

## Response of violet coloured garlic (*Allium sativum* L.) genotypes in *rabi* season

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### ABSTRACT

An experiment was conducted to evaluate new garlic selections during *rabi* season under Nashik conditions at Onion Research Station, Pimpalgaon Baswant Dist. Nashik for four years. The selection P.B. Sel.2 recorded significantly superior mean yield per ha. (169.54q/ha.). The increase yield of P.B. Sel. 2 was observed to be 47.75% over check Godavari. The selection P.B. Sel.2 was also found superior in average weight of bulb (26.15 g), average weight of 10 cloves (10.12 g) and dark violet colour. The incidence of purple blotch as well as stemphyllium blight disease and thrips population per plant was observed to be lowest in P.B. Sel.2.

**Key words :** Garlic, Genotypes, Rabi season.

### INTRODUCTION

Garlic (*Allium sativum* L.) is the second most important Alliums after onion cultivated and used in India. It is mostly consumed fresh as well as dried form. It is also used as an ingredient to flavor the various dishes all over the world. It is well known for its medicinal properties. India ranks second in area as well as in production. In Maharashtra, garlic occupied an area about 7,000 ha. with the production of 52,000 t and average productivity of 7.43 t/ha (Anon.2001). The average productivity of garlic is very low in India as compared to other garlic growing countries. Present production of garlic is not adequate to meet the indigenous and export demand of garlic. The garlic production therefore, needs to be increased either by increasing the area or by developing the high yielding varieties. In Maharashtra, most of the consumers and ultimately farmers prefer violet coloured garlic. Looking to the demand from the farmers, it was felt necessary to test new violet coloured genotypes with high yields.

### MATERIALS AND METHODS

The present experiment was conducted on five violet coloured selections *viz.*, P.B.Sel.2, P.B.Sel.8, P.B.Sel.9, Rahuri local and Malaypur local with check Godavari at Onion Research Station, Mahatma Phule Krishi Vidyapeeth, Pimpalgaon Baswant Dist. Nashik during *rabi* season of 2000-01, 2001-02, 2002-03 and 2003-04. The trial was conducted in randomized block design with four replications. The main field was ploughed twice,

harrowed twice and flat beds of 3 x 2 m size were prepared. The 20 t/ha FYM and 100:50:50 kg/ha NPK were applied to the crop. Planting was done in a bed size of 15x10cm in third week of October. Normal management practices were adopted for raising the crop. Observations were recorded on plant height, no. of leaves/plant, bulb neck thickness, bulb diameter, bulb length, average weight of bulb, no. of cloves/bulb, average weight of ten cloves, bulb colour, bulb yield/ha. The observations were also recorded on percent intensity of purple blotch, stemphyllium blight and thrips count.

The individual year data so generated was statistically analysed and then the four years data was pooled (Panse and Sukhatme,1967).

### RESULTS AND DISCUSSION

The yield differences among the selections recorded significant differences during all the four years and in pooled analysis also (Table 1). The selection P.B. Sel. 2 recorded maximum yield/ha. during all the years under study as compared to other selections and the check Godavari. The pooled data indicated that the selection P.B.Sel.2 recorded significantly maximum bulb yield (169.54q/ha.) over the check Godavari (116.32 q/ha), however, statistically at par with P.B.Sel.9 (160.44q/ha), Rahuri local (152.71q/ha) and P.B.Sel.8 (147.22q/ha). Similar findings were reported by Sharma *et al.* (1997) and Singh and Tiwari (1994). The P.B. Sel.2 also recorded maximum per cent increase (45.75%) followed by P.B. Sel. 9 (37.92 %) over the standard check Godavari.

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