

Editor's Note

“Generally, farmers have difficulty in dealing with the concept of ‘plants being sick’, and sometimes attribute plant diseases to witchcraft,” remarked one scientist at a workshop on rice diseases.

Not only farmers, even scientists sometimes have difficulty in understanding some complex diseases, such as rice blast — probably one of the well-known cereal diseases in the world, which destroys worldwide over 150 million tons of rice every year. The story *Tracking down a notorious cereal killer* in this issue shows how scientists around the world are trying to better understand the blast and find a durable solution.

Favorable policies and political support are vital for moving improved agricultural technologies from research stations to the hands of farmers and consumers. *Putting NERICA on the political agenda* gives brief accounts of the recent declarations of commitment made by political leaders, including Heads of African States, to promote the widespread dissemination of the New Rice for Africa (NERICA).

News and Notes gives you a glimpse of some unforgettable moments in the Center's life.



Moments of glory for WARDA

I would like to share with you some of the memorable events that took place recently, which revealed at regional and global fora that donors' investment and faith in WARDA have paid rich dividends.

The last few months were indeed a period of glory for WARDA that culminated with a shower of tributes from regional and world leaders at the 24th Session of the WARDA Council of Ministers and at the Third Tokyo International Conference on African Development (TICAD III) in September 2003.



One of the key events of this period was the Rice Policy Workshop, held in August 2003, Nigeria, during which WARDA policy economists and their partners — as part of a USAID-funded project to revitalize the Nigerian rice sector — recommended a comprehensive strategy for the promotion of local rice. The project recommendations were later presented to the Nigerian Minister of Agriculture and will also feed into the Presidential Committee on Increased Rice Production and Export in Nigeria established by President Obasanjo in 2002.

Another significant development recently has been the series of high-level meetings on coordinated NERICA dissemination, jointly organized by the Consultative Group on International Agricultural Research (CGIAR), the World Bank and Japan. The second meeting was held on 12 September 2003 in Tokyo and inputs from the African Rice Initiative Steering Committee Meeting (8-9 September 2003) contributed to the productive discussion.

In conclusion, I would like to highlight that there cannot be better testimonials for WARDA's achievements in research management and impact than the pronouncements made at the 24th Session of the WARDA Council of Ministers, 18-19 September 2003, in

Benin and at the Third Tokyo International Conference on African Development (TICAD III), 29 September-1 October 2003, in Japan. I invite you to read the reports of both these events in this issue.

Kanayo F. Nwanze
Director General

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Tracking down a notorious cereal killer

Rice blast — a name that triggers alarm among rice farmers and rice scientists worldwide — is a widespread threat to food security, destroying over 150 million tons of cultivated rice each year, enough rice to feed 60 million people worldwide.

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The disease is found in 85 countries and costs farmers a loss of nearly \$5 billion a year. Not surprisingly, it accounts for the world's largest fungicide market; the Japanese market alone for blast fungicides is estimated at US\$400 million per year!

Now, rice blast has become quite well known in the world of plant science, after the publication in July 2002 of the draft genome sequence of the fungus *Magnaporthe grisea* that causes blast. Scientists considered the blast fungus and its plant host as a model system for understanding fungal-plant interactions and therefore, an ideal candidate for genome sequencing.

It is hoped that the availability of the *M. grisea* draft sequence on public databases will help scientists to have a more comprehensive understanding of the host-pathogen interaction and find ways that would enable rice plants to better resist the blast fungus, or hinder the ability of the fungus to infect rice plants.

In general, blast is controlled with fungicides or through the use of blast-resistant varieties. However, neither strategy has been very effective, because the blast fungus is increasingly becoming resistant to fungicides and has learned to assume more virulent forms to attack resistant rice varieties.

In fact, the blast fungus is so variable, especially under intensive, large-scale monoculture conditions, that it can turn resistant rice varieties vulnerable within 2 or 3 years.

Mapping blast in West and Central Africa

Although present in all rice ecosystems of West and Central Africa (WCA), rice blast is most important in upland and lowland rainfed systems. Many of the traditional upland rice varieties grown in WCA have been found to be sufficiently resistant to prevent massive outbreaks. A West African upland rice variety called Moroberekan, is considered to confer durable resistance to rice blast.

