Emergency Market Mapping and Analysis (EMMA)

Early Potato Market System, Kyrgyzstan

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Contents

Executive Summary

The economic impact of the June events has been immediate. The overall damage to the local economy is as follows: 170 shops, six markets and more than 100 cafes and other sites damaged or destroyed in Osh alone.[1] In addition to the direct damage to business sites, fear of reprisals has immobilized most sectors in and outside of the metropolitan areas. Transport of goods to and from the Southern regions of Kyrgyzstan has halted for most of June, and July from other regions of the country, and from neighboring countries like China, Russia and Uzbekistan. This has had a severe impact on the agricultural sector, which contributed to 27% of GDP in 2008 and remains an essential component of the economy as it employs 46% of the working population.[2]

The EMMA assessment on the ground in Kyrgyzstan focused on early recovery needs for four selected critical markets of wheat flour, early potatoes, CGI and cement. The early potato market is critical for farmers in low-lying areas of Osh and Jalal-Abad oblasts since it represents an important source of food and income. The impact of the emergency and closure of access to important export markets has severely disrupted normal functioning of the market system. There is a glut of early potatoes as supply has outstripped domestic demand. A large percentage of the early potatoes have not been harvested, and are in imminent danger of spoiling in the ground, as farmers cannot afford to harvest them knowing that what they do manage to sell will be at a loss. The reduction in income will impact farmers' ability to purchase inputs for the second planting, lowering crop yields and threatening food security for the winter months.

Middlemen are buying and selling at significantly reduced levels, and many consumers are afraid to patronize mixed-ethnicity market areas. As retailers employ coping strategies by hiring their own transportation to source potatoes, and other vendors set up shop in secondary market areas or even in ethnically homogenous enclaves, the market for first harvest produce is fracturing.

This crisis represents an opportunity to address some long standing issues that may have made the target groups more vulnerable to the conflict and market breakdown. In considering immediate interventions, the host government and NGOs present on the ground also have the chance to look at long term programming to address deeper issues, including economic opportunities for youth, fertilizer shortages, and lack of water, equipment, storage and value adding capacity. Ultimately, a short term intervention must aim to further develop community driven solutions to the current emergency and to the daily and seasonal problems faced by farmers.

Intervention, both direct and indirect is necessary to fill immediate needs for livelihood protection and survival, as well as restore supply chain functionality and develop greater resilience in the early potato market system. Direct intervention should be taken with the most vulnerable farmers to protect their livelihoods and ensure food security for the winter months. The suggested direct interventions are: cash allocation to most affected farmers, subsidized transportation linking farms and markets, vouchers for retailers to purchase from middlemen, cash for work for farmers to clear irrigation and other farm systems, and crews to clean up markets and businesses. Indirect intervention is possible to help the market find its way back to better functionality. Information about crops, prices, supply and demand, coupled with technical assistance and rehabilitation of irrigation would do much to address medium/long-term issues, mitigate future market problems and make the market system more resilient.

[1] Rebuilding Southern Kyrgyzstan, IWPR, July 31, 2010: http://www.reliefweb.int/rw/rwb.nsf/db900SID/AZHU-87VNUX?OpenDocument.

[2] Duhr, Agnes, "Food Security Update and Nutrition Situation In the Kyrgyz republic" UNWFP April 2010.

Finally, advocacy with the Kyrgyz, Kazak, Uzbek and Russian governments to reopen borders for trade would remove the single biggest barrier to the recovery of the potato and other produce markets

Emergency Context

In June 2010, following April's political upheaval[3], the Central Asian state of Kyrgyzstan experienced ethnic violence and rapid displacement in the southern districts bordering Uzbekistan. Nearly 3,000 homes and businesses were damaged or destroyed in a 3 day period. Although the origins and perpetrators of the violence remain unclear, the violence predominantly targeted the Uzbek ethnic group[4]. Government estimates of the number of fatalities are 330, although unofficial sources quote that number to be significantly higher. At the height of the unrest approximately 375,000 individuals were internally displaced and a further 92,000 crossed the border to Uzbekistan. At present about 2,000 households, or 30,000 individuals remain displaced.[5]

The violence against Uzbek neighborhoods in Osh and Jalal-Abad districts in southern Kyrgyzstan was accompanied by the looting and burning of houses, businesses and schools serving that population. Destruction in Uzbek-neighborhoods is significant. Homes have been destroyed, assets stolen or lost, public services damaged, and social and market linkages disrupted. Returnees are faced with immediate assistance needs in shelter, NFIs[6], protection, and emergency economic interventions, as well as medium-term needs in education and economic recovery.

Economic Development and Livelihoods Context

Kyrgyzstan's population suffered from chronic food insecurity before the June events. The rise of cash and pension levels in early 2009 was not sufficient to ensure food security for the food insecure. Furthermore, food prices at the local neighborhood level may not have come down significantly despite downward price trends noted in central markets. Growth stunting affected almost one out of three children below 5 years of age in 2008. The prevalence of stunting among under-5 children was higher in rural areas (35.9%) and seemed also higher in Jalal-Abad and Osh oblasts, the two Oblasts which were the hardest hit by the June events. The population is very vulnerable to changes in prices on basic food stuffs such as potatoes, and wheat flour. The share of food expenditures remains high at 60% of total expenditures across all food security groups, reflecting widespread poverty. The absolute amount of food expenditures of food insecure households is well below the cost of the official food basket.

