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# Potentials and Constraints of Little Bag Silage in Honduras

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**Abstract**

Silage produced in little plastic bags (LBS) is seen as a promising forage conservation technology for small-scale farmers. Within a participatory research project carried out by CIAT and partners in Honduras, innovation with LBS was stimulated during farmer trainings and field days.

A suitable prototype bag system was developed in collaboration with farmers: The use of a removable mould (i.e. plastic barrel) during elaboration of bag silages of higher capacities ($> 30$ kg) eases compaction and protects the plastic material from stretching and tearing. High quality bag silages were produced from, e.g. maize, sorghum, *Vigna unguiculata*, *Cratylia argentea* and *Brachiaria brizantha* cv. Toledo. As experienced by farmers, the main potential of LBS is because of low investment costs, easy handling, low requirements for labour and technical equipment, rapid filling, and the use of small amounts of high-quality forages. In addition, LBS proved to be a useful tool to demonstrate and teach basic principles of silage technology.

However, up to date, adoption of LBS has been low, especially by smallholders. Restrictions to success include availability of suitable and cheap plastic bags, high silage losses due to perforation of plastic bags caused by inappropriate handling, coarse stems, and animals (i.e. mice), and lack of adequate storage facilities in many smallholder farms. Moreover, silage adoption by smallholders is often constrained by a) access to a chopper (as hand-chopping is cumbersome, time- and/or labour-intensive), b) tradition, c) use of non-productive livestock breeds, and d) availability of alternative low cost feeds, i.e. maize residues, natural herbage, improved pasture grasses and sorghum straw. Results show that silage novices rather adopted other silo types with higher capacity (i.e. heap and earth silos), either immediately or after having tried LBS.

Despite of low adoption, LBS technology proved useful as a) a demonstration, experimentation and learning tool that can be used as adaptable prototype in farmer trainings and field days and, b) to get small-scale silage novices started with the technology at a low risk.

**Keywords:** Adoption, forage conservation, innovation, LBS, tropics

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