

Poultry and animal feed from cassava

1. Microbial technology for enriching protein in cassava

Cassava fibrous waste formed as a by-product from starch production industries contains approximately 56% unextracted starch, which therefore is an ideal substrate for microbial growth. Dumping wastes in the factory premises leads to foul smell, resulting in air pollution etc. Studies conducted at CTCRI have shown that cassava waste can be converted to a broiler feed. The process consists of mixing the waste with cassava flour and steaming after partial moistening to increase the digestibility of the hemicelluloses and lignin. This flour-waste mix is dried and then mixed with other ingredients like peanut meal, fish meal and a mineral-vitamin premix to form a composite broiler feed. Feeding studies conducted with this feed showed that broiler performance was satisfactory, and that the birds reached a weight of 1.9 to 2.0 kg within eight weeks. The proportion of peanut meal in the feed mix can be reduced by enriching the waste-flour mix with microbial proteins through the use of a safe fungi such as *Trichoderma pseudokoningii*.

2. Ensiling technology

The poor postharvest storage life of cassava roots necessitates rapid processing into some stable product. Sun-dried cassava chips are susceptible to attack by a number of insect pests, making an economical and eco-friendly storage practically impossible. It was found through a study that whole cassava chips mixed with rice straw can be ensiled to obtain stable quality silage with good feed value for cattle. Cassava silage substituted at levels of 28% in a concentrate feed was found to increase the daily milk yield by 700 ml to 1000 ml. This low-cost technology can promote *in situ* cassava utilization as animal feed.