AN ASSESSMENT OF THE IMPACTS OF THE GLOBAL FINANCIAL AND ECONOMIC CRISIS ON THE AGRO-FOOD SECTOR OF KYRGYZSTAN

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In mid-2009 the Food and Agriculture Organization of the United Nations (FAO) commissioned some urgent research aimed at a snapshot assessment of the impacts of the global financial and economic crisis on the agro-food sector of Central and Eastern European and Central Asian countries. The objective was to propose policy options which can be applied by the FAO and other public authorities to lessen the undesirable effects of the current or future crises in the agro-food sector. This paper reports the results of the research conducted in Kyrgyzstan on three agricultural sub sectors: wheat, sunflower and dairy. About 70 in-depth interviews were conducted with major stakeholders such as farmers, traders, processors, banks and government officials in different regions of the country. The crisis had an impact on Kyrgyz agro-food sector value chains, though different stakeholders responded differently. Agricultural producers and processors were affected by the crisis, and farmers were affected more than other stakeholders. By contrast, the impact on the banking sector vis-à-vis agriculture was quite minor: a small increase the risk premium on credit. The Government has been making efforts to mitigate the consequences of the crisis, support local producers, and especially farmers growing wheat, but these have been largely ineffective.

Key words: Kyrgyz Republic, financial and economic crisis, agro-food sector, wheat, sunflower, dairy

JEL classification: Q11

Introduction

Among developing regions, Eastern Europe and Central Asia has been hit hardest by the global financial and economic crisis. Growth fell from 7.6% in 2007 to 4.7% in 2008, and was projected to be -5.6% in 2009 (World Bank, 2009a), driven by a collapse in capital inflows, a sharp deterioration in terms of trade, and contraction in both domestic and external demand. The robust domestic demand that supported growth throughout 2007 and through the first three quarters of 2008 began to wane at the height of the crisis in September 2008. High levels of foreign currency denominated private sector and household debt, rising unemployment and broadening recession in trade partner countries contributed to dramatic declines in GDP in several countries in the fourth quarter of 2008.

In recent decades, the agro-food sector has become not only more globalised through international trade but also more integrated into the modern financial system (Baker, 2007). Consequently it is more subject to the exogenous fluctuations originating in the macroeconomy. In mid-2009 the Food and Agriculture Organization of the United Nations (FAO) commissioned some urgent research in four representative countries aimed at assessing the impacts of the global financial and economic crisis on the agro-food sector of Central and Eastern European and Central Asian countries. The objective was to propose policy options which can be applied by the FAO and other public authorities to lessen the undesirable effects of the current or future crises in the agro-food sector.

This paper reports the results of the research conducted in Kyrgyzstan. As a result of good economic growth up to 7%, GDP per capita increased from $475 in 2005 to $950 in 2008, inflation remained low and real incomes rose on average by 5% each year in that period (Pomfret, 2009). The crisis has reversed economic growth with a predicted drop in growth to 0.9% in 2009, rising to just 2.9% in 2010 (UN, 2009). It is especially seen in the decrease in income from remittances, which still provide 2.9% in 2010 (UN, 2009). It is especially seen in the decrease in income from remittances, which still provide

With 30% of GDP (2008), agriculture is the largest economic sector in Kyrgyzstan. It is critical not only to the country economic growth but to its employment as well. To Kyrgyzstan, agriculture is shock absorber for the entire economy. During crises, as income drops, demand for food products does not decrease proportionately (demand elasticity is less than one). People will sacrifice other goods to make sure they can buy enough food...
(Regmi, 2001). Even so, the crisis affected the agro-food sector in Kyrgyzstan earlier than other sectors. Exports of agricultural produce have declined following the decrease in demand in Kazakhstan, a neighbouring country and the biggest market for agricultural products from Kyrgyzstan. The economic downturn was also compounded by other factors, such as energy deficiency, drought and extremely cold winters in 2007 and 2008. In 2008, the precipitation in the western and southern parts of the country was twice less than average (Robinson, 2008).

Thus in trying to assess the impacts of the global financial and economic crisis on agro-food sectors in Kyrgyzstan, we are confronted with two sets of questions. Firstly, we face the question of identifying correlation that goes from “causes of the crises” to “effects of the crises”. When a farmer has a hard time selling his/her wheat, is it because of the crisis, or just the effect of too much supply due to weather conditions? It could be both. Secondly, the crisis can have different effects in the different agro-food sectors. Thus by focusing on the wheat, sunflower and milk sectors this study includes important examples of both the crop and the livestock supply chains.

Methodology

Because the time to complete this report was relatively short, and there were still very limited data available to assess the impacts of the financial and economic crisis on the agro-food sector in Kyrgyzstan, the research was mainly based on qualitative structured interviews conducted with the stakeholders backed up by published data. The major objective of the research was to provide a rapid assessment how major agricultural sub sectors of Kyrgyzstan have reacted to the crisis and what policy measures Government needed to take to address the issues of their recovery. The study commenced in August 2009 and the preparatory stage took several weeks, during which RDF research experts have reviewed the literature about the studied agricultural sub sectors in order to identify information such as the areas of crop cultivation and features of livestock grazing. The interview questions were formulated in consultation with the FAO Regional Office for Europe and Central Asia and focused on the effects of the economic downturn, indirect or direct credit constraints, trade and trade credit impacts on production and consumption. The questions were translated from English into Kyrgyz and Russian languages and the interviews were conducted between 10 August and 25 September 2009.

