



# Sustainable smallholder goat production and commercialization in India

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## Key points

- Goat production and marketing are important livelihood options for rural communities in the semi-arid and arid regions of India. Goats are mostly kept by marginalized groups, especially women who produce and sell in an ad hoc, and informal way.
- The increased domestic as well as export demand for goat meat is an opportunity to improve smallholder market participation.
- Important measures to succeed are widespread adoption of improved management practices in relation to health, reproduction and feeding as well as improved interaction among value chain actors to enhance smallholder market participation.
- Innovation platforms (IPs) provide an opportunity for different value chain actors namely, producers, input and service providers, traders and enabling agencies such as government departments, civil society organizations and researchers to meet, and jointly identify and address constraints.
- As access to animal health services is a challenge in most parts of the country, especially in small ruminant sector, it is important to engage with NGOs and public extension services that can train community animal health workers or field guides to deliver animal health services at the community level.
- Livestock policies, in general, are skewed towards large ruminants with little attention to small ruminants. A number of policy issues that may need to be addressed include for example: regulation of interstate transport and governance issues regarding market yards, including small ruminant capacity development in public extension programs, disease surveillance etc.

## Goat production in semi-arid areas: Case of Udaipur district in Rajasthan

About 47% of total households in Udaipur district are considered below poverty line. The scheduled tribe (ST) population accounts for 56% of total households. Almost all the ST households own goats with an average ownership of five animals.

Women and children play an important role in looking after goats while the men are more involved in the selling of the goats.

Because of the low literacy rates together with the absence of extension programs targeting goats, the knowledge of improved goat husbandry practices on health, feeding and reproduction is very low. The festive/winter season October to January is the peak sales period during which most goatkeepers sell their animals at the farm gate to (local) butchers or traders. It is not common for producers to bring their animals to the market.

## Introduction

Goats are an important livestock species to increase household food security in the semi-arid and arid regions of the country as they are mostly sold to purchase food items when cereal reserves are insufficient and to cover for emergencies. Hence, production is practiced on an informal basis that may not deliver its potentially larger benefit to the community. In addition to sales, goats are also consumed locally by goat keepers (making up 25% of the sales in Jhadol block in Udaipur district) hence contributing to the households' nutritional status.

However, there is clear evidence of increased demand for goat meat in domestic market (e.g. the retail price of meat in Udaipur increased by 15% in 12 months). The export demand is also increasing at a rapid pace calling for a more market-driven production. To achieve this given that commercialization is rather informal, linkages among value chain actors such as producers, middlemen, traders, butchers, input suppliers etc. need to be strengthened. Translating this increased demand for meat into increased productivity, sales and thus improved income for the goat keepers could contribute significantly towards improving the food and livelihood security status of farmers in semi-arid and arid areas. One of the critical success factors would be to address some technical and institutional constraints at different levels of the value chain.

### imGoats Project—in brief

The project, small ruminant value chains as platforms for reducing poverty and increasing food security in dry-land areas of India and Mozambique (imGoats) aimed to transform goat production and marketing to a sound and profitable enterprise and model that taps into a growing market, largely controlled by and benefiting women and other disadvantaged and vulnerable groups while preserving the natural resource base. In India the 2.5 years project (2011–2013) was implemented by BAIF in Udaipur district, Rajasthan State and in Dumka district, Jharkhand State. The imGoats project worked with 2685 households over 44 villages in Udaipur district and with 2000 households in 60 villages in Dumka district.

## Results

### Improved production

Delivery of animal health services for goats was improved through the training of community animal health workers (called field guides, 26 in Udaipur and 20 in Dumka) who provide basic treatments at a cost. The field guides are local youth with minimum literacy level, who themselves are goatkeepers.

They assist livestock assistants and/or the veterinary officer in conducting health camps where animals are vaccinated against Peste des Petits Ruminants (PPR), a major killer disease for goats and Enterotoxemia (ET). They also notify the veterinary officers of any animal health issues bridging the information gap between the goatkeepers and veterinary officers.

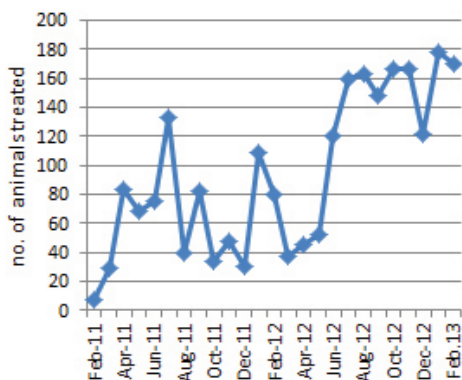


Figure 1. Overview of free services delivered by field guides in Jhadol block, Udaipur district.

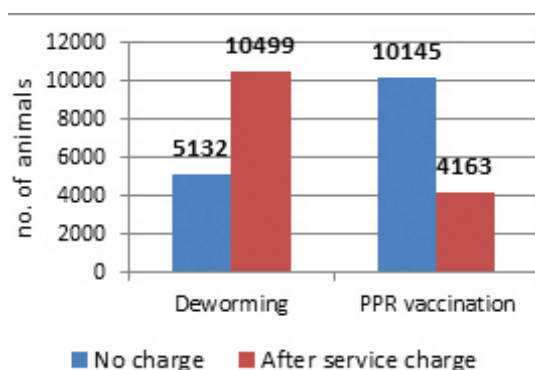


Figure 2. Overview of services delivered by field guides in Dumka district.

As indicated by the figures, the demand for animal health services exists and is growing. The reduction in the PPR vaccination (Figure 2) could be due to the fact that animals had already been vaccinated for free during the previous year (vaccines offer 3 year protection).

