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# Value Chain Management and Poverty Alleviation in Rural Areas: Project Experience of Kyrgyzstan



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## Abbreviation

CC	Civil Code
GDP	Gross Domestic Product
Helvetas	Swiss Association for International Cooperation
KR	Kyrgyz Republic
SDC	Swiss Development Cooperation
SME	Small and Medium-sized Enterprise
R&D	Research and Development
RMA	Rapid Market Appraisal
VC	Value Chain
VCA	Value Chain Analysis

## Summary

This report **reviews the status of value chain management in the Kyrgyz agriculture sector** and works out **recommendations for how to proceed in the development of agricultural value chains in Kyrgyzstan** so that the poorest farmers are not excluded. With 53% of the employed Kyrgyz population involved in farming, and a large proportion of those engaged in subsistence farming, investigating methods for linking small farmers to markets and ensuring sustainable business development for processors and traders addresses rural poverty. A rationale for value chain development is based on the authors' experience in local market development in Kyrgyzstan. The authors have observed **that local producers face a lack of access to potential markets** for several reasons: 1) **lack of trust** and unstable relationships between producers and potential buyers, 2) **lack of reliable information** about markets and financial resources, 3) **small production volume**, especially in the south where land is scarce, 4) **lack of quality seeds and fertilizers**, and 5) **lack of mechanization**. The report builds on project experience to offer several recommendations to other practitioners who are interested in pursuing local market development using the value chain approach.

- **Value Chain Analysis (VCA) is the primary method used to assess the relationships between all actors within a value chain and to understand the economic and social benefits and costs of particular relationships.** VCA determines where the most value addition is occurring and the relative importance of different actors. It includes an examination of the supporting institutional framework, an understanding of the impact of the existing policy framework, and an evaluation of value chain governance. When one link in the value chain does not work the whole system stops. The authors argue for the importance of conducting value chain analysis when addressing local market development challenges, but the analytical approach can vary. Four approaches are presented: 1) in-depth value chain and subsector study, 2) participatory rapid market appraisal, 3) action research, and 4) local business centre approach. The decision to select one approach over another depends on the mission, interests, and legitimacy of the evaluating organizations intervening in value chains. The type of VCA approach also depends on the analytical entry point: 1) business or market opportunity, 2) regional development, 3) technology development, and 4) idea development.
- **The relationships evaluated within a value chain are contractual in nature.** Factors such as bargaining power, information asymmetry and risk are considered when evaluating the advantages and disadvantages of contracts between producers, processors and traders. These factors influence the negotiation of

contract terms such as price, time of delivery, party responsible for transport and amount of product. In Kyrgyzstan, there is often a lack of commitment to contract terms and each link in the value chain suffers.

- **Enforcement of contracts within an agricultural value chain in Kyrgyzstan takes place outside of the court system.** A range of non-court enforcement procedures has emerged to address chronic hold-up problems in the agricultural sector. A hold-up characterizes a commercial situation in which buyer and seller expectations are not met due to non-delivery, non-payment, long delays, and quality discrepancies. Private enforcement procedures, such as provision of inputs to suppliers by buyers, provision of credit to suppliers by buyers, and assistance with marketing for sellers from input suppliers, can result in reduced instances of hold-ups, increased output for both suppliers and processors, and ultimately an increase in trust among value chain actors.

**Recommendations** were based on several years of experience working on local market development and small farmer assistance activities in Kyrgyzstan, with specific emphasis on the fruit and vegetable, milk and cotton subsectors.

- **Facilitate the development of long-term contractual relationships and networks within a value chain.** Specific actions include: 1) organise workshops that provide opportunities to value chain stakeholders to interact and inform each other of their specific challenges within the value chain, simultaneously addressing the asymmetric information problem and providing an opportunity to build trust; 2) consult on the design of contracts that limit the number of escape clauses while providing flexibility in delivery and payment schedules. Supporting organizations can also assist in the development of stable commercial relationships along a value chain through micro-credit access.
- **Evaluate internal and external markets.** A comprehensive understanding of reliable sales channels for processors informs a practitioner's approach to value chain development. What is internal demand for domestic products? What are the exporting possibilities? Project experience indicates the potential to expand exports from Kyrgyzstan to Russia and Kazakhstan, but it also suggests several barriers such as high transportation costs and inability of small producers and processors to meet quantity and delivery requirements. Evaluation of sales channels also directed project activities towards the formation of a national brand to overcome identified market barriers.
- **Develop training programs for growers.** Project experience suggests that training to growers is an effective method for facilitating value chain development in agriculture. Training addresses a lack of knowledge regarding how to best cultivate crops that meet processor needs and how to manage crop pests. Three training models are presented: 1) TES-Centre Model – arrange for specialists to train and coach farmers, 2) Farmer Field School Model – train farmers to become their own trainers, 3) Involve processor in farmer training in order to create self-sustaining training programs.

- **Improve the quality and safety of products in a value chain.** In order to focus farmer training on quality and safety issues, it is essential to harmonise the cultivation technology between farmer and extension service on the one side as well as processor and retailer on the other side.
- **Combining advice, credit and inputs.** Two approaches are presented: 1) the advisory service selects input provider, and 2) a voucher-based system in which the farmer selects input provider.
- **Coordinate study tours for stakeholders within a value chain.** Study tours provide value chain stakeholders in Kyrgyzstan with a chance to learn about how developed value chains operate. When considering whether or not to arrange study tours practitioners should consider: For whom? How? How will the experience be disseminated? Where?
- **Identify ways to address the challenges of the poorest farmers.** These farmers are often the ones faced with the highest transportation costs and the weakest knowledge of best cultivating practices. Due to over-employment in the Kyrgyz agriculture sector, a long-run development perspective should consider not just how to include unlinked farmers into value chains, but should also try to identify sources of off-farm employment that will lead to sustainable livelihoods.

## **1. Introduction**

### **1.1. Agribusiness status quo in Kyrgyzstan 15 years after independence**

Set in the mountains of Central Asia, the Kyrgyz Republic was one of the lower income republics of the former Soviet Union (FSU) although it had a relatively diversified economy and well-educated labour force. Kyrgyzstan became independent in 1991. The country has a population of 5.1 million people, more than 65 percent of them live in rural areas. Despite a remarkable 15 percentage point reduction in the poverty headcount since 1999, about 41 percent of the population is still below the poverty line.

With a total land area of about 198,000 km<sup>2</sup>, Kyrgyzstan is a small country where arable land accounts for about 7 percent of the total area. The Kyrgyz Republic has made major strides in the past decade in its transition to a market based and globally integrated economy. The last five years have seen significant improvement in the country's overall macroeconomic performance, with real GDP growth averaging at about 4 percent per annum. Despite this progress, the Kyrgyz economic recovery remains fragile, hinging critically on agriculture, gold mining and, to a lesser extent, the services sector. Agriculture is the most important sector of the economy; it accounts for 34 % of GDP and 53 % of the employment<sup>1</sup>.

After 1991, agricultural production in Kyrgyzstan significantly decreased as a result of a sequence of adverse economic factors and circumstances. Some of these factors were the elimination of subsidies, industrial sector shutdowns, disruption in support services, and the worsening balance of agricultural trade. Relative factor prices have been changing over the years, caused in part by the depreciation of the capital assets that were provided by the old system, the shift of labour to agriculture, and the access to the world market. The changes in relative prices of factors and inputs in conjunction with changes associated with the introduction of a market-driven economy, such as market-determined output prices, are causing input substitutions and gradual changes in agricultural production technology. For example, decreased wage rates and prices of agricultural outputs have substantially reduced economic incentives to use agricultural machinery and equipment, thus making the agricultural sector more labour-intensive and less mechanized than in the old system.

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<sup>1</sup> 2001 SAM, World Bank 2004.

Agricultural sectors in transitional economies, more than other sectors, have experienced slower and more difficult paths of adjustment towards market equilibrium due in part to the nature of agricultural production and the large number of farmers and entrepreneurs. Many farmers in Kyrgyzstan have been involved in subsistence agriculture, and it takes several years for farmers to understand the market realities of output price volatility and uncertainty. This usually is a learning-by-doing process, which involves disappointing experiences by farmers experimenting with crop substitutions based on the expectation that current prices will prevail at the time the crops are harvested and the outputs sold. Overproduction and low prices and losses for one crop in a year have been often followed by high prices for that crop in the following year. The domestic market is small and incomes are low but the market is made even smaller by several factors:

1. A large portion of the rural population is isolated from the market because distribution channels, which were disrupted after the collapse of the Soviet Union, have not been fully re-established;
2. High transport costs (because of high fuel costs, old vehicles, poor roads, and bribes for road police) and the lack of working capital worsen the situation.

Moreover, events affecting the world market, such as wheat production performance in Russia and Kazakhstan, the price of cotton in the international market, and agricultural subsidies in Uzbekistan, are always influencing the decisions of farmers in Kyrgyzstan and often forcing them to shift from the production of one crop to another.

Many agriprocessing plants are plagued by excess capacity, particularly those plants established in the Soviet era when capacity was installed to meet export quotas to other FSU republics. Most of them operate at 40 percent of capacity or less, which reduces technical efficiency of production substantially. They also struggle with substantial debts and out-dated equipment. Other problems that exacerbate the excess capacity problem are management problems, weak channels of distribution, working capital shortages, difficulties getting consistent raw materials supplies and infrastructure problems. An important reason for low productivity is weak management, resulting from two factors: inadequate know-how and Soviet business practices that continue to cut initiative and drive. Task-level efficiency of workers is poor compared to international competitors. This seems to apply even in situations where equipment in use is relatively modern and up-to-date. A major factor underlying this problem is the lack of training for workers. Industry specific training institutions have closed and with them facilities to train workers.

## 1.2. Rationale for value chain development

Kyrgyz farmers face an array of constraints, including access to markets, a lack of financial resources and production know-how. Only a few development projects focus activities at marketing of agricultural and processed products. The core problem that local producers face in Kyrgyzstan is a **lack of access to potential markets** where they could sell their products. There are several reasons for this. One of them is **lack of**

**trust and unstable relationships** between producers and potential buyers. This was indicated as one of the main problems at a workshop between local producers, processors and traders conducted by Helvetas in February 2003. At the same time, processors would like to have long-term contracts with producers and they are ready to negotiate a purchasing price in spite of market price fluctuation from year to year. Another problem is a **lack of reliable information** about markets and financial resources. Producers as well as processors and traders do not have information about export and customs procedures.

