Farmer-centric public-private partnership – key to boosting agriculture

Agriculture agenda spelt out for Andhra Pradesh, India

At a consultation workshop on Primary Sector development through public-private partnership, Mr N Chandrababu Naidu, Chief Minister, Andhra Pradesh, India, sought ICRISAT’s help to coordinate soil sampling procedures, analysis and preparation of soil health cards.

He stressed on the need for soil health assessment and drought proofing the state for improving crop productivity and increasing farm incomes.

He also requested the private sector to come up with detailed proposals for establishing soil analytical laboratories and developing different value chains for products.

More than 100 participants, mostly from the corporate sector attended the workshop.

Mr Naidu emphasized the need for integrated and holistic solutions for a given product/value chain. He suggested bringing in the best national and international subject experts, to benefit the farmers in Andhra Pradesh and to achieve the goal of ‘Swarnandhra’ (Golden Andhra). Mr Naidu’s vision is to make Andhra Pradesh one of the top three performing states in India by 2022.

He emphasized the need for enhancing water use efficiency through effective delivery and drip/sprinkler systems and also suggested that a model be worked...
out for portable drip/sprinkler systems for drought proofing Rayalaseema region. Mechanization of farming was also highlighted by Mr Naidu.

He stressed that the seed sector for all the crops needs to be strengthened and Andhra Pradesh should become the hub of seed production.

Dr David Bergvinson, Director General, ICRISAT, presented the role of digital technologies in agriculture and how digital technology can be harnessed by adopting a value chain approach for linking farmers to the market as well as for value addition.

Dr Suhas P Wani, Director, ICRISAT Development Center (IDC) introduced the strategy paper to meet the goal of the Primary Sector Mission to transform agriculture in the state to make it one of the top three performing states in India based on economic value as well as the happiness index. He highlighted the importance of farmer-centric public-private partnerships which can be a win-win for all partners including the farmers.

The workshop was inaugurated by Mr IYR Krishna Rao, Chief Secretary, Andhra Pradesh, who stressed on the importance of Primary Sector Mission for harnessing the potential of available natural resources like water, land as well as human resources.

Mr SP Tucker, Special Chief Secretary and Mission Director, Agriculture Production Commission highlighted that ICRISAT is leading the consortium for the Primary Sector and many more partners are expected to join. He sought new ideas and said that technologies and models which have already made an impact can be implemented in the pilot of 10,000 ha in each district.

He also indicated that available state budgets for the Primary Sector will be reallocated and that skill development and human resource development will be taken up in a fast-track mode to meet the emerging needs in specific sectors like animal husbandry, fisheries, poultry, etc.

The workshop was jointly organized by the Primary Sector Mission Directorate, Government of Andhra Pradesh and ICRISAT. The IDC team led by Dr Wani facilitated and conducted the workshop.

The workshop was attended by participants representing food processing industries, seeds, fertilizers and drip input supply companies, banking institutions, non-governmental organizations, state agricultural universities, Indian Council of Agricultural Research institutes, and line departments of Government of Andhra Pradesh.

Priorities for Andhra Pradesh
- Water management
- Soil testing
- Drought proofing
- Mechanization of farming
- Strengthening the seed sector
- Fisheries
- Horticulture

Photos: PS Rao, ICRISAT
Need to utilize new tools in Phase II
Morocco-India Food Legumes Initiative review meeting

The need for utilizing new tools to address drought management, herbicide tolerance, marker assisted selection (MAS) to assist overall crop improvement, inclusion of groundnut and initiating a research student exchange program were some of the plans discussed for Phase II of the project under the Morocco-India Food Legumes Initiative (MIFLI).

The need to enhance south-south collaboration among Moroccan institutes and ICRISAT-Africa was emphasized by Dr Rajeev Varshney, Research Program Director Grain Legumes and Director, Centre of Excellence in Genomics (CEG), ICRISAT. He was addressing the Moroccan delegation that visited ICRISAT-India for the project review.

Dr SA Patil, Advisor, OCP Foundation, identified the most important outputs of the project as:

- Establishment of rural seed enterprise (seed systems) to supply farmers with farmer-preferred variety seed at reasonable prices, and
- Improved agronomic practice – dibbling method of sowing – to enhance productivity.

Other points raised by Mr Roudies Sidi Nawfel, Director and Mr Rouini Imadeddine, Project Manager, Agricultural Development Program, OCP Foundation:

- Increasing the capacity of project farmers in hybrid seed production to meet seed demand.
- Mechanization of crop production activities to mitigate drudgery, particularly for women farmers handling these crops from sowing to harvesting.
- ICRISAT’s progress in developing hybrid cultivars to increase pigeonpea productivity were appreciated.

A detailed presentation on seed systems and dibbling method of sowing was given by Dr Ch Ravinder Reddy, Senior Scientist - Technology Exchange, ICRISAT while Dr GV Ranga Rao, Special Project Scientist – Integrated Pest Management, ICRISAT, presented the overall progress and achievements of the project since its inception in 2013.

Research student exchange program

The visiting delegation proposed the inclusion of a research student exchange program to enhance the country’s capacities in biotechnology for crop improvement, in Phase II of the project.

