Research and innovation highlights

Helping women feed their households in Nioro hub, Senegal



Women and men producers evaluating rice yield at harvest to select best four varieties, Coular village, Toubacouta-Fatick Region, Nioro hub

In the villages of Kaolack and Fatick regions, in the Nioro rice sector development hub in Senegal, women are struggling to grow the principal staple crop needed to feed their households: lowland rice. Most of the more fertile uplands are used by the men to grow cash crops, such as groundnut.

The lowlands are becoming increasingly saline from seawater intrusion and experience iron toxicity, drought and flooding. The situation is becoming critical: women farmers are replacing rice with vegetables or abandoning lowland cultivation altogether and they do not have adequate access to uplands to grow alternative staples, such as millet or maize.

Lowland rice producers have been largely bypassed by formal rice sector development, which focuses mainly on irrigated and upland rice. While Senegal has formally released many varieties over the past two decades or so, most of those grown in the Nioro rainfed lowlands are not salinity tolerant.

Historically, women farmers have obtained quality seed of improved varieties from short-term projects and the public-private extension service, Agence Nationale de Conseil Agricole et Rural (ANCAR), but these have been few and far between (the latest were in 2009 and 2013). Otherwise, these women rely on self-saved seed, a practice that is recommended for only one or two seasons before quality deteriorates markedly.

In 2019, AfricaRice gender researchers worked with their colleague breeders to establish on-farm trials of varieties tolerant of salinity, iron toxicity and drought in three villages that were still producing lowland rice. Farmers ranked the varieties at various stages throughout the crop cycle and tested them in their own fields. All non-salinity-tolerant varieties succumbed to salinity, but four salinity-tolerant ones performed well in terms of yield, farmer-preferred short cycle, and cooking and eating quality.

These varieties are expected to be good for lowland production across the Nioro hub zone. "The next step is seed production," says AfricaRice sociologist Maïmouna Ndour. "The farmers have now dedicated 4 ha of land to seed production in the rainy season of 2020."

Having previously trained the farmers, ANCAR will provide technical assistance in certified seed production. The farmers are preparing to use 1 ha for each of the four selected varieties: ARICA11, ISRIZ-10, ISRIZ-11 and Sahel 210. AfricaRice will provide the foundation seed to initiate the local seed production enterprise.

"We will also identify suitable business models for the new seed producers to sell to other farmers and for farmers to sell any surplus grain they produce — both aimed at commercializing and extending the reach of the new varieties to the benefit of the whole region," says rice value chain expert Gaudiose Mujawamariya.

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