Another problem that constrains access to potential markets is the **small production volume** of individual local producers. After land privatization in 2000, rural households got small plots that are on average 1.6 ha (in the South of Kyrgyzstan even less, around 1.0 ha). Due farmers' own needs in food and feed they are able to produce only small quantities of a particular cash crop. Use of diverse seeds and varieties makes it very difficult to unite production to meet buyers' requirements. There are several reasons for this. One of them is **weak development of cooperatives** and cooperation between farmers which leads to spontaneous production and heterogeneity of crops. A government decree, issued in summer 2004, that places a VAT (20%) on agricultural producers who have a yearly turnover above 500,000 soms (12,000 USD), has a negative impact on cooperation. Many farmers are now fearful of cooperation and forced into a shadow agricultural economy. By all accounts, the Government is going to make some changes in this decree. **Lack of quality seeds and fertilizers, lack of mechanization and simple tools** for production also have a negative effect on production volumes. Fertilizer nutrient use fell from 130 kg/ha in 1990 to 10 kg/ha in 1995 and remains below 30 kg/ha in recent years. The region's farmers use, on average, less than 50% of the amount of crop protection products used by agricultural producers in Western nations. The Kyrgyz seed industry remains mired in pre-transition patterns that are poorly adapted to the new farming structure. In the meantime, inputs from the black market account for 60% of cotton seed, 80% of fertilizer (which may change now that the VAT on fertilizer has been removed) and 90% of crop protection products<sup>2</sup>.

In May 2004 Helvetas organized a meeting between organic agricultural producers in Jalalabat oblast with a manager of a processing company who was ready to buy 50 tons of beans, but the problem was that these producers did not know how to grow beans. This example shows a **lack of knowledge** among farmers of how to produce certain crops that the market demands. Furthermore, many farmers do not have enough knowledge about harvesting technologies and appropriate storage conditions.

There is also the problem of obtaining financial resources (loans) from credit institutions due to a lack of collateral and proper information. Some financial institutions have quite "soft" requirement regarding collateral but producers do not know anything about them. For processors it is the same. Most of them use their own resources to finance agricultural activities. Less than 20% of processors borrowed funds from

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2 IFDC Kyrgyz Agro-Input Enterprise Development Project - 2004

physical persons and less than 15% received credit from a financial institution<sup>3</sup>. The situation with crediting trading activities is even worse: higher interest rates and lack of collateral in trading companies (all their money is in goods and credit institutes do not accept goods as collateral). Traditional lenders are still too conservative and cautious, oftentimes requiring several multiples of extended credit for collateral. Interest rates are falling, but are still high. The necessity to pay bribes to credit officers also remains an issue. Removing financial constraints would have a huge impact on the agricultural sector and is a high priority in Kyrgyzstan.

At the same time, Kyrgyz producers and processors have good potential for development. Privatized land gives producer families hope for further development. These families are supported by a pool of donor projects and local organisations that are working to assist them at production and policy levels. Importantly, processors and traders have an interest in long-term cooperation with farmers and are ready even to make investments in farmer businesses.

In this situation the work along value chains makes the discussion among involved parties more concrete and the needs more clearly defined, especially for such a small market, as is the case in Kyrgyzstan. If one link in the value chain does not work then the whole system stops. Therefore, it is important to look at the entire system from the market side. This should be obvious, but gets all too often forgotten. Services provided by donor funded projects and local NGOs should not be looked upon as a category in itself, but they should be closely linked to the needs of actors along the value chain.

### **1.3. Relevance of value chain development**

Today, the majority of farmers in Kyrgyzstan are working for subsistence with little involvement in the market. Wheat is mostly grown for the family's own consumption, and only unplanned surpluses are marketed. Yet, integration into value chains is only achievable where a crop is grown in consideration of market needs, with the aim to sell it and a plan already in mind of how to put it on the market.

In Kyrgyzstan farms are small. Whereas an average family received some 3 ha in the Chui Valley, farms in the Fergana Basin are barely larger than 1 ha. However, our experience shows that successful integration into value chains does not depend of farm size. Small farms, can very well specialise in exclusive crops such as vegetables which require established ways of marketing. Some crops are highly perishable (cucumbers, tomatoes, strawberries and raspberries) which calls for planned and efficient marketing channels. In contrast, some large farms grow mainly wheat, barley and maize either for subsistence or as animal feed, and vertical co-ordination of their value chain is not of high relevance. Generally, the integration into a product chain is important to those

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<sup>3</sup> Swiss Development Cooperation, Helvetas; Development Strategy for Fruit and Vegetable Processing Industry in Kyrgyz Republic, 2004

farmers who receive the bulk of their yearly income from a particular crop. Farmers who only produce small quantities (due to low yields or small areas) may find transaction costs of contracting too high. Instead of spending time in the spring to negotiate and conclude contracts, and then over the season to keep contact with the processor, many farmers may find it less time consuming to just bring the little they harvest to the wet market or place it on the roadside for traders to collect. Conversely, raising yields through advice and better inputs could make it attractive for farmers to seek integration into value chains.

Zhamzhit, a farmer in Markaz (near Kyzyl Kiya), who has one hectare of own land, told us that he rented another hectare this year. Now he has enough land to grow wheat and livestock feed as well as 0.75 ha of cucumbers, which is his only cash crop, providing enough cash for investments and to sustain the family. He says that without a delivery contract with the nearby processor Agroplast he would not have dared make this investment which includes rent payment for the extra land, applying for a loan to purchase inputs, and staying all spring and summer in a tent in the field to watch the crop. The contract gives him safety and enables him to plan ahead and not to lose time with selling the crop while his presence is needed in the field.

Relevance of value chain development also depends on the maturity of an enterprise. A processor who just starts with a new product, or a farmer who grows a certain crop for the very first time, may be better off experimenting without a contract to minimise liabilities in case of a failure. Most contracts which crash involve some innovations that have not been tested yet. The examples in Kyrgyzstan are plentiful and include crops such as sweet corn, gherkin, soybean and malt barley. Either the buyer had unexpected processing difficulties or the grower failed to produce the quantities and qualities needed.

For many farmers in Kyrgyzstan integration into a value chain is only gradually becoming relevant as they start to specialise in certain crops and become more experienced, while on the other side processors are forced to produce higher quality products and consequently demand better raw materials. Brand names and private standards for food quality and safety are becoming more common. The brand “Taste of the Sun” is such as example from Kyrgyzstan.

In addition, modern retailing in the form of shops and supermarkets are beginning to emerge from northern Central Asian countries southwards demanding quality and timeliness of delivery and hence a strict vertical integration of the value chain. Fresh food items which appear first in shops and supermarkets are milk products followed by meat. Then products like potatoes and apples enter stores, and finally other fresh fruit and vegetables. Worldwide there has been a trend from supermarkets occupying a small niche in capital cities serving only the rich and middle class, to supermarkets

spreading well beyond the middle class in order to penetrate deeply into the food markets of the poor. The rapid growth of supermarkets worldwide is partly due to foreign direct investment (FDI) in this sector. According to Dries, Reardon and Swinnen (2004)<sup>4</sup>, Russia is presently the number one retail FDI destination, and a steep rise in retail FDI is also expected in Central Asia. FDI is often an initiator of change and institutional innovation with more contracting and with a greater emphasis on quality and standards.

The effectiveness of vertical coordination also depends on the stage of transition. In a later stage of transition (e.g. in Eastern and Central Europe) the main incentive for contracts is guaranteed access to markets. In the early stages, which we find in many areas of Central Asia, the incentive for farmers to become integrated into a value chain is mainly to secure credit and inputs such as seed. Therefore, prompt payment is so important in these contracting arrangements. Most farmers in Central Asia have fewer problems getting their production absorbed by the market compared to farmers in Eastern and Central Europe. This should be kept in mind when designing contract arrangements.

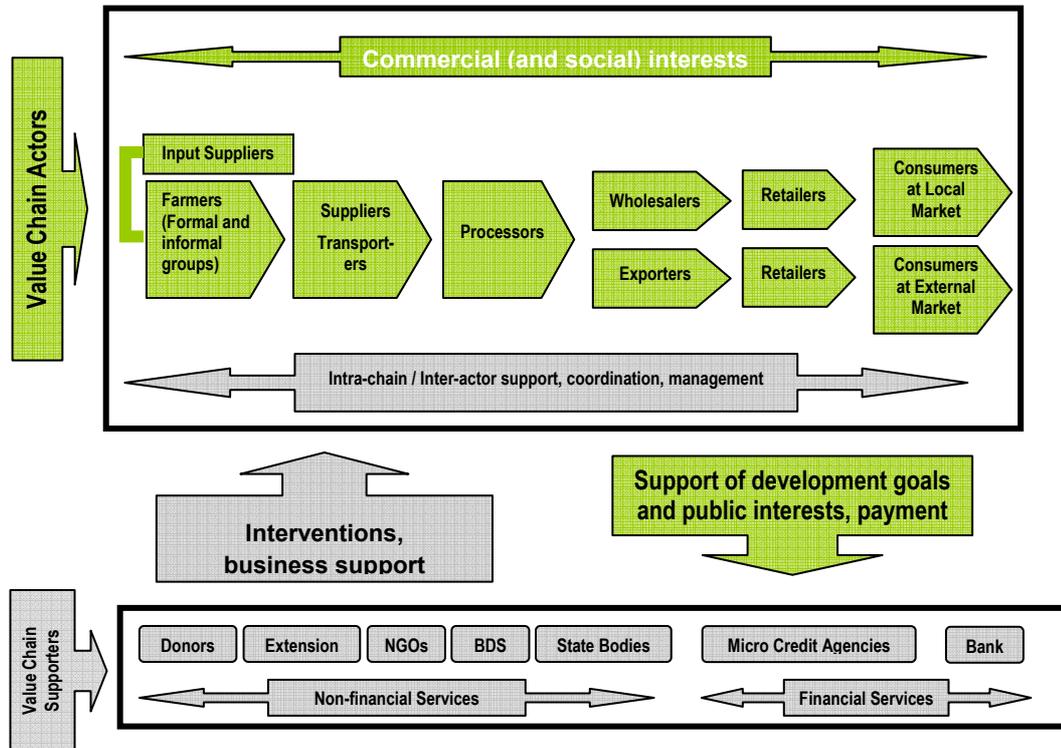
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<sup>4</sup> Dries, L., Reardon, T. & Swinnen, J. 2004. The Rapid Rise of Supermarkets in Central and Eastern Europe: Implications for the Agrifood Sector and Rural Development. *Dev. Policy Rev.*, 22(9): 525–56.

