



Tropentag, September 16-18, 2015, Berlin, Germany

“Management of land use systems for enhanced food security:  
conflicts, controversies and resolutions”

## Dual-Purpose Cattle Production in Nicaragua: Which Breed Fits Best?

MARIA WURZINGER<sup>1</sup>, JULIE OJANGO<sup>2</sup>, ROLDAN CORRALES<sup>3</sup>, MARTIN MENA URBINA<sup>4</sup>, REIN VAN DER HOEK<sup>3</sup>, CARLOS QUIROS<sup>1</sup>, ELIZABETH JANE POOLE<sup>1</sup>, ALI MWAI OKEYO<sup>1</sup>

<sup>1</sup>*University of Natural Resources and Life Sciences (BOKU), Dept. of Sustainable Agricultural Systems, Austria*

<sup>2</sup>*International Livestock Research Institute (ILRI), Kenya*

<sup>3</sup>*National Agrarian University (UNA), Integral Systems of Animal Production, Nicaragua*

<sup>4</sup>*International Center for Tropical Agriculture (CIAT), Nicaragua*

### Abstract

The importance of milk and beef production in Latin America is high and increasing. In Nicaragua and neighbouring countries, smallholder dual-purpose (i.e., milk and beef) cattle production offers opportunities for poor cattle owners to improve their food and nutrition security, and increase their income. The milk and beef value chain employs thousands of people in production, processing and marketing. In order to improve production, many farmers currently practice crossbreeding, involving a large range of breed combinations, but without clear breeding strategies. To assess current farmers' practices and develop appropriate breeding and related management recommendations, a research project that brings together the national agricultural university of Nicaragua (UNA), the International Livestock Research Institute (ILRI), the International Center for Tropical Agriculture (CIAT and BOKU-University is being implemented in two study sites in Central Nicaragua, Camoapa and Matiguás Municipalities. A gender-responsive baseline survey with questionnaires was performed with 289 households in Camoapa and 252 in Matiguás, using a random sampling procedure based on official census data. A “paperless” data collection format was adopted using the “Open Data Kit” (ODK) information technology platform.

Most households (>83%) were male-headed in both municipalities. Mean age of the household head was higher in Camoapa (51.4±14 years) than in Matiguás (48.9±14 years).

Most of the cattle reared in the two municipalities were cross-breeds (>98%). The crosses comprised combinations between several breed-types. The most abundant breed-type in Matiguás was the Brahman, while in Camoapa there were more Brown Swiss and Holstein cross animals. At both locations also other breeds such as Creole, Girolando, Jersey, Nellore, Reyna and Simmental were found, whereas a large proportion of animals were crosses of unknown breed-types. Farmers stated different reasons for using various breeds in their herds such as availability of semen or bulls or different purposes for production. This is also reflected in the selection criteria of farmers. In comparison to Matiguás, cattle production in Camoapa is more intensive (higher number of animals per hectare, stronger tendency towards dairy production), this probably being an effect of a stronger presence of development organisations.

**Keywords:** Breeding strategies, dual-purpose cattle, Nicaragua