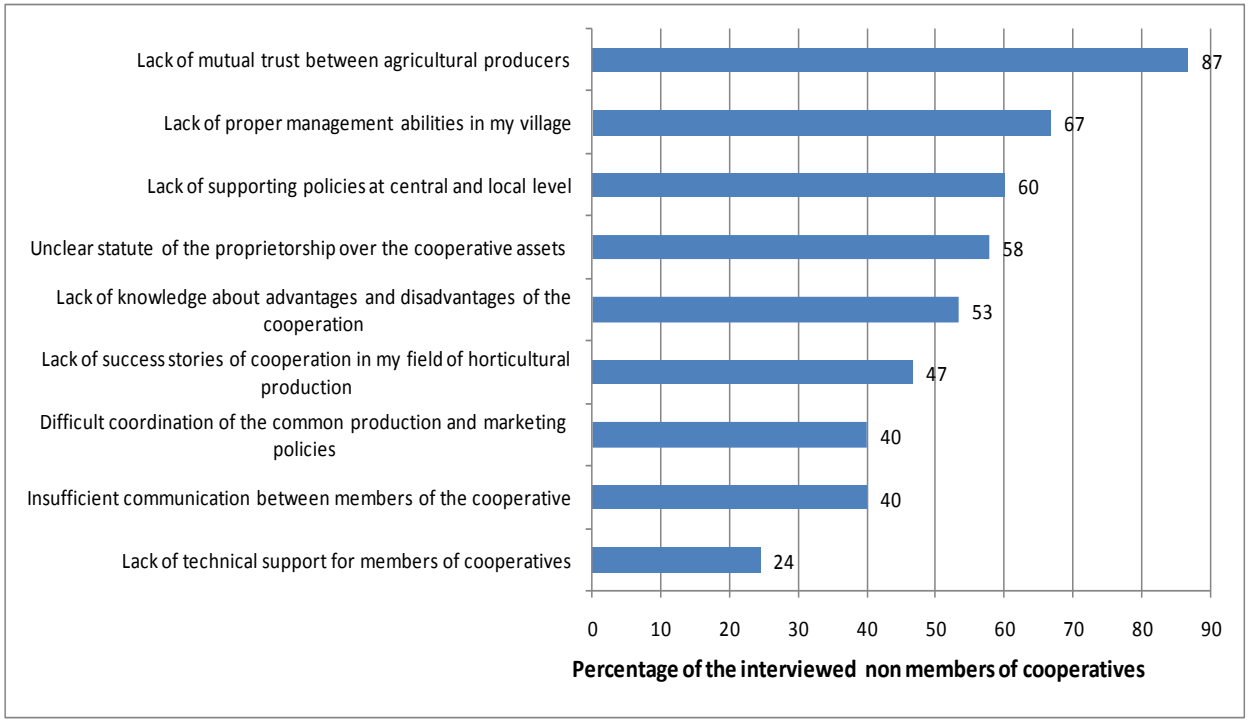

Figure 17. The main risks of the cooperation in opinion of the nonmembers of cooperatives, %
Source: elaborated by authors based on own data

What is important to mention is the equal appreciation of the "Lack of mutual trust between agricultural producers", "Lack of proper management abilities for cooperative in my village" and the "Lack of supporting policies at central and local level", as the most risky factor both by interviewed members and non members of cooperatives. On the other hand the "Lack of technical support for members of cooperatives" is seen by both members and non members as the least risky factor for cooperation (see figure 18).

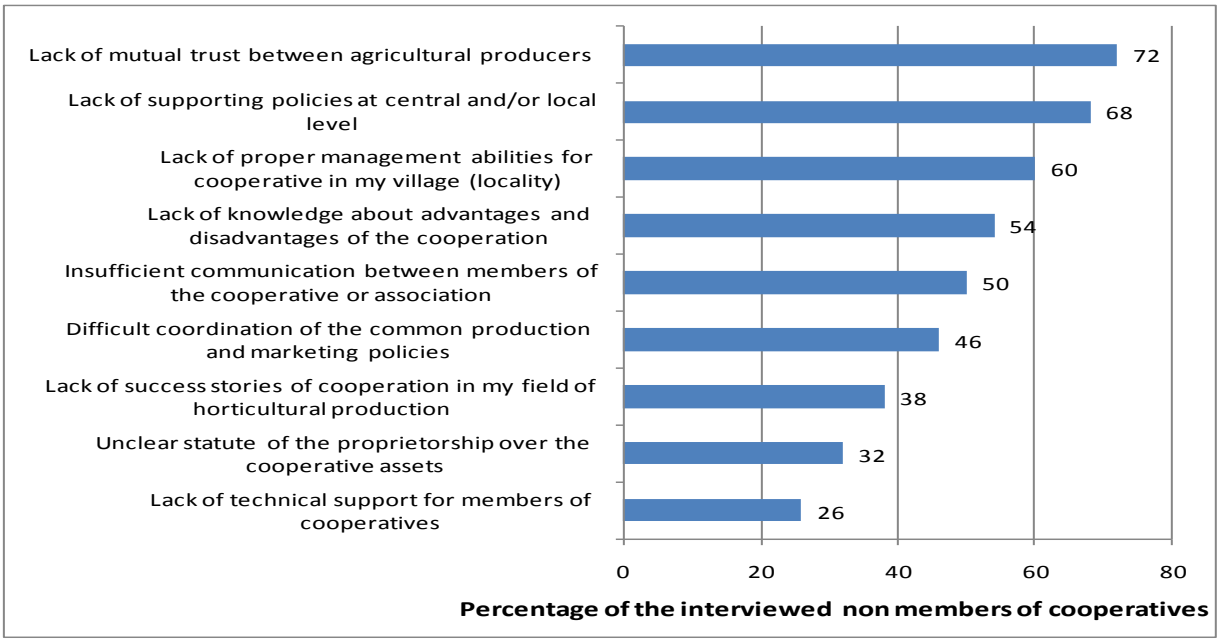

Figure 18. The main risks of the cooperation in opinion of the members of cooperatives, %
Source: elaborated by authors based on own data

Only about one third of interviewed non-members of cooperatives mentioned that they want to create a cooperative , about one quarter have no willingness for it, and almost 42% of the respondents have no a hesitated to give a clear answer with this respect (see figure 19).

The situation is quite similar in case of joining an existing cooperative. In this case the share of persons hesitating to give a clear answer was of about 33%, about 27% have a rather high willingness and 13% a very high willingness to join an existing cooperative while about 16% and 11% have a low and very low willingness to do it (see figure 20).

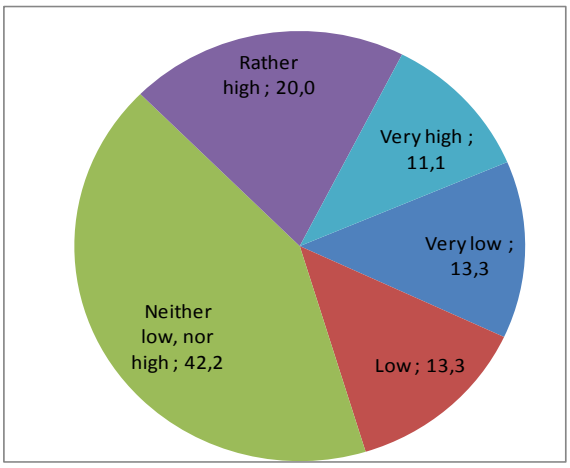

Figure 19. Willingness to create a cooperative among non members, % of respondents
Source: elaborated by authors based on own data

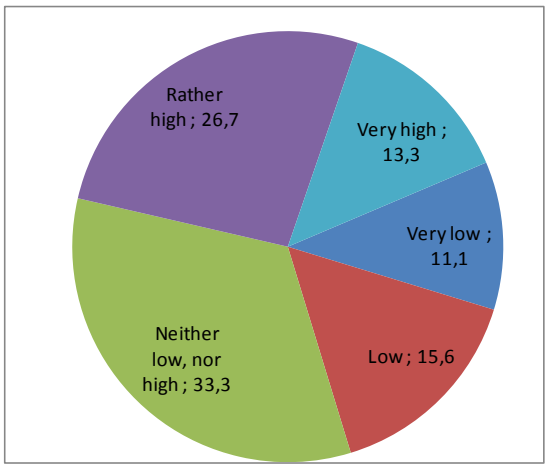

Figure 20. Willingness to join a cooperative among non members, % of respondents

Despite the negative experience the share of former members of cooperatives willing to create a cooperative is about 30%, some 35% of respondents do not want to create a cooperative and

another 35% did not give a clear answer. While asked about joining an existing cooperative the distribution of answers was almost the same (see figures 21 and 22)

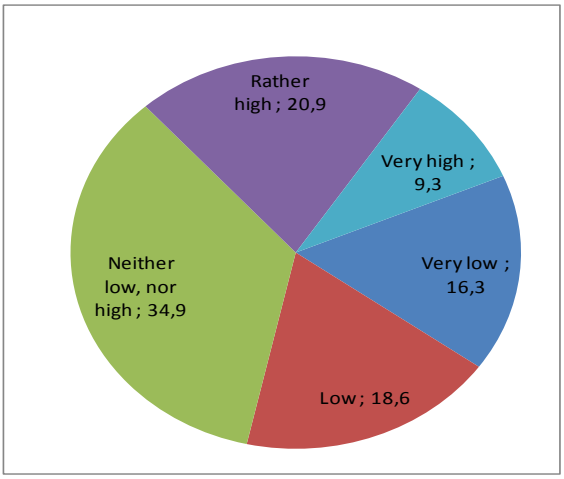

Figure 21. Willingness to create a cooperative among former members of a cooperative , % of respondents
Source: elaborated by authors based on own data

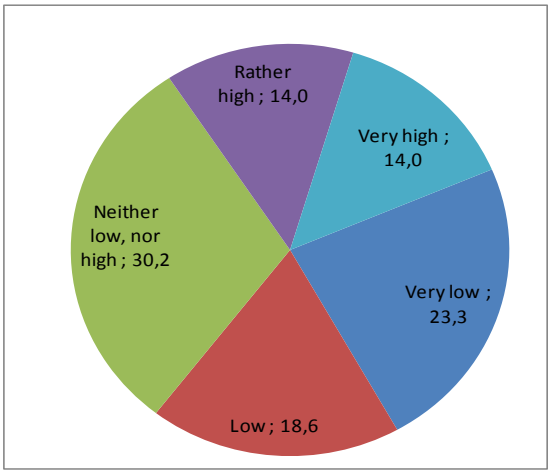

Figure 22. Willingness to join a cooperative among former members of a cooperative, % of respondents

Evaluation of the further development of their cooperatives by their members is quite careful. Thus about 76% of respondents forecast a slight increase and 2% a strong increase of the number of cooperative members. About 14% of them think that their number will remain the same. While 6% assumes a strong decrease and some 2% a slight decrease of the members of their cooperative (see figure 23). Thus one can draw a conclusion of a rather static vision of the interviewed members concerning the evolution of their cooperatives.