## 2. Value Chain Basics

The value chain describes the **full range of activities** which are required to bring a **product or service** from **conception**, through the different phases of **production** (involving a combination of physical transformation and the input of various producer services), **delivery to the final consumer**, and final disposal after use (Kaplinsky and Morris, 2001).

It is very important to make a distinction between value chain *actors*, who are directly involved in delivery of a product or service from conception and production to the final consumer, and value chain *supporters*, who can influence on efficiency of delivery (graph 1). The value chain is not able to operate in the absence of even one actor, but can work without supporters. Ideally, the retailers should order products based on demand and processors and producers should work on reducing the production costs to make their products more competitive and attractive for traders.



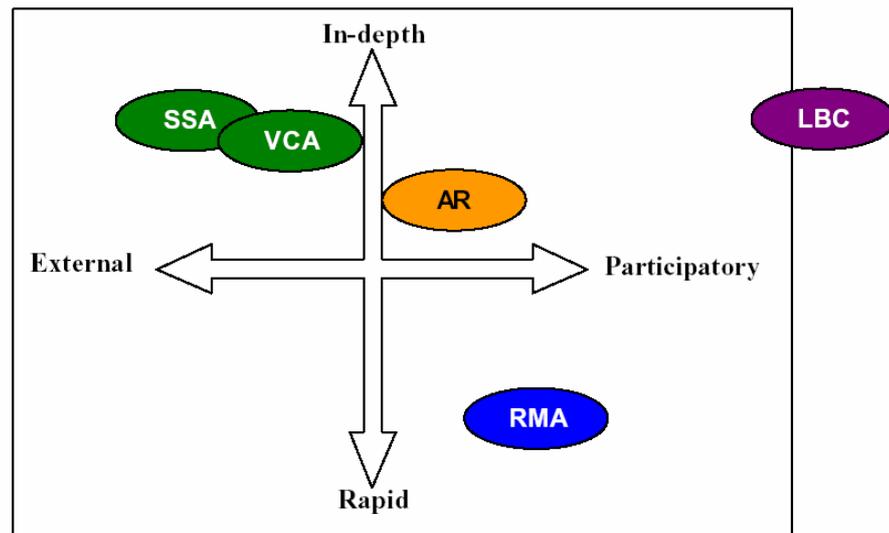
Graph 1: View of the Value Chain

Value Chain Supporters can be divided in two main groups of providers: 1) Non-financial (consultancy, training, technology, know-how, information, attraction of investments, etc.) and 2) Financial Services (money). The first group includes donor-funded international and local non-government organisations, private extension and business development services. The group of Financial Services includes micro-credit agencies, development credit institutions and commercial banks. It is very important to make a distinction between non-financial and financial services because provision of these services requires different types of relationships between actors and supporters, e.g. collateral for obtaining a loan. Thus, an actor in the value chain, having certain financial resources, would be able to buy non-financial services without facing any constraints, but would not be able to obtain credit because of lack of collateral.

### 3. Value Chain Analysis

The goal of a value chain analysis (VCA) is to understand relations between actors and their economic and social benefits. Motivation, decision making, driving forces and approaches can be different from one actor to the other.

The following scheme visualizes the four different dimensions for VCA<sup>5</sup>. The different approaches can shift inside this frame, depending on their application.



VCA: In depth value chain study & SSA: Sub-sector analysis  
 RMA: (Participatory) rapid market appraisal AR: Action research / R&D  
 LBC: Local business support centers

Graph 2: Dimensions of value chain analysing tools

VCA & SSA: This is the traditional approach for knowing what is going on within a specific market or a sector. Usually this approach requires considerable amounts of time, money and specific capacities of consultants. For these reasons, this sort of VCA is often donor financed and implemented by specialised international or urban based organisations. Despite the fact that participation of local actors is sought for information gathering, it remains in most cases a typical externally led in-depth study.

<sup>5</sup> Synthesis of first VCRD Cycle 'Analysing Value Chains'. SDC Community of Practice's Discussion. 2005

AR: Action research employs a trial-and-error approach and is usually based on a business idea or a hypothesis about how a value chain works. An action research program is flexible and allows placing small amounts of money for testing business ideas of various local and international actors. Based on this idea or hypothesis, concrete support and interventions are developed. This appraisal is a fast learning process and adjustments can be made quickly and the idea or hypothesis is either confirmed or rejected.

LBC: This approach is based on the idea that business centres find entry points in the value chain and support later actors of the chain. The idea behind this approach is to develop a local capacity for value chain analysis and intervention. Support from the 'donor-community' is based on the public interest; i.e. fostering income and employment in the region or country. External consultants provide the means (skills, tools, methods, etc.) to business centres for analysing value chains and ensure that results of the public funded activities are available for the public.

RMA: This approach is based on the Participatory Rural Appraisal experience. The key actors have to be included in the RMA from the beginning. They gather information among local stakeholders and do participatory analysis. Information is gathered through interviews with approximately 20-30 different market chain actors. Often the VC actors who do the analysis are competitors for a certain product or a certain market. Therefore, the approach has a few critical key challenges such as trust between actors for team analysis and reliability of information.

A value chain analysis is about identifying the full set of economic costs along the value chain to determine where the most value addition is occurring, the relative importance of different actors, a good look at the supporting institutional framework, and an understanding of the impact of the policy framework.

There are several entry points for analysis depending on the priority of the analysing institution:

- Use of Business or Market Opportunity: Start with an existing chain to create or expand a market for a specific product (commodity) with high demand through better collaboration of market chain actors.
- Regional Development: Concentrate on a livelihood system within a specific region and investigate what this region could best produce for a) being marketed and interesting for pro-poor benefits and b) for improving the livelihoods of the poor.
- Technology Development: Start with an existing technology and develop a technology to a level that allows achieving interesting income and pay off the investment.
- Development of Idea: Analyse and support ideas that were generated in a demand driven way from any VC actor and having public interest and social and economic benefits for other actors.

## 4. Contracts in value chains

Looking at the graph in Chapter 2 it becomes obvious that a number of relationships have to be established and mutual commitments defined and fixed in writing. Most importantly in this chapter are contracts between farmers and processors; however, also the other relations in a VC have to be negotiated and fixed on paper for the value chain to run smoothly: farmers and input suppliers, processors and wholesalers, wholesalers and retailers, exporters and importers. The essence of contracting is commitment and not only the piece of paper. Lack of commitment to contracts along a value chain is often very costly.

### 4.1. Advantages and disadvantages for farmers and for processors

Usually a contract determines the price of a product to be delivered and therefore also precludes the farmer from getting above-average prices which may occur unexpectedly if climate, diseases, pests or political unrest reduce supply of that product on the market. In a young and still unstable market as we find it in Kyrgyzstan these price fluctuations quite high between years, and therefore a farmer who agreed to supply at a determined price may lose a lot at times where market price are up to ten times higher than what was foreseen when the contract was established.

**Example:** Usually the tomato wholesale price in Osh falls to 1.8 som/kg from mid August. However, in 2005 the tomato wholesale price rose to 6 som in mid August due to a combination of a late spring and a tomato disease in neighbouring Uzbekistan which reduced yields there drastically.

On the other hand contracts may also secure a farmer's livelihood if prices falls dramatically.

**Example:** In spring 2000 the price for onions in Bishkek fell to 0.5 som/kg and stayed there for several months because of unexpected export difficulties to Russia, although normally the onion price at that time of year is well above 5 som.

Given the high level of uncertainty in the market, producers and processors may therefore be motivated to conclude contracts only for a certain amount of production, which is necessary to break even, and to sell/buy the remainder on the open market. In our

discussions we often found that farmers and processors want both: highest price and lowest risk, but they have to understand that this is not possible.

Another disadvantage for farmers to conclude a contract with a processor derives from the unequal power relations. Elements such as price, time of delivery, and party responsible for delivery are influenced by the bargaining position of the parties and asymmetric information. An enterprise's bargaining position is greater the larger the market share the enterprise controls. In the case of a small private farm in Kyrgyzstan, it is likely that this enterprise is poised to compete with hundreds of other producers within one community. This is the case with small fruit and vegetable producers who vie for buyers among one or two large agricultural processors. Many contracts in the agricultural sector are poorly drafted and extremely one-sided. It is not uncommon for producers to be unaware of all the terms to which they are actually agreeing, reflecting the unequal bargaining power and information asymmetry present in agricultural contracts. Information asymmetry can present a particular burden on agricultural producers. During a period of rapid institutional change when legal and economic rules are transformed, mistakes are likely to be made by contracting parties who do not fully understand the rules or are simply not aware of them. Lack of access to good legal education among new producers hinders the ability of contracting parties to make educated decisions about contractual terms, exacerbating the level of asymmetric information during contract negotiation. Legally sanctioned contracts could potentially burden agricultural producers with litigation costs, incentivizing the use of informal contractual arrangements.

The main advantage of contracting is to reduce marketing risks and hence income fluctuations for the farmer. Yet, both buyers and sellers encounter other risks when contracting particularly when the goods are perishable. For the grower, the perishability of his/her crop heightens his/her risk in the event that the processor defaults on the contract<sup>6</sup>. In the event of a processor default, the grower has essentially two choices. The grower can lose the crop, or the grower can sell the crop in a spot market, likely for a lower price due to crop deterioration. Perishability also indicates how long the processor can hold inventory of the particular fruit or vegetable. A default by the grower would, therefore, interrupt the processing procedure, or require a potentially costly replacement crop on the spot market with no quality guarantee.

