

Saffron Cultivation in Northeastern Region

Northeast Centre for Technology Application and Reach (NECTAR) initiated a pilot scale cultivation of Saffron in 2021-2022 in four Northeastern region states of the country i.e., Sikkim, Arunachal Pradesh, Meghalaya and Mizoram by following individual land surveys meticulously assessing the related parameters specific to saffron cultivation and comprehensive studies of the potential sites conducted by cross- referencing through desktop studies and Geospatial techniques with the geographical and climatic parameters of Pampore region of Kashmir as standard reference.



Saffron, revered as the world's priciest spice, boasts various bioactive compounds like crocin, picrocrocin, and safranal, offering numerous therapeutic benefits. Its demand has surged in recent years, outpacing production. To fill the gap both at domestic and international markets, efforts are being made to explore alternate strategies for upscaling saffron production. The pilot cultivation was carried out in collaboration with state govt. departments and local organizations under one umbrella to execute “Mission saffron”. Complete assessment using the basic requirement of science & technology, related to flowering yield, corm survival rate, multiplication of daughter corms and soil profiling was carried out by NECTAR in respective sites. The cultivation sites were then categorized under three categories ---high potential sites that showed flowering accompanied by greater than 50% corm survival rate and multiplication rate of daughter corms; medium potential sites that showed flowering, corm survival and multiplication rate between 10-20% and low potential sites for sites showing low flowering rate with no multiplication of daughter corms.

Positive results from the pilot cultivation in terms of flowering, corm survival rate and multiplication of daughter corms paved a way to carry forward the project on a larger scale for the year 2023-24. An awareness cum farmers mobilization program was conducted by NECTAR and importance of saffron and its package of practices were explained to the farmers. A total of 27 quintals of saffron corms were procured from the Pampore Saffron Farmers Producer Company Ltd, Kashmir and transported to different cultivation sites. The cultivation

steps have been modified as per the prevailing climatic condition and soil type of different cultivation sites. Saffron corms were sown between last week of September and first week of October. Soon after, flowers started blooming in all the fields. Till date approximately around 37000 plus flowers were seen blooming with at least 250 grams of dried saffron was harvest from the region this season. The harvested dried saffron was packed in an airtight container with proper labelling to showcase authenticity and origin. Innovative packaging solutions are continuously explored to enhance shelf life and maintain the premium quality of saffron for consumers.

A total of 64 farmers (22 in Sikkim, 37 in Arunachal Pradesh and 5 in Meghalaya) are now reaping the benefits from NECTAR's saffron cultivation project. The Saffron cultivation project along with partners like Arunachal State Rural Livelihood Mission and Directorate of Horticulture, Govt. of Arunachal Pradesh; Bethany Society, Wellspring Social Service Society, Krishi Vigyan Kendra East Khasi Hills, Meghalaya Basin Development Authority, and Experimental Research Station Upper Shillong, Directorate of Horticulture, Govt. of Meghalaya; Department of Science & Technology, Mizoram; Sikkim state council of Science and Technology, Social Forestry, Gangtok and Mangan Division, Govt. of Sikkim, could bring opportunity for the NER farmers in terms of prospecting livelihood generation.

NECTAR is working on bringing more area and farmers under saffron cultivation following comprehensive physico-chemical and microbial assessment of the soil to understand the suitability of the soil for saffron cultivation and to bring a new NE brand of Saffron in the market. It is also exploring possible opportunities to accommodate R & D aspects of Saffron and related byproduct(s).