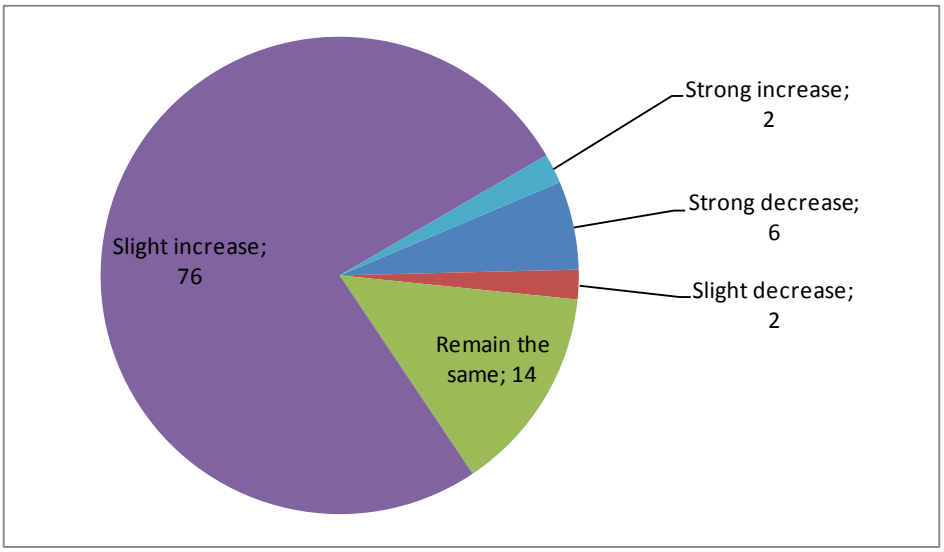

Figure 23. Opinion of the interviewed members concerning the evolution of the members of their cooperatives, **%**
Source: elaborated by authors based on own data

3.2 Focus group results

The major part of the problems and solutions mentioned by participants in focus groups refers to general problems, including political and economical ones, state regulations, access to finance, access to the market, taxation, etc. Part of the problems identified and solution proposed do not expressly refer to the farmer cooperation, but are important to be taken in to consideration in promotion of the cooperation.

In case of the ex members of cooperatives, despite existing negative experiences, farmers are interested to become part of a cooperative in future. The basic problems identified by them for the cooperation refers to the management ability and/or integrity of the leader, lack of trust among members and the differences in visions referring to activity development.

The farmers, both, with experience of cooperation, and without experience of cooperation are skeptical referring to the large groups of producers that are considered by them as dysfunctional from the point of view of coordination and communication. The optimal number of cooperative members is considered to be up to 5-6 members.

Generally, farmers that are not members of a cooperative have basic knowledge referring to cooperation and advantages of cooperation. Anyway, the first association is made to soviet type collective farm, namely so called kolkhoz. Based on some information campaigns organized by different organizations, the differences between kolkhozes and modern form of cooperation are realized by the farmers. Some negative perceptions referring to the farmer cooperation are made with reference to the agriculture production cooperatives. Farmers associate them with a form of land lease, and concentration of the assets.

Farmers, even if not members of the producers group or of a non formal cooperation, have some visions referring to the objectives of the cooperation. Anyway, the attitude toward the importance of the cooperation for themselves differs in case of non members based on two main criteria:

- Dimension of the farm: subsistence farmers and large scale farmers tend to not consider cooperation as an actual option for them.
  The subsistence farmers do not see how the cooperation can help them and tend to focus on alternative solutions such as seasonal work migration etc. Women, tend to be more flexible and consider cooperation as a solution for their subsistence farming in order to become more commercially oriented.
  Those farmers satisfied with actual level of revenue tend to have a positive appreciation for cooperation, but perceive it as tool for smaller farmers.
- Major part of farmers that are not member of any formal or non formal cooperation consider cooperation, as an abstract phenomena that do not refers to them. However, in their opinion cooperation has a future in case of the Republic of Moldova and represent a potential solution for large number of problems that affect agricultural producers.
  They admit the idea of becoming members of cooperation in the proximate future, but are more skeptical referring to the present and near future.

In opinion of the farmers interviewed different options of possible assistance for producers associations or cooperatives are related to subventions, trainings and grants.

Farmers that are member of a cooperative were able to provide more detailed information that includes also information on donors. A particular importance is allocated to possibility of accessing grants and the importance of the guidance and continuous assistance provided to the producer group before establishment and during its activity. This is considered as an important factor that contributes to the establishing and efficient activity of the producer group.

Advantages of cooperation

According to opinion of the interviewed agricultural producers the cooperatives are a solution for a set of problems, such as:

- Rational and efficient use of the agricultural equipment and machines etc,
- Optimization of the cost of marketing and selling
- Access to different financing sources,
- Better access and assimilation of knowledge's and expertise,
- Market instability is better managed by a cooperative than by the individual farmers,
- Better opportunities for access to the market, including the foreign one,
- Ensuring the possibility to aggregate a larger volume of products that increase the economic efficiency of post harvest handling and storage of the production,
- The populations gain the possibilities to stay in the villages and to not migrate to large cities or aboard when they are able to obtain a constant and secure income at home. This helps to maintain the families together and for some of the farmers have chance to switch from a subsistence production to a semi-commercial or commercial one.
- Help to maintain the people involved in agriculture, and to not abandon the farming activities.
- The access to the information referring to the markets, the possibility to sell in common the production.
- Higher opportunities to negotiate a better price for the agricultural production,
- Better access to projects, grant and other financing sources

Problems

Among the most relevant problems and barriers for cooperation were mentioned the following:

- Consolidation of the agricultural land it is an issue and particularly
    - High cost of the procedures for land consolidation
    - It is very problematic to move a parcel from the central part of a massive
    - Small sides of land parcels conduct to application of some harmful procedures for sustainable usage of the land
- Lack of labor force for labor intensive works such as fruit harvest
- Excessive bureaucracy in the process of legal registration of the enterprises

- Insufficient knowledge referring to the cooperation, management of the cooperatives, accounting, marketing etc.

Many problems refer to the specific vision of agricultural producers over the issue of cooperation, namely:

- The mentality that still links the notion of cooperative with those of *kolkhoz*
- The lack of mutual trust between cooperative members, in particular with reference to the production and selling
- There is necessary an enormous effort in order to convince people to cooperate and work together
- Establishing of the common vision referring to the objective of the cooperation and in coordinating the common activities
- Lack or insufficiency of success stories that could motivate farmers to associate,

A particular set of problems is related to the cooperative management, namely:

- Identification of the leader of the cooperative. It is important that leader to be identified among the cooperatives members
- The lack of management skills and of the integrity of the cooperative leader
- The remuneration or financial stimulation of the leader of the cooperative
- Lack of internal democracy and the autocratic style of the leader
- Difficult and slow decision making process inside the cooperative
- The cooperative is a legal person and it is taxed differently from the individual producers that creates certain problems in bookkeeping

A number of mentioned problems exceed the internal level and refers to the followings:

- The massive imports of agri-food products are appreciated as a barrier for cooperative development. Frequently these imports are associated with the corruption that persists in the country,
- The extended minimal number of members of the cooperatives. Thus some of the donors request as a precondition a large number of members, while 5-6 members per cooperative at the initial stage is considered to be optimal
- Lack of trust to the Government and Government initiatives.

Risks

The major risks for cooperation are seen as:

- The lack or insufficient trust among the members of the cooperatives
- Barriers to access the local market – bureaucratic procedures, too much taxes etc,
- In case when the neighboring farmers that cultivates the same crop do not respect the same technology of plant protection, there is a risk that the treatments will be less effective and additional treatments will be required. The costs in this case are increasing.

- Imperfect legal framework referring to farmers which are not cultivating the land, in order to reduce their number
- Poor management of cooperatives
- High competition in horticultural production
- When the numbers of the members of the cooperative are increasing, it is become more difficult to operate and to come to an agreement
- The lack of support from the Government
- There is a risk of disputes among the members of the cooperatives
- Failure of the marketing strategy and the incapacity to execute the signed contracts.

Solutions

Despite the large number of problems and risks mentioned, interviewed agricultural producers proposed also a set of solutions":

- Identification of the leader within the members of the cooperative
- Reduction the bureaucracy in the process of corporative registration and of the land consolidation
- Improving the access to the finance, namely less bureaucracy, a lower interest rate, and to solve the issue referring to the collateral
- The legal framework concerning the ownership in the cooperatives should be improved
- More information and trainings on cooperation issues
- Correct application of the legislations
- More intensive sharing of the cooperation experience between different producers groups
- Larger use of projects with grant element for cooperatives.

3.3 Success stories in developing agricultural associations

Case Study I: The Fruit Producers' Group "Verifruct", Hînceşti

The fruit producer group "**Verifruct"** was created by five small scale agricultural producers in 2013 and manages about 123 ha of agricultural land in the town of Hînceşti. The structure of cultivated areas includes about 68 ha of orchards and 50 hectares of arable land. An interesting characteristic of this producers' group is the homogeneity of the farm size and structure. Thus each of all five founders of this **Fruit Producers' Group (**FPG) owns on average about 23 ha of agricultural land of which about 10 ha (cca 42% of) is arable land and other 13 ha (cca 58%) is covered by orchard including about 6 ha (28%) of apples and other 7 ha (cca 30%) of plums (see table 3).

This uniform structure of agricultural lands serves as an initial precondition for sustainable development of this fruit producers' group that is registered under the legal form of entrepreneurship cooperative.

The total area of 68,2 hectares of orchard consists of 32,8 ha of apples and 35,4 ha of plums. These orchards have been planted during the period of 2007-2009 and entered into the fruit bearing age

in 2014-2015. The potential production of the FPG constitutes approximately 800 tones of apples and 450 tons of plums of different varieties that are demanded on the local and regional markets.

Table 3. Structure of agricultural lands of the FPG "**Verifruct"** by founders, ha

Founders	Orchard		Arable land, ha	Total agricultural land, ha
	Apples	Plums		
GT „Grosu Ecaterina"	6,1	7,22	9,96	23,28
GT „Moraru Alexandru"	6,82	7,06	10,02	23,90
GT „Rosca Nina"	6,51	6,93	10,03	23,47
GT „Sandu Ecaterina"	6,71	7,05	9,97	23,73
GT „Marcu Vitalie"	6,68	7,10	10,02	23,80
Total per group	32,82	35,36	50,00	118,18
Average per founder	6,56	7,07	10,00	23,64

Source: authors' calculations based on Agroinform data

One of the problems for the FPG Verifruct was related to the lack of the labor force during the harvest period. But this problem was partially solved by employing prisoners through an employment contract with the administration of the prison Rusca located not so far.