In WCA, rice blast causes significant losses in farmers' fields mainly when farmers try to improve their traditional system by using higher-yielding but susceptible rice varieties.

Researchers from WARDA and their partners have found that an integrated pest management (IPM) approach, including the use of resistant rice varieties, cultural practices and rational chemical control, remains the best way to tackle blast in farmers' fields in WCA.



Leaf blast

“WARDA's research emphasizes the control of blast through stable varietal resistance,” said Dr Y Sere, WARDA Plant Pathologist. “Apart from routine breeding and selection for blast resistance, new breeding methods for durable blast resistance are being sought on the basis of a broad molecular and biological characterization of the blast pathogen's genetic diversity in West Africa.”

As part of a 4-year multi-institutional project comprising WARDA, the Horticultural Research International (HRI) in UK, and national agricultural research system (NARS) in Ghana, researchers have been studying the blast pathogen diversity in WCA.

The final outputs of this project funded by the Department for International Development, Crop Protection Program (DFID/CPP), were discussed at a workshop on Strategic Characterization of Blast Lineages and Tools for Long-term Monitoring by WARDA/NARS in March 2003. These outputs serve as important contributions to the global atlas of blast pathogen diversity.

A major output reported by the project is the establishment and characterization of a baseline collection of over 350 blast pathogen isolates from key screening sites and surrounding farms in Côte d'Ivoire, Ghana, Burkina Faso and Nigeria.

Common lineages (genetic groups) of these isolates were identified in the four countries, revealing nine distinct West African blast lineages. Nearly half of the 40 rice varieties provided by WARDA and NARS that are being screened under controlled conditions, have shown resistance to dominant representative blast lineages of West Africa.

Neck blast



WARDA researchers have been able to develop a strategy to identify rice material with durable resistance to blast, which can be adopted directly by farmers and also used in breeding programs.

Building on the project outputs, the following activities are planned:

- The promotion of a molecular tool kit for monitoring blast pathogen diversity in WCA through the training of NARS scientists
- Characterization of blast pathogen populations in key countries using molecular tools at WARDA
- Use of characterized populations/sites and host resistance sources to achieve durable blast resistance in WCA

Putting NERICA on the political agenda

TICAD III Calls for Emphasis on NERICA Dissemination

Receiving high tributes from world leaders at TICAD III, 29 September-1 October 2003, NERICA emerged as a byword for successful Asia-Africa cooperation.

The TICAD process initiated in 1993 has become a major global framework for Asia and Africa to collaborate in promoting Africa's development. Commemorating its 10th anniversary, TICAD III was one of the biggest ever conferences held on Africa with delegates from 90 countries, including 23 African Heads of State and heads of 22 organizations.



“The participants concurred on the importance of technical assistance to ... the dissemination of NERICA ... in augmenting food self-sufficiency in Africa,” summed up the TICAD III Chair, Yoshiro Muri, Former Prime Minister of Japan. Japan has been one of the foremost champions of NERICA dissemination in Africa.

“NERICA is an excellent example of how a variety of partners ... can work together on actions with potential for quick development impact,” commented Lennart Bage, President of the International Fund for Agricultural Development (IFAD). Thabo Mbeki, President of South Africa urged that NERICA dissemination should be extended “to other parts of the continent in urgent need.”

In line with the New Partnership for Africa's Development (NEPAD), which has identified NERICA as “one of Africa's best practices worth up-scaling”, the World Bank stated that it welcomed Japan's offer to help the NERICA initiative forward as an example of the TICAD-NEPAD partnership.



Invited to participate at the TICAD III, WARDA organized a CGIAR/WARDA side event on NERICA including a display booth and a participatory Seminar, chaired by Mr Yukio Yoshimura, World Bank Vice President and Special Representative, Japan.

“A series of high-level meetings on coordinated dissemination of NERICA, organized by the CGIAR, the World Bank and Japan earlier in 2003 had set the momentum for this Seminar. Therefore, both the quality of the participation and the level of attendance were impressive,” said Dr Kanayo F. Nwanze.

