Report on the Consultation with District Officials of Andhra Pradesh on Farming System for Nutrition: A Pathway for Addressing Malnutrition in India

A one day consultation was held at the Extension Training Centre (ETC), Sri Kalahasti for district officials representing the departments of agriculture, animal husbandry, horticulture and fisheries on the 7th September 2017. The consultation had representations from 13 districts with a total of 29 participants, including 8 faculty members from ETC. The consultation was organized by the MSSRF in collaboration with NIRD&PR, Hyderabad and ETC, Sri Kalahasti. The consultation was inaugurated by Dr. Radhika Cherukuri, Associate Professor, NIRD & PR in the presence of Ms. Prasanthi, Acting Principal, ETC. This is a report on the major points that emerged from this consultation.

The objectives of the consultation were three-fold:

- To disseminate the concept of Farming System for Nutrition
- To discuss the need and scope for nutrition sensitive agriculture in Andhra Pradesh
- To collect district level information with respect to:
  - on-going practices in nutrition sensitive agriculture
  - constraints in practicing/promoting nutrition sensitive agriculture
  - Support system for practicing nutrition sensitive agriculture: (a) Existing schemes (b) Required support/schemes

With the above objectives, the Consultations were structured to incorporate a combination of power point presentations by the MSSRF team and group discussions among participants. The consultation began with a presentation on the concept of Farming System for Nutrition (FSN) and this was followed by a detailed presentation on the need and scope for agriculture-nutrition linkages in Andhra Pradesh. The participants actively participated in the discussions following the presentations. It was extremely gratifying to note that the participants were very positive in their attitude and was vociferous in their suggestion that as district officials they had enormous opportunities under ATMA to incorporate the principle of nutrition sensitive agriculture in various ways.

In the afternoon sessions, the participants were divided into three groups. One group examined crop related issues in Andhra Pradesh while the second group focused on animal husbandry and fisheries and the third on horticulture. However, in all three groups the focus of discussions revolved around district specific issues pertaining to: 1) on-going practices on nutrition sensitive agriculture; 2) constraints to practice nutrition sensitive agriculture; 3) existing government schemes that support nutrition sensitive agriculture; and 4) support structure required to promote nutrition sensitive agriculture. All the three groups listed out the ongoing government schemes that promote nutrition sensitive agriculture and NGOs working in these areas.

A summary of discussions in the three groups are presented below:

Group 1: Crop Husbandry: Nutrition Sensitive Practices, Constraints and support:

The group listed out the major schemes that incorporate nutrition sensitivity. These are:

1. National Food Security Mission (NFSM) for increasing production and productivity of Paddy and Pulses [Promotion of pigeon pea cultivation in bunds through distribution of seeds (ICPH 2740) to all districts]; In 2017, the Dept. of Agriculture distributed seeds of CRR Dhan 45 paddy variety to Vizhagapatinam; Promotion of crop diversification from paddy to pulses under irrigated dry conditions; Intercropping with pulses in cotton and groundnut growing areas.

2. Comprehensive revival of millets, since 2007.

3. Area expansion and production of oilseeds under National Mission on Oilseeds & Oilpalm Production (NMOOP).

The group identified the following constraints for practicing nutrition sensitive agriculture in Andhra Pradesh. First, tenancy is wide spread across Andhra Pradesh and tenant farmers have a tendency to cultivate cash crops rather than food crops; Second, there is limited knowledge among farmers on nutrition sensitive interventions that can be adopted and agricultural extension services to fill this gap is essential; Third, lack of availability of suitable seeds for nutri rich food grains remains an issue; Fourth, marketing facilities and remunerative prices for food grains remain an issue; and finally, though the government has many schemes to promote food grains the emphasis continue to be on the quantity of production and the nutrient quality of produce is yet to become a major concern.

This group emphasized the importance of research and the need to promote biofortified crops in order to bring in a nutrition orientation to agriculture in Andhra Pradesh. The other recommendations on the support required to practice nutrition sensitive agriculture are:

- Policy on pricing and marketing of bio-fortified/food crops;
- Policy on Rytu-Bandhu (storage) scheme
- Promotion of nutrition literacy for farmers/villagers, particularly to women and children; further, sensitisation on kitchen garden, backyard poultry and diary would be important
- Promotion of post harvest technology for value addition;
- Strengthen and expand coverage of Prime Minister Fasal Bima Yojana (PMFBY) for crop insurance
- Soil nutrient management

Group 2: Animal Husbandry including Fisheries:

Group 2 started the presentation by emphasizing the important position held by Andhra Pradesh in milk production (ranks 5th place in all India); sheep and goat meat production (4th position); egg production (2nd place); and fish production (2nd place). The group noted that limitations in availability of fodder remain a major constraint for increasing milk production in the state. However, there is a government scheme which is operational only in Anantapur district to increase production of grass fodder and silage and supply of complex feeds to all farmers at Rs.8 bag/month. Another important constraint is lack of professional practices in livestock rearing.