The UNWFP prediction in April that exports should pick up as demand recovers in Kyrgyz Republic's main export markets (Russia, Kazakhstan) has unfortunately not held true for the months following the June violence. The Kazakh export market remained closed as of early August, in addition to the closing of the Uzbek border, products like CGI originating from China, have also slowed to a halt most likely due to fears of instability in the South. It is also important to note that both Russia and Kazakhstan are currently not allowing large amounts of commodities through their border due to the newly signed Customs Union Accord between Russia, Kazakhstan and Belarus to which Kyrgyzstan is not a member.

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[3] On 7 April 2010, violent civil protests erupted in the capital city Bishkek and provoked the dismissal of the President, Bakiev. An interim 'caretaker' government was instituted headed by Rosa Otunbaeva, but tensions continued, leading to a vacuum of national counterparts in many institutions at central and local levels, freezing of bank assets, and closure of borders, and disruption of the spring planting season.

[4] Kyrgyzstan: Ensuring Security and Human Rights Required to Put Country Back on Course, Refugees International 29/07/2010.

[5] Kyrgyzstan Complex Emergency; Factsheet #13, Fiscal Year (FY) 2010, Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA), Office of U.S. Foreign Disaster Assistance (OFDA), 12/08/2010.

[6] Non-food items.

The disturbance of market linkages, namely in the transport of goods domestically and to and from foreign markets from one area to another, and lack of information available to farmers about market prices in other regions, the pervasive fear which is discouraged farmers and laborers from clearing the early harvests from April until July, and finally the high costs of inputs such as fertilizer, pesticides, and fuel have all contributed to the glut in the potato market in the Osh and Jalal-Abad Oblast' and are now delaying the second planting of the crops in the Southern regions which have two planting seasons.

EMMA Methodology

The EMMA is a rapid market analysis designed to be used immediately after a sudden onset crisis. Its rationale is that a better understanding of the most critical markets in an emergency situation enables decision makers (i.e. donors, NGOs, government, other humanitarian actors) to consider a broader range of responses. It is not intended to replace existing emergency assessments, or more thorough household and economic analyses such as the HEA, but instead should add to the body of knowledge after a crisis.

The key analytical questions for the EMMA team were "how has the crisis affected the early potato markets and the targeted market actors, and what implications do those effects have for the food security and livelihoods of vulnerable populations?" The EMMA expresses these observations through the market map, which shows the different linkages between consumers, producers, retailers, middle men and processors. Two or more market maps are used to compare baseline information (prior to the conflict) and post- conflict/natural disaster information.

The EMMA assessment on the ground in Kyrgyzstan focused on early recovery needs for four selected critical markets (wheat flour, potatoes, CGI and cement), and the impact of humanitarian aid to date on the local markets. The IRC EMMA team led by Benjamin Barrows and Eugenia Gusev arrived on the ground several weeks after the initial June violence. Four other local team members were trained and carried out the assessment from three organizations on the ground: Mercy Corps, and two local NGOs Mehr-Shavkat and TES center.

The Assessment focused on Osh Oblast, particularly on Osh city, Aravan district (selected because of 2 planting seasons) and Jalal-Abad oblast (city and surrounding villages). It is important to note that a large interagency livelihoods assessment has been conducted with ACTED, GTZ, German Agro Action (Welt Hunger Hilfe) in collaboration with local NGOs AMFIK and TES. The assessment interviewed 300 business owners, 300 MFI clients and 300 farmers/producers. The EMMA team has coordinated closely with ACTED to avoid geographic and programmatic overlap and ensure complementarity.

The enumerator team was recruited in the first week of the IRC assessment teams' arrival in Osh city. This was possible through networking at the UN Cluster meetings as well as during bilateral meetings with local and international NGOs present on the ground. It was also possible in part because Southern Kyrgyzstan has several very active local NGO's who were present at the Cluster meetings. This strong local capacity should be noted for any future programming in Kyrgyzstan. Following the initial recruitment the IRC EMMA team prepared the Russian language materials for a two-day induction of the local enumerators. The EMMA team, including drivers and the translators employed for the EMMA assessment were of Uzbek and Kyrgyz ethnicity which was helpful for obtaining balanced data and accessing both Kyrgyz and Uzbek market places, households and farms.

The Target Population

The EMMA team selected farmers and urban retailers as the target population. Families with damaged or destroyed houses and urban small businessmen whose shops were damaged or destroyed were not selected because those populations, although the most directly affected by the violence, were to be thoroughly covered by the large joint assessment efforts undertaken by the ACTED, GTZ, German Agro Action, TES and AMFIK alliance. Therefore, the EMMA team selected a target population and geographic coverage in its fieldwork that would complement the assessments already underway at the time the EMMA began on July 19th.

