

ROAD TO IMPROVEMENT FOR BEAN PRODUCTION YIELD IN HAITI

JUNE 13, 2017- For nearly two months on a 660 square meters' plot, about 20 varieties of beans are planted in Robin, located in the municipality of Kenscoff, Haiti. This experiment at intermediate altitude is a follow-up to evaluations already carried out in both lowlands and highlands from a group of 212 lines of beans, 60 of which are selected in lowlands and 20 in highlands.

Among other objectives pursued by the Feed the Future Haiti Appui à la Recherche et au Développement Agricole (AREA) project, bean and peanut improvement of the yield per hectare is a main one. "According to data available from Haiti with seeds available on the market, for each hectare of land, we can produce 0.6 tons of beans and 0.8 tons of peanuts. A yield well below the world average," said Raphael Colbert, Lead Researcher for the AREA Legume Breeding Program project manager and genetics and plant improvement specialist.



View of improved bean varieties of a plot planted. Photo/AREA

Yield improvement with new varieties developed

According to Colbert, these new varieties will have a yield of at least one tonne per hectare, which is almost twice the current yield in Haiti. Given the time required to develop a variety, eight years or more, and the duration of this project, researchers associated with the program are working jointly with other international partners.

At the same time, Haitian researchers for breeding purposes, receive improved varieties which are in advanced stages (6th generation and more) experimented abroad as part of the Legumes Innovation Lab program in which are involved several countries of Central America, the Caribbean and Africa.

Asked about the adaptation of these new lines in Haitian climate, Genetics specialist Colbert says he hopes, based on the evaluations carried out, they will come up with varieties that can be adapted to several microclimates. He explained, "In Haiti, we grow crops not only in lowlands, but also in highlands."

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Inter-varietal breeding experiment

In the greenhouses constructed on site in Duvier, researchers involved in the project regularly carry out inter-varietal breeding.

“From the results obtained, it is possible to decide to proceed with the planting of these new species in fields but ideally,” suggests Colbert, “it would be better to produce more seeds in collaboration with local companies. “This,” the specialist says, “would promote better distribution or commercialization of this new improved seed on a larger scale and make it available at a more affordable price for farmers.

Capacity building and knowledge exchange

In addition to the benefits of the project in terms of yield improvement per hectare, it also brings together Haitian agricultural professionals and researchers to share experiences with other colleagues from other foreign universities. Our collaboration with entities such as the Faculté d’Agronomie et de médecine vétérinaire (FAMV), Université Quisqueya, Université Épisopale d’Haïti and others have facilitated a transfer of knowledge to the graduating students of these higher education institutions.

- With this new variety, from 0.6 ton per hectare, yield will be more than 1 ton per hectare, twice the current yield in Haiti.
- In the inter-varietal bean breeding experiment new varieties of beans are developed to adapt to different climate.
- Interns are trained and experience and skills shared among local and foreign agricultural specialists.

“I am very pleased to be able to participate in this research,” says Joseph, a former student in Agronomy of the Episcopal University of Haiti. “These exchanges allowed me to learn a lot on the ground. I was able to follow the evolution of different varieties of beans for almost two months and have as well-bred several species of beans (local and foreign varieties) in the greenhouse,” he said proudly.

According to Steve Joseph, this training in Duvier is conciliation between theory and practice. During these two months, he said he could test same crops both in fields and in greenhouses while following the behavior of the crops throughout the process. “I learned a lot, this training will help me not only for writing my final dissertation (thesis), but also for my future professional experiences,” concludes the trainee happily.

These research activities are part of the improved legume project (Projetd’amélioration de légumineuses) which is one of several components of the AREA project. Being in its 2nd year of

experimentation, the project is implemented in Arcahaie, in the commune of Kenscoff, Robin, Duvier and at the “Wynn Farm” and is implemented over a period of five years.

The Feed the Future Haiti Appui à la Recherche et au Développement Agricole AREA project is made possible by the American people through USAID as part of the U.S. Government's Feed the Future initiative to reduce global hunger. AREA is led by the University of Florida Institute for Food and Agricultural Sciences (UF/IFAS). The University of Florida Institute of Food and Agricultural Sciences (IFAS) takes pride in supporting international education, research and Extension/outreach programs, through UF/IFAS Global. UF/IFAS Global priorities are learning, discovering, and engaging.

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