

The constraints to production by the small farmers in the Agreste region of Pernambuco, Brazil

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Abstract

This study is centred on the analysis of the constraints to production by a group of small subsistence farmers who live in the surroundings of a small village called "Xicuru" in the Agreste semi-arid of Pernambuco, Brazil.

The Xicuru farm systems were investigated and attention focused on production constraints, which can be overcome by technological and/or organizational alternatives on hand. In order to do this, a detailed understanding of the Xicuru farm system was built up through the application of description methods and modelling exercise.

This led to the conclusion, that within the existing system, the main constraints to production were shortage of labour during the wet seasons, shortage of feed during the dry seasons as well as low productive cattle and the overall need to improve the potato crop. The strategies to overcome these constraints were concerned the use of draft power to improve labour efficiency in planting and weeding, the introduction of a higher intensity cattle system plus silage of forage sorghum and credit to facilitate the introduction of the potential changes. Also new husbandry practices were introduced to improve the potato system. The effects of these strategies on the farm system were investigated via a Linear Programming farm model.

The constraints were overcome by the recommended strategies e.g., the cassava and potato planted areas increased; silage was not selected, instead, cassava harvesting assumed an important role as feed supplier as well as of flour producer in the dry seasons; the availability of credit was vital to create the opportunities for the improved cattle to be introduced and cattle and potato sales became the main source of income during the wet seasons. However, all these changes were shown to have either micro or macro economic implications meaning that the potential technologies will only be adopted by the small farmers if accompanied by changes in the micro and macro economic environment.