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## **Research on Agricultural Value Chains in Kyrgyzstan**

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## **1. Study Objectives**

The main objective of the study is to understand the agricultural chains existing in Kyrgyzstan and to identify potential opportunities to engage MFIs in the development of agricultural value chain financing in Kyrgyzstan.

The study was proposed and financed by ICCO (Interchurch Organization for Development Cooperation) which recognized the need for strengthening its efforts in developing agricultural value chains.

Agricultural value chains in Kyrgyzstan are already in the spotlight of several development projects. Value chain development project (VCD) of ICCO/Helvetas are one of the examples. Microfinance institutions are typically engaged in value chain financing (VCF) by providing loans to agricultural producers. However, there are also some MFIs which serve processors (dairy, grain mill), input (seeds, fertilizers) producers and traders as well as procurement companies. These institutions managed to extend their services beyond the producers thanks to the external guidance and technical assistance.

## **2. Methodology**

The research was conducted through the analysis of secondary data as well as through the collection and analysis of information from primary resources.

In the beginning, the analysis of the economic data and statistics relating to the agricultural sector and microfinance industry development in Kyrgyzstan was conducted. Various kinds of materials, publications, and reports of government bodies and the National Bank were used during the study.

Secondly, interviews (face-to-face or via phone) were conducted microfinance sector representatives, representatives of local NGOs connected with agricultural advisory services and trainings centers and international project specialists engaged in value chain development processes initiated by their institutions. These actors are not the main operators of value chains, however, their contribution in the sector highly valued and opinions in different kind of questions are considered important. The main value chain operators engaged in livestock, crop production and processing were also interviewed. The list of people contacted in this phase of the project is included in Annex 1.

This part of the study, as well as the preparation of the bulk of the final report was conducted by Mirlanbek Torobekov.

### 3. Background

After getting independence almost all collective farms all over the country were divided into small plots of land. According to the statistics<sup>1</sup>, 66% (3,615 mln) of the population lived in rural areas at the end of 2010. If we assume that an average family consists of 5 members, then more than 700 000 families (households) in rural areas. Each family residing in rural area can be considered as a farm, because almost each of them has its own land, cattle and opportunities to be engaged in production of agricultural goods.

Some big farms, cooperatives also exist but the number of such farms is very small, which is a major weakness of today's agricultural sector. It was very difficult task for each small farm to operate in market economy and deliver high quality agricultural goods with competitive prices. It requires expertise in plant/animal production, marketing, transportation, trade and sometimes food processing.

Looking at past fifteen or twenty years it can be seen that farmers who had experience in planned economy in the Soviet era had not been able to operate in the market economy as they lacked skills in farm management and marketing. In most cases hopes concerning the expected prices at harvest time were not justified. Additionally, over-production of one crop lowered the market price for this product while there were deficits of the other crop and consequently high prices for it. A lot of factors which could influence the price, and therefore farmer revenues, were not taken into account.

Since 1991 the share of agriculture in GDP has significantly decreased<sup>2</sup> (in from 35.3% in 1991 to 18.5% in 2010). The figure looks particularly low if we consider that over half of the population leaves in rural areas and is engaged in agriculture.

Food production in Kyrgyzstan is on the basic level with the largest volume of food sold in the raw, unprocessed state. A lot work and attention is paid mostly for production processes in agriculture. Processing is weak as it requires significant financial investments (processing equipment/machineries, storage space), highly qualified human resources, bridging connections with suppliers and various agro associations. Geographic location of processing companies is also important and in some cases vital.

The other challenges which processing companies face is lack of information concerning good's prices, quality, sorts, volumes, location makes their tasks more difficult to perform and riskier in view of the fact that in order to justify their significant investment processing companies should operate with big volumes of goods.

Traders also have difficulties because they also face similar problems as processors. Additionally, they have to negotiate with retailers, and deliver them high

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<sup>1</sup>[http://212.42.101.124:1041/stat1.kg/index.php?option=com\\_content&task=view&id=89&Itemid=132/](http://212.42.101.124:1041/stat1.kg/index.php?option=com_content&task=view&id=89&Itemid=132/) – 20 лет независимости Кыргызской Республики. Цифры и Факты. Page 63.

