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# Effect of cycocel and alar on the growth and flowering of poinsettia cv. SINGLE

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**ABSTRACT :** The study was conducted in poinsettia (*Euphorbia pulcherrima*) cv. SINGLE by dipping the cuttings in different concentrations of cycocel (1500, 3000 ppm) and alar (1000, 2000 ppm) with control (untreated) at Model Floriculture Centre of the University during April, 2010 to February, 2011. Cycocel @ 3000 ppm was found to be the best for early initiation of first vegetative bud burst, early flowering and more number of leaves, branches and maximum duration of flowering. It also reduced the internodal distance, dimension of lowest leaf and bract dimension as compared to control while, alar @ 2000 ppm resulted the minimum plant height.

**KEY WORDS :** Poinsettia, Cycocel, Alar, Growth retardants

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Floriculture has been identified as the fast emerging sector and is now branded as an industry in domestic as well as export market. Amongst the traditional floricultural products, apart from cut flowers, pot plants occupy a major share as with ever increasing standard of living, the demand for pot plants has increased manifolds. Poinsettia, *Euphorbia pulcherrima*, had a good market potential as potted flowering plants and belongs to the family Euphorbiaceae. There is a constant demand for diversity in flowering pot plants. This demand can be met through the use of growth retardants. A good example is poinsettia, in which there is no genetic dwarf plant. The application of growth retardants has produced mini poinsettias (Murti and Upreti, 1995). Plant growth retardants are commonly applied in order to produce high quality, compact plants. Among various plant growth retardants, cycocel and alar are well known for production of quality plants. Cycocel is widely used to control stem elongation of geraniums, hibiscus, poinsettias and begonias (Erwin, 2003). Cycocel (2-choloroethyl trimethyl ammonium chloride), is the commercial name for chlormequat chloride. It regulates plant growth by interfering with the action of the growth hormones within the plant, thereby slowing stem elongation, result is height control and compact appearance of plant. Increasing concentration of CCC cause more number of branches and more number of nodes. In contrast to this a reduction in internodal length was recorded. (Narayan Gowda and Jayanthi, 1991). B-Nine/Alar (Succinic acid 2, 2-dimethyl hydrazide), is the commercial name for daminozide. It is highly mobile in the plant and will rapidly move from the point of application to all parts of the plant. It is generally considered safe because it has short term effect (Berberich and Anderson, 2007). In the changing requirement of interior decoration, landscape, there has been growing demand of dwarf varieties and cultivars for picturesque effect. Concerted efforts are being made to develop new varieties/ cultivars having dwarfing effect. Application techniques also have a huge impact on the effectiveness of a growth retardant on the crop thereby, modifying its presentability.

## RESEARCH METHODS

The present investigation was conducted at the Model Floriculture Centre, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, District Udham Singh Nagar (Uttarakhand) during April, 2010 to February, 2011. Pantnagar is situated at the foothills of Himalayas at 290 North Latitude and 79.30 East Longitude. The altitude of the place is 243.84 m above the mean sea level. In the present investigation the growth retardants used comprised of cycocel at 1500 ppm