

PART 1

Wool and cashmere



Introduction

Despite the boom in demand for livestock products in general, wool production has fallen by one-third since it peaked in 1990 (FAOSTAT 2009), as production of cotton and other natural and artificial fibres has risen. This creates particular problems for small-scale producers of wool and cashmere: they must find ways to market their product in competition not only with larger-scale, more efficient producers, but also compete with other fibres.

This section contains four cases that describe how producers' associations and development organizations have attempted to overcome these problems:

- Marketing wool from an endangered sheep breed in the Deccan Plateau of **India**
- Cashmere from the Pamirs: Helping mountain farmers in **Kyrgyzstan**
- Spinning a value chain from the Gobi: Camel wool in **Mongolia**
- Marketing of handicrafts made from Linca sheep wool in Patagonia, **Argentina**.

The Indian case describes how an NGO has organized shepherds and processors to produce high-value handicrafts from a seemingly unpromising product – coarse, brown wool. It shows how a combination of community organizing, product design and entrepreneurial marketing can not only reduce poverty, but also halt the decline of a threatened breed.

The case from Kyrgyzstan looks at the other end of the spectrum in terms of fibre quality: super-fine cashmere. It looks at efforts to help goat raisers in remote mountain areas produce a higher-value product by introducing a cheap, simple technology (combs, which cost a mere \$7 each) and to link producers with cashmere buyers in Europe and Japan. That way the goat raisers can earn more than by selling unsorted shorn fleeces at low prices to local traders, and they have an incentive to maintain the local goat breed that produces the finest cashmere.

Camel wool has many properties that make it attractive to hobbyists in the United States. The case from Mongolia tells how a development project and NGO are developing a value chain to link women in southern Mongolia who spin camel wool into yarn with American knitting enthusiasts.

Like the Indian case, finished handicrafts are the focus of the final case in this section. Women in the Andes foothills in Argentina weave coloured wool from a local sheep breed and make ponchos and other traditional items. They sell them to tourists through a community-run sales outlet. This not only earns them money; it also encourages them to maintain the breed that produces the wool.

The value of wool and cashmere depend largely on three characteristics:

- **Fibre diameter**, measured in microns or μm (thousandths of a millimetre). The thicker the fibre, the coarser and heavier the cloth woven from it will be. Thick fibres may cause an itching sensation on the skin; they are used for carpets, bags and insulation. Intermediate fibres are suitable for garments such as sweaters that are not worn next to the skin, while fine fibres are good for garments that are worn next to the skin. Not surprisingly, the finest fibres are most valuable.

TABLE 1
Fibre characteristics

Breed/species	Guard hair		Fibre diameter				Staple length cm	Fleece weight g
			Intermediate		Down			
	μm	%	μm	%	μm	%		
Deccani sheep, India	53	75			25	22	5	250
Cashmere goat, Kyrgyzstan	80	74			14	26	5	120
Bactrian camel, Mongolia	60	1.7	35	4.8	18	95.5	3	3 500
Linca sheep, Argentina	?	64			27	46	9	4 000
Merino sheep					21	60	5	4 000

- **Staple length** refers to the length of each fibre. Short fibres are difficult to spin; longer fibres are more highly prized.
- **Fleece weight.** This is a measure of the amount of fibre per animal. Other things being equal, the heavier the fleece, the more the owner can earn.

Table 1 summarizes these characteristics for the four cases in this section, plus Merino, the wool of a major breed of sheep.

REFERENCES

FAOSTAT. 2009. <http://faostat.fao.org> Food and Agriculture Organization of the United Nations: Rome.

Marketing wool from an endangered sheep breed in the Deccan Plateau of India

Gopi Krishna, PR Sheshagiri Rao, and Kamal Kishore

The hilly Deccan of south-central India stretches away into the heat haze. Patches of trees are interspersed with scattered shrubs. Dry, brown grass alternates with bare, rocky soil. Down in the valleys it is possible to grow crops, and that is where most of the population live. Up on the plateau, local people have long ago learned that planting crops is pointless: the monsoon rains do not last long enough, and the soils are too poor.

The best way to use this semi-arid land is by raising sheep. Enough grass grows in the short rainy season to use as grazing, and the long dry season means that there are few parasites or diseases.

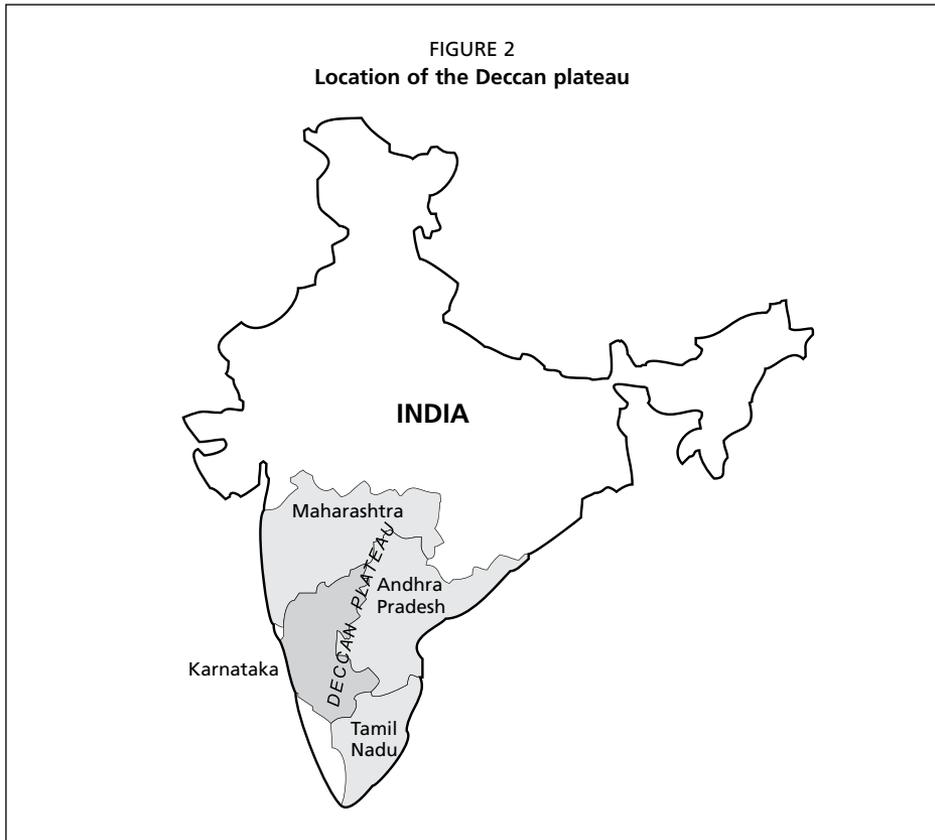
Over centuries, a nomadic system has emerged, with a native sheep breed, known as the Deccani, Dekhani or Deshi, well adapted to the sparse fodder and hot, dry environment. These sheep convert the grass – a resource that would otherwise be unused – into protein and wool. With Hindus forbidden to eat beef, sheep are a major source of meat in India. The sheep also produce a coarse wool that used to be prized as highly as their meat, especially in the cooler, higher parts of the Deccan, but its value has recently declined as textile products from outside have flooded the local market.

The Deccani breed is a distinctive animal. It is small and hardy, with a Roman nose, drooping ears, thin neck, narrow chest, and prominent spine. It is not a good meat type: it has flat ribs and produces a poor leg of mutton. Most animals are black, but some are grey or roan (with a mix of white and coloured wool). Shepherds recognize various types in different areas of the Deccan.

THE KURUBAS

Some 750 000 families all over the Deccan depend on raising sheep. They belong to various ethnic groups: Gollas, Kurmas, Lambadas and Dalits in Andhra Pradesh; Kurubas, Kadugollas, Lamanis, Bedars, Gollas and Dalits in Karnataka; Dhanghars, Kurubas and Dalits in Maharashtra; and Kurubas in Tamil Nadu. Some of these groups are traditional sheep rearers; others have taken up sheep-raising more recently. Many of the sheep rearers are members of cooperative societies; over 5 000 such societies exist throughout the area.

The Kurubas are the traditional sheep keepers in the districts of Belgaum, Bagalkot, Koppal, Dharwar and Haveri, in northern Karnataka. One of the oldest communities in India, they are semi-nomadic, moving with their flocks for between 3 and 9 months a year. They also lease some land for part of the year to grow crops such as sorghum, wheat, maize, oil seeds, minor millets and cotton.



The Kurubas have a strong sense of community: they maintain strong bonds to their relatives and their ethnic group, and have traditional community forums where they discuss issues and make decisions as a group. Their temples are not only a place of worship, but also a place to meet to discuss their social, cultural and economic activities. In common with other Hindus, the Kurubas worship various gods, but they also worship the sheep itself.

The Kurubas manage their sheep collectively: they share the tasks of grazing, penning and protecting the sheep, managing diseases and so on. The men take care of the grazing, while the women look after the young lambs, and handle and process the wool. They also accompany the men on the seasonal migrations.

There are three main types of sheep rearing in the area:

- **Stationary flocks** (10–50 animals) reared on crop residues and village pastures within a radius of 3–10 km of the village.
- **Semi-nomadic flocks** (50–1 000 animals) reared on crop residues and village pastures within a radius of 50–100 km of a group of 25–50 villages.
- **Nomadic flocks** (1 000–3 000 animals), which migrate over distances of 200–400 km.

The larger the flock, the more mobile it must be in order to take advantage of the sparse grazing in the dry season.

The sheep are shorn twice a year – usually before monsoon in June, and after the rainy season in November. Most shepherds shear their own animals using scissors, though some contract shearing is done.

SHEEP PRODUCTS AND SERVICES

The sheep of the Deccan produce a range of products and services.

- **Manure and tillage.** Farmers welcome shepherds and their flocks onto their fields during the fallow period, as the sheep eat weeds and other vegetation, and leave behind manure that fertilizes the soil. The animals' hooves break up clods of earth and help prepare the soil for planting. The farmers pay the shepherds Rs 1.50–2.00 (\$0.03–0.04) per animal per night (or the equivalent in grain, sugar and tea) for keeping their sheep on their fields. This is the main source of sustainable income for the shepherds. During the monsoon from July to September, the shepherds move their animals to an area with lower rainfall and pen them in fields, where they collect manure to sell. A tractorload of manure sells for Rs 1 600 (\$34), while a cartload sells for Rs 400 (\$8.50).
- **Live animals for slaughter.** The shepherds sell male lambs aged 3–6 months at a weight of 10–18 kg to butchers, traders or other sheep rearers in weekly livestock markets. Some buyers purchase animals directly from the herders. An animal may cost Rs 1 600–2 500 (\$34–53), depending on the weight and build of the animal, or Rs 80–100 (\$1.70–2.10) per kg live weight. After 8–9 lambings, the shepherds sell the females to butchers or traders. A sheep weighing 20–25 kg fetches Rs 2 500–3 000 (\$53–64).
- **Wool.** The shepherds shear the animals twice a year, before winter (in October or November) and before the monsoon (in April or May). A sheep may produce 250–500 g of coarse, hairy wool. The shearing is done by members of a group known as Katri-gars. Women sort and grade the wool into three colours and two grades: lamb wool and adult wool. The average fibre diameter varies widely: one fleece may average 35 μm , while another is much coarser – up to 70 μm . The overall average is 53 μm . About one-quarter of the fleece is fine, good quality wool, with fibres around 24 μm in diameter. This fibre is suitable for spinning. Another quarter of the fleece is very coarse and hairy, with fibre diameters around 58 μm .
- **Milk.** The shepherds milk their animals and make buttermilk and butter, but selling these products is considered taboo.

CRISIS OF THE DECCANI SHEEP

Demand for meat in India is rising rapidly. That is causing changes in the sheep production system in the Deccan. The government is promoting breeds, such as the Red Nellore in Andhra Pradesh, Yelgu in northern Karnataka, and Madgiyal in Maharashtra, which produce meat rather than wool. Shepherds cross-breed their Deccani animals with these other breeds, even though imported animals and crossbreds are less hardy than the indigenous Deccani sheep.

In addition, the Indian police and army have shifted away from providing locally made woollen blankets to their officers and soldiers. A large number of weavers, especially women, have lost their jobs as a result, and demand for wool has plummeted.

As a result of these trends, the purebred Deccani has been in decline, and the breed has become marginalized in its home range.

A FOCUS ON WOOL

How best to conserve this breed, along with its favourable genetic traits? And how to promote the development of sustainable livelihood among the Kurubas of northern Karnataka, but at the same time help them conserve their distinctive way of life?