Schemes that are operational across Andhra Pradesh and have contributed towards increase in livestock production are the following:

- Fodder seed supply scheme (OPGK);
- Vaccination and dewormimg for all animals;
- Insurance for cattle and sheep
- Supply of nets, boats and iceboxes for fisherman and also vehicles for fish marketing at subsides rates;

The group felt it is necessary to focus on the following to promote livestock production:

- By expanding the *Kutumba Seva* scheme that distributes two milch animals per family; 20+1 sheep scheme for each family; 20+2 birds for backyard poultry per family;
- Provision of drip irrigation for fodder plots in 100 % subsidy;
- Provision of 2000 species of fishes in one acre pond combined with supply of appropriate feed (rice bran and groundnut cake)
- Promotion of prawn culture in fresh water and brackish water.
- Promotion of aquaculture ponds especially in coastal areas
- Promotion of azolla cultivation in paddy fields to serve as animal feed

Group 3: Horticulture

The group members identified the following practices that are prevalent as nutrition sensitive:

1. Cultivation of orange flesh sweet potato in 3 districts in north coastal regions of AP.
2. Adoption of cropping system that incorporates cultivation of banana, turmeric, vegetables, sweet potato, orange flesh sweet potato and guava.
3. Adoption of cropping pattern that includes papaya, elephant foot yam and moringa;
4. Adoption of mixed farming – Paddy + Fish + Poultry + Horticulture+ Leafy vegetables (in East and west Godavari districts).
5. Home based mushroom cultivation (promoted by ANGARAU).
6. Backyard nutritional gardens/Seed banks and polycropping of amla + custard apple + coconut seedlings by tribal farmers and also across all government institutions and hostels.
7. Farmers cultivate border crops in few villages close to Odisha border. This practice is possible in north-coastal districts also

The group members had a discussion on the ongoing schemes, implemented by the Department of Horticulture, and arrived at the following as the most important:

- Mission of Integrated Development of Horticulture (MIDH) that promotes integrated crop management in banana and coconut cultivation;

- RKVY- that provides for distribution of hybrid seeds of vegetables, kitchen garden mini kits, post harvest tools ;
- Scheme that provides subsidy for purchase of vehicles to transport harvested produce;
- National Mission on Oilseeds & Oilpalm (NMOOP) that promotes cultivation of vanilla along with coconut and palm.
- On Farm Water Management (OFWM)- that provides sprinkler and drip irrigation in every district at subsidized rates CDB (Coconut Development Board) under horticulture
- State Plan Scheme for nutri gardens for SC/ST;
- Promotion of mango and cashews in MGNREGS

The group members were of the opinion that strengthening Rythu Bazaar/Global e-marketing/food festivals/Melas will help in promoting horticultural crops. Further, facilitation for processing as also storage is absolutely necessary for various crops and across the state.

Follow up Action for MSSRF team

- To collect details on important government initiatives:
  - the SERP model;
  - distribution of biofortified paddy seeds (CRR Dhan) to three districts
  - distribution of pigeon pea seeds (ICPH 2742);
  - fodder scheme in Anantapur
  - Pilot scheme of legume production in Chittur district
- Compilation of details of the existing models of Integrated Farming Systems (promoted by the Indian Institute of Farming Systems Research) for Andhra Pradesh;
- To collect details on development of biofortified crops suitable for Andhra Pradesh
- To visit NGOs working in the area of agriculture-nutrition linkages and develop case studies-Jattu Foundation; KOVEL Foundation; Rural Development Trust (RDT), Ananthapur.

Participant list of AP workshop held on 7th September 2017 at ECT, Srikalahasti

Sl. No:	Name of the Participant	Designation	District
1.	B.G.V. Prasad	Dy. Project Director ATMA	Vizianagaram
2.	G.M. Srilatha	Dy. Project Director ATMA	Prakasam
3.	K.P.B.S. Madhavi Latha Devi	Dy. Project Director ATMA	Nellore
4.	B.V.S. Hari	Dy. Project Director ATMA	West Godavary
5.	A. Sarada	Dy. Project Director ATMA	Guntur
6.	Y. Anuradha	Dy. Project Director ATMA	Krishna
7.	P. Padmalatha	Dy. Project Director ATMA	Nellore
8.	Dr. K.Bharatha Ramesh	Dy. Project Director ATMA	Visakhapatnam
9.	C.N. Sreenivasulu	Dy. Project Director ATMA	Kurnool
10.	P.V.N. Nagachary	Dy. Project Director ATMA	East Godavary
11.	B. Mohan Rao	Dy. Project Director ATMA	Chittoor
12.	I. Murali	Dy. Project Director ATMA	Kadapa
13.	Dr. Gautam	Veterinary Assistant Surgeon	Visakhapatnam
14.	Dr. V. Sreesha	Veterinary Assistant Surgeon	Visakhapatnam
15.	Dr. G. Chandra Mohan	Veterinary Assistant Surgeon	Kurnool
16.	Dr. Y. Ramesh Reddy	Assistant Director of Horticulture	Anantapur
17.	Dr. P. Girija	Assistant Director (Animal Husbandry)	Anantapur
18.	Dr. T. Rama Krishna Prasad Rao	Assistant Director (Animal Husbandry)	Guntur
19.	K. Sridhar	Deputy Director of Agriculture	Srikakulam
20.	N. Chandra Sekhar Reddy	Fisheries Development Officer	Chittoor
21.	J. Venkataraman	Fisheries Development Officer	Chittoor
22.	A. Gopala Rao	Faculty, ETC, Samalkot	East Godavari
23.	T.L.N. Kumar Raja	Faculty, ETC, Samalkot	East Godavari
24.	M. Krishnaiah	Retd., ETC	Chittoor
25.	Y. Samantha	Sr. Faculty, ETC	Chittoor
26.	M. Rupa Rani	Sr. Faculty, ETC	Chittoor
27.	S. Padma Rani	Sr. Faculty, ETC	Chittoor
28.	B. Adisesha Reddy	Sr. Faculty, ETC	Chittoor
29.	A. Prasanthi	Sr. Faculty, ETC	Chittoor

Andhra Pradesh Workshop Photographs

7th September 2017