

Performance of onion genotypes in *rangda* (Late *kharif*) season under Nasik conditions

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ABSTRACT

An experiment was conducted at Onion Research Station, Pimpalgaon Baswant (Nashik) to evaluate eight new onion genotypes during *rangda* (late *kharif*) season 2003-04 under Nashik conditions. The results revealed that among the different genotypes S-1 proved to be superior in terms of growth and yield parameters like days to 50% top fall after transplanting (86 DAT), neck thickness (1.19cm), maximum bulb to green top ratio (4.47), lowest premature bolting percentage (3.17%), less twin bulb percentage (5.03%) and highest bulb yield per ha. (525.31 q/ha). The same selection also recorded minimum purple blotch index (12%) among all the selections and varieties tested.

Key words : Onion, Genotypes, *Rangda*.

INTRODUCTION

Onion (*Allium cepa* L.) is one of the most important vegetable crop extensively grown throughout India. Maharashtra occupied 68,000 ha. area with the production over 1.37 m. tones which contributed 60 and 40 per cent of countrys area and production, respectively (Anon.2001), however, the productivity is still low.

Predominantly, onion is a rabi season crop in India. However, in Maharashtra and that to be in Nasik area onion cultivation is undertaken in three seasons *viz.*, *kharif*, *rabi* and *rangda*. The late *kharif* cultivation in this area is known as *rangda* season. It is sown from July-August, transplanted in September-October and harvested from January to February. Most of the farmers cultivating *rangda* onion use dark red *kharif* varieties for this season which causes excessive vegetative growth which is responsible for late maturity, non-attainment of physiological maturity, pre-mature bolting, bigger size bulb with thick bulb neck and twin bulb development. Looking to the huge area under *rangda* onion cultivation in this area, it was felt necessary to test new genotypes suitable for *rangda* season.

MATERIALS AND METHODS

The present study was conducted at Onion Research Station, Mahatma Phule Krishi Vidyapeeth, Pimpalgaon Baswant (Nashik) during *rangda* (late *kharif*) season of 2003-04. The seeds were sown on raised bed and seedlings were prepared. The main field was ploughed twice, harrowed twice and flat beds of 3 x 2 m size were

prepared. Eight weeks old seedlings were transplanted at 15 x 10cm spacing during second week of October. The 20 t/ha FYM and 100:50:50 kg/ha NPK were applied to the crop before transplanting. Eight cultivars of onion were evaluated in randomized block design with three replications. Recommended cultural practices were followed to ensure good crop. Observations were recorded on days to 50% top fall, plant height at top fall, neck thickness, bulb diameter (polar and equatorial), average bulb weight, bulb to green top ratio, premature bolting percentage, percent twin bulbs, percent marketable yield, total bulb yield and percent purple blotch disease intensity on leaves. The data so generated was statistically analysed (Panse and Sukhatme,1967).

RESULTS AND DISCUSSION

The eight onion entries differed significantly for all the traits except plant height at top fall and weight of bulb (Table 1). The S-1 recorded minimum days to 50% top fall after transplanting (86 DAT), however, it was maximum in B-780 (108 DAT). The S-1 was observed to be early maturing among all the entries may be because of controlled vegetative growth and very thin neck.

Though the data regarding plant height at top fall indicated non-significant differences, the S-1 recorded numerically minimum plant height at top fall (39.07 cm). The selection S-1 recorded significantly minimum neck thickness (1.19cm) over all the checks, however, it was statistically at par with all the selections *viz.*, S-3 (1.20cm), S-2 (1.24cm), M-9 (1.27cm) and M-11 (1.32cm). The

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