The Asian Journal of Horticulture, June 2007, Vol. 2 (1) : 242-243

Short Communication

Effect of plant spacing on growth and flowering of zinnia (*Zinnia elegans* L.)

VIKASH RANJAN CHAUDHARY, JITENDRA KUMAR, YESHPAL SINGH, RAJEEV KUMAR SINGH AND RAM PRAKASH

See end of article for authors' affiliations

Correspondence to :
Vikash Ranjan Chaudhary
Department of Horticulture,
Krishi Gyan Kendra,
JALOAN (U.P) INDIA

Accepted : *February, 2007*

Zinnia occupies a very selective and special position to flower loving people among the annual plants, which are valued much by the aesthetic world for beauty and fragrance of the flowers. Zinnia is a popular garden plant which flowers almost throughout the year in moderate climate but mainly in summer and rains with a wide range of flower colours and sizes. Recently Zinnia has become a valuable cut flower and attracting a good demand in domestic market. For this purpose proper cultivation practices are necessary and in this, spacing is the main and important factor, which has profound influence on the commercial cultivation of any ornamental crop.

So keeping the above facts in view the present investigation entitled "Effect of Plant Spacing on growth and flowering of Zinnia(Zinnia elegans L.)" was carried out.

An experiment was conducted at the Horticulture Research Farm, Ch. Charan Singh University, Meerut(U.P). Zinnia seeds were sown in nursery beds on 2nd April. One month old seedlings were transplanted in the field and followed by irrigation. The six treatments were taken viz 30x45 Cm, 30x30 Cm, 30x20 Cm, 30x15 Cm., 25x25Cm and 20x20 Cm. The experiment was laid out in randomized block design and replicate their observation on vegetative growth and flowering were recorded at the definite time from five plants taken at random in each treatment and average was calculated. Observation regarding the different characters of vegetative growth and flowering were recorded at 10 days interval continued till the plants completed flowering.

The plants transplanted at the spacing of 30x45 Cm gave the best results in respect of all the above mentioned growth characters except number of leaves. However minimum values were obtained at closer spacing of 20x20 Cm. The maximum number of leaves was observed at the spacing of 30x30 Cm. (Table 1).

The above results shows that with the decrease in plant spacing a significant decrease in growth, was observed due to inter plant competition for nutrients, water and light etc. The similar results were also reported by Jhon et al (1991), Chanda and

Table 1 : Effect of Different Plant Spacing on Vegetative Characters.

Plant Spacing (cm)	Plant Height (cm)	Leaves per. plant (Nos.)	Branches per plant (Nos.)	Length of Branches (cm)	Inter nodal length (cm)	Nodes per plant
30x45	84.90	148.93	29.80	33.23	10.28	16.66
30x30	81.83	154.33	27.06	31.41	9.67	15.53
30x20	71.60	143.60	22.33	26.83	9.30	14.40
30x15	71.00	139.86	22.20	25.73	8.85	14.20
25x25	74.03	141.86	22.73	25.87	8.86	15.20
20x20	66.03	124.93	18.60	22.82	8.05	11.53
C.D at 5%	3.12	10.22	3.87	5.35	0.66	1.13