Dr Appolinaire Djikeng
"Sharpening the tools we already have"

Appolinaire Djikeng's engagement with demand-led plant breeding started with his current role as Director of the BecA-ILRI Hub, a joint venture program established between ILRI (the International Livestock Research Institute) and AU-NEPAD (Africa Union - The New Partnership for Africa's Development).

Djikeng is a genomics scientist by training and became the BecA-ILRI Hub's Director in June 2013. He concentrates on how to improve the livelihoods of resource-poor people in Africa through the development and use of new technologies and strategies for sustainable farming.

Djikeng is a strong proponent of capacity building, in part using demand-led approaches in Africa by building the next generation of African scientists and using the knowledge bases of both modern biosciences and plant breeding to tackle agricultural development and human nutrition issues.

The BecA-ILRI Hub provides access to scientific and technological facilities by crop and livestock scientists from over 18 African countries, and has facilitated the creation of triangular alliances with African National Agricultural Research Systems and advanced Research Institutions, bringing to bear the most relevant knowledge and technology to smallholder farmers' fields in Africa. There's a pressing need for modernisation in practice and technology, and Djikeng is conscious of the need for more national government encouragement and support. For him, national support programmes must ultimately be created, developed and financed in Africa so that African agriculture has a stable and sustainable future.

As Djikeng observes, "*if we are serious about the short and longer term benefits of agriculture then ideally our programmes should not in the long term be externally funded. We need financial and political sustainability to be able to deliver the innovation needed to drive agricultural transformation. Our current funding is still externally driven. The support is much appreciated, of course, but it cannot go on as it is now – it is not sustainable. I believe that national governments understand this; they are starting to realise what an excellent financial investment it could be to support and finance plant breeding in Africa*". Governments, together with the larger funds and the corporate private sector need to coordinate resources for a more effective impact, allowing the market to assist with the revival of rural fortunes in the agricultural sector and spurring the development of scientific knowledge in Africa.

Djikeng believes that one of the central principles of demand-led breeding is to apply and enhance best principles by cooperative working. This is achieved by the creation of multifunctional teams and excellent networking to address challenges together. This doesn't necessarily mean creating a different network. He notes that there are many different networks in Sub-Saharan Africa, but "*we have to ensure that the networks themselves are*

well coordinated together, and this isn't always the case. In some ways promoting cooperation is better than having additional networks".

Africa is endowed with abundant natural resources, including about 60% of the world's arable land. These resources are rich assets if the investment can be found to accelerate Africa's agricultural transformation. And these resources are optimised through education, training and the transfer of knowledge and experience. The priority is for a planned and regular increase in plant breeders, trained within the system, and knowledgeable of local conditions, markets and environments.

There is a growing realisation within governments that science must be put at the heart of international development, and should be applied in those areas with the greatest need, regardless of where they are. The market, on its own, does not necessarily provide the independently generated incentives to develop a way of reducing extreme poverty although it can certainly create wealth under the right conditions and with the right framework.

The educational programme of the BecA-ILRI Hub is built on partnership and on practicality, and the foundation training is different from regular university training - another sign of the pragmatism with which Djikeng approaches the objectives of his institution. "We will be most effective if we continue the professional development of African scientists already active in a given area. In our current strategy we are enhancing and applying the capabilities of the scientists we already have. It's like sharpening the tools we already have in the box as well as getting new ones."