

**Proceedings of the Brainstorming meeting on Pulses Production held on  
12<sup>th</sup> September, 2012 at NASC Complex, Pusa, New Delhi under the  
Chairmanship of Hon'ble Union Agriculture Minister**

**Background**

1. A brainstorming meeting on pulses production was held on 12<sup>th</sup> September, 2012 at 10.30 AM under the Chairmanship of Hon'ble Union Agriculture Minister in Committee Room No. 1 of NASC Complex, Pusa, New Delhi. List of participants is appended.
2. Two publications entitled "Innovative Approach in Sustainable Production of Pigeon pea and Chickpea- a success story of Gulbarga" and "Chana: Utpadan evam Prabandhan Technique" brought out by NCIPM, ICAR were released by Hon'ble AM.
3. Hon'ble AM in his opening remarks said that the meeting was being convened at an appropriate time before the ensuing Rabi season. Shortfall of area coverage under moong (green gram) and arhar (red gram) in Maharashtra, Karnataka, Gujarat and Rajasthan due to prolonged dry spell during Kharif – 2012 was required to be made up with higher production in Rabi season. Demand for pulses had been steadily growing and high price rise as a result of supply shortfall was a major concern, as was witnessed after the drought of 2009. New initiatives of Government of India in incentivizing adoption of technologies were paying rich dividends with a sharp rise in production in the past two years. He exhorted the participants representing diverse domains to share their views and suggestions for improving the production and productivity of pulses.
4. Joint Secretary (Crops) made a presentation on the key recommendations of the Pulses Expert Group set up by Government of India under the chairmanship of Prof. Y.K. Alagh. The presentation gave an overview of the suggested measures in research, development and policy domains. In the long term, the expert group felt that research should be intensified with definite timeframes and adequate resources to deliver products that addressed the main concerns relating to farming of pulses. The group also emphasized the facilitative and promotional role of policies particularly relating to pricing and marketing that could galvanize more investments in pulses development with private sector participation.

**Research**

5. On the research agenda, Director IIPR made a presentation covering a wide range of projects currently being undertaken including development of appropriate plant ideotypes for commercial cultivation of pulses.
6. The observations made by the participants on the topic are summarized as under:-
  - a. Hon'ble AM desired to know the scope for pulse production in the States of Haryana, Punjab and Western Uttar Pradesh. Director,

IIPR informed that summer moong after the wheat harvest was getting popular with farmers with very good income return. He said that farmers were getting a net income return of 1000 rupees per day for the 60 day crop. The crop was also enriching soil fertility and fitted very well in the rice wheat cropping system.

- b. Dr. K.B. Saxena, Breeder (Pigeon pea), ICRISAT informed that two new plant types of Pigeon pea with early maturity of 90 days had been demonstrated in Uttarakhand and were giving an average yield of 1000 Kg/ha for the last 3 years. Besides, another hybrid with huge biomass relevant to dryland farming had been successfully developed and demonstrated in Maharashtra with an average yield of 3 ton per ha using drip irrigation. ICRISAT was taking up seed production of these hybrids with their national partners. It was informed by Dr. Gaur from ICRISAT that a little taller and erect type of chickpea was also developed to facilitate mechanical harvesting.
- c. Dr. Ashutosh Sarkar, ICARDA informed that early lentil varieties with less than 90 days duration were required for summer/boro rice system of Eastern India comprising Eastern Bihar, West Bengal and Assam where rice was harvested in early November and lentil could be grown as relay crop. Power drawn farm implements like tillers, seed drills/multi crop planters were needed for small farmers of this region.
- d. Director CRIDA informed that unseasonal rain at the time of harvest and non availability of labor for picking operations was a major area of concern. He advocated mechanization to address these concerns. Additionally, he suggested that an intensive program for constructing farm ponds should be taken up in the 100 major pulses growing districts of the country. He also suggested development of sturdy plant types that could withstand mechanization stress. He said that crop geometry should be suitably revised to provide for tractor tyre paths for promoting intercrops and for using boom sprayers.
- e. Dr. Masood Ali, former Director, IIPR informed that moong bean cultivation had immense scope in Punjab, Haryana and Western UP where farmers were harvesting a yield of 17 quintal per ha. He said that special attention should be paid for obtaining reports of area under summer moong as the revenue department was not entering this information in the khasra records. He felt that information on moong and urad intercropped with sugarcane was also not being reported in UP. He also suggested for lifting of ban imposed on lathyrus and said that lentils could be promoted extensively in the rice fallows of Eastern India.
- f. DDG (CS) informed that a collection of 18,000 accession lines of chick pea from ICARDA and other places was available in the country, which could be utilized for development of suitable plant

types to meet various requirements like inter-cropping and mechanical harvesting, etc. As regards the lifting of imposed ban on lathyrus, it was stated that genotypes with zero to acceptable level of BOAA was available and lathyrus was the most drought tolerant crop which could grow in very hostile conditions. He hoped that ICMR would complete their tests to clear the doubts about the adverse effect of lathyrus on human and animal health. He also emphasized research on genome-wise associated mapping for boosting the production and productivity of pulses.