<sup>2</sup>[http://212.42.101.124:1041/stat1.kg/index.php?option=com\\_content&task=view&id=89&Itemid=132](http://212.42.101.124:1041/stat1.kg/index.php?option=com_content&task=view&id=89&Itemid=132/) – 20 лет независимости Кыргызской Республики. Цифры и Факты. Page 68.

quality products with competitive prices. With perishable crops, the quality of warehousing and transportation services is paramount.

The volumes of goods are the significant issue in agricultural business processes. Price for agricultural goods should not be high and available for ordinary citizens. In order to decrease additional cost for transportation, warehousing, collecting, traders should operate with huge volumes. However, it is difficult to collect one sort of crop among small farms or traders.

## **4. Existing projects and initiatives**

Until this moment a lot of projects have been carried out to strengthen and develop the agricultural sector in Kyrgyzstan. Almost all projects were financed by international donors such as Helvetas Swiss International Cooperation, ICCO, GIZ, JICA, USAID. Thanks to those projects there are several local NGOs and private companies that are engaged in developing and strengthening business processes in agricultural sector. Some of the NGOs specialize in providing advisory/training services for farmers in agronomy in different kind of agricultural sub-sectors. Some of them are engaged in market research and the others provide agricultural sector operators with agricultural machinery, equipment, seeds, veterinary goods, different kind of fertilizers and other inputs for agricultural producers.

Almost all local NGOs developed their own training curricula in agriculture business processes starting from production till marketing and delivering goods to the next value chain operators.

### **4.1. *Local Market Development Project***

Some successful NGOs act as intermediaries between producers and traders or processors. The example is a Local Market Development Project under Helvetas Swiss Intercooperation and ICCO which has been working in Kyrgyzstan since January, 2005. The project works at the moment in 5 oblast of the country (Batken, Osh, Jalal-Abad, Chui and Issyk-Kul).

At the beginning of the season farmers are contracted for certain crops through tri-lateral agreements (farmers, processors, and NGOs) in which NGOs act as guarantor of the farmers' fulfillment of liabilities. Prices for goods are not defined at the time of the deal and all three parts accept that prices will be in accordance with market prices at harvest time. In such cases all three parts are satisfied with such conditions, because processors know for sure that they will have enough raw materials for their processing processes, farmers know that they have buyer to whom they can sell their goods, and NGOs are also satisfied because it is profitable, processors or traders is obliged to pay them some fee in accordance with delivered volumes. Second positive side for NGOs is successful experience in completed business processes which was initiated by them.

According to the project fact sheet<sup>3</sup> the year-by-year results are improving. The amounts contracted by processing and trading companies increase thus increasing farmers' income.

#### **4.2. Kyrgyz-Swiss Agricultural Program**

At the same time Helvetas runs another program<sup>4</sup> – Kyrgyz-Swiss Agricultural Program. KSAP support supports Rural Advisory Services. The RAS was initiated in 1994 in Naryn, and in 1999 it was expanded to all regions of the country. Today, RAS consists of 6 independent foundations in Batken, Chuy-Talas, Issyk-Kul, Jalalabad, Naryn, and Osh. RAS operates in 40 raions (districts). They support rural people through providing know-how, facilitating processes and building up links to other relevant players required for more productive and profitable farm and other small-scale rural enterprises.

According to the bulletin<sup>5</sup> RAS services are highly valued and result in real improvements. Farmers apply knowledge gained from RAS and consider them highly useful. The majority of RAS clients who received services in several areas increased the overall profits from their farms by 25%-100%. RAS clients increased their wheat yields on average by two thirds from 2.3 to 3.9 t/ha (compared to the national average of 2.2 t/ha). Positive results are also seen in livestock - RAS clients increased their profits thanks to the productivity improvement.

The key achievements of the Rural Advisory Services include:

- “Creation” of a new function and profession in the rural knowledge system of the Kyrgyz Republic – “rural advisers”;
- Intensive capacity building of all levels of staff of the RAS from field advisers to managers and steering bodies, including around 350 field advisers;
- Introduction of advanced agricultural practices and new types of rural businesses to Kyrgyzstan;
- Coverage of over 70% of all consumers and over 50% of all villages;
- Trained on average 55 000 people per year – total during 10 years nearly 560 000;
- Reached over 10 years an estimated 30% of all farms and had in total around 50 000 permanent clients (nearly 20% of farms).