Some other problems such as shortage of market outlets, political instability and ban for export of agricultural products to the Russian Federation make fruit growers to turn to invest in fruit storage refrigerators in order to preserve fruits until closer to spring in order to obtain a higher price and subsequently a higher income.

That is why the FPG try to invest more in fruit storages, but also in new plantations and agricultural equipment. Allocation for procurement of a cool fruit storage constituted in 2015 about 96% of total amount of investments of cca. € 151,2 thous. During the next year the company invested other 34000 €, of which about 71% in procurement of a new tractor and other 29% for procurement of agricultural land. For the next two years 2017-2018 the FPG plans to invest about € 718 thous., of which about 64% will be allocated for procurement and construction of another cool fruit storage, about 28% for planting of a new orchard, and other cca. 8% of total investments will go for procurement of agricultural land and special equipment.

The similar structure of the agricultural lands and of the fruit cultivars creates preconditions for similar volumes of sales. Thus in 2015 all members of the FPG recorded sales of about € 19,1 thous., while in 2016 volumes of sales of each member of the FPG were on average close to € 23,5 thous., increasing on average by almost 23% comparing with previous year (see table 4).

The future plans of the FPG members include further increase of the orchard area, of which plantation of sweet cherry - 9 hectares, 10 hectares of sour cherry, summer apples - 5 hectares, 4 hectares of apricot, 7 ha of plums and 5 ha of berries. For an sector of about 13 ha of apple orchard grafted on the rootstock M-26 and for a berry plantation of 5 ha is planned to install a drip irrigation system.

Table 4. Volumes of sales of the FPG **Verifruct** by founders, Euro[4]

Founders	2015		Total sales 2015	2016		Total sales 2016
	Apples	Plums		Apples	Plums	
GT „Grosu Ecaterina”	8404	10697	19101	11866	11580	23446
GT „Moraru Alexandru”	8487	10642	19129	11983	11521	23504
GT „Rosca Nina”	8434	10721	19155	11909	11607	23516
GT „Sandu Ecaterina”	8481	10699	19179	11975	11582	23557
GT „Marcu Vitalie”	8418	10680	19098	11887	11562	23448
Total per group	**42223**	**53439**	**95662**	**59621**	**57851**	**117471**
Average per founder	*8445*	*10688*	*19132*	*11924*	*11570*	*23494*

Source: authors' calculations based on Agroinform data

The FPG plans also to develop some livestock production for which about 10 hectares of land will be cultivated with forage crops.

The fruit value chain for will be developed as well. The basic strategy of the FPG is to invest more in fruit preserving and processing facilities in order to add more value to produced fruits. For this reason the FPG plans to assemble a refrigerator with a capacity of 500 tons and will build a fruit drying unit. A modern sorting and calibration machine is planned to be purchased and installed to ensure the quality of fruits for local and export markets. The marketing of the FPG products will be improved through, but not only due to, certification and implementation of GLOBAL GAP quality standards. The FPG is planned to be registered in the national list of fruit producers that are allowed to export directly to regional markets.

All these measures will assure an about 30% increase of volumes of sales during the following 2-3 years.

Case study II: The cooperative “Basan Agro”, Cimișlia

CAP "Basan Agro" from Cimislia is a Cooperative of Agricultural Entrepreneurs. In 2000, along with six other entrepreneurs Mr. Ion Baban founded the Cooperative "Basan Agro". Initially founders of the cooperative owned together about 115 hectare of agricultural land and were specialized in the production of cereals on the leased land. Gradually, cooperative members were able to purchase the necessary equipment, but also land on which a vineyard and an orchard of apricot and almond were planted.

Year by year the business was taking speeds and become quite competitive in production of fruits, berries and grapes. In 2014 the six founder of the cooperative have developed an investment plan for the construction of a refrigerator with a capacity of 500 tons and purchasing of other equipment for the post-harvest infrastructure. The investment required is 12 mln lei. of which more than half was supposed to be their own investment, and the remaining 4.8 million. Lei had to be obtained from grants. As a result cooperative obtained a refrigerator with a capacity of 500 tons, endowed

[4] The exchange rate of the euro to Moldovan leu was 1 to 20,898 in 2015 and : 1 to 22,200 in 2016

with a special room for pre-cooing, 6 cool storing rooms and a special unit for packing grape and fruits.

With the support of IFAD, ACED and the GoM this cooperative has installed a modern refrigerator for storage of grapes both from its own vineyards, but also for other fruit and grap producers, providing these services for other interested producers.

The cooperative applied also for subsidies from the Agency for Interventions and payments in Agriculture (AIPA) that covered up to 40 percent of the total investment in the refrigerator in amount of 1,3 mil lei (about 650 thousand USD). Thanks to this member of the cooperative were able to expand their fruit plantations.

Currently, the Cooperative "Basan Agro" employ 16 permanent employees and 80 seasonal workers that cultivate about 600 hectares of crops, 60 hectares of table grape and about 70 ha of orchard. An innovative system of drip irrigation was installed, which allows reducing risks of droughts. To ensure irrigation of the vineyard the cooperative has built a modern pool for rainwater storage with a volume of 5,000 cubic meters.

Annually the cooperative produces more than 1000 tons of table grape of different varieties such as Leana, Red Glob, Codreanca, Prezentabil, Moldova, Victoria, Losse Parlette, Italia, Vostorg etc, but also plums and apricots.

The table grape and fruits produced by the Cooperative "Basan Agro" are supplied not only to the local market but also to the export markets of Ukraine, Russia and Belarus. The cooperative intends to enlarge the geography of its exports and for this reason put more effort on increasing the quality of products.

The cooperative plans also to increase the number of its members. For this reason two women specialized in production of table grape and plumes will be accepted as cooperative members.

4 Analysis of impacts of agricultural associations over production of table grapes

Based on the results of the consultations with the major actors involved in the support of cooperatives development, the most significant impact was registered in case of table grapes producers. The association among small scale producers offers larger possibilities to develop postharvest infrastructure, in particular the cool storages, and to set up packing lines. One can mention the positive effect of cooperation over negation of higher price comparing with individual small scale supplier of table grape. Another specific case is the cooperative of table grapes growers from Costesti that was able to attract necessary investments for building and equipping a refrigerator and a packing line.

The leading idea for the association of the individual small scale table growers is represented by their particular interest in establishing cool storages that create the possibility to extend the selling period over the season and obtain, therefore, higher revenues in off season period. Based on assistances provided, that include business trips to main markets and other technical support, associations of table growers provide the possibility to aggregate the necessary volumes of table grape as it is requested by the importers and to maintain the diversification of the markets.

As, the official statistics did not collect and provide separate data referring to the activity of the cooperatives there are rather limited possibilities to quantify the relevant data.

The existing market opportunity has facilitated the particular interest of the producers. The average quantity of exported products has increase from 29,5 thousands tones for 2009-2010 to 48,0 thousands tones during the period of 2014-2015. The geography of exports and market diversification also registered a significant improvement. While in 2009 and 2010 where registered export to 7 countries, in 2015 the table's grapes from the Republic of Moldova were exported already to 17 countries.

The table grapes growers are one of the main beneficiaries of entering in to force of the Association Agreement with the EU. The average exports of table grapes raised to 10000 tons in the period of 2014-2016 from average of 700 tones registered in 2009-2010.

Based on the results registered during the implementation of the MAC-P project activities during the organized focus groups 35% of all participants were interested in establishing table grapes as single or one of main products for the cooperation, being the most popular one.

5 The role of agricultural associations in bargaining power increasing of individual agricultural producers

As most chains are characterized by bargaining imbalances between farmers and their upstream and downstream partners, cooperatives play a key role in strengthening bargaining power. However, generally the countervailing power of cooperatives vis-a-vis their retail customers is limited. The need for further strengthening bargaining power will most likely lead to more mergers among cooperatives, while such mergers are also induced by the need to gain economies of scope in R&D and branding. To support farmers in this trend, legal definitions of producer organizations and support measures should not discriminate against large cooperatives. As this growth process is often accompanied by changes in the internal governance, it holds the risk of a loss of member control over the cooperative firm (Bijman et al., 2012)

EU competition rules prohibit standard agreements that establish prices or other trading conditions or share markets, unless agreements allow improving the production or distribution, while providing consumers a fair share of the resulting benefit.

Agricultural associations and particularly marketing cooperatives provide a number of advantages for its members, of which the most important are:

- better access to market outlets and market information
- better use of the products, meaning first of all higher prices for and much safer sales of horticultural products;
- allowing concentration of supply, which limits the domination of the downstream market operators over the small scale agricultural producers;
- promoting agricultural modernization and integration in the agri-food system;
- creates opportunities for agricultural producers to know what is happening throughout the product supply chain, from agricultural production to consumption: requirements, margins (value added tax), problems faced by processors and distributors, competition etc.

- contribute to the creation and maintenance of enterprises owned by cooperatives in order to process and sale agricultural products in distant areas which are not of interest for other private companies with the same profile.

Along with these advantages, marketing cooperatives have also certain limitations, such as:

- slow process of decisions making, and
- impossibility of creation large scale marketing or processing enterprises of national importance, due to difficulties in raising capital.
- the phenomenon of double taxation of cooperative members
- problems with the application of VAT and its reimbursement to members of the cooperative or producer group
- insufficient transparency in relations between members of the cooperative or producer group
- the real sector has not yet fully aware of the advantages of cooperation
- underdevelopment of the state policy for the development of cooperatives, and the lack of skillful staff to develop this policy framework

Conclusions and recommendations

Conclusions

- The dominant position in the structure of agricultural production is the plant growing. Horticulture, including the primary production and processing industry has a multiplier role in the economy, generating demand and stimulating the creation of added value in other branches of national economy such as trade, construction and financial services.
- Excessive fragmentation of agricultural land underlies a number of problems for the country's horticultural sector. In particular, the division of land into small plots did not allow intensification of the horticultural production and strengthening the scale effect. In the same time small scale farms produce a large part of high value-horticultural crops such as fruits, nuts, grapes, vegetables and potatoes that are mostly on the local market
- The horticultural sub-sector faces several challenges, such as small scale production, large diversity of cultivars, insufficient productivity and quality, limited access to finance. It also faces bottlenecks in limited entrepreneurship capability and inadequate skilled and competent human resources. Cooperation is seen as one of the key solutions for the multiple problems faced by the horticultural sector
- The low level of crop rotations and reduced use of organic fertilizers have led to a profound negative balance of humus and bio-elements in soils. As a consequence, the decreasing quality of soils combined with effects of different types of soil erosion and insufficiency of water for irrigation affects the productivity of agricultural land and becomes a critical problem for agricultural sector of the country.
- The decrease of productivity in the horticultural sector is directly related to lack of investments, capital and credit availability, factors that have resulted in farmers applying low yield technologies and drastically reducing their use of agricultural inputs

