In this issue

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This issue consists of eight original papers and three book reviews. The first four papers concern several issues but the second four form a special section dealing with nutrition-sensitive agriculture. The latter are introduced by Detlef Virchow and Hannah Jaenicke and have been guest edited by them. They form the first part of a series, which will be continued in the December issue of the journal.

In the first paper (*Priority research questions for the UK food system*), John Ingram and a large cohort of co-authors summarize the results of a questionnaire, which was designed to establish the research priorities for the UK food system. The questionnaire was the product of 456 individual stakeholders, who submitted a total of 820 questions. These were narrowed down to 100, which were sorted into 10 themes. From the answers to the questions, it was clear that food affordability, nutrition and food safety were the issues of principal concern.

The next three papers are all concerned with food production. Nesar Ahmed and Mark Flaherty (*Opportunities and challenges for the development of prawn farming with fish and rice in southeast Bangladesh: potential for food security and economic growth*) point out that the southeast of Bangladesh has appropriate resources and favourable agro-climatic conditions for the culture of prawns, although this is currently mainly confined to the southwest of the country. They suggest that farming prawns with fish and rice in the

southeast has considerable potential for increasing the food security of farming households. Moreover, owing to the value of prawns on the international market, this has the potential for boosting the economy of the country as a whole.

The paper by David Spielman and co-authors (*The prospects for hybrid rice in India*) is also concerned with the potential for increasing food production. The Indian government is seeking to improve yields by expanding the area planted with hybrids, which could be more productive owing to heterosis, otherwise known as hybrid vigour. However, the authors conclude that by 2015, the government's target of 25 % of the area grown to rice being occupied by hybrids is unlikely to be reached, one stumbling block being the difficulty in producing high quality hybrid seed with a sufficiently attractive yield increase.

John McDermott and co-authors (*Agriculture and household nutrition security—development practice and research needs*) build on the papers and discussion of household nutrition, which took place at the second Global Conference on Agricultural Research for Development (GCARD2) last year in Punta del Este, Uruguay. The paper serves as a bridge to the subsequent four papers as, like them, it is concerned with nutrition-sensitive agriculture. Here, the authors emphasize the needs for diet diversification through the production of nutritious and biofortified foods and go on to stress the importance of enhancing the safety and quality of food. Another area of discussion is the development of extension, a frequent topic in the pages of Food Security. They conclude with four “next steps”: these are aligning agricultural interventions with health, water, sanitation and social protection; enabling development through accelerated learning; building local and national capacity to adapt and innovate; and empowering.

Detlef Virchow and Hannah Jaenicke write that, despite ongoing efforts, under-, mal- and over-nutrition remain important and increasing global problems. While there are numerous reasons for this, one key cause is a general lack of appreciation

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of nutritious food. In recent decades, the fight against hunger has focussed mainly on increasing the available quantity of food throughout the food chain. Not only was the struggle against hunger dominated by the quantitative increase of food, but productivity gains throughout the food system were mainly premised on increasing yield and nutritional quality was disregarded. This has had a significant effect on the nutritional status of poorer sections of society. Obesity and related non-communicable diseases, caused by imbalanced diets, are not only problems in developed countries, but increasingly also in low-income countries and households. This situation has long been neglected and has not been sufficiently linked to the issues surrounding lack of food quality.

The relatively new concept of nutrition-sensitive agriculture aims to narrow the gap between available and accessible food on the one hand and the quality of food needed for a healthy and balanced diet for all people on the other. The following four papers provide an overview of some of the most relevant cross-cutting themes relating to nutrition-sensitive agriculture (plant breeding, gender and urban agriculture) and show how agricultural and related food security policies and interventions can be designed and implemented in a manner that contributes to an adequate, well-balanced diet for the population.

The first paper of this section of the journal by Jaenicke and Virchow (*Entry points into a nutrition-sensitive agriculture*) takes stock of innovative approaches to improve the positive nutrition-related impacts of agriculture and associated food systems and identifies commonalities and parameters that are entry points into a system within which local nutrition-sensitive agriculture approaches will have a realistic chance of success.

Christinck and Weltzien (*Plant breeding for nutrition-sensitive agriculture: an appraisal of developments in plant breeding*) summarize developments in plant breeding relevant to nutrition-sensitive agriculture and highlight the importance of broadening breeding programs towards people and their needs and thereby especially targeting the needs of vulnerable groups. By doing so, the divide between technology-oriented and system or actor-oriented approaches can be overcome for the benefit of the malnourished.

Beuchelt and Badstue in their paper (*Gender, nutrition- and climate-smart food production: opportunities and trade-offs*) point out undesired effects from gender and human development perspectives related to promoting better technologies for

improving food and nutrition security. They pinpoint opportunities and pathways for mitigating trade-offs, including gender transformative approaches; engagement with alternative or non-traditional partners with different but complementary perspectives and strengths; “smart” combinations of technologies and approaches; and policies for inclusive development.

Gerster-Bentaya highlights in her paper (*Nutrition-sensitive urban agriculture*) the role and importance of urban agricultural production for a nutritious and diversified, and hence healthy diet, especially for the poor in urban societies and fosters the idea of nutrition sensitive urban agriculture. The sensitization and training of all stakeholders, including urban planners, have special roles to play in identifying and addressing the challenges and potentials of nutrition-sensitive agriculture in urban settings.

The first of the three book reviews is a translation from the German by Patrick O’Mealey of Hans Bielsalski’s book *Hidden Hunger*. As stated above, in recent decades, the combating of hunger has mainly been concerned with production of quantity rather than quality. As a result, some of the essentials of a balanced diet, such as vitamins and micronutrients have been neglected. Lack of these results in hidden hunger, the subject of the book.

Much of the current debate about food security revolves around the plight of the smallholder farmer. In *Europe’s Green Revolution and Others Since: The rise and fall of peasant-friendly plant breeding*, Jonathan Harwood draws attention to the existence of an extensive public-sector system for breeding and seed supply that flourished in Bavaria in the 1920s. As Shawn McGuire, the reviewer states, development experts in the last two decades have been calling for more ‘integrated seed systems’ to link farmers more effectively with research but the Bavarian system which could provide a model for such integration is hardly known.

Steve McKevitt and Tony Ryan’s book *Project Sunshine—How science can use the sun to fuel and feed the world* is a popular science book which makes the incontrovertible point that, to quote Ian Crute’s review, “energy derived directly from the sun is the safest, most certain and secure source of energy on which to base a sustainable future for the human race”. A corollary to this is the need for major investment to provide the technology for the generation and storage of electricity from solar power.