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# MANAGING STRESS IN DRYLANDS UNDER CLIMATE CHANGE SCENARIOS

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# Abstracts



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## **ECONOMIC VIABILITY OF CAMEL REARING IN SOUTHERN RAJASTHAN**

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One humped or dromedary camel (*Camelus dromedarius*) is an important livestock species uniquely adapted to hot and arid environments. Camels in India are primarily reared for carting/draft, agricultural operation, transportation in addition to the secondary utility of milk and hair production. It is important livestock specie contributing significantly in rural economy and livelihood of desert dwellers in western Rajasthan. It still plays a very distinctive role in various agricultural operations and rural transportation in dry land farming. The Southern region of the Rajasthan has large camel herders' population. These herders not only move in different parts of this region for grazing but also visit adjoining area of Gujarat every year in search of better fodder resources. The present study highlights the socio-economic and marketing pattern among camel herds of Raika camel herders in southern Rajasthan.

A total of 75 Raika families owning camels were randomly selected from Udaipur, Banswara, Chittorgarh and Dungarpur districts of Rajasthan. The quantitative and qualitative data were collected through structured interview schedule, observation and discussion. The financial viability of camel herders worked out using both undiscounted and discounted measures.

Primary survey of camel breeders (n=75) revealed that for 96% of sample households camel breeding was the main occupation with average herd size of 21.06 units of camel. The breeders did not have any housing structure for camel and kept them in open. Camels were taken for grazing in forest area of the state during rainy season and migrate to Gujarat and Madhya Pradesh for about 6-8 months during winter and summer season. During migration to Gujarat, camel breeder stay in farmers field who offer them money beside free food and tobacco. Human labour was one of the major items of total maintenance cost (29%) as they take animals for grazing and stall feeding is not practiced. Female camel after calving is fed with concentrates and oil etc. About 80% animals are sold in the village itself to traders who take these animals for further sale in Pushkar and Jhalrapatan and other fairs. The major demand of camel comes from farmers for their use in agricultural operations besides carters and camel milk producers also purchase camel from breeders. The most commonly occurring diseases in camel were trypanosomiasis (surra), pox (mata), pneumonia, mange, enteritis (diarrhea) and abortion. The camel calves were mostly affected by enteritis, pica and pox. The most common poisonous plant was lantana and many times its use was fatal for the animals. Common ailments of camel were treated by breeders themselves, using ethno veterinary practices or taking advice of elders.

Average fixed investment per household was found to be Rs. 4.22 lakh of which animals alone accounted for 97.4%. The average cost of maintaining a camel unit (21.06 animals) was Rs 1.03 lakh. The proportion of fixed cost and variable cost in total cost of maintaining a camel unit accounted for about 51% and 49%, respectively. Average net return worked out per camel household per year was Rs 1.01 lakh with B: C ratio of 1.99. The analysis indicated a payback period of 03 years. Camel production was financially viable at 12% discount rate in terms of both NPV and BCR criteria, as  $r^*$  was positive and BCR greater than one. The IRR estimated was 73% in South