

CORRELATION STUDIES FOR YIELD AND YIELD CONTRIBUTING CHARACTERS IN CHINA ASTER (*Callistephus chinensis*)

G.B. SREENIVASULU, B.S.KULKARNI, S.K. NATARAJ, B.S.REDDY, KIRTI MALA NAIK AND K. CHANDAN

ABSTRACT

China aster (*Callistephus Chinensis* L. Nees) is one of the important commercial flower crop grown in India. Although number of varieties are recommended for cultivation the information on the yield and yield contributing characters is lacking for the agro climatic condition of North Karnataka. Therefore an investigation was under taken during winter 2003-2004 and summer 2003-2004 at K.R.C. College of Horticulture, Arabhavi, U.A.S. (Dharwad). Six genotypes namely Phule Ganesh White, Phule Ganesh purple, Phule Ganesh Violet, Phule Ganesh Pink, Namdhari Pink and Kamini, were evaluated for quality traits. The experiments were laid out in randomized block design with four replications under four environments. E₁ (Winter 2003-2004, with recommended package of practices), E₂ (Winter 2003-2004, half recommended package of practices), E₃ (Summer 2003-2004, with recommended package of practices) and E₄ (Summer 2003-2004, package of practices with half recommended dose of fertilizer), with the recommended dose of fertilizer for China aster 180:120:60 Kg NPK/ha. Yield per hectare was positively and significantly associated with number of flowers per plant, plant height, number of secondary branches, days taken for 50 per cent flowering, duration of flowering, diameter of flower, fresh weight of flower, fresh and dry weight of plant in all the three sets of environments, viz., over all the environments, rich environment, poor environment. Number of flowers per plant was positively and significantly (at p=0.01) associated with plant height, primary branches and secondary branches, days taken for 50 per cent flowering, diameter of flower, fresh weight of flower and dry weight of plant. The flowering characters, viz., days taken for 50 per cent flowering was significantly and positively associated with dry weight of plant in all the three sets of environments, viz., over all the environments, rich environment and poor environment. The flowering characters, viz., days taken for 50 per cent flowering was significantly and positively associated with dry weight of plant length was positively and significantly associated with days taken for 50 per cent flowering, duration of flowering, and diameter of flower. The fresh weight of flower was positively and significantly associated with dry weight of plant.

See end of article for authors' affiliations

Correspondence to :
G.B. SREENIVASULU
Department of Floriculture
and Landscaping,
K.R.C. College of Horticulture,
U.A.S. (D), ARABHAVI
(KARNATAKA) INDIA

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China aster (*Callistephus Chinensis* L. Nees) is one of the important commercial flower crop grown in India for its attractive coloured flowers which are used as loose as well as cut flowers. The flowers have long vase life and are used for various purposes, viz., for the preparation of garlands, bouquet and in flower arrangement as fillers. China aster is also popular as a bedding plant and used in herbaceous borders in gardens, it is extensively grown successfully in open conditions. For year around production in *kharif*, rabi and summer to have continuous supply of flower markets. It is extensively grown throughout the year in all parts of the country. Phenotypically stable genotypes are of great importance because the environmental conditions vary from season to season and year to year. The inadequate knowledge of interrelationship among various traits and the unilateral selection for yield

parameters makes it desirable to go for correlation studies. Since plant breeding correlation coefficient is a statistical measure used to find out the degree and direction of relationship between two or more variables. Although number of varieties are recommended for cultivation the information on the yield and yield contributing characters is lacking for the agro climatic condition of North Karnataka. Therefore efforts were made to study the association of yield with yield contributing character in China aster.

MATERIALS AND METHODS

An investigation was under taken during winter 2003-2004 and summer 2003-2004 at Kitture Rani Channamma College of Horticulture, Arabhavi , University of Agricultural Sciences, Dharwad. Six genotypes namely Phule Ganesh White, Phule Ganesh purple, Phule Ganesh Violet, Phule Ganesh Pink, Namdhari Pink and Kamini, were evaluated for quality traits.