- In the Republic of Moldova there is no a permanent platform for communication and cooperation aimed at serving the common needs of the private sector. There is no clear and transparent procedure of selection for research topics that should be targeted to the real sector demands. In the same time the existing knowledge transfer system has no mechanisms through which the extension service could influence the agricultural research agenda.
- The legal framework that regulates different aspects of cooperative or production groups creation and development was set up in 2000 by Law No. 1353 on peasant farms that stipulated different aspect of peasant farms' association. Latter on this legal framework was improved but yet it is not stimulating, but rather hindering the process farms cooperation.
- Despite the various types of association forms the most viable forms proved to be production cooperatives and entrepreneurship cooperatives. However agricultural production cooperatives, due to the lack of sufficient organizational democracy, act rather as a form of land renting than as a form of agriculture producers integration.
- Intents of setting up cooperatives using the "top-down" approach proved its unsustainability. In opposite cooperatives created using a "bottom-up" approach tend to integrate vertically toward processing the agricultural raw material and marketing the semi-processed or ready for consumption products.
- The major problems that hamper the development of cooperation in horticultural sector are very similar to general problems in agricultural such as the land consolidation, lack of the labor force, excessive bureaucracy, difficult access to financing sources etc.
- There are also a set a problem specific to the cooperative development namely,
    - The mentality that still links the notion of cooperative with those of *kolkhoz*
    - The lack of mutual trust between cooperative members, in particular with reference to the production and selling
    - There is necessary an enormous effort in order to convince people to cooperate and work together
    - Establishing of the common vision referring to the objective of the cooperation and in coordinating the common activities
    - Lack or insufficiency of success stories that could motivate farmers to associate,
    - The lack of management skills and of the integrity of the cooperative leader
    - Difficult and slow decision making process inside the cooperative
- There is big gap in elaboration of the official statistics concerning the development of cooperatives in the Republic of Moldova
- Cooperatives play a key role in strengthening bargaining power of small scale agricultural producers. However, the countervailing power of cooperatives vis-a-vis their retail customers is still rather limited.
- Cooperatives have become a social economic necessity, providing small-scale farmers a viable alternative to become competitive with big economic agents and increase bargaining power relative to suppliers of materials and agricultural markets.
- Currently cooperatives in Moldova are in a quite complex and difficult situation given the multiplicity of managerial, financial, legislative and consultative problems they face.
- Farmers are not yet fully aware of the importance of support and mutual assistance to develop cooperatives and other forms of associative activity.

- Low productivity, low investment capacity and poor access to markets appear to be evidence that the association in agriculture intervention is the only solution for the survival of small farmers.
- The education system, including higher education, specialized and technical secondary education, do not provide special courses that would prepare specialists for work in the agriculture business cooperatives, marketing groups or other types of associative structures.
- Development of cooperatives has not yet become an obvious priority for subsidy system in Moldova and is not sufficiently supported through financial and technical assistance national and external projects.

Recommendations

- The creation and development of cooperatives and other forms of associative agricultural producers must be seen as an evolutionary process that has as the main motivation factor socio-economic interests of small-scale agricultural producers.
- The increase of the number of cooperative members and further merging of cooperatives into larger association will contribute significantly to the increase of their bargaining power versus retailing sector and middlemen.
- Agricultural and rural development policies have to be more focused on strengthening cooperative movement that will solve as a side effect a range o problems faced by horticultural and in a wide range the whole agricultural sector such as land fragmentation, crop rotation, input purchase, access to finance, marketing and other ardent problems.
- There is a strong need in setting up a permanent platform for communication and cooperation among agricultural producers, political structures and science.
- The knowledge transfer system has to identify and implement new mechanisms through which the extension service could influence the agricultural research agenda.
- The legal framework regulating creation and development of agricultural cooperatives has to be further improved in order to stimulate the process of farms' cooperation.
- It is important to identify and promote successful cases of cooperation both locally and from abroad, which would stimulate the development of cooperatives and producer groups in Moldova.
- Educational programs at levels of universities, specialized technical and vocational education must be adjusted in order to prepare specialists for the development of cooperatives, taking as model similar programs from countries with experience in this field.
- Rural and agricultural extension services must establish cooperative development as a top priority and have to identify clear steps and activities required for this in their activity plans
- It is necessary to deepen technical and financial support of small farms in order to organize them into groups, associations and unions, which may offer significant opportunities to reduce costs associated with penetrating new markets and to prevent their exclusion from the agri-food markets.
- It is important to support Saving and Credit Associations as an alternative option for financing small scale agricultural producers.
- Development of cooperatives should be more evident in the activity of AIPA.

- In order to improve the institutional situation should be useful establishment of a Cooperative Development Agency following the example of other countries.
- Involvement of the state in developing associative structures could take the form of improving and adjusting the legal and regulatory framework to the real needs of small producers, including the introduction of a flat tax in agriculture, improving the advisory services, ensuring a fairer distribution of subsidies, developing and promoting specific policies.

References:

1. Agro România (2016). Accesat la: http://agroromania.manager.ro/articole/diverse/in-ce-conditii-fermierii-europeni-pot-forma-carteluri-21641.html?utm_source=agroromania-22072016&utm_medium=email&utm_campaign=newsletter&uid=784103
2. Bardswick K. eds. (2012) The Capital Conundrum for Co-operatives
3. Bijman J. et al. (2012) Support for Farmers' Cooperatives. Final Report. Accessed at: http://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2012/support-farmers-coop/fulltext_en.pdf
4. Chiriac V. (2003) Moldovan Savings and Credit Associations' Experience. Accessed at: http://www.microfinancegateway.org/sites/default/files/mfg-en-case-study-moldovan-savings-and-credit-associations-experience-2003.pdf
5. CNPF (2017). The National Commission for the Financial Market / Comisia Națională a Pieței Financiare. Official web site. Accessed at: http://www.cnpf.md/md/asoc/
6. Government of the Republic of Moldova. (2008). National strategy for sustainable development of the agro-industrial complex in the Republic of Moldova for the period (2008-2015). Decision nr.282 from March 11, 2008
7. Groeneveld H. (2016) Doing Co-operative Business Report. Methodology and exploratory application for 33 countries. International Co-operative Alliance.
8. Parliament of Moldova. The Law of peasant farms. Nr. 1353-XIV from 03.11.2000
9. Gorton M., Dumitrashko M., White J. (2005) Overcoming supply chain failure: a Moldovan case study of agri-food industry recovery. INTAS Research Project on Agri-food Industry Restructuring in Ukraine and Moldova (AFIRUM) Working Paper No.5 Revised
10. Lerman Z., Csaki C., and Moroz V. (1998) Land Reform and Farm Restructuring in Moldova: Progress and Prospects, World Bank Discussion Paper 398, World Bank, Washington DC .
11. MAFI (2011) Strategic priorities for the activities of the Ministry of Agriculture and Food Industry of Moldova in the years 2011 - 2015
12. Münkner H.-H (2002). The Supportive Environment for Cooperatives in the Context of the Current Political, Economic, Social, Demographic and Ecological Environments. Paper for Expert Group Meeting on "Supportive Environment for Cooperatives: A Stakeholder Dialogue on Definitions, Prerequisites and Process of Creation" jointly organized by the Division for Social Policy and Development, United Nations and the Government of Mongolia, 15-17 May 2002, Ulaanbaatar, Mongolia
13. The State Registration Chamber under The Ministry of Justice. Official website. Accessed at: http://www.cis.gov.md/buletinul-electronic
14. Şelari G. (2009) Sectorul agrar al Republicii Moldova şi al Transnistriei: reforme şi rezultate. Accessed at: http://www.ipp.md/public/files/Proiecte/blacksee/rom/selari_ro_bodean.pdf
15. The National Land Cadastre, 2016.

Annex 1. List of persons interviewed

1. Nicolae Ciubuc. AIPA, Deputy director
2. Sergiu Zabolotnîi. Association of grape producers and exporters (APES), Executive director
3. Arsenie Alexandru. Group of producers ”Strugurii Aurii”, Popeasca, Stefan Vodă, Administrator
4. Iurie Fală. Association ”Moldova Fruct”, Executive Director
5. Stelian Andronachi. Promo Tera / MAC –P, Consultant
6. Anatol Fală and Eugen Revenco. ACSA, Program directors
7. Grigore Daraban. People In Need, Project manager
8. Arcadie Murahovschi. Former project coordinator in the GIZ Project ”Modernization of agricultural sector in the Republic of Moldova ”
9. Viorel Leahu. Former consultant in ACED
10. Alexandru Slusari. The Union of Agricultural Producers (UAP), President
11. Nicolae Tîltu. National Farmers Federation (FNFM), Project coordinator
12. Anatol Gobjilă, World Bank Moldova, Senior operation officer
13. Andrei Botezatu, IFAD, Value chain specialist facilitator
14. Valentin Bozu, Sustainable Development Account Moldova, Activity leader
15. Valentina Cătănoi, Sustainable Development Account Moldova
16. Radu Voicu and Dumitru Croitoru, NGO Alternative Development Alternatives, Consultants
17. Olga Sainciuc, CAPMU, Deputy director
18. Iurie Hurmuzachi, AGROinform, Deputy Director

Annex 2. The guidance methodology for country desk and field research on development of the association between agriculture producers

The goal of the research is to provide valuable information on producers cooperation in all three regions and provide analytical material for supporting elaboration of the policies, recommendations and learning documents.

Objectives

The research will provide a mapping of collective action groups and approaches supported by IFAD, other donors and national governments. The research will provide an analysis of socio-economic and environmental conditions that enable vulnerable groups engage in collective action groups; potential partnerships for innovation and knowledge transfer in agriculture; success stories on collective action groups and approaches supported by IFAD and others.

Based on the project objectives, the research study will focus on horticulture[5] sector and producers, and a focus on cross-cutting issues such as, poverty, gender and women empower, climate change and environmental issues should be kipped in all chapters and stages of the research.

The structure of the research paper and methodological guidelines for research activity

I. Introduction

II. General description of the agriculture sector

The chapter should provide an overview on:

- Trends and development of the agro-food sector of the country, structure of agriculture sector, farm structure, agricultural products trade patterns, tendencies of development, review of environment and natural recourses, knowledge transfer system, major challenges for sector development,
- State policies and strategic priorities for the development of the horticulture sector and rural development, sector oriented support measures.

III. The state of play in the development of the agriculture producers association.

Based on the desk research the chapter should provide comprehensive information on the dynamic of cooperation among producers, support activities provided by the donor organizations and government, legal and normative basis affecting producer's cooperation through the value chain, including taxation, support measures and financing. Based on the evaluation, the chapter will provide an assessment on competitive position of cooperatives related to their potential competitors among other forms of farmer organizations.

[5] Garden crops (fruits, nuts, vegetables, culinary herbs and spices, beverage crops, and medical plants, ornamental plants), as well grains, oilseeds, fiber crops and industrial crops. Pasture grasses and forage crops are excluded taking in consideration the strong connection with livestock sector, which is not targeted by the project.