The Deccani has one feature that the newcomers do not: it produces wool; the Red Nellore and other breeds produce worthless hair. That was recognized by Shramik Abhivru-dhi Sangh (SAS), an NGO that has been working in the area since the mid-1990s. An SAS project that began in 1996 helped local women produce and market bags and other handi-crafts made of jute and cotton fibre. This project resulted in the women forming self-help groups, and eventually a federation of such groups, known as Shramik Kala. The women are the owners of this federation, which they plan to register as a production company. Shramik Kala took over responsibility for production activities from SAS, which continued to provide management support, marketing services, working capital and the salaries of core staff.

In 2005, SAS decided to explore the possibility of expanding this project to include woollen products. A team composed of SAS and CALPI (Capitalization of Livestock Programme Experiences India, a project supported by the Swiss Agency for Development and Cooperation) first studied various aspects of wool production, processing, product design and marketing. Over a period of 6 months, it reviewed earlier studies and documents, and met with spinners, weavers, handicraft artisans and cooperative societies in northern Karnataka who work with wool and create wool products. It looked into the spinning, weaving and product-making technology, the quality of the yarn, and the range of potential products. It had wool samples laboratory-tested for fibre diameter and length, regional variations, and qualities for spinning and felting. The team also discussed with shepherds and with cooperatives and other organizations in northern India to learn from their experience in wool production and marketing. Out of this research, it developed a pilot project to help Kuruba women in Belgaum district in Karnataka make and sell products made from the wool of the Deccani sheep.

Many of the women were already skilled in making items out of wool. But producing items for a wider market would mean many changes: organizing the workers into groups, grading and sorting the wool, developing new product designs, introducing new production techniques, and marketing the products in new ways.

Organizing into groups

The project helped the women organize themselves into self-help groups, and trained them how to make various products. There are now 16 such groups, with 20 members per group, in eight villages in the district. Each group elects a committee and officers to manage its activities.

The women sort, grade, card, spin and weave wool to make woven products such as bags and cushion covers, and make felt into non-woven products such as mats and slippers. They can come together to work as a team, or they can work in their own houses.

That gives them flexibility to work in ways and at times they find convenient. A craftsperson can make one bag per day.

Grading and sorting the wool

The Shramik Kala federation buys wool and leather from cooperatives or local traders. The traders buy raw, mixed wool from shepherds at Rs 4–6 (\$0.08–0.13) per kilogram. Shramik Kala has an informal agreement with the cooperatives and traders to buy sorted and graded wool for Rs 25/kg (\$0.53) – sorting and grading is easier and cheaper if done at shearing-time, before wool from different animals has been mixed up. It also buys unsorted wool direct from the shepherds at a remunerative price. Shepherds and local traders have mobile phones, making it much easier than before to source raw materials.

Shramik Kala buys 10 tons of wool each season, worth Rs 250 000 (\$5 250). The federation's wool supervisor and the self-help group committees are responsible for checking the quality of the wool.

Part of the charm, and hence the value, of products made from Deccani wool is its range of natural colours, which can be woven into attractive stripes, zigzags and chequers in products such as cushion covers and rugs. That means sorting the raw wool into seven different colours, from a pale cream, through mid-brown to nearly black, instead of the traditional three shades. The project trained two self-help groups in Huvnoor village to do this sorting, as well as separating the wool into two grades: finer wool from lambs, and coarser wool from adult animals.

New products and designs

Product design has been a central focus of the project. Since design schools do not typically teach designers to work with coarse raw materials and traditional crafts and designs, the project avoided using experts from such schools. Instead it has worked with designers who are experienced with wool products and community-based production. These designers developed designs for various products that the market research showed would be in demand, such as cushion covers, rugs and mats, bags and oven gloves. Spun wool and felt are the main constituents of these items; they also may include sheep leather (for handles) and other natural materials such as jute and banana fibre.

Deccani wool is relatively coarse, so is not suitable for clothing. But it is ideal for home furnishings and products such as bags. The designers developed a range of products that could take advantage of the wool's natural colours and short staple length, as well as local peoples' craft skills. Items such as blankets were dropped from the product range because they required too much capital and the market was already saturated.

Deccani wool is also a tough fibre and naturally fire-retardant, which presents new product opportunities for home furnishings, or even as building material. The amount of wool produced each year provides enough raw materials to expand the range and output of products significantly.

New production techniques

The products are hand-made – which gives them a special character – using traditional techniques, but with some modifications. For example, the project introduced improved

pedal-driven spinning wheels to spin the wool into yarn. Most existing equipment is designed for finer wool, so the project had to adapt it for working with the coarse Deccani fibre.

To prevent infestation by moths, the wool is treated with a traditional method using an extract made of roots. Multicoloured yarn is produced in two ways: by spinning wool of various colours, or tie-dyeing yarn spun from a single-colour fibre. Additional techniques include making knotted carpets using a flat frame, moulded felting, and hand-knotting or macramé using hand-felted yarns.

Training has been a major part of the project. The project organized two types of hands-on training: for 3 000 shepherds in shearing, sorting and grading of wool, and for 100 women on spinning, weaving, bag making and felting. The trainees were selected by local cooperatives which short-listed potential participants, and by master craftsmen who assessed their aptitude to craftwork, motivation and skills. Most of the spinners and weavers had some previous experience of making yarn with spindles and weaving on traditional looms. The master craftsmen and a group of resource persons from shepherds' cooperatives conducted the training courses proper. The training taught them how to spin yarn using a pedal-driven spinning wheel, and how to weave using a frame loom.

The training has been highly effective. Before the training, the women could spin 200–250 g of wool a day; afterwards, they could spin 300–500 g. Some 95% of the trainees now earn their living using the skills they have learned. Some of the trainees have themselves become trainers and have conducted training workshops for other groups.

Marketing products

How to market these new products? In 2007, the project management team set up a company to handle various functions: marketing, capacity building, design, technology and networking. This was necessary to enable the business to expand and diversify. The company, Mitan Handicrafts Development Pvt Ltd., now manages these functions for Shramik Kala. Mitan is jointly owned by Shramik Kala and a partnership of scientists, development professionals, designers and marketing experts, and uses capital raised by its professional supporters. Currently approximately 85% of Shramik Kala's sales are through Mitan.

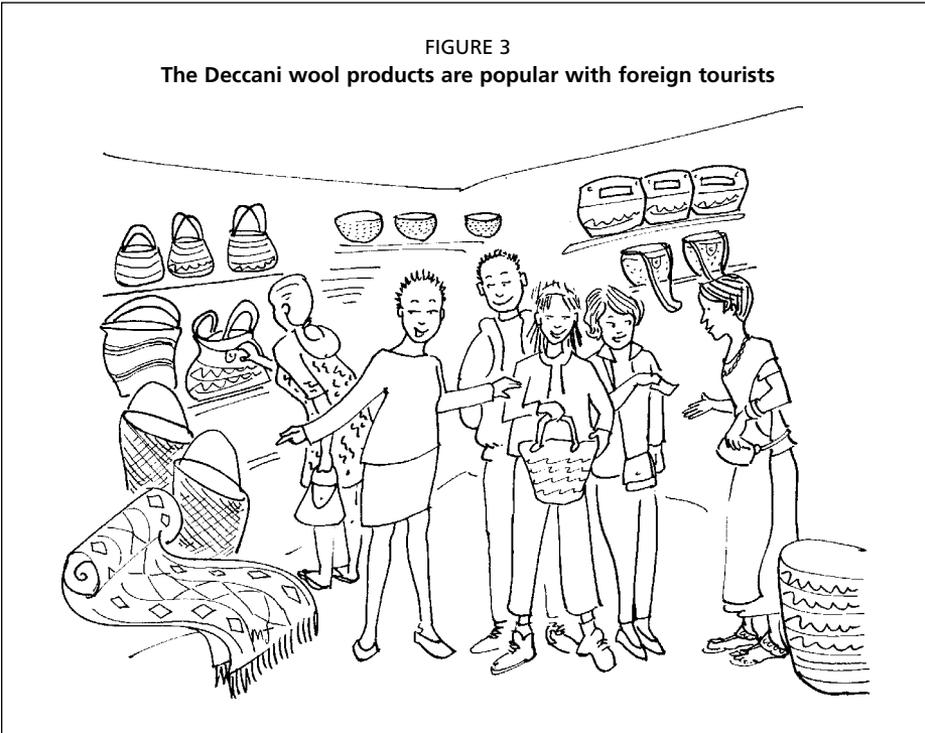
Nearly three-quarters (74%) of Shramik Kala's revenues come from export sales, mainly to Europe (45%) followed by Japan (28%) and the United States (25%). It also showcases its products at national and international fairs; one fair in 2005 resulted in over Rs 50 million worth of orders.

Shramik Kala also sells its products in India, through Fabindia (a retailer and distributor focusing on products made by artisans), as well as through other wholesalers, retailers and support organizations, such as 95 Parklane, SETU The Bridge To Artisans, and the All India Artisans and Craftworkers Welfare Association (AIACA). It also promotes the sale of wool to felt-makers in Maharashtra, the state to Karnataka's north.

Both Shramik Kala and Mitan are beginning to market the products via email and through the internet via the websites www.shramik.org and www.mitan.in.

Shramik Kala does not brand its products. The product identity comes from the design of the product range, rather than from a particular label. The federation also produces a range of other products made from jute, leather and banana fibre marketed with the

FIGURE 3
The Deccani wool products are popular with foreign tourists



“Craftmark” logo, a label for handicrafts supported by AIACA. It is planning to get a “woolmark” certification for its woollen products.

Once the marketing channels are established, markets are not a problem. For handicrafts, demand always exceeds supply, and the market is increasing and diversifying. There is demand for these products because health- and environmentally conscious consumers, especially in Europe, appreciate natural colours and hand-made products. Customers include both young and middle-aged people. Shramik Kala can sell as much as it can produce, and cannot keep up with rising demand. It accepts orders from buyers, then allocates the orders to the self-help groups to produce the required number of items. An order of, say, 100 bags, needs a lead time of 30 days to fulfil. Larger orders take longer: a consignment of 1 000 bags takes 120 days to produce. Shramik used to produce items without a prior order, but no longer has to do this because of the level of demand.

The unique qualities of Deccani wool offer additional opportunities for product development. Shramik Kala and Mitran have started strategic collaboration with wool and felt traders from Nepal, who are big players in the European market. These traders can provide white wool, but they do not have access to black wool of the type produced by Deccani sheep.

Credit and support

Four self-help groups from the villages of Kadoli and Huvnoor have acquired land and are constructing buildings to use for producing handicrafts. They are using their savings, government grants and subsidized loans to pay for this construction and to use as work-

TABLE 2
Initial investment by SAS in marketing of Deccani wool

	1 000 Rs
Formation of federation of self-help groups (awareness raising, training, support and registration)	1 000
Consultants	1 000
Hands-on training	500
Exposure visits	300
Product design and development	200
Technology development	300
Market development	300
Documentation, printing	400
Production equipment (spinning wheels, rope-twisting machines)	40
Total	4 040

ing capital. The two groups in the village of Kadoli now have net assets of Rs 1 000 000 (\$21 000).

The self-help groups can get a limited amount of credit from the banks. But this is not enough because of the constant need for working capital. New foreign donors are showing interest in supporting the initiative. Shramik Kala is also seeking support from government bodies such as the Wool and Textiles Department and the Karnataka Sheep and Wool Development Board.

Investments

How much does setting up a production and marketing effort cost? Table 2 shows that production equipment was a very minor expense. The largest part of the costs were for forming the Shramik Kala federation, consultancy expenses, training, and exposure visits. In all, the project cost about Rs 4 million (\$85 000), Rs 3 million of which was funded by a grant from the Swiss Agency for Development and Cooperation.

In addition, Shramik Kala has rented a building for Rs 15 000 (\$320) per year for its main office. It also uses a community hall in one village and has rented a building in another.

For working capital, the enterprise obtained a loan of Rs 250 000 (\$5 300) a year for 3 years from a local bank under a central government scheme. SAS has provided an additional loan of Rs 1 000 000 (\$21 000). This working capital is used buy raw materials and to pay the spinners, felt-makers and bag-makers for producing the items.

ANALYSIS OF COSTS AND REVENUES

Table 3 shows the prices at which the various actors sell the wool and wool products.

SCALING UP

From small beginnings, the production of woollen items has grown remarkably. In 2005 sales totalled Rs 21 000 (\$440); by 2008 they had risen to over Rs 1 000 000 (around \$22 000) (Table 4).