The rationale for the selection of the three subsectors is as follows. All four country case studies included the wheat sub-sector owing to its importance in international trade. The choice of other sub-sectors was based on local importance, but co-ordinated across countries to maximise the number of sectors studied. Thus, in Kyrgyzstan the wheat sub sector is essential to people and the economy of the country – in view of its weight in GDP, its magnitude in cereals production, and most importantly, its role in food security. Wheat makes up a significant part in agricultural output (crop production accounted for 58% of the total agricultural output in 2008 and, at 395,800 ha, wheat occupied 42% of arable land. The total output in that year was 835,200 tonnes). Flour and flour goods play a crucial role in food security of the population of Kyrgyzstan, accounting for more than 36% of household expenses for food. In view of the fact that wheat production in Central Asia is growing and in the next decade former Soviet Union countries will become the major suppliers of wheat to the world markets (Liefert et al., 2010), it is important to understand dynamics of this sub sector and its resilience to the financial market fluctuations.

Sunflower was selected for this study as a crop produced at the small household level (mostly on farms with less than 5 ha of arable land), with some surplus sold at the markets, and with a great potential for expansion and for use as an addition to fodder for livestock, as well as for cooking oil substituting imports. At 58,200 ha in 2008, the area under sunflower is in seventh place in the range of the country’s sown areas, and the total output was 55,300 tonnes. With the decrease of cotton growing, areas under sunflower is being increased. The milk sub sector was the subsector most affected by the crisis among selected supply chains because of its dependency on export markets in Russia and Kazakhstan. Raw milk is an important element of Kyrgyz diet, with almost 90% of households reporting to consume it. Data shows that consumption of raw milk in the country is more than 216 litres a year per capita.

Interviewees were drawn from all parts of the supply chain including producers (small and big), input suppliers, processors, integrators, traders, retailers, banks and government officials. The selection of interviewees included the clustering principles. Input suppliers, farmers, processors, traders and retailers were selected according to the size (i.e. scale) of owned businesses, land plot, number of farming households and size of enterprises. For instance, the research included small farms, medium and big farm enterprises (cooperatives). The governmental officials were also selected based according to their positions and responsibilities. For instance, the investigation has included the governmental officials positioned on the rayon, oblast (region) and state levels.

Within the wheat subsector, interviews were conducted with 4 input suppliers, 3 farmers, 5 processors, 4 traders, 2 retailers, 3 bank representatives, 4 governmental officials and 1 member of agricultural cooperative. Within the sunflower subsector, researchers carried out 24 interviews with 2 input suppliers, 4 farmers, 3 processors, 2 traders, 5 retailers, 4 bank representatives, 3 governmental officials and 1 member of agricultural cooperative. Finally, within the dairy subsector, the researchers interviewed 6
input suppliers, 6 farmers, 2 processors, 2 traders, 2 retailers, 3 bank representatives, 3 governmental officials and 1 member of an agricultural cooperative. It should be noted that the interviews with bank officials and government representatives covered all subsectors at the same time. The research was carried out in three oblasts of Kyrgyzstan – Chui, Osh and Issyk-Kul oblasts. Interviews included two big cities (Bishkek and Osh) and 10 rayons (district), with 3 towns and 18 villages.

There were some difficulties with conducting interviews. The main difficulty was the unwillingness of some people to participate in the research and/or to be interviewed, especially government officials, middlemen, and managers of organisations. This is mostly due to their fears of disclosing information which could attract attention of taxation agencies. However, farmers, retailers and other stakeholders expressed the willingness to answer the questions and take part in the study. In addition, some interviewees were not able to provide the full answers to some questions referring to the confidentiality of the information, especially concerning business operations and finances.

### Results

The findings of the research were as follows.

**Wheat sub sector**

**Input suppliers.** There are about seven companies which import fertilisers and pesticides. These products are exempt from customs taxes and from VAT. The price for mineral fertilisers and pesticides increased in 2007 and 2008 (Table 1). Input dealers had difficulties with selling their pesticides since farmers lacked funds and many decided not to use any these years. Such suppliers of inputs when interviewed think that they have been negatively affected by the crisis since their sales decreased by 30% at average. The same concerns cost of machinery and spare parts imported from Russia, Belarus, and China. Their prices had significantly increased in 2007 and 2008. Within three summer months of 2008, the diesel cost increased more than twice, affecting cost of services as well.

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Origin of production</th>
<th>Unit</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Potassium</td>
<td>Sodium potassium</td>
<td>kg</td>
<td>31.00</td>
</tr>
<tr>
<td></td>
<td>Sodium sulphate</td>
<td>kg</td>
<td>16.00</td>
</tr>
<tr>
<td></td>
<td>Sodium sulphonate</td>
<td>kg</td>
<td>14.50</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>Amorphous Kazakhstan</td>
<td>kg</td>
<td>16.00</td>
</tr>
<tr>
<td>Pesticides</td>
<td>Amorphous Russia</td>
<td>kg</td>
<td>10.50</td>
</tr>
<tr>
<td></td>
<td>Amorphous Uzbekistan</td>
<td>kg</td>
<td>11.00</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Urea Uzbekistan</td>
<td>kg</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>Urea Russia</td>
<td>kg</td>
<td>10.00</td>
</tr>
<tr>
<td>Ammonium sulphate</td>
<td>Uzbekistan</td>
<td>kg</td>
<td>6.75</td>
</tr>
<tr>
<td>Ammonium sulphate</td>
<td>Russia</td>
<td>kg</td>
<td>8.00</td>
</tr>
<tr>
<td>Fuel</td>
<td>Diesel</td>
<td>litre</td>
<td>18.18</td>
</tr>
<tr>
<td></td>
<td>Petrol 76 oct</td>
<td>litre</td>
<td>17.93</td>
</tr>
<tr>
<td></td>
<td>Petrol 80 oct</td>
<td>litre</td>
<td>18.17</td>
</tr>
<tr>
<td></td>
<td>Petrol 92 oct</td>
<td>litre</td>
<td>18.51</td>
</tr>
<tr>
<td></td>
<td>Petrol 93 oct</td>
<td>litre</td>
<td>18.62</td>
</tr>
<tr>
<td></td>
<td>Petrol 95 oct</td>
<td>litre</td>
<td>19.75</td>
</tr>
</tbody>
</table>

