

Mid-Term Report

December 2002

1.) Principal Investigator – Kathleen Galvin, Senior Research Scientist, Natural Resource Ecology Laboratory and Associate Professor and Chair, Department of Anthropology, Colorado State University

Co-Principal Investigator – Nurlan Malmakov, Head of Reproductive Laboratory, Kazak Research Institute of Sheep Breeding, Almaty Oblast, Kazakstan

Co-Principal Investigator – Irik Abdullavevich Almeev, Head of Goat Breeding Department Kyrgyz, Livestock Research Institute, Chu Oblast, Kyrgyzstan

2.) Title of Project Feasibility of Market Development and Support Services for Livestock Products in Kazakstan and Kyrgyzstan

3.) Narrative Summary

Kazakstan and Kyrgyzstan, in common with the other Central Asian republics, had highly developed livestock industries which produced wool, other animal fibers and pelts, as well as meat. Following the disintegration of the Soviet Union, these industries, and the USSR market on which they were based, largely collapsed. The wool and fiber industries are now experiencing a revival. The region has a comparative advantage in producing livestock on an extensive basis. Rangelands cover more than 60% of the agricultural area, managed by herders with traditional skills. There is a genetic fund of indigenous and crossbred animals of economic value, and a depth of national research skills inherited from the Soviet period.

Regionally, wool production has remained steady since the year 2000 yet the prices remain low. Most wool and fibers go to the other Newly Independent States though China has become increasingly important to the trade. Household data from previous studies and our studies suggest that wool, cashmere and camel hair are sold without the benefit of separation into coarse and fine wool and that of other fibers. This is due to the single and low prices that persist for the products.

The “Feasibility of Market Development and Support Services for Livestock Products in Kazakstan and Kyrgyzstan” study examines how the livestock resources can be better exploited to meet new commercial demand as well as increase economic returns to producers. Focusing on a few high value products – fine wool and goat cashmere – the study investigates the information and technology transfers needed to improve marketability



Fine woolled white Merino crossbred sheep in Almaty Oblast's mountain pastures

4.) Research

Problem Statement – This project addresses the problem of developing markets for fine wool and cashmere that can: increase profitability for producers and the commercial sector, meet industrial quality standards, capture niche markets for high-value projects in competition with similar products on the world market, and develop the comparative advantages of unique animal genetic resources and the natural rangeland.

Recent assessments of the market for livestock products in Kazakhstan and Kyrgyzstan have identified the greatest potential in fine sheep wool and goat cashmere, with camel hair and pelts to a lesser degree. Some of the wool processing factories that fell into disuse post-1991 have recently been rehabilitated. And in the last few years demand for fine/semi-fine wool – the most commercially valuable kind – has increased in both Kazakhstan and Kyrgyzstan. Unfortunately, there are few pure fine wool sheep left, since in the economic crisis of the early reform period most remaining Merinos were crossed with the indigenous fat-rumped meat breeds. The largest factories are not able to obtain sufficient domestic supplies of fine and semi-fine wool. In 2000 these factories operated at between 10 and 35% capacity. In addition, processing factories are prepared to pay higher prices to producers for cleaned and sorted wool thus training farmers to sort wool by different grades would improve their ability to market their livestock products.

In approaching the market feasibility problem we plan to **one** analyze the potential to improve marketing of high value livestock products to national processing facilities and international buyers. The potential is being assessed from the perspective of producers, traders, domestic processors and researchers. We plan to identify existing constraints to

improved marketing. The analysis will specify the type of assistance required from national agencies and the private sector to assist in overcoming these constraints. This is developmentally relevant as the results of this project, though modest in scale, will propose measures for assisting producers, researchers and the commercial sector to realize greater value from wools and fibers through the market. These measures could be implemented through government and donor-assisted projects in the future.

Two, we are assessing the feasibility of establishing support services for marketing livestock products and examining shortcomings in the current marketing system. We also are reviewing the impact of support services provided to the livestock sector in similar ecological conditions. Recommendations will be made to governments and the private sector on the priorities for allocating resources to develop livestock marketing support services and outline the financial investment and training needed to implement the recommended services.

We are accomplishing the above goals by collecting data from four study areas in Kazakstan and Kyrgyzstan. Data has been and is being collected from sample households and traders in each study area and from processors and officials in the principal commercial centers of Almaty, Kazakstan and Bishkek, capital of Kyrgyzstan. National researchers in the project are collecting these data in their respective countries, with technical assistance from the consultant and the PI. Reviews of livestock support services provided in Mongolia and China will be undertaken by C. Kerven

We have not modified the problem model since initiating this research. The timing of some of the activities, however, have been modified to accommodate research and travel schedules. Instead of having the data and research entered into a database and analyzed by December 2002 we will commence with that process in February 2003.

