The Scientific World and the Farmer's Reality: Agricultural Research and Extension in Kyrgyzstan

Author: Schmidt, Peter

Source: Mountain Research and Development, 21(2) : 109-112

Published By: International Mountain Society

URL: https://doi.org/10.1659/0276-4741(2001)021[0109:TSWATF]2.0.CO;2

Mountain Research and Development Vol 21 No 2 May 2001: 109–112

The Scientific World and the Farmer's Reality:
Agricultural Research and Extension in Kyrgyzstan

Peter Schmidt

Shepherds on horseback tend sheep on green mountain pastures: an idyllic image of Kyrgyzstan, a mountainous country in the heart of Asia, that hides the harsh reality of life after the collapse of the Soviet Union. The radical change from a planned economy to a free market economy caused an almost complete breakdown of Kyrgyzstan's industry and interrupted trade flows. Today, many families in rural areas depend on subsistence agriculture, living below the poverty line. Kyrgyzstan has formed a new agricultural advisory service to render assistance to rural families in this difficult transition period. In the absence of adequate formal research, this extension service relies on participatory methods to develop messages adapted to the new situation. It makes use of a participatory smallholder research methodology known as participatory technology development.

The impact of 1991 on the agricultural sector

In 1991, after the collapse of the Soviet Union, the Central Asian Soviet region known as Kirgyzia became the independent Republic of Kyrgyzstan. Independence was accompanied by a drastic decline in national economy. Agriculture, which still accounts for around half of the gross domestic product, has undergone drastic changes. Huge state farms have been dismantled, land has been privatized and distributed, the supply of agricultural inputs has been interrupted, and marketing outlets have all but disappeared. A good part of the former rural cadre, many of them of Russian or German origin, have left the country. Highly specialized former employees such as milkers or tractor drivers have suddenly become independent farmers who have to plan agricultural production, run a farm with livestock and crops, and find a market for their products.

Ninety-four percent of Kyrgyzstan is mountainous. Sheep breeding, based on abundantly available pastureland, is traditionally one of the most important branches of agricultural production (Figure 1). However, the large flocks of the former Sovkhoses and Kolkhoses have disappeared. The number of sheep has decreased from 11 million before independence in 1991 to around 3 million today. Kyrgyzstan struggles to live from its resources, of which sheep are the most dramatic example. With the conversion of large farms to small, family-run subsistence farms, production targets and breeding plans designed in the centralized scientific institutions either vanished or became meaningless.

Policy development: Researchers defend their own breeds

June 2000. In conjunction with the World Bank-financed Sheep Development Project, the Kyrgyz-Swiss Agricultural Project (KSAP) is supporting a process to design a national sheep/goat breeding policy for the Kyrgyz Republic. Another function is to integrate field experiences into policy

FIGURE 1 Abundantly available pastureland in Kyrgyzstan has traditionally made sheep breeding the most important branch of the agricultural sector. However, the number of sheep has decreased from 11 to 3 million since 1991. (Photo courtesy of Helvetas)

"I have not come across any new extension messages from our research institutions. What else can we expect when scientists have to sell potatoes in the bazaar in order to survive!" Musaliev Jumabek, specialist working for a Rural Advisory and Development Service (RADS)

dialogue at the national level. The main event in this process is a workshop where all the main stakeholders participate. Among the participants are representatives from the government, farmers, researchers, the processing industry, extensionists, and international consultants. Attending the workshop, I realize that the researchers involved in breeding activities are held in great esteem. Many of the scientists are elderly and all are men; they deserve high regard because of their age. Many of the other younger participants have been their students. The scientists talk about the breeders as having created particular breeds. Literally translated, the animal breeders are called authors of the breeds they work with. Breeders proudly defend their own breeds. The production figures for each breed are very important. But when the policy formulation taskforce is asked to include an economic comparison of the breeds in the policy, it fails to reach a consensus. No solid economic data about sheep production are available. Sheep breeding in Kyrgyzstan has so far concentrated on wool production. The same is true for research, which focuses primarily on wool genetics. Only at this workshop was the importance of meat production accepted by the majority and hence included in the new policy.

