

Integrated dairy and goat entrepreneurship in Maharashtra

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A small landholder, Shri Sanjay Atmaram Ingle switch his occupation from agri farming to dairy and goatry farming in 2006. In a drought prone area, opting such occupation augmented the income of farmers.

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SHRI Sanjay Atmaram Ingle, residing in a small village i.e. Chittalwadi of Akola district in Maharashtra, own small landholding (2 acre) with no source of irrigation. The annual income from this small landholding was not constant due to severe natural vagaries of climate viz., drought and insufficient rainfall which led him to think about other sources of income for the better livelihood of his family. He started searching for other options but lack of capital was a major constraint for him. While discussing his problem with the Livestock Extension Officer of State Department of Animal Husbandry (SDAH) DAH, he got to know about Vidarbha Vikas Package Programme for Dairy development. Under this development scheme, with the incentive of 50% subsidy, he started dairy farming in 2006 with two indigenous cows purchased ₹ 7,000/cow. Further, from 2006 to 2009 he added more cows and

increased his stock to about 100 cattle unit, meantime he sold some cattle ₹ 30,000-35,000 animal. After generating sufficient capital, he purchased 60 murrah and non-descript buffaloes ₹ 80,000 animal. At present he is possessing 18 cattle and 44 buffalo animal unit in the herd (Fig. 1). The average total milk production is around 400 litres/day which are sold in market (dairy, hotels, restaurant, sweets shops, urban consumers) ₹ 50 litre, whereas average milk productivity is 10-12 litres of buffalo and 5-6 litres of cattle. Later, he integrated goatry with dairy enterprise to for income generation (Fig. 2).

Economics of dairy unit

The economic analysis of dairy unit is presented in Table 1, 2 and 3 which reveals that started dairy enterprise with few dairy animals in 2006, Shri Sanjay Ingle, at present, is earning the net income of

₹ 18,33,000/year. Owning small landholding forced him to purchase dry, green and concentrate feed from the market. He regularly attends trainings on dairy and goatry organize by the State Department of Animal Husbandry (SDAH) and

Table 1. Cost measures in terms of Fixed Cost

	₹/annum	₹/annum
Fixed cost (TFC)	Dairy unit	Goat Unit
Purchase of animals	76,25,000	5,00,000
Equipments	4,00,000	1,00,000
Construction of shed	15,00,000	10,00,000
Depreciation of shed @ (5%)	75,000	50,000
Depreciation on animal purchase @ (10%)	7,62,500	50,000
Depreciation on investment @ (12%)	11,43,000	1,92,000
Total Fixed cost (TFC)	19,80,500	2,92,000



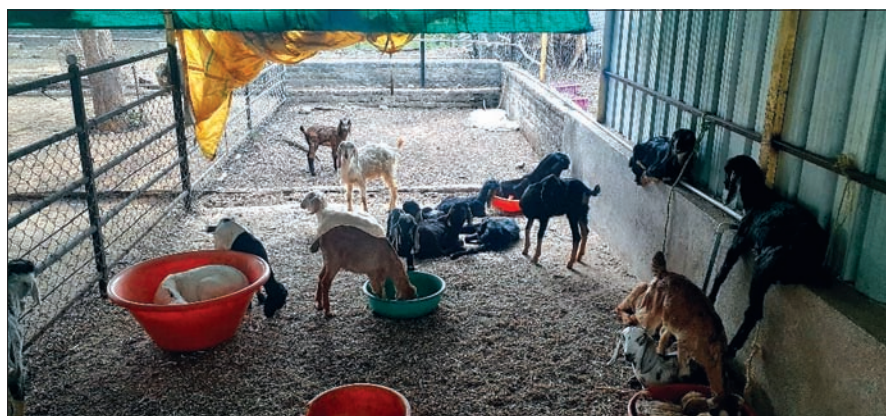
Fig. 1. a. b. Dairy farming of Indigenous cows, murrah and buffalo

Table 2. Cost measures in terms of Variable Cost

	₹/annum	₹/annum
	Dairy unit	Goat Unit
Variable cost (TVC)		
Feeding cost	45,49,500	1,20,000
Veterinary treatment	50,000	15,000
Labour charges	2,64,000	1,00,000
Transport	1,48,000	5000
Miscellaneous	50,000	10,000
TVC	50,61,500	2,50,000
Total cost (TFC+TVC)	70,42,000	5,42,000

Table 3. Income measures

	₹/annum	₹/annum
	Dairy unit	Goat Unit
Total Revenue	73,00,000	Nil
Selling of milk	73,00,000	Nil
Selling of animals	10,50,000	5,50,000
Selling of manure	5,00,000	60,000
Breeding services	25,000	10,000
Total Revenue	88,75,000	6,20,000
Gross margin	38,13,500	3,70,000
Net income	18,33,000	78,000
B:C ratio	1.26	1.14
Profit margin (%)	20.65	12.58
Cost of production per litre of milk per day	34.66/Day	Nil

**Fig. 2.** Integrated goatry enterprise

NGOs and whatever he learnt in trainings, applies in his dairy enterprise. The benefit cost ratio (1.26), profit margin (20.65%) and low cost of production per litre of milk (₹ 34.66/day) indicating the potentials of income and employment generation in dairy farming.

Management practices at the dairy and goat unit

Cleaning of shed every day and disinfecting the shed weekly using sodium hypochlorite solution are the regular management practices Shri Sanjay Ingle follows. The vaccination and deworming are practices regularly under the guidance of veterinary doctor. The due care is also taken for the management of new born calf by feeding colostrums, whole milk, skim milk and calf starter. Stall feeding for cattle and buffalo and grazing + stall feeding are practiced for goatry. On his

own small landholding unit he usually cultivates hybrid bajra, sorghum and lucern as a green fodder while the need of dry fodder, concentrate and mineral mixture met from local market and nearby large landholding farmers.

Marketing

The marketing operation is done under his own supervision. Milk is sold to the private dairy, urban consumers and local villagers ₹ 50/ litre. Transport of milk is done by his own small tempo. Selling and purchase of animal is done at the district livestock market. The local goat breeder and local animal markets are the main sources from where he buys and sale goat.

Goat farming

The sufficient capital generated from dairy unit invested successfully in goat farming unit in 2017. This

was the beginning of integrated Dairy+Goat farming unit of his enterprise. He started goatry with 75 flocks of Berari Breed purchased ₹ 5000-7000/goat. He constructed a pukka shed and bought all the necessary equipments by investing about ₹ 10,00,000. He followed both grazing and stall feeding practices for the goat.

Economic analysis of goat farming

The economic analysis of cost and income measures is presented in Table 1, 2 and 3 which reveals that average annual net income (₹ 78,000) generated from goat unit. The benefit cost ratio (1.14) and profit margin (12.58%) indicate that goat farming a compatible profitable ventures along with dairy farming. The main component contributing to the maintenance cost in the goat farming is feeding cost (60-70%). Further, the study reveals that as the size of the flock enhances the net income generated is also augmented. Within the span of two years the income of dairy enterprise was enhanced by 15% due to the integration of goatry.

Employment generation

The 4 labour were hired on permanent annual basis ₹ 80,000/year and 2 casual labours ₹ 300/day on contract basis. The dairy and goat integrated unit can provide the employment throughout the year to whole family as well as hired labour.

Conclusion

The case study concludes that dairy and goat enterprises are complementary unit to each other for augmenting the income of farmer. The integrated dairy + goat unit can be a successful model in a drought prone area for the small landholders. The suitable interventions are needed by framing the policy programmes like Vidarbha Vikas Programme for doubling the farmer's income and promoting the entrepreneurship.

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