Progress on Research

1. Data on the current producer marketing patterns of live animals, fibers and skins will be analyzed from an existing sample survey of 40 livestock-producing households in Kazakstan (DARCA 2001) and from a new survey of 30 such households in Kyrgyzstan.

The DARCA data are currently in a database. They will be analyzed in February 2003 when Kazak scientists Dr. Nurlan Malmakov and Mr. Aidos Smailov, travel to Fort Collins for training and data analysis. We decided to increase the number of household surveys in Kyrgyzstan (from 30 to 40) to be more comparable to the Kazak data. The Kyrgyz surveys are being conducted by Dr. Abdugani of the Livestock Research Institute, Goat Breeding Department, and will be complete by the end of December 2002. Dr. Abdugani is a colleague of Dr. Almeev, a co-PI on this project. Though Dr. Abdugani was not initially part of the project, his knowledge and expertise will allow for

excellent data collection. The Krygyz data will also be processed and analyzed in February 2003 at CSU.

Fieldwork initially commenced early in the year 2002 when Carol Kerven traveled to the region and established working relationships with our Kazak scientific collaborators (funded by leverage funds). Galvin and Kerven traveled to Kazakstan in August 2002 and carried out in-depth interviews of herders and their families in villages and homesteads to access household production strategies and marketing of wool, cashmere and camel hair. Kerven later traveled to Kyrgyzstan to coordinate the interviews and data collection. Tables 1, 2 and 3 show summary household data on livestock product prices from various villages in Kazakstan. These data will be made much more complete following the analysis of the household surveys conducted by our national colleagues.

See separate files:

Table 1. Prices of livestock products in Aidali village area

Table 2. Cashmere and wool prices in Topar village area

Table 3. Prices of livestock products in Shiem village area

2. Data on marketing, processing and demand for livestock products will be obtained from an informal survey of up to ten livestock traders and processors in each country. These will be selected according to varying scales of operation and different types of livestock products handled.

The national collaborators (Dr. Serik Aryngaziev, Kazakstan and Professor Almeev, Kryrgyzstan) have been collecting data on wool production at the regional level, export of wool, cashmere sales of goat and camel hair, trading, and processors. These data will be available in early 2003. Below are some data (Tables 4, 5) collected at the regional and national levels on wool production, and export in Kazakstan. Table 6 shows prices of livestock products in the Almaty markets.

See separate files:

Table 4. Wool Production in Almaty Oblast

Table 5. 2001 Export of Wool in the Republic of Kazakstan

Table 6. Prices in Almaty markets

3. Informal interviews will be carried out with key officials responsible for developing the livestock sector, including market development.

These are being gathered by the in-country national collaborators (Dr. Serik Aryngaziev, Kazakstan and Professor Almeev, Kryrgyzstan) and overseen by co-PI Dr. Nurlan Malmakov. The data will be available in early 2003.

Some data from **Kazakstan** were presented above in the section on Progress on Research, sections 1 and 2. Dr. Nurlan and Dr. Kerven will be bringing other Kazak data to CSU in February 2003 for analysis.

In Kyrgyzstan Prof. Almeev is interviewing seven traders and three national processors of wool and goat down, using a checklist of questions developed from the proposal. He is carrying out these interviews in Naryn town (Naryn Oblast), Bishkek, Akshiski Rayon (Jalal Abad Oblast) and Tokmok town (Chui Oblast). He will obtain national statistics on the export of wools and goat down from 1990 to 2002 and a list of all officially-registered traders and traders in wools and fibers operating with the country. He noted that many traders are not officially registered, so as to avoid paying tax, but the largest traders and processors are likely to be registered.

By Dec. 2002 Dr. Almeev's report will be completed and then translated into English by a Kyrgyz translator, Gulbara Tagaeva, who has previously worked on the topic of goat down and who assisted the team during C. Kerven's visit to Kyrgyzstan in August 2002.

Dr. Abdugani is carrying out the survey of 40 livestock-owning households, using the questionnaire developed for this project. The questionnaire was translated into Kyrgyz by Ms. Tagaeva and tested on several farmers in two villages during the visit. The questionnaire was revised three times and Dr. Abdugani was trained in using the questionnaire.