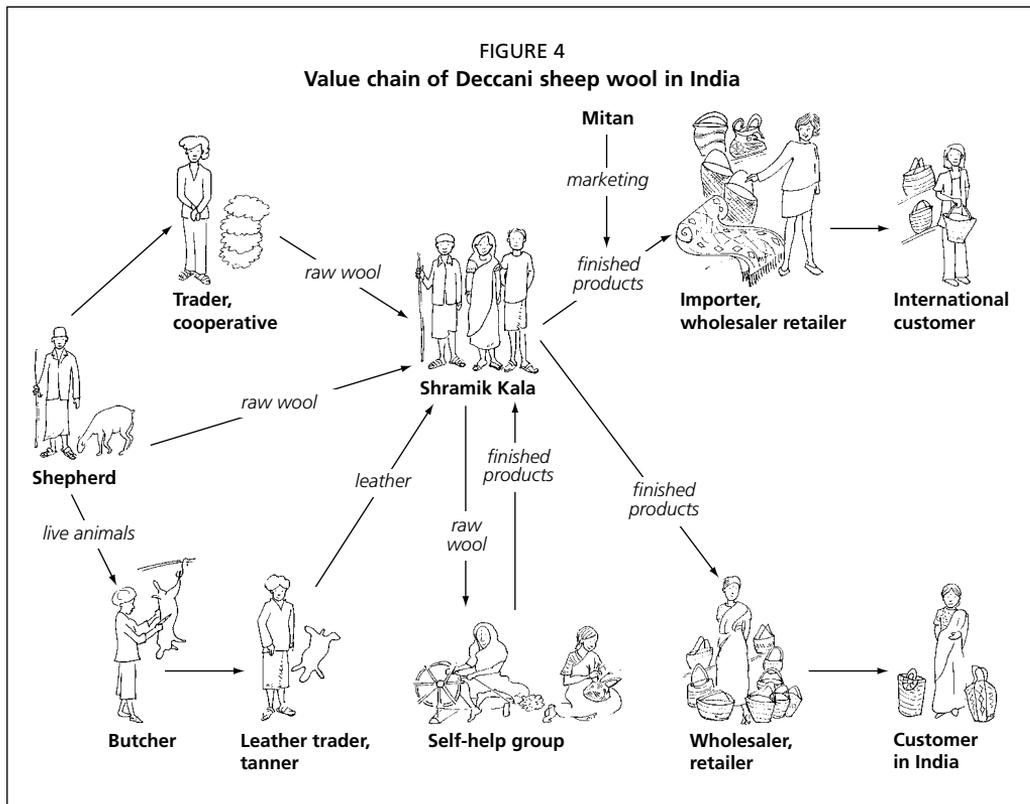


TABLE 3
Selling price of wool and wool products

	Selling price (Rs/kg)
Shepherd	5–7
Trader	9–10
Wool processor	24
Yarn spinner	69
Yarn exporter	110
Bag maker/felter (self-help group members)	175
Shramik Kala (accessories, finishing, packing)	350
Buyer/Importer	1 500
Retailer	4 500

In 2006, the self-help groups had 265 members producing various items: just 95 were working on woollen items; the remainder made jute items. Each worker earned an average of Rs 5 400 (about \$114) in that year. By 2008, the number of workers had risen to around 500 producing both woollen and jute items.

TABLE 4
Value of wool exports

Year	Value of wool exports (Rs)
2005	21 000
2006	281 000
2007	555 000
2008	1 040 000

The big increase in the amount of items ordered and sold in 2008 was possible because of Shramik Kala's and Mitani's marketing efforts. Over half of the total earnings from exports were paid to the artisans for their work.

It is typical of the craft sector to vertically integrate design, material procurement, production, marketing and quality control to a small group of individuals. This offers several advantages, but is suitable only for low levels of production. As the scale increases these tasks have to be specialized and defined carefully to improve efficiency and ensure smooth functioning. This was the reason Shramik Kala span off the marketing function to Mitani, making possible the leap in sales and production in 2008.

Shramik Kala is trying to increase production by establishing more self-help groups rather than expanding existing ones. Its efforts to scale up production are driven by the community as well as the market. Interest among pastoralist communities in nearby parts of Maharashtra and Andhra Pradesh has spurred Shramik Kala to facilitate the spread of the technologies and marketing efforts to these areas. In Solapur district, Maharashtra, an NGO called Mata Balak Pratisthan has started two groups of 40 people to do weaving and spinning. In Sangli district, also in Maharashtra, Verla Projects has started three groups with 60 women to make woollen bags. In Medak district, in Andhra Pradesh, Anthra, another NGO, has started a group with about 20 women.

BENEFITS

Shramik Kala's wool production and marketing programme not only provides livelihoods for 100 women and their families. It also benefits 100 shepherds who raise the sheep that produce the wool, and who now have a ready market for their fleeces. A large number of shepherds are now starting to keep the Deccani breed again, and shepherds from neighbouring Andhra Pradesh are buying breeding rams from northern Karnataka.

The enterprise has shown how to protect the Deccani sheep breed by finding a high-value niche market for a previously low-value product: coarse, coloured wool. The woollen products have achieved remarkable and rapid success in both international and domestic markets. This has been achieved through a social enterprise consisting of self-help groups of poor women, and nurtured by a team of development activists, craft persons and marketing experts.

PROBLEMS IN MARKETING

The enterprise has encountered various bottlenecks in production and marketing:

- **Investment for export.** Historically, most of the infrastructure and investments made in the sector have been geared to the domestic Indian market, not to exports. Fresh investment is needed to create facilities for processing the wool and to develop new product ranges that cater to exports. Such investment could contribute significantly to reviving the wool sector.
- **Eco-friendly packing materials.** Shramik Kala and Mitan Handicrafts would like to use eco-friendly packaging for their products, but buyers demand, and export regulations dictate, what types of material can be used for packaging. Packaging materials must be able to withstand different conditions and protect the product from fungus attacks when the humidity is high.
- **Variable shades.** Leather tanned with organic dyes may be different shades at first, but matures to a classical leather shade over a period of time. This is poorly understood: buyers sometimes think that the product is the wrong colour.

LESSONS FOR ENTERPRISE DEVELOPMENT

Factors in the successful development of the product range based on the Deccani wool include:

- **An entrepreneurial approach backed by social investment.** The project involved extensive dialogue with market participants: shepherds, traders, cooperatives, technical experts, product designers. The task force included a multifunctional team to ensure that a range of viewpoints and approaches were taken into account when developing the product and enterprise. The process was driven by a potential market opportunity. Social investment enabled all phases of the initial pilot: the exploratory study, the design and development of products, training, and market development and product launch
- **Extensive research to identify and exploit the qualities of the raw material.** Laboratory analysis identified the unique properties of the Deccani wool. Field research with players in the wool market, from suppliers to buyers, focused the product design and development to create a competitive range of products.
- **Building on existing skill sets and organizational capabilities.** Developing the woollen products took advantage of existing skills and organizational capabilities. It built on an established federation of women's groups. Relationships with the community of shepherds and their families were already established, and the operational and organizational framework was already in place.
- **Leveraging established relationships with other stakeholders.** The new product lines also built on established relationships with traders, producers, buyers, international and government funders, designers and technical consultants. The groundwork had been laid in the earlier project which developed the production of jute bags and established Shramik Kala. The team developing the enterprise had a track record with each set of stakeholders.

- **Building stakeholder commitment to the enterprise.** Expanding the enterprise model of Shramik Kala was possible because of careful assessment and development in the pilot programme. All the stakeholders were involved in the enterprise from the initial phases of the pilot to its evaluation.
- **Communication with all stakeholders** through progress reports, meetings and workshops continues their participation and commitment to the enterprise. Periodic meetings, workshops and discussions are part of the culture of the self-help groups. Several of the Shramik Kala team live at the federation's processing centre and are a part of the production process.

LESSONS FOR POLICY MAKERS

Most of the world's sheep are white. The international policy environment supports fine, white wools, and is oriented to production by large mills. Policymakers and the industry have ignored the potential of breeds such as the Deccani that produce coarse, coloured wool, as well as production by pastoralists and artisans. Black and brown wool tends to be coarser, but there is considerable potential demand for these shades.

In India, the decision to switch from local wool to imported yarns to make blankets for the army and police destroyed the livelihood of many shepherds. Large amounts of investment, subsidies, and infrastructure in the wool sector have been wasted due to faulty policies. Subsidies have encouraged actors to keep fraudulent books that show higher-than-actual production. These wasted millions have failed to raise demand for wool or benefit the shepherds.

As Shramik Kala has shown, the pastoralist wool sector can be returned to productivity. Coarse wool-based livelihoods have immense potential in semi-arid parts of the Deccan plateau if they are appropriately organized. There is potential to revive and revitalize the defunct cooperatives formed by the government over the last 25 years.

Policy decisions that would help the wool sector should also include the shepherds and wool-related artisans. Recommendations include:

- Involve shepherds in policy decisions.
- Promote research on and breeding of Deccani sheep for its adaptation to semi-arid areas and its ability to handle a changing climate.
- Build on the growing interest in traditional veterinary treatments and animal management methods.
- Persuade sheep raisers to grow a few acres of fodder crops to provide additional feed for animals and so overcome shortages when grazing is scarce.
- Develop markets for lamb meat.
- Empower local people through local government.

MORE INFORMATION

Shramik Abhivrudhi Sangh: www.shramik.org

Mitan Handicrafts: www.mitan.in

Cashmere from the Pamirs: Helping mountain farmers in Kyrgyzstan

Carol Kerven and Sabyr Toigonbaev

It's a long way from the towering Pamir range of central Asia to the catwalks and boutiques of the rich world. And not just in terms of kilometres: the pastoralists who herd their flocks on the remote mountains could not be more different from the wealthy elite of Paris, London, New York, Moscow and Tokyo.

But high mountains do have something in common with high fashion: the goats traditionally raised on pastures in the Pamirs. To survive the harsh winters, these goats have evolved a soft, downy undercoat, concealed beneath an outer layer of coarse hair. This undercoat has a name that evokes images of warmth and quality: cashmere.

But even though the herders sell cashmere, they gain little from producing such a valuable product: in fact, most are not aware of how valuable their cashmere is.

That is beginning to change, thanks to initiatives by the British-based Odessa Centre and the Kyrgyz Cashmere Producers' Association, supported by the Aga Khan Foundation.

A SPECIAL FIBRE FROM A DISAPPEARING BREED

Cashmere is an ultra-fine fibre – with a diameter of up to 18 microns (thousandths of a millimetre), it is finer even than the finest Merino wool. That makes it ideal for high-end fabrics and garments. Colour and fineness of diameter make a huge difference in price: over the past 10 years on average, a large British cashmere importer has paid from \$18/kg for coloured, 17-micron cashmere, and up to \$70/kg for white cashmere of 15-micron diameter.

Kyrgyzstan is one of the places where goats were domesticated, so is home to a major genetic resource of cashmere goats. Indeed, some of the finest cashmere in the world comes from a local breed of goats in southern Kyrgyzstan.

These goats may be black, white, red, or with black-and-white marks on the body. They come in various sizes; 90–95% have horns. The long, rough, coarse outer fibre has a strong shine, and is very different from the short undercoat of down. The outer hair has a diameter of 70–90 microns and grows evenly all year round, reaching a length of 15–17 cm. The inner down coat, or cashmere, grows in autumn and winter. It has a diameter of 13–16 microns and reaches a length of 4–5 cm.

Scientific studies show that Kyrgyz goats produce 24–27% down and 73–76% outer hair. One goat gives about 120–150 grams of combed cashmere (though research by the Odessa Centre and its partners show some goats produce more than this). The productivity of the goats is good, with a kidding rate of 125–150 from 100 adult females.

FIGURE 5
Combing out the fine cashmere produces better-quality fibre than shearing



THE MARKET FOR CASHMERE

In the springtime, the goats naturally moult their warm inner winter coats. Before this happens, their owners shear them and sell the fleeces to local town traders. The fleece contains a lot of rough guard hair, which has no market value. The buyers buy fleeces by weight, in recent years paying a pre-set uniform price of \$5–25 per kilogram regardless of quality, with no extra for ultra-fine or white fibre. These traders then sell the unsorted fleeces to mainly Chinese wholesalers, who hand-sort them into quality lots, each with a different price, before selling them on to factories in China, Turkey or elsewhere for processing. Neither the producers nor the local traders are aware of the market value of what they are selling to the wholesalers. These have come to dominate the market, so the pastoralists and local traders currently have few options but to sell to them at the prices they set.

During the Soviet era, the mountain farmers and transhumant pastoralists of southern Kyrgyzstan used to work for state livestock collective farms that mainly produced fine-wooled sheep. In the mid-1990s the state farms were dissolved, and their former employees had to create their own enterprises. Many now keep livestock. The better-off raise sheep, cattle or yaks, which are regarded as more prestigious animals, while poorer families keep goats, which are cheaper to buy and manage, and produce more offspring.

With no incentive to produce better-quality fibre, many livestock keepers have cross-bred their local animals with Pridon and Angora goats, which were introduced to collective farms in the north of the country during the Soviet era. They produce more fibre, but of a lower quality: it is coarser, and the Pridon fibre is dark. It sold well in the old Soviet Union, but is less prized in the international market, where it is not regarded as true cashmere. The reputation of Kyrgyzstan goat fibre is poor, as the few European buyers who trade in northern and central Kyrgyzstan are increasingly offered coarse, low-quality “cashgora” from the Pridon crosses.