#### **4.3. Promotion of Sustainable Development Program**

Another international donor which also operates in our country is GIZ. Since 2008 it had been running Promotion of Sustainable Development Program which consists of four components:

1. Reform policy;
2. Strengthening Value Chains;

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<sup>3</sup><http://www.helvetas.kg/en/projects/lmdp/>

<sup>4</sup><http://www.helvetas.kg/en/projects/ksap/>

<sup>5</sup><http://www.helvetas.kg/en/publications/> - Rural Advisory Services (RAS). Impact Assessment

3. Local Economic Development;
4. Financial Services.

Promotion of Sustainable Economic Development Program works with several value chains in textile, herbs, fruit, mineral water, and beef meat.

In 2010, 54 farms were selected (Chuy and Naryn oblasts) by local organizations such as CAMP Alatau and CABS. The pilot farms, ranging in size from 20 up to 700 cattle per each farm, allocated 10 % of their cattle to the program which introduced 7 improving production principles:

- *Identification and registration of animals* – selected animals were given identification numbers (ear label) and registered, in order to improve monitoring of production process and epizootic situation in the country. All information registered in one united data base.
- *Production records* – database with information on each animal (weight, age, location, etc.)
- *Increase of infectious and invasive control and BIO-security* – disinfection system was established in all pilot farms, blood tests were done and cattle were vaccinated against parasites and infectious diseases.
- *Breed improvement* – introduction of developed management programs in animal breeding;
- *Improvement of keeping and feeding* – improve production processes, improve conditions of keeping and feeding processes;
- *Exchange programs* - exchange programs were organized among different kind of farms in order to share achievements, and experience to attract farmers attention to the practice of improving production processes.

#### **4.4. USAID Local Development Program**

USAID is also engaged in supporting agriculture of Kyrgyzstan by running Local Development Program. The program works in different kind of sub sectors such as fruits and vegetables; cereal and field crops; livestock; dairy; poultry and edible oils; and etc.

Local Development Program works mainly with processors or large scale farmers and provides them necessary equipment to strengthen this element of the value chain. 40% of program efforts are directed to fruit and vegetable sub-sector, 15% to cereal and field crops and 40% to livestock and dairy. The program improved food processing facilities by providing equipment to some big farms or processors - equipment for initial stage processing and grading/packing/sizing lines for fresh product market in fruits and vegetables sub-sector, flour mills and bean cleaning and

handling facilities in cereal and field crops sub-sector, and also feed mills, milk collection and cooling points all over the country.

## 5. Current situation and the role of microfinance in agricultural value chains

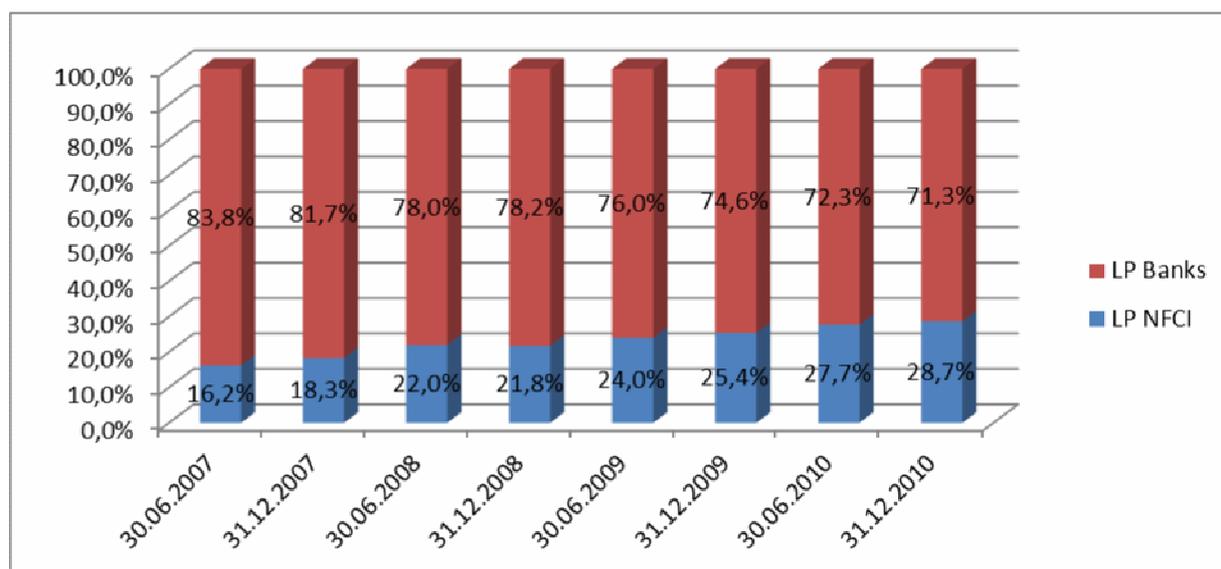
At the end of 2010, according to the National Bank’s report there were 22 banks, 397 microfinance institutions, 217 credit unions. According to below table the number of credit unions year by year is decreasing while the number of MFIs shows the increasing tendency which is due to liberal legislation system concerning MFIs and soft equity requirements of NBKR. The number of MFIs increased for nearly 2.4 times in 5 years, however only 7 MFIs have loan portfolio more than USD 10 mln.

