

Influence of storage containers on storability of china aster genotypes

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SUMMARY : The storage experiment on storage potential of china aster varieties was conducted in the Department of Seed Science and Technology, AC, Dharwad. Among four china aster varieties, Kamini was found relatively better in storability with high germination and seedling vigour with low electrical conductivity up to six months of storage. Among containers, seeds stored in aluminium foil and polythene bags maintained higher germination and seedling vigour parameters compared to seeds stored in paper and cloth bag.

KEY WORDS : Storage containers, Storability, China aster, Genotypes

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China aster [*Callistephus chinensis* (L.) Nees] belongs to the family Asteraceae native of china is an important commercial ornamental annual crop grown in many parts of the world for cut and stock flower. The wide spectrum of colour ranges of flowers viz., pink, blue, violet, purple and white makes people more attractive which are used for garlands bouquets etc. Further, due to long shelf-life of cut flowers they are being wider decorative purpose. In India and Karnataka china aster is increasing every year but the availability of high quality seed in adequate quantity has become a major problem for cultivation of china aster crop. Further the china aster seeds are found to have lesser period of viability which also is a limiting factor for availability of quality seeds for sowing. Hence, there is need to extend the longevity of china aster seeds by storing in appropriate storage containers. Storage potential of seed is basically under genetic control and it differs with species and cultivars it is also influenced by number of other environmental factors viz., moisture content, RH,

temperature, storage containers, province etc. generally seeds stored in sealed moisture impervious containers store for longer period compared to those stored in moisture pervious containers as they act as effective barriers against moisture fluctuation (Thomson, 1979).

EXPERIMENTAL METHODS

The storage experiment was conducted in the department of Seed Science and Technology, College of Agriculture, University of Agricultural Sciences, Dharwad involving four china aster varieties viz., Kamini, Phule ganesh white, Phule ganesh purple and phule ganesh violet and four container viz., cloth bag, paper bag, polythene bag and aluminium foil. The fresh seeds of china aster varieties with initial 8.0 per cent moisture content were stored in different containers. The polythene and aluminium foil containers were heat sealed. The seeds required for months observations were obtained from separate containers. The monthly observation were made on germination, speed of germination, shoot length, seedling dry weight, vigour index, moisture content and electrical conductivity as per ISTA rules (Anonymous, 1996).

EXPERIMENTAL FINDINGS AND ANALYSIS

The present study revealed significant variation among

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