*Source: Kyrgyz Agricultural Market Information System for this study.*

The production of seeds is functioning chaotically. There are more than 170 seed-growing farms in Kyrgyzstan. In 2008, prices for milling wheat more than doubled (Table 2) and seed farms focused mainly on growing elite and super-elite wheat seeds which are sold at a very high price, often not affordable for the majority of farmers. As a result, these seeds were overproduced in 2008, whereas seeds of 2nd reproduction were in shortage. In 2009 the price for elite and super elite went down.
Producers. The major crisis-related factors noted by interviewees that affected farmers were the increased prices for energy, the cost of mineral fertilisers; the increase of bank interest rates for agricultural producers; and a decrease of remittances from abroad which led to lack of cash in rural areas for buying inputs and repaying credits. The price for wheat decreased about twice in 2009 in comparison with 2008, while the cost of inputs has been increasing. The price of wheat went down to 9 soms in February, March, and April (2009) from 17 soms at the beginning of the year. Wheat producers benefit least from this situation. However, among farmers the most affected are big farms, which have legal status of entity and have to pay taxes and social payments to the state for their employees. Small farmers are not registered as legal entities and pay fixed taxes and social payments which are much lower than those paid by legal entities. As grain prices went down, the price for flour also decreased (Table 2). On the other hand, producers have to buy inputs and necessary equipment. On top of that, they have to pay wages and make payments to the Social Fund. After adding up all cost payments and deduct them from the price, they get a profit of hardly 10%. They are not able to sell their products for cash, but give it to others to sell (cash after selling).

In general, the increase in demand that follows a decrease in price is never enough to keep farmers revenue constant. This is what happened in Kyrgyzstan (Kara-Suu rayon farms, Jalalabad). Regarding the wheat last year, less crop was sown in the Kara-Suu rayon farms; however, the yield was good as well as the wheat price. The price reached 17 soms. The seasonal price for cotton was also high. Based on these conditions (high prices and high yields), farmers made optimistic expectations. More crops were sown the next year (seven out of ten farmers sowed wheat). With subsequent large supply, prices went down and the quantity demanded went up. It would have been fine if both the price and the quantity moved in the same proportion. Unfortunately for the supply side, producers’ loss (due to price decrease) was more than their gains (from demand increase).

Credit resources became more difficult to access with the increase of interest rate and with a more limited lending portfolio. One interviewee said: “As I am a farmer myself and have participated in projects. I visited other countries. I believe in the following: credits with more than 10% of interest rate are unprofitable. However, at present farmers have to take Bai Tushum’s 30% interest credit and 32-33% interest credits from other organisations. For this reasons farmers cannot move forward. In some foreign countries farmers can obtain 10% interest credits. However, Aiyl Bank (former Agricultural Financial Corporation, recently established as a bank) provides with 22% interest credits, and if the terms of the bank are fulfilled, the interest rate will reduce to 12%. People who took up credits before have some privileges. For those who obtain a credit for the first time, the terms are a bit harsh. For example, their houses put as collateral are appraised lower by 20-30%. If Aiyl Bank’s interest rate was 15-17% before, now it is 22-26%. If the credit is used for agricultural purposes, they lend money at a 22% interest rate, if for other purposes I heard they charge 26%”.

Processors and retailers. Wheat demand in Kyrgyzstan is about 1.1 million tonnes so with production of about 800,000 tonnes, Kyrgyzstan needs to import about 300,000 tonnes per year to meet its needs. However, given the poor quality of some of the Kyrgyz wheat, imports have increased to about 500,000 tonnes of grain equivalent in 2007 (EU, 2009). There are about 2,900 flour mills working in almost all regions of the country. There are two

Table 2. Average prices for products on local markets in Kyrgyzstan in 2005-2009

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Variety</th>
<th>Unit</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009 (start)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat Seeds</td>
<td>Super elite</td>
<td>kg</td>
<td>28.00</td>
<td>29.50</td>
<td>31.00</td>
<td>59.50</td>
<td>32.50</td>
</tr>
<tr>
<td></td>
<td>Elite</td>
<td>kg</td>
<td>21.50</td>
<td>22.50</td>
<td>23.00</td>
<td>42.00</td>
<td>23.50</td>
</tr>
<tr>
<td></td>
<td>1st reproduction</td>
<td>kg</td>
<td>15.00</td>
<td>15.50</td>
<td>15.50</td>
<td>26.50</td>
<td>16.50</td>
</tr>
<tr>
<td></td>
<td>2nd reproduction</td>
<td>kg</td>
<td>11.50</td>
<td>13.00</td>
<td>12.50</td>
<td>23.50</td>
<td>14.50</td>
</tr>
<tr>
<td></td>
<td>3rd reproduction</td>
<td>kg</td>
<td>9.50</td>
<td>10.50</td>
<td>10.50</td>
<td>22.00</td>
<td>13.00</td>
</tr>
<tr>
<td>Milling grain</td>
<td>Superior Quality</td>
<td>kg</td>
<td>6.54</td>
<td>5.79</td>
<td>9.83</td>
<td>14.91</td>
<td>10.12</td>
</tr>
<tr>
<td>Fodder grain</td>
<td>1st quality</td>
<td>kg</td>
<td>12.15</td>
<td>11.69</td>
<td>17.89</td>
<td>27.05</td>
<td>19.47</td>
</tr>
<tr>
<td></td>
<td>2nd quality</td>
<td>kg</td>
<td>9.27</td>
<td>8.78</td>
<td>14.08</td>
<td>22.64</td>
<td>15.20</td>
</tr>
</tbody>
</table>