Supply and production contracts can be either long-term formal contracts or short-term less formal contracts<sup>7</sup>. The length and type of the contract is largely dependent on the type of product. For example, long-term contracts are likely to structure a relationship between producers of value-added, specialty products and processors. Examples in Kyrgyzstan include organic cotton and new sorts of vegetables. These contracts are likely to be complex and include stocking requirements, shelf space definitions, and

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6 Masten, S. (2000). "Transaction-Cost Economics and the Organization of Agricultural Transactions." *Industrial Organization* 9: 173-195.

7 Shelford, J. (2004). *Economic Impact of Contracting in the Fresh Fruit and Vegetable Sector*. Agricultural Outlook Forum 2004. Naples, FL.

introduction and promotional incentives. With these agreements, suppliers accept a high level of risk when they make promises to customers regarding time of delivery. Their clients rely on them for timely delivery so that they in turn can meet the demand of their respective customers. The nature of this type of commercial situation requires the processor to develop long-term relationships with producers in diverse geographical areas to hedge against the potential for poor growing conditions. Long-term contract relationships also require careful management of “lack of product” risk, because the processor often has agreements on the other end of the marketing chain to deliver produce regularly.

## 4.2. Contracts between producers and processors/traders: A checklist

Contracts between farmers and processors, which are concluded in winter before the growing season starts, help both sides plan their economic activities and finances. Yet, supply contracts used in Kyrgyzstan between farmers and processors since the early 1990s have often been nothing more than vague declarations of intent in which processors say they would purchase the farmers’ crop whenever they need it and farmers say they would deliver their crop to the processor if the price at the fresh market would not be higher at that time.

Contracts should therefore be as specific as possible, not leaving much room for vague exit provisions. Only then a contract fulfils its potential of enabling actors to plan and build trust.

In the following checklist we want to enumerate some themes which should be dealt with in a contract. How these themes will be decided, is up to the contract partners. In general a processor will have his ready-made contract form with only two blanks: for the farmer’s name and the delivered quantity. It is hence so important that before the processor drafts his contract form, the processor and the farmer delegates come together in a meeting which could be facilitated by a development organisation to discuss point for point how the following ten issues will be decided:

**Table 1: Checklist for a contract**

Issue	Recommendations
1. <b>Quantities to be delivered</b>	The farmer should not contract his/her entire crop as prices on the fresh market could be much higher, but usually at least that amount that he/she needs to sustain the family. Contracts may include minimum and maximum quantities to be delivered under the contract.
2. <b>Qualities to be delivered (variety, size, form, imperfections due to pests and diseases, dry matter...)</b>	First, for each quality criteria thresholds have to be defined, because a delivery can never comply 100 % with the desired quality. Example: “90 % of delivered cucumbers between 6 and 8 cm.” Secondly, sampling and methods of analysis need to be defined for each quality criteria. Example: “At delivery random sampling by processor in presence of deliverer”.

Issue	Recommendations
3. <b>Provisions for deliveries which do not meet the required quality standards</b>	The processor should have the freedom to either reject the entire delivery or purchase it at a reduced price defined in the contract. Example: "Deliveries failing to comply with at least one required quality criteria will be purchased at 80 % of agreed price or rejected." This is necessary to avoid situations where farmers feel they are forced to sell to the processor at any price as transport back home is too expensive.
4. <b>Price per kg specifying if this is the price at field edge or at factory gate</b>	Prices should be fixed at the time the contract is concluded because the price guarantee is the main asset of a contract. It is therefore not advisable to state "market prices at time of delivery". However, if market prices are the basis of the contract it has to be shown how market prices are defined. The market price depends on location and quality, and in the South of Kyrgyzstan prices very much differ between locations, and qualities sold in the market are often very different from what processors purchase. Meaningful contracts which build trust among partners work with fixed prices. Prices could be defined in advance for every month or week to reduce opportunity costs of farmers delivering to the processor early or late in the season when prices are usually higher.
5. <b>Payment</b>	Farmers in Central Asia are used to being paid right away. Because of high depreciation factors in rural Kyrgyzstan all past attempts to pay farmers a higher price after processing failed. Cash demand is high, and therefore farmers will always choose marketing opportunities which provide them with cash right away.
6. <b>Delivery schedule</b>	At the latest, one month before delivery starts, the delivery schedule should be defined between suppliers and the processor. For example in a group contract: "From 15 July every second day 150 20-kg-crates."
7. <b>Transportation</b>	For small farmers in remote villages, transport of their produce is one of their main problems. For many smallholders a key advantage of contract farming constitutes the fact that the produce is collected at the field edge according to a delivery schedule. Many say they would accept a price of up to 30 % under market price if the produce is picked up from the field. If the processor assumes the responsibility of transportation, it should be clearly stated in the contract: who pays for fuel and driver, and who loads and unloads the truck?
8. <b>Packing: Type of crates, amount per crate</b>	Just as for transportation, crates should be supplied by the processor. Before the first collection of produce, crates should be distributed to the farmers. Farmers could be obliged to staple their names on each crate so that the origin of the produce could be traced.
9. <b>Services by the processor</b>	In areas with more developed vertical co-ordination of agricultural value chains, contracting usually includes some kind of farm assistance (e.g. input supply programs – especially seeds –, investment assistance, trade credit, bank loan guarantees, extension services). In situations where vertical co-ordination is just beginning, it is more prudent to leave these services to specialist organisations such as agricultural credit institutions and extension services. Where trust between farmers and processors is built up and volumes of raw materials have risen, the processor may wish to provide these services himself in order to reduce transaction costs.
10. <b>Contract cancellation, fines, rewards and means of enforcement</b>	Contracts have to be enforceable and exit provisions should be clearly cut. Kyrgyz contracts usually contain an article about " <b>Force Majeure</b> ", but the understanding is often very broad. Many farmers think that "Force Majeure" comprises a rise in fresh market prices – a reason not to deliver to the processor. For some farmers, low yields due to untimely irrigation and for some

Issue	Recommendations
	<p>processors unforeseen sales problems fall under “Force Majeure” and constitute reasons not to fulfil the contract. Therefore, “Force Majeure” should be defined and limited to events such as hail, land slides, earthquakes, etc. All other cases of <b>contract non-fulfilment</b> mean breaching the contract and the consequences should be defined (e.g. termination of contract, fines, black-listing by processors, extension services and credit organisations). Example: “If the processor has not provided transport within 24 hours after agreed delivery date the farmer must no longer fulfil his/her contract obligations.” On the other side, <b>rewards</b> for loyalty could also be defined. For example, in a group contract: “Payment of 10% bonus for contract fulfilment after the sale of processed product into the group account.” Contract <b>enforcement</b> via the legal system is costly and time consuming. Contract partners could agree on a neutral third party to decide disputes (arbitration). This job could be fulfilled by extension services.</p>

If contracts should really be enforceable, they must be concluded between the processor and each farmer. However, the common practice shows that contracts are negotiated with individual farmers (group leaders) on behalf of the entire group and without the group members’ names and individual contributions mentioned in the contract. These contracts are often not worth the paper they are written on, as some group leaders told us: “I cannot force the others in the group to deliver to the processor.” If group contracts are chosen, every group member should have to sign the contract.

How relevant the above recommendations are becomes obvious if we have a closer look at existing growing contracts in Kyrgyzstan.

**Price:** Some contracts set the price as “market price at the time of delivery”. Other contracts refer to the price as “average one som” or “orientation price one som depending on quality, variety and demand”. However, in these contracts it is not said how quality, variety and demand will influence the price.

**Quality:** Contracts usually do not establish the required quality, thresholds for quality criteria and methods of taking samples.

**Transportation:** Upon examination, a few contracts noted that depending on the quantities to be purchased, the company could provide transport. However, it was not specified how transport costs would be met, and how much farmers have to pay for transport provided by the processor.

#### 4.3. “Honesty and faithfulness are investments into the future”

Producers and processors are dependent on each other. The importance of building good long-term relationships cannot be underestimated and both parties have to understand that to abstain from the highest possible sales price (or the lowest possible purchase price) means to invest this difference between contract price and actual market price into good relations. It is an investment just as money put into machinery or in-

puts. Farmers must understand: Selling a part of the crop to the processor at 2 som/kg as agreed in the contract in stead of all to the market at, say, 4 som/kg keeps the processor alive; and this in return helps the farmer when in another year the market price is down to 1 som/kg.

Both contracting partners need to make clear that their acts (strict contract fulfilment, even in subordinate matters) are interpreted by the partner not as opportunism, but as an expression of their honesty and faithfulness. In this way trust is slowly built.

To foster trust the reputation for being honest should be enforced by social sanctions when state sanctions are unlikely to enforce contractual obligations. A good reputation is the basis for confidence in future exchanges, facilitates transactions, and creates networks of relational or oral contracts<sup>8</sup>. A good reputation has the effect of facilitating repeated contracting between a buyer and a seller<sup>9</sup>. This reputation effect is particularly important in long-term contracts when the desire to maintain the goodwill of other contracting parties is often more important than the letter of the contract<sup>10</sup>. Repeated transactions will guide the formation of expectations about what will happen in the future. Thus, a reputation based on honesty in transacting can increase the commitment of contracting parties.

If relations among contracting parties break down during a negotiation, reciprocity becomes particularly important. Reciprocity is the idea that you get something for giving something. A commitment to this idea by contracting parties engaged in negotiating could serve to even out the level of bargaining power among unequal parties. In Kyrgyzstan, adherence to the idea that a negotiation should yield a contract which benefits both parties could represent an important step towards investment in long-term contractual relationships.

#### 4.4. The Kyrgyzstan legal framework for contracts

An important and complementary part of the privatization strategy in Kyrgyzstan was to adopt comprehensive contract laws within the 1994 Kyrgyzstan Civil Code. The parameters of contract law, in particular, freedom of contract rules, can provide the legal means with which (theoretically) arms-length actors in a market economy can convey their expectations. In Chapter 7 of the CC KR, article 381 outlines the parameters of freedom of contract for transacting parties: a) a contract is a document that confirms the mutual volition, common will, of two or more persons; b) there should be the free will of the partner when concluding the contract; c) the parties of the contract should be free in selecting the type of contract; d) there should be freedom in selecting

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<sup>8</sup> Macaulay, Stewart. (1963). "Non-contractual relations in business: A preliminary study," *American Sociological Review*, 45: 55-69.

