Study of Sheep Meat Production Value Chains in the Kyrgyz Republic and Export Capacity to the EAEC Member States

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Background

Research Motivation:
- In 2015, Kyrgyzstan became a member of the Eurasian Economic Community (EAEC)
- The possibilities for exports from Kyrgyzstan to EAEC countries increased
- One of the potentially important export goods is lamb
- However serious obstacles exist for the export of livestock products
- The current study was conducted to study these obstacles
Value Chain Study

• Qualitative research with elements of quantitative methods (November - December 2015)
• Four regions (cluster) - Jalal-Abad, Naryn, Issyk-Kul, Chui (including Bishkek)
• 12 respondents were interviewed in each cluster
• 48 respondents-value chain agents:
  – Farmers - sheep breeders (48%)
  – Market agents (middlemen) (33%)
  – Slaughterhouses (19%)
• “Snowball” method was used for selection of respondents

Farmers- Sheep Breeders

• Mixed livestock production (husbandry of sheep, cattle and horses) is a common form of farming - sheep comprise an average of 56% of the total herd
• Livestock - mainly middle-aged family men with experience of over ten years, and they are the successors of family businesses; 22% have loans
• Education - mostly secondary and special (70%), higher and incomplete higher education are about 30%
• The average size of the herd - 226 sheep
• 60% of the herds - ewes, the average productivity - 85 lambs for 100 ewes
• The level of the annual litter (crop of lambs) is 40% of the total herd
• About 30% of the sheep are sold annually; also farmers use sheep for household consumption (7%); 5% of the stock is lost because of diseases, theft
• The sheep is the concept of "high" and "low" seasons
• "High" season is the arrival of the sheep from jailoo - rangelands - the period of the mass sale of sheep
• Farmers sell two sheep group - grown lambs of the current year and older culled sheep (ewes and wethers)
• "Low" season is the winter season after the mass sale until spring
• Factors affecting the sale of sheep - need for cash, availability of forage on the market, competition on the markets (on supply)

**Farmers- Sheep Breeders (Cont.)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Price per head of sheep, USD</th>
<th>Price per head of lamb (under 1 year), USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naryn</td>
<td>73.8</td>
<td>49.4</td>
</tr>
<tr>
<td>Chui</td>
<td>71.8</td>
<td>34.4</td>
</tr>
<tr>
<td>Issyk-Kul</td>
<td>72.4</td>
<td>36.3</td>
</tr>
<tr>
<td>Jalal-Abad</td>
<td>65.2</td>
<td>39.4</td>
</tr>
<tr>
<td>Average price</td>
<td>68.1</td>
<td>40.4</td>
</tr>
</tbody>
</table>

• Costs associated with the sheep maintenance (per 1 head) - 13.1 US dollars:
  – Veterinary services - 0.9 US$  
  – Costs of village grazing - 4.5 US$  
  – The costs of stripping grazing - 3 US$  
  – Expenses for the purchase of forage - 4.8 US$  
• The costs vary from 6 to 22 US$ by region (Naryn and Chui, respectively)
Farmers- Sheep Breeders (Cont.)

- Market channels (farmer view):
  - Own village (56%)
  - Market agents (middlemen) (56%)
  - Livestock market (87%)
- Transactions are made based on oral agreement
- Documents on animals are asked by 83% of buyers
- Evaluation method of animal prices - visual assessment
- The only form of cooperation between sheep farmers is exchange of rams for cross-breeding purposes
- Optimal size of sheep herd for sale varies from 10 to 20 heads

Issyk-Kul region focused on the sale of sheep in the summer resort season, since autumn - sales decline until the spring

Market Agents (Middlemen)

- Market agents - middle-aged married men with experience of more than ten years; 73% of them are business owners; motivation of business - profit earning
- Almost half of them have higher or incomplete higher education (47%)
- Two-thirds of the agents do not have officially registered businesses; the rest prefer to take a patent
- Middlemen practically do not hire workers on a permanent basis
- Equity capital is sufficient for half of the intermediaries, the others take a loan or have an investor; 13% work only based on credit capital
### Market Agents (Middlemen) (Cont.)