A. Collective actions and approaches supported by the donors

The sub-chapter will provide a detailed overview on actions and approaches for collective actions and cooperation trough the value chain implemented by IFAD and other donor's organizations. The sub-chapter should consider the multiple forms of the impact of the activities implemented, direct, through the support to establishment and consolidation of the activity of the producer's cooperation, but also the impact on policy and public service, environmental, social and human development impact.

B. State policies, support measures, and regulation of the producers cooperation initiatives and activity

The overall objective of the chapter

- State policies, strategic documents and measures developed and implemented for the support of the producers association.

The analyses should provide an overview and impact analyses of the strategic and support policies adopted by the government, mandates of the financial allocations and support measures implemented and planed, according to the development strategies and plans. In consideration should be taken cross-cutting impact of the policies in the other field like agro-food products promotion, market regulation and intervention, environment, innovation, knowledge transfer and extension, rural development, social inclusion, competition, state aid, food safety and social protection on producers' cooperation.

- Legislation and regulations on producers cooperation and affecting the collective actions

Analysis of existing legal and normative framework referring to the producers' cooperation, legal form of business organization, internal governance of the associations, registration and recognition procedures, administrative and regulatory barriers for cooperation development and activities, taxation (including social one, referring to the whole sphere of collective action – production, movement of goods, selling, VAT and other taxes, insurances etc.).

IV. Driving factors with impact on developing collective actions of the agriculture producers

The chapter will be developed based on field research methods. The overall objective of the chapter is to determine, based on producers experience, the opportunities and major challenges, and constrains for producers' cooperation. The chapter will provide valuable knowledge for the design of the field support activities.

The research tools for the chapter will be:

- Interviews with key stakeholders
- Semi-structured interviews of agriculture producers
- Focus group interview
- Case study

Monitored groups of factors:

- Subjective factors driving the cooperation (socio-cultural, leadership role, perceptions on the advantages and disadvantages of associations, related to main challenges to the sector)
- Internal governments (transparency towards members, internal democracy and members involvment in decision making, finance management, goods flow, logistic and acquisition)
- Economic factors and empowerment.

Sampling will be based on the specific 'segmentation' or fragmentation for each country. The decisions for each country will be adopted based on the consultations. Generally, it should cover representative country regions, horticulture sectors and should target women and particular ethnic or national minorities, and focus on both, farmers that have experience of cooperation and farmers that does not have such experience.

For Semi-structured interviews of agriculture producers two suggested general groups of respondents to be involved: cooperative or producers group members and non-members. The non-members should be selected from two regions: in the villages with functioning farmers cooperation organization or were such organization existed in the near past (ex members and non-members) and village where no producers groups or cooperatives were registered. The 3 formed sub-groups are suggested to have equal number of respondents, which will allow to compare collected data.

There are three proposed forms of the questionnaire, based on the relationship to producer group or cooperative of the respondent:

- The respondent (or his/her household member) is member of a producer group or cooperative;
- The respondent (or his/her household members) have no experience of being members of an agriculture producers group or cooperative;
- The respondent (or his/her household members) which are not member of an agriculture producers group or cooperative but have had such experience in the past.

The investigator should select the form of the questionnaire using two filtering questions:

1. “Are you (or other household members) member of any agriculture producer group or cooperative?”

   If the answer is negative:
2. “Have you been (or other household members) member of any agriculture producer group or cooperative in the past?”

The guidelines and draft questioners are attached.

V. Overall assessment, conclusions and recommendations

The conclusions and recommendations will be elaborated based on the results of the desk and field research. It should comprise the main findings and process them based on SWOT analysis by grouping the findings based on the following criteria: policies and regulatory framework, overall horticulture sector development opportunities and challenges, socio-cultural factors, cross-cutting issues (environment, innovation, gender etc.). Assessment of the learning process that happened before and after project should be provided.

Annex 2 1. Guideline for focus groups with agricultural producers

I. Organizational aspects

The recommended number of the participants per focus group is 10 persons. Focus group participants should not be the same as respondents to Semi-structured interviews of agriculture producers. Focus group should be organized both with groups experienced in cooperative development and those without such experience. Additionally/optionally, could be organized focus groups with persons having negative experience of involvement in cooperative activities. It is recommended to have minimum 30% women, heads of a farm. Preferable, to have representatives of different age groups and education level.

The total number of focus groups organized, should be established to cover the representative zones of the country, ethnic groups, if is the case, types of main production activity. At least 10 focus groups should be organized with members and no members of various associative forms of producer organization. The basic data referring to the participants should be collected.

II. Survey questions

Introduction: Thank you for the opportunity to speak with you. We are a research team interested in learning more about farmer cooperation in this area. We assure you that all the information that you provide to us will be used exclusively for our research and analysis. We will record the session but all responses will appear anonymously. This is not a test, and there are no right or wrong answers. The most important thing is that you should feel comfortable and contribute as much as you can. You can express opinions and discuss issues freely.

1. What do you know about farm cooperation and how relevant do you find the issue of cooperation for yourself?
2. What are in your opinion main advantages, disadvantages and risks of the cooperation among farmers?
3. What kind of forms of cooperation among farmers do you know? (formal, informal cooperation, production cooperatives, marketing cooperatives, marketing groups, bargaining associations, other forms)
4. How relevant is the cooperation for your farming activity from the point of view of solving economic, technological, environmental, social, and other problems?
5. Which are in your opinion the main barriers for the cooperation among farmers?
6. Which are in your opinion main solutions for these problems?
7. What do you know about support measures and facilities that a partnership organization of farmers can benefit? (Access to financing sources (credits, grants, subventions, etc.), Tax

reduction, access to specialized training courses and extension services, support from central and local public administration, etc)

8. What do you think about efficiency of these support measures and facilities?
9. How can be improved these support measures and facilities and what other measures could be implemented?
10. How do you think, is there a future for farmers' cooperation in your region (country) and why do you think so?
11. Could you briefly describe a successful/unsuccessful story of cooperation (association) among agricultural producers?

Note: The follow up, prompt and probating questions should be used depending on each individual case.

Annex 2.2. Case study approach

This qualitative case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood.

The goal of case study research is to understand the complexity of a case in the most complete way possible. For this reason, case study research often involves the use of multiple methods for collecting data. By using multiple sources of data (and both qualitative and quantitative data) researchers may attain the richest possible understanding of a case. The qualitative methods described below are all likely to be used in case study research.

This approach has the potential to deal with simple through complex situations. It enables the researcher to answer "how" and "why" type questions, while taking into consideration how a phenomenon is influenced by the context within which it is situated. The case study is an excellent opportunity to gain tremendous insight into a case. It enables the researcher to gather data from a variety of sources and to converge the data to illuminate the case.

Participant Observation. This will involve studying the daily lives and routines of described cooperative/ association. This observation will provide insight into the behavior patterns and social organizations that operate and constitute a particular bounded system or case.

Interviewing. Researchers will learn about the person or persons that are part of the case by speaking with these people. The types of interviews conducted by researchers will vary in degree of formality (informal interview to semi-structured to structured interviews).

Collection of Artifacts and Texts. Researchers can also learn about a described cooperative/ association by collecting and studying artifacts (e.g. written protocols, charts, flow sheets, educational handouts) and other materials used by or describing members of the cooperative/ association.

Annex 2.3. Questionnaire for interview of agricultural producers, members of an agriculture producers group or cooperative

Loc. Village:								
Region:								
	d	d	m	M				
DM. Interview date					2	0	1	6
					h	h	m	M
TS. Time started of the interview								
TE. Time ended of the interview								
TL. Duration of the interview								
INTNAME. Interviewer's Name Surname								

INTERVIEWER, READ AS FOLLOW!

In the framework of a project financed by IFAD, we would like to carry out this interview with you to collect information about your experience in developing associative activities with other agricultural producers. This information will be useful for improving policy-making process. **I ensure you that the information you share with us is entirely confidential.** You have the right to refuse and to interrupt the survey in any case, or to choose not answering any question asked. Do you have any question? Thank you.

Section 1. What is your main field of agricultural production (please underline **)**		
1.1 Fruits (apples, plums, cherries, apricots, peaches, other fruits (please mention) _____	Yes	☐1
1.2 Berries (strawberries, raspberries, blackberries, currant, other berries (please mention) _____	Yes	☐2
1.3 Vegetables (tomatoes, cucumbers, paper, cabbage, potatoes, other vegetables (please mention) _____	Yes	☐3
1.4 Cut flowers, pot flowers, decorative plants, other plants (please mention) _____	Yes	☐4
1.5 Seedlings, seeds, bulbs	Yes	☐5
1.6 Culinary herbs and spices, beverage crops, and medical plants, ornamental plants (please mention)	Yes	☐6
1.7 Cereals, oilseeds, fiber crops and industrial crops (please mention)	Yes	☐7
1.8 Others _____	Yes	☐8

1.9 Are you personally involved on farm activities including production and sales, related to the main product?	Yes	☐1	No

If Q1.1 – 1.9 is No, than close the interview.

Section 2. Socio demographic background	
2.1 Gender a) M ☐ b) F ☐	2.2 Age _____ years
2.3 Position: 1. household head, 2. husband/wife, 3. child, 4. parent/parent in law, 5. other relative, 6. non relative	
2.4 Number of household members? _____	2.5 How many years is the farm household head involved in agriculture? _____
2.6 Number of year you are involved in horticultural production on your farm? _____	
2.7 Previous profession of the household head:	
2.8 Main employment of the household head (Choose only one)	**2.9 Education level of the household head:**
a) Wage employment in public sector	a) No education
b) Wage employment in private sector	b) Elementary school (4 years)
c) Self-employed in non-agricultural sector	c) Mandatory education (up to 9 years)
d) Self-employed in farming sector	d) General high school
e) Employee in family business	e) Agricultural vocational school
f) Other (please mention):	f) Agricultural or other (to be specified) technical high school
	g) Agricultural or other (to be specified) university education
2.10 Does your household benefit of other revenues sources than agriculture (leasing equipment and machines, providing services, trade, others) ? If Yes please specify:	Yes/No

Section 3: Farm characteristics and miscellaneous		
3.1	**Please complete the table on the characteristics of your farm in the year 2016:**	
	a) Amount of total land *owned* (ha)	
	b) Amount of total land *rented* (ha)	
	Structure of the land used (ha)	
	Main horticultural crops (please mention_____)	
	Cereals (wheat, barley, maize, oat, rise, millet, other etc)	
	Technical crops (sun flower, rape, sugar beet, tobacco, soya, etc)	

