

Press Note
ICAR-Indian Institute of Maize Research, Ludhiana
28th August, 2021

The rice-wheat cropping system in Indo-Gangetic Plains contributed immensely to national food basket over past 5 decades. However, over time the sustainability of the intensive rice-wheat systems of North-West India has become a major challenge owing to faster depletion of ground water table, stagnating or declining productivity growth, degrading soil health and environmental quality including air pollution and public health concerns, and diminishing farm profitability. Therefore, diversification of rice crop is the need of hour to sustain the declining natural resources to ensure food security in long-run in the Punjab. Replacement of rice with maize crop in this ecology could be one of the best options as its cultivation consumes 80% less water and energy with over 10% enhancement in wheat production. However, the stakeholders need handholding and strategy for its promotion is much needed with best agronomic production practices.

Shri Suresh Kumar, Chief Principal Secretary, Government of Punjab was chief guest of a state level maize field day held at Dana Mandi, Garshankar, Hoshiarpur, Punjab. He was impressed with the performance of ICAR-Indian Institute of Maize Research and its commendable efforts for bringing maize cultivation and meeting expectations for bringing it in Punjab for diversification. The maize can be brought up in place of rice as during field visit, he was impressed with crop yield touching at 7 t/ha or more. Hoshiarpur is a potential district for maize cultivation. To save earth and to save health, paddy to be replaced with maize. He urged scientists and private partners to convince farmers with credible solution to enhance credibility by giving a proof of the technology at their field. Timely availability of the input is critical for the farmers and providing good market is essential for realisation of diversification with maize replacing rice. Price deficiency scheme (bhavantar yojana) can be a solution for enhancing remuneration in maize cultivation. In the programme, a policy paper on "Diversification of cropping system in Punjab and Haryana through cultivation of maize, pulses and oilseeds" developed by ICAR institutes was released. A document folder on "Participatory innovation platform on potential yield realization of maize based cropping system in Punjab and Haryana" the maize system in Hindi, English and Punjabi also released. A newsletter of ICAR-Indian Institute of Maize Research (IIMR) also released. Welcoming to the guest, Dr Sujay Rakshit, Director, ICAR-IIMR briefed that these demonstrations are critical for the diversification in the Punjab for sustainability. The IIMR have developed 12 maize hybrid of which one is released for Punjab and Haryana region. The institute also developed maize based value added product for dietary diversification and entrepreneurship development.

Chairman of the function, Dr Tilak Raj Sharma, Deputy Director General(Crop Science), Indian Council of Agricultural Research, urged farmers to adopt maize based cropping system technology demonstrated at farmer's field at very faster rate to save water and enhancing profitability. The declining water table demanding more energy for pumping water for rice cultivation. He stressed upon use of machineries in cultivation, quality protein maize, value added product, sweet corn, baby corn etc needs to be integrated in maize production systems for enhancing profitability. ICAR initiated a new project on emerging pests and diseases in which fall armyworm of maize is also an important component. Guest of Honour, Sh. Anirudh Tewari, ACS(D) & Vice Chancellor, Punjab Agricultural University emphasized that the whole maize based cropping system should be encouraged for demonstration and emphasized to convince farmer for water saving and enhancing profitability. After introduction of combine harvesting, problem of residue burning enhanced enormously rearing environmental problem. Good yielding ability of maize system will certainly help in achieving goals of sustainability. A programme with Rs 4000 launched by government on Khushhal Kisan, Khushhal Punjab. Director Agriculture, Government of Punjab, Dr S.S. Sidhu emphasized maize lead diversification for sustainability in Punjab.

Dr M.L. Jat, CIMMYT briefed that Secretary DARE & Director General, ICAR, New Delhi has advised to establish such participatory innovation platforms of maize system with value chain for diversification of rice in Punjab and Haryana. With this objective, the ICAR-Indian Institute of Maize Research (IIMR), Ludhiana in collaboration with International Maize and Wheat Improvement Center

(CIMMYT), India, State Departments of Agriculture in Punjab and Haryana, and other key stakeholders have established the participatory “Innovation Platform on Potential Yield Realization of Maize-based Cropping Systems” in Punjab and Haryana. Demonstrations have been conducted on maize-wheat-mungbean or maize-mustard-mungbean cropping system or other vegetable based maize systems to document benefits and plan strategy and future pathways for diversification in Punjab and Haryana. In Punjab, 100 acres platform sites at Jalandhar (14), Hoshiarpur (13.5), SBS Nagar (15), Rupnagar (17.5), Pathankot (16.5) and Ludhiana (21.5) have established. In these sites, knowledge on improved agronomic production technologies and agro-inputs such as seeds of improved maize varieties, herbicides and pesticides to control fall armyworm have been distributed to the farmers.

The programme was also graced with presence of Ms. Apneet Riyait, DC, Hoshiarpur, Dr. N.S. Bains, Director (Research), Dr. J.S. Mahal, Director (Extension), PAU, Dr. J.P.S. Gill, Director (Research), GADVASU, Shri Vinay Kumar and Shri. Subhash Chander of Punjab Agriculture Department, Dr. Ramesh Kumar, Dr. D.P. Chaudhary, Dr. S.L. Jat, Dr. Romen Sharma, Dr. Seema Sheoran and Dr. Priyajoy Kar of ICAR-IIMR.

The ICAR-Indian Institute of Maize Research, Ludhiana and CIMMYT in collaboration with state Agriculture Department, Government of Punjab, Punjab Agricultural University, Ludhiana organized this *State Level Maize day* at Dana Mandi, Garhshankar Village, Hoshiarpur on August, 28 2021. In the programme, an entrepreneur urged farmers to grow maize for higher price realization to use in export and industrial uses. Another entrepreneur in Punjab engaged in silage making told that farmer can earn 50 thousands/acre by selling maize for silage at milking stage which will also help in early field vacation for next crop. A visit to farmer's field where participatory potential yield demonstration taken was also organized at Pahelewal village near Garhshankar. The stalls of key stakeholders involved in maize value chain were also displayed. In the meeting, over 600 farmers participated.