Technical innovations in processing cassava peels into new products for feeding livestock and fish and for food safety

Introduction

Nigeria, the world’s largest producer of cassava, harvests 54 million metric tonnes (MT) of cassava tubers annually. More than 95% of its uses require peeling which generates up to 14 million MT of waste annually of which only an insignificant amount is put to some use due especially to challenges related to drying. Sun drying is practically impossible during the wet season and takes about three days in the dry season to reduce moisture content of fresh peels from about 70% to 20% or lower - a marketable state (Fig. 1). At the same time as the mountains of cassava waste exist and create problems related to drying. Sun drying is practically impossible during the wet season and takes about three days in the dry season to reduce moisture content of fresh peels from about 70% to 20% or lower - a marketable state (Fig. 1). At the same time as the mountains of cassava waste exist and create problems related to drying.

Materials and Methods

At ILRI Ibadan, Nigeria, a team of scientists and engineers from CIAT and IITA led by ILRI have undertaken several technical innovations in processing cassava peels into new products for feeding livestock and fish and for food safety. These innovations include:

1. **Sun drying and dewatering:** Drying and dewatering of cassava peels is a key step in reducing their moisture content to a marketable state. This process involves exposing the peels to sunlight for extended periods to reduce their moisture content. It is particularly important during the wet season when natural drying is impossible. Drying and dewatering are done to achieve moisture contents of 10-15% for use in various applications.

2. **Grating and dewatering:** This step involves the mechanical breaking down of the dewatered peels into smaller pieces, facilitating easier handling and further processing.

3. **Pelletization:** Pelletization is a process that involves the compression of the grated and dewatered peels into small, compact pellets. This step is crucial for increasing the energy density and improving the storage and transport efficiency of the peels.

4. **Fermentation:** Some of the innovations involve the fermentation of the peels to make them more palatable and nutritious for livestock and aquaculture feeds.

These technical innovations have the potential to address feed scarcity, contribute to food security and safety, clean up the environment, and improve the incomes and livelihoods of people currently engaged in processing cassava tubers into food – 85% of them women.

Reference