The breed that produce the ultra-fine cashmere is known as *jaidari*, which simply means “local”. As the crossbred goats become more common in Kyrgyzstan, the *jaidari* goats are in danger of disappearing altogether. That would mean the loss of a valuable genetic resource, since ultra-fine cashmere is rare. And it would mean a missed opportunity for

pastoralists to gain better prices for their cashmere. If the local breed dies out altogether, they will have lost this chance forever.

But a chance still exists. Introduced to the north of the country, the imported breeds have not yet reached the high Pamirs in the south. The *jaidari* goats in these areas could be used to rejuvenate cashmere production in Kyrgyzstan.

A LACK OF SUPPORT

The trade in cashmere is new in Kyrgyzstan, and indeed in the rest of former Soviet Central Asia. It was only in the late 1990s that the buyers from China and other countries started coming every spring to buy cashmere from farmers and pastoralists in Kyrgyzstan. At first they bought cashmere from northern and central Kyrgyzstan, and they reached the Pamirs only around 2003.

As a result there are no government programmes or skills among research or extension organizations to support rural people in this new activity. Nor is there any official information about the amount of fibre and cashmere production, sales or export from Kyrgyzstan: no government department has taken responsibility for collecting this information. Donor organizations and NGOs have been reluctant to embark on cashmere projects, perhaps due to lack of interest among national decision-makers, and inexperience in taking on a new and somewhat technical development activity.

This is in sharp contrast to the situation in the two principal cashmere-producing countries, China and Mongolia. In Mongolia, cashmere has long been known as a major component of many pastoralists' incomes, and there have been numerous efforts by donors, NGOs and the government to improve research, provide market information and training for producers, and regulate the markets. China leads the world in improved cashmere breeds and has a highly organized system of marketing, processing and manufacturing cashmere. In 2008, pastoralists in western China sold their raw cashmere to local traders for \$32 per kg – way above the prices paid in Kyrgyzstan.

The best quality cashmere – fine, white, and of the appropriate length and style – is rare and difficult to source. World demand for cashmere garments is growing as incomes rise in the Russian Federation and the Far East. China, the source of the majority of the world's cashmere goats and garments, is unable to satisfy this demand. This is why Chinese buyers have so enthusiastically sought raw cashmere from Kyrgyzstan and other Central Asian countries in the last few years.

PROJECT INTERVENTIONS

Finding ways for producers and other local people to benefit from this unique resource is the aim of Odessa Centre Ltd. and the Kyrgyz Cashmere Producers' Association, initially supported by the Aga Khan Foundation (Box 6). In 2004, Odessa Centre was commissioned by the Aga Khan Foundation's Mountain Societies Development Support Programme (MSDSP) to investigate the potential for livestock development to benefit farmers in Kyrgyzstan's Osh province. It identified cashmere marketing as a new and very active commercial activity, and recommended that the MSDSP develop cashmere training and information packages for farmers and small-scale local traders to increase their sales margins.

In 2008, another Aga Khan Foundation grant enabled the Odessa Centre to trial-run a

BOX 6 Collaborating organizations

- **Cashmere Producers' Association.** Based in Osh, Kyrgyzstan, this NGO focuses on breeding cashmere goats and marketing their fibre. It is run by Sabyr Toigonbaev, the only local professional expert on cashmere goat selection and breeding.
- **Odessa Centre Ltd.** A British research and consultancy company focusing on extensive pastoral livestock production and marketing.
- **The Aga Khan Foundation's Mountain Societies Development Support Programme.** A programme to support community organizations introduce improved technologies and establish small enterprises.

cashmere marketing project in several regions of southern Kyrgyzstan. The project aimed to find a market for cashmere produced by the poorest villagers. Efforts have included:

- Studies on the production and marketing of cashmere
- Research on the characteristics of cashmere in remote districts
- Training pastoralists on producing high-quality fibre
- Reviving the local *jaidari* breed of goats
- Promoting marketing links with buyers from Europe.

These following sections describe these activities.

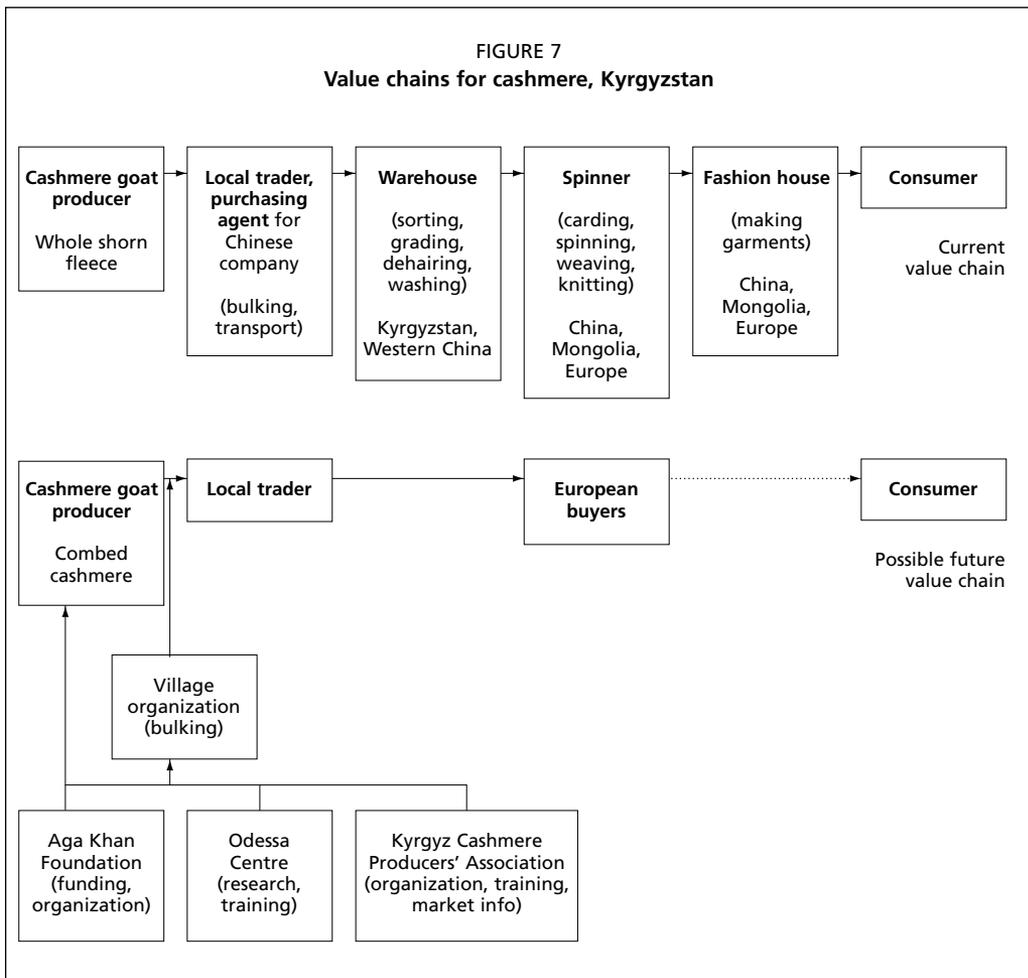
FIGURE 6
Location of Alay and Chong Alay districts, Kyrgyzstan



STUDIES ON THE PRODUCTION AND MARKETING OF CASHMERE

The study focused on Alay and Chong Alay, in Osh province along the southern border with Tajikistan. The villages in these two districts lie at high altitudes, from 1 500 to over 3 200 metres, while the Chong Alay range rises to the highest mountain in Kyrgyzstan, Peak Lenin. Crop farming is limited by the long, cold winters and a lack of irrigation. Livestock are the mainstay of people’s livelihoods.

In Alay district, the buying season starts in March, when goats at the warmer lower altitudes start moulting. By June, when the buying season ends, goats in villages at the highest altitudes over 2 500 metres in southern Alay and Chong Alay districts are moulting. There are 15–20 traders in Alay district, which has 58 villages, and about six traders in Chong Alay district, which has 18 villages. During the season, Kyrgyz traders from the main rural towns go to the villages and collect fibre house-to-house from farmers. When they get enough, they bring it to Osh city. Only a few producers bring fibre directly to warehouses in the city, and sell it for a higher price.



For the past 5 years, Chinese companies have been buying raw cashmere sourced from Kyrgyz farmers in the southern regions of Osh province, through local Kyrgyz purchasing agents. The combed down, goat skins and sheared goat fibre (whole fleece) are collected at warehouses in the two main cities, Osh and Bishkek (the national capital). There are about ten such warehouses in Osh, where Chinese citizens collect cashmere and sheep wool and sort the fibre into grades.

There are well-established contacts between the Chinese buyers and local traders. Some of them work on a formal agreement basis, and others just by verbal agreement. On the basis of long-term cooperation, the Chinese buyers trust some of the traders. At the beginning of each season, they advance money to the traders to buy raw fibre.

The cashmere is then sent to factories to remove the coarse hair, leaving the fine cashmere to be “carded” (combed so all the fibres lie in the same direction), spun into yarn, and woven or knitted into fabrics and garments. Much of this processing is done outside Kyrgyzstan: in China, Mongolia, Kazakhstan, Uzbekistan and Europe.

For washing and to remove the coarse outer hair, the fleeces (and a small amount of combed cashmere) are either taken to one of the few enterprises in Kyrgyzstan that can do this, or they are trucked directly to China. Chinese factories then spin, weave and manufacture the cashmere into garments, or they export processed cashmere to Europe for manufacture by luxury designer companies, mainly in the United Kingdom and Italy.

To comb or to shear?

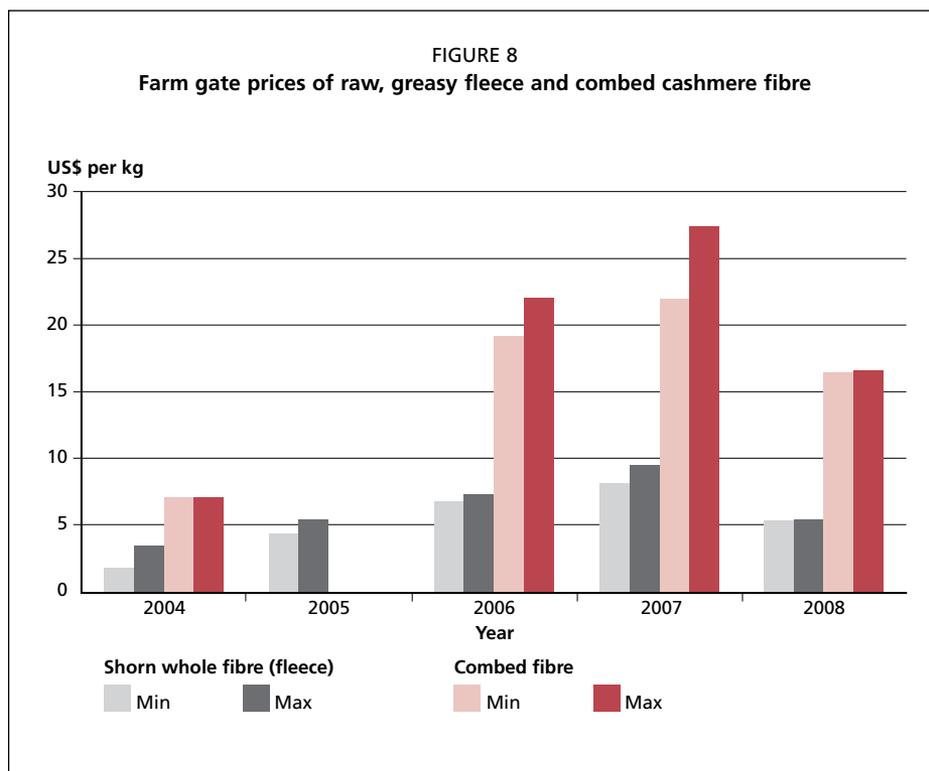
International market prices for cashmere are highly sensitive to quality. However, in southern Kyrgyzstan, Chinese buyers do not encourage livestock keepers to sort their raw cashmere and do not offer any price differentials for different qualities. Producers thus lose a lot of the value of sorting raw cashmere into fineness grades and colours, which attract different prices on the international markets.

It is possible to produce a product that is of much higher value by combing the goats when they begin to moult, rather than shearing them. A generation ago, some village women used to do this to make yarn for knitting into garments for their families. But most Osh traders have stopped accepting combed cashmere, so the villagers stopped combing and now mostly sell shorn whole fibre.