Target Group	Location	Essential Characteristics
Farmers	Rural and suburban areas of Osh and Jalal-Abad oblasts	Small-holding farmers that plant a variety of seasonal crops; those in low-lying areas currently facing livelihoods threat and anticipate increased danger to food security in the winter. Most farmers that plant early potatoes are ethnic Uzbeks.
Urban retailers	Aravan village, Osh city and Jalal-Abad city	Some cannot access their previous place of business, sales down 10-50%. Many retailers are women.

Many farmers need immediate assistance – those in areas with two annual growing cycles are facing a serious decrease in income. The cash earned in the summer harvest is used to pay debts and buy inputs such as seeds, fertilizers and labor for the second planting. The summer harvest is stored and consumed over the winter months and therefore essential to food security.

Retailers interviewed in the field all spoke about a marked decline in sales at a time of year that is usually the peak for volume commerce. Some cannot access their place of business because it was destroyed or they are afraid, and many have relocated to areas that are safer and/or have a more reliably large quantity of customers. Some early potato retailers interviewed are new to selling potatoes, and have taken up the business after losing their source of income due to the June events or the social aftermath.

Critical Market System

The critical market systems were selected after giving consideration to seasonality, the survival and livelihood needs of the affected population, current international interventions and other ongoing livelihood-oriented assessments.

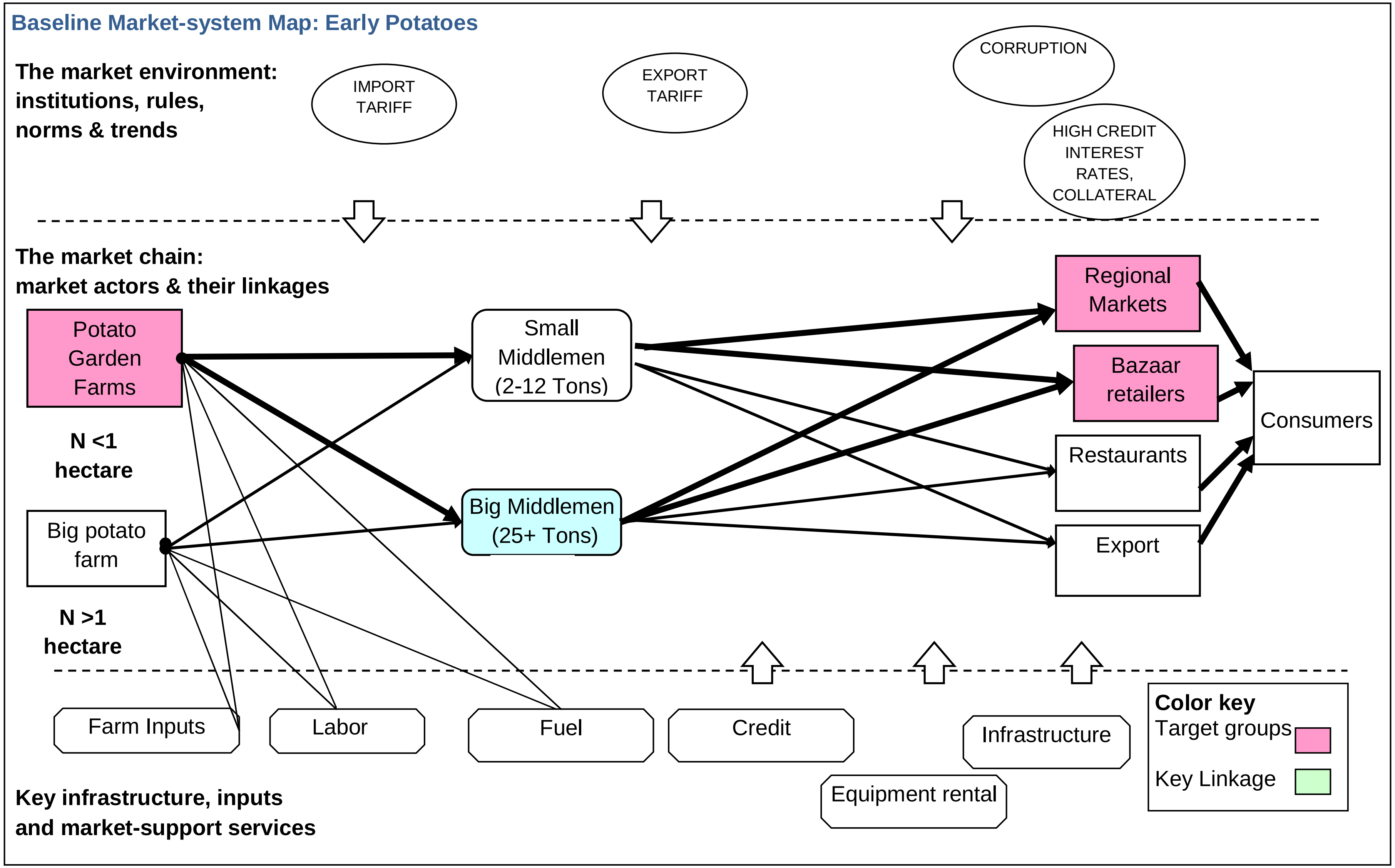
Early potatoes were selected as a critical market system because they are a staple food item and an important source of income for producers. The areas of Tepe-korgon Ayil Okmoty, Uygurabad village around Aravan in the Osh Oblast, and Shamaldysay in the Jalal-Abad oblast have two growing seasons, the first of which is now in harvest time. Please see the seasonal calendar for more details about crop cycles. Early potatoes, as well as tomatoes, onions, cucumbers and watermelons harvested after the first growing season are cash crops.

