

EDITORIAL

Agricultural production is the foundation of human society. With a swelling of the world's population, food security remains a concern as at least a billion of the world's population is undernourished and an equal number malnourished. Marginalization of land by soil erosion and salinity, deterioration of natural resources like forest, falling of ground water levels due to unrestricted use of tube-well technologies and mining, population growth, urbanisation and changing diets, climate change and other related anthropogenic activities pose a great threat to agricultural production and food security the world over. No technology is foolproof. Little did the early promoters of the Green Revolution realise the side effects of using high yielding variety (HYV) seeds, chemical fertilizers and pesticides on the health of human beings, soil and the wider environment. One current debate centres on the advantages and disadvantages of the bio-technological innovation of genetically modified (GM) seeds. For example, in 2016 the Union government announced that it is trying to develop the Bt cotton biotechnology to minimise India's reliance on the foreign agro-technology giant Monsanto (Koshy, 2016a). In this same year, cotton farmers have in large numbers taken to sowing traditional varieties of cotton, having lost faith in Bt cotton's ability to protect against boll-worm (Buradikatti, 2016). Also this year, the Genetic Engineering Appraisal Committee (GEAC) of the Environment Ministry is attempting to clear GM mustard for commercial use in face of strict resistance by civil society groups (Koshy, 2016b). Bt brinjal, though banned in India, is being grown in Bangladesh and there is a high likelihood that the seed has contaminated Indian farms already. Thus the battleground is delineated and the struggle for seed biodiversity and seed sovereignty is ongoing.

Recently the Government of India recognised the agricultural neglect of Eastern India and accordingly launched the programme 'Bringing the Green Revolution to India' (BGREI). While this is a welcome step, one hopes the lessons learned from the earlier Green Revolution will be taken into account, namely that short and medium term gains should not be sought if it is likely that the costs (including the social costs) in the longer term will be disproportionately high. Even before the onset of BGREI, farmers in the uplands of Eastern

India have complained that use of chemical fertilisers has – within a decade – damaged their land and wiped out the small fish and other creatures traditionally caught in fields for domestic consumption. BGREI takes place in the context of several legislations designed to address the problem of crop production and food security. The Government of India enacted the Protection of Plant Variety and Farmers Right Act (PPV & FRA), 2001, which is designed to encourage the development and cultivation of new varieties of crops and vegetables, while ensuring sufficient safeguards for farmers and their traditional varieties. But in reality the private sector with the backing of the public sector is aggressively pushing its narrow range of hybrid seeds on farmers without concern for issues of seed sovereignty and seed biodiversity.

There remains a need for a more holistic framework that can allow the private and public sectors to work in a complementary manner for the benefit of farmers and the country at large. Here one main problem is that of profit-orientation. The private sector is driven by the motive of profit, which doesn't always fit well with issues of human and environmental well-being or indeed the best interests of the nation. It has been tempting for government agricultural scientists to support the expansion of the private sector; for in the short term, the raising of yields helps the Ministry of Agriculture achieve its goals to increase production. The job of working to defend the rights of farmers and to protect the environment has been left to civil society. The challenges are huge and include the task of working with farmers to preserve in situ their original seed varieties while improving the techniques of production that increase yields without reliance on unsustainable, climate/environment polluting chemical inputs. Thus holistic agriculture for enhancing agro-ecosystem health by utilising both traditional as well as modern scientific knowledge is the need of the hour.

To take the debate on Eastern India's agriculture forward, in this special issue of JJDMS we asked contributors to address research questions such as: 1) How can a new 'Green Revolution' based on privately produced seed biotechnologies and chemical inputs coincide with the development of organic agriculture in eastern India? 2) How does promotion of seed biotechnologies, like F_1 hybrids and HYVs, that require chemical fertiliser/pesticide fit

into climate change and sustainability strategies? 3) Where and under what conditions are new seed biotechnologies like F_1 hybrids relevant and desirable? 4) Is there a role for transgenics such as Bt brinjal and GM mustard in the future of Eastern India's agriculture? 5) How important are questions of farmers' control and ownership over seed? 6) Can the seed of traditional varieties (landraces) be protected and preserved, even while increasing seed replacement rates to improve yields? 7) Have public sector and industry scientists placed too much emphasis on yield to the neglect of other characteristics of seed/plants like straw, taste, storability, and nutritional content?

We received many articles and after a thorough review process, have selected just six for publication in this thematic issue. This issue begins with a short introduction by Sharat Singh, Programme Director at Society for Promotion of Wastelands Development (SPWD), Ranchi and Dr. Joe K.W. Hill, Associate Editor of JJDMS, who present an overview of the thematic issue and its contributions. SPWD and XISS have a longstanding relationship as students of XISS's Rural Management department are placed as summer interns with SPWD to undertake their dissertation projects. What's more, some of our graduates have joined SPWD as full time staff, such as Sanjay Kumar and Sanjay Kumar Singh whose article in this issue brings attention to the neglected secondary characteristics of rice plants. We're also proud of the relationship between XISS and Birsa Agricultural University, Jharkhand's State Agricultural University. This issue contains two contributions from BAU scientists that give good insights into how the Government of India is addressing the challenges facing agriculture. This issue also contains two book reviews by Nidhi Shukla (on women, social security and protection in India) and Ganesh S. Narkulwad (on corporate social responsibility projects of Tata Steel).

Our journal JJDMS is currently working to improve the quality of its content, to which end we've held a series of meetings, made changes to the Editorial Board, and are developing a set of policies to guide our endeavour. As of August 2016, the journal's Editor-in-Chief, Dr. (Fr.) Alexius Ekka and Editor, Dr. Sudeep Kumar are joined by Associate Editors Dr. Shyamal Gomes and Dr. Joe Hill, from the departments of Human Resources Management and Rural Management respectively. The Editorial and Advisory Boards have

been re-constituted, more information about which can be found on the JJDMS website of XISS. One policy change that is being shaped as we write relates to practices of research ethics, ranging from informed consent being sought from informants during empirical research to taking care not to plagiarise or fabricate results. Another point is that we are shifting away from publishing our journal in print media to making the research online and open access; and thus readily available to policy makers, officials, academics and students. A third point is that our quarterly journal will in the future have general issues as well as thematic issues, which should help encourage a more diverse range of scholars to publish with us.

We hope you'll enjoy this issue and invite you to publish in JJDMS in the near future. We welcome articles on a host of development and management themes as well as reviews of books – preferably of reputable publishing houses. Please contact us if you wish to publish your original scholarly work.

August, 2016

**Fr. Alex Ekka, S.J.
Sudeep Kumar**

References

- Buradikatti, K. (2016, May 23). Farmers drop cotton cultivation. *The Hindu*. Retrieved from <http://www.thehindu.com/news/national/karnataka/farmers-drop-cotton-cultivation/article8634420.ece>
- Koshy, J. (2016a, June 8). Centre plans alternative to Bt cotton. *The Hindu*. Retrieved from <http://www.thehindu.com/news/national/centre-plans-alternative-to-bt-cotton/article8701803.ece>
- Koshy, J. (2016b, August 26). GM mustard moves closer to approval. *The Hindu*. Retrieved from <http://www.thehindu.com/news/national/gm-mustard-moves-closer-to-approval/article9032700.ece>