- g. Ms. Usha Barwale informed that a molecular marker was available for improving the plant stem strength of chick pea crop. This marker could be used in breeding programs for fast tracking development of new plant types. She also felt that review should be undertaken on the adoption rate of new varieties to find out the reasons for their rejection by farmers.

### Development

7. Director of Agriculture, Government of Karnataka made a presentation on “Innovations in pulses promotion to farmers” covering overall scenario, major pulse crops grown in Karnataka, major constraints, soil health management, technological innovations including promotion of transplantation of redgram, application of drip irrigation and other innovative approaches like ***Bhoochethana and Ryuthu Sampark Kendras*** backed by provisioning of quality inputs in the ***Ryuthu Sampark Kendras*** established at Hobli level. He also emphasized post-harvest technologies and market linkages which could benefit the farmers in a big way.
8. The observations made by the participants are summarized as under:
  - a. Hon’ble AM desired to know the reasons for non-adoption of new varieties by the farmers. It was informed by Director Agriculture that new varieties were being promoted under seed minikits and demonstration programs. However, it was ultimately the farmers’ preference for the varieties and efforts were being made to at least achieve desired level of seed replacement rate as per farmers’ preference for adoption of quality seeds of pulses.
  - b. AS&FA remarked that the productivity levels of pulses in Karnataka were far below the national average and were lower than even those of the adjoining States of Andhra Pradesh, Tamil Nadu and Maharashtra. ADG Seeds, ICAR stated that Karnataka State, unlike other States was unnecessarily conducting another round of testing of new varieties recommended for release in the State based on the data of the State Research Centres. This additional process delayed the availability of seeds to farmers.
  - c. Mr. K.N. Rao, GM, Agricultural Insurance Company informed that to encourage pulses farmers to opt for crop insurance, a new product of ‘Loyalty discount’ was introduced on pilot basis at a few

locations in Karnataka. This product offered attractive discounts in premium to farmers for subsequent years.

## **Policies**

9. Director, NCAP made a presentation on “Policy Initiatives – Possible Options to Drive Value Chain” covering scope of value chain, low-price realization, growing irrelevance of MSP, market efficiency at farm and retail level and future demand of pulses. He highlighted the need for critical review of MSP and FHP (Farm Harvest Price) and for providing assured marketing support. He stated that though pulses offered highest margin to the farmers but still the net return to them was low due to low productivity and volume of turnover. Secondly that there was little increase in farm harvest price as compared to steep hike in wholesale and retail price of pulses. He therefore argued that value chain development was very strong marketing imperative to link markets to farmers.
10. The observations made by the participants on the presentation are summarized as under:
  - a. Chairman CACP clarified that there was substantial increase in MSP in the past two years. He said that sustainability of pulse production should be addressed through increase in productivity rather than increase in price. He also advocated for exploring the possibilities for utilization of protein rich soya products in Indian staple diet, which was mainly used as a source of vegetable oil. He said Government should also examine lifting the ban on export of pulses for farmers to get market price. Lastly, he mooted the idea of ‘Nitrogen Award’ on the basis of saving of fertilizer due to cultivation of nitrogen fixing pulses. He said that various market instruments need to be explored to incentivize growing pulses crops.
  - b. Principal Advisor, DAC said that market price and FHP could not be equated due to intermediation costs of transportation and storage etc. She opined that with the fluctuating production levels of pulses and uncertain Government policies on stock limits, the gap between FHP and Market price was bound to remain. However, she agreed that there was a big scope to drive value chain considering the wide margin between FHP and Market price.
  - c. MD, NAFED informed that pests were a serious problem in storage of pulses and caused heavy losses. He also suggested that supply of pulses should be allowed through PDS for ensuring nutritional security and losses incurred, if any, should be borne by the Government as in the case of wheat and rice.
  - d. MD, SFAC emphasized on importance of institutional building for aggregation of crop produce of pulses farmers. JS Crops clarified that there was a separate section in the report of Pulses Expert

Group dedicated to increasing the role of institutions in making pulses farming more efficient.

### **Private Sector Participation**

11. MD, Rallis, India Ltd. made a presentation on “Experience and Expectations of Private Organizations in Marketing and Promotion of Pulses” covering their involvement in the States of Tamil Nadu, Karnataka and Madhya Pradesh and initiatives being taken for productivity improvement through buy back arrangements with transparency in price and procurement. He requested for support from the Government for infrastructure to facilitate grading of pulses, uniform license policy in the country and removal of stock holding ceiling.
12. The observations made by the participants are summarized as under:
  - a. Secretary (A&C) remarked that private sector should enter with a long term business perspective rather than taking such ventures as a part of their obligatory Corporate Social Responsibility (CSR).
  - b. Principal Adviser was informed that entire procurement system was electronically monitored and that market price was paid to farmers as per the quality of their produce.