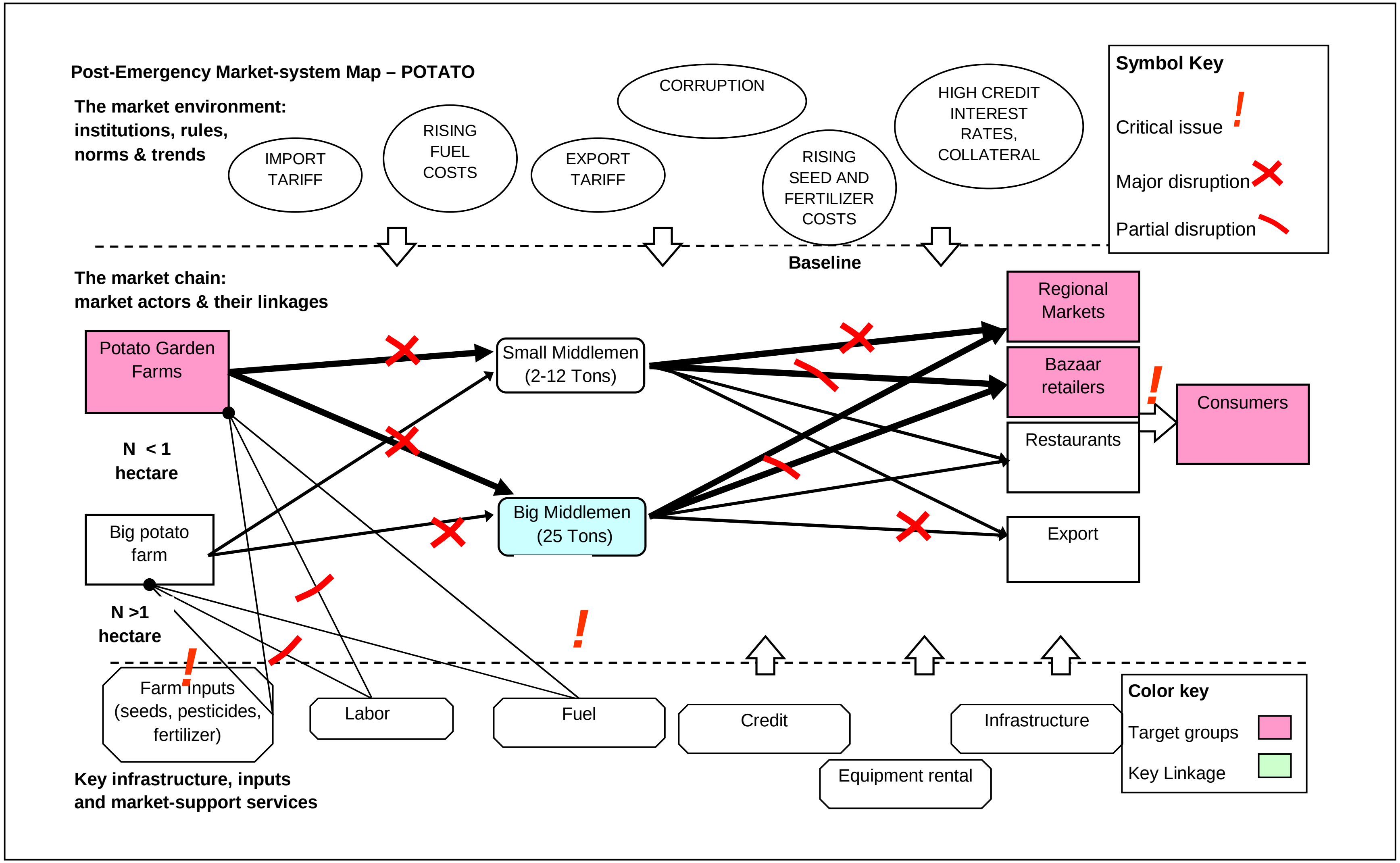
Critically, income realized from the first harvest is used for purchasing the seeds and inputs and servicing credit necessary for the second planting. The autumn harvest of the second planting includes heartier, thicker-skinned potatoes that are stored in household root cellars and consumed over the course of the winter.

The vast majority of potatoes grown in southern Kyrgyzstan come from small, family-owned and worked plots of land. Large commercial farms do exist, but they produce only a small percentage of the early potato harvest. The break-even point for farmers is a price of 4 KGS per kilo. Last year the sales price was 5-10 KGS per kilo. The current price for a kilo of early potatoes is 3-4 KGS (direct from the farm), but the cost of inputs, especially fertilizer and fuel, purchased with potato sales has gone up substantially in the wake of the crisis.