Section 3: Farm characteristics and miscellaneous		
	Forage crops	
	Other (please mention)	
	Unused (fallow) land	
	In case of existence of unused (fallow) land please specify, why don`t you cultivate it?	
	Which part of the land used is irrigated (of which homestead land plots and arable lands)?	
	e) Number of full-time farm employees	
	f) Number of part-time farm employees	
	g) Turnover of the farm (national currency)	
	h)The proportion of turnover accounted for by main horticultural production	_____%

Section 4 Your main market outlet, Buyer relationships				
4.1	**Is your main market outlet?**			
	A processing factory (unit)	☐1	A collecting firm	☐2
	A wholesale company (market)	☐3	Small scale retailers	☐4
	Retailing chains	☐5	Co-operative	☐6
	Open air agricultural market	☐7	Other (please state)_____	☐8

4.2	**How is your main product(s) (_____) collected?**					
	You bring your products to the main buyer	☐1	The main buyer collects it from your farm	☐2	Other (please state)_____	☐3

4.3	**When are you paid for the product supplied to your main buyer (s)?**					
	Paid before the delivery, including credits and inputs	☐1	On delivery	☐2	After delivery (record how many days _____)	☐3

4.4	**What proportion of the total volume of production of your main product (s) _____ you sell to different types of buyers and how many you dealt with in 2015.**		
		% of output sold on contract	No. of firms dealt with
	Local markets	_____%	_____
	Food processors	_____%	_____
	Marketing co-operative / organizations	_____%	_____
	Household / family / non-marketed consumption	_____%	_____
	Other	_____%	_____
	Total	100%	_____

4.5 Overall how satisfied are you with the relationship with your main buyer?				
Very dissatisfied	Dissatisfied	Neither satisfied / dissatisfied	Satisfied	Very satisfied
☐1	☐2	☐3	☐4	☐5

4.6	**How important are the following factors in your choice of main buyer?**					
		No importance	Slight importance	Moderate importance	Very important	Most important
a)	Reliability of payments by buyer	☐1	☐2	☐3	☐4	☐5
b)	Higher prices offered by buyer	☐1	☐2	☐3	☐4	☐5
c)	Extra services offered by buyer e.g. credit, input supply, etc.)	☐1	☐2	☐3	☐4	☐5
d)	Price stability	☐1	☐2	☐3	☐4	☐5
e)	Buyer is trustworthy	☐1	☐2	☐3	☐4	☐5
f)	Contractual collaboration (long or short term)	☐1	☐2	☐3	☐4	☐5
g)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

4.7	**How many potential commercial buyers do you think there realistically are for your products?**	_____insert number

		Very difficult	Difficult	Neither easy nor difficult	Easy	Very easy
4.8	**How easy is it for you to switch to another main buyer for your products?**	☐1	☐2	☐3	☐4	☐5
4.9	**How easy do you think it would be for your main buyer to replace you as a supplier?**	☐1	☐2	☐3	☐4	☐5

4.10	**How in your opinion these factors affect the revenue and sustainable development of your agriculture activity?**					
		No impact	Slight impact	Moderate impact	Strong impact	Very strong impact
a)	Low endowment with equipments and machines	☐1	☐2	☐3	☐4	☐5
b)	Low access to postharvest and processing infrastructure	☐1	☐2	☐3	☐4	☐5
c)	Low access to the infrastructure (eg. roads, irrigation, energy)	☐1	☐2	☐3	☐4	☐5
d)	Access to markets	☐1	☐2	☐3	☐4	☐5
e)	Access to the finance					
f)	Market and price volatility	☐1	☐2	☐3	☐4	☐5
g)	Natural hazards	☐1	☐2	☐3	☐4	☐5
h)	Underdeveloped social service in the community	☐1	☐2	☐3	☐4	☐5
i)	Insufficient or unskilled labor force	☐1	☐2	☐3	☐4	☐5
j)	Negative impact of State policies and regulations that affect sector	☐1	☐2	☐3	☐4	☐5
k)	Insufficient knowledge and skills (eg. regarding market, regulations, financing opportunities, novel practices and technologies)	☐1	☐2	☐3	☐4	☐5
l)	Market competition	☐1	☐2	☐3	☐4	☐5
m)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

Section 5: Association	
5.1	Please mention the duration of being a member of a producer group or cooperative _____years
5.2	What is the number of members of your producer group or cooperative _____

5.3	**What is the legal status of your agriculture producer group?**			
	NGO/non-commercial legal entity /Association	□1	Ltd	□2
	Non-formal union of farmers	□3	Cooperative	□4
	Other (please state)_____			□5

5.4	**What are the activities that are coordinated through the your agriculture producer group?**			
a)	Input purchasing	Yes □1	No □2	No, but planned for the proximate future □3
b)	Production	Yes □1	No □2	No, but planned for the proximate future □3
c)	Processing	Yes □1	No □2	No, but planned for the proximate future □3
d)	Marketing	Yes □1	No □2	No, but planned for the proximate future □3
e)	Storage	Yes □1	No □2	No, but planned for the proximate future □3
f)	Packing	Yes □1	No □2	No, but planned for the proximate future □3
g)	Transportation	Yes □1	No □2	No, but planned for the proximate future □3
h)	Lobbing	Yes □1	No □2	No, but planned for the proximate future □3
i)	Financing	Yes □1	No □2	No, but planned for the proximate future □3
j)	Trainings	Yes □1	No □2	No, but planned for the proximate future □3
k)	other (specify) _____	Yes □1	No □2	No, but planned for the proximate future □3

5.5	**Did your producers group/cooperative get any support (financial or in-kind)**		
	From the government?	Yes □1	No □2
	From donors?	Yes □1	No □2
If "Yes", please specify			

5.6	Do you participate in decision making processes of your cooperatives?						
No, and I don't consider it relevant	☐1	No, but I am interested to be involved	☐2	Yes, but insufficient	☐3	Yes, I am satisfied with the level of involvement	☐4

5.7	How much do you trust (are confident in) the decisions made by the management of cooperative or producer group?			
Very unconfident	Unconfident	Neither confident or unconfident	Confident	Very confident
☐1	☐2	☐3	☐4	☐5

5.8	What changes has occurred in your activity after becoming member of a producer group or cooperative?					
		No changes	Slight changes	Moderate changes	Important changes	Very important changes
a)	The volume of production increased	☐1	☐2	☐3	☐4	☐5
b)	The quality of production was improved	☐1	☐2	☐3	☐4	☐5
c)	The income of the household increased	☐1	☐2	☐3	☐4	☐5
d)	The access to the finance and credit has improved	☐1	☐2	☐3	☐4	☐5
e)	The access to the farming technologies, equipment and machines was improved	☐1	☐2	☐3	☐4	☐5
f)	The access to postharvest and processing infrastructure was improved	☐1	☐2	☐3	☐4	☐5
g)	The exposal to the market risks decreased (market and price volatility)	☐1	☐2	☐3	☐4	☐5
h)	The exposal to the natural hazards decreased (frost, droughts, hail etc.)	☐1	☐2	☐3	☐4	☐5
i)	The knowledge and skills were improved	☐1	☐2	☐3	☐4	☐5
j)	The production cost decreased and become more efficient	☐1	☐2	☐3	☐4	☐5
k)	The communication and mutual support within the producer group become more efficient	☐1	☐2	☐3	☐4	☐5
l)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

5.9	**Which factors has motivated you to establish or join a cooperative or association?**			
	Better prices for inputs (seeds, fertilizers etc.)	□1	Better organized agricultural production	□2
	Access to infrastructure (machinery, storage, irrigation equipment, seeds, fertilizer)	□3	Better organized post harvest activities and sales	□4
	Improvement of knowledge and skills	□5	Access to credits / grants	□6
	Mutual support and assistance	□7	Other (please specify):	□8

5.10	**How in your opinion will evolve the number of members of your producer group or cooperative in the proximate future?**			
Strong decrease	Slight decrease	Remain the same	Slight increase	Strong increase
□1	□2	□3	□4	□5

5.11 What are in your opinion the main risks of the cooperation (association) among farmers?

1)	Lack of proper management abilities (managers) for cooperative/association in my village (locality)	□1
2)	Lack of supporting policies at central and/or local level	□2
3)	Unclear statute of the proprietorship over the cooperative assets	□3
4)	Lack of success stories of cooperation in my field of horticultural production	□4
5)	Poor (insufficient) communication between members of the cooperative or association	□5
6)	Lack of mutual trust between agricultural producers	□6
7)	Difficult coordination of the common production and marketing policies	□7
8)	Lack of knowledge about advantages and disadvantages of the cooperation or association among agricultural producers	□8
9)	Lack of technical support (trainings, study tours, consulting) for members of cooperatives or associations	□9
10)	Other risks (please specify)_____	□10

Thank you for your collaboration!

Annex 2.4. Questionnaire for interview of agricultural producers, having no experience of being a member of an agriculture producers group or cooperatives

Loc. Village:								
Region:								
	d	d	m	M				
DM. Interview date					2	0	1	6
					h	h	m	M
TS. Time started of the interview								
TE. Time ended of the interview								
TL. Duration of the interview								
INTNAME. Interviewer's Name Surname								

INTERVIEWER, READ AS FOLLOW!

In the framework of a project financed by IFAD, we would like to carry out this interview with you to collect information about your experience in developing associative activities with other agricultural producers. This information will be useful for improving policy-making process. **I ensure you that the information you share with us is entirely confidential.** You have the right to refuse and to interrupt the survey in any case, or to choose not answering any question asked. Do you have any question? Thank you.

Section 1. What is your main field of agricultural production (please underline **)**		
1.10 Fruits (apples, plums, cherries, apricots, peaches, other fruits (please mention) _____	Yes	□1
1.11 Berries (strawberries, raspberries, blackberries, currant, other berries (please mention) _____	Yes	□2
1.12 Vegetables (tomatoes, cucumbers, paper, cabbage, potatoes, other vegetables (please mention) _____	Yes	□3
1.13 Cut flowers, pot flowers, decorative plants, other plants (please mention) _____	Yes	□4
1.14 Seedlings, seeds, bulbs	Yes	□5
1.15 Culinary herbs and spices, beverage crops, and medical plants, ornamental plants (please mention)	Yes	□6
1.16 Cereals, oilseeds, fiber crops and industrial crops (please mention)	Yes	□7
1.17 Others _____	Yes	□8

1.18 Are you personally involved on farm activities including production and sales, related to the main product?	Yes	□1	No

If Q1.1 – 1.9 is No, than close the interview.

