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Adoption and Diffusion Processes of Silage Technology in the Area of Yoro, Honduras

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Abstract

Feed shortage during the 5–6 month dry season in extended areas of Central America severely limits livestock production. An alternative feeding strategy to overcome this constraint includes silage preparation during the rainy season. However, adoption of forage conservation methods by small-scale farmers has been low. Reasons include high investments required, lack of know-how and lack of knowledge of appropriate low-cost alternatives.

In 2002, CIAT and its partners identified the need and demand for forage conservation technologies by farmers in the area of Yoro, Honduras. Silo types such as heap and earth silos and especially little bag silage (LBS) were offered during farmer trainings and field days in order to catalyze innovation, adoption and dissemination processes of silage technologies with and by small-scale farmers.

Adaptation, adoption and diffusion processes of silage technology and factors influencing these processes were identified for the Yoro area.

Over the last three years, there were annual growth rates of farmers using silage of 91, 57 and 103 % respectively, with presently 67 farmers. In the same period, the quantity of forage ensiled increased by 82, 71 and 135 % respectively, with presently about 3880 tons.

Until 2003, there were only medium and large-scale farmers using mainly the common bunker silo type that involves an initial investment of about US\$ 600 for materials and construction (30 t forage capacity). Since 2004, the use of alternative low-cost silo types has been increasing up to presently 50 % (11, 17, 22 % for LBS, earth and heap silo respectively). The present share of small-scale farmers using silo increased from 0 to about 20 %. While until 2002/2003, 91 % of the farmers ensiled maize, the present share is about 65 % with an increasing use of sorghum and mixtures of improved pastures, sugar cane and forage legumes.

In Yoro, the most relevant factors boosting the spread of silage use are forage scarcity and the absence of a forage market, existence of a milk market, promotion of silage technology and technical assistance, presence of farmer associations and innovators who are at the same time key communicators and influentials.

Keywords: Farmer trainings, feeding strategy, forage conservation, silage

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