Shearing has several disadvantages:

- Fearing that a cold spell could kill shorn animals, many livestock keepers shear their goats late in the spring season – often after the animals have started moulting and left some of the valuable cashmere caught on bushes when they browse.
- In common with other Central Asian goats, Kyrgyz *jaidari* goats have rather short cashmere, while the international market requires fibres at least 4 cm long. Shearing does not cut the fibre next to the skin, so it can reduce the fibre length by 1 cm or more. That reduces the market value accordingly.
- Because they sell unsorted, whole fleeces, the livestock keepers do not benefit from the high-quality fibre they produce, and they have no incentive to produce the best quality or maintain the local breed. The buyers prefer whole fleeces, which they have sorted in China, where labour costs less than in Kyrgyzstan.

Despite these disadvantages, the herders have no incentive to laboriously comb the valuable cashmere from their goats, since buyers usually accept only the fleeces.



The price of cashmere

Figure 8 shows that the farm-gate prices of untreated fleeces and combed cashmere for Kyrgyz producers rose from 2004 to 2007, but dropped in 2008 due to the world economic downturn and a decline in demand for luxury goods, which affected cashmere prices all over Asia. Combed fibre fetched three times the price of the unsorted whole fleece.

The project team found that when their cashmere was combed out, a few goats produced up to 350 g of fibre fine enough for commercial use. Those were the best producers; on average, goats in Chong Alay district produced 168 g of cashmere, while animals in Alay produced 198 g. At the prices prevailing in late May 2008, this would mean an income of \$2.80–3.30 per animal. Typical villagers have 7–8 goats, so could have earned \$21–25 by selling cashmere.

Cashmere is a secondary income source for the villagers, whose main source of income is selling live animals. A young goat sells for about \$25, but a typical villager with 8 goats cannot afford to sell more than one or two animals a year. In Gansu province in western China, by contrast, goat keepers earn their main cash income from selling cashmere because the cashmere prices are much higher there.

Herders in Mongolia, Ladakh (in India) or China earn higher prices for their cashmere because they have learned how to sort their cashmere by quality and colour, and sometimes have created marketing cooperatives. Kyrgyz producers, on the other hand, do not have such cooperatives, and they do not sort their raw cashmere on-farm or in the village at present.

How much cashmere is available?

Official livestock production statistics appear to be gross underestimates. The provincial government levies a head tax on livestock, which discourages villagers from declaring all their animals to tax collectors. This applies particularly to goats, which the authorities consider are ecologically damaging, so a higher tax is levied on goats than on sheep. Villagers, NGOs and junior government officials all say that the official numbers are too low, and unofficial head counts seem to confirm this. Actual goat numbers in Alay are perhaps three times the official statistics, and in Chong Alay five times. That means that Alay district could produce up to 22 tonnes of combed cashmere, worth some \$350 000, or around \$6 000 per village in 2007. Chong Alay could produce up to 7.8 tonnes, worth \$125 000, or more than \$7 000 per village. The livestock keepers could earn even more if they sorted the cashmere into colour and grade classes.

RESEARCH ON THE CHARACTERISTICS OF CASHMERE IN REMOTE DISTRICTS

The project team collected cashmere from over 1 000 goats from 156 livestock keepers' flocks in 51 villages in Alay and Chong Alay districts, as well as three districts in Naryn province, in central Kyrgyzstan. It sent the samples to a commercial laboratory in Denver, USA. Here is a summary of the findings.

Remote districts have the finest cashmere. Some indigenous goats in remote Alay and Chong Alay districts produce very high-quality cashmere, comparable to the best in China and Mongolia. Some 38% of the samples from Chong Alay district had fibre diameters of less than 15 microns, while 27% of the samples in neighbouring Alay district did so. Only 4–5% of the samples from these two districts were more than 18 microns in diameter, which would not be classed as true cashmere.

Though some fine cashmere was present in the samples from Naryn province, interbreeding with the introduced non-cashmere breeds (Pridon and Angora) has lowered the fibre quality of many goats there. Some 10–18% of the samples from this province were thicker than 18 microns. Kyrgyz traders in Osh corroborate these findings: they say that fibre from mountainous areas is always more expensive than from valley areas.

Some animals have ultra-fine cashmere. Some livestock keepers' goats had very fine cashmere of 13 microns in diameter. Such fine fibre is extremely rare and forms an important genetic base for breeding goats with fine cashmere.

Flocks are mixed. Some other goats had coarse down, up to 22 microns in diameter, well above the standard accepted as cashmere. Within individual flocks, there were differences of up to 6.5 microns in the mean fibre diameter of different animals. That would have a major impact on the commercial value of their cashmere.

Remote districts have white or cream fibres. In Alay and Chong Alay districts, 29% of the cashmere was white, compared to only 14% in Naryn, where black goats predominate (79% of samples). Furthermore, 14% of the Osh districts' cashmere was light yellow or cream, also appreciated in the processing industry as white and lighter colours can be more easily dyed.

Finer cashmere is wavy. The study confirmed that coarse fibres are straighter than fine cashmere. Buyers have long known this: they use the waviness to class cashmere into lots for sale, so avoid having to send samples to a laboratory for testing.

Overall, the tests show that some livestock keepers, villages and districts have better cashmere goats than others. But because the goats are variable, the fibre is not uniform, even within a single flock. Mixed lots of variable cashmere are less attractive for commercial buyers who seek the best quality and are willing to pay more for this.

TRAINING PASTORALISTS ON PRODUCING HIGH-QUALITY FIBRE

The project responded to the villagers' request for training by conducting six workshops in five districts. The 113 participants included village organizations, district agricultural officers, and village-based cashmere traders, and Aga Khan Foundation staff. The training covered cashmere goat identification, combing, sorting the fibre, village bulk marketing, international standards and demands.

Participants complained about the lack of cashmere buyers, leaving the Chinese as an effective monopoly buyer. The livestock keepers said they did not have enough information about world markets, price and demand. Many livestock keepers confused Angora fibre (mohair) with cashmere. Most participants felt their goats were suitable only for meat rather than for producing cashmere. They also said that they did not have special tools and skills needed to comb the down.

The trainers advised the livestock keepers that the cashmere they produced did not always fulfil international standards for cashmere, which discouraged Western buyers from Kyrgyzstan. Crossing *jaidari* goats with Angora or Pridon breeds lowers the quality of cashmere produced. The trainers showed samples of Chinese, Mongolian and Afghani cashmere so they could see what the world standard is like. The livestock keepers noted that some of their own goats produced cashmere that was just as fine as these samples.

Advice was also given on feeding goats for better nutrition. There were practical demonstrations of how to comb goats, and how to identify and sort cashmere according to main quality characteristics.

Several hundred cashmere combs were distributed to villages, for sale at \$7 each. Some village organizations sold them on credit to their members, while other combs were sold at markets and at the training workshops. The demand for combs far outstripped the supply. A comb can last a lifetime, so is a good investment.

The participants were encouraged to form marketing groups to sell cashmere in bulk, and to decide how to get veterinary treatment, produce feed, and sort and process cashmere.

Following these workshops, Aga Khan Foundation staff livestock staff also advised villagers on cashmere production and handling.

REVIVING THE LOCAL BREED OF GOATS

In 2008, the Odessa Centre, the Kyrgyz Cashmere Producers' Association, together with an Australian cashmere researcher, joined a local livestock keeper in Alay district to form a group called QuodPod Cashmere to buy and breed 30 of the best cashmere goats, identified through the laboratory tests. QuodPod aims to use these animals to create an elite *jaidari* breeding flock. After several years of breeding, it should be possible to sell animals to local livestock keepers who wish to upgrade the quality of their flocks.

PROMOTING MARKETING LINKS WITH BUYERS FROM EUROPE

The project team supports villagers by creating linkages with companies in Germany, Italy, Poland, the United Kingdom, Japan and other countries that seek high-quality cashmere. Demand for the best quality cashmere remains strong in high-end fashion houses in Italy, Japan and the United Kingdom. These companies are willing to pay livestock keepers a premium for high-quality fibre which is bulked and sorted.

The laboratory tests in 2008 were the first technical assessment of the quality of cashmere goats in Kyrgyzstan. They were important because international cashmere processors express interest in buying only after they have seen independent tests of the cashmere available. Once they know where the good and poor quality cashmere is located, they will pay more for better quality.

As a result of the project's promotion efforts, a large-scale buyer from Germany visited remote villages of Alay and Chong Alay in June 2008, hosted by the Aga Khan Foundation. This buyer agreed to buy fibre through village organizations in 2009, the following season. This company has been buying cashmere from northern Kyrgyzstan since 2000. Company representatives noted that the quality of down had decreased in Naryn province in the previous 3 years, due to the livestock keepers bringing in Pridon goats to cross with their *jaidari* goats. Several other buyers from Poland and the United Kingdom are also establishing buying points in Osh City, with assistance from the Cashmere Producers' Association. Cashmere companies in India, the United States and New Zealand have also contacted the Odessa Centre about buying cashmere from Kyrgyzstan.

WAYS TO IMPROVE CASHMERE MARKETING

How do the villagers think marketing could be improved? The chairmen of village organizations formed with the support of the Aga Khan Foundation had three main requests:

- **Establish cashmere collection points.** Older villagers remembered the Soviet centralized marketing system, where state organizations regularly collected products such as wool and milk from each large collective farm. Nowadays, private traders come to villages and buy with cash from individual households. Some villagers think they could earn more by pooling their cashmere at one place in the village, and then sell it in large lots to bigger buyers.
- **Train livestock keepers on selecting breeding animals.** Livestock keepers need training on how to select breeding bucks and does to improve the value of the cashmere they produce. They should avoid using males with coarse cashmere for breeding, and should avoid crossing cashmere goats with Angora or Pridon animals. They should sell or slaughter goats that produce the coarsest cashmere, the least amount of fibre, and the fewest kids. They should learn to identify the animals with the best cashmere: the down is wavy rather than straight
- **Train livestock keepers on improved production practices.** Producers should comb the fine cashmere out of the goats' fleeces before shearing them, and should separate the coarse and fine cashmere from the main bulk of the fibre. They should avoid combining Angora or Pridon fibre with *jaidari* goats' cashmere.

How else to improve the market value of cashmere for Kyrgyz producers? Here are some ideas.

- **Provide better bucks for breeding.** Kyrgyz goats produce only about one-third of the cashmere produced by improved goats bred in China – so there is a lot of scope for improvement. QuodPod Cashmere's efforts to establish an elite herd should be continued and replicated.
- **Invest in Kyrgyzstan's cashmere production.** Investment by donors, local foundations and the private sector is needed to increase the number of good-quality goats and help the poorer livestock keepers and goat-breeders, especially in remote mountainous regions where goats have been traditionally bred.
- **Inform producers about cashmere prices.** Reliable information on prices for different quality grades of cashmere would motivate livestock keepers to improve their flocks.
- **Improve extension services on goat and cashmere production.** NGO staff and government development workers need accurate information on different qualities, current international prices for cashmere, conditions of keeping and combing goats, and so on, so they can advise producers through practical training, demonstrations and exhibitions in the villages. Producers and development agents could learn much by visiting neighbouring countries where cashmere production and processing are more developed.
- **Market cashmere in bulk.** The village organizations established by the Aga Khan Foundation should create collection points to bulk and sort cashmere for sale to traders. This would bring better prices for livestock keepers and encourage them to make decisions collectively.
- **Promote handicrafts from cashmere.** Products made of cashmere are in great demand. Training village women to knit or weave cashmere products would establish local industries and create employment.
- **Provide tools and equipment.** Local blacksmiths can make the combs needed to produce high-quality cashmere. Larger investments are needed for equipment to process down to make a semi-finished product with higher value.

MORE INFORMATION

Odessa Centre Ltd.: www.odessacentre.co.uk

Kyrgyz Cashmere Producers' Association: sabyr7508@rambler.ru

Aga Khan Foundation: www.akdn.org/kyrgyz_republic_social.asp

Spinning a value chain from the Gobi: Camel wool in Mongolia

Sabine Schmidt, Altanchimeg Chimiddorj, Nancy Shand and Dean Officer

It is minus 40°C outside, and the wind is howling across the flat, snow-covered landscape. Outside the *ger*, the felted tent that many Mongols call home, the cold does not bother the family's twin-humped, Bactrian camels: they grow thick layers of insulating wool that protects them during the harsh winters in the Gobi desert. Inside the round tent is a single room, heated by a stove in the centre. A woman sits with a hand-spindle, spinning the last of the light-brown wool shorn in previous spring. She winds the finished yarn into a skein – a loose coil of wool weighing 100 grams.

Camel wool is soft and does not stretch or “pill” when knitted (it does not form little balls of fuzz on its surface). Unlike sheep's wool, it does not cause allergies. It keeps the wearer warm when the weather is cold, and pleasantly cool when it is warm. It has a range of earthy natural colours, from white, cream, beige, brown to black, and is ideal for dyeing. Those are attractive properties, not only in Mongolia but also in the United States, where the winters are perhaps not quite as cold as in the Gobi, but where knitted scarves and warm socks still find eager customers.