Source: Kyrgyz Agricultural Market Information System for this study
types of wheat processing in Kyrgyzstan: small scale village level mills and middle size/large industrial mills in towns and cities. Interviews confirmed that the amount of wheat flour bought from interviewed mills is at the level of previous years. But if the quantity demanded may have remained the same, there is too much supply of flour (one source stated that it had as much as doubled) and the choice is wider. Therefore sales are slack and the price is low. And prices for wheat flour in 2009 decreased by average 14-18% in comparison to the prices of the same time in 2008. Interviewees stated that last year 50 kg of flour was over 1,000 soms, this year the highest quality flour hardly costs 850 soms (Table 2).

Processors were also affected by the increase of cost of wheat, fuel, machinery and spare parts. The increase in transportation cost of Kazakh wheat by railway also significantly affected the cost of processing. Mills were also impacted negatively by the intervention of state in the procurement of wheat which led to a price decrease. Few large mills interviewed stated that they decided to halt their operations to wait and see what the AgroProdCorporation (a state joint stock company set up in 2008 to regulate prices for wheat through market activities) activities on the market were.

Flour in Kyrgyzstan is sold at the markets, retail stores, and supplied directly to bakeries. The crisis had another impact on producers of flour, bakeries and retailers with the increase in cost of rent for facilities increase in energy tariffs, and almost twofold raise in tax rates. Since the Government had to limit consumption of electricity within the last two years, some small bakeries went bankrupt and bigger ones reduced production and thus profitability.

**Sunflower sub sector**

*Input suppliers. The network of input dealers in the sunflower sub sector even less developed than the one for wheat. In the case of the one major plant, it supplies sunflower seed producers with fuel, pesticides and other inputs. The cost of mineral fertilisers in 2008 was almost twice that in 2007. The same concerned rise in cost of fuel and thus services. For instance, harvester’s services increased by 20% in 2008, and if paid in harvest, it accounted for 12% of harvest when in 2007 it was only 10%.

Farmers. The crisis affected the sunflower sector different than the wheat sub sector. In 2007, the yield of sunflower was very good and with dramatic increase of price of the imported oil in the autumn of 2007, the price for sunflower in Kyrgyzstan has also increased (Table 3). In 2008, farmers were able to sell sunflower for an even better price and even if cost of production increased, the profit was still significant. Farmers in response increased the area under sunflower but already at the end of 2008 the price for sunflower went down with the decrease in price of imported sunflower oil.

### Table 3. Dynamics of prices of sunflower seeds and oil in Kyrgyzstan in 2005-2009

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>Unit</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009 (start)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunflower oil</td>
<td>Non refined</td>
<td>litre</td>
<td>35.80</td>
<td>34.80</td>
<td>48.70</td>
<td>85.50</td>
<td>57.01</td>
</tr>
<tr>
<td></td>
<td>Refined</td>
<td>litre</td>
<td>38.50</td>
<td>37.20</td>
<td>54.20</td>
<td>95.80</td>
<td>62.47</td>
</tr>
<tr>
<td>Sunflower seeds</td>
<td></td>
<td>kg</td>
<td>21.74</td>
<td>22.41</td>
<td>26.41</td>
<td>46.68</td>
<td>36.86</td>
</tr>
</tbody>
</table>

Source: Kyrgyz Agricultural Market Information System for this study.

An interviewed sunflower grower was able to sell sunflower seeds for 25 soms per kilo in 2007-2008. In 2009 he had difficulty to sell sunflower seeds for half of this price, i.e. for 10-13 soms per kilo. With the increase in cost of inputs and decrease in price of output in 2008-2009, many farmers decided to the decrease area under the sunflower because the price went down and switched to wheat. This year the demand for oil crops has dropped. The supply is high although production has dropped. One litre of oil costs 55 -70 soms. The demand for oilcake, a by-product of sunflower oil production, was previously good but starting from 2008 the demand is also not so good. The reason is reduced cross-border trade (chicken farms from Uzbekistan bought oilcake for up to 18 soms per kilogram in 2008). At the same time, cake is being imported from Russia and Kazakhstan.

### Middlemen and oil processors. Sunflower seeds are bought by processors or their representatives directly from farmers, as well as by wholesale buyers. Some plants pay farmers in cash, some in oil. They usually buy sunflower straight from the farms. Interviewed farmers said that there are no established buyers, with new and different buyers appearing every year. While interviewed in September, farmers complained that though price for sunflower went down this year almost twice and they still can not sell produce. Interviewed farmers noted that they mostly feel the impact of crisis because it is much more difficult to sell their products. One stated “Before middlemen from Bishkek, Uzbekistan, Kazakhstan came and bought our products without anything left. Last two years middlemen didn’t come and they have been selling mainly to local people who pay less and buy limited amount”.