Result: The combination of these interventions resulted in a reduction in mortality in goats from 30 to 40% in March 2011 to around 10% in March 2013. For households in Jhadol block it results in an avoided loss of approximately 2 animals or 7000 Indian Rupees (INR) per household for the same period (INR 61,2894 = USD 1 at 18 October 2013).

In addition, 244 Sirohi bucks were distributed in Udaipur district and 160 Black Bengal in Dumka district. Because of the different characteristics of the Sirohi breed (much bigger and taller) compared to the existing local non-descript breed (desi), introduction of the bucks resulted in a visible benefit for the goat keepers in terms of increased body weight. In Dumka district, the distributed Black Bengal bucks resulted in more offsprings per kidding.

Result: Introduction of suitable improved breeds can help improve income from goat sales as the animals are often bigger than the local breed (e.g. Sirohi versus local) or result in more offsprings per kidding (e.g. Black Bengal). Rigorous culling of weak and non-descript animals, replaced by progeny of elite breeds will improve the productivity while keeping control on herd size.

### Increased commercialization

As shown in Figure 3, the winter months (October to February) are traditionally the peak sales months for goats coinciding with the main Hindu and Muslim festivities.

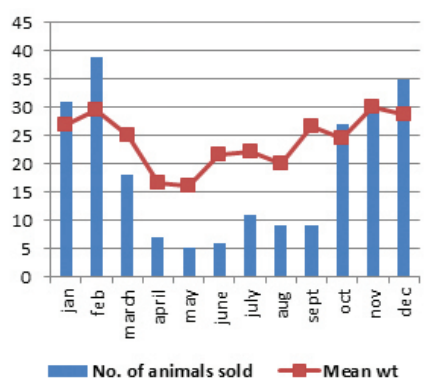


Figure 3. Overview of the number of goats sold and their mean weight in 2012 in Udaipur district as part of imGoats (no. = 232).

Information from Jhadol block in Udaipur district based on 232 animals sold shows that the average weight at sales is 26 kg at 12 months of age. The average price per animal is INR 4100 with some fetching up to INR 10,000 for a particular Muslim holiday (Bakried). In general, there is a clear preference for castrated animals with price differences varying from INR 600 at farmgate to INR 1400 in Udaipur market.

The project introduced the use of weighing scales to improve producer's ability to value their animals and bargain with buyers but traders were reluctant to use scales.

Direct access to distant markets (interstate) is limited for the goatkeepers. A value chain study indicated challenges in terms of transportation of animals across state borders, private market yards controlled by commission agents and a closed network of traders engaged in the trade.

Result: Collective action by goat keepers to meet the varying demands in live goats throughout the year (weight, sex, breed and colour) will help improve the commercialization resulting in more animals sold in the nearby urban markets.

## Increased interaction among goat value chain actors

An Innovation Platform (IP) was established in Jhadol block, Udaipur district. This multi-stakeholder platform was comprised of: producers, field guides, local traders/butchers; a local pharmacist; a representative of the AHD; BAIF staff and research staff (ILRI). The aim of establishing an IP is to jointly identify and subsequently address some of the constraints at different levels of the value chain. The focus of the platform evolved over time from production towards commercialization issues as initially the production needed to be improved and the Sirohi offspring was only available for sale 1.5 years into the project. The IP meetings allowed for joint planning of activities regarding health and discuss commercialization strategies. An illustration of joint action is the setup of the fecal testing scheme to ensure that appropriate dewormer is given to prevent drug resistance. This was led by staff of the Regional Disease Diagnostic Laboratory of the State Animal Husbandry Department (AHD) in close collaboration with the field guides.

The field guides make sure that the issues raised at the IP meetings are also fed back into the goat keeper groups.

Result: Stakeholder interaction through the Innovation Platform process resulted in improved information flow and improved delivery of animal health services by the AHD as well as collective action regarding commercialization with field guides playing an important role in the facilitation process.

## Conclusions

The following primary conclusions can be drawn from this 2.5 year project aiming at improving smallholder goat production and commercialization:

- Because of the relatively short reproduction cycle of goats (17 or 18 months from gestation to sale) goats have a great potential to improve household food security through sales and consumption in arid and semi-arid regions of India.
- Goats are sturdy and resilient animals and can survive in relatively harsh environments but improved husbandry practices on health, feeding and reproduction are needed to reach their full potential.
- Because of the increase in domestic and export demand for goat meat, there is potential for smallholders from arid and semi-arid areas to increase their market participation.
- The use of an IP process to jointly identify and address the value chain constraints and strengthening the stakeholder engagements is a valuable approach even though it is time consuming and requires leadership and facilitation skills.

## Implications for policy and intervention

- Policy implication 1 is that State Ministry of Agriculture—Animal Husbandry Departments can draw lessons from the imGoats model to improve smallholder goat productivity and commercialization.
- Some of the central government programs such as the National Livestock Mission (NLM) can also look at the model and its implications for a nation wide program.
- Investment implication 1 is that the AHD should work closely with NGOs who can assist with training of field guides to improve animal health service delivery, in a form of public–private partnership. The AHD should ensure that the training curricula meet minimum standards and includes, apart of technical training, on goat rearing, some key market related issues.
- The current animal health policies focus on curative measures for diseases, a need for preventive measures is essential.
- Policy implication 2 is related to commercialization: There is lack of clarity regarding governance of marketing yards as well as interstate transport regulation, and includes need for clarity on food safety and post-harvest issues.
- Investment implication 2 it would be beneficial for the goat sector to have more harmonized policies across the states and better linkages between the state regulatory bodies.
- Women play an important role in goat rearing and hence mainstreaming of gender in animal production, extension services and policies will be very important.



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