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# Adaptation Strategies to Challenges in Small Ruminant Production in NE Brazil: Farmers' vs. Experts' Views

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**Abstract**

The Northeast of Brazil is considered the poorest area of the country. In the semi-arid Itaparica region of Pernambuco, characterised by irregular precipitation, a long dry season and frequent droughts, goat and sheep production is a common livelihood strategy. This study explores farmers' challenges and their respective adaptation strategies and contrasts experts' perception concerning small ruminant production.

60 small ruminant keepers were interviewed using questionnaires with quantitative and qualitative questions. 10 open interviews were conducted with experts from agricultural institutions and cooperatives. Data were analysed with descriptive statistics.

Drought and subsequent forage shortage, particularly in the Caatinga rangeland, was perceived as the most impacting challenge by 68 % of small ruminant keepers. Low investment capacity was named as second most important constraint (12 %). Further challenges of lower importance were toxic plants, predators and robbery. As coping or adaptation strategy to drought and forage shortage, 49 % of farmers mentioned to buy additional feed, e.g. maize and soybean; 20 % cultivated grasses or other forages, or cut and carried fodder from the Caatinga and 13 % relied on a partitioned dry season forage reserve for grazing or browsing. Further 13 % did not apply any strategy against drought and 5 % provided water. 42 % of respondents wanted to enlarge or implement an irrigation system for forage production. 78 % of the farmers would like to receive (more) technical assistance.

Experts also regarded drought as a main limitation but emphasised the reluctance of farmers to adopt technologies, the missing extension and the missing financial capital of farmers in order to investment in new technologies as main challenges. Experts' most frequently mentioned adaptation strategy was to increase technical assistance in order to increase knowledge and innovativeness of farmers. Irrigation, forage production and conservation and use of adapted breeds were suggestions for adaptation strategies to drought. Further suggestions were improving local policies supporting farmers and facilitation of credits.

Results showed that farmers mainly applied coping strategies whereas experts only mentioned adaptation strategies. In contrast to farmers, experts emphasised strengthening the extension and financing system in order to increase farmers' adaptation capacity.

**Keywords:** Adaptation strategy, challenge, drought, Itaparica region, Pernambuco, small ruminant production

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