Market-system Maps

The main tool for the EMMA is the Market Map which is used to show how the potato market worked prior to the crisis, and how it has been affected by the June violence. Each map features elements of the market environment that affect how the supply chain functions, how the infrastructure and inputs that enable market interactions have been impacted, and the effects on market actors themselves.


Baseline Market-system Map: Early Potatoes
The market environment:
institutions, rules,
norms & trends
IMPORT TARIFF
EXPORT TARIFF
CORRUPTION
HIGH CREDIT INTEREST RATES, COLLATERAL
The market chain:
market actors & their linkages
Potato Garden Farms
N <1 hectare
Big potato farm
N >1 hectare
Small Middlemen (2-12 Tons)
Big Middlemen (25+ Tons)
Regional Markets
Bazaar retailers
Restaurants
Export
Consumers
Farm Inputs
Labor
Fuel
Credit
Infrastructure
Equipment rental
Color key
Target groups
Key Linkage
Key infrastructure, inputs
and market-support services


Post-Emergency Market-system Map – POTATO
The market environment: institutions, rules, norms & trends
IMPORT TARIFF
RISING FUEL COSTS
EXPORT TARIFF
CORRUPTION
RISING SEED AND FERTILIZER COSTS
HIGH CREDIT INTEREST RATES, COLLATERAL
Symbol Key
Critical issue !
Major disruption
Partial disruption
Baseline
The market chain: market actors & their linkages
Potato Garden Farms
N < 1 hectare
Big potato farm
N >1 hectare
Small Middlemen (2-12 Tons)
Big Middlemen (25 Tons)
Regional Markets
Bazaar retailers
Restaurants
Export
Consumers
!
!
!
!
Farm Inputs (seeds, pesticides, fertilizer)
Labor
Fuel
Credit
Equipment rental
Infrastructure
Color key
Target groups
Key Linkage
Key infrastructure, inputs and market-support services

Main market actors:

Potato Farmers

Most farmers in Kyrgyzstan have little land – the government has allocated one 'are' (100 square meters) of a hectare per family member. Subsequently, some families have less than a hectare while others have up to 1 hectare or more. It is also apparent that since the end of collectivization, farmers have tried to diversify their crops. Few, if any have only one crop culture planted in their field. Most grow several varieties of crops and occasionally also cash crops like cotton and tobacco. When land was allocated to people after the end of the Soviet Union, most did not have farming skills. Lack of skills and inadequate structures for irrigation, planting, harvesting and storage have all negatively impacted harvests and producer's income. Because the soil in most areas is exhausted, farmers have to use large amounts of fertilizers on their land in order to be able to grow their crops.

Irrigation infrastructure within the boundaries of the former farms has been affected by lack of maintenance as well. More than 70 % of the arable area depends on irrigation for its productivity but since the dissolution of the U.S.S.R, lack of funding for maintenance has resulted in the deterioration of irrigation dams as well as reduced capacity of the primary and secondary irrigation systems. Many pumping stations have slowed or stopped operations. The clogging of drainage systems is leading to increased water logging and soil salinization. For example, in the village of Oktiaborsk outside of Jalal-Abad city the village has had no drinking water for 2 months because of clogging in the water system.

Labor

Labor for potatoes is hired on a short term basis for harvesting and for planting periods. In the South of Kyrgyzstan, the majority of the labor used during this period was Uzbek laborers coming from across the border. Casual Uzbek laborers cost about 150 KGS per day. The harvest of early potatoes takes 4-6 days, depending on the size of the plot and the number laborers employed.

Middlemen (Middle-Wholesalers)

The mechanisms for producers to sell to markets in Kyrgyzstan are underdeveloped, allowing middlemen to keep food prices high. The middlemen are inevitably an important link in the potato market since they purchase and distribute the crops to the local, regional and external markets. Currently, the price per kilo charged by middlemen for the transport of potatoes is 4 KGS per kilogram. Middlemen fall into two broad categories of 'small' and 'big' according to amount of weight their trucks can bear. The majority of middlemen are small, and can only carry up to 12 tons in their trucks. Identifying and interviewing middlemen was difficult, as they keep irregular hours and work mostly on the road. Those that the EMMA team were able to identify were reluctant to answer questions for fear of taxation and other, unexpressed fears.

Small Business owners: market stalls, restaurants, hotels

The small business owners are the direct market link to the consumers. Market stall holders purchase their produce from the middlemen in most cases, and resell it to the consumers, restaurants and hotel owners in the service industry. The particularity of the early potato harvest is that it has to be sold off or consumed right away since early potatoes do not store for more than a few weeks. The second crop of potatoes can be kept partially by the farmer for his family through the winter.

Processing

The EMMA team did not discover any evidence of processing or value-adding for potatoes in the South of Kyrgyzstan. It is an area of the market much needed for the Kyrgyz economy and unfortunately lacking. In 2006, there were only 2 companies and 6 individuals registered as producers of potato products.

Importers/Exporters

Potatoes are exported from and not imported to Kyrgyzstan. They are exported to Kazakhstan, Russia and Uzbekistan. Reliable data for volumes of Kyrgyz potatoes sold on the export market was not discovered, but it can be said that the early potato harvest, much more so than the second potato harvest in the autumn, relies heavily on demand in the export market. Kyrgyz middlemen bring the produce to the border where it is then loaded onto local trucks. This practice is common because Kyrgyz drivers transporting produce in other countries are more likely to be stopped, extorted or harassed than local drivers.

