

**National Workshop/ Brain storming session on “Promotion of pulses in nontraditional niches: summer cultivation” at ICAR-IIPR, Kanpur ( U.P.) on 9<sup>th</sup> -10<sup>th</sup>, 2016**

ICAR-IIPR, Kanpur in collaboration with the Directorate of Pulses Development, Bhopal organized a two days Brainstorming Session on "Promotion of pulses in nontraditional niches: summer cultivation" as an event to commemorate the year 2016 as "International Year of Pulses". The Brainstorming Session was held during February 9-10, 2016 at ICAR-IIPR, Kanpur and attended by 119 participants from all stakeholders including scientists, farmers, extension personnel, policy makers from U.P., M.P., Rajasthan, Karnataka, West Bengal, Punjab, Delhi, J&K, Telangana and national organizations like ICAR-ATARI, Jodhpur, Ludhiana, Kanpur, Jabalpur, Bangalore, Kolkata, ICAR-NCIPM, New Delhi, National Seed Corporation, Private Seed Entrepreneurs, State Agricultural Universities, Department of Agriculture of different states, ICAR-NBAIM, Mau, KVKs and Directorates of different crops under DAC, **Ministry of Agriculture and Farmers Welfare, GoI.**

- **Session stressed on micro-irrigation, mechanization, creation of village level seed hubs and effective IPM strategy for promotion of pulses in summer cultivation.**
- **Besides inaugural session, there were four technical sessions in which 3-5 deliberations were made by subject matter specialists on topical themes followed by panel discussions by member experts which led to the following recommendations:**

**Technical Session I : Development Efforts**

1. Short duration pulses has assumed importance in increasing area under pulses in non-traditional niches like spring/summer/rabi and rice fallow cultivation. Mungbean area in non-traditional niches has steadily increased over the years from the level of 6-3 lakh hectare in 2005-06 to 1.05 million hectare in 2013-14. There is ample scope , if technological (improved varieties, irrigation scheduling, weed management, IPM, innovations in mechanized cultivation) developmental (microirrigation, mechanization, biofertilizers, quality seeds) and policy (provision of seed hubs, bio-agents production units, custom hiring for mechanized planting and harvesting, crop insurance etc.) efforts are oriented towards promotion of short season pulses in non-traditional niches. A policy paper need to be developed on the basis of discussion in two days brainstorming session. (*Action - States/DAC&FW/ICAR*).
2. There is need to document the area under summer pulses. The delineation of area under spring and summer is required separately as both are parts of different cropping systems. Spring crops are cultivated after the harvest of potato, mustard, vegetable pea. However, the summer pulses are grown after harvest of wheat in northern India and after harvest of second crop of rice in new delta area of Tamil Nadu and other areas of southern peninsula. (*Action - States/DDG (Crop Science), ICAR/DAC&FW/DES*).
3. Like summer pulses, there is need to promote spring cultivation as it has obvious advantage of reduced risk of MYMV in spring. Mungbean with spring sugarcane can be promoted in eastern U.P. and Bihar. (*Action- States/ ICAR-IIPR/DAC&FW*).
4. Since wheat varieties are grown in delayed planting in certain niches and are harvested late, the short season window is further reduced. Therefore, there is need to **develop mungbean** varieties maturing in 50-55 days. (*Action-SAU/DDG (Crop Science), ICAR/ ICAR-IIPR*).
5. The area under irrigation in M.P. in canal command area has increased and thus facilitating summer mungbean cultivation in M.P.. There is need to develop suitable cultivars of mungbean for M.P. (*Action-SAU/SDA(M.P.)/ DDG (Crop Science), ICAR/ ICAR-IIPR*).

6. In Uttar Pradesh, summer pulses are facing competition with some more remunerative crops like summer Bajra, groundnut, mentha and maize. There is need to develop appropriate technologies and varieties to make summer pulse cultivation profitable and sustainable. (*Action- SAUs (CSAU-Kanpur)/NDAU, Faizabad/Banda Agriculture Univ U.P./ Modipuram Agriculture Univ., Meerut /States/ ICAR-IIPR/DAC&FW*).
7. Large scale demonstrations with improved new varieties of summer pulses are required and seeds so produced during first year of demonstrations may be used for subsequent years to bring further large area under demonstrations. A suitable mechanism has to be evolved. The specific provisions are also required to monitor and visit of these demonstrations. (*Action-States/NSC/Seed Division/DAC&FW/ICAR-IIPR*).
8. Raised bed planting in some areas emerged as an important planting technique which economizes the quantity of water/irrigations. This need to be upscaled through demonstrations further. (*Action – SDA /Directorate of Engg./States/Machinery Division, GoI*).
9. There is need to develop small scale entrepreneurship at village level for processing and value addition to make summer pulses cultivation profitable and competitive with other crops. (*Action- States/CFTRI /DAC&FW*).

