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Study of pollinator activity in Cho-cho Sechium edule (Jacq.) Sw crop

M A Rashmi, Gandhi Gracy R, Vinutha T M and Bhat N S University of Agricultural Sciences, India

Cho-cho Sechium edule is grown in the traditional way on family plots and in backyards and vegetable gardens. Pollination is mainly entomogamous. The present investigations on the pollination benefits in Chow- chow crop was carried out from December 2011 to February 2012 at the University of Agricultural Sciences, Gandhi Krishi Vignana Kendra, Bangalore. The crop was on the pendal. The treatments taken up were 1. Hand pollination, 2. Afternoon bagged & removed in the evening, 3. Morning bagged & removed in the afternoon, 4. Completely open. It was observed that eight species of insects visited flowers of chow chow during different period of time in day. Of these, majority species belonged to the order Hymenoptera (Apidae, Halictidae, Specidae, Formicidae and Vespidae) and Dipter (Muscidae). Peak activity of the pollinators of chow chow was found to be at 9 to 11 hours followed by 7 to 9 hours and 11 to 13 hours and the activity was found very low at 17 to 18 hours. Major pollinators of the chow chow flower were *Trigona* sp followed by *Apis cerena*. Highest percent of fruit set (88.89%) and fruit weight (112.33g) was noticed when the flowers were fully opened and followed by T3 that is when the flowers were bagged in the afternoon 85.15% and 103g respectively.

rashmigowda.ento@gmail.com

Standardization of induction temperature in Musa cultivar Grand Naine to analyze temperature tolerance V Ramanjinappa and A Rekha

Indian Institute of Horticultural Research, India

B ananas are sensitive to very high temperature and very cold temperatures. Some observations have revealed that temperatures below 10°C and above 38°C have affected the growth. Genetic variability is available in nature to different abiotic stresses like temperature and drought. In order to assess the temperature tolerance of a genotype Temperature Induction Response (TIR) technique is widely used, where the seedlings are gradually exposed to lethal temperature for a specific time to observe growth and recovery. The recovered or survived plants at high temperature can be considered as stress tolerant types. An experiment was undertaken to identify the induction temperature in banana. In the present study the tissue culture plantlets of popular banana cultivar Grand Naine with 3-4 leaves were subjected to different high temperatures (In BOD apparatus and relative humidity was maintained with intermittent sprinkling of water) for various duration such as 40°, 45° and 50°C for 2, 4, 6 and 8 hrs. One set of plantlets was maintained at 30°C (normal temperature in shade net) throughout the period of experiment as control. The plantlets exposed to 50°C for 8 hours showed complete lethality and it was confirmed as lethal temperature. Based on this observation a set of plantlets was exposed to induction temperature where they were exposed to high temperature starting from 30°C to 50°C by gradually increasing the temperature 5°C every 30 minutes interval. It was observed that 85% plants survived and were planted in field conditions for further observations.

Biography

V Ramanjinappa has completed his M.Sc. (Agri) at the age of 24 years from University of Agricultural Sciences, Raichur and post graduate diploma studies from Annamalai University, Tamil Nadu. He is working as SRF Under the project 'National Initiative on Climate Resilient Agriculture' at IIHR, Bangalore. He has published 8 papers in reputed journals and 10 popular articles in reputed magazine.

ramanji_1092@rediffmail.com