Dr Nwanze also delivered a lead-off statement on “The Challenge of Agricultural Development in Africa and the Promise of NERICA” in one of the thematically focused sessions at TICAD III. For more information, see *NERICA at TICAD III* on www.warda.org. ■

WARDA Council of Ministers resolves to promote local rice

At its 24th Ordinary Session, the WARDA Council of Ministers (CoM) expressed deep concern over the alarming trend of the increasing dependence of West and Central Africa on imported rice at the expense of local rice. The Session was held on 18-19 September 2003, in Cotonou and chaired by Lazare Sehoueto, Minister of Agriculture, Animal Husbandry, and Fishery, Government of Benin.

Realizing that greater political commitment is needed to make high-quality local rice, such as the NERICA varieties, available on the market and better known to rice consumers in WCA, the Council passed an important resolution during the Session strongly urging WARDA member countries to promote the production, marketing, and consumption of local rice.

The Council also advised WARDA to develop a strategy to help member countries cope with issues relating to biotechnology (especially GMOs) and Intellectual Property Rights (IPR).

As an autonomous intergovernmental research association of African member states, WARDA is unique among the CGIAR-supported Centers, to have the Council as its highest oversight body. This distinct organizational model gives a strong feeling of ownership of WARDA by the Council, making the Center's activities highly relevant to the region.

The 24th Ordinary Session put on record its deep appreciation for the “courage and high sense of responsibility” of the WARDA Board, the Director General and staff during the Ivoirian crisis. It thanked the Ivoirian government for continuing to ensure the security of WARDA staff and properties and resolved to maintain the WARDA headquarters in Côte d'Ivoire.

The National Experts Committee (NEC) comprising the Directors of the national programs of WARDA member countries met on the first day of the 24th Session and prepared the groundwork for the CoM meeting.

The Session was preceded by a Rice Day, organized jointly by the Institut national des recherches agricoles du Bénin (INRAB) — the national program of Benin — and WARDA. This public awareness campaign on rice included participatory seminars and display booths by various organizations involved in rice R&D, production and processing.



Thanking the CoM and the NEC for having stood by WARDA during the Ivoirian crisis, Prof. Richard Musangi, WARDA Board Chair said, “Without your strong support, it would have been impossible for WARDA to continue coping with the challenge.” He urged the member states to show their support through their regular contributions to WARDA — “an institution conceived and managed by themselves.” ■

News and Notes

Milestones



24th Ordinary Session of the WARDA Council of Ministers, Cotonou, Benin, 18-19 September 2003



Third Tokyo International Conference on African Development (TICAD III), Tokyo, Japan, 29 September - 1 October 2003

Rice Policy Workshop,
Ibadan, Nigeria, 21-22 August 2003



A concluding workshop on the USAID-funded rice sector project The Nigerian rice economy in a competitive world: constraints, opportunities, and strategic choices, was organized on 21 and 22 August 2003, Ibadan, Nigeria. The project was implemented by WARDA in collaboration with the Nigeria Institute for Social and Economic Research (NISER).

The workshop participants recommended a comprehensive approach to enhance the competitiveness of the Nigerian rice sector by improving the quality of the local rice and the efficiency of operators at the production, processing, and marketing levels. The recommended strategy was later presented to the Minister of Agriculture and Natural Resources, Government of Nigeria.

New and old faces at WARDA

Director of Research
Dr Shellemiah Keya



Lowland Rice Breeder
Dr Sie Moussa

Vegetable Agronomist
(AVRDC-WARDA
collaborative project)
Dr Virginie Levasseur



Production Economist
Dr Mohamed Kebbeh

Participants of the ARI Steering Committee Meeting,
Bamako, Mali, 8-9 September 2003



Please send your questions, comments or suggestions to:

Savitri Mohapatra, Editor
WARDA Abidjan Liaison Office
01 B.P. 4029
Abidjan 01, Côte d'Ivoire

Tel. (225) 22 41 06 06
Fax (225) 22 41 18 07
E-mail: s.mohapatra@cgiar.org

If you would prefer to receive this newsletter in French, please contact us at warda@cgiar.org.

Web-site: www.warda.org