### **Open House**

13. MD, SFCI informed that seed treatment with mycorrhiza in chick pea had shown increase in productivity through increased nutrient availability to the plant.
14. DDG, CS advocated enhanced investment on genomic and transgenic research for effective management of weed, pod borer, drought and terminal heat.
15. Director, Farming Systems Research, Modipuram emphasized on development of extra short duration varieties like SML-668 of moong for rice fallows.
16. Hon'ble AM desired to know the difficulties for involving private sector as partners in research by IIPR. Director, IIPR informed that restrictions on conducting trials of GM material were a major problem which need to be sorted out for involvement of private sector in genomic and transgenic research. Secretary (A&C) felt that there was a good scope to involve private sector by contracting out various research activities and for production of quality seeds. DG, ICAR assured that discussion with major stake holders like IIPR, ICARDA, ICRISAT and private companies would be organized by ICAR for suggesting guidelines /regulations in respect of sharing / movement of germplasm and conducting trials of GM material etc.

### **Recommendations**

17. Summing up the discussions, Secretary (A&C) listed the major recommendations of the brainstorming session:

- a. Specific short term recommendations of Pulses Expert Group would be implemented in various programs and schemes of the Ministry of Agriculture. Suitable steps would be initiated in respect of policy interventions etc to operationalize medium and long term recommendations.
- b. Process of popularizing newly released varieties should be reviewed for accelerating adoption rate.
- c. Hybridization, genomics and transgenic research in **pulses should be imparted appropriate thrust**. Modalities for Involvement of the private sector in research collaboration should be worked out by ICAR.
- d. Utilization of rice fallows/other fallow land for pulse cultivation.
- e. Summer moong in North Western Region should be more actively promoted.
- f. Intercrops should be targeted particularly to cover very large sugarcane and oilseeds area in kharif.
- g. Until major technological breakthroughs were achieved, there was a big scope to extend simple measures like seed priming, seed treatment, planting techniques for dry land farming, etc. to improve productivity. Intensive work in selected districts could create visible impact on productivity increase.
- h. Crop insurance coverage of pulses crops should be increased with promotion of innovative insurance products. A working paper should be prepared and shared with the States in the coming Rabi Conference.
- i. Price signals were critical as also assured marketing structures. There is need to study the merits of several innovative marketing arrangements tried out in different States to explore newer ways of engaging financial institutions, spot exchanges, grading agencies, storage management, and warehousing receipts. It would be appropriate to form a small group to look at various marketing options for developing a program on marketing of pulses.

The meeting ended with a vote of thanks to the chair.

## **Brainstorming Meeting on Pulses Production held on 12.9.2012**

### **List of Participants**

1. Shri Sharad Pawar, Agriculture Minister - Chairman
2. Shri Ashish Bahuguna, Secretary (A&C), DAC, New Delhi
3. Dr. S.Ayyappan, Director General, ICAR & Secretary (DARE), New Delhi
4. Shri Siraj Hussain, Addl. Secretary, DAC, New Delhi
5. Stish B. Agnihotri, Addl. Secretary & FA, DAC, New Delhi
6. Smt. S. Bhawani, Pr. Adviser, DAC, New Delhi
7. Dr. S.K. Dutta, DDG (CS), ICAR, New Delhi
8. Shri Mukesh Khullar, Joint Secretary (Crops), DAC, New Delhi
9. Shri B. Ganguli, Adviser, DAC, New Delhi
10. Dr. J.S. Sandhu, ADG (Seed) ICAR, New Delhi
11. Dr. B.B. Singh, ADG, ICAR, New Delhi
12. Shri U.K.S. Chauhan, Resident Commissioner, Kerala Govt., New Delhi
13. Shri Rajeev Gupta, Managing Director, NAFED, New Delhi
14. Shri S. Biswas, General Manager (Pulses), NAFED, New Delhi
15. Dr. B. Venkateshwarlu, Director, CRIDA, Hyderabad
16. Dr. K. Ramasamy, Vice Chancellor, TNAU, Coimbatore
17. Dr. Ramesh Chand Director, NCAP, New Delhi
18. Dr. S. Nadarajan, Director, IIPR, Kanpur
19. Shri Kuldeep Singh G.M. (M), SFCI, 14-15 Nehru Place, New Delhi
20. Dr. J.P. Mishra, OSD to Agriculture Commissioner, DAC, New Delhi
21. Shri V. Shankar, Managing Director & CEO, Rallis India Ltd
22. Shri C.Anbarasu, Chief Manager (Tech.), Agriculture Insurance Company of India 1<sup>3th</sup> floor, Amberdeep Bulding, K.G. Marg, New Delhi-110001
23. Shri Ravinder kumar, Sr. Manager- Grow More Pulses, IInd Floor, IInd Block, KSCMF, Ltd, bulding-Cunningham Road, Banglore-560052
24. Dr. B.S. Bhandari, Adviser, Directorate of economics & Statistics, Department of Agriculture & Cooperation, Krishi Bhawan New Delhi
25. Dr. R.K. Tripathi, Director Extension, Dte. of Extn., DAC, New Delhi
26. Dr. Masood Ali, Ex- Director, IIPR, Advisor (Pulses) NSC, H434-A Satyam Vihar, Kalyanpur Kanpur-20801
27. Dr. O.P. Sharma, Senior scientist (P.P.), NCIPM, L.B.S., Building, IARI, Pusa New Delhi
28. Dr. A. Barik, Addl. Commissioner (Crops), DAC, New Delhi
29. Dr. Krishan Chandra, Add. Commissioner (IINM), R.No. 247, DAC, Krishi Bhawan, Email- krishan.rcof@gmail.com Mobile 9818322105
30. Dr. Someshwar Bhagat, Senior Scientist (Plant pathology), NCIPM, L.B.S., Building, IARI, Pusa New Delhi-110012
31. Shri Anand S. Sharma, Dy. General Manager, HIL, Scope Complex, IInd Floor, Core-6 Lodi road, New Delhi-110003
32. Shri Shailendra Pandey, Regional Manager, HIL, Scope Complex, IInd Floor, Core-6 Lodi road, New Delhi

