

## Community based breeding programs – opportunity for smallholder goat genetic improvement and increased incomes

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The Garasiya Bhil ethnic community in the southern Aravali hill range in Rajasthan and Gujarat states in India, rely on livestock as a source of income, apart from agriculture on their meagre lands. Goats are one of the main livestock species for these economically marginalized communities. Local goats are adapted to grazing in the hilly terrain and are sold readily for meat mostly in other states and Sirohi breed bucks are much in demand as breeding stock. Sirohi is a recognized and popular goat breed from southern Rajasthan.

In the last decade, the Centre for MicroFinance and Collectives for Integrated Livelihood Initiatives have strengthened goat rearing by training village women to support goat health, nutrition and shelter management interventions. They also purchased phenotypically superior Sirohi bucks from other districts in Rajasthan and supplied them for use as breeding bucks.

To provide a more sustainable way of genetic improvement by selection within locally adapted goats, two community-based breeding programs (CBBP) were established in 2024 in two blocks in each of the two states (3,000 goats belonging to 1200 households in 19 villages in Rajasthan and 1,500 goats belonging to 600 households in 6 villages in Gujarat). These CBBPs are using the Dtreo cloud-based database system for performance recording of goats. Breeding bucks will be selected according to goat keepers' preferences based on recorded data, placed in distant villages and does will be mated only to such selected bucks.

Data already recorded shows considerable variation in body weights and milk yields suggesting a good scope for selection. After a few rounds of breeding with selected bucks, it is planned to establish supply centres of surplus superior breeding animals through 'farmer producer companies' of women goat keepers.

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