Figure 1: Number of non-bank financial-credit institutions providing microcredit, breakdown by year<sup>6</sup>

	2006	2007	2008	2009	2010
MFI (MLA, MLC, MFC)	168	233	291	359	397
Credit Unions	305	272	248	238	217

Compared to the banks MFIs share in the loan portfolio is small, however below table shows that in last 3,5 years the share of MFIs in the credit portfolio has been slowly growing – the share of MFI portfolio in this structure increased by 77%. It should be noted that in spite of small loan portfolio, the number of MFI borrowers is higher than the number of bank clients and the average loan size of MFI loans is low.

Figure 2: Loan portfolio structure; breakdown by banks and NFCI<sup>7</sup>



<sup>6</sup>НБКР. Годовой отчет 2010. Page 19.

<sup>7</sup><http://www.nbkr.kg/index1.jsp?item=140&lang=RUS> - Тенденции развития банковской системы. Второе полугодие 2010 года. Page 54

## Banks

The loan portfolio structure of banks shows that loans to agriculture have only 12.7% share and harvesting and processing a marginal 0.2% of the total credit portfolio. Among 22 banks, only a few of them have developed a system of branch network and sub-offices all over the country. The target group of banks is located in big towns and cities of Kyrgyzstan. Only Aiyyl Bank's main activity is lending to rural population.

Figure 3: Structure of banks' loan portfolio by economic sectors<sup>8</sup>

	31.12.2008	30.06.2009	31.12.2009	30.06.2010	31.12.2010
Manufacturing	5,7%	6,1%	5,5%	5,3%	5,6%
Agriculture	11,5%	12,1%	12,2%	13,0%	12,7%
Transport	1,0%	1,0%	1,0%	1,1%	1,3%
Communication	0,5%	0,4%	0,1%	0,0%	0,0%
Trade	36,1%	38,2%	41,5%	43,0%	43,0%
Harvesting and processing	0,5%	0,4%	0,4%	0,3%	0,2%
Construction	9,5%	8,5%	7,7%	7,5%	7,7%
Mortgage	14,0%	13,2%	12,3%	11,4%	10,8%
Household	8,3%	7,8%	8,0%	7,3%	7,1%
Social services	0,4%	0,2%	0,1%	0,2%	0,3%
Other	12,4%	12,2%	11,2%	10,9%	11,3%
Total	100%	100%	100%	100%	100%

This reason for low bank presence in rural areas is sufficient demand in urban areas and lower risk associated with lending to urban clients than to rural population. The population of towns and cities is considered more attractive and less risky due to:

- high value of immovables which can be used as a collateral
- stable income from salaried jobs
- higher life standards thanks to higher earnings
- presence of legal entities which can be served with larger loans

## Non-bank financial institutions

Credit operations of non-bank credit providers are performed all over the country, in urban and rural areas. The largest share of non-bank loan portfolio is located in the Osh and Jalalabad oblasts and in Bishkek due to the concentration of the population in those regions.

