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Present status and future prospects of rapeseed-mustard in India

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India is cultivating nine oilseed crops under the diverse agro-ecosystems, among which rapeseed-mustard stands second after soybean in terms of area (24%) and production (25%). However, the contribution of rapeseed-mustard to national edible oil basket is about 36%. Indian mustard (B. juncea) (90% acreage) is the dominant oilseed brassica crop mainly grown as post-rainy season crop under poor soils and limited water conditions where, the genetic potential could not be realized leading to low yield levels. The potential yield of the species is much higher than is harvested.

A quantum jump in production of rapeseed-mustard was recorded from a mere 0.76 million tonnes in 1950-51 to 10.11 million tonnes in 2020-21. The present level of the area, production and yield are 6.69 million ha, 10.11 million tons and 1511 kg/ha, respectively (2020-21). Under present climatic variability, fast depleting natural resources, limitations of food and nutritional security, the realization of oilseed targets will be unimaginable without the path-breaking technological interventions. Additional area under cultivation for rapeseed-mustard may be explored in rice-fallow system (north-eastern regions), and in non-traditional areas (southern regions) provided with suitable technology and policy interventions.

Yield loss due to abiotic stresses (high temperature, drought, salinity, frost) and biotic stresses like, insect pest, diseases, and parasitic weeds (Orobanche) needs to be addressed through development of the resistance/tolerant varieties and holistic management strategies to reduce the losses. There is a need to integrate frontier scientific research along with ongoing programs for yield improvement, resource use efficiency, diversified products and uses. Further there is a need for more involvement of stakeholders, viable supply chain, marketing and policy interventions and farmer-institution-industry linkages for a better oilseed economy of the country.

The present situation of depriving natural resources is a concern for sustainable livelihood and nutritional security of small and marginal farmers in India (72%). Strategies need to be carved for the enhanced production of edible brassica oil through maximum sustainable utilization of natural resources to exploit the genetic potential of the crop. Varietal development for new agronomic avenues of conservation and regeneration agriculture are to be considered to patch-up the edible oil requirement of the country.