In this issue

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This issue consists of 14 papers and two book reviews. The first paper is concerned with the relationship between the spatial distribution of land consolidation projects and farmland resources in China over the timespan 2006–2012. This is followed by five papers, which are essentially concerned with crops and their productivity, the first of which is about Cassava and is part of our series Crops that Feed the World. The next four papers discuss various aspects of food acquisition and safety and the last four deal with topics, which may be broadly classified as welfare.

Xiaobin Jin and co-authors report on the Chinese government's implementation of large-scale land consolidation programs in order to stabilize and improve the quantity and quality of national farmland. Consolidation consists principally of improving existing farmland, land exploitation (conversion of unused land e.g. wild grass land, saline and alkali land, swampland, beach land, and reed land) to agricultural lands and land reclamation (conversion of urbanized and/or disaster-damaged farmland) back into agricultural uses. Consolidation was weak at the national level and variable across the country. The authors attributed this to ineffective guidance and suggest operational strategy should be improved.

Aditya Parmar and co-authors review the production and improvement of cassava for food, feed, and industrial uses. They point out the crop's high importance for food security in Western, Central and Eastern Africa due to its ability to produce reasonable yields (~10 t/ha) in poor soils and with minimal inputs. The major challenges to production are cassava

mosaic disease (CMD), cassava brown streak disease (CBSD) and cassava bacterial blight (CBB), inherent post-harvest physiological disorder (PPD) and cyanogenic glycosides (CG).

The impact of the adoption of New Rice for Africa (NERICA) on household food security and health in the Gambia is reported by Lamin Dibba and co-authors. NERICA rice is the result of embryo rescue of a cross between African rice, *Oryza glaberrima*, and Asian rice, *Oryza sativa*. Although NERICA rice significantly increased household food security by 14 percentage points, there was no significant effect on human health.

H. Hengsdijk and W.J. de Boer investigated post-harvest losses of maize in Ethiopia. They found that only 10% of 2500 households reported losses and the average self-reported loss was 24%. Losses increased the further households were located from a market or main road but tended to decrease with higher rainfall.

Thomas Daum and Regina Birner investigated the governance challenges involved in mechanization of smallholder-based farming systems. As a result of their findings they suggest that instead of focusing on the supply of subsidised machinery, the government could be more effective if they invested in the development of institutions, particularly those that could ensure adequate skill development of tractor-operators and technicians.

Poor diet diversity is a frequent occurrence on the Indian subcontinent. Vijaya Bhaskar and co-authors made an exploratory study of the resource poor villages of Wardha and Koraput districts in the states of Maharashtra and Odisha. They found vitamin A deficiency and iron-deficiency anaemia among children less than 5 years old, high prevalence of chronic energy deficiency (CED) in women and anaemia in pregnant women. CED in adults (>18 years of age) from both regions significantly increased as the dietary diversity score

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(DDS) decreased and this was also true of anaemia in adolescent girls and women in Koraput.

Barbara Häsler and co-authors draw attention to the paucity of simultaneous studies on nutritional outcomes and food-borne diseases. They propose embedding traditional risk analysis and nutrition assessment methods into value chain analysis. This would improve the understanding of the linkages between nutrition and food safety and point to the most promising interventions that would promote these in value chains involving animal source foods.

Georgina Limon and co-authors used mixed methods to assess food security and coping strategies among smallholders in the Andes. They point out that international organizations and governments regularly support programmes to promote food security among smallholders through the control of animal diseases but the impact of such programs remains unclear. They used Food and Mouth Disease as a case study. Two aims of the study were to: “to demonstrate the application of mixed methods as an approach to evaluate the four pillars of food security” and “coping strategies in food security compromised situations in a one-off visit and to assess the food security of smallholders in the Andean region at the beginning of a transnational programme that could be used as baseline information for future evaluations”.

Food acquisition programmes (PAA) in Brazil’s semi-arid regions were studied by Patricia Mesquita and Marcel Bursztyn. PAA was perceived as positive and had a diversity of effects at the farm, household and community levels. However, an extreme drought in 2012 had a negative effect owing to decreased availability of produce and even disruption of services.

Ilse de Jager and co-authors studied grain legume cultivation and children’s dietary diversity in smallholder farming households in rural Ghana and Kenya. The study took place within a large agricultural development project supporting legume production (N2Africa), allowing the authors to compare N2Africa households with non-N2Africa households. There was no improvement in the dietary diversity of children of N2Africa households versus non-N2Africa households but structural equation modelling showed a relatively good fit to the a posteriori model in Kenya but not in Ghana, and in Kenya only the production-own consumption pathway was fully supported, with no effect through the income-food purchase pathways. The authors comment that the results confirm the importance of the food environment if enhanced crop production is to translate into improved human nutrition.

The importance of the food environment is also demonstrated by Meenakshi Fernandes and co-authors in their study of the school food environment and dietary behaviours of children and adolescents. These groups were less likely to go home for lunch if they were the recipients of free school

meals provided by the Ghana School Feeding Programme. More than half the schools reported offering food for sale by independent vendors and, correspondingly, some children and adolescents brought money to school for its purchase.

Alicea Skye Garcia and Thomas Wanner studied gender inequality and food security in the context of the gender-responsive work of the International Food Policy Research Institute and the Bill and Melinda Gates Foundation Research Institute. They suggest that the work by these concerns has some limitations such as a lack of recognition of long-term consequences resulting from the provision of agricultural assets, and a lack of prior analysis of social perceptions of gender roles in the contexts of the projects. Recommendations are made for more effective gender-responsive approaches to organisations working on the improvement of global food security.

The production of cash crops is generally regarded as a means of reducing poverty in developing countries. However, Mahamadou Tankari found that cash crops actually reduced the welfare of farm households in Senegal. He suggests that agricultural policies in Senegal should be more concerned with the production of food crops within a framework supportive of functioning markets.

Irene Mitchodigni and co-authors studied the determinants of dietary diversity and meal frequency among children aged 6–23 months in Southern Benin. This is the crucial period at which complementary foods - solids or liquids other than breast milk - are introduced. Complementary feeding practices that are inappropriate at this stage increase mortality and risk of chronic disease, and have detrimental effects on overall growth and development of children. The authors list many factors that determine complementary feeding practices but single out diversification in farm-systems, women’s empowerment and reduction in women’s workload in order to allow more time for child care.

Plant Growth Promoting Actinobacteria: A New Avenue for Enhancing the Productivity and Soil Fertility of Grain Legumes, edited by Subramanian Gopalakrishnan et al. is a multi-authored text. David Ingram found the book fascinating and certainly I, for one, was intrigued to read about the many ways in which Actinobacteria cause increased growth of plants.

Suresh Babu reviews the book, Food Security in Eurasia: Case Studies, edited by Per Pinstrup-Andersen et al. The four countries of the case studies are Armenia, the Kyrgyz Republic, Tajikistan, and Uzbekistan and represent countries that are in transition from central planning to market-oriented economies. Dr. Babu completes his comprehensive review by stating that “the role of the social entrepreneurial approach to food policy making, espoused in this volume, cannot be overemphasized”.