

SRI in Egypt

A report from Dr. Mustapha Ceesay, director of research for the National Agriculture Research Institute of The Gambia, who visited Egypt in August 2008 to participate in a sustainable rice development conference in Alexandria:

Egypt has one of the highest average rice yields of world -- 8 t/ha -- made possible by the sustained efforts of Egyptian rice researchers at Giza and more recently at Sakha. Among the challenges facing Egyptian agriculture is maintaining sustainable high yields despite the threats of global warming and climate change. Irrigation is an essential component of agriculture in Egypt. "In the desert, water is money," reports Dr. Waled El Khoby, the rice research scientist who is leading efforts to evaluate SRI methods under Egyptian conditions.

Along with some scientists from the African Rice Center (WARDA), I had the opportunity to visit the newly-established rice research station in Sakha, Kafr El-Sheikh. There Dr. Waled and his colleagues, Dr. Ali Abou Khalifa, Dr. A. Abd Allah, Dr. Basuny Zayed and Dr. Rabab Elamawi, are in a second year of experimentation to evaluate the water-saving benefits of SRI. They are comparing: continuous flooding vs. intermittent saturation; various seedling ages (15, 20 and 25 days) vs. 30 days with the conventional method; and different plant spacings (20x20 cm, 25x25 cm, and 30x30 cm).



In this picture, in front of an SRI trial plot, I am standing with Dr. Waled and his colleague Dr. Ali Abou Khalifa (on left), and Paul Kiepe (on right), coordinator of the WARDA/Africa Rice Center Natural Resource Program.

At Sakha, scientists are already using water-saving irrigation methods (as in SRI) on a large scale. However, because fields are rotated every year, as part of the experimental design (which requires randomization of plots), one may wonder if it will be possible to observe any benefit from the bio-amelioration and soil fertility improvements seen previously from SRI that follow from several years of these practices. The effects of SRI utilization are likely to be greater where there is cumulative impact on the soil system.

The organic matter build-up over time with SRI is something that Waled is aware of and he would like to evaluate this if he can convince the land authorities to allow him to maintain his current field under SRI cultivation for a period of years. Last year the yields were 10.8 ton/ha with the inbred line GIZA 178 and 13.9 ton/ha with the hybrid line Egyptian Hybrid 1. Yields from this year's trials are expected to be high, especially where younger seedlings were used. Waled El Khoby believes that any savings in water without yield loss would significantly advance Egyptian agriculture in the long- and short-term.

In the future, Waled and his colleagues would like to experiment with SRI using low-input varieties and also under saline soil conditions. We are looking forward to learning the results of the evaluations underway at the Sakha station, and to the dissemination of SRI methods within the rice-growing sector in Egypt.