

AGRA knowledge series

Scientist improves cowpea seed variety in Burkina Faso

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Dr. Jean Baptiste De La Salle Tignegre, a beneficiary of Rockefeller and AGRA funding, graduated from the ACCI in 2011 and is currently working with AVRDC in Mali as a research scientist and cowpea breeder.

For his PhD training at the African Centre for Crop Improvement (ACCI) at the University of KwaZulu-Natal in Pietermaritzburg, South Africa, he focused on the development of high yielding and Striga-resistant cowpea lines for semi-arid areas of Burkina Faso.

He generated lines that he further developed with a research grant from AGRA to release four short to medium maturing varieties with large, white, smooth-textured grain, resistant to *Striga gesnerioides* race 1 and resistant/tolerant to several diseases. After completion of his PhD he worked as a cowpea breeder at INERA Kamboinse in Burkina Faso where he developed and released 4 varieties.

The release of the four varieties was preceded by three years of on-farm trials, variety demonstrations and tests (set up as a homologation phase) coupled with organoleptic tests. He organized a special session with farmers to change scientific naming of varieties into local names that farmers applauded (Komcalle = Hunger stopper; Nafi, Tiligre and Gourgou).

The cowpea variety grain increased from 22% to 48% as compared to the most adopted improved variety still widely grown by farmers. NAFI, with 67 days to maturity and a yield of 2 T/ha, is tolerant to drought, resistant to Cowpea Aphid Borne Mosaic Virus and resistant to Striga races 1 and race 5.

The farmers indicated that the large-sized cowpea grains have characteristics that are ideal for the market. A woman from the Bik-Baskoure village of Koupela District of Burkina Faso confirmed that when the two varieties are compared, one with the large grain will sell faster and people will only buy the small grain ones after the larger grain variety seeds are sold out. The 4 varieties are now grown by more than 70% of the cowpea farmers in Burkina Faso and have been introduced to Mali and other countries in the region.



Dr. Tignegre Jean Baptiste De La Salle (left) visiting a series of organoleptic tests resulted in the release of the demonstration field of the new varieties a Koupela new varieties



Komcalle



Tiligre