

In this issue

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Published online: 15 February 2012

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This issue contains a review of rice in the series Crops that Feed the World and eight original papers. There are also two conference reports and two book reviews. Almost every item contains some reference to the plight of the poor, whether it is their lack of influence on policy makers, their vulnerability to price hikes in their staple crops or the low yields they obtain on their farms owing to their inability to obtain credit to finance agricultural inputs.

The rice review is by **Pape Abdoulaye Seck, Aliou Diagne, Samarendu Mohanty** and **Marco C.S. Wopereis**, the first two authors and the last being from the Africa Rice Center, Benin and the third from the International Rice Research Institute (IRRI), Philippines. As the authors state, rice is the staple food of more than half of the world's population, many of whom are poor and therefore extremely vulnerable to high rice prices. However, there is cause for cautious optimism: although the demand on the African continent will be for an additional 30 million tons of rice by 2035, productivity there is increasing at the rate of 9.5% per annum. This is largely due to the NERICA rice varieties which are crosses between Asian rice, *Oryza sativa*, and the indigenous African rice, *Oryza glaberrima*. Unfortunately, there are a number of biotic, abiotic and human constraints, the principle biotic constraints being weeds and blast disease

caused by the fungus, *Magnaporthe grisea*, and the abiotic constraints, drought and poor soil fertility. Human constraints are particularly severe in Sub-Saharan Africa: they consist of lack of researchers and extension staff, poor education of farmers and farmers' poor health owing to malaria and bilharzia.

Two papers follow which are essentially about governance. The first is by **Dan Maxwell** and reports on the UN's global mechanism for coordinating food security responses in emergencies worldwide. This is the global Food Security Cluster (FSC), formally launched last year by the Food and Agriculture Organization (FAO) and World Food Programme (WFP). Maxwell's paper cites four case studies: those of the Haiti 2010 earthquake, the Pakistan floods of 2010, the 2008 post-election violence in the context of recurrent vulnerability to drought in Kenya and the Côte d'Ivoire's crisis in 2010–11. Salient points include the need of prioritizing objectives, getting organizations with different objectives and incentives to work together ("leading from behind") and good leadership in the right place at the right time (weak leadership owing to the rapid turnover of qualified staff was singled out as a particular problem). The second paper concerns food security responses in South Africa. The authors, **Laura Pereira** and **Shaun Ruysenaar** contend that the current Integrated Food Security Strategy is neither sufficiently flexible nor sufficiently coordinated to deal adequately with the complexity of the subject. They suggest that "adaptive governance", based on complex adaptive systems theory and including collaboration between diverse stakeholders, would be more appropriate.

Finance is the common theme of the next two papers. In the first of these **Sebastian Levine** assesses the impact of the rapid acceleration of food prices in Namibia in 2007/2008. He shows that low income households who spend a large

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proportion of their cash income on food were most badly affected. These were urban household who have few in-kind goods to fall back on and rural households whose own production was reduced owing to crop failures. Moreover, the effect of the ‘zero-rating’ of the VAT for basic food items, a palliative measure introduced by the Namibian government, was ineffective in shielding the poor from the crisis. In contrast, he suggests that cash transfers would be a better option. In the second paper, **Abid Hussain** and **Gopal Thapa** call attention to the fact that, despite the Government of Pakistan making provision of credit to farmers, needed for purchasing inputs such as farm machinery, fertilizer and seed in order to boost food security, the uptake by those farming small plots of land is very low. Major reason for this are the excessive bureaucracy involved in obtaining the loans and the perceived notion that only land holdings are accepted as collateral. As a result, informal sources of credit, usually involving high interest rates are resorted to by smallholder farmers. In order to overcome this problem, the authors suggest simplifying the process of obtaining loans and offering loans on a group guarantee basis.

The next two papers deal with topics of concern on the Indian Sub-Continent, one in India and the other in Nepal. **Derek Headey** and co-authors point out that, although in recent decades India has achieved one of the fastest economic growth rates in the world, there has been only slow progress towards combating both child and adult undernutrition. They advocate the promotion of more diverse diets, raising incomes by diversifying crops, encouraging gender and nutrition sensitive policies and recognising that undernutrition is a multi-dimensional problem with strong interactions among health, education and diets. The persistent problem of undernutrition therefore needs multisectoral solutions. **Thakur Tiwari** and co-authors describe the complex farming systems in Nepal where the land is often steeply sloping and, consequently, crops are grown on terraces. Maize, which is second only to rice as a key staple, is relay cropped with finger millet on the terraces and fodder trees are grow on the risers. There is therefore a question as to whether the shading afforded by the trees limits the yield of maize. Although farmers were of the opinion that local maize varieties are more stress tolerant than introduced varieties, the authors found no evidence for a difference in photosynthetic adaptation to shade amongst the varieties tested. However, there was some evidence that local germplasm developed longer and possibly deeper roots which may have conferred greater drought tolerance and also some genotypes appeared to compensate for sub-optimal light conditions by growing more leaves.