<sup>9</sup> Kreps, David. (1982). "Reputation and Imperfect Information," *Journal of Economic Theory*, 27: 253-79.

<sup>10</sup> Atiyah, P.S. (1979). *The Rise and Fall of Freedom of Contract*, Oxford: Clarendon Press.

the terms of contract. There are several limitations to these legal freedoms including commodification, externalities, coercion, asymmetric information imperfections, paternalism, and discrimination.

Contracts that are considered to be unconscionable, were formed under duress, or were formed in bad faith are also not legally sanctioned according to contract law doctrine. These contract formation violations can be linked to issues of bargaining power. Unequal bargaining power can lead to contracts that can not be legally enforced. Several factors are used to determine whether or not the result of a bargaining process is unconscionable. These factors include gross imbalance of bargaining power together with contract terms that overwhelmingly benefit the stronger party, revealing that the weaker party had no meaningful choice, no real alternative, or did not agree to unfair terms.

The concept of good faith appears in the CC KR and refers to the honesty expected of transacting parties when negotiating and performing a contract. When honesty is not present in contract dealings, it is said that one or more of the contracting parties operated in bad faith. Bad faith practices are the following: 1) bad faith in negotiation and formation, 2) bad faith in performance, 3) bad faith in introducing and resolving contract disputes, and 4) bad faith in remedying the dispute <sup>11</sup>. More specifically, examples of bad faith include: evasion of the spirit of the bargain, lack of diligence in its performance, slacking off during performance, wilfully rendering imperfect performance required by the contract, abuse of a party's power to specify terms, and interference with or failure to cooperate in the other party's performance. While these practices could legally invalidate a contract between parties in a value chain, the time and expense of court proceedings creates barriers, and it is a rare case that ends up in the court.

#### **4.5. Enforcements of contracts**

The courts are a nonviable option for enforcing contract disputes within an agricultural value chain in Kyrgyzstan, especially among small farmers and processors. Aside from the high cost of accessing courts, the amounts in dispute are often less than the cost of dispute resolution via the courts. Furthermore, the perishable nature of many agricultural products can lead to an impossibility of performance, sometimes beyond the control of the producer. It is often the case that the fastest and least expensive method for processors in the event of a breach by suppliers is to locate substitute suppliers. If contract enforcement is sought, instead of the going through the legal system contract

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<sup>11</sup> These bad faith practices were adapted from Looney, J. W. and A. Poole (1999) ["Adhesion Contracts, Bad Faith, and Economically Faulty Contracts." *Drake Journal of Agricultural Law* 4(1): 177-195.] and Baarda, J. R. (2002) [*Failed Expectations and Challenges to Unfettered Freedom of Contract in Agriculture*. Second Annual Workshop Economics of Contracts in Agriculture, Annapolis, Maryland.]

partners could agree – already in their contracts – on a neutral third party to decide disputes (arbitration). This job could be fulfilled by extension services.

Contract breaches in the Kyrgyz agricultural sector can be characterized as a series of hold-ups. Stable relationships among parties along the value chain are important for overcoming chronic hold-up problems. Trust between parties based on consistently fulfilled expectations is missing in many contractual relationships within Kyrgyz agricultural value chains. Analysts have identified reputation of transacting parties as an important factor when choosing contracting parties, which could affect the effectiveness of existing contract enforcement procedures, but in Kyrgyz agriculture, where there is little competition, especially among processors, the reputation effect plays less of a role. So the question remains: how to build stable relationships in Kyrgyz agriculture along value chains?

Experience from other transition countries suggests a range of possibilities. Some of the contract innovations adopted by contracting firms include provision of inputs to suppliers by buyers, provision of credit to suppliers by buyers, and assistance with marketing for sellers from input suppliers<sup>12</sup>. These methods, sometimes referred to as “private enforcement procedures”, can have the effect of reducing instances of hold-ups and lead to increased output for both suppliers and processors. A case study of a Slovakian sugar processor and suppliers<sup>13</sup> described how input support and investment programs were instituted for producers who signed a long-term lease with the company. According to the terms of the contract, if the company failed to pay the farmers, the farmers would not be required to pay for their inputs. This self-enforcing contract innovation not only increased sugar beet production, it also induced competing processors to adopt similar contractual arrangements with producers. In light of the evident effectiveness of private enforcement procedures, analysts are arguing that an important part of the agricultural restructuring strategy in post-Soviet states is to develop rules and norms that would reinforce self-enforcing contract procedures.

Some non-court consequences of contract non-fulfilment could include the termination of the contract, and, moreover, the inclusion of the contract partner in blacklists of extension services and credit organisations. On the other side, rewards for loyalty could also be defined in the contracts.

Activities which build trust between farmers and the processor have shown to be a major determinant of contract fulfilment. In order to foster relationships between producers and processors the authors organised monthly meetings the premises of the processing companies in which farmer group leaders and company managers came together. During these meetings mutual commitments were restated, production and

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<sup>12</sup> Gow, Hamish and Johann Swinnen. (2001b). “Enforcing Agribusiness Contracts,” *Transition*, July-August-September, The World Bank/The William Davidson Institute.

<sup>13</sup> Gow, Hamish, Deborah Streeter, and Johan Swinnen. (2000). “How private contract enforcement mechanisms can succeed where public institutions fail: the case of Juhocukor a.s.,” *Agricultural Economics*, Vol. 23, Issue 3, September, pp. 253-265.

processing problems discussed and delivery schedules negotiated. These meetings took place from early spring to the end of the season. They proved to build strong relationships. In contrast, those contract relations in the past, where sellers and buyers did not meet between contract establishment and expected first delivery were weak and lacked mutual commitment. Also a study of the Armenian dairy sector<sup>14</sup> identified stable relationships between producers and processors that were informal and largely based on trust.

#### 4.6. Implications of using the Kyrgyz standard contract form

Standard form contracts are becoming a common method in Kyrgyzstan for establishing commercial terms of agreement among parties in a value chain. Often the relationship that is created when a standard form contract binds a powerful contracting party and a weak contracting party, has been referred to as a “contract of adhesion<sup>15</sup>,” because the choice of contractual terms is limited for at least one of the parties. This type of contractual relationship is not uncommon along an agricultural value chain in Kyrgyzstan.

Typically, contracting parties who use standard form contracts may agree to some terms, but often contract performance begins before a full set of terms are agreed upon. Standard form contracts only reflect freedom of contract that is consistent with the CC KR if the parties actually engage in careful examination of terms, dickering over any terms that are open to negotiation. Often this exercise never occurs. Instead the adhering party will simply accept the standard form contract, without paying much attention to the legalese contained therein.

Agricultural producers, who are generally characterized as having weaker bargaining positions, often accept standard form contracts that restrict their rights while retaining the rights of the processor. For example, a standard form contract could retract the right of the farmer to opt out of the contract, while maintaining that right for the processor, who in monopolistic situations common to contemporary industry structure enjoys the stronger bargaining position. Standard form contracts in agriculture are especially problematic for crop farmers because farmers are forced to bear an inordinate amount or risk in four areas: 1) the risk that crops might not be accepted by the processor is solely the farmers', 2) farmers are subject to on-the-spot price discounts for delivery that do not meet quality standards, 3) the timing for payment to the farmer can be altered indiscriminately by the processor, and 4) the contract can be terminated at

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14 Hakobyan, Artavazd. (Draft April 2004). "Evolving Marketing Channels in Armenia: A Structure-Conduct-Performance Analysis," Paper prepared for poster presentation at the 14th Annual IAMA World Food and Agribusiness Symposium in Montreux, Switzerland, June 12 - 15, 2004.

15 Kessler, F. (1943). "Contracts of Adhesion - Some Thoughts about Freedom of Contract." Columbia Law Review 43: 629-642.

the will of the processor for reasons unrelated to production<sup>16</sup>. Farmers sometimes knowingly put themselves in disadvantaged business positions, because they feel they do not have a choice. Upon further consideration, it seems undeniable that in some cases the standard form contract must represent only one part of the business relationship. In other words, the terms of the contract go beyond what is contained in writing.

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<sup>16</sup> Hamilton, N. (1994). "Why Own the Farm if You Can Own the Farmer (and the Crop)? Contract Production and Intellectual Property Production of Grain Crops." *Nebraska Law Review* 73(48).

## 5. Interventions

### 5.1. Where to start value chain development?

The Value Chain approach is complicated and requires involvement and coordination of different VC supporters. Services should not be looked upon as a category in itself, but they should be closely linked to the needs of actors within the value chain.

In the past we have often seen that certain services for farmers and enterprises are pushed although income from sales have not yet been generated by VC actors. We have also seen that VC supporters often hope that ideas elaborated with, and approved by, all VC actors will simply be adopted and implemented by the actors, but that is not so. The unwillingness of VC actors to make real contributions could lie in mutual mistrust. Will another VC actor not get more benefits from a certain activity?

Building trust therefore is the number-one activity of VC supporters. This of course takes time and most donor-funded development projects usually have limited time and defined indicators for their yearly work plan. Change agents need to be selected and trained in order to facilitate trust among VC actors. It should be recognized that development projects need to have enough time (i) to put a real success story together with their change agents and (ii) to spread success stories and motivate less innovative people, who might be capable and interested in copying these examples. This applies both to changes intended at the level of VC actors and at the level of VC supporters.

In Kyrgyzstan, especially in rural areas, lack of information is a big problem. Parallel to that, the level of mistrust in post-communist societies is very high, whereas state and other structures are still weak at enforcing laws and contracts. In this situation, trust building between the different subjects of society is one of the most effective means of encouraging economic activity. Trust is built by enabling free flow of information. For example, monthly working groups with all actors of a particular value chain brings people with the same objectives together. Personal relations are built, information is exchanged and joint activities planned. The participants undergo a mutual learning process, which leads to their empowerment. This, in turn, can lead to activities that go far beyond the original project objectives. Networking among all stakeholders of a value chain is therefore an important task of the project. The level of shared information between stakeholders is sometimes amazingly low. However, networking should not be limited to an exchange of information, but also should lead to common action.

Of special importance is the integration of credit institutions into all economic support activities. The example of Kyrgyzstan shows clearly that the existence of credit lines is not sufficient to make credit accessible to farmers, rural enterprises and trading companies. All actors have to be in a position to successfully work with credit and the links between credit institutions and their clients must be supported.