<sup>8</sup> <http://www.nbkr.kg/index1.jsp?item=140&lang=RUS> – Тенденции развития банковской системы. Второе полугодие 2010 года.  
Page65.

Figure 4: Loan portfolio size of non-bank financial institutions, by regions<sup>9</sup>

	in mln KGS	
	2009	2010
Bishkek	1 497,1	1 940,8
Batken oblast	888,6	828,8
Jalalabad oblast	1 462,4	1 951,6
Issyk-Kul oblast	1 080,7	1 118,3
Naryn oblast	385,6	769,2
Osh oblast	1 904,7	2 104,3
Talas oblast	739,4	948,6
Chuy oblast	932,5	1 320,3
out of Kyrgyz Republic		106,1
Total	8 891,0	11 088,0

Unlike banks, MFIs and credit unions provide credit mainly to agricultural sector and the share of agricultural loans has been increasing over the years to reach 46% of the total loan portfolio. In 2010 agriculture sector's share increased at the expense of mainly the trade sector.

Figure 5: Non-bank financial institutions loan portfolio, break down by economic sectors<sup>10</sup>

	2009	2010
Mortgage	2.4%	1.9%
Manufacturing	2.0%	1.8%
Agriculture	41.9%	45.6%
Transport and communication	0.2%	0.9%
Trade and services	40.1%	33.9%
Harvesting and processing	0.2%	0.2%
Other	13.2%	15.7%

Agricultural loans are predominantly used by producers of meat (cattle, sheep, poultry breeders), grains (wheat, maize), vegetables but also some technical crops (cotton). The largest microfinance institutions (Kompanion, FINCA, Mol-Bulak) provide mainly group loans to private persons, rather than business entities, of up to 2,000 USD. Such loans are used by clients to improve working capital, buy livestock and vaccination, build utility rooms for agricultural needs, buy seeds fund, develop poultry, fish and bee keeping and for other types of farming.

Harvesting and processing sectors share in the loan portfolio of non-bank lenders is negligible. Companies operating in this sector require large financial resources in comparison with individual farmers or traders which at the moment cannot be financed by MFIs committed to serving micro loans.

<sup>9</sup>НБКР. Годовой отчет 2010. Page 21.

<sup>10</sup>НБКР. Годовой отчет 2010. Page 21.

Bai Tushum, at the moment, is the only microfinance institution with a significant outreach which serves food processing businesses like dairies, grain mills, meat and vegetable processors and also offers leasing for agricultural machinery. Some credit unions also provide loans to processing companies operating, for instance, dairy plants, but the number of clients such credit unions serve is very low.

However, a number of MFIs has already started providing large loans in order to diversify their loan portfolio.

## **6. Weaknesses of value chains in agriculture and rooms to make interventions**

### **6.1. *Human resources and know-how***

As it was mentioned above at the moment a network of agricultural advisory centers operates through the country. These NGOs are effective in mobilizing rural population to scale-up production of quality crop. Also, such NGOs succeed in connecting producers with traders/processors. In some cases the production is exported. However, the outreach of such NGOs is too small to be significant for the country as such advisory centers work with only 5-10% of rural population and with only several agricultural value chains.

Because of their positive impact on the agricultural sector development such organizations should continue receiving support in building strong systems of regional networks (in rayons and village councils). At the same time, the number of staff should be increased and trained. Main emphasis should be placed on attracting the younger generation in such kind of organizations.

However, at the same time the agricultural sector still suffers from the lack of young qualified specialists. During the research almost all interviewed specialists noted that the number of specialists in agriculture and agronomists decreases year by year, as some of them retire, some of them move to other countries, the others change profession and etc.). The average age of an agronomist is more than 35-40 years. And almost all those qualified agro specialists were educated in the Soviet era.

With getting independence agriculture became un-attractive for young population compared to other professions and specializations such as bankers/economists, lawyers, diplomats, merchants etc. Urbanization and migration processes were also factors which influenced it. It turned out that people who specialize in agriculture are doing it because of despair.

Professions like agronomists, farmers, shepherds, stockbreeder or other jobs related to agriculture need to become attractive and fashionable professions.