Section 2. Socio demographic background	
2.1 Gender a) M ☐ b) F ☐	2.2 Age _____ years
2.3 Position: 1. household head, 2. husband/wife, 3. child, 4. parent/parent in law, 5. other relative, 6. non relative	
2.4 Number of household members? _____	2.5 How many years is the farm household head involved in agriculture? _____
2.6 Number of year you are involved in horticultural production on your farm? _____	
2.7 Previous profession of the household head:	
2.8 Main employment of the household head (Choose only one)	**2.9 Education level of the household head:**
g) Wage employment in public sector	h) No education
h) Wage employment in private sector	i) Elementary school (4 years)
i) Self-employed in non-agricultural sector	j) Mandatory education (up to 9 years)
j) Self-employed in farming sector	k) General high school
k) Employee in family business	l) Agricultural vocational school
l) Other (please mention):	m) Agricultural or other (to be specified) technical high school
	n) Agricultural or other (to be specified) university education
2.10 Does your household benefit of other revenues sources than agriculture (leasing equipment and machines, providing services, trade, others) ? If Yes please specify:	Yes/No

Section 3: Farm characteristics and miscellaneous		
3.1	**Please complete the table on the characteristics of your farm in the year 2016:**	
	a) Amount of total land *owned* (ha)	
	b) Amount of total land *rented* (ha)	
	Structure of the land used (ha)	
	Main horticultural crops (please mention_____)	
	Cereals (wheat, barley, maize, oat, rise, millet, other etc)	
	Technical crops (sun flower, rape, sugar beet, tobacco, soya, etc)	

Section 3: Farm characteristics and miscellaneous		
	Forage crops	
	Other (please mention)	
	Unused (fallow) land	
	In case of existence of unused (fallow) land please specify, why don`t you cultivate it?	
	Which part of the land used is irrigated (of which homestead land plots and arable lands)?	
	e) Number of full-time farm employees	
	f) Number of part-time farm employees	
	g) Turnover of the farm (national currency)	
	h)The proportion of turnover accounted for by main horticultural production	_____%

Section 4 Your main market outlet, Buyer relationships				
4.1	**Is your main market outlet?**			
	A processing factory (unit)	☐1	A collecting firm	☐2
	A wholesale company (market)	☐3	Small scale retailers	☐4
	Retailing chains	☐5	Co-operative	☐6
	Open air agricultural market	☐7	Other (please state)_____	☐8

4.2	**How is your main product(s) (_____) collected?**					
	You bring your products to the main buyer	☐1	The main buyer collects it from your farm	☐2	Other (please state)_____	☐3

4.3	**When are you paid for the product supplied to your main buyer (s)?**					
	Paid before the delivery, including credits and inputs	☐1	On delivery	☐2	After delivery (record how many days _____)	☐3

4.4	**What proportion of the total volume of production of your main product (s) _____ you sell to different types of buyers and how many you dealt with in 2015.**		
		% of output sold on contract	No. of firms dealt with
	Local markets	_____%	_____
	Food processors	_____%	_____
	Marketing co-operative / organizations	_____%	_____
	Household / family / non-marketed consumption	_____%	_____
	Other	_____%	_____
	Total	100%	_____

4.5 Overall how satisfied are you with the relationship with your main buyer?				
Very dissatisfied	Dissatisfied	Neither satisfied / dissatisfied	Satisfied	Very satisfied
☐1	☐2	☐3	☐4	☐5

4.6	**How important are the following factors in your choice of main buyer?**					
		No importance	Slight importance	Moderate importance	Very important	Most important
a)	Reliability of payments by buyer	☐1	☐2	☐3	☐4	☐5
b)	Higher prices offered by buyer	☐1	☐2	☐3	☐4	☐5
c)	Extra services offered by buyer e.g. credit, input supply, etc.)	☐1	☐2	☐3	☐4	☐5
d)	Price stability	☐1	☐2	☐3	☐4	☐5
e)	Buyer is trustworthy	☐1	☐2	☐3	☐4	☐5
f)	Contractual collaboration (long or short term)	☐1	☐2	☐3	☐4	☐5
g)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

4.7	**How many potential commercial buyers do you think there realistically are for your products?**	_____insert number

		Very difficult	Difficult	Neither easy nor difficult	Easy	Very easy
4.8	**How easy is it for you to switch to another main buyer for your products?**	☐1	☐2	☐3	☐4	☐5
4.9	**How easy do you think it would be for your main buyer to replace you as a supplier?**	☐1	☐2	☐3	☐4	☐5

4.10	**How in your opinion these factors affect the revenue and sustainable development of your agriculture activity?**					
		No impact	Slight impact	Moderate impact	Strong impact	Very strong impact
a)	Low endowment with equipments and machines	☐1	☐2	☐3	☐4	☐5
b)	Low access to postharvest and processing infrastructure	☐1	☐2	☐3	☐4	☐5
c)	Low access to the infrastructure (eg. roads, irrigation, energy)	☐1	☐2	☐3	☐4	☐5
d)	Access to markets	☐1	☐2	☐3	☐4	☐5
e)	Access to the finance					
f)	Market and price volatility	☐1	☐2	☐3	☐4	☐5
g)	Natural hazards	☐1	☐2	☐3	☐4	☐5
h)	Underdeveloped social service in the community	☐1	☐2	☐3	☐4	☐5
i)	Insufficient or unskilled labor force	☐1	☐2	☐3	☐4	☐5
j)	Negative impact of State policies and regulations that affect sector	☐1	☐2	☐3	☐4	☐5
k)	Insufficient knowledge and skills (eg. regarding market, regulations, financing opportunities, novel practices and technologies)	☐1	☐2	☐3	☐4	☐5
l)	Market competition	☐1	☐2	☐3	☐4	☐5
m)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

Section 5: Association

5.1	Which factors could motivate you to establish or join a cooperative or association?			
	Better prices for inputs (seeds, fertilizers etc.)	☐1	Better organized agricultural production	☐2
	Access to infrastructure (machinery, storage, irrigation equipment, seeds, fertilizer)	☐3	Better organized post harvest activities and sales	☐4
	Improvement of knowledge and skills	☐5	Access to credits / grants	☐6
	Mutual support and assistance	☐7	Other (please specify):	☐8

5.2 What are in your opinion the main risks of the cooperation (association) among farmers?

a)	Lack of proper management abilities (managers) for cooperative/association in my village (locality)	☐1
b)	Lack of supporting policies at central and/or local level	☐2
c)	Unclear statute of the proprietorship over the cooperative assets	☐3
d)	Lack of success stories of cooperation in my field of horticultural production	☐4
e)	Poor (insufficient) communication between members of the cooperative or association	☐5
f)	Lack of mutual trust between agricultural producers	☐6
g)	Difficult coordination of the common production and marketing policies	☐7
h)	Lack of knowledge about advantages and disadvantages of the cooperation or association among agricultural producers	☐8
i)	Lack of technical support (trainings, study tours, consulting) for members of cooperatives or associations	☐9
j)	Other risks (please specify)_____	☐10

5.3	Do you have ever experienced solving any kind of production, marketing or other type of problems by joining efforts of several agricultural producers?	Yes	☐1
		No	☐2

5.4	If "Yes", could you specify the frequency of this experience?		
Occasionally, from case to case	Once per year	Several times per year	On a permanent basis
☐1	☐2	☐3	☐4

5.5	**Do you collaborate (cooperate) with other farmers on any of the following activities?**				
		Yes	No	If No, would you be willing to collaborate in future?	
a)	Marketing	□1	□2	Yes, in future □1	No, in future □2
b)	Processing	□1	□2	Yes, in future □1	No, in future □2
c)	Input purchasing	□1	□2	Yes, in future □1	No, in future □2
d)	Lobbing	□1	□2	Yes, in future □1	No, in future □2
e)	Storage	□1	□2	Yes, in future □1	No, in future □2
f)	Packing	□1	□2	Yes, in future □1	No, in future □2
g)	Transportation	□1	□2	Yes, in future □1	No, in future □2
h)	Financing	□1	□2	Yes, in future □1	No, in future □2
i)	Production	□1	□2	Yes, in future □1	No, in future □2
j)	Trainings	□1	□2	Yes, in future □1	No, in future □2
k)	other (specify)	□1	□2	Yes, in future □1	No, in future □2

5.6	**In your neighborhood, do you think that there is anyone who you trust and who can lead the group/association?**	Yes	□1
		No	□2

5.7 How could you appreciate your willingness to create a cooperative/association?

Very low	Low	Neither low, nor high	Rather high	Very high
□1	□2	□3	□4	□5

5.8 How could you appreciate your willingness to join a cooperative / association?

Very low	Low	Neither low, nor high	Rather high	Very high
□1	□2	□3	□4	□5

Thank you for your collaboration!

Annex 2.5. Questionnaire for interview of agricultural producers, ex-members of the producers groups and cooperatives

Loc. Village:								
Region:								
	d	d	m	M				
DM. Interview date					2	0	1	6
					h	h	m	M
TS. Time started of the interview								
TE. Time ended of the interview								
TL. Duration of the interview								
INTNAME. Interviewer's Name Surname								

INTERVIEWER, READ AS FOLLOW!

In the framework of a project financed by IFAD, we would like to carry out this interview with you to collect information about your experience in developing associative activities with other agricultural producers. This information will be useful for improving policy-making process. **I ensure you that the information you share with us is entirely confidential.** You have the right to refuse and to interrupt the survey in any case, or to choose not answering any question asked. Do you have any question? Thank you.

Section 1. What is your main field of agricultural production (please underline **)**		
1.19 Fruits (apples, plums, cherries, apricots, peaches, other fruits (please mention) _____	Yes	☐1
1.20 Berries (strawberries, raspberries, blackberries, currant, other berries (please mention) _____	Yes	☐2
1.21 Vegetables (tomatoes, cucumbers, paper, cabbage, potatoes, other vegetables (please mention) _____	Yes	☐3
1.22 Cut flowers, pot flowers, decorative plants, other plants (please mention) _____	Yes	☐4
1.23 Seedlings, seeds, bulbs	Yes	☐5
1.24 Culinary herbs and spices, beverage crops, and medical plants, ornamental plants (please mention)	Yes	☐6
1.25 Cereals, oilseeds, fiber crops and industrial crops (please mention)	Yes	☐7
1.26 Others _____	Yes	☐8

1.27 Are you personally involved on farm activities including production and sales, related to the main product?	Yes	☐1	No

If Q1.1 – 1.9 is No, than close the interview.

