

Nerica: a “wonder” rice?

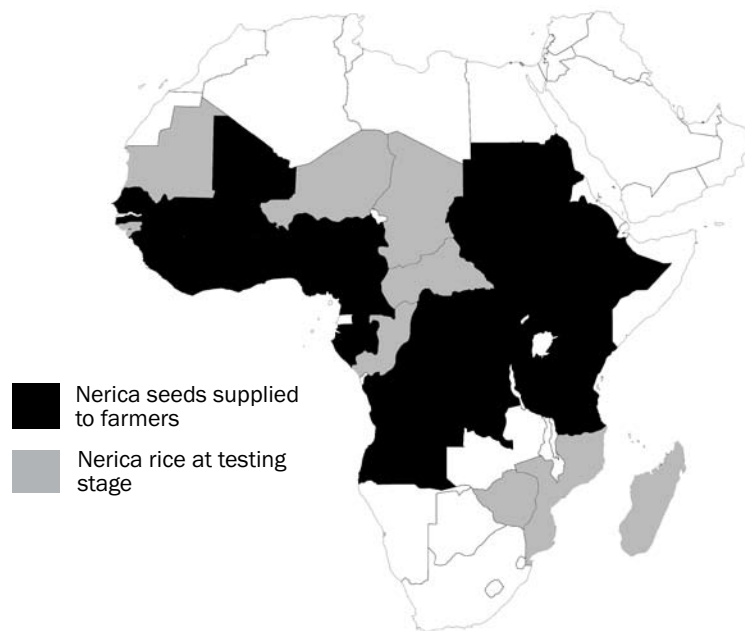
GRAIN

A cross between African and Asian rice – dubbed New Rice for Africa (Nerica) – is being hailed as a “miracle crop” that can bring Africa its long-promised Green Revolution in rice. A powerful coalition of governments, research institutes, private seed companies and donors are leading a major effort to spread varieties of Nerica seeds to all of the continent’s rice fields. They claim that Nerica can boost yields and make Africa self-sufficient in rice production. But is Nerica living up to the hype? In a recent report¹ GRAIN explains the origin of Nerica and assesses its success.

Rice has a long and varied history in Africa. African farmers probably domesticated this grain at the same time as Asian farmers – about 3,000 years ago. African farmers developed the species *Oryza glaberrima*, while Asian farmers developed *Oryza sativa*. *Oryza sativa* was introduced to Africa about 500 years ago, however, and peasants there have adapted it to their rice production systems, developing many local varieties of the Asian species and turning Africa into an important secondary source of diversity.

Nerica was developed using complex embryo rescue techniques to cross the Asian *Oryza sativa* rice with the African *Oryza glaberrima* rice. The first Nerica variety was developed in 1994 by researchers at WARDA,² using an *Oryza sativa* japonica variety (WAB 56-104) and an African *Oryza glaberrima* variety (CG 14). WARDA researchers developed several other hybrids, working with Japanese researchers on the Inter-specific Hybridisation Project (IHP), financed by the Japanese government, the US Rockefeller Foundation and the United Nations Development Programme (UNDP). These inter-specific hybrids were supposed to combine the high yield of their Asian parent with the adaptability to local conditions of their African parent.

At first, the Nerica researchers insisted that they did not intend Nerica to replace local diversity. Indeed, the incorporation of new seeds is nothing new for African farmers. New varieties are often mixed with old and become part of the selection process, contributing to the local genetic



Where Nerica seeds are being tested or supplied to farmers

heritage.³ The Nerica project researchers could have used these peasant seed systems as the point of departure for their programme, but the project team feared that the formal seed systems of the national research programmes would be too slow. So they chose instead to stay in their laboratories and work with hybrids from the CGIAR’s gene bank. It was only after developing the Nerica hybrids that the researchers sought out the farmers.

Experience among farmers since the first Nerica varieties were introduced in 1996 has been mixed, GRAIN found, with reports of a wide range of problems. Perhaps the most serious concern with Nerica is that it is being promoted within a larger drive to expand agribusiness in Africa, which threatens to wipe out the real basis for African food sovereignty – Africa’s small farmers and their local seed systems. The political and financial support for Nerica given by all the ministries of agriculture and the national and international agricultural research institutes in Africa makes it clear, if there were still any doubt, that governments and scientists are interested only in “modern” varieties, and care little for traditional varieties that farmers have adapted to local conditions. If Africa is to move towards food sovereignty – which entails,

broadly, producing what it consumes and consuming what it produces – then it needs to value the centuries-long work of African rice farmers. As a Benin proverb says, “it is to the end of the old piece of rope that we need to attach the new piece”. Africa’s local seed systems are the necessary basis for its food sovereignty.

1 GRAIN Briefing, “Nerica: another trap for small farmers in Africa”, January 2009. www.grain.org/briefings/?id=215

2 WARDA (the Africa Rice Group – formerly the West Africa Rice Development Association), is a member of the Consultative Group on International Agricultural Research (CGIAR). WARDA has 22 members: Benin, Burkina Faso, Cameroon, Chad, Côte d’Ivoire, Egypt, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Uganda, Senegal, Sierra Leone, Central African Republic, Republic of Congo, Democratic Republic of Congo and Togo. In January 2005, the Centre moved its offices from Bouaké, Côte d’Ivoire to Cotonou, Benin, because of the civil war in Côte d’Ivoire. It has regional research stations near St Louis in Senegal and at the International Institute of Tropical Agriculture (IITA) at Ibadan in Nigeria. <http://tinyurl.com/5msnje>

3 Edwin Nuijten, “Farmer management of gene flow: The impact of gender and breeding system on genetic diversity and crop improvement in The Gambia”, thesis, University of Wageningen, 30 November 2005.

Map compiled by GRAIN, January 2009

