Nigeria's State of Kano, on the fringes of the Sahel, is undergoing an agricultural revolution and one of its major ingredients is a high-yield variety of cowpea called TVx 3236.

Not so many years ago Kano State decided that something had to be done to rescue its agricultural development. The goal, as expressed by the former Governor Aiahaji Abdu Dawakin Tofa, was "the total emancipation of the common man from hunger, disease, poverty, and squalor".

So the Kano Agricultural Research Development Authority — KNARDA — was established. It is a multi-million dollar joint venture between the Federal Government and the World Bank. Despite economic difficulties that will likely result in less money being spent than originally anticipated, KNARDA is nevertheless one of the most ambitious projects of its kind in the world and Africa's largest rural development project.

KNARDA's work embraces the whole of Kano State — some 4.3 million ha and almost one million farm families. Among its many goals are the improvement of irrigation systems, the promotion of integrated farming systems (irrigation, livestock, etc.), and the application of a new extension system. KNARDA wants farmers to be self-reliant and to make their own decisions. "We do very little free for the farmers," explains Simon Gillet, one of KNARDA's four zonal managers. "They pay for the seeds, the pesticides, the pumps."

CLOSE TO SUPPLIES

Working closely with KNARDA is a special service called KASCO, which operates 170 retail outlets around Kano State. It ensures that farmers are close to supplies of seeds, fertilizers, chemicals, small implements, livestock, and domestic goods for their families. It also provides tractor services such as ploughing, harrowing, and ridging when the farmer can afford it.

Under KNARDA, agricultural extension has been decentralized. As their name suggests, the "village extension advisors" (VEAs) live in the village with the farmers. They train the farmers, take them to demonstration plots, discuss farming with them, and get to know them. In Kano, the extension worker needs good boots more than a shirt and tie! At present, KNARDA has about 500 VEAs, but that is expected to increase eventually to 1500.

"I think Kano State is taking the first steps of an agricultural revolution comparable to the European agricultural revolution of the 18th century," says Gillet. The leading edge of this rural transformation is cowpea cultivation.

The intercropping of cowpeas with sorghum and millet is traditional in this part of the world. In fact, they were the first crops to be grown in a primitive farming system introduced some 10,000 years ago. Today, they still occupy a primary position in Nigeria's agriculture.

Nigeria is the world's largest producer of cowpeas and 80 percent of the country's harvest comes from the northern states of Kano, Sokoto, and Borno.

Local varieties are more useful as groundcover — they help retain soil moisture and fix nitrogen — than as good grain producers. The classic cowpea is a viny, sprawling plant with good tolerance to disease, insects and adverse climatic conditions. But its yield is low, only 200 kg/ha.

Nigeria is the world's largest producer of cowpeas.

Last year, a new variety of cowpea grown by 10,000 Kano farmers turned statistical estimates topsy-turvy. It was released a few years ago by the International Institute of Tropical Agriculture (IITA) in Ibadan under the name TVx 3236. Multiplied and distributed by KNARDA among smallholders in Kano State, it has changed the landscape, production systems, and the former pessimism of farmers.

TEN TIMES THE YIELD

"The farmers have quickly become accustomed to the miracle of high-density, sole-crop sprayed cowpeas," says C. Harkness, another zonal manager of the project. With yields sometimes 10 times greater than that of traditional cultivars, TVx 3236 is clearly a profitable crop to grow. The farmers have nick-named it "Dan Knarda", which in the Hausa language means "Son of Knarda".

Habu Kadiri Hoperter is a farmer who planted a little less than a hectare of the high-yield cowpeas last year. "What is left when my family and I have eaten enough I'll give to my neighbours who have seen the cowpeas in my field and want to grow Dan Knarda themselves next year," he says.

But what will happen to the high price of cowpeas and to farmers' incomes as the growing surplus makes its way into the marketplace? Simon Gillet is not worried about increased production: "We do nothing about marketing as such, but know that much will be absorbed in the South where production continues to be scarce."

The price of cowpeas on local markets is still very high, but even if it drops, as it is expected to in the near future, the farmers of Kano should still be left with a fair profit.

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