Section 2. Socio demographic background	
2.1 Gender a) M ☐ b) F ☐	2.2 Age _____ years
2.3 Position: 1. household head, 2. husband/wife, 3. child, 4. parent/parent in law, 5. other relative, 6. non relative	
2.4 Number of household members? _____	2.5 How many years is the farm household head involved in agriculture? _____
2.6 Number of year you are involved in horticultural production on your farm? _____	
2.7 Previous profession of the household head:	
2.8 Main employment of the household head (Choose only one)	**2.9 Education level of the household head:**
m) Wage employment in public sector	o) No education
n) Wage employment in private sector	p) Elementary school (4 years)
o) Self-employed in non-agricultural sector	q) Mandatory education (up to 9 years)
p) Self-employed in farming sector	r) General high school
q) Employee in family business	s) Agricultural vocational school
r) Other (please mention):	t) Agricultural or other (to be specified) technical high school
	u) Agricultural or other (to be specified) university education
2.10 Does your household benefit of other revenues sources than agriculture (leasing equipment and machines, providing services, trade, others) ? If Yes please specify:	Yes/No

Section 3: Farm characteristics and miscellaneous		
3.1	**Please complete the table on the characteristics of your farm in the year 2016:**	
	a) Amount of total land *owned* (ha)	
	b) Amount of total land *rented* (ha)	
	Structure of the land used (ha)	
	Main horticultural crops (please mention_____)	
	Cereals (wheat, barley, maize, oat, rise, millet, other etc)	
	Technical crops (sun flower, rape, sugar beet, tobacco, soya, etc)	

Section 3: Farm characteristics and miscellaneous		
	Forage crops	
	Other (please mention)	
	Unused (fallow) land	
	In case of existence of unused (fallow) land please specify, why don`t you cultivate it?	
	Which part of the land used is irrigated (of which homestead land plots and arable lands)?	
	e) Number of full-time farm employees	
	f) Number of part-time farm employees	
	g) Turnover of the farm (national currency)	
	h)The proportion of turnover accounted for by main horticultural production	_____%

Section 4 Your main market outlet, Buyer relationships				
4.1	**Is your main market outlet?**			
	A processing factory (unit)	☐1	A collecting firm	☐2
	A wholesale company (market)	☐3	Small scale retailers	☐4
	Retailing chains	☐5	Co-operative	☐6
	Open air agricultural market	☐7	Other (please state)_____	☐8

4.2	**How is your main product(s) (_____) collected?**					
	You bring your products to the main buyer	☐1	The main buyer collects it from your farm	☐2	Other (please state)_____	☐3

4.3	**When are you paid for the product supplied to your main buyer (s)?**					
	Paid before the delivery, including credits and inputs	☐1	On delivery	☐2	After delivery (record how many days _____)	☐3

4.4	**What proportion of the total volume of production of your main product (s) _____ you sell to different types of buyers and how many you dealt with in 2015.**		
		% of output sold on contract	No. of firms dealt with
	Local markets	_____%	_____
	Food processors	_____%	_____
	Marketing co-operative / organizations	_____%	_____
	Household / family / non-marketed consumption	_____%	_____
	Other	_____%	_____
	Total	100%	_____

4.5 Overall how satisfied are you with the relationship with your main buyer?				
Very dissatisfied	Dissatisfied	Neither satisfied / dissatisfied	Satisfied	Very satisfied
☐1	☐2	☐3	☐4	☐5

4.6	**How important are the following factors in your choice of main buyer?**					
a)		No importance	Slight importance	Moderate importance	Very important	Most important
b)	Reliability of payments by buyer	☐1	☐2	☐3	☐4	☐5
c)	Higher prices offered by buyer	☐1	☐2	☐3	☐4	☐5
d)	Extra services offered by buyer e.g. credit, input supply, etc.)	☐1	☐2	☐3	☐4	☐5
e)	Price stability	☐1	☐2	☐3	☐4	☐5
f)	Buyer is trustworthy	☐1	☐2	☐3	☐4	☐5
g)	Contractual collaboration (long or short term)	☐1	☐2	☐3	☐4	☐5
h)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

4.7	**How many potential commercial buyers do you think there realistically are for your products?**	_____insert number

		Very difficult	Difficult	Neither easy nor difficult	Easy	Very easy
4.8	**How easy is it for you to switch to another main buyer for your products?**	☐1	☐2	☐3	☐4	☐5
4.9	**How easy do you think it would be for your main buyer to replace you as a supplier?**	☐1	☐2	☐3	☐4	☐5

4.10	**How in your opinion these factors affect the revenue and sustainable development of your agriculture activity?**					
		No impact	Slight impact	Moderate impact	Strong impact	Very strong impact
a)	Low endowment with equipments and machines	☐1	☐2	☐3	☐4	☐5
b)	Low access to postharvest and processing infrastructure	☐1	☐2	☐3	☐4	☐5
c)	Low access to the infrastructure (eg. roads, irrigation, energy)	☐1	☐2	☐3	☐4	☐5
d)	Access to markets	☐1	☐2	☐3	☐4	☐5
e)	Access to the finance					
f)	Market and price volatility	☐1	☐2	☐3	☐4	☐5
g)	Natural hazards	☐1	☐2	☐3	☐4	☐5
h)	Underdeveloped social service in the community	☐1	☐2	☐3	☐4	☐5
i)	Insufficient or unskilled labor force	☐1	☐2	☐3	☐4	☐5
j)	Negative impact of State policies and regulations that affect sector	☐1	☐2	☐3	☐4	☐5
k)	Insufficient knowledge and skills (eg. regarding market, regulations, financing opportunities, novel practices and technologies)	☐1	☐2	☐3	☐4	☐5
l)	Market competition	☐1	☐2	☐3	☐4	☐5
m)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

Section 5: Association	
5.1	Please mention the duration of being a member of a producer group or cooperative _____years
5.2	What is the number of members of the producers group/cooperative you was a member _____
5.3	Please provide the basic reasons to not be a member of the producer group or cooperative at the moment

5.4	**What is the legal status of agricultural producers group/cooperative you was a member?**			
	NGO/non-commercial legal entity /Association	□1	Ltd	□2
	Non-formal union of farmers	□3	Cooperative	□4
	Other (please state)_____			□5

5.5	**What are the activities that were coordinated through the agriculture producers group/cooperative you was a member?**		
l)	Input purchasing	Yes □1	No □2
m)	Production	Yes □1	No □2
n)	Processing	Yes □1	No □2
o)	Marketing	Yes □1	No □2
p)	Storage	Yes □1	No □2
q)	Packing	Yes □1	No □2
r)	Transportation	Yes □1	No □2
s)	Lobbing	Yes □1	No □2
t)	Financing	Yes □1	No □2
u)	Trainings	Yes □1	No □2
v)	other (specify) _____	Yes □1	No □2

5.6	**Did the producers group/cooperative you was member get any support (financial or in-kind)**		
	From the government?	Yes □1	No □2
	From donors?	Yes □1	No □2
If "Yes", specify			

5.7	Did you participated in decision making processes of your producer group/cooperatives?						
No, and I did not consider it relevant	☐1	No, but I was interested to be involved	☐2	Yes, but insufficient	☐3	Yes, I was satisfied with the level of involvement	☐4

5.8	How much did you trust (was confident in) the decisions made by the management of cooperative or producer group?			
Very unconfident	**Unconfident**	**Neither confident or unconfident**	**Confident**	**Very confident**
☐1	☐2	☐3	☐4	☐5

5.9	What changes had occurred in your activity after becoming member of a producer group or cooperative?					
		No relevance	Slight relevance	Moderate relevance	Very relevant	Most relevant
a)	The volume of production increased	☐1	☐2	☐3	☐4	☐5
b)	The quality of production was improved	☐1	☐2	☐3	☐4	☐5
c)	The income of the household increased	☐1	☐2	☐3	☐4	☐5
d)	The access to the finance and credit has improved	☐1	☐2	☐3	☐4	☐5
e)	The access to the farming technologies, equipment and machines was improved	☐1	☐2	☐3	☐4	☐5
f)	The access to postharvest and processing infrastructure was improved	☐1	☐2	☐3	☐4	☐5
g)	The exposal to the market risks decreased (market and price volatility)	☐1	☐2	☐3	☐4	☐5
h)	The exposal to the natural hazards decreased (frost, droughts, hail etc.)	☐1	☐2	☐3	☐4	☐5
i)	The knowledge and skills were improved	☐1	☐2	☐3	☐4	☐5
j)	The production cost decreased and become more efficient	☐1	☐2	☐3	☐4	☐5
k)	The communication and mutual support within the producer group become more efficient	☐1	☐2	☐3	☐4	☐5
l)	Other (please state) _____	☐1	☐2	☐3	☐4	☐5

5.10	**Which factors had motivated (or could motivate) you to establish or join a cooperative or association?**			
	Better prices for inputs (seeds, fertilizers etc.)	□1	Better organized agricultural production	□2
	Access to infrastructure (machinery, storage, irrigation equipment, seeds, fertilizer)	□3	Better organized post harvest activities and sales	□4
	Improvement of knowledge and skills	□5	Access to credits / grants	□6
	Mutual support and assistance	□7	Other (please specify):	□8

5.11 What are in your opinion the main risks of the cooperation (association) among farmers?

1)	Lack of proper management abilities (managers) for cooperative/association in my village (locality)	□1
2)	Lack of supporting policies at central and/or local level	□2
3)	Unclear statute of the proprietorship over the cooperative assets	□3
4)	Lack of success stories of cooperation in my field of horticultural production	□4
5)	Poor (insufficient) communication between members of the cooperative or association	□5
6)	Lack of mutual trust between agricultural producers	□6
7)	Difficult coordination of the common production and marketing policies	□7
8)	Lack of knowledge about advantages and disadvantages of the cooperation or association among agricultural producers	□8
9)	Lack of technical support (trainings, study tours, consulting) for members of cooperatives or associations	□9
10)	Other risks (please specify)_____	□10

5.12	**Do you have ever experienced solving any kind of production, marketing or other type of problems by joining efforts of several agricultural producers (excepting period of being member of the producer group/cooperative)?**	Yes	□1
		No	□2

5.13	**If "Yes", could you specify the frequency of this experience?**		
Occasionally, from case to case	Once per year	Several times per year	On a permanent basis
□1	□2	□3	□4

5.14	Do you collaborate (cooperate) with other farmers on any of the following activities?				
		Yes	**No**	**If No, would you be willing to collaborate in future?**	
a)	Marketing	□1	□2	Yes, in future □1	No, in future □2
b)	Processing	□1	□2	Yes, in future □1	No, in future □2
c)	Input purchasing	□1	□2	Yes, in future □1	No, in future □2
d)	Lobbing	□1	□2	Yes, in future □1	No, in future □2
e)	Storage	□1	□2	Yes, in future □1	No, in future □2
f)	Packing	□1	□2	Yes, in future □1	No, in future □2
g)	Transportation	□1	□2	Yes, in future □1	No, in future □2
h)	Financing	□1	□2	Yes, in future □1	No, in future □2
i)	Production	□1	□2	Yes, in future □1	No, in future □2
j)	Trainings	□1	□2	Yes, in future □1	No, in future □2
k)	other (specify)	□1	□2	Yes, in future □1	No, in future □2

5.15	In your neighborhood, do you think that there is anyone who you trust and who can lead the group/association?	Yes	□1
		No	□2

5.16 How could you appreciate your willingness to create a cooperative/association?

Very low	Low	Neither low, nor high	Rather high	Very high
□1	□2	□3	□4	□5

5.17 How could you appreciate your willingness to join a cooperative / association?

Very low	Low	Neither low, nor high	Rather high	Very high
□1	□2	□3	□4	□5

Thank you for your collaboration!