

Performance of different varieties of chrysanthemum in respect of growth, flowering and flower yield under north Gujarat condition

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ABSTRACT

An experiment was laid out in Randomized Block Design during 2005-06 under field condition. The experiment comprised of seven varieties viz., IIHR-6, Shyamal, Mayur, Red Gold, Honey Comb, Panchon and Nilima. Study revealed that the various varieties showed significant difference in plant growth, flowering and flower yield. The highest plant height (24.58 cm and 36.69 cm) was recorded in variety Nilima at 30 and 60 days after planting, respectively and 42.55 cm at 90 days after planting was recorded in varieties Red Gold. The maximum number of branches (4.33, 5.41 and 6.41) were observed in variety Red Gold at 30, 60 and 90 days after planting, respectively. The maximum plant stem girth (3.95 cm) was found in variety Nilima. The variety Mayur recorded minimum days for first bud initiation (24.91 days) and days taken for initiation of first flower (31.25 days). The maximum size of flower (7.32 cm) and average weight of flower (2.33 g) were recorded in variety Nilima. The maximum shelf life of cut flower at room temperature (6.58 days) was recorded in variety Shyamal. The maximum number of flowers per plant (96.25) was found in variety Red Gold. Variety Nilima was recorded maximum weight of flower per plant (214.04) and flower yield (158.54 q/ha).

Key words : Purethrum, DAP - Days after planting

The word chrysanthemum comes from two Greek words, Chrysos – golden and anthos - flower which means golden flower. It is a member of family Asteraceae. The chrysanthemum has earned tremendous popularity as an ornamental flower for the garden, as cut flower for interior decoration or for the green house cultivation. The flower are used as cut flower and loose flower are used for making garlands, veni, bouquets and for worship. The dwarf and compact growing plants are used in flowerbed, mixed borders, edging, pot plants, hanging baskets, window boxes and front row planting. The aesthetic value contain species like *Chrysanthemum cinerariifolium* and *Chrysanthemum coccineum* are also cultivated as sources of pyrethrum, as important insecticide (Pascull Villalohos, 1996).

The number of varieties in the world is reported to be above 2000, in India, there are about 1000 varieties are in existence which include exotic as well as indigenously developed in our country. The species *Chrysanthemum morifolium* Ram is a perennial type has considerable number of varieties which differ in the size of the plant, shapes, size and colour of flower, weight and number of flowers, plant girth and flowering season. These types of varieties are preferred by the growers year after to get continuous demand in market and earned more profits. Thus, it is necessary to identify the most suitable cultivars for the particular region.

MATERIALS AND METHODS

Seven varieties of chrysanthemum were used for investigation during the year 2005-2006 under field condition. Sardarkrushinagar falls under the category of sub-tropical zone and characterized by semi-arid and arid condition. The rainfall of the area is restricted within the rainy season mostly with average rainfall of 500 mm per annum. The experiment was carried out in well drained and sandy loam soil. The experiment was layout in Randomized Block Design (RBD) with four replications. Plant spacing between two rows was 45 cm and within plant 30 cm. Seven varieties of Chrysanthemum were selected for experimentation viz., V₁- IIHR-6, V₂- Shyamal, V₃- Mayur, V₄- Red Gold, V₅- Honey Comb, V₆- Panchon and V₇- Nilima.

Five tones FYM; 50 kg N (half doses); 100 kg P₂O₅ and 50 kg K₂O per hectare were applied at the time of soil preparation and half doses of nitrogen was applied in two splits, first at 30 days after planting and second at 45 days after planting. Irrigation was given at 10 days interval.

RESULTS AND DISCUSSION

The data showed that the different varieties significantly differed from each other in all the parameters. The highest plant height was recorded in the variety Nilima