It was agreed that the survey should cover two areas, one in which fine wool/Merino sheep were raised and another area in which downy goats were raised. Twenty farmers are being surveyed in Chui Oblast, Keminisky Rayon, where Merino and Kyrgyz fine wool sheep were kept and there is a demand from the Kasiet wool processing factory in Tokmok town. The village of Shabdan in this rayon is also being included as downy goats were introduced there in 1995 and it is likely that farmers in Shabdan village are selling goat down.

A further 20 farmers are being surveyed in Badken rayon of Badken Oblast, in the extreme southwest of the country at a distance of 1000 km from Bishkek. This oblast contains about 200,000 goats, 40% of all goats in the country, and farmers have been selling goat down for several years to traders from Uzbekistan and China. Two villages were selected: Samarkandik, 60 km from the oblast center and Aksi village, nearby.

Households were selected on a stratified sample, according to the level of smallstock ownership within each sampled village. Three ownership categories are being sampled: less than 30 head; 30-70 head and plus 70 head.

The farmer survey will be completed by Dec 2002, and the questionnaires submitted by Abdugani to the regional PI, Dr. Malmakov. The raw data will then be processed at CSU. The data from the Kyrgyz farm survey will be compared to that from the survey in Kazakstan of 40 livestock-owning households, under the DARCA Macaulay Institute project.

Dr. Abdugani will also obtain maps showing the location of different sheep (for meat and wool) and goat breeds by ecological zone within Kyrgyzstan in the Soviet period.

4. Overall research outputs and recommendations to date

Kazakstan

1. Training needed in sorting wool and fiber

The importance of training producers and traders in sorting wool and cashmere cannot be over-emphasized. The Soviet state farms had skilled personnel who graded all fibers; in the case of fine wool, using up to 30 grades. But nowadays private farmers and most traders do not have these skills. Traders usually offer a single low price for all unsorted wool and fiber that inevitably contains both poor and good quality products. Producers are thus unable to reap any benefit of selling better quality wool and fiber. This is summed up by a producer/trader who emigrated from Mongolia to one of the villages we visited: this man formerly worked as a fiber grader in Mongolia on a state farm. His comment is that “The public does not know that after sorting, we [traders] make a lot more money”. However, few Kazak traders have these skills, and the raw unsorted product is therefore exported cheaply to other countries. Sorting adds value at the source of production.

2. Women should be prime targets for training on wool and fiber development

Kazak and Kyrgyz women, in common with women in other parts of Central Asia, have traditionally processed livestock fiber products from sheep, goats and camels into homemade articles such as carpets and clothing. Sometimes these articles are sold by women and provide a much-needed source of cash income. In handling wools and fibers, women comb, clean, sort, card, spin, weave and knit, as well as make felt and knotted carpets. When male household heads are interviewed about production and sales of wool and other fibers, they frequently refer to their wives for accurate information, which rarely occurs in the case of other household livestock management questions. Central Asian women are more knowledgeable about and interested in wool and animal fibers, and should therefore be a focus of development efforts to improve marketability of these commodities.

3. Market development needs to reflect regional variation of Kazakstan

The different ecological regions of Kazakstan each have particular potentials to develop wool and fiber marketing. Strategies to improve marketing and producer prices must therefore be geared to these regional advantages. Parts of Almaty, Pavlodar and Dhambul Oblasts are suited for fine wool Merino crossbred sheep. Western Kazakstan and parts of Almaty Oblast are suited for semi-fine wool breeds. Coarse wool from local crosses is produced in almost all regions but has a very low commercial value. The Oblasts of Atrai, Aktubinsk and Kyrzyl Orda are the main areas for camel hair production. The desert portions of southern, western and central Oblasts contain local cashmere goats. Our project will define more closely the development objectives for improved marketing in each region.

4. Loss of genetic resources and need to re-invigorate wool breeds

During the Soviet era, a number of specialized wool breeds were developed and adapted to the different ecological regions of Kazakstan. Many of these new breeds were derived

from seven British breeds brought to Kazakhstan in 1965. According to scientists at the Kazak Sheep Breeding Institute, some of the breeds resulting from crossing UK breeds with Kazak breeds in the past are still very suitable for the present market conditions and private sheep farmers. The Hampshire crossbreed is considered especially appropriate, as it is a fast-growing meat-wool breed producing semi-fine wool for which there is a demand. From an original state flock of 60,000 Hampshire/Kazak crossbreeds there are now only 2,000 remaining. Kazak scientists are keen to develop this breed for sale to private farmers and would like to re-invigorate the breed with new genetic material. Hampshire sheep are raised in the USA and UK.