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Kyrgyzstan produces only 20,000 tonnes of sunflower oil annually, which is less than 50% of total demand. Oil is produced in small oil mills at the household level which lack oil producing technology and some key equipment (seed washing equipment, filtering devices). Because quality of local sunflower oil is often low, it is difficult to farmers to compete with imported sunflower oil from Russia, Kazakhstan, and Ukraine. More than half of oil plants have closed since 2008. According to interviews there is only one sunflower oil processing plant in the country which has adequate equipment and use proper processes for producing oil to international standards. This is the Ergesh Ata oil processing plant in Karasuu which beginning in 2004 worked only with cotton oil pressing. In 2009 this plant has started processing sunflower oil as well, which made up 40% of its production. The manager of this plant thinks that his plant was able to sell the same amount of oil but for lower price because price for imported oil went down as well. This plant bought this year sunflower seeds from Russia and Ukraine because Kyrgyz farmers supplied only with 105,000 tonnes of seeds, which was enough for one month of work only. Processors sold sunflower oil in 2007 and 2008 for 70 soms per litre, in 2009 it went down to 45 soms per litre.

Interviewed small scale traders of oil on the market noted that their profits are low and they make in average 3 soms from one litre of oil sold. But the turnover of sales is lower, thus in 2008 one interviewee informed that he sold daily oil for 35,000 soms, this year he was hardly able to sell oil daily for 4,000 soms at the same time of the year.

**Milk sub sector**

*Farmers.* The majority of the livestock is still held at the household level, with one farmer maintaining up to four cows on average. There is a growing number of farmers with 5-15 cows in a herd but these comprise only an estimated 3% of all dairy farmers and there are only few big farms (cooperatives) maintaining herds. This means that the majority of milk production still lies at the household level. The production output is about 1.2 million tonnes of milk annually.

The cost of maintaining livestock increased with increase in price of feed and fodder, veterinary medicines. Farmers interviewed in the study noted that they receive some return from dairy cows in summer when they are grazed on natural pastures, while the cost of their maintenance during the winter is very high. In aggregate, it is estimated that the current feed supply per animal is insufficient, covering only about half of that required to maintain fully healthy herds. Winter feed supply per animal has dropped by almost 60% since 1990. In 2008, fodder yields were approximately 50-70% of an average year. Less maize stoves and cereal straw was available due to the poor yields and increased demand. The price of fodder as well as concentrates and supplementary feeds increased in 2008 substantially from 2007 (e.g. lucerne from 50 to 90 soms, and cotton seed cake from 10 soms a kilo to 12-18 soms/kg).

All interviewed small farmers complained that price of milk went down two times in 2009 compared to 2008 and often it was unprofitable even to take it to the market (Table 4). Interviewed small producers as well as large dairy farms experience consequences of the crisis. A few farmers who live near markets and towns were able to sell milk directly there for a price five times higher than they were offered by traders. Even in those cases they stated in interviews that received price was at maximum of 70% of the retail price of milk.

Plants to which farmers used to bring their milk decreased their volume of buying milk and many farmers had no place to sell their milk to this year. In remote mountainous areas all procurement points were closed in 2009 and no milk was procured there. In those areas, especially in summer months, farmers skimmed milk and the skim milk was given to dogs. One interviewed farmer complained that she had five cows, she had to sell two cows and two were used for repayment of credit.

*Table 4. Dynamics of prices for various products in Kyrgyzstan in 2005-2009*
A very small amount is sold by small producers close to urban areas in the local bazaars and directly to consumers (by visiting residential areas and selling at the door). However, this is a very small portion of milk on a market. Other way is direct contracts between producers and consumers, such as hospitals, resorts and schools.

Local traders. There is still a widespread practice in rural areas when small scale traders collect all of the raw milk on a daily basis from either local collection points or through the use of a tanker travelling around the village. These traders take milk either to processors, to markets or export directly to Kazakhstan. This last phenomenon is specifically present in the areas bordering Kazakhstan (Chui and Issyk Kul oblasts) where Kazakh milk processing companies send their tankers to collect raw milk in order to maintain their production and sales in their own markets. This is particularly prevalent during the winter months, when supplies in Kazakhstan drop even further (World Bank, 2007).

The majority of traders supply procured milk to the nearest local processing plant. In the vast majority of cases, this relationship is informal, in so far as it is not based on a written or registered contract. This enables the trader to operate outside of the legal parameters (specifically for payment of taxes and VAT). This made interviews of traders in the milk sub sector very difficult.

Traders are also experiencing difficulties with the reduced demand for milk and dairy products. Kanat – interviewed trader of ice cream in Issyk Kul region – made 25% less profit this year in comparison to the same period in 2008. He provides resorts at the Issyk Kul with ice cream and he thinks that his business was affected by crisis because much less tourists came this year to Issyk Kul from Russia and Kazakhstan. The same was reported by the director of one resort of the Issyk Kul area. Consumption of milk in his resort decreased in 2008 by 9,899 litres or 38% in comparison to 2007, and decreased by 11% more in 2009 in comparison to 2008. Cheese consumption decreased by 19% in 2008. This is due to the shortage of tourists last and this year.

Processors. Processed dairy products, such as butter, cheese and ice cream are produced for local markets, as well as for export. There are more than 390 dairy processing enterprises but the sector is dominated by several medium and large enterprises, principally Ak Jalga, Wimm Bill Dan (formally Bishkek Sut), Ak Sut, Ak Bulak, Sut Bulak, El West and Eridan Sut. These companies process 85-88% of milk which comes onto the market and the remainder is processed through small local companies. They tend to sell through only three channels: direct distribution to retail outlets, wholesale from storage facilities in Bishkek, and export. The 18 months were reportedly difficult for processors. Energy supply was limited and unstable, and prices for machinery and spare parts increased.