Post-Emergency Potato Market

Inputs and Market Environment:

The prices of inputs, as mentioned earlier have been growing since April, due to the closing of the borders with Kazakhstan and Russia. The June violence also resulted in closing of borders with Uzbekistan officially, but little of the previous volume of trade was coming in and out of China as well. The potato market was heavily impacted by these border closings. Reduced access to the export market has created a glut in the southern markets of Osh oblast' and Jalal-Abad. Although prices in Jalal-Abad are slightly higher (3-4 KGS per kilo in Osh, and 7-10 KGS per kilo in Jalal-Abad), farmers often don't have adequate knowledge of prices across regional markets, and so are poorly equipped to direct their produce to other more profitable market areas. It should be noted that local organizations like TES and Mehr-Shavkat have made notable inroads into information sharing about crop and input prices for farmers and in some cases attempting to forge linkages with external markets and small scale exporters. The mechanism by which middlemen and farmers select the market at which the produce will be sold is not well understood, nor is the current balkanization of market areas relative to conditions before the emergency.

The prices of fuel and fertilizer have continued to rise since the June events, making it difficult for farmers to pay for transport of their potatoes to market. Higher fuel costs force middlemen to charge more for their transport services, and they are more conservative in the volumes of produce they purchase from farmers.

It would not be accurate to say that labor costs have increased, but rather that the relatively inexpensive labor provided by ethnic Uzbeks is no longer available. In farming areas casual Uzbek labor cost about 150 KGS/day, while local ethnic Kyrgyz labors cost up to 300 KGS per day.

The general fear of reprisals and instability has discouraged many to return to work following the June events. Most ethnic Uzbeks who worked in Jalal-Abad and Osh near the affected areas are still staying at home or have fled to safer havens. Middlemen are thought to be avoiding some of the affected areas, furthering economic distress in those locations. It was observed that many of the retailers returning to work in the market areas are Kyrgyz. Most of the stalls and shops damaged or destroyed in the violence were Uzbek, so many don't have places of business to which they can return.

The post conflict market map demonstrates breaks in linkages with red X's, minor disruptions with red slashes, and an explanation point to show where critical issues may arise. Target populations are shown in pink. To understand the importance of timing for harvest and planting of the next crop it is important to consider the schedule of planting and harvests for the two sets of crops in the low-land regions. The one crop regions in the rest of the country are also marked on the seasonal calendar below, as are factors which have impact on incomes and livelihoods like warm and cold seasons, holidays and marriage seasons, school fees etc.,

Small Business owners:

Merchants have received the most damage directly from the June violence that resulted in a fragmentation of this critical market. The majority of market stalls destroyed as well as restaurants and café's were Uzbek owned. In reaction to the lack of venue where people can currently sell in Osh city, markets have sprung up in several areas of the city where no or little commercial activity was taking place before. One example is Zapodniy rinok – which currently houses many more small vendors. This market is Kyrgyz only – and Uzbek merchants do not feel comfortable coming to sell here. The majority of potato sellers were new to the market, and usually did not sell goods at this time of the year. The events have forced them to come out and find alternative income strategies. Numerous female retailers interviewed for the EMMA organized several small vendors together to pay for a vehicle. They then purchased vegetables at the Aravan market, and brought them back to Osh for resale. The main concerns for these vendors was lack of adequate storage space (they sold what they bought) and the conditions in which they were selling (the stalls are crowded on the side of the road with no roofs or real order). The Uzbek vendors have also reacted to the new market tendencies and have put up shops in the Uzbek mahalas all over Osh to provide for the Uzbek population. They source their produce from middlemen who can go between the two ethnically different neighborhoods. The result is that the goods are more expensive in the Uzbek mahalas, and the choice is narrower.

In Jalal-Abad city the fragmentation of the market was less pronounced, and market spaces with vendors of different ethnic origin were functioning.

Farmers:

Farmers depend on sales of early potatoes and other vegetables harvested during from the first planting for income, which they use towards planting the second seasonal crop which is harvested in the fall and is critical for food security. The importance of the early potato critical market is linked with the two seasonal regions and the glut of potatoes which is currently the biggest issue for the local farmers. Early potatoes are being left in the ground by farmers, damaging livelihoods and threatening food security. The potatoes aren't being harvested because on the one hand the cost of harvesting and transport to market is high, and on the other hand the price of the potato on the local market is down more than 50% in some areas. The closure of the borders with Kazakhstan and Uzbekistan has denied farmers the important export market, and created a glut of early potatoes. Other early crops such as tomatoes, onions, cucumbers and leafy greens are facing the same problems experienced by early potatoes. However, the other early crops aren't as dependent on export, and so are not as acutely suffering from an overabundance of supply and drastically lowered prices. Nevertheless, the reduced purchasing power of affected populations and the general fragmentation of the produce markets have adversely affected sales of all early crops.

