



The Declining Yield of Saffron in Kashmir-Can Environmental Changes Be Held Responsible: An Opinion



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Opinion

Jammu and Kashmir state situated between 32°17' to 36° 58'N and 73°26' to 80° 30'E, is one of the largest states of India, covering an area of 2,22,236km². Saffron is one of the important niche crops of the state. Saffron (*Crocus sativus*) is the most expensive spice of the world and is regarded as the king of spices. Apart from Iran and Spain, Kashmir has the highest production of saffron. It is an important niche crop that is grown in the Pulwama district of the state of Jammu and Kashmir, India. Saffron is known by several names-Zafran, Kesar, Kong, Kong Posh etc. Kang posh, the flowers of Saffron is a symbol of freshness and purity and the stigma-the female reproductive part is the main economic product. Kashmir is known as the valley of flowers. Among different types of flowers grown here, saffron has got a unique importance and utility. Historically, the cultivation of saffron started before three or four centuries in Arabia and Spain. After that, its cultivation spread in Iran, Sweden and India. Presently, saffron cultivation is a great commercial activity. This activity is also known as "Golden Zest" in Indian agriculture.

In India, 5,707 hectares of land is under saffron cultivation with an annual production of about 16,000 kilograms. The state of Jammu and Kashmir ranks first among the saffron growing states in India. It can be known from the fact that out of the total 5,707 hectares of land under its cultivation, 4,496 hectares lie exclusively in Jammu and Kashmir. In Kashmir, Pampore, which is situated at a distance of 15 kilometers from Srinagar, is famous worldwide for its high grade saffron. Saffron is also grown, though in a limited scale, in Kishtwar district of Jammu and Kashmir. Pampore and its adjoining areas produce on an average 2,128 kilograms of saffron every year. In spite of being such an important crop, the productivity hardly crosses 2.5kg ha⁻¹ [1]. Though several factors are responsible for low yield of saffron, but the vagaries of weather particularly the deficient rainfall is considered an important reason [2,3]. The year 2017 was regarded as a drought year for Kashmir as the precipitation was merely less from June to November, imparting its negative influence on the important

crops like rice, maize, apple and saffron. As the saffron is mainly grown as a rain fed crop, the effect of marginal precipitation was highly reflected in terms of loss in yield. The production for the present year was reduced by more than 50%.

The declining trend of rainfall is regarded as one of the effect of much spoken climate change in the ecologically sensitive areas of Kashmir. In the past, several initiatives were taken by the government of Jammu and Kashmir and Infact by the Govt. of India to improve the saffron productivity in the valley. One of such major initiatives was the "Saffron Mission" which aimed to introduce scientific interventions for higher stigma yield. But the mission mainly focussed on the replacement of the old corms with the new ones and hardly focussed on increasing the irrigation facilities for the saffron fields. The mission focussed on high technology interventions (breeding and biotechnological improvements), but unfortunately neglected the basic agronomic interventions for increasing the yield. Would the mission has focussed on improving the moisture retention technologies, improved planting techniques and expanding irrigation options through drip and sprinkler irrigation facilities, the vagaries of weather would not have caused such severe yield reduction. So apart from extension of improved irrigation facilities, other factors that can be helpful are as follows [4]

- a) Provision of good quality corms.
- b) Extension in the area of cultivation.
- c) Disease protection
- d) Appropriate training for packing the produce.
- e) The expert's total and equal cooperation and coordination with the saffron growers
- f) Use of solar and air drier.
- g) Improving marketing facilities.

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