- Middlemen operate mainly on the household basis
- Facilities for keeping animals (155 m²), storages and utility rooms are the main basis of the business operation
- 74% of entrepreneurs have one vehicle; 20% have two cars, half of the cars are trucks; refrigerators are not available
- "High" season is characterized by increased sales level - more than 50 sheep per week on average; "low" season – 20 sheep
- The middlemen bear the cost of transportation of animals and their maintenance (about 3 US$ per 1 sheep)
- Net margin per 1 animal at the "high" season is about 10%, and during "low" season - 9%

### Market Agents (Middlemen) (Cont.)

- The purchase and sale prices vary across the regions:
  - "High" season - 76 and 88 US$
  - "Low" season - 104 and 118 US$
- Average gross income of market agent is about 450 US$ per week in the "high" season and 200 US$ per week in the "low" season
- In Issyk-Kul the season is also shifted towards the summer tourist period
- The highest profitability among middlemen are reported in Jalal-Abad, the lowest in Naryn
- In Jalal-Abad, the average size of the sheep herd for sale is much bigger than in other regions, and travel expenses per 1 head are lower
Market Agents (Middlemen) (Cont.)

- Purchasing and Sale Channels
  a) Purchase  
  b) Sale

![Pie charts showing purchasing and sale channels.]

- The key factors at sale are price, exterior and animal fatness of the sheep, season, location and sales channels
- All transactions are done in cash, regular customers have the opportunity to buy on credit
- Animals are sold alive, but also can be slaughtered upon request
- Deliveries of sheep in Kazakhstan used to be carried out before, however, stopped with the accession of Kazakhstan to the Customs Union
- Shipments were made to the border zone in the Chui Oblast, where Kazakh dealers buy sheep and transport them across the border
- Currently, there is no supply of sheep due to the substantial devaluation of the Kazakh currency, while supply of horses and cattle is still profitable
### Slaughterhouses

- Managers and owners of slaughterhouses - married middle-aged man, with experience from 3 to 5 years (67%)
- Higher education and specialized secondary education in 44% in both cases
- The motivations are profit-making and discovering of a personal potential
- Only 67% of businesses are officially registered
- Slaughterhouses usually work not only with sheep (33%), but also with cattle and horses
- Slaughterhouses are not only slaughtering of animals but also carry out the delivery of meat

### Slaughterhouses (Cont.)

- The slaughterhouses employ from 3 to 10 people on a permanent basis
- Slaughterhouses don’t operate with credits
- Infrastructure includes:
  - Facilities for keeping animals
  - Slaughtering line(s)
  - Sewage facilities
  - Sharpening equipment
  - Scales
  - Storerooms
- Refrigeration equipment is not available
- Slaughter capacity is small - 67% can slaughter up to 20 sheep per day, the remaining slaughterhouses - up to 50 sheep
Slaughterhouses (Cont.)

- In the "high" season the workload reaches up to 60 heads per day, while in the "low" season only ten heads
- Average weight of live sheep is about 40 kg, meat output is about 60% of the live weight
- The purchase price is US$ 71 per head in the "high" season and $ 96 - in the "low" season
- Gross profit - 10% in the "low" season, 12% in the "high" season
- Main requirements - meat quality, health standards, price and ability to deliver to the buyer
- The price on meat and services is fair according to the opinions of more than half of butcheries
- Slaughterhouses can sell the meat and provide services on credit for permanent clients

Slaughterhouses (Cont.)