The proposed exchange program will consider student researchers pursuing both degree courses as well as vocational and technical training in Morocco to pursue their research in ICRISAT and other Indian universities.

In April 2015, at a legume monitoring workshop to be held in Morocco, Indian researchers will identify avenues for strengthening legume research collaborations between India and Morocco.

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The delegation were given a tour of the Center of Excellence in Genomics at ICRISAT. During the field visit, they were shown the pigeonpea hybridization program by Dr CV Sameer Kumar, Senior Scientist - Pigeonpea Breeding; and the chickpea MAS for different traits and the facilities of wilt sick nurseries were demonstrated by Dr PM Gaur, Assistant Research Program Director, Grain Legumes.

Apart from OCP Foundation officials, the delegation included heads of Moroccan agriculture institutes – Dr Dahan Rachid, Secretary-General, National Institute of Agricultural Research of Morocco; Dr Ouaattar Said, Director, Hassan II Agronomy & Veterinary Institute; and Dr Amiri Said, Academic Director, National School of Agriculture, Meknes.

The delegation visited ICRISAT-India on 6 February.

Project: Increasing food legumes production by small farmers to strengthen food and nutrition security through adoption of improved technologies and governance within South-South Cooperation

Principal partners: Acharya NG Ranga Agricultural University, Andhra Pradesh; University of Agricultural Sciences, Karnataka; ICRISAT.

Collaborative partners: Department of Agriculture, of Andhra Pradesh and Karnataka governments, local Krishi Vignana Kendras, non-governmental organizations and self-help groups.

Investor: Office Chérifien des Phosphates (OCP) Foundation, Morocco.

This work was undertaken as part of the CGIAR Research Program on Grain Legumes.

Conference at University of Hyderabad

“Agriculture’s share in the national economy is declining and the adverse impacts of climate change will be felt more in agriculture. Thus, climate change issues need to be addressed well while planning and implementing agricultural sector R&D,” said Dr David Bergvinson, Director General, ICRISAT. He also stressed on demand-driven agricultural innovation for poverty alleviation and climate change adaptation and engaging women and youth in Inclusive Market-Oriented Development.

Dr Bergvinson was addressing the International Conference on Inspiring Innovation and Social Entrepreneurship for Poverty Eradication and Climate Change Mitigation at University of Hyderabad on 6 February.
Women take the lead in learning about watershed development

A group of 30 master trainers comprising 26 women from the Self Employed Women’s Association (SEWA) acquainted themselves with emerging concepts of integrated watershed management and the importance of intensification for achieving impact at the ground level. Sharing of experiences with regard to microenterprise activities for women dominated the proceedings as SEWA is working for upliftment of women through income generating activities.

The objectives of the training program organized by ICRISAT Development Center (IDC) were:

- To enhance the awareness on integrated watershed management approach for improved rural livelihood in dryland areas.
- To familiarize concepts of integrated natural resources management, good practices, innovative and improved technologies for sustainable intensification.
- To discuss in detail the process and impact pathways of new integrated watershed management approach.

At the inaugural session, Dr David Bergvinson, Director General, ICRISAT expressed his keenness over the participation of a large number of women.

He emphasized the importance of collective action and digital technologies which are critical for improving rural livelihoods.

The training program covered, among others, topics on concept and approaches of integrated watershed management and sustainable intensification, research for development, convergence, collective action, consortium, best practices in the areas of natural resource management, integrated pest management, cropping systems approach, productivity enhancement and climate resilient agriculture and agro advisories, scaling out and scaling up approaches; remote sensing, and geographic information system.
Women take the lead... from page 5

Dr Peter Carberry, Deputy Director General-Research, ICRISAT, underlined ICRISAT’s work on farmer-centric technology adoption through watershed management approach. He also emphasized on Inclusive Market-Oriented Development approach to link farmers to markets to enhance their income and livelihoods, and the critical role women play in this.

Dr Suhas P Wani, Director, IDC, highlighted the need to integrate value chain approach in the context of watershed management by involving women. He spoke about the importance of community-based integrated watershed management approach for unlocking the potential of rainfed agriculture. He stressed on the need for partnerships to bring knowledge into action for benefiting millions of smallholder farmers.

The participants from Gujarat, Rajasthan, Madhya Pradesh and Uttar Pradesh states of India also visited the Adarsha watershed in Kothapally and interacted with farmers.

“...and with the help of SEWA, there was a huge resistance from other traditional milk traders. But we have not given up. At present, we have 40 milk collection centers under SEWA. Each center collects 500-1,000 liters every day. We also manage accounts, milk fat measurement and create awareness among other milk producers.”

Bharati Rathod
SEWA

“...there were lot of women who were not able to go out for work due to social obligations and responsibilities, SEWA has given number of opportunities for them to work on activities such as craft and embroidery. Daily earning was assured by linking with market.”

Asha Parmar
SEWA

Genomics conference

ICRISAT’s Center of Excellence in Genomics is holding its 5th International Conference on Next Generation Genomics and Integrated Breeding for Crop Improvement (NGGIBCI-2015).