Interviewed processors stated that they have to store the bulk of their products because of lower demand for them from buyers and retailers (Table 5). With the electricity problems and increase of cost of inputs, they have been reluctant to increase production volume. Since the products are fragile, they are worried that if the demand would not grow, they might go bankrupt with milk and cheese going bad.

<table>
<thead>
<tr>
<th>Products (tonnes)</th>
<th>“Sut Bulak” output in soms</th>
<th>“Ak Zhalga” output in soms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard cheese</td>
<td>618 400</td>
<td>647 900</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>32 800</td>
<td>80 800</td>
</tr>
<tr>
<td>Cream</td>
<td>10 900</td>
<td>8 800</td>
</tr>
<tr>
<td>Sour cream</td>
<td>15 300</td>
<td>14 500</td>
</tr>
<tr>
<td>Yogurt</td>
<td>16 500</td>
<td>16 700</td>
</tr>
<tr>
<td>Butter</td>
<td>79 400</td>
<td>99 200</td>
</tr>
<tr>
<td>Cheese spread</td>
<td>15 700</td>
<td>11 400</td>
</tr>
<tr>
<td>Milk</td>
<td>1 000</td>
<td>-</td>
</tr>
<tr>
<td>Non fat cheese</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Other cheese</td>
<td>2 200</td>
<td>4 700</td>
</tr>
</tbody>
</table>

Source: Department of Agriculture, Issyk Kul oblast

Some plants opted to produce cheaper products. Thus, the interviewed Shin Line Dairy processing plant representative stated that they increased production of low cost ice creams with increase of its price and reduced production of expensive types of ice creams. Farmers think that processors have started adding dry milk instead of fresh milk into their dairy production but this was not confirmed by processors.

Banks. There are more than 20 commercial banks in country. Many have branches in almost all rayons of all regions. In addition, there are networks of micro-credit enterprises lending to the agricultural sector. However,
only a limited number of banks and financial institutions lend to agricultural producers. The major bank which is focused on agriculture lending is Aiyıl Bank which was established with the funding from the World Bank and is in state ownership. 97% of Aiyıl Bank’s credit portfolio is for agricultural producers, while only 3% is for processors. This bank gives credit for 2-3 years with 22% interest rate. Farmers also obtain credits from Bai Tushum, RSK Bank and other banks to carry out their businesses.

Interviewed banking institutions stated that they also were negatively affected by the crisis through increase of currency exchange rates, increased inflation, lower rate of transfers from migrants in Russia and Kazakhstan, as well as repayment of credits to financing institutions, including the World Bank. Compared to last year the credit obtaining process is slowing down a bit. This is related to the danger of loan defaults. Low prices for agricultural products and difficulties to sell their products make farming even more of an unattractive sector for bankers. With farmers posing a threat of default, bankers take tougher measures to protect from possible non-repayment.

Banks were also affected through increase of cost of their operations because of increase of fuel costs in working with their clients and in response to this many of them increased their interest rates to cover increased administrative costs of lending. According to an interviewee of the regional credit office of Aiyıl Bank, central office made a decision to increase interest rate by 3.5% in November 2008. In March 2009, Aiyıl Bank further increased its interest rate. This year (2009) the percentage rate increased to 22% for agricultural activities and to 27% for processing and other sectors. Many banks have increased interest rates on loans given earlier, thus “Bai Tushum” financial company broke the agreement and added 1% to its annual interest rate blaming inflation, i.e. farmers who have obtained credits with 27% interest will have to pay 28% due to inflation.

With higher risks of non repayment, banks tightened their credit processing procedures and requirements. Previously the percentage rate depended on the credit history, now clients (mostly processors) are selected on tougher criteria. Clients need to go through CCRO (The Central Collateral Registration Office) if the amount of a loan exceeds 30,000 soms. This was introduced by law. If a client does not fit all imposed conditions, banks deny any financing. Almost all banks reevaluated collateral and decreased its estimated value to reduce their risks. Credits are given in soms in order to avoid the risks that could arise (from an exogenous shock) before the credit comes to end. The decision making process for credit used to be 20 days and now it can take 2-3 months.

In response to the crisis, Kyrgyz Government has started a programme of subsidised loans through Aiyıl Bank. An interviewed banker stated “In 2009 through Aiyıl Bank 5.5 million soms were allocated to our rayon to provide farmers with subsidised loans. According to their lending terms, credits will be provided at 22% interest rate. If a farmer repays credit in time, 10% will be returned to him”.

State policy. The Kyrgyz Government initially announced that the global crisis would hit the economy. Later, it judged that since the country was not fully integrated into the global economy, it would not be hurt significantly. However, several actions were adopted to mitigate the impact of the crisis and ensure food security although many interviewees claim to have not yet noticed the results. Major economic and social measures of the Government focused on control of increase of prices of food security products and increase in their domestic production were as follows:

- From October 23, 2007 Government established 10% VAT rate (instead of 20%) for wheat, wheat flour and vegetable oils.
- The President imposed a freeze on property tax introduction until January 2010 which was in part to support processors.
- Simplification of taxation for production and marketing of bread products (transfer to fixed taxation rate through patent based system).
- Simplification of customs procedure for physical entities such as small importers of grain or flours (importing less than 20 tonnes);
- Seasonal fees on exportation of grain were decreased from 20 to 10%, on wheat down to 3 soms per kilo. At the same time Government reached agreement with wheat milling plants that their flour price will not exceed 17-18 soms for kilo.
- At the same time, Government increased customs fees for export of wheat, flour, vegetable oil and sunflower seeds. Rate of custom fee for export of 1 kilo of wheat was 15 soms, one kilo of wheat flour was 30 soms, sunflower seeds was 20 soms per kilo, sunflower oil was 100 soms per litre in 2008.
- Provision of budgetary loans for refinancing of agricultural crop producers through Aiyıl Bank with the interest rate of 12%. There were additional credit resources provided to Aiyıl Bank for on lending to farmers. Over past 2-3 years public authorities stepped in three times trying to ease the financial burden to farmers. It has been financing on preferential terms the agricultural producers of wheat. The government allocated 100 million soms for spring field works in 2008; later in the autumn of 2008, about 140 million soms were given by the government to support producers during the autumn field works and in the spring of 2009, it provided another 125 million soms to Aiyıl Bank for refinancing. The scheme used in this programme is that if farmer repays credit within agreed terms, bank reimburses him amount equal to 10 percent out of 22 percent interest rate.
• State Procurement of wheat through AgroProd-Corporation. This corporation is becoming a dominant player in wheat sector but its negative effect is that it seems to push out middle size and small grain mills out of market. This is a state enterprise purchasing wheat and processing it at big state flour mills. In 2008, AgroProd-Corporation received 400 million soms from the state for purchasing of wheat and processing it into flour. According to interviewed private mills representatives, the purchasing price of wheat with the use of state funds by this corporation affects prices for wheat in a country and many private medium and small size mills cannot compete with it, some being already closed, others temporary closed for renovations and modernisation waiting for this corporation’s further development.

• Government provided subsidised inputs to crop farmers, however, the arrangements of allocation to farmers are not transparent and clear. In 2008 and 2009 spring sowing season some farmers received fuel for lower than market price. In a spring of 2009, the Government allocated 75 million soms from the state budget for purchase of agricultural machinery from China. In 2008 and 2009 government allocated 50 million soms for subsidising fuel (5-6 soms per litre lower than market price).

• Targeted government interventions in the regions through marketing of food grain at a lower price. There is renewed negative practice of payment of taxes and Social Fund payments, repayment of loans in-kind (wheat). In 2008 Kyrgyz Antimonopoly Committee established procurement price for wheat at the amount of 20 soms per kilo and many farmers used this opportunity to offset their liabilities in front of the State for taxes and social payments. In early spring of 2009, the Government promised to procure wheat from farmers at the price of 10 soms per kilo as repayment of state credits and loans. In September, state procurement of wheat has not started but price at the market was 5-6 soms per kilo of wheat grain. Though practical in some cases, non monetary exchange (barter) may prove damaging to the whole economy. A monetised economy is more competitive economy.

• There are new institutions created but their mandate and functions are still not clear. The Government of the Kyrgyz Republic established new state enterprise Centre of Grain Expertise at the Ministry of Agriculture, Water Resources and Processing Industry (Government Resolution No.738, December 30, 2008). This Resolution was adopted with a view to ensure control of grain and grain products purchased at budget resources as well as grain and grain products to be procured into the State Wheat Reserve as well as operative arrangement of establishing and replenishing the State Wheat Reserve.

• A state programme aims at increase of areas under wheat while land is being in private ownership. The strategic programme on the development of rural economy sector and the regulation of the markets of agricultural products, raw materials and food products in the Kyrgyz Republic during the years 2008-2011 (approved by the Ministry of Agriculture) aims at an increase of areas under wheat for ensuring food security, while interviewees recommend decreasing the area cultivated for wheat and increase productivity through better seeds and fertilisers.

• Currently the Ministry of Agriculture is developing a law on complete exemption of agricultural processors from the VAT.

• Government is preparing strategy for 2009-2015 for ensuring food security aimed at an increase of growing of crops which are being imported. There are 9 food products where production is to be increased to substitute imports, including wheat and sunflower.

• Government makes decisions on prolongation of arrears repayment giving the wrong message to farmers. Some measures taken do not provide incentives for strong farmers. Thus, in 2009, Government made a decision to prolong repayment of arrears on budgetary loans for 5 years, while those who repaid timely did not benefit from that.

• Government provided soft loans to seed farms which produce seeds not affordable by average farmers.

• There are interstate discussions going with Kazakhstan and Russia on waiving the quarantine restrictions on import of dairy products into Russia and Kazakhstan.

Discussion. The research confirmed that agricultural producers and processors of Kyrgyzstan were affected by the global financial and economic crisis. Although the Kyrgyz Government and donors have been addressing consequences of global crisis through various interventions, these efforts were not systemic and not synergised for better results. The wheat sector differed insofar as there was a strong Government presence which substantially impacted the market. Some of the Government’s initiatives were poorly explained and implemented such as setting a buying price but never coming up with the funds to buy significant amounts of wheat at that price, or valuing wheat at above-market prices and accepting it as payment in kind for tax and social fund. This distorted the market and unevenly benefitted only some farmers.

The Kyrgyz Government needs to develop and implement a comprehensive policy and strategy towards support of farmers, processors, and traders of agricultural produces to mitigate the impact of the crisis. This policy needs to be transparent and promote an efficient market minimising distortions due to government interventions while at the same time countering the emergence of monopsonies in terms of wholesale producers in the sector. Aspects of this policy should include:

• Use of banking institutions to deliver financial support. The Government was right to avoid direct crediting to the agricultural producers and processors in terms of budgetary loan and instead used bank for channelling funds to increase financing for the sector. At the same
time, there was reportedly less the full use of the relatively cheap credit resources provided as a result of this action. There was need for a better information campaign on the procedures and requirements to obtain such loans to increase access to it.