How, then, to bring this wool from the poor, rural Mongolian women who spin it, to customers in affluent America? The answer was to build a value chain from scratch. A group of poor rural women who own few or no livestock themselves now earn 50–80% of their family's annual income by hand-spinning yarn. This chapter describes how wool is produced in the Gobi, and how it is beginning to reach customers in the USA.

CAMELS IN MONGOLIA

Bactrian camels are highly adapted to the desert environment. In the summer the coats is short and thin, and in the winter it grows thick and long, protecting them from the cold. Animals can be 3 m tall and weigh up to 700 kg. They can live as long as 40 years. They are important for herders as a source of milk, wool and transport – both for riding and to carry heavy loads when the herder family moves camp. Camels are the only large animals suited for sustainable livestock husbandry in the southern Gobi.

A decline in camel numbers in Mongolia has been halted only in the last few years. In Gurvantes district, in the far south of the country, there were only just over 4 000 camels at the end of 2007, compared to 15 000 in 1975. Nationwide, the number of camels has decreased from around 900 000 in the 1950s to about 320 000 in 2000 and about 250 000 in 2002. Eating camel meat used to be taboo, but began during the socialist period when each household was allowed only a limited number of private livestock. It became more common in the 1990s when rural households were short of food and money, and when the price for camel meat increased.

Camels also play a vital role in the management of the Gobi. They forage especially on a type of shrub called saxaul (*Haloxylon ammodendron*), especially in the winter, and help maintain saxaul forests by spreading their seeds. Intact saxaul forests protect the soil from erosion, shelter other plant species from the biting wind, and retain moisture in the soil and air. However, saxaul wood is also a major source of fuel for pastoralists as well as for urban residents. Protecting and restoring saxaul forest is an important strategy to combat desertification.

Today, government policy seeks to increase camel numbers by rewarding herders for larger herds and supporting exhibitions of camel products. The Gurbantoelei district government pays herders MNT 1 000 (about \$0.70) for each newborn camel calf. The national government also has launched a programme to promote camel wool – though this does not provide any financing.

“MALE” AND “FEMALE” WOOL

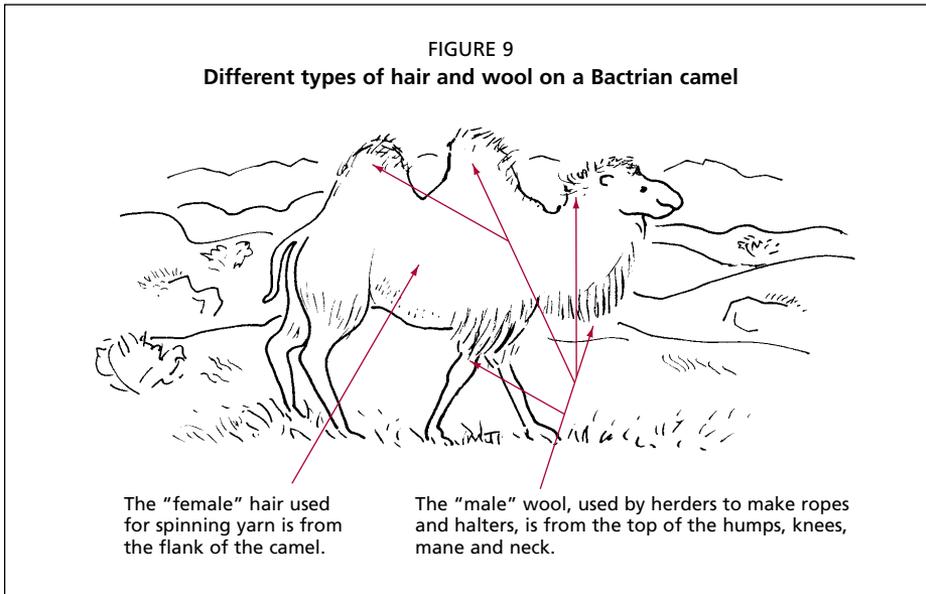
The quality of camel wool is determined by the age and sex of the camel. Mongolian herders distinguish “male” and “female” wool from camels more than 3 years old (despite the names, male and female camels have both types of wool, Figure 9). The “male” wool is made up of longer, coarser hair; it comes from the mane, the front of the neck, the knee and the tops of the humps. It is used to make ropes and animal halters. The long neck hairs are used to make thread, and hair from the mane is used to make bags and as insulation in traditional quilted pants and jackets. A camel yields about 1.5 kg of “male” wool a year.

The finer, “female”, wool is from the rest of the body. The fibre that comes from the camel’s sides is best for spinning yarn. A camel yields about 3.5 kg of the “female” wool a year. The finest, most valuable, very high quality “female” fibre is called *torom* wool; it comes from baby camels less than 3 years old. All of the wool from a 2-year-old animal (the age that it is first shorn), including from the head, neck, hump and front legs, is rated as *torom* wool. The older a camel gets, the less “female” fibre it has. Some 80% of the wool from an adult camel is fine grade hair with a diameter of 17–20 microns.

Women who do not have their own camels may buy a batch of “female” wool direct from herders or from traders. They separate out the finest fibres to spin, and perhaps sell the remainder. They use hand-spindles for spinning and they knit garments by hand; today, some also use small knitting machines. They make items either for household use or for sale locally and in shops in Ulaanbaatar.

Shearing of the camels starts after Tsagaan Sar, the Mongolian lunar new year, and takes place in several steps. Depending on the weather and the camel’s condition, the shearing of the “male” wool will be finished between middle and the end of spring. If the camel is weak, the shearing of the last “male” wool may be postponed until the end of spring. At the end of spring, the wool on the feet, neck, groin, armpits and tail is shorn. Shearing of the body (the “female” wool) should be finished by end of June. Ideally, females should have given birth by the end of spring, so that calving does not coincide with shearing time.

A typical herder household with 46 camels earns about 12% of its annual income from selling raw camel wool. Other income sources include cashmere (about 50%), dairy products (about 1%), livestock skins (about 2%), as well as government support (pensions and family allowances, about 35%).



PROBLEMS FACED BY HERDERS

Nomadic camel husbandry is an ancient way of life for herders in the Gobi, the desert and semi-desert pasturelands that form Mongolia's south and west. But the herders face many challenges:

- **Climate change** is affecting pasture and water resources.
- **Herd structure.** Market mechanisms encourage herders to keep cashmere goats rather than camels.
- **Policy.** Laws and policies for managing pastureland are lacking.
- **Inequality.** Livestock are becoming concentrated in the hands of fewer, very wealthy households or absentee owners, creating a class of herding labourers who are potentially very vulnerable.
- **Remoteness.** Long distances, a lack of roads, and high fuel and transport prices mean it is difficult for herders to reach the market.
- **Dependence on traders.** Many are dependent on traders who come to them. These traders dictate prices, or provide consumer goods on credit and demand payment in wool or cashmere when prices are high, or in cash when prices are low.

A WOOL SURPLUS

Mongolia produces more camel wool than it can use. In the 1970s, 3 000 tons of raw wool accumulated each year without being processed. Since the 1980s, an industry to process this wool has developed, so more wool is used than before. It produces high-quality knitwear to compete in the international and domestic markets. Other products are blankets and mattresses, the latter made from the coarser components of the wool. While advances have been made to separate the different components of the wool and to extract the fine fibres suitable for making high-quality products, this process remains lengthy and expensive.



There is still a wool surplus, especially in districts far from the factories in Ulaanbaatar and the Chinese border. Mongolia has over 200 000 adult camels, producing an estimated 700 tons of “female” wool suitable for yarns and garments a year. The three biggest companies in Ulaanbaatar together process less than half of this – about 310 tons a year. It appears that up to half of the raw wool suitable for making yarn and garments is not processed in Mongolia; it is either stored indefinitely or is smuggled over the border to factories in China (exporting raw wool is illegal, so accurate data are hard to come by).

District data support this supposition. For example, the 12 400 camels in Bayanlig, a district in Bayankhongor province that has the highest camel numbers in the country, produce about 62 tons of wool a year. Two companies in Ulaanbaatar each buy about 10% of this output. Another 20–30% is sold to traders, while a further 20% is used locally to make ropes and local handicrafts. That leaves nearly a third unaccounted for. In neighbouring Gurvantes district, approximately 20 tons of wool are produced annually, of which only 400–500 kg are processed locally.

Many of the traders come from China. They grade the raw wool, and sell the clean portion (which is free of earth, plant materials and dirt) to Mongolian processors, and transport the remainder to China. There, the inferior fibre is used for insulation in quilted garments. Also, camel hides are sold at the border, and the camel wool is cut from the hide, processed and sold back to Mongolia.

KNITTING TOGETHER A CHAIN

Building a value chain to link Mongolian spinners with American knitters took a combination of development projects, NGO activities and initiatives by committed individuals.

In the late 1990s and the 2000s, German Technical Cooperation (GTZ) supported two successive projects focusing on nature conservation and sustainable resource management in the Gobi. These projects emphasized community organization, sustainable livelihoods,

and working with mobile pastoralists and local governments. They saw an opportunity in camel wool: a high-quality but under-used product that could be used to raise local people's incomes and alleviate poverty. The idea was to make camel wool more valuable, so enhancing the value of the camels and creating an incentive for camel husbandry. That would ultimately generate important ecological benefits.

These projects provided various forms of support:

- Training in processing and spinning of camel wool
- Locally made carding and spinning machines
- Training to produce yarn to specifications
- Training in small enterprise skills and cooperative training.
- Workshops with the women spinners to identify problems, challenges and successes, and to plan the way forward.
- Support for women to participate in exhibitions and fairs.

Initially, product development was for the local and national market, and the projects presented the product in trade shows and fairs in district centres, the provincial capitals of Arvaikheer, Bayankhongor and Dalanzadgad in south-central Mongolia, and in Ulaanbaatar, the national capital.

Production

At the local level, community organizers working with the project coordinated efforts, provided information to the spinners, organized training and collected samples and products to be sent to Ulaanbaatar.

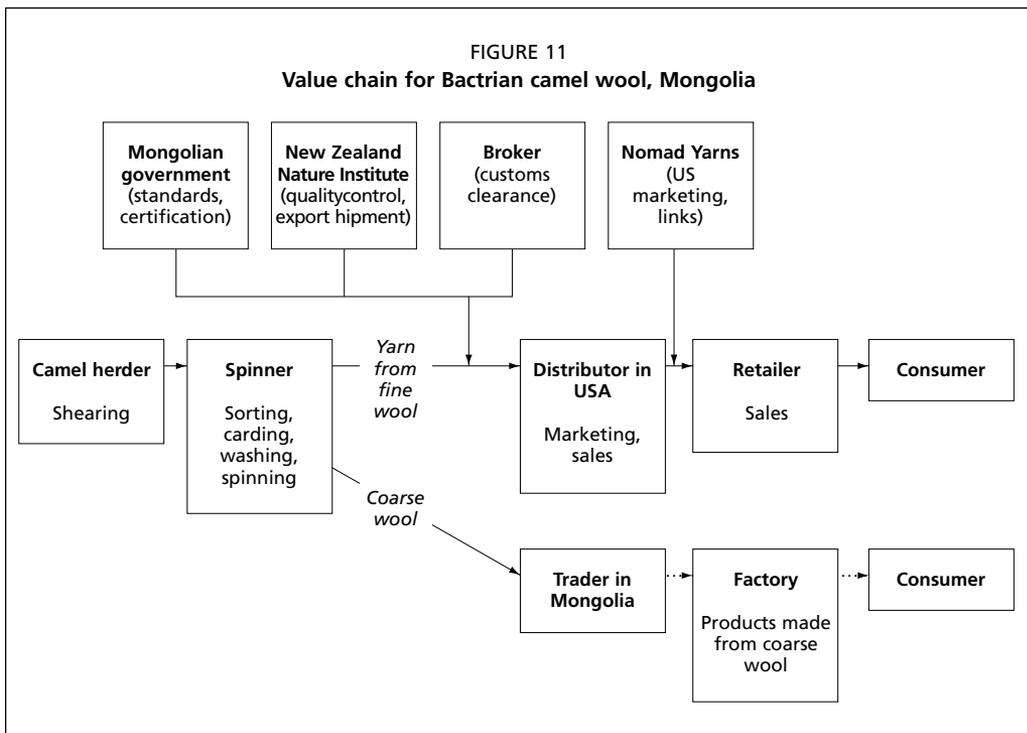
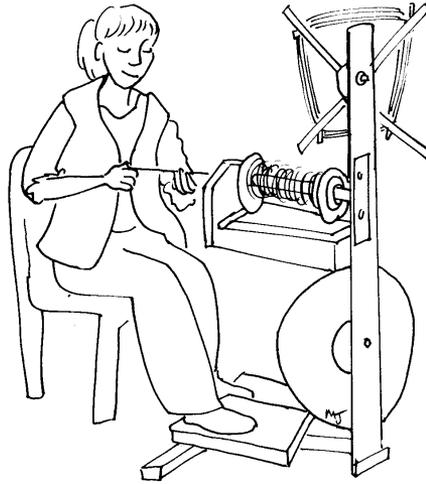


FIGURE 12
A part-time spinner produces about 1 kg of wool a month



While a large number of spinners in several districts were provided with initial training and equipment, only 40–50 spinners in Gurvantes district currently produce yarn for the targeted niche market, using wool from the indigenous Nutgiin Mongol breed. Currently, about 35 women are spinning regularly. They are all able to produce to the required standard, and some have excellent abilities.

