

Cool weather, water stress, last year's poor crop behind profuse mango flowering in Kerala: KAU

OUR BUREAU

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The unusually profuse flowering of mango trees in Kerala this calendar year is being attributed to cool night temperatures, water stress and a poor crop in the previous year.

These are the preliminary observations by scientists at the Kerala Agricultural University (KAU). A detailed study of these aspects is required, according to P Indira Devi, Director of Research, KAU.

Proper balance

Flowering is governed by a proper balance between carbohydrate reserves and nitrogen in mango shoots. A poor crop in the last year (2018) increased carbohydrate reserves. This is another factor that favoured profuse flowering this year, Indira Devi said.

Mango flowering in Kerala normally takes place from November-December to January-February. This is early compared to that in other parts of the country.

Genetically, mango varieties are classified into regular and irregular/alternate bearers. Flowering, in general, is governed by climatic factors, especially during the flower initiation period.

Flowering occurs in past-season shoots that have attained a minimum maturity of four months.

These shoots produce

either vegetative shoots or flowers, depending on the prevailing climatic conditions.

Factors that predispose the tree to flower initiation include the age of shoots, hormonal balance and environmental factors.

Minimum temperatures

Thus, the major factor for the sudden profuse flowering, could be the unprecedented cool night temperatures experienced in early January, said Devi.

The minimum temperature across the state in January 2019 was 16-20 degrees Celsius, against 20-24 degrees Celsius in January 2018.

Further, relative humidity levels were lower during the period, i.e. 40-60 per cent in January 2019. In January 2018, it had hovered in the region of 60 per cent.

The State received unusually heavy rains during the South-West monsoon (June to September) last year, but the subsequent North-East monsoon (October to December) was poor.

All parts of the State have reported groundwater depletion this year. So, water stress could be another factor that has favoured flowering of mango trees.

Heavy rains received during the flowering season last year had resulted in the reversal of flowering to the flushing stage and, in turn, a poor crop, Devi said.