## 5.2. The role of supporting organisations (private service providers, donor projects and NGO) in Value Chain Development

The participants of Community of Practitioners on Value Chains in Rural Development on the Internet organised by SDC discussed the roles of supporting organisations and concluded that the role of donor organisation is to:

- Support sector, sub-sector and value chain analysis as well as Research and Development efforts
- Support small farmers in becoming eligible partners for private value chains; facilitate small farmers' linkages to markets; employ entrepreneurs and marketing experts where entrepreneurship and commercial knowledge is needed
- Improve market access for local small scale farmers and develop their capacities
- Support small and medium enterprises to withstand increasing competition from imported products at local markets and/or access regional or international markets
- Provide technical assistance to the businesses at the micro level (value chain actors), to institutions providing business-oriented services at the meso level (value chain supporters) and to government in changing framework conditions at the macro level
- Facilitate Public-Private Partnership with the aim of using public money for public interest.

In Kyrgyzstan, the ICCO and Helvetas project Local Market Development plays a pure facilitation role and does not provide any services. The project initiates the provision of demanded services by local service providers such as the TES Centre. The project's facilitation role stands for keeping its interventions to a minimum and handing over as much responsibility as possible to local partners. Where vital functions are not assumed by any partner, the project takes over these functions, but withdraws as soon as a private service provider or another stakeholder takes over.

In Southern Kyrgyzstan the project organizes working groups for different value chains (pickled cucumber, tomato paste, milk processing) in which all actors (farmer group leaders, processor, traders) and supporting organizations (extension service, development NGO, consulting and marketing companies) come together. The groups have regular monthly meetings at the processing enterprise where all parties give details about past activities and discuss existing difficulties (e.g. lack of agricultural inputs or lack of covers for twist-off jars). Such meetings play an important role in building trustful relationship among partners.



Picture 1: Meeting of the working group

### 5.3. Internal versus external market development in Kyrgyzstan

Kyrgyzstan is an agricultural country with a small internal demand and depends, therefore, on export markets for its food production industry. The establishment of reliable sales channels is one of the important conditions for bringing growth opportunities to rural areas. Most agriprocessing companies have no constant sales channels and are far from their potential markets (Distance to Russia minimum 2,000 km and to Northern Kazakhstan around 1,500 km). The analysis of external markets done by the Helvetas project in spring 2004 showed that Kyrgyz farmers and processors have a good chance to export their products to Russia and Kazakhstan where Kyrgyz products have a share of 3 to 8% of total imported products. Nevertheless, there are some barriers for expansion into those markets:

1. Delivery of products by trucks to potential markets is very expensive (~ 1,200 USD per ton). Delivery of products by railway substantially reduces transportation costs (~ 500 USD per ton).
2. Long distance and high competition with other countries limit the range of exported products. It is possible to deliver only products having high added value

(e.g. dried carrot, paprika, fennel and basil which have prices of around 2 USD per kg). Low value products (e.g. tomato paste at about 0.7 USD per kg) entail high transportation costs which reduce their competitiveness.

3. Disconnected small producers and processors are not able to fulfil the requirements of Russian and Kazakh companies: regular delivery (at least monthly) in big quantities (at least a wagon or container). However, a Kyrgyz agriprocessing company only produces around 500 tons of processed products yearly (except tomato paste).
4. It is possible to join products of different processors but the quality will probably not be homogenous.
5. Kyrgyzstan faces a lack trading companies specialised in the export of fresh and processed agricultural products. A trading business experiences a completely different set of risks as opposed to producers and processors: financial risks, cash flow, operational costs for customs, warehouses, transportation etc.);
6. Lack of working capital in existing trading companies and high interest rates for trade in credit institutions;
7. Lack of trustful relationships with Russian and Kazakh trading companies and as a consequence, unattractive cooperation schemes for Kyrgyz processors.

To organize reliable sales channels is therefore one of the first conditions for bringing growth opportunities to rural regions. Every additional quantity of exported agricultural goods creates jobs and income in rural areas. Export promotion is, therefore, an effective tool for supporting the rural poor.

Overcoming existing problems takes time. Therefore it is also advisable to investigate current opportunities of the local market. A marketing survey among 1,200 households in Bishkek (urban market with relatively high purchasing power) on consumer behaviour and attitudes towards Kyrgyz products was conducted in 2003 by the Local Market Development project. The results of the study looked quite promising:

- 83% of Bishkek households (191,000) buy processed fruit and vegetable products such as juices, marinades, ketchup, sauces, salads and jams.
- The size of the Bishkek market is estimated at around one billion soms (~ 25 million USD) per year.
- The actual share of Kyrgyz products in the domestic market is very low (~ 0.5 million USD).
- Kyrgyz consumers would prefer to buy Kyrgyz products because they believe these products are natural and without preservatives. At the same time, they complain about lack of advertisement of Kyrgyz processing companies and their poor packaging and label design.
- An assessment of criteria of choice of Kyrgyz consumers showed taste of local products ranks first (4.9 out of 5 scores); second ranks ecological purity (4.8);

product appearance (4.6) is on position three followed by the price (4.3). Lowest scores were given to the consideration if the product is sold under an internationally known brand name (3.5). Kyrgyz consumers are still taste- and not brand-oriented. This consumer behavior gives a good potential for local producers and processors.

Based on the results of the study, the project initiated the development of a new brand for fruit and vegetable processed products (jams, pickled cucumbers and tomatoes, juices and tomato paste). Finally, the new brand “Taste of the Sun” was introduced to the local market in autumn 2004. In the last months of 2004 four processing companies produced products for an amount of around 8 million soms (~ 200,000 USD). In 2005, already seven companies started to produce under the brand products for 19 million soms (~ 450,000 USD). The actual order from the Kyrgyz trading company that sells these products inside the country is much higher. The demand cannot be met due to lack of working capital and underdeveloped relations with farmers.

## 5.4. Training for producers

Successful vertical contracting typically includes farm assistance programs for suppliers and extension services. In mature stages of contracting, farmer training is often funded and organised by the processors. In early stages, the public sector and non-government development organisations step in to provide farmer training which is often funded by donor agencies.

This section presents two models of third-party funded extension and discusses how farmer training could become self-financing.

### 5.4.1. Model 1: The TES Model – training and coaching farmers

The TES Centre in Osh (Kyrgyzstan) is a Centre of Excellence with a limited number of qualified specialists in group development as well as livestock and crop production and a large number of freelance field advisors. According to the raw material needs of a specific processor and his readiness to conclude contracts satisfying the standards outlined in Chapter 4.2, the TES Centre starts organising village meetings in early winter. These meetings are as inclusive as they can be with announcements via the local government and other places. Farmers interested in contract farming are invited to a first group formation meeting. TES works with groups of farmers who learn together, commit themselves to follow the growing protocol, accept mutual liability for each other's loan repayment and deliver to the processor jointly. Farmers who are on the black list of a processor or a bank are excluded. During the group formation process the number of participating farmers usually sharply declines until a stable group starts to form.

The training program starts with the Winter School. It is interactive and has three parts: 1) group development, 2) technology and 3) financial planning:

Part	Subjects	Length
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Group development	Introduction and discussion of the constitution	1 day
	Constitution, contributions, record-keeping	1 day
	Leadership, participation	1 day
Technology	Basics of cropping / livestock	1 day
	Specific technology of the crop / livestock enterprise	1 day
	IPM for the specific crop enterprise	1 day
	Writing up the individual growing protocol	1 day
Financial Planning	Cash flow analysis, mutual liability	1 day
	Credit application	1 day

From each group (consisting of 5 to 15 members) a leader is elected who receives a contract from TES to act as field advisor during the entire cropping season. He/she receives additional training at TES Centre every month or more often (technology and methodology) and is expected to carry out practical demonstrations at the group's learning field as well as to monitor the crop of each group member, to organise joint input purchases, work out the delivery schedule with the processor, and organise collection or delivery of the group's produce. The practical demonstrations are about operations which have been discussed at the Centre, for example (in the case of tomatoes): Seedling production, field establishment, scouting for pests, predator release, working out fertiliser and chemical amounts, anti-erosion measures in irrigation. The field advisor signs the responsibility for all farmers to apply the agreed fertilising and spraying program. TES agronomists assess all farmer fields three times during the growing season, and according to these results a gratuity payment to the field advisor is computed.

This approach is somewhat top-down and result-oriented. Its advantage is that it comprises not only training, but also the delivery of the produce to the processor. The approach assumes that the advisory service knows the answers (or can easily find the answers) and that farmers learn by being required to implement the growing protocol step by step. This model works well where the distance between the training centre and villages is short, because field advisors need quite substantial support from the centre to carry out all of the technological innovation included in the growing protocol.

#### ***5.4.2. Model 2: The Farmer Field School Model – farmers become their own trainers***

In 2005 the Farmer Field School (FFS) approach was used for the first time to integrate farmers into fresh vegetable value chains with the processor Agroplast in Kyzyl Kiya. The FFS was established in proximity to the processor and with access to a learning field. Eight farmer groups, which have been established by non-governmental development organisations in recent years, are involved in this extension program. Each group selects two representatives who function as trainers for the others. Five master trainers work with these ten selected farmers. During the entire growing season all trainers and master trainers come together once a week for a two day seminar. During this time participants mainly learn how to observe the crop in the learning field of the

FFS recording crop development, abnormalities, pests, diseases and particularly predators. Observations are discussed and responses developed, implemented and jointly evaluated. In order to break up long group meetings, special attention is granted to make sessions enjoyable with the help of ice-breakers and energisers.



Picture 2: Farmer Field School Training

During the other days of the week the master trainers visit the groups in their villages and assist in the meetings between trainers and group members. Where required, they give some input on topics requested by the group. Typically, the group meets once per week to work together on the group learning field.

This approach is rather process-oriented and recognises that adults learn best from experimenting. It assumes that most answers can be found within the group, as farmers already have substantial knowledge from own experience. The approach also puts special emphasis on the ability of a crop to recover itself from pests and diseases by favouring natural predators and resistances in the fields. Whereas the FFS approach improves people's problem solving abilities, the group learning fields have generally not been in a better condition than usual farmer fields in terms of pest and disease pressure. In addition, time commitment is substantial in this approach, and some farmers cannot afford to be away from their farms and families for two days every week.