One spinner produces approximately 10 skeins (loose coils of wool), or approximately 1 kg of fine yarn, per month. The spinners do not work full-time, but in between housework or paid jobs. Most prefer to work at home so they can look after their children and do other tasks at their own convenience. They say that under current conditions (all the preparation done by hand and the spinning done with wheels) they could increase the average output to 15 skeins a month.

Most of the spinners are women from non-herding households in rural centres, or from herder households with few camels. Members of herder households with many camels are less likely to do spinning: they live in remoter areas, move around with their animals, have many herding tasks, and are relatively well-off from their income from herding and selling raw products. For spinners with few or no livestock, selling yarn can be a significant source of income, and often their main one.

Marketing

At the other end of the chain, the international marketing process was largely carried forward by Nancy Shand, an American anthropologist who brought the yarn to the USA and introduced it to potential buyers. A support initiative, “Nomad Yarns”, was set up in the USA. For several years, Nancy Shand continued to support the effort by enlisting a volunteering expert to provide guidance on product development to the required specifications, covered the costs of transport and customs, made contacts with distributors, displayed the

yarn at trade shows, developed brochures and other information material, and set up a website. Raising the quality of the product and developing consistency of properties of the yarn has been an important input.

A large international distributor has taken on camel wool yarn for marketing in North America and Europe. If these initial efforts prove successful, they could evolve into a viable market. The potential to develop and market other products based on camel wool is largely untapped.

Linking producers and markets

The link between the spinners in Mongolia and the marketing efforts in the USA was for several years maintained through the efforts of Altanchimeg Chimiddorj, a local consultant with the office of the New Zealand Nature Institute in Mongolia. She introduced tools and standards for skeins with Nomad Yarns, organized training, and oversaw quality control and the paperwork requirements for certification and for shipment to the USA.

The spinners in the Gobi needed support in handling the paperwork for export and in organizing transport. Several certifications are needed: for quality (from the Mongolian Agency for Standardization and Metrology), origin (by the Chamber of Commerce), and laboratory testing (the Mongolian Textile Institute, Mongolian University of Science and Technology).

The effort of developing the product and developing a market has been a constant balancing act. For a wholesaler or distributor to take on the product, it needs a steady, assured supply of the product. On the other hand, the spinners put considerable work into production, so need to know that their efforts will be worthwhile.

All this effort has established a marketing chain:

1. The spinners buy wool from herders (some spinners also own camels).
2. They separate out the high-quality fibre and sell the remainder to traders.
3. They remove the grass, wood, dirt and hair from the fibre, wash and dry it, fluff it by hand or using a hand carder, and comb it. They weigh it into lots of 100 g each, and then spin each lot into skeins. They wash the skein with shampoo, rinse and dry it, then label it with the individual spinner's name before giving the skein a final quality check.
4. The finished yarn is taken to Ulaanbaatar, where it is again checked for quality.
5. The wool is certified by a laboratory for customs, origin, and quality.
6. It is shipped to the USA. On arrival, it is cleared through customs by a broker.
7. It is shipped to the distributor, which in turn ships it to retailers.

This chain is still in the trial stage. If successful, it can be scaled up at both ends, with more spinners producing more wool, and a wider distribution network in the USA.

PRICES

A spinner buys 100 g of raw, fine wool for about \$0.50 and sells it as a spun skein for about \$4.00. The costs of shipping, certifications and export permits from Mongolia and import into the USA, advertising and marketing are partially covered by the NGO in Mongolia and supporters in USA. Even so, the distributor pays \$12 for a skein, and sells it for \$20 to retailers, who sell it on to customers after adding their own margin.

SECRETS OF SUCCESS

What makes camel yarn attractive to customers in the United States? The qualities of the yarn itself are a major selling point. Its exotic origin, the ecological significance of the camel, and the benefits to women of the Gobi all add appeal. They also generate a lot of interest and commitment among key players involved in the value chain, from supportive customs officials who admit the product into the USA under an existing code, to the end-customers who are prepared to pay premium prices when they know about the ecological values and livelihoods their purchases can enhance. A key staff member at the distributor has developed a personal interest in the story and has facilitated trial marketing efforts that have the potential to reach thousands of retailers.

UNRAVELLING THE KNOTS

Various problems and challenges face the spinners:

- **Cost of raw wool.** Because most of the spinners have no or few camels of their own, they have to buy the raw wool. That greatly reduces their profit margin.
- **Processing efficiency.** The spinners de-hair the raw wool and prepare it for spinning by hand at a very small scale. This takes a long time.
- **Lack of organization.** Several attempts have been made, by local individuals themselves and through project support, to establish and strengthen a cooperative of spinners, but they have not yet been successful. Barriers are the nomadic lifestyle, long distances, high costs of travel and communication, a lack of infrastructure, as well as limited understanding of cooperation mechanisms, and insufficient trust among members. So the spinners are essentially an informal network of women connected to the marketing effort.
- **Lack of export skills.** Even if they had a more formal organization to manage production, the spinners would still lack the knowledge, skills and resources to maintain the market links. They rely on the NGO to handle this aspect of the work.
- **Maintaining a steady supply of wool.** Raw wool is available only after the spring shearing, so workloads are seasonal. Long distances and remoteness are major challenges to maintain the steady supply of wool that is a precondition for successful marketing.
- **Lack of regular buyer.** If the women had a regular order they could decide how much wool to buy, and would be able to manage their work more easily. They could even consider applying for credit to buy wool.
- **Lack of capital and credit.** Despite various rural microfinance programmes, it is still difficult for poor and remote households (and for groups) to access credit. Collateral requirements, short repayment terms and high interest rates are major barriers. Credit would enable spinners to buy sufficient amounts of raw wool when it is cheap, and to acquire a machine to de-hair and clean the raw wool.

POTENTIAL AND OPPORTUNITIES

Various opportunities exist to expand production and marketing of the wool.

- **Increasing production.** Many more women are interested in spinning. Production could be increased significantly if they were trained and could get credit to buy equip-

ment and raw materials. Based on the number of non-herding households and the volume of camel wool available, it is fair to assume that in Gurvantes and two neighbouring districts, several hundred women would be interested in spinning yarn. A larger number of producers would make it easier to produce a regular supply of yarn.

- **Mechanizing laborious processes.** Production could be increased further if the laborious cleaning and de-hairing process were mechanized. The women could continue to hand-spin at home. Feasibility studies are needed to calculate the production potential if groups of women had such equipment, or if a processing and production facility were established to employ spinners.
- **Ensuring socially responsible investment.** Investment in the processing of wool should ensure good working conditions, child care, social insurance, continued training and fair wages and prices. The New Zealand Nature Institute is exploring ways to create a viable venture by building on the unique qualities of the wool, creating fairer trading conditions, and linking current initiatives to sources of expertise, funding or investment.
- **Geographical indication.** With assistance from the European Union, the Mongolian government has established “Gobi desert camel wool” as a “geographical indication” – a kind of trademark that guarantees the origin of the wool. This certification requires that all processing steps are done in Mongolia. Registered producers can use the geographical indication logo as well as their own trademarks.
- **Expanding the international market.** Although about 50 retailers in the USA and Europe carry the camel wool, re-orders are still rare. A major distributor has taken on the yarn since September 2008 and is undertaking a major marketing effort at trade shows and through its links. The next 6 months will be crucial to gauge demand and potential, and to determine whether larger regular orders could be placed with the spinners in Mongolia.
- **Developing a long term strategy.** The outcome of this marketing effort will feed into a long term strategy, targeting more efficient production, further defining and refining the product, and determining the most viable option for production and marketing. Choices to be studied for feasibility include (a) an informal network of spinners (as now) linked to a fair trade initiative, (b) a larger cooperative with its own capacity to ensure regular supplies, quality control and marketing, (c) a local factory, run by a small business venture. The first two options may involve some mechanization.

MORE INFORMATION

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New Zealand Nature Institute: www.nzni.org.mn

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Marketing of handicrafts made from Linca sheep wool in Patagonia, Argentina

Luciana Cardinaletti, Julieta von Thüngen and María Rosa Lanari

Tourists have many reasons to visit Bariloche. This town in Argentina's Rio Negro province is nestled in the foothills of the Andes and is surrounded by scenic lakes. In winter it attracts skiers, while in summer people fleeing sultry Buenos Aires come to enjoy the lakes' beaches, fish for trout, trek through the mountains and climb local peaks.

Many of the tourists buy local handicrafts as a souvenir of their visits: leather belts and bags, silver rings and pendants; liqueurs, jams, chutney and honey; ceramics and carvings. Wool is also a speciality: ponchos, shawls, bags, sweaters, hats, socks, gloves, girdles, wallets: there is a vast range of types, using traditional designs from the area.

Perhaps the best place to pick up a souvenir is in Dina Huapi, a small town about 20 km northeast of Bariloche, on the road towards the Siete Lagos (Seven Lakes). On a crossroads here is the Mercado de la Estepa "Quimey Piuke" (which means Market of the Steppes "Good Heart" in Spanish and Mapuche), a shop filled with all kinds of traditional handicrafts. Visitors who browse through the shop rarely come away without a colourful woven bag or a jar of *dulce de leche*, a sweet syrup made of milk.

The pride of the Mercado sellers is the ponchos: traditional woollen garments worn by the region's farmers. The ponchos are warm in winter, waterproof in the rain, and multifunctional, serving as a coat, cushion and blanket. There are many designs: stripes and patterns made of different naturally coloured wools: cream, light brown, ochre, dark brown and nearly black. The ponchos are not cheap – one may cost upwards of 2 500 pesos (about \$660). But these are beautiful, hand-woven, individual items that take hundreds of hours to make on a traditional loom. With their traditional designs and natural colours, they encapsulate the region's identity.

LINCA SHEEP

Sheep raising is the main economic activity in this dry, windswept steppe. There are around 1 500 sheep raisers, who also keep cattle, horses, chickens and goats. Most of the sheep are Merinos – a breed that produces white, fine wool. About 30% of the sheep raisers are large-scale producers who keep flock of 2 000 or so Merinos on big farms averaging 8 500 ha each. They sell large amounts of wool to exporters.

The remaining 70% of producers operate at a smaller scale: they each have an average of 800 ha of land and about 200 animals. These producers live in remote villages, with poor roads that are impassable in winter. They sell wool to large companies at low prices: with only 800 kg of wool a year, individual producers do not produce enough to sell in bulk, and buyers have to incur higher costs to obtain their wool.

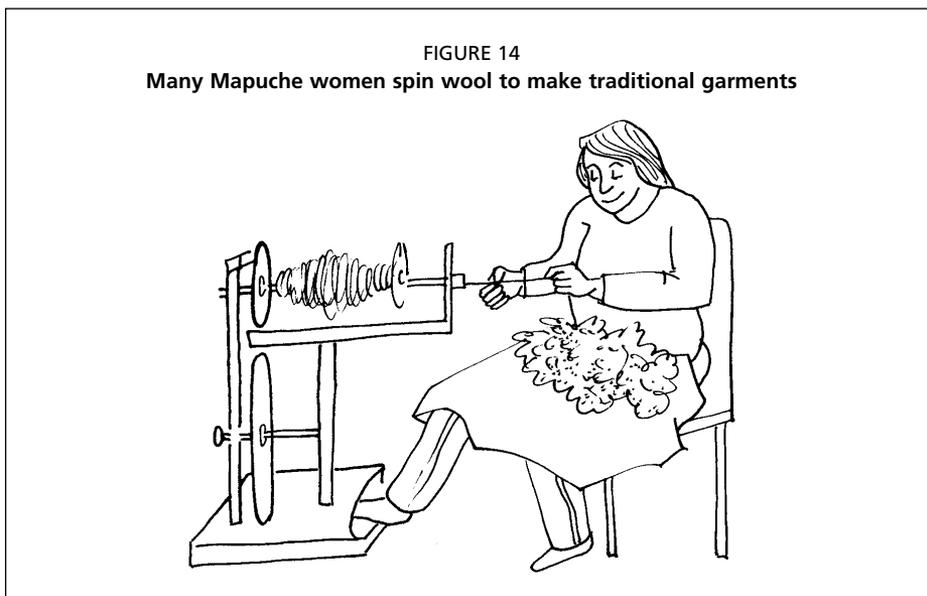


The wool in the ponchos comes from a particular breed of sheep called the Linca, or Pampa. These sheep have been in the area since the late 17th century, but the breed's origin is not known: it is thought to be descended from Lincoln animals from England. Linca sheep are variable in colour, ranging from light brown to very dark brown. Local craftswomen prize the wool: they say it is soft and has the right fibre length, so is good to weave with. Some 46% of the fleece is a fine down with an average fibre diameter of approximately 22.7 μm and length of 9 cm. The average guard hair staple length is 18.5 cm. The down is ideal in terms of length, softness and variety of colours for making ponchos and other products.

