

The rice man of Africa

by Savitri Mohapatra

Growing up in Sierra Leone, rice researcher Monty Jones was encouraged to become a priest. It's lucky for Africa he didn't.

MONTY JONES with the plaque presented to him at the Africa Rice Center's inaugural lecture in his honor.

R. RAMAN (WARDA) (3)



With his gentle smile and calm demeanor, Monty Jones doesn't look like the proverbial wild-haired scientist. But there is no doubt that the New Rice for Africa (NERICA) breakthrough made by him, in partnership with national and international scientists, has changed forever the way the world looks at African rice and rice research.

Going boldly where few scientists had gone before, Dr. Jones and his team succeeded for the first time in producing fertile progenies—later dubbed NERICA—from the crossing of Asian (*Oryza sativa*) and African (*O. glaberrima*) rice species. Crossing different species is notoriously difficult because of the high probability of sterility in the offspring.

The popular NERICA varieties outperform their parents, inheriting high yields from the Asian parent and the ability to thrive in harsh environments from the African parent.

Thanks to this remarkable achievement, Africa was catapulted almost overnight from relative obscurity among the international rice research and development community into the limelight.

Dr. Jones made the NERICA breakthrough during his tenure as a senior scientist at the Africa Rice Center (WARDA) from 1991 to 2002. He is currently the executive secretary of the Forum for Agricultural Research in Africa (FARA), based in Ghana.

For its NERICA achievement, WARDA received several awards, including the Consultative Group on International Agricultural Research (CGIAR) King Baudouin Award in 2000 and the United Nations Award for South-South Triangular Partnership in 2006.

The NERICA breakthrough also earned Dr. Jones the World Food Prize in 2004—the first ever won by an African. “Working closely with colleagues at WARDA and the CGIAR system, through sheer personal tenacity, Monty

Jones succeeded where all others before him had failed,” stated the World Food Prize Committee.

In his supporting letter to the World Food Prize Committee, Sir Gordon Conway, chief scientific adviser for the United Kingdom's Department for International Development, wrote, “Dr. Jones' ability to combine cutting-edge science with on-farm work has yielded significant benefits for the many poor rice farmers



FARMERS in Benin celebrate a bumper crop of NERICA rice.

in Africa who were by-passed by the Green Revolution.”

In addition to the World Food Prize, Dr. Jones has had many “firsts” to his credit. He was among the first agricultural scientists to understand that Africa needed to do its own research and develop technologies adapted to its specific conditions rather than importing wholesale solutions from outside.

He was also among the first to realize the value of Africa's indigenous rice species as a rich reservoir of genes for resistance to several local stresses and to develop and apply new tools to increase the efficiency of the rice breeding program in Africa.

At a time when participatory approaches were relatively unknown in Africa, Dr. Jones introduced and promoted participatory varietal selection and community-based seed systems to accelerate NERICA varieties' dissemination.

During a recent ceremony organized by WARDA to honor him, Dr. Jones spoke of some turning points and memorable moments in his life, offering a glimpse of the man at work.

Reminiscing about his childhood and his very religious upbringing in Freetown, the capital of Sierra Leone, with parents who had “white-collar jobs,” Dr. Jones said he had no contact with agriculture. But he dreamed of helping to produce food that would help feed the world. His mind made up, he decided to pursue his studies in agricultural science against the wishes of Irish Fathers who urged him to enter the priesthood.

In the 1970s, Dr. Jones received a fellowship from the Food and Agriculture Organization of the United Nations, allowing him to move to the U.K. to study at Birmingham University. There, he received a master's degree (1979)

and a doctorate in plant biology (1983). In 2005, in recognition of his work, the university conferred upon him the honorary title of Doctor of Science. He said that the 1985 “rice riots” in Sierra Leone, catalyzed by a shortage of rice, strengthened his resolve to become a rice researcher.

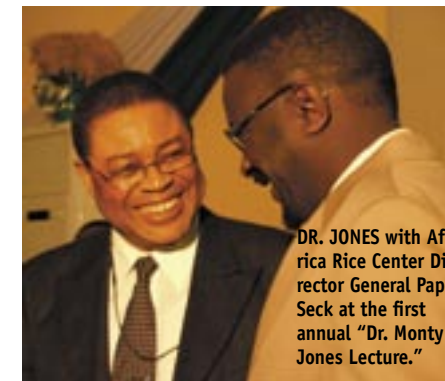
Before joining WARDA in 1991, Dr. Jones worked on mangrove rice in the Rice Research Project in Rokupr in his home country. There, he first saw farmers growing African rice and he became fascinated with its hardiness—a fascination that sowed the seeds for the NERICA development.

Dr. Jones recalls that when he proposed a program to the WARDA board to cross the African and Asian rice varieties in 1991, some members thought it was “too ambitious.” However, he eventually received the go ahead and the rest is history.

Dr. Jones said that even now he remembers very vividly the excitement he felt when he first saw that seven out of the 48 crosses he had made had produced a few fertile plants. “Some even had 98–100% fertility,” he recalls.

From that time onward, Dr. Jones said he had several such “eureka” moments, as he noticed one by one the desirable characters of the two parents that had been transferred to the progenies. Several international rice scientists could not believe it when he told them that a few NERICA lines had more than 300 grains per panicle, compared with the Asian rice varieties that have on average 100 grains.

Dr. Jones and his team continued to break new ground, as they learned to use anther culture—a technique that allows breeders to obtain pure breeding lines without the numerous cycles of inbreeding or “backcrossing” usually needed—to produce highly fertile lines in around 2 years, one-third the time required for conventional selection. “There was often an element of luck in our research,” he says, modestly referring to their success



DR. JONES with Africa Rice Center Director General Papa Abdoulaye Seck at the first annual “Dr. Monty Jones Lecture.”

in producing callus—a mass of undifferentiated cells that can be used to grow genetically identical copies of plants with desirable characteristics—by experimenting with coconut milk as a medium.

After the excitement of research, is Dr. Jones happy with his present work as FARA secretary? “I must confess I miss research,” he says. “But I don't regret the decision I took, because now I am continuing to do what I like very much—facilitating agricultural research at the continental level.”

He was happy that his legacy continues to live on at WARDA, where Dr. Moussa Sié, in close partnership with national program scientists, has recently developed NERICA varieties for lowlands.

To honor Dr. Jones, WARDA recently launched an annual “Dr. Monty Jones Lecture” and presented him with a plaque recognizing his “outstanding achievement in rice research and exemplary dedicated service to Africa.”

Paying homage to him, WARDA Director General Papa Abdoulaye Seck observes, “Dr. Monty Jones has demonstrated by his remarkable contribution that it is possible to reshape the agricultural map of our continent through the African creative genius.”

Dr. Jones may not look like a stereotypical scientist, but perhaps he possesses some of the eccentricity that seems to go hand in hand with scientific greatness. At the WARDA ceremony, he confessed that he used to speak to his NERICA plants, praising them for their performance. Whatever he did, it worked. 🌾