

household, market and eco-tourism) support TLFS prosperity. How to assess human value(s) of the animal and/or activity? How to take into account the social determinants and the environmental impacts of the human and/or economic activity? How to address recommendations and build a development project by the way of participatory approach based on the society and territory context? Many challenges for searchers, teachers and extension officers for the future of TLFS.

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# The situation of goat farming in Haiti

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## Introduction

Located on the western side, Haiti shares the Hispaniola Island with the Dominican Republic and occupies a surface of 27,750 km<sup>2</sup>. It is mainly mountainous, with more than 60% of the land having slopes over 40%. Farming activities are considered the cornerstone of the Haitian economy because more than 60% of the population lives in the countryside and earn a living from farming activities. Statistics for 2003 indicate a national GDP of 3.46 billion dollars from which farming activities account for only 25%. However, in spite of these published figures, some areas of agricultural production have been identified in 2004–2005, as generating more than 1 billion dollars of income that were redistributed in rural areas.

## Importance of "Goat" sub-sector

Figures for 1990 stated a population of 2,633,000, distributed respectively in the departments of "Grand Anse" (443000), Southern Dept (311000), Western Dept (232000) Southeast Dept (216000) and "Plateau Central" (181000). While this last one can be qualified as a humid area with a few dry and semi-arid pools, the other regions are considered humid to very humid mountainous areas, except for the Western department, where all the landscape units are used for production associated with the nearby urban market of the capital. According to a report on the identification of potential niches in the Haitian rural sector, approximately 38% of family farming businesses, nearly 300,000 production units are involved in goat farming, with variable farm and herd size.

## Haitian "creole" goat characteristics

Height and weight: Withers height for male adults is on average 55 to 75 cm; and for females 45 to 60 cm. Average weight for male adults is 35 to 45 kg and for females 28 to 40 kg. There is no data available on the growth potential for Haitian "creole" goats.

## Reproduction Performance

The age of puberty is 5 to 6 months. Service is natural, not seasonal and often influenced by the fodder availability. In the plains, where the dry and the rainy seasons are more significant, there are 2 birth peaks: one in January/February, the other in August. In the mountains, there are more births between January and March (Bien-Aimé, 1991). The mean age at first parturition is about 12 months with a greater period between each birth in elevated areas, around 14 months as against 9.5 months in the plains. Goats give birth to approximately 2 kids per litter.

## Management

Rope driving is predominant. Goat roaming can be seen mostly in the so-called drier or semi-arid areas. In these agro-economic pools where the vegetation is spontaneous and dominated by ligneous bushes, the goats graze on large uncultivated lands. Often livestock from different farmers are grouped at dusk by a herder under a natural shelter or in a rough fold.

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### Feeding

In free range farming, the food supply is based upon native vegetation of herbaceous plants, pasture legumes, a great variety of graminacea and some leguminosae. Other ligneous shrubs of importance are *Prosopis juliflora*, *Leucaena* and *Acacia*. The goats are usually left on seasonal pasture under a free grazing regime, except during the growing season when owners pay more attention to avoiding crop damage. The length of the rope determines the grazing area, which is on average 5–25 ft long (Bien-Aimé, 1991). Natural pastures account for the basis of the food supply. After harvesting, the animals feed on crop residue, corn and sorghum stubbles and bean and potato stalks. Natural pastures may constitute a biomass of lesser quality, highly lignified and low in digestible proteins. They remain with grasses that grow on the side of roads and food waste near houses the the major available feed resource along with excess mangos and avocados. It is noted that Mineral blocks or any other supplement are rarely made available to goats.

### Health care

From a hygiene viewpoint preventive care is mostly nonexistent unless periodical campaigns organized by the Ministry of Agriculture, against Anthrax, or deworming shots against non specific gastrointestinal parasites are done. The main pathologies are diarrhoea related to major parasite infestations. Intestinal infestations caused by lung worms are predominant and to a lesser extent, those caused by *Eimeria*. A survey conducted in 1990 indicated a notable polyparasitism with a prevalence of nematodes (in 80% of the cases due to lung worm) in all areas, and variable whip worms infestation (5% to 35%) in dry areas.

### Purpose of production

A predominance of local goat breeding in extensive systems is reported. Most are without inputs for meat production. In addition some aid projects have led, over a period of 20 years to the sporadic introduction of "enhanced" breeds, sometimes for milking production purposes (Alpine), but generally to enhance the local carcasses (Boer, Nubienne) (Gaspard, 1986). These animals and their crossed offspring represent 5% of the field. Processing of the skin remains a leather craft activity.

### Trends and Prospects

Today goat farming in Haiti is mainly dedicated to meat consumption under traditional farming systems. Despite an increased tendency to meet the specific demands of the Dominican Republic market no sign of enhanced productivity has been observed. This will probably only be achieved through the increased female productivity and a better zoosanitary support. Characterizing the local "creole" breed remains to be done. Preserving the "Haitian Creole" biogenetical resource does not exclude the implementation of niche enterprises that favours cross-breeding with stronger breeds to enhance the carcasses.

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## A study of the male agouti's (*Dasyprocta leporina*) reproduction system: a Neo-tropical animal with the potential for sustainable production

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### Introduction

This study addressed four questions: (1) Are there any morphologies specific to the male agouti's (*Dasyprocta leporina*) reproductive system? (2) Can semen be collected from the agouti by electro-ejaculation? (3) Can the agouti's semen be extended and (4) stored?

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