

Evaluation and Utilization of Diverse Genetic Materials in Tropical Field Crops



Yam (Source: IITA)



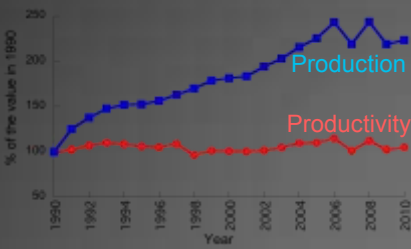
Pounded yam, most popular recipe in WA

Traditional crops have numerous advantages and hold great potential to bolster the livelihoods of smallholder farmers and benefit local communities in many African countries. Root and tuber crops play important roles in African diet. Yam is a traditional staple tuber crop, plays a central role in the food culture in West Africa.



Annually, total of 48 million metric tones, 93% of the global yam production, is produced in West Africa.

There is a greater demand for yam with increasing populations. However, yam has been under-researched and the farm yields have declined recently due to degraded soil fertility, pest problems etc.



JIRCAS started a research project named "EDITS-Yam" with the International Institute of Tropical Agriculture (IITA). The project aims to develop technologies using advanced genome information and molecular tools for yam germplasm utilization and improvement.

It stimulates yam breeding to produce new varieties with improved productivity and favorable economic traits to meet the regional needs.



Small vendors are proud in selling local variety (Kishi, Nigeria)

Yam EDITS Cowpea

Consumers and producers



Breeding programs

Rich genetic resources

"EDITS-cowpea" – generates knowledge linking key elements for value-addition

JIRCAS initiated "EDITS-cowpea project" with the International Institute of Tropical Agriculture (IITA) to generate scientific information to provide more insights that will advance "value-addition" into cowpea breeding programs in West African countries.

We expect the developed value-added cowpea will help promote rural livelihood improvement through enhanced income generation, while cowpea consumption will contribute to solving the problem on chronic malnutrition, especially among poor farm households in the region.

Cowpea is an important cash crop for West Africa's small-scale farmers, who have limited options for income generation; it generated an estimated 2 billion USD in annual revenue, according to FAO (2007-2009 data).



Cowpea (Source: IITA)

Also it serves as a readily available and cheap protein source for the poor, and its high-protein and mineral content helps fulfill the nutritional and dietary requirements of people in the region.

"Value addition" is a way to amplify the role of this traditionally important crop, however, the fundamental scientific information to generate breeding strategy for value-addition of cowpea are lacking in current situation.



A farmer sells his harvested cowpea at the local market (Kano, Nigeria)