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EDITORIAL

In this issue

Richard Strange[1]

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This issue consists of a literature review, nine original papers and two book reviews. The literature review and the first paper are concerned with pearl millet (*Pennisetum glaucum*). Arvind Jukanti and associates are loud in their praise of the crop because of its favourable attributes. These include adaptability to adverse physical conditions such as saline and acid soils, drought and high temperatures but responds well to irrigation. Nutritionally, the crop is advantageous with high levels of energy, dietary fibre, proteins with a balanced amino acid profile, some vitamins, antioxidants and essential minerals.

Regarding essential minerals, Melinda Smale and associates investigated the potential for the adoption of pearl millet varieties with high iron content in one province of India, a country in which around 50 % of children are anaemic, owing to low iron consumption. They confirmed that pearl millet is more likely to be grown by poorer households in drier, drought-prone areas and suggest that, in order to increase iron consumption, popular hybrids should be targeted for iron enrichment.

Solveig Danielsen and Frank Matsito used a plant health system framework to assess the performance of plant health clinics in Uganda. The components of the system were: Plant health service delivery; Plant health workforce; Plant health information; Inputs and technologies; Financing; Policy, governance, leadership. Plant clinic performance was assessed by coverage, access and quality of plant healthcare.

Postharvest losses of crops feature strongly in the following three papers. S. Majunder and associates point out that nearly 70 % of the calories consumed in Bangladesh are provided by rice so that ensuring the availability of this source of food is critical to the food security of the country. They describe two ways of doing this – increasing the technical efficiency of production and reducing post-harvest losses. Technical efficiency was influenced by farm size, level of farmers' education, farmers' experience in production, microcredit, training and extension. Reduction of postharvest losses was significantly related to the availability of extension services.

Lack of information and knowledge, i.e. limited extension services, is also one of the constraints to Cassava production in Rwanda identified in the paper by Athanase Nduwumuremyi and associates but the main problems are physiological postharvest deterioration and late bulking. Other inhibitory factors include the lack of clean cuttings, viral diseases, drought and lack of market and effective storage techniques. It is suggested that, in order to enhance the adoption of new cultivars, breeding should target the preferences of end users.

Postharvest losses are also the subject of the paper by Milindi Sibomana and associates, but of Tomato in Sub-Saharan Africa (SSA) rather than rice or cassava. Losses occurred predominantly between field and market i.e. in the supply chains but quantifying them is a challenge owing to inadequate monitoring strategies. Nevertheless, it was estimated that most of the losses in SSA countries were around the 10 % level and occurred in the supply chains. Suggestions for mitigation of these losses such as the TSI:TA (Total Sweetness Index: Titratable Acidity) ratio at commercial packing houses, can facilitate the estimation of fruit shelf-life and this, in combination with FEFO/LSFO (first-expired-first-out/least-shelf-life-first-out) warehouse management strategies, could reduce losses in the supply chain.

Hans-Peter Weikard draws attention to the fact that Phosphorus, which, together with Nitrogen and Potassium,

✉ Richard Strange
r.strange@ucl.ac.uk

[1] University College London, London, UK

is one of the three major fertilizers required for plant growth, is a depletable resource. Thus, without recycling, it will eventually run out but how long this will take is debated. With recycling the author maintains that food production will fall but food security can be maintained. However, with greater recycling efforts, he suggests that a sustainable path of food production is feasible.

Michael Goodman and associates report on a programme of support for sibling families of orphaned or vulnerable children in rural Kenya. Important constituents of the programme were financial resources, including conditional cash transfers for education, housing, business, farming and food expenses. Household heads were encouraged to begin a business and were provided with knowledge, financial capital and often a "start-up kit" to begin or expand a business. Income generating activities included hair-styling, auto-mechanic, farming and small shop ownership. The programme ran over three years and food adequacy and diversity was determined using the World Food Programme's Food Consumption Score. Duration of programme participation, which was normally 3 years, was a significant predictor of improved food consumption, quality and security.

Florencia Palis and associates investigated the effects of introducing short duration rice varieties and direct seeding of rice to farmers in NW Bangladesh during the monsoon season in order to overcome seasonal hunger, known locally as *monga*. These technologies allowed farmers to harvest their crops three weeks earlier than those using the traditional practice of long duration varieties and transplanting, with considerable beneficial effects for those living in the area. These included increased rice production, the provision or increase of income and the creation of additional jobs for the landless or agriculture day laborers in the *monga* period.

George Rothschild, former Director General of the International Rice Research Institute in the Philippines applauds Matin Qaim's book on *Genetically modified crops and agricultural development*. To quote just two sentences from the review of the book: 'Matin Qaim argues that the "way forward" requires honesty in the debate to help build trust in evidence among the public, politicians, the media and other stakeholders, and "maintaining a moral obligation not to misinform" – especially in the developing world. An evidence-based approach will also address problems of over-regulation of GMCs (Genetically Modified Crops), specially in the EU.'

Meera Subraniam's book, *A River Runs Again - India's Natural World in Crisis, from the Barren Cliffs of Rajasthan to the Farmlands of Karnataka,* was found by Norman Clark to be "a good read". The subject, which is set in an Indian context, is the more general one of sustainable and equitable development. This, as Norman Clark states, has become an increasingly intractable problem from a public policy standpoint.