Agricultural sector should become a locomotive of the country's economy and be attractive for people to engage in. The significant role of the agricultural sector in ensuring food security should be explained to the society in the context of global

population increasing. According to the UN studies global population might reach 9 billion by 2050 <sup>11</sup>, almost 30% increase. Also it should be noted that according to the United Nations<sup>12</sup> there are a billion people in the world today who do not get enough food to be healthy and lead an active life in the earth. But first of all, the country should learn and manage to satisfy the internal demand before turning to export.

The role of non-government institutions can be significant in rebuilding the agricultural sector as a vital sector of the economy which can significantly contribute to GDP growth and the improvement of other economic and social indicators. All of the informational measures can be done by media, internet resources, via articles, video clips and other acceptable tools.

NGOs and advisory centers can become strong knowledge centers in the regions. Also, they can be strong mediators connecting agricultural producers and next agricultural value chain operators. All of those measures can be done only if there is enough human resources who have the will to be engaged in the agricultural sector.

Currently, there is only one university (Kyrgyz National Agrarian University)<sup>13</sup> and a few agricultural technical schools in Kyrgyzstan. These institutions educate agricultural specialists. KNAU has 8 following faculties: 1. Engineering Technology; 2. Agronomic; 3. Social Humanitarian and Natural Sciences; 4. Management of Natural Resources; 5. Economic and Business; 6. Veterinary Medicine and Biotechnologies; 7. Production and Processing Technologies of agricultural goods; 8. Innovative Technologies. It seems not enough for the country with 65% of the population located in rural areas with sufficient natural resources to ensure food security. But even if establishing new faculties of agricultural universities is unrealistic because of the lack of funds, the existing faculties can be made attractive for young generation through scholarship programs, competition programs for best students, or exchange programs with foreign universities organizing trips for students to other countries, paid internships, developing universities educational base (laboratories, equipment, new training manuals).

To summarize the above points - two main directions in strengthening agricultural value chain can include:

1. Improve the engagement of NGOs in agricultural sector: all of them should attract more qualified young specialists and train their staff in order to pace with the time. Also, they should develop their networks through opening new branches in all regions or even villages. Only in such way they can reach significant numbers of farmers and deliver their services on a massive scale. By supporting such institutions the foundations will be laid for the development of every existing value chain in agriculture, and new kinds of value chains in the future.

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<sup>11</sup><http://earthskey.org/featured/population-challenges-to-the-year-2050>

<sup>12</sup><http://earthskey.org/food/how-many-people-in-the-world-today-are-hungry>

<sup>13</sup><http://obrazovanie.kg/uchrezhdenija/vishee/universiteti/knau>

Such institutions have a vision to become independent, operationally self-sufficient and sustainable, working along the rules of the market economy. Providing large-scale services is one of the pre-requisites for achieving sustainability.

However, in the beginning these institutions will need support in building institutional infrastructure. Almost all of the institutions are private which enables them to receive international donor's support.

2. Strengthening human resources base: firstly, improve knowledge and skills of agricultural producers, not only in modern agricultural production processes but also in business management and marketing. Secondly, develop young and qualified specialists/professionals who will provide training, consultations and advisory services. Developing young specialists is the investment to the future.

## **6.2. *Agricultural inputs, equipment/machineries and automation of production processes***

According to interviewed specialists, the market prices for fresh agricultural products have been very high in the last two years even in such months of July, August, September when prices are usually low. Additionally, the volumes were so low that the local market consumed almost all produce leaving the processors with no inputs. The situation was influenced by the political events and the closed border with Uzbekistan which was the main supplier of fresh market goods to Kyrgyzstan.

All agricultural equipment inherited from Soviet Union is technologically obsolete and physically over-exploited. The attempts of the government bodies to bring agricultural equipment from China or Russia and offer it to agricultural companies through leasing are a drop in the ocean.

Nowadays, almost all production in agriculture is done manually. This results in small volumes of produced goods, high cost of goods and sales of the production mainly in raw/unprocessed state.

While at the beginning of the post-Soviet era manual labor was cheap, the last several years showed that manual labor prices increased sharply. Replacing manual labor with automation may turn out to be cheaper over time but in the beginning it requires big investments.

During the study almost all specialists noted that people started to understand that agriculture has a potential for generating income, they understand that if goods are sorted and packed, passed quality control to meet international standards it can be exported with higher profit in comparison with the domestic market.

