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Improving Cassava plants and making the technology available in developing countries

SFIAR Award 2011 won by the Cassava Research Team, led by ETH Zurich

This year's research award from the Swiss Forum for International Agricultural Research (SFIAR) goes to a research programme entitled "Cassava Research - Technology Transfer and Capacity Building: Making tropical crop technologies available where it can have an impact". The Cassava Research Team, led by Dr. Hervé Vanderschuren of the ETH Zurich Plant Biotechnology Lab, is developing improved cassava varieties by both conventional breeding and genetic engineering. The cassava research programme is characterized by its strong focus on training, education and technology transfer towards developing countries. The award ceremony will be held at Kulturcasino in Bern on 11 October 2011 as part of the symposium "Food Price Volatility and Food Security".

Why we need Agricultural Research for Development

The majority of the world's poor people live in rural areas, where they try to make a living from agriculture. One of the major challenges today is to improve their agricultural production while at the same time reducing pressure on natural resources. To meet these challenges agricultural research for development is working on many fronts towards promising solutions. Typically, this also involves the strengthening or development of local research capacities in developing countries. Agricultural research for development is often done in partnership between research institutions in the South and in the North, and capacity development and training of Southern researchers and research institutions is an essential part of agricultural research partnerships. Agricultural innovations must respond to the need and demand of the local beneficiaries, and are to be jointly elaborated, shared and applied for the benefit of the local farmers.

The 2011 SFIAR Award

Numerous Swiss institutions are involved in, or concerned with, agricultural research for development. With the aim of supporting this research effort, the Swiss Forum for International Agricultural Research (SFIAR) honours an innovative project of one or several scientists working for a Swiss institution with an award each year. The 2011 SFIAR Award call was targeting research teams. Among the many interesting proposals that were submitted this year, the SFIAR has decided to confer the 2011 SFIAR Award (CHF 10,000.–) to a research team led by Dr. Hervé Vanderschuren of ETH Zurich, for their project: "Cassava Research - Technology Transfer and Capacity Building: Making tropical crop technologies available where it can have an impact".

The winning project

The Cassava Research Team is addressing yield constraints of the cassava plant, the developing world's fourth most important crop. It is the staple food of nearly a billion people in 105 countries, where the root provides as much as a third of daily calories. And it has enormous potential – at present, average cassava yields are barely 20% of those obtained under optimum conditions. Cassava is grown mainly by small scale farmers in areas that have little or no access to improved varieties.

The activities of the Cassava Research Team, led by the Plant Biotechnology Laboratory of ETH Zurich, aim at developing improved Cassava varieties by both conventional breeding and genetic engineering. Over the last decade, cassava lines resistant to the cassava mosaic disease (CMD) and the cassava brown streak disease (CBSD) have been developed. Natural virus resistance has also been assessed with molecular tools developed at ETH Zurich. A

promising strategy of combining traditional breeding of farmer preferred cultivars and genetic engineering holds the promise of providing farmers with cassava resistant to multiple viral diseases. Further research is targeted to increase storage life of harvested roots, to improve nutritional value and to study crop responses to drought and other abiotic stresses.

The Cassava Research Team puts a specific emphasis on training and education for researchers from developing countries. Due to these large capacity development and technology transfer activities, involving training of African, South American and Asian scientists at both ETH Zurich and in their respective countries, the cassava transformation technology is now available in several laboratories in Africa and hopefully soon in Asia.

Award ceremony

The formal presentation of the SFIAR Award will take place on 11 October 2011, as part of the symposium "Food Price Volatility and Food Security", held at the Kulturkasino in Berne. At the Award Ceremony, Hervé Vanderschuren will present the winning project.

Further information:

Swiss Forum for International Agricultural Research (SFIAR): www.sfiar.ch

SFIAR Award (with press photos for download): www.sfiar.ch/award.htm

Symposium "Food Price Volatility and Food Security": www.world-food-dialogue.ch/program.htm

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