In this issue

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James Sumberg's opinion piece is a warning of the perils of applying sophisticated models to unsophisticated data concerning technology adoption. Without going into detail (the piece is short), the take home message is a plea for new investment in 'data collection that is sensitive to the non-binary, non-linear, socially-embedded processes and dynamics of technological change'.

The following 10 original papers are all concerned with various constraints to the acquisition of healthy diets, the diversity of these globally and the lack of diversity in specific regions being two reasons why food security is so hard to obtain where it is not present and often precarious where it is. In the first of these papers, Sharaunga and Mudhara investigate the impact of improved security of water-use on women's agricultural incomes in KwaZulu-Natal Province, South Africa. Contrary to expectations, greater security of water-use did not correspond with greater reliance on incomes from agriculture. Rather, incomes from this source were contingent on other capital endowments, such as social capital, access to information, agricultural production skills and land size. The authors conclude that security of water-use also requires appropriate institutional and infrastructural resources for this benefit to contribute to women's reliance on agricultural incomes.

Lack of an adequate diet is frequently a reason for poor health, particularly among children, but in efforts to remedy this, there is now increasing emphasis being placed on

nutrition-sensitive agriculture (NSA). As Peter Berti and co-authors point out, NSA is a broad concept and there are few guidelines as to what kind of intervention in any particular context is most likely to be successful. Accordingly, they developed questionnaires concerning communities, the types of projects and external factors, which enabled the identification of those interventions most likely to succeed. Three or four of these, out of a total of 19 previously tried, are now being implemented in two settings in Vietnam and one in Thailand, with poultry rearing and home gardening being realized at all three sites.

On a similar theme, Alessandro Romeo and co-authors found that farm diversification correlated with livestock ownership more strongly than crop production. Specifically, poultry rearing and pulses were effective in promoting diet diversity. The authors conclude that integration of crop and livestock production not only increased diet diversity and quality directly but also indirectly through increased income.

Legumes have the potential to be highly beneficial in terms of nutrition, food security and also soil fertility, owing to their capacity to fix nitrogen. However, as pointed out by Kurt Waldman and co-authors, despite these advantages, their adoption in sub-Saharan Africa has remained low. In order to determine the reasons for this, the authors investigated farmers' perceptions of the characteristics of groundnut, soybean pigeonpea, cowpea and common bean in Malawi. There was variation among regions with marked discrepancies in the perception of soil fertility and nutrition. Regarding integration of legumes with maize-based cropping systems, socio-economic factors, biases and marketing of legumes also played important roles. A better appreciation among the farmers of sub-Saharan Africa of the advantages of legume cultivation could do much to promote their adoption.

Maize protein is deficient in two essential amino acids, lysine and tryptophan, but the plant has been bred conventionally

This issue of Food Security begins with an opinion piece and is followed by 10 original papers and two book reviews.

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(biofortified) to contain protein in which their concentration has been increased, the product being known as quality protein maize (QPM). As usual with new genotypes, there is the question of adoption. Hugo De Groote and co-authors point out that biofortified crops may be promoted on the basis of nutritional or agronomic qualities or both and investigated the case of QPM in East Africa. They found that agronomic performance rather than an understanding of nutritional benefits was more important and concluded that for biofortified crops to be disseminated successfully they would need to perform agronomically at least as well or better than conventional crops.

Haiti is once more in the news after the disastrous earthquake of 2010, this time with hurricane Matthew in October of this year. As even before the storm, nutrient deficiencies and stunting were already major public health concerns, these are only likely to become worse. However, Elise Pauzé and co-authors point out that quality and diversity of household diets are multifaceted and include land ownership, livestock rearing and better education. Their improvement should therefore be tackled multisectorally and at multilevels.

HIV/AIDS in South Africa is another constraint to obtaining an adequate diet. Keitumetsi Ncube and co-authors point out that this comes about through reductions in availability and quality of labour, reductions in earned income and diversion of money from purchase of food to purchase of medication. These deficits are ameliorated to some extent by social safety net programmes but also by the collection of wild food, the latter being a free source of nutrition.

Wild food, owing to its large proportion of the diet consumed by aboriginal communities living in Alaska and Canada, is fundamental to their food security but, according to Shirley Shea and co-authors, they face considerable obsta-

cles in accessing it. These barriers differ according to the communities concerned but prominently include lack of time for hunting, owing to employment in alternative work, and lack of knowledge and interest of younger members of communities in wildlife harvesting, a considerable threat to cultural traditions as well as food security.

Kukom Edoh Ognakossan and co-authors assessed the post-harvest losses of maize caused in Kenya by rodents, insects and fungi. In five of the six agro-ecological zones surveyed, insects were the most important causes of loss and rodents the second. Losses were higher with shelled grain than when stored on cobs and were significantly reduced by trapping rodents and the use of insecticides. (The third ranking of fungi belies their importance as they may generate dangerous mycotoxins, such as aflatoxins and fumonisins. Ed.).

Laroche Dupraz and Huchet Bourdon discuss the Bonilla Index, defined as the ratio of expenditure on national food imports to the value of total exports, regarding trade of Developing Countries. The authors demonstrate its evolution in 39 Developing Countries during the period 2005 to 2010 and show that countries varied their nominal rate of assistance in order to compensate for price volatility e.g. during the price surge of 2008 and that variation in exchange rate had little impact on food accessibility.

Malcom Blackie found that Colin Tudge's book 'Six steps back to the land' strongly argues the case for 'enlightened agriculture' but found his economics out of date.

Stephen Waddington was impressed with Stephen Whitfield's book 'Adapting to climate uncertainty in African agriculture – narratives and knowledge' and gives a reference to a paper by the author in which the contents of the book are expressed in shorter form.