Also, generally there is lack of slaughterhouses which meet international standards, diagnostic laboratories of meat, blood of cattle.

Additionally, according to Mehr Shavkat's senior agronomist, farmers need deep-freeze technologies to freeze their goods while transporting their goods to other countries, but at the moment they even don't have boxes or other packing materials.

During the study, a breeding farm named “Dorskulu” located in Kochkor region was visited. The farm specializes in fine-wool sheep breeding. According to the head of the farm, this year government bodies intended to buy wool by KGS 100 per kg, but this wool should be classified by sorts. At the same time Chinese entrepreneurs offered to buy wool at a price of KGS 130 per kg and they offered to buy any kind of unsorted fine-wool without any classification. The farm made a deal with Chinese entrepreneurs.

This case illustrates that Kyrgyz farmers are delivering raw materials to other countries and those countries add additional work and after that offer processed product and of course prices for such goods are much higher.

Immovable property is not overly expensive and in every region we might find nonfunctioning garages or small factories with its land which also was inherited from the Soviet era. This kind of infrastructure can be used, equipped and transformed into the centers where farmers can **classify, sort, press, clean, purify, refine, pack, freeze, cool** their agricultural goods. In some cases such centers can include functions of veterinary services, or slaughterhouses, or in some cases of laboratories.

Each such regional center can have its own specialization taking into consideration opportunities of that region. For example, Naryn oblast can specialize in potato, meat, wool, leather, cereal, grain crops and preparation of fodder. Southern oblasts can specialize in fresh market goods, melons and gourds and, in some cases, in livestock products.

Having developed storage facilities such centers can start to purchase goods and store them for a longer period of time. In such way we can develop places where big volumes of agricultural goods can be accumulated, from where they can be supplied to wholesalers.

At the same time, such centers can become **showplace** of inputs for farmers starting from seeds, chemicals, fertilizers, from small components till complex agricultural machineries. Such kind of examples and shows will increase farmers' opportunities, and will illustrate farmers how to make be more effective in production. The main advantage of such shows would be in their location in rural areas, close to the farmers' place, where he can easily come, look, learn how to use and purchase.

In the beginning, such centers should include more functions, however in future, with the increase of the volumes of goods, they should have separate specializations. Investments in such kind of infrastructure will be justified in the short period of time because it is really in demand today and there will be enough supply.

All this undertakings and services will positively impact farmers to produce different kinds of crops, because they will know the demand and places where they can deliver their products. For example, during the Soviet times there was a lot of tobacco processing companies and people were engaged in growing tobacco plants. The situation changed when almost all tobacco factories were closed and people stopped growing tobacco plants.

In future such centers can obtain another important function – **quality certification**. The necessity of quality label is only a matter of time, so developing this function will allow to meet the demand of the nearest future.

### **6.3. *Financial resources***

Harvesting and processing sector currently requires investment which translates into the demand large loans. However, entrepreneurs often lack sufficient collateral to meet the requirements of financial institutions for which big clients increase the concentration of risk. Establishing guarantee funds to which some credit risk is transferred would improve access to credit for processing companies. Such funds operate in many countries and are important part of the development schemes.

The other challenge of companies engaged in harvesting and processing is high cost of debt servicing. Operating on a much smaller profit margin than microenterprises the interest rates of 30-50% p.a. usually applied by microfinance institutions are to high.

## **7. The role of microfinance institutions in strengthening and developing agricultural value chains**

On the basis of previous paragraphs the following interventions involving microfinance institutions can be recommended:

### **7.1. *Strengthen institutional infrastructure of NGOs engaged in agriculture***

We can only highly value undertakings of international institutions in supporting local NGOs (advisory and training centers), and note that at the moment it is the effective instrument to mobilize rural population in producing qualitative agricultural goods in high volumes. As it was mentioned above, MFIs should actively take part in building business processes in agricultural sector, because almost half of their assets are engaged in this sector. The MFI function should not be only lending but also their contributions to building necessary infrastructures/institutions for farmers.

Therefore, they should support the development of the physical infrastructure and network of support institutions which will reach into the regions of the country. The support and assistance to advisory centers can be done in the frame of MFI social responsibility.

