



Research Paper

Article history :

Received : 03.04.2012

Revised : 04.09.2012

Accepted : 05.10.2012

Evaluation of different carnation varieties for the agro-climatic condition of Chhattisgarh

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ABSTRACT : Evaluation experiment was conducted at AICRP on Palms, College of Agriculture and Research Station, Kumharawand, Jagdalpur (Bastar), Chhattisgarh during 2006-07 and 2007-08 to evaluate different carnation varieties for agro-climatic condition of Chhattisgarh, among 15 varieties (Firato, Raggio-de-sole, Tasman, New Tempo, Sunrise, Neva, Tikar, Madrass, Yellow Candy, Dover, Master, Cherry Solar, White Wedding, Sissagree and Kazhuca), the maximum plant height at bud emergence was noted for variety Sissagree (67.5 cm) followed by Cherry Solar (65.0 cm), the number of days taken for flower bud emergence was found to be significantly minimum (57 days) in variety Madrass while variety White Wedding took maximum days (144.5), significantly maximum flower stalk length (50.5 cm) was observed in variety New Tempo, maximum number of flowers per plant was observed in variety Tikar (6.50). The significant superior flower size was noted in variety Sunrise (5.40 cm) which was statistically similar with variety Yellow Candy (5.10 cm), maximum number of leaves were observed in variety Neva (25.3) whereas, minimum number of leaves were recorded in Madras (12.50).

KEY WORDS : Varietal evaluation, Agro-climatic condition, Carnation

HOW TO CITE THIS ARTICLE : Verma, L.S., Mishra, S.K., Sharma, D. and Narayan, Kamal (2012). Evaluation of different carnation varieties for the agro-climatic condition of Chhattisgarh, *Asian J. Hort.*, 7(2) : 318-320.

Carnation (*Dianthus caryophyllus* L.) belongs to family 'Caryophyllaceae'. The standard carnation is being grown as perennial crops under glass house or poly houses in temperate countries but in tropical and sub-tropical region, it is grown in open or under semi-protected condition as seasonal crops. India has immense potential of growing carnation for export as well as for homestead consumption due to its diverse climatic condition. It is mostly grown under cover around big cities. In mild climate cities like Pune, Nasik, Bangalore, Solan and Chandigarh, the crop withstand upto two years with proper protection but in other parts of India, it is grown as annual crop due to extreme weather condition. Although, carnation is being grown mostly under cover for round the year production but due to high cost of infrastructure, it is uneconomical and many European countries shifted their production programme to area of natural

climate in open-field condition giving different cultural and chemical treatments for producing higher number of quality flowers (Singh *et al.*, 1994).

In Chhattisgarh, carnation cultivation is possible in almost all part of the region due to availability of wide agro-climatic condition. Meteorological normal of India claims that climate of Bastar-Plateau zone resembles to the climate of Pune and Bangalore. Hence, Bastar is also proved to be suitable place for flower cultivation especially carnation, rose, gladiolus, etc. Therefore, identification of varieties for agro climatic is essential under Bastar condition so that farmers of the area could be benefited by flower cultivation. However, no work has been done under agro-climatic condition of Chhattisgarh to exploit the potential benefit of flower cultivation. Keeping in view the above facts, the present investigation was undertaken.