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Knowledge Transfer towards Cost-Effective Poultry Feeds Production from Processed Cassava Products to Improve the Productivity of Small-Scale Farmers in Nigeria: A Nipoferd Workshop

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Abstract

A training workshop with the general objective of building capacity of small-scale poultry operators on the development of value-added cassava products for use in the Nigerian poultry industry was organized in south-eastern Nigeria for the members of Poultry Association of Nigeria (PAN) and Feed Millers Association of Nigeria (FAN) from 27th June to 1st July 2016. The workshop lasted for five days that comprised four days of presentations/discussions and one day of learning field trip to Phinomar Farms, Ngwo, Enugu (farmer-to-farmer exposure). Seventeen oral presentations were made. At the end of each day, the participants broke into three groups and a content reflection was carried out by each group, documented on cardboard sheets and presented to the general house. The workshop immediate impact was evaluated among participants using impact survey instruments. The workshop daily proceedings were disseminated widely on Facebook, Instagram, Whatsapp, and PAEPRAD blog (<http://paepard.blogspot.be/2016/07/knowledge-transfer-towards.html>). The workshop was well received by the participants as shown in podcasts made by participants on the PAEPARD blog. The proceeding of the workshop has been published and is being distributed across Africa and beyond.

Keywords: Poultry feeds, cassava products, small-scale farmers, feed millers, Nipoferd

Introduction

Cassava is the most important food crop in the humid tropics in terms of energy yield per unit land area. It yields about 40% more carbohydrate than rice and 25% more than maize, making it the cheapest source of calories in both human and animal diets. The more than 14 million tons of cassava produced in Nigeria annually represents about 25% of sub-Saharan Africa's output. However, tons of cassava products that could be utilized in animal production are wasted each year. Even though rich in calories, cassava is highly deficient in protein (2.0%). Cassava contains endogenous cyanogenic glycosides, which on hydrolyses liberates hydrogen cyanide, thus limiting the value of the unprocessed cassava root in livestock feeding. Cassava-based poultry feeds are usually dusty and produce high moisture faeces that attract nuisance flies to the poultry premises, thus limiting their adoption by farmers. Recent research efforts at the Federal University of Technology Owerri have yielded several low-level cyanides containing processed cassava products that address these shortcomings. Such research efforts point to the production of value-added cassava products that could completely replace maize in the diets of poultry. The transfer of knowledge on simple machinery development and formulation of poultry feeds from processed cassava products to poultry farmers in Nigeria is therefore highly probable.

Objectives of the Workshop

The key objectives of the workshops were to;

1. Build capacity of participating poultry farmers on the equipment needs and techniques for processing fresh and pre-dried cassava roots into feed raw material
2. Transfer knowledge on the formulation and manufacture of poultry rations with processed cassava products
3. Exchange experiences on processing of cassava products for use in poultry feeding
4. Identify key challenges and bottlenecks that may hinder the scaling-up of the use of processed cassava products in poultry feeding
5. Enhance an enduring farmer-researchers network

Workshop Methodology

Participants Selection: Participants in the workshop were drawn from the partnering organizations that formed the consortium at the partnership inception workshop (PIW) in 2012. They included an innovation facilitator, European partner, 13 farmers drawn from members of the farmer organization partners (PAN and FAN), one M.Sc student, one early-career lecturer, seven resource persons including one from Burkina Faso, a PEAPARD representative, and two NIPOFERD Staff, totaling 27 participants from four countries.

Workshop activities: The workshop was conducted in sessions, each comprising an introduction to the objectives of the session, with each resource person presenting two papers during the period of the workshop. The approach during each day was plenary presentations and group work. Each session was intended to contribute an output related to the specific objectives. At the end of each day, the participants broke into three groups and a content reflection was carried out by each group, documented on cardboard sheets and presented to the general house. As a way of monitoring whether the workshop objectives were being achieved, a process monitoring (Potentials identified from the presentation? Challenges to effective adoption and recommendations to the presenter) was done at the end of each day, with a representative from each group reporting to the facilitator. A one day of learning field trip to Phinomar Farms, Ngwo, Enugu was also undertaken on the third day of the workshop.

Workshop visibility: The event was given wide publicity on Facebook, Instagram, Twitter, and WhatsApp. A WhatsApp group was created by one of the participants and helped to keep the participants in close communication after the workshop ended. On the last day of the workshop, some participants made podcasts of their experiences, personal take homes and take homes to their organizations. These could be accessed at the PAEPARD Blog (<http://paepard.blogspot.be/2016/07/knowledge-transfer-towards.html>),

Results/Outcomes

During the workshop, knowledge on equipment fabrication, processing of fresh or pre-dried cassava roots to value-added products, poultry feed formulation, and production as well as health and quality regulation issues were transferred to the poultry business operators to enable them to produce, utilize or supply such products to the poultry industry in Nigeria. The workshop achieved the following:

- Knowledge of equipment needed for production of processed cassava products for poultry feeding
- Technologies for producing cost-effective poultry feeds from processed cassava
- Knowledge on poultry feed formulations that utilize cassava in place of maize
- Interest of the farmers in the adoption of cassava-based poultry rations
- Poultry farmers knowledgeable on the use of cassava in producing poultry products
- Farmer-researcher nucleus for collaboration on future challenges in the industry
- A model for research collaboration between Nigerian universities and industry
- Agricultural researchers experienced in science, technology and innovation transfer
- A sub-regional awareness of the value of cassava as material for poultry feeding

Conclusion

The workshop was successful because it addressed an important poultry industry constraint outside the control of the farmers, especially at the small-scale production level.