## **7.2. Mobilize rural population**

It is in the interest of MFIs to support NGOs which work to strengthen farmers' businesses and thus decrease MFI credit risk. MFIs should support measures to attract more farmers to such centers in order to increase the number of qualified farmers with well operating businesses. It is important to attract MFIs in implementing this idea because of the number of MFI clients in rural areas which by far exceeds the number of beneficiaries of advisory centers.

## **7.3. Train and attract young qualified agricultural specialists**

Advisory and training centers should strengthen their capacity by attracting new qualified specialists in order to reach more rural population. Microfinance institutions can be engaged in this undertaking in supporting for example best students of the KNAU University with scholarships or by other similar instruments.

## **7.4. Develop infrastructure for improving the quality of agricultural production**

- **Service centers to classify, sort, press, clean, purify, refine, pack, freeze, cool, etc.**

Developing appropriate infrastructure for farmers to prepare their raw production for sale requires significant investment which is outside of the scope of microfinance institutions, however, MFIs can be the facilitator for the larger donor grant/investment.

- **Veterinary services**

Better infrastructure of veterinary services is needed which can be achieved by directing credit products to veterinarians for the purchase of necessary equipment and medicines.

## **7.5. Secure access to guarantee mechanisms**

This is the area where international donors can make an intervention by making available funds which will serve as guarantees against which MFIs can lend larger sums of money without requiring large collateral from the borrower.

## **7.6. Take part of borrowers' liabilities in accrued interests**

In some cases, international donors can part-take in the repayment of borrowers' liabilities, particularly some part of the interest expense.

Three parties will be involved in the implementation of the above indicated measures: international donors, MFIs and value chain actors.

Value chain actors (processors, trader, and next value chain operators) will benefit from receiving loans in sufficient amounts and without additional barriers such as lack of collateral or unaffordable price. Their profit can be directed to strengthening institutional infrastructure or increasing the turnover.

MFIs will create new products and widen their client base. International donor organizations will fulfill their mission of supporting the development of agriculture by impacting value chains in the country.

## **8. Conclusion**

The study aimed to find the responses to the important problematic issues in agricultural sector processes, particularly weaknesses in value chains. A lot of attention was given to the experience of institutions engaged in building value chains. Interviews with direct and indirect actors' of value chains allowed for proposing solutions.

As a result, we did not indicate particular value chains in selected sub-sectors, but proposed to approach systematically the challenges which agriculture faces in the whole country and pinpoint the opportunities for combating the weaknesses.

The issue was considered in the frame of three main production factors: human resources, technology and financial resources. Of course there are a lot of other factors which can affect the development of processes in agriculture such as legislation, geo-political circumstances, and other. However these factors are not in our jurisdiction.

All the proposed solutions can be only implemented through the cooperation of the parties: (i) people - farmers, entrepreneurs, engage in agricultural value chains, (ii) NGOs and microfinance institutions providing financial and non-financial support and (ii) donors operating development programs in Kyrgyzstan.

## **Annex 1: List of interviews conducted during the study**

1. Eugeny Ryazanov, Manager of Local Market Development Project, Helvatas/Swiss Intercooperation Agency.
2. Iskenderbek Amanbaev, Program Officer Fair Economic Development, ICCO Regional Office in South and Central Asia.
3. Dr. Peter H. Forster, Senior Adviser, Promotion of Sustainable Economic Development Programme, GIZ.
4. Paul Forrest, Senior Agricultural Advisor, USAID Local Development Program.
5. Nadyrbek Kachkynbaev, Regional Manager, Rural Advisory Services Jalalabat.
6. Syrgabek Joibolotov, Deputy Manager, Rural Advisory Services Jalalabat.
7. Baktygul Satygulova, Program Manager, Training and Extension System (TES centre).
8. Inabarjan Eraliev, Agricultural Projects Manager (agronomist) of Mehr-Shafkat
9. Asanaly Mametov, director of MLA “Agrocredit+”.
10. Ramil Nafikov, Executive director of MLA “Mehr-Shavkat Sahovaty”.
11. Ulan Kydyraliev, Manager of Aiyl Bank’s Kochkor branch.
12. Mayrambek Suranchiev, Manager of Bai Tushum Kochkor representative office.
13. Chynarbek Aljanbaev, head of breeding farm “Doskulu” situated in Kochkor.