33. Shri B.S. Dhurve, Joint Director Agriculture, Directorate of Agriculture, Govt. of Madhya Pradesh, Bhopal
34. Dr. T.K. Prabhakara Setty, State Consultant, NFSM, Department of Agriculture, Bangalore-560001
35. Dr. K.B. Saxena, Principal Scientist , ICRISAT, Hyderabad (A.P.)
36. Dr. PM Gaur, Principal Scientist , ICRISAT, Hyderabad (A.P.)
37. Shri Shanker Wankhade, Sales Officer, HIL, Scope Complex, II<sup>nd</sup> Floor,Core-6 Lodi Road, New Delhi
38. Dr. A. Sarkar, R.C. ICARDA, New Delhi
39. Dr. M. Venkateshwarlu, Associate Professor,National institute of Industrial engineering, (NITIE), Vihar Lake Roao, Mumbai-400087
40. Dr. Vijay Dalvi, Associate Research Scientist, Maharashtra Hybrid seed Company Ltd.,PO Box-76,Dawlwadi, Jalna (Maharashtra)
41. Smt. Usha Barwale Zehr,Chief Technology Officer, Maharashtra Hybrid seed Company Ltd., PO Box-76,Dawlwadi, Jalna (Maharashtra)
42. Shri K.N. Rao, Chief Risk Officer, Agriculture insurance Company of India 13<sup>th</sup> floor, Amberdeep Bulding, K.G. Marg, New Delhi-110001
43. Dr. K. Krishnappa, Resedent Project Scientist, ICRISAT, Department of Agriculture, Govt. of Karnataka, Seshadri Road, Bangalore-560001
44. Shri N. Emay Araramon, Director, NSC, Pusa Complex, New Delhi
45. Shri M.N. Jha, AO GM (production) SFCl, 14-15, Farm Bhawan Nehru Place, New Delhi
46. Dr. J.P.Singh, Director (Millet), DAC, Krishi Bhawan New Delhi
47. Shri R. K. Trivedi, Deputy Commissioner (Seeds), DAC, New Delhi
48. Shri C.Y. Barapatre, Asstt. Commissioner (NFSM), DAC, New Delhi
49. Dr. M.N. Singh, Joint Director, NFSM Cell, DAC, New Delhi
50. Dr. R.K. Gupta, National Consultant, NSC, New Delhi
51. Shri S.V. Singh, National Consultant, NSC, New Delhi
52. Shri S. K. Dalal, Consultant (Agril. Extension), NSC, New Delhi
53. Dr. B.B. Singh National Consultant (Plant Breeding), NSC, New Delhi,
54. Dr. Shamsheer Singh National Consultant (F.M.), NSC, New Delhi
55. Dr. D.V. Singh National Consultant (Plant Protection), NSC, New Delhi
56. Shri A.K. Khanna, Programme Manager (NFSM), NSC, New Delhi
57. Dr. Suresh Kumar Yadav, STA (Crops), NFSM Cell, DAC, New Delhi
58. Shri Suraj Prakash, Programmer
59. Shri Bhanu Joshi, Programmer