The early potatoes planted in the spring and harvested in June/July are a cash crop, and of a variety that does not keep well for extended periods of time. Large scale storage facilities are not available, and although many families do have root cellars, they are disinclined to store the potatoes because they need the income realized from the sale of the early potatoes to offset the cost of harvesting them. The potatoes keep in the ground for a certain period of time, but that time ended by about the 10th of August, depending on local soil conditions.

That a good deal of the early potatoes have spoiled in the ground will affect the second growing season planting, which should be done by the end of August at the very latest. Without the income from the sale of the early potatoes, farmers will have difficulty purchasing enough seed and inputs for the planting. Fertilizer is especially expensive now, so crop yields for the second harvest are already expected to be low. The areas affected are those at low enough altitude for two growing seasons. They are Aravan, which is in the Osh oblast, about 30 minutes southwest of the city, and Shamaldisay, which is near Jalal-Abad city in the Jalal-Abad oblast, about 1.5 hours from Osh.

Seasonal Calendar

Seasonality is particularly important for producers in areas where two growing seasons are possible. There is a narrow window of time in which crops from the first planting must harvested and sold to realize income necessary for purchasing seeds, labor and other inputs for sewing, tending to and harvesting the second crop. As can be seen in the seasonal calendar below, the window of time for selling early potatoes is drawing to a close. With a large part of the early potato harvest spoiling in the ground, farmers have few resources even less time in which to sew crops for the second growing season.

Seasonal Calendar Key:	
Crop season:	includes Harvest (H) and Planting (Pl). Specific about crop culture for example Pl, Wh= Planted Wheat/ or H, Rice (Harvest Rice). Harvested Wheat and Potatoes (H, Wh,P).
Snow seasons:	Mountain (Mt), Valley
Holidays	Wedding (W), Religious (R)
Household expenses	Construction (const), W (weddings), S (school fees), w.prp (winter preparation)
Cost of Fuel	High Price (H$) and High Demand (HD)

Activity, Food or Income Source	Who?/ Where?	J	J	A	S	O	N	D	J	F	M	A	M
Seasons		Hot	Hot	Hot	Hot	cool	cool	cold	cold	cold	cool	cool	Hot
Rainy season						Rain	Rain				Rain	Flood	Flood
Dry season		Dry	Dry	Dry									
Snow seasons							Mt	Mt/Valley	Valley	Valley	Valley		
1st crop season	3 regions in S KYR	H Wh, P				Pl, Wh				Pl 1st crops Veg.	Pl 1st crops Veg.		H, Potatoes
2nd crop season	3 regions in S KYR	Pl	Pl			H, Rice, Corn	H, Veg						
Fertilizer 1 crop season												F	F
Fertilizer 2nd crop season			F	F									
Holidays				W, R	W,R	W	W						
Household expenses				$ W,S, const	$ W,S, const	$ w.prp	$ w.prp						
Labor ($$ when hot, effected by border closings), P 2/3 days, H 2 weeks		$	$	$									
Food Prices (L: Low, H: High)			L	L	L	L	L			H	H	H	H
Hungry time											H	H	
Home improvement													
Credit: for S, W. Demand is high, suppliers have to take credit to buy stocks													
Seeds							Low $	Low $	Low $			H $$	H $$
Fuel High $ and High Demand				H $ HD	H $ HD	H $ HD					H $, HD	H $ HD	
Flour					Mill		Gr imp	Gr imp					

Key Findings

The early potato market system has fractured. The linkage of bulk transport from producers to large bazaars is greatly diminished. The damage to large market areas like the grand bazaar and Osh has pushed a certain volume of commerce to secondary and tertiary market areas. For example, a significant amount of business has been pushed to Zapodniy Bazaar and Frunzenskiy where the number of vendors is such that many are selling on the roadside by the market, a practice that was less common before the emergency. Vendors selling there often obtain their goods by making daily taxi trips to production areas to purchase the goods for the day's sales. In turn, these newly enlivened market areas are the source of goods for another retail phenomenon created by the crisis – the many-folded increase of produce vendors in mahalas. Fear has prevented many people from venturing outside the relative security of their neighborhoods, and markets have sprung up to service hyper-local demand. In Uzbek mahalas in Osh city, the long-standing modest collections of kiosks that represent a neighborhood's commercial center are now often crowded with produce vendors squatting on the roadside.

Price

The price of early potatoes is low. In some areas[7] it has fallen to as low as 4 KGS per kilo in the large bazaars, which represents a decrease of more than 50% compared to this time last year. However, potatoes are being sold for the considerably higher price of as much as 11 KGS per kilo in Bishkek. As domestic supply is plentiful, the price difference for the same product in different geographic represents a break in the market system caused by a lack of affordable transport and security concerns. The glut in the market caused by the closure of the Kazakh and Uzbek borders depressed prices. Farmers who are currently desperate to get whatever income they can from potatoes are often selling at a loss.