5. Government taking control of wool and fiber marketing

As the last several years have seen a rise in the value of sheep wool and goat fiber, following the deep slump in the mid 1990s, this trade has become profitable again. The Kazak government is now showing a renewed interest in regulating and in particular taxing, this trade. This follows years of neglecting wool and fiber production in the post-independence period. Local informed opinion is that the state is seeking to share the profits in processing and selling wool and fiber. Examples given are the recent state intervention in a private wool processing company, which has been made into a joint stock company with a government share. The government is also enforcing more stringent taxation of the wool/fiber collection agencies. This has meant that many smaller companies do not register with the state, to avoid paying taxes.

6. Infrastructure development

It is the case that as people are located further away from principle markets, the price of their products declines. The prices would be higher if transport to markets such as Almaty could be obtained.

7. World prices

Producers and domestic traders need information on annual world prices for each commodity according to grade and types. Presently, farmers lack any knowledge of the final worth of their products on the world market and therefore are in a very weak bargaining position with traders. At the same time, domestic traders are also unaware of the price differentials set by processors according to grade specifications. Traders therefore buy indiscriminately without regard for quality, paying only the lowest price for unsorted products. By increasing their awareness of international specifications, traders would be encouraged to set price premiums for better quality product. This would increase farmers' incentives to improve quality and sort their products.

Kyrgyzstan

Given the short period of time spent in Kyrgyzstan, little information could be obtained. However, interviews are being conducted. See section on Research Progress 3. Prof. Almeev has prepared a report, which is being translated into English by Dr. Malmakov. Following is a summary:

Cashmere production

The estimated national production of goat down is between 40-45 tons. Most of last year's production was sold, mainly to traders from China and Uzbekistan. There is some unsold, for example, 4 tons in Badken and 2 tons in Aksikishi rayon. The price of goat down in 2002 was considerably lower than in 2001, as elsewhere in Central Asia. The average price in 2002 was \$ 7-8 kg for combed down, compared to \$11-12 in 2001, according to Prof. Almeev. Domestic collectors are holding onto their stocks from 2002 in the hope that prices will rise in future years.

Development of cashmere goat breeding

The World Bank funded Cooperatives for sheep breeding (KAO) purchased and marketed goat down in addition to sheep wool last year (2001), for the first time. A new cooperative for farmers raising downy goats (cashmere) was also created under this project, in Talas Oblast in 2001. The goat farm is based at Chong Jirgitau village in Talasiskiy rayon. Prof. Almeev visited this farm recently. The farmer bought 150 downy goats from Aksikishi rayon of Jalal Abad, with financial assistance from GTZ (German aid). The farm aims to raise downy goats for distribution to other farmers.

Wool production

A visit was made to a village called Onbirjilghan in Chuisky Rayon, about 100 km east of Bishkek. Discussions were held with the village administrator, livestock specialist and a large-scale sheep farmer. The village has 400 families. Very few farmers keep fine-wooled sheep, mostly having Kyrgyz fat-rumped (Kurduchne) breeds crossed with Kazak sheep such as Edil Baisky and Digeres breeds. Farmers find it profitable to raise meat breeds as meat from local sheep is in high demand. Several years ago some Merino sheep were distributed to the village through the World Bank project, but the project took these back as farmers did not find them profitable. The Merino lambs required more care compared to local breeds and at that time there was a low price for fine wool. In 2002 villagers sold white wool from Kyrgyz fine wool sheep crossed with meat breeds, at a price of 30 som/kg (\$0.67/kg). The dark coarse, so-called "black", wool from local breeds sells at 4 som/kg (less than \$0.10 cents) but many farmers do not sell this as there is no demand. Farmers use this type of wool for the home, to stuff mattresses and make rugs. No one in this village sells goat fiber though many goats are kept. The reason is that no one knows how to comb goats so traders do not come to buy combed down.

Milking goats

Milking goats (Saananisky breed descended from Saanan European goats) are kept by some villagers. The does give between 3-6 litres milk a day and sell for \$30 each. There is some demand for these goats among villagers as they require less special feeding than milk cows.

5.) Gender

This projects incorporates women researchers and women informants. K. Galvin and C. Kerven are the P Is on the project. Several women were interviewed by the PIs during

their trip in August and many more will be represented in the household interviews. See section on Research Outputs 2 on the recommendations for women.



Figure 2. Project researcher, Carol Kerven, sitting with Kazak family.

6.) Policy

We have the full support of the Kazak Research Institute of Sheep Breeding in Kazakhstan and the support of the Kyrgyz Livestock Research Institute in Kyrgyzstan. National scientists will receive technical assistance on household and trader survey and informal interview techniques. We have also purchased a computer for the Wool Standardization Lab at the Research Institute of Sheep Breeding in Kazakhstan.