### 5.4.3. *Creating self-sustaining farmer training programs*

Donor support for Central Asia will not disappear in the years to come. However, donor agencies will generally not fund training for one and the same group over consecutive years, although it is evident that no training program will make out of neophyte smallholders successful agricultural entrepreneurs in only a couple of years. Therefore, farmer training services have to become self-funding.

As farmer training should lead to higher crop quality and safety, it would be mainly in the interest of the processor to fund such training. Sugar factories for example have their own extension services in countries with highly developed value chains.

In this brochure we propose the following arrangement to finance extension in a sustainable way:

1. Agricultural extension is contract-based: while the farmer signs to adhere to the agreed technology, the extension service in turn assures an increase in the yield (benchmark is the usual yield in the area over a number of years).
2. The processor deducts a percentage from the delivered surplus which is above the defined benchmark yield.
3. This money is used to pay for the contract between the farmer and the extension service.

In this way the extension service has an incentive to make sure that yields are increased and contracts fulfilled. However, this arrangement will only work, if the processor pays a price high enough to stop farmers from selling their surplus yield on the open market.

## 5.5. **Improving quality and safety of produce**

Training for producers must not only help to increase yields, but also improve quality and safety of the product, if the processor's interest in training programs should be kept up.

Quality mainly means processing features, and therefore particular crop varieties, fertilising and pest control play an important role. The examples are manifold: Some tomato varieties have genetically more dry matter, which makes them more suitable for paste production. Too much nitrogen fertiliser reduces the taste and may lead to toxic nitrates in the fruit, while potassium fertiliser increases fruit acids and thus improves taste. Caterpillars in tomatoes are common in Central Asia, but tomato concentrate from damaged tomatoes will not be able to be exported to Europe.

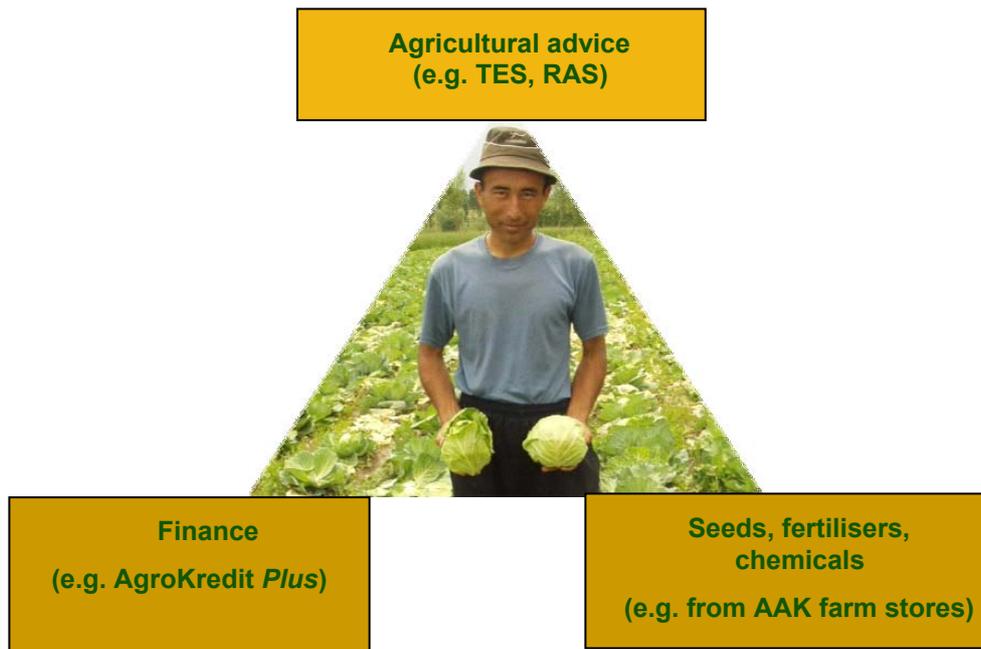
In a meeting of all parties involved in a milk value chain hosted by an Osh dairy plant in spring 2005 the issue of farmers diluting their milk with water was discussed. The dairy plant technologist complained that diluted milk was more difficult to process. All farmers present in that meeting admitted that they added water to the milk they delivered, because everybody did it and the price set by the plant was correspondingly lower. They would only stop putting water into the milk, if they formed a group of farmers who trusted each other and in which every member committed himself/herself to keeping the milk pure. For this, they said, special awareness creation and training would be necessary.

Also in poorer countries more consumers are becoming increasingly concerned about safety issues connected with fruit, vegetables, meat and milk. Supermarket chains, especially, have a dual objective – one quantitative (to reduce costs and increase volumes procured) and one qualitative (to increase quality and safety of the product). To this end, brand names based on a private standard for FFV safety have been developed to which suppliers have to adhere.

In order to focus farmer training on quality and safety issues, it is essential to harmonise the training contents and extension messages with the processor and the retailer. They should both have a chance to say what variety the farmers should grow and which chemicals he/she should use. The experience in Kyrgyzstan shows that processors, until now, have no understanding of production issues. They tend to blame the farmer for having grown the wrong variety if something goes awry, but are unable to say what variety the farmer should have used. Here work still needs to be done.

## **5.6. Combining advice, credit and inputs**

Extension services alone cannot help increase yield and quality. A support system must be in place, where advice, input supply and financing works hand-in-hand.



The systems described below have been implemented in Southern Kyrgyzstan in 2005. They are beneficial for all parties involved and are effective if actors mutually trust each other. Two approaches are possible. In the first system the advisory service selects the provider of inputs. This should be tender-based. The second system is voucher-based, and the farmer him/herself selects the provider. This approach is obligatory if the advisory service becomes involved in trading with selected inputs – a practice understandable in Kyrgyzstan, where farm stores are not yet able to supply in time what extensionists recommend (e.g. certain fertilisers or bio-insecticides). Both approaches work with a micro credit institution which is farmer focused, ready to disburse small loans (100-200 USD per farmer), prepared to accept group collateral and willing to run a system in which the farmer receives inputs instead of cash.

Approach 1:

1. The advisory service assesses the group and recommends it to the micro credit institution.
2. The lending organisation concludes individual loan agreements with the members of the group for input items based on the growing protocol which was developed jointly by the advisory service and the farmer group.
3. The advisory service is the farmer's purchasing agent and selects the provider of the input included in the loan agreement.
4. The farm store delivers the input directly to the farmer group and receives signatures of receipt from each group member.
5. The farm store is now paid directly by the micro credit institution.

6. Farmers pay interest monthly and the principle after harvest. The group leader makes all payments straight to the office of the micro credit institution.

Approach 2:

1. The farmer group selects a provider and negotiates delivery terms. The provider has to be member of the farm stores apex organisation (Association of Agribusinessmen in Kyrgyzstan – AAK). The group leader then sends this information to the micro credit institution.
2. A couple of days before delivery, the lending organisation transfers the money for the input in question to the AAK account.
3. AAK gives its o.k. to the respective farm store which then does the delivery to the farmer group.
4. The farmer group confirms delivery to the lending organisation. It passes the information on to AAK which transfers the money into the farm store's bank account.

Farmers' feedback in 2005 is very positive. Growers especially appreciate that they receive all inputs just in time. They say: "We did not waste time searching for chemicals in Uzbekistan", and they value the fact that they receive legally registered and controlled chemicals. Another point is that often farmers find it difficult to use cash credit for the purpose for which it was disbursed: to buy agricultural inputs. Repeatedly, loans are used to pay back other debts. When we spoke to farmers we heard frequently that they prefer to receive credit in kind.

## 5.7. The role of study tours

To give all parties in the value chain (input suppliers, farmers, procurement departments, processors, retailers) an insight into more developed vertical co-ordination, visits are deemed to be an appropriate tool. On the other hand, numerous visits have been carried out in the past, from Central Asia to places as far away as Israel, Switzerland and Japan, but the impact has often been disappointing.

Here are some ideas to keep in mind when thinking about launching study tours:

1. **For whom?** To pursue the idea of value chains, it would be beneficial to visit other places in mixed groups composed of delegates from all links in the value chain.
2. **How?** In some cases internships can be more useful than superficial study tours where the tourist element should not be underestimated. Internship means to work for a while (at least two weeks) side-to-side with a manager of a company involved in a value chain of the host country.
3. **What about experience dissemination?** The tour should be centred around a certain aspect to be studied (e.g. quality certification, just-in-time delivery,

value chain of leafy vegetables) and participants should do presentations of their findings to the different segments of a value chain in their home country.

4. **Where to go?** To get a feeling of what will happen in the home town in a few years ahead, study tours should go primarily to areas which have just experienced the development step to be expected at home. Since much innovation comes to Central Asia from the North (in terms of food processing, branding, retailing), study tours should go North: from Osh to Bishkek, from Bishkek to Almaty, from Almaty to Novosibirsk. On the other hand, places like South East Asia (Thailand) should be of interest, as here supermarkets have started ten years ago to invade the markets and South Asia (India) which is now experiencing a wave of supermarket growth.

## 5.8. Poverty Alleviation and the Value Chain Approach

A key concern is that the process of vertical coordination will exclude a large share of farmers, and in particular small farmers. There are three important reasons for this. First, transaction costs favour larger farms in supply chains, since it is easier for companies to contract with a few large farms than with many small ones. Second, when some amount of investment is needed in order to contract with or supply to the company, small farms are often more constrained in their financial means for making necessary investments. Third, small farms typically require more assistance from the company per unit of output. Organising farmers into (in)formal groups is a response to the above mentioned constraints.

The value chain approach works only with those farmers who produce surplus, thus resource-poor farmers who produce products for own consumption (food security) are automatically eliminated from the chain. Yet, farmers could either rent additional land and begin production of cash crops. Or they could substitute subsistence crops for cash crops. It is important here to mention here that production of wheat and potato has been unprofitable in Kyrgyzstan for the past decade because of overproduction.

Another constraint is the distance of remote, marginalized farmers to the processor. Usually the majority of vegetables produced has low value added and their transportation for a distance above 25 km substantially increases the cost premium. Only gherkins used to be transported over longer distances. However, it was found that it is profitable for processing companies to extend their operation from 3 to 6-8 months a year (processing different vegetables and fruits). In this case they would move away from cheap mass production to more specialised processing enabling to pay higher transportation costs for raw material. With the currently short operational period fixed costs are very high; on the other hand demand for a more diverse range of processed food items is growing.