This example shows that the spirit of the command economy lives on in present agricultural research in Kyrgyzstan. Production and planning figures are important. Whether a venture is profitable or not is not a relevant question. At the same time, scientific institutions lack resources and are barely able to operate. The great social prestige and considerable political influence still associated with research prevent researchers from responding to the new economic environment and from focusing on current needs. Of course, there are always exceptions to this general trend.

FIGURE 2 Inhabitants of Ak Bosogo, a rural village at 2800 m surrounded by the mountains of the Alai Range, prepare the traditional pilaw (rice with mutton). (Photo by Andreas Kläy)

Marketable products: A favorite with farmers

October 2000. I drive through the wide, mountainous landscape of rural Kyrgyzstan to Naryn, the provincial capital in the far eastern part of the country close to the Chinese border. The fields have been harvested and a thin film of snow covers the wheat stubble. Here and there, shepherds are driving their flocks on the winter pastures. Obviously, no breeding plan is followed. What unites the flock is the fact that most sheep have a fat rump, which helps them survive the harsh winters. In the market, the fat rump is the major quality criterion for farmers. Sheep bred for wool are white and have no fat rump.

There are still specialized sheep farmers who opt to produce wool, who keep separate flocks of the white Kyrgyz Fine Wool Sheep, and who are improving it with imported Australian Merino rams. According to the field experience of the Kyrgyz–Swiss Agricultural Project (KSAP), the wool breeders are a minority, even if official statistics tell the opposite story. A large majority of sheep breeders keep and want to keep fat-rump sheep, a robust locally adapted breed. The dark wool has a low market value but is used to produce felt products, in particular the unique felt carpets known as *shyrdaks*. No Kyrgyz would like to give up mutton in his or her diet (Figure 2). And since the drastic reduction in the sheep population, mutton fetches a price above the international market rate. In the present situation, with depressed international and national wool markets, it makes economic sense for the farmers to produce meat.

The advisory service goes its own way

In the mid-1990s, the World Bank's Sheep Development Project began extension work related to sheep breeding. Simulta-

neously, KSAP, run by the nongovernmental organization Helvetas, established a limited rural advisory service in two mountainous areas. Solutions to urgent problems were developed in a participatory way in this field laboratory. Kyrgyzstan subsequently decided to create a countrywide, semiautonomous Rural Advisory and Development Service (RADS). In 1999, the Swiss Agency for Development and Cooperation (SDC) mandated Helvetas to support RADS through the KSAP. With an annual budget of CHF 2 million, the KSAP is providing technical and financial assistance to RADS in three provinces (covering half the country).

The traditional role of an agricultural advisory service is to extend scientific findings developed in research institutions to the farming community. Global experience has shown that blanket recommendations in such transfer-of-technology models of extension often do not fit the complex reality of a particular farm, whereas farming systems research, farmer participatory research, participatory technology development, and other participatory approaches have proven to be valuable approaches. Similarly, with regard to sheep breeding, the Rural Advisory and Development Service in Naryn obtained few useful or relevant research results. Based on a participatory situation analysis, the advisory service decided not to pursue the official breeding programs focusing on wool production but to opt for breeding to produce meat.

Meat sheep breeding groups

Musaliev Jumabek works as a livestock subject matter specialist for RADS Naryn. I accompanied this experienced veterinary surgeon on a visit to a meat sheep breeding group (Figure 3). According to Jumabek, most of the previous breeding stations had to close down. Breed rotation schemes prevalent during the Soviet era have ceased and pure breeds have vanished. He explains the reasoning for the meat sheep program of RADS Naryn as follows: "Today wool prices are low and farmers demand access to good meat-producing breeds. We designed our program two years ago and also consulted scientific institutions, especially about the choice of the meat-producing breed. But since then I have not come across any new extension messages from our research institutions. What else can we expect when scientists have to sell potatoes in the bazaar in order to survive!"