- Avoidance of offsetting loans, taxes and other liabilities in goods/commodities. Such system of offsetting liabilities can be prone to corruption and abuse and benefit only few.
- Prevention of illegal importing of wheat, grain, flour, sunflower oil, as well as various inputs. Kyrgyz farmers, middlemen and small scale processors cannot compete with products which are brought into the country without tax and customs payments.
- Transparency and predictability in the delivery of subsidized fuel, if this practice is to be continued at all.
- Creation of an updated and reliable database on agro-food sectors. This is crucial for more documented actions. It helps to identify sectors where action is needed and measure the impact (efficiency) of any policy action.
- Improvement in the flow of market information to all stakeholders, but especially farmers, is needed to overcome market dislocation. Farmers faced two major challenges in the crisis: overestimation of demand of certain crops that encouraged risk-taking in purchase of inputs and problems with monopsonies of wholesale purchasers and access to markets. Improvements might come through use of ICT, greater Government regulation of access to markets to counter de facto monopsonies, and organization of farmers into larger units with more bargaining power and capacity to access and utilize information about the market.
- There is a lack of accessible financing in the sector due to the crisis. High interest rates and increased collateral and other requirements further limited lending. Financing covers less than 1/5 of estimates for overall operating deficits in the farming sector (financing ‘needs’ without consideration of cost of capital). There is a need to increase working capital loans, which would allow farmers to increase their production in a short term, to provide investment loans to procure equipment and machinery for better productivity.
- The sunflower oil sector should be developed. There are the prospects for replacement of imported sunflower oil by locally produced oil. Efforts should be targeted to facilitate above all the development of processing facilities for refined oil that can compete with foreign competitors. Conditions should also be created for the development of better wholesale purchase arrangements to avoid monopsonies, and retail arrangements.
- Support small farmers to unite and develop large cooperatives – large enough to be able to respond to a large demand from big retailers. Cooperatives should be given tax incentives.
- Possible areas of assistance for removing bottlenecks in wheat processing, such as improving access of flour mills to credit. Lack of operating capital often pushes flour mills to purchase wheat based on the tolling arrangements (the mill charges 10% of wheat received from farmers as a service fee and returns flour, bran and other by products back to farmers). While the tolling arrangements may seem to be beneficial to farmers, their increase transportation and marketing costs and create problems with flour quality on later stages of the value chain.
- Better governance and accountability in activities of the AgroProdCorporation is needed. This corporation played a big role in distorting the market by communicating varying policies regarding purchase of wheat which negatively impacted farmers and processors. It also appears to be crowding out private processors. The policy on state procurement of wheat and provision of different subsidies should be clear, transparent and fair.

Although information received from literature review and conducted interviews does not provide a complete picture, it gives a fair insight of how different stakeholders undergo the hardships of the financial and economic crisis, and thus constitutes a reasonable basis for government officials in Kyrgyzstan to identify and design policy measures to relieve sectors hurt by the financial and economic crisis. The policy options recommended in the present research are meant for both Kyrgyz public authorities as well as private decision makers.

**Conclusions**

1. In the wheat sector, the effects of the crisis were felt most by those participants who had the most sunk costs associated with wheat production in the supply chain because they were unable to react efficiently to the changed market dynamic for wheat. This affected primarily farmers. Following the relative boom year of 2008 there was a big push by farmers to increase inputs in order to produce more in 2009. The cost of these inputs, including the rent of land, increased as well. However with demand relatively static and perhaps some reduction due to the financial crisis, the downstream participants in the market (including sellers of inputs, processors, and retailers) reacted by reducing their involvement with the market, leaving the farmers with excess supply. Input suppliers with a large investment in servicing farmers were also affected as exiting the market was not an easy option; smaller traders were not affected because they were able to leave the market at less cost. Processors were somewhat affected by higher energy costs for much of the year, though this became less so as these prices declined rapidly over 2009 as well.

2. The impact of the financial crisis on the sunflower sector was similar to the wheat sector, though it affected a much smaller range of farmers as the sunflower seed sector
is quite small. Farmers producing sunflower seeds beyond subsistence levels faced increased input costs and were unable to sell their products at profit. However, much of the sunflower seed production was for subsistence use and hence was less affected by the crisis. Wholesale purchasers (middlemen) with fewer fixed costs were able to exit the market. The one case of a large processor which engaged farmers directly only entered the market due to the reduction in cotton production which meant that other inputs were needed. The plant was forced to reduce the price of production due to an overall glut in oil on the market driven by cheaper imports.

3. Clearly the major victims of global financial and economic crisis in a dairy chain are farmers. The cost of milk in a retailing chain is not decreased in comparison to 2008, while the procurement price for milk from farmers went down at least two times. Processors in Kazakhstan and Kyrgyzstan reduced scope of production and thus they reduced volume of milk purchased from farmers, as well as price they pay for milk. This did not affect to the same degree the wholesale traders who served as middleman, as they were able to exit the market. Many milk farmers had to waste their milk because there literally were no buyers, while processors resorted to sink their cost in storages and stores. It seems that traders and processors also have experienced problems but their losses are partly covered by farmers.

4. The impact on the banking sector vis-à-vis agriculture was quite minor: a small increase the risk premium on credit. There was no reduction in the overall amount of credit available. The Government was able to pressure essentially state-owned Ayil Bank, the major creditor for agriculture, both to keep lending and to rein in interest rates.

References