Market Area	Sales price per kilo of early potato
Large regional bazaars	4-7
Secondary bazaars	6-10
Tertiary (Mahala) vendors	7-10
Direct from farmers	4-6

Supply

Approximately 75% of the early potato harvest is spoiled in the ground. The closure of the Kazakh and Uzbek borders has denied access to the important export markets on which farmers and middlemen rely for a significant amount of demand of their produce. Despite the fact that the supply of potatoes was strong until they spoiled, the supply chain is weakened and changed. The middlemen whose trucks carried bulk quantities of potatoes to markets did not come to the farms to collect the produce. Some are not coming because of fear, but many are coming because the margin on potatoes became so narrow – prices are down and the cost of fuel has gone up. To fill this gap in the market system, retailers are employing self-help mechanisms by banding together to rent small trucks for their daily supply of saleable goods.

Vendors purchase new produce for sale every 1-3 days, depending on the size of their operation and the volume of sales. For example vendors in secondary markets report replenishing their supplies nearly every day; often 1 or 2 sacks of potatoes that they collect via taxi. Vendors in mahalas purchase 2-3 sacks at a time and sell them over 2-3 days because ethnic differences make it more costly or

[7] Osh bazaars (Zapodniy, Frunzenksiy, Central Bazaar), in Aravan (Aravan village market, Uygur-Abad, Chek-Abad, and small villages Boegan.

complicated for them (or a transporter paid by them) to purchase the produce at a secondary market and bring it to the mahala.

Demand

Demand is high in secondary markets and mahala (tertiary) markets, but has fallen significantly (up to 50% for vendors who are still working the big bazaars). Vendors in secondary and tertiary markets report no problems selling all of the produce they procure regularly.

Main Conclusions and Recommendations

1. Many tons of potatoes will be lost to spoilage because farmers don't have the financial resources to harvest and transport them to market.
2. The drop in prices, rise in cost of inputs and fragmentation of the market is threatening the livelihoods of farmers who depend on income from sales of early potatoes.
3. Linkages between producers and retailers have weakened and changed to smaller volumes, reducing efficiencies of scale.
4. Smaller market areas in the cities and neighborhoods are expanding to absorb displaced retailers and new retailers selling produce as a livelihood alternative to their pre-emergency income.
5. The spoilage of part of the early potato harvest has implications for farmer livelihoods and food security. Direct intervention should be taken with the most vulnerable farmers to protect their livelihoods and ensure food security for the winter months.
6. Indirect intervention is possible to help the market find its way back to better functionality. Information about crops, prices, supply and demand, coupled with technical assistance and rehabilitation of irrigation would do much to address medium/long-term issues, mitigate future market problems and make the market system more resilient..

Response Options

	Response Option	Feasibility & Timing	Advantages	Disadvantages
1	Cash allocation to most affected farmers	-High Feasibility: Needs are fairly simple to assess with basic gap analysis. Logistically and administratively simple to implement. Assistance is easy to track and disburse, and monitoring receipt of funds straightforward. -Needs to be implemented immediately. Would most likely take 3-4 weeks to design and operationalize.	-Beneficiaries have control over use of funds, which is an empowering flexibility. -Can be implemented rapidly -Would not require prolonged program to effectively serve immediate needs. -Mitigates winter food security problems .	-Higher risk of misuse, and may exacerbate inter-ethnic tension and increase risk to most vulnerable. -Difficult to monitor use of funds.
2	Subsidized transportation linking farms and markets	Feasible: Needs can be assessed inductively in short period of time (2 weeks)	-Low-cost -Intervention need not distort normal market functionality -Could be set up in time for the autumn harvest	-May drive potato prices even lower by supply further outstripping demand if not delivered to areas where prices are currently higher. -Too late to save losses from the early potato harvest
3	Public information system for crops and markets	Feasible 3-4 months	-Could make good use of existing local NGO capacity. -Good for preventing/mitigating market fragmentation in future emergencies . -greater connectivity reduces enmity between producers and downstream market actors.	-Cannot be implemented as rapidly as direct interventions; will not ameliorate immediate needs

4	Vouchers for retailers to purchase from middlemen	Feasible; can be implemented through local MFIs and existing INGO programs	-Incentivizes middlemen to resume operation. -Lowers financial risk to vulnerable potato retailers, many of whom are women. -Increases volume of commerce and efficiencies of scale.	-May exacerbate potato glut in marketplace -Spoilage may increase as retailers procure more produce then can be sold in a timely fashion .
5	Cash for work for farmers to clear irrigation and other farm systems, and crews to clean up markets and businesses	High feasibility; can be implemented very rapidly through local NGOs and newly established INGO CFW structures.	-Provides livelihood support to vulnerable populations. -Increases beneficiary purchasing power for self-help, including crop inputs and winterization. -Increases ability of beneficiaries to purchase staples necessary for nutrition and survival.	-Cash may be used to fund relocation to Uzbekistan or Russia. -Must not interfere with regular field work, crop harvesting seasons.
6	Advocacy with Kyrgyz, Kazakh, Uzbek and Russian governments to reopen borders for trade	Modest feasibility; timing unknown	-Would address single biggest problem disrupting normal market system functionality. -Subsequent sales would provide critical income to vulnerable farmers. -The best response option if international funding is not available for market interventions.	-Will probably not be an Option until after window of maximum utility (purchasing inputs, etc) has passed for vulnerable farmers.