7.) Outreach

Recommendations will be made for governments and the private sector on the priorities for allocating resources to develop livestock marketing support services. See our Research Outputs and Recommendations for Kazakhstan above for some initial information for outreach.

8.) Developmental impact

Environmental impact and relevance

Though the project objectives do not directly address this question, it has become clear that market development needs to reflect regional ecological variations in the region. See Section 4.3 above.

Agricultural Sustainability

This project examines how livestock resources can be better exploited to meet new commercial demand as well as increase economic returns to producers. The results of this study will be of interest to two livestock development projects in Kyrgyzstan -- the World Bank sheep development project and the new UK DFID project "Support to livelihoods in livestock producing communities". USAID does not presently fund livestock-focused projects in either country. Kazakhstan does not have any livestock development projects, despite the importance of rangelands as a national resource, the tradition of extensive livestock rearing and the contribution of livestock to rural household economies. This project proposes measures for assisting producers, researchers and the commercial sector to realize greater value from wools and fibers through the market. These measures could be implemented through government and donor-assisted projects in the future.

Contributions to U.S. Agriculture

Information from this project could be used to determine to what extent the US small stock, wool and cashmere industry (to the extent that they exist) could become interested in Central Asian livestock products and contribute to the CA breeding stock.

Contributions to Host Country

The case of Mongolia demonstrates the possible benefits to the host countries of developing a successful wool and fiber market. Selling raw cashmere has become the major source of income for privatized herders in Mongolia and Mongolia's raw cashmere production has risen by 70% propelled by a strong demand from China, USA and Europe. The Mongolian government has encouraged direct foreign investment and new technology.

Linkages and networking

This project is linked closely with the two other GL-CRSP funded projects for Central Asia. We have developed a plan for sharing and synthesis of data among projects.

Collaboration with international research centers

We work closely with Macaulay Institute, a leader in small stock research.

10.)Leverage funds and linked projects

Macaulay Land Use Research Institute, U.K., 2001 - Desertification and Regeneration in Kazakhstan and Turkmenistan: Modeling the impacts of market reforms on Central Asian rangelands. (DARCA) EU (funding not available)

11.) Training

Short term

CSU will host a two-week training session in February 2003 for two host country nationals. In addition, numerous people have been trained, both in Kazakhstan and Kyrgyzstan on survey techniques and informal interviewing techniques.

12.) Collaborating Personnel

United States:

Dr. Michael Lacy, Professor, Sociology Department, Colorado State University

Host country

Kazakstan

Dr. Serik Aryngaziev, Head, Department of Goat Selection and Breeding, Kazak Research Institute of Sheep Breeding,
Dr. Koishybek Karymsadov, Head, Laboratory of Wool Quality Analysis, Kazak Institute of Sheep Breeding
Dr. Bolatkhan Makhatov, Director, Kazak Research Institute of Sheep Breeding
Professor Terentiev, Researcher, Wool Standardization Lab.,
Kazak Research Institute of Sheep Breeding

Kyrgyzstan

Dr. Irik Almeev, Head, Goat Breeding Department, Kyrgyz Research Institute of Sheep Breeding
Dr. Abdugani, Goat Breeding Department, Kyrgyz Research Institute of Sheep Breeding

United Kingdom

Dr. Carol Kerven, Independent Researcher

13.) Collaborating institutions:

Kazak Research Institute of Sheep Breeding
Mynbaeva Village, Dhambul Rayon, Almaty Oblast, 483174 Kazakstan

Kyrgyz Livestock Research Institute
Frunze Village, Sokuluksky Raion, Chu Oblast, 722125 Kyrgyz Republic

14.) Publications

Kerven, C., Russel, A.J. and Laker, J. 2002. Potential for increasing producers' income from wool, fiber and pelts in Central Asia. Working Paper 45, ILRI/Macaulay Institute, Nairobi.

15.) Abstracts and Presentations:

Galvin, K.A. 2002. Feasibility of market development for livestock products in Kazakstan and Kyrgyzstan. Paper presented at the US-AID Global Livestock CRSP Program Conference, Washington, D.C. October 8-12.

Galvin, K.A., C. Kerven, Nurlan Malmakov and J. Sunderland. 2002. Livestock product marketing in Kazakstan. Poster presented at the US-AID Global Livestock CRSP Program Conference, Washington, D.C. October 8-12.

Kerven, C. 2002. Cashmere production in Kazakstan and Kyrgyzstan. . Paper presented at the US-AID Global Livestock CRSP Program Conference, Washington, D.C. October 8-12.