

## Miscellany

### Temporal variation in saffron (*Crocus sativus* L.)

Saffron (*Crocus sativus* L. : Iridaceae), the world's most expensive spice is unknown in the wild state (Mathew 1982). It is a triploid ( $2n=3x=24$ ) and reproduces asexually through corms. In India saffron is cultivated in the Kashmir Valley and also at Kishtwar (Jammu and Kashmir), Ranikhet and Chamoli (Uttar Pradesh). The present investigation was undertaken to assess the temporal variation in saffron from four locations (Charar-Sharief, Sanatnagar, Pampore and Malabagh). Observations on floral characters were recorded from 200 randomly selected flowers at each location during October-November 1988. The characters included fresh flower weight, flower size (perianth area), stigma length, fresh and dry stigma weight and saffron percentage.

The study indicated that there were appreciable differences in the coefficient of variation for all the floral characters at different locations (Table 1). However, the available variability is of no use for utilization in breeding because of triploidism. Saffron is basically a clonally propagated crop, hence its population is expected genetically to be similar, if not identical. The variability seems purely due to varied microclimates at different locations since there are not much marked climatic differences prevailing at these locations.

### Reference

Mathew M, 1982 *The Crocuses* : A revision of genus *Crocus* (Iridaceae). B T Batsford, London.

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Table 1. Variation in floral characters of saffron at different locations in Kashmir Valley

Character	Charar-Sharief			Sanatnagar			Pampore			Malabagh		
	Mean	Range	CV(%)	Mean	Range	CV(%)	Mean	Range	CV(%)	Mean	Range	CV(%)
Fresh flower weight (g)	0.309	0.203-0.362	27.46	0.289	0.248-0.355	25.11	0.314	0.182-0.142	24.72	0.373	0.296-0.427	12.16
Flower size (cm <sup>2</sup> )	12.53	7.53-16.55	23.17	12.23	9.44-15.60	19.00	15.86	11.71-18.61	31.22	16.86	13.11-19.69	13.32
Stigma length (cm)	2.92	2.63-3.25	8.41	2.46	1.70-3.03	17.30	2.76	2.33-3.70	11.42	3.70	2.83-5.13	6.42
Fresh stigma weight (g)	0.025	0.018-0.033	19.10	0.020	0.011-0.045	24.43	0.27	0.011-0.046	51.03	0.029	0.018-0.046	17.36
Dry stigma weight (g)	0.0042	0.0018-0.0054	25.71	0.0045	0.0045-0.0020	27.90	0.0051	0.0020-0.0090	36.17	0.0054	0.0029-0.0084	23.27
Saffron percentage*	8.24	5.91-11.07	17.49	6.13	4.43-8.21	14.24	8.46	6.03-14.14	32.13	7.50	7.72-11.68	11.66

\*Saffron percentage =  $\frac{\text{Dry stigma weight} \times 100}{\text{Fresh flower weight}}$