BBSRC bioscience for the future

University of Leeds Africa College

Africa College, a partnership between the University of Leeds, African and international research organisations, is working to translate research results from biological, health, nutritional, ecological, climate and social sciences into impact on food security, nutrition and health in sub-Saharan Africa.

Today about a third of people living in sub-Saharan Africa suffer from chronic hunger. The Africa College research partnership was set up to help address this.

The partners are the Faculties of Biological Sciences, Environment and Medicine and Health at the University of Leeds, the International Institute of Tropical Agriculture (IITA) and the International Centre of Insect Physiology and Ecology (ICIPE). The College applies scientific research to tackle challenges of food security and human health in order to provide solutions that could improve the lives of millions.

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Africa College is working to help develop improved technologies for African smallholders

Delivering Impact

We believe that by building new and innovative partnerships we will help translate research into solutions that will benefit people in Africa. To do this we are:

- applying our bioscience expertise to generate technologies that help farmers and their communities.
- developing interdisciplinary research on sustainable agriculture, health and nutrition, focused on the problems of food security and health.
- increasing uptake of new solutions by combining basic and applied research outputs with capacity-building activities.
- using our research to inform evidence-based policies on sustainable agriculture and food security.
- helping build the research capacity of African research organisations.

Africa College has a long term vision with a five-year strategic plan to achieve culture change to deliver impact. By the end of this period we expect the College to become financially sustainable. To maintain the culture change and to focus on impact we are:

- setting clear research objectives focussed on outcomes
- investing in people and building capacity for scientific excellence and impact
- deepening and broadening our research partnerships
- working across different faculties at the University of Leeds
- informing policy and sharing lessons beyond Leeds

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Improving bananas for African farmers

Professors Atkinson and Urwin are working with the International Institute of Tropical Agriculture and the Ugandan National Agriculture Research Organisation to produce nematode resistant plantains and cooking bananas. Field trials are planned from 2011. The new plants could prevent losses to small growers of up to 50 % from nematode damage and benefit the 60 million poor Africans who rely on this inexpensive, staple food which is unaffected by increases in world food commodity prices. The long term aim is to also protect other African crops from nematode damage. This work builds on long-term BBSRC and DFID support.

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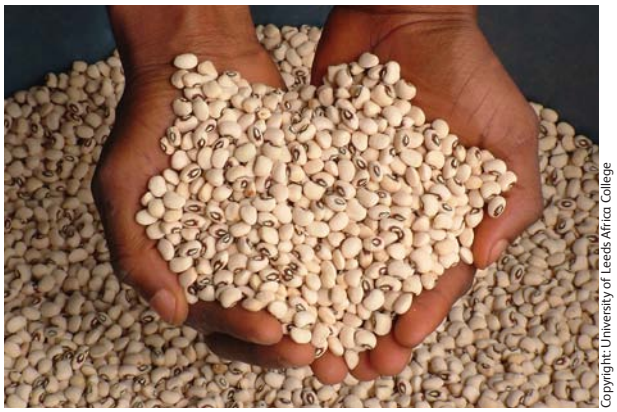
Professor Atkinson (pictured) and Professor Urwin are developing nematode-resistant varieties of cooking bananas that could benefit 60 million Africans

Maintaining seed quality

During storage, seeds can accumulate DNA damage that results in loss of viability and seedling vigour. This causes significant problems to small farmers and their suppliers.

By analysing DNA damage and repair events in germination, Africa College's Dr West is working with the International Center for Tropical Agriculture (CIAT) to find ways of improving seed storage conditions that will benefit both farmers and germplasm conservation (seed-banks). Their BBSRC funded investigations into the genetics of DNA repair will allow them to use marker assisted breeding to produce crop varieties for sub-Saharan Africa with improved storability and germination.



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Understanding DNA repair will help improve the quality of seeds

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BBSRC EXCELLENCE WITH IMPACT 2011

The BBSRC Excellence with Impact 2011 scheme ran from 2008 to 2010. It was developed to reward and esteem those university departments most active in embedding a culture that recognises and values the achievement of impact alongside excellent research.