- Wholesale markets are the primary source of supply of sheep, while deliveries from farmers and suppliers are also important
- Channels for selling sheep are also based on sales at the wholesale and retail markets in the region, as well as through direct delivery to hotels, cafes, and restaurants
- Shipments to other areas and export are rare
- Slaughterhouses operate as centers for the provision of services, and do not carry out purchase of sheep in large quantities
Main Conclusions on the Value Added Chain

- The traditional way of doing sheep husbandry business
- Small scale production
- Decrease of breeding qualities
- Serious technological constraints
- Lack of the economies of scale
- Lack of the export

Potential Export Markets: Kazakhstan and Russia

Production and Consumption of Sheep and Goat Meat in Kazakhstan and Russia

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output, thousand tons</td>
<td>142,9</td>
<td>149,5</td>
<td>153,8</td>
<td>156,4</td>
<td>161,9</td>
</tr>
<tr>
<td>Consumption, kg per capita</td>
<td>6,5</td>
<td>7,6</td>
<td>6,6</td>
<td>6,9</td>
<td>6,7</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output, thousand tons</td>
<td>184,6</td>
<td>189,0</td>
<td>190,4</td>
<td>190,0</td>
<td>203,9</td>
</tr>
<tr>
<td>Consumption, kg per capita</td>
<td>0,9</td>
<td>1,0</td>
<td>1,0</td>
<td>1,2</td>
<td>1,5</td>
</tr>
</tbody>
</table>

- Import and export in Kazakhstan are small (several hundred tons)
- Russia imports 9-10 thousand tons of lamb a year for 50-60 million US$ USD. (About 5% of its domestic production)
- Kazakhstan market is closer and potentially more attractive, because in Russia lamb is not the main type of meat for consumption
• However, volatility of the exchange rate in Russia and Kazakhstan make export capacity of lamb weak in the nearest future
• In addition to economic reasons, animal diseases have led to a ban on imports of livestock products in Russia and Kazakhstan since 2007

• For withdrawal of the ban on import of animal products quite a number of major changes are required from the state:
  – laboratory equipment, personnel training, improving regulatory legal frameworks, animal identification, timely vaccination, restoration of effective veterinary control
• As well as by private enterprises:
  – timely veterinary care, appropriate equipment of production facilities in the slaughterhouses and meat processing plants, improving the technology of production and processing of meat
• It will require significant investments and time to implement these measures
Problems and prospects of production and export of lamb in Kyrgyzstan

- Production problems and moving cattle and mean along value added chain
- Domestic institutional constraints associated with the current level of development of agriculture in general
- Technical barriers to exports of lamb to EAEC countries
- External macroeconomic factors.

Production Problems

- The traditional nature of agriculture has led to a focus on domestic consumption. The population produces and consumes a significant share of mutton with a high fat content. Developed countries consumers prefer decreased fat content in meat, and typically do not consume meat of adult animals. There remains capacity for supply to Kazakhstan, where historically the culture of mutton consumption is close to the tradition of Kyrgyz people.

- Small-scale production does not give an opportunity to increase productivity. Some resources, such as remote pastures, are underutilized. At the same time, there is overgrazing of pastures near villages and lack of winter feed. Lack of capital hinders technological solution of the problem - the mass slaughter of livestock in the fall, followed by freezing and gradual selling throughout the year.
### Institutional Constraints

- Animal identification system for sheep is unreachable in the nearest decade
- There are no practical steps for the introduction of veterinary zoning
- Insufficient level of vaccination
- Pasture reform has not resulted in improved management, pasture degradation continues
- Veterinary situation shows massive ignoring of legislation by the participants of the process of meat production and processing

### Technical and economic barriers

#### Technical barriers
- Ban on exports of meat due to the current epizootic situation
- Core modernization of veterinary systems and investments from public and private sector can make a difference

#### Macroeconomic barriers
- The devaluation of the Russian and Kazakh currencies make the investment unprofitable
- Now Kazakh lamb is cheaper than Kyrgyz lamb
- Continued instability of the economies of the main trading partners - Russia and Kazakhstan - negatively affect the export prospects of Kyrgyzstan
Recommendations

- Support for large producers - access to technology and capital, investments in trainings and technologies, responsibility for the condition of pastures and livestock veterinary status should be passed on to the large producers
- Improving veterinary control system
- Develop a strategy to promote export of meat to the markets of developed countries, including Russia

Thanks for the attention!