

Evaluation of capsicum varieties under polyhouse conditions

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ABSTRACT

Protected cultivation is gaining importance in the recent past, owing to its perpetual demand throughout the year. Polyhouse production has already been proven as profitable and production under protection has attracted much attention in recent years. Hence, a study was carried out to evaluate the performance of capsicum varieties under polyhouse conditions. The study revealed that all varieties were suitable for growing under polyhouse conditions. Among the three varieties, the variety Arka Mohini recorded increased fruit weight (199.6 gm) and length of the fruit (10.54 cm). In case of Arka Bharat, the girth of the fruit was high (17.70 cm) followed by Arka Mohini (15.50 cm) but it recorded the lowest individual fruit weight of 83.82 gm. The variety Arka mohini also registered an increased yield of 1.204 kg/plant followed by Arka Gaurav (0.678 kg/plant) and Arka Bharat (0.403 kg/plant). The increase in yield was due to increase in fruit length, fruit weight and fruit girth etc.

Key words : Capsicum, Evaluation, Varieties, Polyhouse

Capsicum is an important spice cum vegetable crop and forms a rich source of Vitamin C as a salad. It is a valuable crop with excellent prospects both for the domestic and export market. Sweet peppers are used for fresh consumption, and they are processed into powders, sauces, and salads. Nutritional content is altered by the changes in the way they are consumed. They are an excellent source of Vitamin C, Vitamin A and other minerals and nutrients. It has very good potential as an alternative for greenhouse tomatoes.

MATERIALS AND METHODS

The experiment was conducted at Horticultural College and Research Institute, Periyakulam to evaluate the performance of capsicum varieties under polyhouse conditions. The plants were grown under lowcost polyhouse located at western block of Horticultural College and Research Institute, Periyakulam. Three capsicum varieties viz., Arka Mohini, Arka Bharat and Arka Gaurav from IIHR were utilized for the study. The Experiment was laid out with 3 varieties of capsicum in Completely Randomized Design with five replications. Five randomly selected plants from each plot were utilized for recording the observations. Observations were made on individual fruit weight, length of the fruit, girth of the fruit, number of fruits per plant, number of seeds per fruit and yield per plant.

RESULTS AND DISCUSSION

The study revealed that there were significant

differences among the varieties for all the characters. All the varieties were suitable for growing under polyhouse conditions. Significant differences among the varieties were observed for all the characters (Table 1).

Among the three varieties, the individual fruit weight ranged from 83 g to 200 g. The variety Arka Mohini recorded increased fruit weight (199.6 g) and length of the fruit (10.54 cm). Hari har Ram and B.P. Singh (1990) and Sundaram (1992) reported similar results in French bean. The number of seeds per fruit was also high (207) compared to other varieties.

In case of Arka Bharat, the girth of the fruit was high (17.70 cm) followed by Arka Mohini (15.50 cm) but it recorded the lowest individual fruit weight of 83.82 g. The results are in consonance with the findings of Aruna (1992), Arora *et al.* (1982) and Sundaram (1992) and Arunkumar (2000). The number of fruits per plant was moderate (4.67 Nos) compared to other varieties. The results are also in agreement with the findings of Agarwal *et al.* (2000), Shobha and Arumugam (1991) and Vijayakumari *et al.* (1999).

Significant differences in yield per plant were observed for all varieties. The variety Arka Mohini registered an increased yield of 1.204 kg/plant followed by Arka Gaurav (0.678 kg/plant) and Arka Bharat (0.403 kg/plant). The increase in yield was due to increase in fruit length, fruit weight and fruit girth etc., This is in consonance with the findings of Susheela and Bharathalakshmi (2005) Vijayakumari *et al.* (1999) and Suchindra (2002) in tomato. Similar results were expressed by Jawaharlal and Veeraraghavathatham (2003), Sumathi