Venue: ICRISAT-India.
Dates: 18-20 February 2015
For more details visit: http://ceg.icrisat.org/v-nggibci/home.htm

Congratulations

Dr Suhas P Wani, Director, ICRISAT Development Center, was awarded the Krishi Sanman Award for his contributions to Indian agriculture. The award was presented at a function in Pune, India, by Mr Prakash Javadekar, Minister of Environment, Forest and Climate Change, Government of India, and Mr E Khadse, Minister of Agriculture, Government of Maharashtra. The award has been instituted by television channel ABP Majha which has a focus on agriculture related news.

Dr Wani receiving the award.
Preparing for India’s next green revolution

Genetic modification technology, hybrid seeds, innovations in family farming, nutritionally enhanced crops that included millets, restoring soil health and large-scale mechanization on small farms were identified as the key components for India’s ‘Next Green Revolution’.

The key components were enumerated by Dr Sanjay Rajaram, winner of the World Food Prize 2014, while addressing scientists at the 12th Agricultural Sciences Congress titled “Sustainable Livelihood Security for Smallholder Farmers”.

Dr S Ayyappan, Director General, Indian Council of Agricultural Research, pointed out that in India more than 90% of the farmers cultivate on less than 2 ha land holdings and contribute to nearly 70% of India’s food. He said that Science, Sense and Skills were the need of the day to deliver scientific outputs that ensure “smart farming for small farmers”.

Dr David Bergvinson, Director General, ICRISAT, reminded the audience of Prime Minister of India, Mr Narendra Modi’s slogan of “Lab-to-Land”. He emphasized the need for research that is grounded in the needs and realities of smallholder farmers and called for demand-driven innovation to ensure research outputs enjoy higher rates of adoption.

Dr Jurgen Voegele, Senior Director of the World Bank’s Agriculture Global Practice, World Bank, spoke about Climate Smart Agriculture that delivered a triple win to increase agriculture productivity, adaptation to climate change and mitigation by reducing greenhouse gases from agriculture.

Dr Jimmy Smith, Director General, International Livestock Research Institute, emphasized the power of science to address the looming challenges of food and nutrition security, while Dr Kevin Gallagher, FAO Representative for India, emphasized the role of partnerships to ensure food security.

The bi-annual meeting held on 3 February at Karnal, brought together nearly 1,500 scientists of the Indian Council of Agricultural Research to review research advances by ICAR institutions during the past two years.

2015 SEED Awards for innovative start-up enterprises

SEED, a global partnership on sustainable development and the green economy, has launched its 2015 awards for innovative start-up enterprises that aim to generate environmental, social and economic benefits at the local level.

SEED will make available up to 29 SEED Awards to enterprises in Ethiopia, Kenya, Malawi, Morocco, Mozambique, Namibia, Tanzania, Uganda and South Africa. Two SEED Awards are available to enterprises that are run or owned by women and prioritize women’s empowerment; one of these is for an enterprise in any country that is not an OECD or EU member, the other to an enterprise in Kenya.

Last date for application: 31 March 2015, For more information visit www.seed.uno.
Readers’ comments

I think the future of sorghum in East Africa is very bright. In the past, for example in many parts of Tanzania, sorghum was one of the most important cereals for making local brew. However, in view of drought in many areas of the country these days, the Government has been encouraging farmers to grow sorghum for food in such areas instead of maize, the most preferred staple. Therefore sorghum, especially the white variety, provides a very good opportunity for this.

Timothy N Kirway, Acting Director of Research and Development, Ministry of Agriculture, Food Security and Cooperatives, Tanzania.

True, our research is targeted to the “smallholder farmers”; through, technological innovations we may be able to increase productivity many folds per unit area and time, but beyond certain limit we will have to look for other alternatives if the farmer has to sustain his entire family’s livelihood on agriculture.

Extract from comments sent by Mr DS Bisht, ICRISAT Alumnus.

While appreciating Kenya farmers for adopting Sorghum for nutritional security and profitability, my appeal to the administrators of Agricultural sector in India to popularize Sorghum crop among farmers which is not only assures nutritious food for people as well as cattle, but also saves irrigation water in many fold. This sorghum crop is mainstay for changing climate in semiarid tropics in India.

Dr P Gurumurthy, Sr Scientist and Coordinator DAATT Centre, Vizianagaram, Andhra Pradesh.

New projects


Principal Investigator: SP Wani

Investor: Aquagri Processing Pvt. Ltd.

Aims:

1. To assess the effect of “Aquasap” formulations (concentrate and powder form) for enhancing crop yields through on-farm participatory evaluations;

2. To assess techno-economic feasibility of scaling-up use of “Aquasap” formulations for enhancing water and nutrient use efficiencies in ESA farmers’ fields; and

3. To document the impact of “Aquasap” formulations on crop yields, nutrient and water-use.

Project title: Re-sequencing Canadian Chickpea

Principal Investigator: R Varshney

Investor: University of Saskatchewan, Saskatoon

Aims:

1. Re-sequencing of elite Canadian chickpea varieties

2. Identification of structural variables in elite Canadian chickpea varieties

3. Understanding genetic relationships of Canadian chickpea varieties with Indian and Australian varieties.