## **Session II : Technical Innovations**

1. For summer mungbean cultivation there is an urgent need to develop farmer's friendly literature on "package and practices of summer mungbean", "Management of flower drops in summer and spring mungbean "and" Integrated management of insect pests in summer/spring mungbean cultivation".(*Action-ICAR-IIPR/DPD/DG (Crop Science), ICAR /SAUs*).
2. Micro-nutrients as 'Pulse Wonder' application should be promoted in summer mungbean for enhancing yield. (*Action-States/SAUs/DAC&FW*).
3. Zero or conservation tillage should be promoted for timely sowing of summer pulses and enhancing yield. (*Action–States/Directorate of Engg./ICAR-CIAE/CRIDA/DAC&FW*).
4. Economic threshold level of major insect-pests of summer pulses should be clearly defined. Need was also felt for development of an effective IPM modules for effective and economical management insect-pests in summer pulses.(*Action-NCIPM/SAUs/ DAC&FW /ICAR-IIPR*).
5. Date of sowing is very critical in the management of yellow mosaic disease and time of harvesting . The house felt that the sowing should not be delayed beyond the 1<sup>st</sup> week of April so that the harvesting should not coincide with early onset of monsoon. The delayed sowing in summer favour the high incidence of YMD at later stage of the crop.(*Action-States/ATARI/SAUs*).
6. Using resistant cultivars against YMD is the best, cheap and preferred method. The cultivars developed must have high level of resistance against YMD and they should be tested in all the three seasons particularly for YMD resistance. (*Action-DDG (Crop Science), ICAR/ ICAR-IIPR*).
7. There is no insecticide available which have the label claim for the use in mungbean cultivation. Efforts should be made for obtaining label claim of the insecticides used in summer/spring cultivation of mungbean.(*Action-NCIPM/ICAR-IIPR/ DDG (Crop Science), ICAR*).
8. Punjab Agricultural University has developed a formulation (consortia) of Rhizobium and PSB which is being used in mungbean cultivation. It has been recommended that they

should develop a proposal for the establishment of small scale production unit of the formulation and submit it to DAC for funding. (*Action-States/PAU/ICAR-IIPR/DAC&FW*).

9. In case of farm mechanization, need was felt for the development of combine harvester mechanization package for summer pulses. (*Action-States/Machinery Division of DAC&FW*).

### **Session III : Success Stories: Farmers' Perspectives**

1. Participatory seed model has been successful and by adopting this seed model several seed societies are producing seed of pulses in Uttar Pradesh, Madhya Pradesh and West Bengal. This concept needs to be popularized to cater seed need at village level. (*Action-States/NSC/DAC&FW*).
2. Farmers' innovations in mechanization for pulses need dues attention. The system of arranging convenient mechanized spray of insecticide in pigeon crop intercropped with soybean as devised by the farmer requires validation, institutionalization and up scaling for summer pulses also. (*Action-ICAR-CIAE/Machinery Division of DAC&FW*).
3. The success story of summer pulses need to be documented and popularized in other six states of the country where the summer cultivation is practiced. (*Action-ICAR-IIPR/DPD/States*).
4. The use of compost in pulses confirmed the reduction of harmful fauna thereby improving the crop productivity. The easy to prepare and use method for such compost may be popularized by the related agencies.

### **Session IV : Policy perspectives: Mission approach**

1. **For promotion of summer pulses, a special campaign may be planned with the identification of target areas and convergence of several provisions of different schemes of SMAM, NFSM, RKVY etc.** (*Action-States/DAC&FW*).
2. Up scaling the seed hubs in the potential districts for ensuring the seed demand of pulse crops in the country. Safe storage structures for Mungbean seeds need to be popularized on the models of community seed bank. (*Action-States/ICAR-CIAE/CIPHET/DDG (Engg.), ICAR/DAC&FW*).
3. Delayed planting and late harvest of wheat left a small window for summer cultivation. In view of sustaining the cereal based cropping system, timely planting of wheat need to be ensured.
4. Showcasing of technologies with standard package of practices for summer cultivation need be made through publication of farmer's friendly literature, demonstrations and displaying documentary. Intercropping with spring sugarcane offers the potential for promotion of mungbean in eastern and western part of Uttar Pradesh and Bihar which could also be harnessed through farmers' persuasion and awareness programmes. (*Action-States/SAUs/ICAR-IIPR/DPD/DAC&FW*).
5. Mechanization in mungbean cultivation is a potential area for improving the system's efficiency. Use of combine harvester and thresher needs testing, adaptation and popularization.
6. Uninterrupted power supply for critical irrigation support is required in the areas of summer pulses.
7. Stray cattle and Blue bull menace is serious constraints in cultivation of summer pulses. This issue needs to be addressed properly. (*Action-States/Forest Department*).

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**Brainstorming Session on Promotion of Pulses in New niches: Summer Cultivation**  
**February 9-10, 2016 at IIPR, Kanpur**  
**Photo Gallery (1)**



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