Poor and marginalized people are not the engine of VC development, but they may be if they acquire an entrepreneurial attitude. Donors should concentrate their efforts for VC development on the most promising change agents who have a business attitude and experience: entrepreneurs, business companies and associations.

Kyrgyzstan, where small farms make up nearly the entire agricultural sector, is characterized by significant over-employment in agriculture from a long term development perspective. Significant productivity increases and growth can come from integration of the farm sector into modern supply chains and the associated inflows of inputs, technology, capital and management. However, these beneficial developments are unlikely to solve all structural problems in the rural areas. Therefore, it is unrealistic to assume that in the country all households currently employed or relying on agriculture will be able to be included in such a development. For a broader pro-poor development process, ultimately a more comprehensive rural development is needed with the creation of off-farm employment. The value chain development model can be only one part of such a strategy.

## 5.9. Résumé: What should be done

**Working with all actors:** involve all actors along the value chain in providing the services needed to overcome obstacles, encourage contract fulfilment and make sure that all parties receive fair compensation for their efforts.

**Setting up a supporting framework:** facilitation of interactions among actors and supporters through provision of information, training, extension and management advice.

**Coordination of the value chain:** One of the supporting organisations should act as coordinator to tailor technical support and organise regular working group meetings. It is an illusion to think that VC actors would initiate cooperation because the existing processing businesses in Kyrgyzstan are too small and have too few resources to develop a value chain; however, many are very interested in developing their own businesses. A supporting organisation can also better act as a referee between VC actors.

**Working with local service providers:** technical and organizational support to farmer groups, processing and trading companies could be mandated to local service providers using public funds

**Dialogue between actors and supporters** on lessons learnt with the aim of disseminating and capitalizing their experience.

## 6. Case Studies from Kyrgyzstan

### 6.1. Malt barley: A failure in value chain development

The plan was promising. More high quality beer is consumed in Kyrgyzstan and its neighbour Kazakhstan as well as in Western China. Breweries in Kyrgyzstan producing superior beer get all their malt shipped in all the way from Czech Republic and German which is 7000 km on railway. After a positive feasibility study a large German

malt producer intended to produce malt in Bishkek/Kyrgyzstan. For the factory a plot of land was bought and a loan negotiated. The factory could have been built within less than a year, but first the raw material base had to be secured: malt barley.

Malt barley is different from feed barley. It requires large grains with little protein. On the one hand special varieties are needed and on the other hand a growing technology which achieves good yields with little nitrogen fertiliser. The company worked together with the Kyrgyz Crop Research Institute and found that Kyrgyz barley varieties do not meet these requirements. Therefore two German varieties were shipped into the country: 40 t of certified German seed. For this the breeders had to be convinced that the varieties would not be illegally reproduced and that later royalties would be paid.

In spring 2000 the seed arrived. The Agrofinance Corporation (KAFC) selected some of their clients to whom growing contracts were proposed. KAFC said they would look favourably at business plans for malt barley. The Kyrgyz rural advisory service (RADS) agreed to produce extension material and coach malt barley farmers. A storage facility was rented and a laboratory to check grain moisture, size and protein was contracted. With ten larger farms in Chui and Issyk Kul contracts were concluded which obliged farmers to deliver the crop to the company and specified quality as well as price which was world market price in US Dollars (fob Hamburg).

What went wrong in 2000? It took farmers more than three months to receive KAFC loans so that many sowed too late when temperatures were already too high. Generally, it was found that the Chui valley was too hot for malt barley and good results were only achieved in areas above 1600 m: Issyk Kul and Suusamyr. But in these areas farmers delivered all or part of their crop as seed (!) to neighbours at a considerably higher price. Apparently the genetics of the German varieties were more appreciated than any barley seed on the Kyrgyz market. Several farmers attempted to deliver a crop that exceed the moisture limits of the contract and was too moist to be stored. Therefore delivered quantities were just sufficient to serve as seed for the coming year excluding those farmers who breached their contract.

What went wrong in 2001? To bind farmers more to the company it gave half the seed as a credit in kind, which farmers would not need to repay in autumn if they delivered more than 2.5 t/ha. Some 60 growing and delivery contracts were concluded with mostly small farms. But in this year barley prices shot up to more than 50% over the world market price, which was a result of the pork price cycle in Kyrgyzstan, and virtually no farmer delivered his/her crop in autumn. As a result the company decided to discontinue its investment project in Kyrgyzstan.

Lessons learnt: The market in Kyrgyzstan is small with little cross-border exchange. Therefore price fluctuations are sometimes extreme. In this example the actual price was 50% over the contract price, and since the company just started its project, trust had not yet been built up and farmers may not have believed in the company's future so that they were not willing to invest into good long-term relations. In addition, the linkage between farmers and the company was weak, and except 1-2 monitoring visits per season not much was done to increase bonds. The advisory service RADS did not help here either. Its advisors even did not understand the requirements of malting barley and did not contribute to yield and quality increase. This example also shows how

difficult it is to introduce a new agricultural technology in Kyrgyzstan, where farmers are not used to apply basal fertilisers, have limited control over irrigation water and altogether not the tradition of “managing” their crop. Should the project have concentrated on few large farms or on a number of small farms in one area? It was found that large and collective farms respect contractual agreements less, whereas small farms often cannot produce sufficiently high yields and quality due to lack of finance and machinery as well as weak negotiation power for irrigation water. For this reason other similar foreign investment projects (e.g. potato chips) started to grow the raw material themselves before switching to purchase the desired quality from farmers.

## **6.2. Pickled cucumbers: A success in value chain development**

The situation was bizarre: Processors in Osh complained that they are working at a fraction of their capacities due to lack of raw material, and farmers told us they had difficulties selling their produce.

The Local Market Development (LMD) Project financed by ICCO and Helvetas decided to work with the two processors Rakhmonberdy in Osh and Agroplast in Kyzyl Kiya. They were chosen as their managers expressed a genuine interest in building up long-term ties with their suppliers. Other processors had shown in previous years that they prefer to gamble and to either purchase at the lowest possible price or if market prices are too high not to start production at all. Both Rakhmonberdy and Agroplast process virtually everything from cucumbers and tomatoes to berries and fruits.

On the supply side the small family business of Rakhmonberdy competes with the significant fresh market in Osh and other, much larger processing companies such as Eastman. This calls for a more stable relationship with suppliers. Agroplast is the largest buyer of fresh produce in Kyzyl Kiya and in the position of dictating the price to a certain degree. However, the prices Agroplast paid to farmers over the past years have been stable and slightly higher than in Osh. The price of 1.2 som per kg of tomatoes was also paid when market prices were down to 0.5 som in 2003.

For more effective marketing Rakhmonberdy and Agroplast decided this year to become fee-paying members of the Association of Fruit and Vegetable Processors in Kyrgyzstan. This enables them to use a bar code on their jars, which is indispensable for export and getting into the Bishkek supermarkets. It also allows them to use the renowned marketing brand “Taste of the Sun” for their products. In addition, the membership helped the companies to establish contracts with a large Kyrgyz trading firm (Numen Service) for about 270,000 USD (Agroplast) and 146,000 USD (Rakhmonberdy).

In March long before cucumbers are sown the Project conducted a planning workshop during which a working group was established along each chain. Actors of a chain were the farmer group leaders in nearby villages plus the processor’s top management. We find little delegation in the management of local processing companies, and therefore it was crucial to have the main decision-makers of a company join the regular working group meetings. Supporters were the LMD Project, the extension services

(TES, RAS) and the micro-credit organisation (AgroKredit Plus). Groups met monthly, and actors as well as supporters discussed past challenges and forecasted activities for the next month.

LMD Project came up with a standard contract form including fixed prices for different qualities and description of transportation issues. Rakhmonberdy accepted this form, whereas Agroplast used its own form without mentioning prices. During the season interviewed farmers assumed that the company would pay the same prices as in previous years, and in fact, Agroplast did. Rakhmonberdy made contracts with five farmer groups (60 farmers) for 28 tons of cucumbers and Agroplast with 26 farmers for 37 tons of cucumbers.

To foster links between farmers and processor, the extension service TES took Rakhmonberdy into the villages to meet the farmer groups and look at their production. During the working group meetings then the delivery schedule was discussed and decided. Following this schedule, Rakhmonberdy collected cucumbers every second day from the leaders of the farmer groups. At the end of the season both Rakhmonberdy and Agroplast had purchased nearly one-and-a-half times the amount of cucumbers indicated in the delivery contracts, although at the start of the delivery season the prices on the fresh market was considerably higher.



Picture 3: Manager of the company with products

What are the reasons for this success? First, the regular working group meetings at the processor's increased mutual trust and commitment. Rakhmonberdy and Agroplast are successful businesses and farmers believe in their future and therefore wish to establish good relations. Both processors show that they cut links to those farmers who do not fulfil their contracts. Rakhmonberdy preferred group contracts in order to deal with the farmer group leaders only; a challenge in future is to increase commitment of all farmer group members who at present are not all well informed about the contract content and the working group discussions. Leaders told us: "Not all members feel responsible for contract fulfilment and I can't force them to deliver." Second, during the season both processors gave minuscule loans (money, fertiliser) to the farmers showing their interest in building good relations. Farmers appreciated this. It is important to emphasize that the major lending was done by a professional rural micro-credit agency, which has its own procedures allowing for efficient operations and high repayment. Thirdly, farmers grew a hybrid variety specially bred for pickling. Prices on the fresh market for this variety are slightly lower. On the other hand yields are higher, and this variety is more appreciated by processors.

Rakhmonberdy said at the end of the season: "This year helped me to come to know my suppliers better, and I am very interested in improving these relations because for me it is easier to purchase from one area only." Farmer group leaders said: "Last year we had various contracts, but we did not follow them. This was a shame for us. This year we sold according to contract to Rakhmonberdy irrespective of the price." "If you send your cucumbers to the market you get small amounts of money every day. At Agroplast we are paid once a week, so that we get a large amount, which is not spent immediately. Now when our children start school we all have our pockets full of money."