

Myanmar after Cyclone Nargis

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Improved agricultural productivity can help developing countries reduce their reliance on international emergency food relief following natural disasters. This is one of the conclusions of a team of International Rice Research Institute (IRRI) scientists who visited cyclone-devastated Myanmar in August.

Cyclone Nargis devastated Myanmar's Ayeyarwaddy (Irrawaddy) Delta area on 2-3 May, leaving more than 140,000 people dead or missing and causing an estimated 1.2-million-ton drop (6%) in rice production, jeopardizing the country's food security and exports.

On 26 and 28 August, IRRI scientists T.P. Tuong, David Johnson, Abdelbagi Ismail, Grant Singleton, and Ruben Lampayan met in Yangon with representatives from the United Nations Development Programme, the Food and Agriculture Organization of the United Nations, and the Myanmar Agriculture Service (MAS) to discuss how IRRI can help develop plans to increase rice production during the coming dry-season crop and the 2009 wet-season crop. On 27 August, the team visited two townships (Kun Yangon of Yangon Division and Daedaye of Ayeyarwaddy Division) in Nargis-affected areas.

"While a disaster of Nargis's scale will hurt any country, a robust and efficient agricultural sector—which, in a country with Myanmar's area of farmland, means food self-sufficiency and exports—helps people get back on their feet faster and with less need for emergency aid," said Dr. Tuong. "Emergency relief is like helping people who have fallen over a cliff; longer term agricultural development provides a fence that stops

people from falling in the first place."

U San Nyunt, general manager of MAS Seed Division, said that the key needs of Myanmar are more fertilizer for high-yielding varieties, improved production of high-quality seed, and fruit tree seedlings and vegetable seeds to be supplied to affected communities. The government of Myanmar has asked IRRI for seeds of salt-tolerant rice varieties, and the MAS Seed Division needs equipment to monitor salinity levels in farmers' fields and on seed farms.

Dr. Ismail emphasized that salt-tolerant high-yielding varieties will be important, particularly to replace the low-yielding traditional varieties being grown in coastal areas. "IRRI has more than 800 salt-tolerant breeding lines and can provide a subset of these with a set of specifications for MAS to test," he said.

Over the whole Ayeyarwaddy Delta, the area planted was 6% less than previous years. In hard-hit areas closer to the coast, planted area was down 25% because of a lack of labor, infrastructure, equipment, and draft animals.

Salinity brought inland by Nargis had already been washed out, with very low water salinity at the two sites visited by the team. IRRI will also continue supplying and testing flood-tolerant rice varieties in flood-prone areas of the delta. However, there are concerns that salinity will occur during the next dry season in irrigated areas where protective embankments were breached by the typhoon. Farmers reported failures of crop establishment following direct seeding after the storm, probably because of high salinity levels.

Dr. Johnson stressed that IRRI, through the Irrigated Rice Research Consortium (IRRC) and the Consortium for Unfavorable Rice Environments (CURE), can provide guidance on best-management

options. "We need to consider new technologies for resource management to complement the use of good-quality seed and to sustain increases in the production of rice," he said, adding that CURE also has a breadth of knowledge on new stress-tolerant varieties for different situations.

Even though the IRRI team was unable to visit the worst-hit coastal townships, the devastation appeared overwhelming. In Daedaye, for example, 80% of the houses collapsed, 3,800 people died, and stored dry-season rice, draft animals, and farm equipment were lost. Four months after the cyclone, shattered trees and tidal surge flood marks more than 3.5 meters high on trees and buildings served as grim reminders.

"We are impressed by the resilience of the Myanmar people in the affected regions," said Dr. Tuong. "IRRI can help spread the message that more access to fertilizer is needed, and the IRRC can help with recommendations on efficient fertilizer use." He highlighted that IRRI can support Myanmar's work to improve seed storage and can help farmers save irrigation fuel costs through the use of water-saving technologies.

Dr. Singleton's concern was that pests and diseases could be a major problem in the current wet season given the staggering of planting and, consequently, maturation. Conditions that favor pests and diseases will thus be lengthened, and the situation is complicated by the planting of high-yielding varieties in the wet season to generate seed for the dry season.

"We need to be vigilant and to capture what is happening so that Myanmar's Plant Protection Department and MAS are better prepared in the future—proactive rather than reactive—when planting is staggered in the Ayeyarwaddy Delta," explained Dr. Singleton. "Through the IRRC, we have an ongoing partnership with MAS colleagues on improved crop

and natural resource management. These improved practices have been validated over the past 2 years and are ready to be scaled out in Ayeyarwaddy and Yangon divisions to help achieve environmentally sustainable increases in production."

Source: International Rice Research Institute

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