The final two papers are concerned with vegetables and their importance for dietary diversity in Africa. In the first of these, members of the World Vegetable Center (AVRDC) in Taiwan and its regional center for Africa in Arusha, Tanzania present a paper on vegetable breeding in Africa, pointing out

its constraints and the potential that vegetables have in achieving food and nutritional security. Despite long-term underinvestment in horticulture in Africa, there are now signs of improvement with many new and better varieties being released which are indigenous and nutrient-dense. These are finding growing markets in both rural and urban settings. In the second paper, **Gudrun Keding** and co-authors relate the dietary diversity scores (DDS) and food variety scores (FVS) to vegetable production and socio-economic status of women in rural Tanzania. They found that in a total of 252 randomly selected women from three districts of north-eastern and central Tanzania about one third had an “alarmingly” low DDS of only two to four food groups per day. The authors emphasise that different forms of increase in dietary diversity and food variety must be distinguished, as well as quantity and quality of diversity. They suggest that homestead food production may be a good way to improve dietary diversity.

This issue of Food Security contains two reports of meetings. The first is the International Conference on Asian Food security held in Singapore in August 2011 with the title “Feeding Asia in the 21st Century: Building Urban–Rural Alliances”. Although Asia has more than 60 per cent of the world’s population, with some of the fastest growing economies, it has only 37 per cent of the world’s arable land and 36 per cent of the world’s water resources. Several policies to meet the challenge to food security that these figures represent are advocated. These include redoubling research and development in agriculture, addressing the plight of the poor, making efforts to link policies in the food and health sectors and fostering rural–urban relationships. Food and health were also addressed in a report of a conference held at Stanford University on November 10, 2011 with the title “Redefining Security Along the Food-Health Nexus”. As the authors of the report state, feeding the world is no longer just an issue of food security but is a human security concern that links agriculture, health and political stability in ways not previously studied. The impressive line-up of speakers included Jeff Raikes, CEO of the Bill & Melinda Gates Foundation; Kofi Annan, former Secretary General of the United Nations; and Robert Gates, former U.S. Secretary of Defense. At the same time, Stanford’s Freeman Spogli Institute for International Studies launched a Center on Food Security and the Environment.

The issue is completed by two book reviews. The first, *African Seed Enterprises: Sowing the Seeds of Food Security* is edited by **Paul Van Mele**, **Jeffery W Bentley** and **Robert G Guéi**. On the African continent much of the seed used to plant crops is saved by farmers themselves. Unfortunately, this is often of poor quality and may be instrumental in the spread of disease. Supply of good quality seed would be a great boon to farmers but how to sustain a seed enterprise in the African context is fraught with difficulties which are discussed in the book. **Per Pinstrup-Andersen** and **Derrill Watson’s** book,

Food Policy for Developing Countries: the Role of Government in Global, National and Local food Systems is a tour de force and a mandatory read and reference book for all who are concerned with the scandal of the approximately one billion people on the planet who are denied an adequate diet. An important feature of the book is the reference to case studies at the end of nine of the eleven chapters. These are contained in a three volume work edited by Per Pinstrup-Andersen and Fuzhi Cheng, *Case Studies in Food Policy for Developing Countries* (Ithaca, NY: Cornell University Press, 2009) and available online via open access at <http://cip.cornell.edu/gfs>. Action by policy makers informed by these invaluable resources should do much to relieve the suffering of many in the developing world.



Richard Strange Editor-in-Chief Food Security Richard Strange's background is in Plant Pathology, a subject to which he was attracted by its relevance to food security and in which he has published over 90 papers and two books. He currently holds an Honorary Chair at University College London and an Honorary Fellowship at Birkbeck College, University of London. He has been involved in numerous overseas projects, several of which were located in different African countries and has supervised Ph.D.

students from these and other countries of the Developing World in topics directly concerned with plant disease problems affecting their food security.