FIGURE 3 Shakeev Erkinbek, meat sheep breeder in Naryn, Kyrgyzstan: "We are three brothers and between us we own 48 sheep. On the advice of RADS Naryn, we purchased an Edylbay ram from Kazakhstan to improve our flock." (Photo courtesy of Helvetas)

The scheme is simple: sheep producers form small groups—often consisting of members of the extended family so that the flock reaches a reasonable size. At a subsidized price, the group purchases a ram from a meat-producing breed, such as the Edylbay breed. RADS assists in identifying and selecting the ram. This initial investment by the advisory service is necessary since breeding is a long-term activity with no immediate effect. The group signs a contract among its members and another one with RADS. After a year, the group is obliged to give a male offspring from the purchased ram to another group. And the group has to maintain records, such as lambing dates, weight, condition, growth rate of the lambs, etc. The RADS specialists give

advice on nutrition, animal health, care, pasture management, etc., and on preparing gross margin calculations.

Today more than 30 groups have purchased an improved ram of their choice from breeds that produce meat. Another 35 groups plan to join in 2001, and in the autumn consolidated data will be available. The consolidated data and the conclusions drawn from them will be disseminated through consultations, booklets, and the mass media. As Markus Arbenz, Helvetas Advisor to RADS Naryn, explains, sheep shows will play an important role in disseminating experience to other farmers: "In the sheep shows we want to extend our knowledge about such things as the state of breeding, variations between animals, the animals preferred by breeders, and the animals that fetch the highest prices at sales. How do the rams breed? What are the most appropriate selection criteria? At the same time, we will disseminate information through poster displays, discussions among farmers about selection and selection criteria, explanations of sheep breeding in the arena, the sale of veterinary products, market information, and more."

Research versus extension: A way out of the dead end?

I am attending a coordination meeting between the World Bank's Sheep Development Project and the Rural Advisory Development Service at the national level. The World Bank task officer responsible for the Sheep Development Project blames the advisory service for being ineffective and not extending the results of research funded by the project. The RADS general manager, Amangeldi Abdyrachmanov, counters: "How can we extend what we do not know?" This is a classic dilemma: researchers blame extensionists for not disseminating the results of research and the extension service blames researchers for not having informed the extensionists of their results. Both sides are right. The participatory, bottom-up approach pursued by RADS Naryn with the meat-producing groups operates in isolation from external inputs. It should also be pointed out that the findings of these groups do not withstand scientific scrutiny.

What is the outlook for the future? A number of attempts are being made in Kyrgyzstan to close the gap between research and extension in the following areas:

1. Rural Advisory Development Service at the national level.
   - Establishment and maintenance of a database of researchers.
   - Establishment of a documentation center.
   - Establishment of an applied research and participatory technology development databank.
   - Establishment of training courses with researchers.
2. RADS provincial centers.
   - Conducting applied research and participatory technology development with more regular involvement by researchers.
   - Serving as an entry point and service provider for research, networking, participatory appraisals, collection of field data. For example, RADS advisors were involved in collecting data for a survey about prevailing fodder conservation practices.
3. Research stations.
   - Proactively spreading and publishing the results of more applied research.
   - Conducting research by contract. The Sheep Development Project has ordered a range of studies relevant to sheep production.
   - Offering laboratory services.

Although there are attempts to coordinate agricultural research and extension activities in Kyrgyzstan, the overall picture is a sober one. Current agricultural research in Kyrgyzstan is by and large of little use to smallholders, and therefore extension and research ignore each other. Ways need to be found out of this dead end. One promising possibility is to stick strictly to participatory research methodologies such as PTD, which include the main stakeholders, ie, small- and middle-sized farms. Such methodologies, however, are little known to the research community in Kyrgyzstan and need careful introduction.

AUTHOR

Peter Schmidt
KSAP Project Manager, Helvetas Kyrgyzstan, 503 Frunze Street, Bishkek, Kyrgyzstan.
ksap@helvetas.kg

Peter Schmidt is an agronomist. He is presently working as project manager of the Helvetas Kyrgyz–Swiss Agricultural Project (KSAP) in Kyrgyzstan. The Helvetas Foreign Program Strategy focuses on infrastructure in rural areas, sustainable use of natural resources, and education and culture; it consistently builds on participatory methods adapted to the specific needs of projects and countries. For more information about Helvetas, please visit www.helvetas.ch; for the Helvetas Kyrgyzstan program, visit www.helvetas.kg.