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Research Paper

Evaluation of different genotypes of chilli through IET under South Gujarat conditions

S.N. SARAVAIYA, P.B. KOLADIYA, H.B. PATEL, D.A. PATEL, V.L. PARMAR **AND** J.B. PATEL

See end of the article for authors' affiliations

Correspondence to:
S.N. SARAVAIYA
Department of Horticulture, ASPEE College of Horticulture and Forestry, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA
Email : sanmukhsaravaiya @yahoo.in

ABSTRACT

Field experiment was conducted to evaluate the 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. A randomized bock design was used with three replications, which included eleven genotypes of chilli. The chilli genotypes were transplanted with care in the field during the month of November 2009 at the spacing of 60 cm x 45 cm. Significant differences were observed among the genotypes for growth and yield parameters. The genotype GVC-111 was found significantly superior than all the genotypes under study, recorded the green fruit yield of 13.95 t/ha. The next best genotypes were Chivar-2, Chivar-8 and Chivar-3.

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Key words : Chilli, Genotypes, Growth, Yield

Pungent peppers commonly known as chillies (*Capsicum* spp. 2n = 2x = 24) are most widely cultivated species in the world, India is one of the leading countries in terms of area and production. There are five major cultivated species in the genus *Capsicum* (*C. annum, C. frutescens, C. chinense, C. pendulum and C. pubescens*) which are strictly cultivated in Central and South America, except *C. frutescens* which also spread to some parts in the USA, Africa and India (Ram, 1998).

India is one of the leading country so far as chilli area and production is concerned. Chilli in India has become an essential article of diet both of rich and poor. Its fruits are used for its pungency and spicy taste in diet, is due to capsaicin. Dry chillies powdered or ground into paste, and even green chillies are used for curries, samber, rasam and other flavory dishes. It is widely used in manufacture of curry powder, in preparation of sauces, soup, salad, ketchup etc. It is a rich source of vit. A and vit. C. (Desai and Patil,1984; Singh, 1993, Singh 2004).

The knowledge of genetics of various traits is very essential for a breeder to plan breeding program for getting efficient results in the succeeding generations. Color of fruits, fruit shape, position, fruit apex, fruit length and thickness, pedicel length, number of seeds/fruit etc. are considered as important characters in chilli improvement work. It provides valuable guidance based on the information generated by conducting the IET/SSVT/ LSVT/AVT trails on a particular crop on large scale to the research workers, olericulturist and plant breeder for their breeding program in other regions (Chadha, 2002).

MATERIALS AND METHODS

Total eleven genotypes with two checks of chilli were evaluated in field conditions at Regional Horticultural Research Station, ASPEE College of Horticulture & 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, Uttar Pradesh (India) 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 45 cm. Details of