

ABSTRACT

Fifteen genotypes of carrot *viz.*, SH-C-131, SH-C-132, SH-C-130, SH-C-135, SH-C-39, SH-C-50, SH-C-102, SH-C-108, SH-C-5, SH-C-33, SH-C-137, SH-C-133, SH-C-132, Chamman and Karoda, were grown in RBD with three replications at a spacing of 15 x 30 cm during *Kharif* 2009 at Vegetable Experimental Area, Sher-e- Kashmir University of Agricultural Sciences and Technology, Shalimar, Srinagar. Root yield was recorded maximum in SH-C-131 (157.00 q/ha) followed by SH-C-134 (132.33 q/ha) and SH-C-130 (122.33 q/ha) while minimum in SH-C-137 (82.33 q/ha). The quality traits *viz.*, TSS was maximum in SH-C-135 (12.06) followed by SH-C-134 (12.00), SH-C-39 (11.70) and minimum in SH-C-133 (9.06) while vitamin C (mg/100 g) was maximum in SH-C-108 (7.93) followed by SH-C-131 (7.83), and SH-C-102 (6.60), minimum value being recorded by Chamman (3.23). Genotype SH-C-131 was found superior for most of the traits *viz.*, total plant length, root length, root diameter, minimum core diameter, and root yield, hence, can be recommended for further evaluation and cultivation during summer months in the valley, thus reducing dependence on imports.

Carrot (*Daucus carota* L., $2n=2x=18$) is a cool-season root vegetable grown all over the world under temperate climates during autumn seasons in temperate climate and in sub-tropical climates during winter in subtropical climate. In India, it is cultivated over an area of 24,000 hectare with an annual production of 350,000 metric tones with its productivity much lower (14.58 t/ha) than the world average (22.17 t/ha) as per FAO (2004). Carrot has a significant place as an ingredient in soups and sauces and in dietary compositions and also as a salad. A sweet preparation called *Gajar Halwa* is very famous dish in North India. Besides canning, it is also used in preparation of pickles. It is also exported in the form of fresh roots to the countries like Kuwait and Sharjah. Carrot is a rich source of