But the Linca is in danger. Stocks have been declining sharply recently through cross-breeding with Merinos, and because the major buyers do not want the coloured wool the Linca produces. A small number of small-scale producers, generally women, keep a few Linca sheep – perhaps 30 animals – among their Merino flock. There are very few purebred Linca flocks, and even fewer rams: an ongoing study has found only four producers with fewer than 200 animals in all, though there may be other flocks elsewhere in the region.

Many of the small-scale producers have roots in the indigenous Mapuche community. The men in these small farms rear Merino animals and sell small amounts of wool at low prices to local dealers. The women's role is to care for the home and children, to rear the Linca sheep. They spin and weave the wool of their own sheep (plus perhaps some wool

FIGURE 14
Many Mapuche women spin wool to make traditional garments



bought from outside) to make traditional products such as ponchos and other garments, mainly for family use.

The women also sell wool, or woven items, to a few local traders who go from house to house; some also take their products to sell in town. But few traders come to the isolated villages, and local people rarely have a chance to travel, so have few chances to sell their products. Potential markets are too far away for individual farmers to reach. Sales are not high enough to encourage farmers to keep more Linca animals. And the farmers did not have the skills or connections to sell their products.

MERCADO DE LA ESTEPA

The solution was to organize as a network to overcome the physical and cultural distances. This network has small towns as nodes where members can meet and discuss news, prices and techniques. The Mercado de la Estepa is the central hub, where every member can sell the products that she and other members have made. Today, the network it involves over 260 families from various parts of southern Rio Negro province. Nine-tenths of the members are women.

How did this network emerge? The organization that eventually became the Mercado de la Estepa was formed in 1999, when Surcos Patagónicos, a NGO promoting development of rural communities in Río Negro province started a weekend trade fair in Dina Huapi. This was a time of economic crisis in Argentina, and people had very little cash. Local people came to the fair to barter goods: they exchanged wool, handicrafts, meat, fruit, vegetables and other products.

The first fairs were held out of doors. But winters in the area are cold, so in 2000 the fair moved indoors, and in 2001 the Mayor of Dina Huapi granted Surcos Patagónicos a piece of land to use for 10 years. Surcos Patagónicos collected donations and funds from government and private sources, and began constructing the building where the shop is now located. The building was opened in December 2003.

Meanwhile, Surcos Patagónicos, the Programa Social Agropecuario (agricultural social programme) of the Ministry of Social Development and the Instituto Nacional de Tecnología Agropecuaria (National Institute of Agricultural Technology, INTA) agreed to work together to support the sheep raisers and craftswomen. These three organizations aim to better the livelihoods of rural people.

This team began by studying the production and marketing system and local people's situation and needs. Then, during 2002 and 2003, they helped organize groups of local people in the Department of Pilcaniyeu, in western Rio Negro, near the city of Bariloche, and raise their awareness of their products and potential markets. Through a series of participatory workshops, the market Mercado de la Estepa was established, and a set of rules were drafted by the community to govern it.

The team and Mercado members took part in various local and regional trade fairs and exhibitions, and from 2004 on held several training courses on economics, organization and technical aspects of producing wool and leather handicrafts. In 2005 and 2006, new members joined the existing groups. New groups of producers in Pilcaniyeu and other departments had heard about the Mercado and negotiated to join it.

In 2007, the team helped the Mercado open a shop in downtown Buenos Aires, in collaboration with two other organizations (Silataj Foundation and Civic Association Niwok) working on indigenous fair-trade handicrafts from northern Argentina. This shop sells Patagonian products to consumers who do not have a chance to visit the Mercado itself in Dina Huapi.

GOVERNING THE MERCADO

The Mercado has its own constitution, and an assembly of representatives meets four times a year. The members are organized in zones, and each of the nine nodes elects two representatives. Assemblies are held in each node in rotation. The assembly elects a president, a vice-president, two committee members, a treasurer, and an auditor to manage the Mercado.

Someone can become a member of the Mercado in one of two ways. One is to apply for a guest membership, which allows her to sell items in the shop for 6 months. After this period, the organizing committee may approve her application for full membership. The other way is to be invited to join the Mercado by a permanent member. In both cases, the new member's products must be approved by the organizing committee. The new member must also agree to serve as a salesperson in the Mercado to sell all members' items.

The Mercado started out as a project of Surcos Patagónicos. In 2008 it was formally registered as an independent non-government organization.

FROM SHEEP TO PONCHO

The process of making a poncho involves several steps.



Shearing. This is done by hand with shears in summer, from October to late January. Each sheep produces around 4 kg of fleece. The fleece may be packaged and stored until it is sold or processed.



Washing. The fleeces are washed by hand using mild soap and warm water to remove the grease and dirt. After drying, the fleece weighs about 60% of its original weight.



Carding. This means combing the fleece to remove impurities in the wool and to align the fibres so they can be spun. When done by hand this task takes about 9 hours per fleece; with hand-operated drum carders, it takes about 3 hours.



Spinning. This uses a spindle or spinning wheel to convert the carded wool into yarn. Spindles are the traditional equipment: they are light and can be taken everywhere, but using them takes a long time and requires a great deal of skill. Using a spinning wheel speeds up the process, but not all the craftswomen have one. Spinning takes a long time: 20–30 hours for 1 kg of yarn, depending on the type of wool (thin, double, or thick). Making enough wool for a poncho may take perhaps 120 hours.



Dyeing. This uses natural dyestuffs such as grasses, roots, bark and onion peels, plus vinegar or salt to fix the colour.



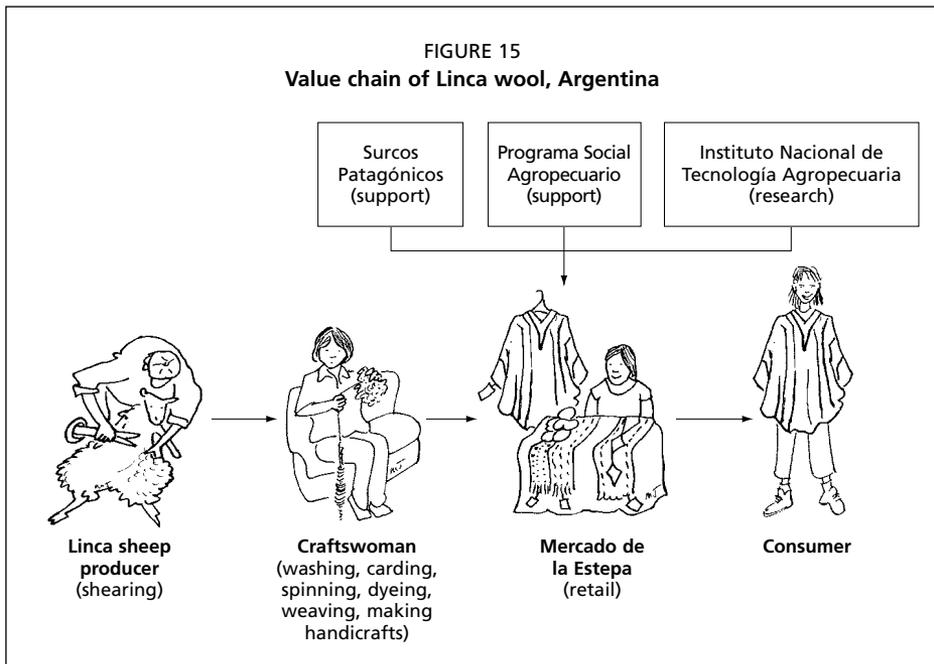
Weaving. The women use a simple, traditional vertical loom. Weaving a large poncho takes 200 hours of work and 4 kg of yarn. The ponchos may be plain or patterned with traditional Mapuche designs.

From unshorn sheep to finished poncho takes 350 hours in all. Different people may do different steps, or the same family may do them all. Women handle all of the steps, except the shearing, which is generally done by men.

SELLING HANDICRAFTS

The craftswomen act as salespersons in the Dina Huapi store. On weekdays, it is the women from Dina Huapi itself who do the selling. At weekends, two or three members from outlying villages come into the town to act as sales staff. They sleep in a dormitory on the second floor of the shop, and spend the day serving customers and maintaining and cleaning the store. They sell the products of all the Mercado members, not just their own. Most of the buyers are Argentinean and Chilean tourists looking for crafts typical from Patagonia, though increasing numbers of foreign visitors have started visiting the Mercado.

This interaction is enriching for both craftswomen and customers. The craftswomen learn their customers' tastes and become familiar with the market demand. They also gain



in skills and confidence, and learn to appreciate their traditional culture because they see that outsiders value it. The customers in turn appreciate meeting the people who have actually made the things they are buying.

Most of the Mercado's products are sold in the shop. The craftswomen themselves set the prices for the items they have made. Each item is labelled with the maker's name so she can be paid when it is sold. When setting the price, some check similar products that are for sale in the shop, while others calculate their costs and the amount of time it has taken to produce the item. The time and effort can be considerable: 6.5 kg of fleece worth 50 pesos converts into 4 kg of wool (worth 360 pesos), which in turn becomes a poncho that sells for 2 500 pesos. The Mercado keeps 10% of the sale price to cover its expenses.

PROMOTION

There has been very little promotion of the shop or its products, except through word of mouth in Dina Huapi and Bariloche. This was a deliberate strategy to begin with because only a few items were available and the craftswomen were afraid they would not be able to supply a big demand. More recently, however, volumes have grown as more craftswomen have joined the Mercado and the range of products has increased. The Mercado has printed publicity flyers and brochures and created a website (www.mercadodelaestepa.com.ar) to advertise the products. The Mercado also participates in fairs and other local, regional and national exhibitions in order to promote the products and to even out sales, which fluctuate seasonally along with the numbers of tourists in Dina Huapi. As a result, sales have risen steadily, by 30–40% a year.

Several other shops sell ponchos and other handicrafts, but they are not the same as those sold in the Mercado. The Mercado stress the origin of its products, their quality and the links with their makers, and its operation on fair-trade principles.

THE WOOL BANK

Very few Linca animals but increasing sales: that meant a shortage of wool for the craftswomen to turn into ponchos and other products. At the same time, some producers could not sell their Linca wool, as mainstream buyers want only fine, white Merino wool. Naturally coloured, coarse wool fetched low prices from such buyers.

So in 2005, the Mercado created a “wool bank” where craftswomen could buy Linca wool. They could pay for this raw material in cash, or in kind by returning spun wool or finished goods to the Mercado for sale. The wool bank also lent out spinning wheels and drum carders to craftswomen: they could take turns in borrowing this equipment. Demand has been high: the wool bank does not have enough equipment to supply everyone's needs.

As part of the process of forming the wool bank, the team held training workshops so craftswomen could identify which types of fleece were best for the products. Many complained it was hard to find the pure Linca wool their ancestors had used. So Surcos Patagónicos and INTA have begun to search for purebred animals and analyse their genetics in order to identify them more reliably.

INSTITUTIONAL SUPPORT

In addition to the team of INTA, the Programa Social Agropecuario and Surcos Patagónicos, various other organizations have contributed to the development of the Mercado. The Ministry of Social Development and the Ashoka, AVINA and Nuria foundations have provided financial support. Support from the local authority in Dina Huapi and various local municipalities where Mercado members live has also been vital.

BENEFITS AND CHALLENGES

The Mercado has substantially increased the income of its members' families. They have benefited in many other ways too: they are coming to value their own culture, relearn forgotten skills and develop new ones, and learn how to work together in a collaborative networking effort. They have gained visibility and respect in society for their families and their culture.

However, incomes are still low and sales are uneven throughout the year, as they are concentrated in the tourist season.

In terms of production, there are several constraints. One is a lack of equipment; this is being gradually overcome through projects that buy spinning wheels and drum carders. The main bottleneck is the lack of Linca wool. The wool bank has made a major positive impact: producers who would otherwise throw worthless fleeces away can now sell them to the wool bank for around 50 pesos each.

In the longer term, the only way to increase the supply of wool is to expand the numbers of Linca sheep. Thanks to the presence of a profitable market, this is now a possibility. Developing a market for handicrafts based on the local culture has created an opportunity to rescue and conserve the Linca breed.

MORE INFORMATION

Surcos Patagónicos: www.mercadodelaestepa.com.ar