



## Performance of various genotypes of chilli under South Gujarat conditions

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### ABSTRACT

Field experiment was conducted to study the performance of various genotypes of chilli under South Gujarat conditions at Regional Horticultural Research Station of Navsari Agricultural University, Navsari as voluntary centre during *Rabi* season of 2009. The experiment was laid out in randomized block design with three replications, which included nine genotypes of chilli. The genotypes were transplanted with great care in the field during the month of November 2009 at the spacing of 60 cm X 60 cm. Differences among the genotypes for growth and yield parameters were found significant. The genotype ACS-06-2 was found significantly superior than all three checks, recorded the green fruit yield of 11.39 t/ha.

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**Key words :** Chilli, Genotypes, Growth, Yield

Chilli or hot pepper (*Capsicum* species,  $2n=2x=24$ ), belongs to the family solanaceae, is a tropical spice crop commercially grown throughout the world and is used in almost all dishes. India is the largest producer and exporter of chilli in the world. Chilli fruits are good source of Vit. A and C. (Desai and Patil, 1984; Singh, 1993).

In India, chilli is grown in almost all states. Andhra Pradesh has been leading both in area and production of chilli. The area under Gujarat is 33,260 hectares with the green chilli production of 1,37,992 MT (Anonymous, 2009). In food and beverage industries, chilli is being used in the form of oleoresin which permits even distribution of color and flavor in food. Capsaicin is the pungent principle found in chilli (Singh, 2004).

There is a large variation in fruit color, shape and size in chilli. Varieties having thin pericarp, low seed content and strong spike are suitable for dried chilli. The production of chilli is greatly fluctuating in respect to cultivars and environment under which they grow. The information generated by conducting the IET/SSVT/LSVT/AVT trails on a particular crop on large scale will be a valuable guidance to the research workers, olericulturist and plant breeder for their breeding program in other regions (Chadha, 2002).

### MATERIALS AND METHODS

Total nine genotypes with three checks of chilli were evaluated in field conditions at Regional Horticultural Research Station, ASPEE College of Horticulture and Forestry of Navsari Agricultural University, Navsari as voluntary centre during the *Rabi* season of 2009. The experimental material *i.e.* seed packets of all the genotypes were allotted from the Project Coordinator, AICRP (Vegetable Crops), IIVR, Varanasi, U.P. for conducting the trial. The genotypes were transplanted with great care in the field during the month of November 2009 in Randomized Block Design with three replicates, at the spacing of 60 cm x 60 cm. Details of genotypes are given in Table 1.

Five randomly chosen plants were tagged from each genotype in each replication were used for recording observation on growth and other yield contributing parameters. Fruit yield data were recorded picking wise and calculated on hectare basis.

The research data on growth parameters and fruit yield were subjected to statistical analysis as suggested by Panse and Sukhatme (1984).

### RESULTS AND DISCUSSION

The performance of various genotypes of chilli under