

## Effect of various planting materials and different date of planting on yield and quality of *Kharif* onion (*Allium cepa* L.) cv. AGRIFOUND DARK RED

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### ABSTRACT

A field experiment was conducted on sandy loam soil of Horticulture Instructional Farm, C. P. College of Agriculture, S. D. Agricultural University, Sardarkrushinagar during the year 2005 and 2006. The experiment was conducted on "Effect of various planting material and different date of planting on growth and bolting of *Kharif* onion (*Allium cepa* L.) cv. AGRIFOUND DARK RED." Twelve treatments comprising of four planting materials viz., seedling, 1.5 – 2.0 cm, 2.0 – 2.5 cm and 2.5 – 3.0 cm size onion sets and three dates of planting viz., 10<sup>th</sup>, 20<sup>th</sup> and 30<sup>th</sup> July were tested in Factorial Randomized Block Design (FRBD) with four replications. On the basis of pooled data, relationship of different growth characters with various planting materials and different date of planting revealed that the highest plant population was found in D<sub>3</sub>P<sub>4</sub>, while maximum plant height and neck thickness of plant was recorded with treatment combination D<sub>2</sub>P<sub>3</sub>. Number of leaves per plant and bolting percent did not affected by combination of various planting materials and different date of planting.

**Key words :** Bolting, Genetical, Neck, Pungency, Sets

Onion is one of the most important vegetable crop of India. Onion is used green as well as bulb. It is popular salad crop and mature onion bulbs are widely used as a cooked vegetable in soups, stews and casseroles in addition to a flavouring agent in many additional dishes. Onion possesses nutritional and medicinal importance. The outstanding characteristic of onion is the pungency (which is due to volatile oil known as Allyl-propyl-disulphide).

Onion is mainly a *winter* season crop; however it is raised during *Kharif* in Maharashtra and Gujarat to catch the off season market. Onion is propagated by seeds and bulb. By propagation of sets we can get early yield as compared to propagation by seedlings. The growth and yield of cultivated crop plants is mainly influenced by two factors viz., genetical and cultural or management. The second factor deals with cultural practices viz., planting date, sowing method, seed rate, planting material, spacing, fertilizer, irrigation, plant protection, weed control etc. The time of sowing and planting material exerts a distinct effect on growth of onion. Therefore, the present study was indicating to study the effect of various planting materials and different date of planting on growth of *Kharif* onion.

### MATERIALS AND METHODS

The experiment was conducted on sandy loam soil of Horticulture Instructional Farm, C.P. College of Agriculture, S.D. Agricultural University, Sardarkrushinagar during the year 2005 and 2006. Twelve treatments comprising of four planting material viz.,

seedling, 1.5 – 2.0 cm, 2.0 – 2.5 cm and 2.5 – 3.0 cm size onion sets and three dates of planting viz., 10<sup>th</sup>, 20<sup>th</sup> and 30<sup>th</sup> July were tested in Factorial Randomized Block Design (FRBD) with four replications. All the recommended cultural practices were adopted during growing season.

### RESULTS AND DISCUSSION

The plant stand was found significant during both the years of experimentation and in pooled analysis. The maximum plant stand (98.08 %, 96.91 % and 97.50 %) was found in the year 2005, 2006 and in pooled analysis, respectively with planting of 2.5 – 3.0 cm size onion sets (P<sub>4</sub>). The data presented in Table 1 revealed that the maximum plant stand (94.12 % and 92.25 %) was found in 2005 and 2006 with 30<sup>th</sup> July (D<sub>3</sub>) planting. The combined effect of various planting material and different date of planting on plant stand was found significant in both the years of experimentation and in pooled data. The data (Table 2) revealed that maximum plant height (37.17 cm, 41.36 cm and 39.26 cm) were recorded with P<sub>3</sub> i.e. 2.0 – 2.5 cm size onion sets in the year 2005, 2006 and in pooled analysis, respectively. It is clear from the data that the maximum plant height (34.32 cm, 34.93 cm and 34.63 cm) were recorded with D<sub>3</sub> i.e. 30<sup>th</sup> July in the year 2005, 2006 and in pooled analysis respectively. From the data in Table 2 it can be said that the maximum plant height (39.61 cm, 42.73 cm and 41.17 cm) were recorded with D<sub>2</sub>P<sub>3</sub> in the year 2005, 2006 and in pooled analysis.