Research Note

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Effect of age of seedlings on growth, yield and quality of onion (*Allium cepa* L.) in *Rabi* North Gujarat condition

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ABSTRACT : The field experiment was conducted on onion cv. AGRIFOUND WHITE (*Allium cepa* L.) at Horticulture Instructional Farm, Chimanbhai Patel College of Agriculture, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar during the year 2010-2011 to study the effect of age of seedlings on growth, yield and quality of onion (*Allium cepa* L.) cv. AGRIFOUND WHITE. Different age of seedling did not exert significant effect on plant stand per plot. The plant height (29.85, 59.66 and 62.90 cm) at 45, 75 and 90 DATP, number of leaves per plant (5.14, 8.60 and 10.94) at 45, 75 and 90 DATP, neck thickness (1.37 cm) at harvesting time, bolting per cent (22.99%), diameter of bulb (5.07 cm), number of doubled bulb (22.42) per plot, weight of doubled bulb (2.64 kg) per plot, total yield (27.35 kg) per plot, marketable yield (19.68 kg) per plot, unmarketable yield (7.67 kg) per plot and total soluble solids (14.47 %) were significantly higher with transplanting of 8 weeks seedling *i.e.* treatment S_3. The minimum days required for maturity (147.00) was recorded with transplanting of 8 weeks seedling.

Key Words : Onion, Seedling, Age of seedling

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Onion (*Allium cepa* L.) is one of the most important vegetable bulb crops grown in India from ancient time. The edible portion is a modified stem which is known as 'bulb' and develops under-ground. Onion is popularly used green as well as mature bulb. It is a 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. Because of its importance in cookery, onion is called 'queen of the kitchen' by Germans. It is one of the few versatile vegetable crops that can be kept for a fairly long period and can safely withstand the hazards of rough handling including long distance transportation.

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 2010-2011. Nine treatments comprised of three age of seedlings *viz.*, 6 weeks, 7 weeks and 8 weeks and three dates of transplanting *viz.*, 1st September, 15th September, and 30th September were tested in Factorial Randomized Block Design with four replications. The data were recorded on growth and yield attributes *viz.*, plant stand per plot, plant height (cm), number of leaves per plant, neck thickness (cm) at harvesting time, bolting percent, days taken for maturity and total yield (kg)/plot.

Table 1 : Effect of age of seedling on growth characters of onion (mean for year of 2010-11)

Treatments	Plant stand %	Plant height (cm)			Number of leaves per plant			Neck thickness (cm)	Bolting (%)	Days to maturity	Total yield per plot (kg)
		45 DATP	75 DATP	90 DATP	45 DATP	75 DATP	90 DATP				
Age of seedlings											
S_1 - 6 weeks seedling	74.31	22.81	50.08	53.55	4.28	7.37	9.38	1.04	14.40	156.00	21.04
S_2 - 7 weeks seedling	76.43	25.82	54.72	57.97	4.62	7.90	10.02	1.14	19.48	150.58	24.31
S_3 - 8 weeks seedling	77.30	29.85	59.66	62.90	5.14	8.60	10.94	1.37	22.99	147.00	27.35
S.E. ±	0.88	0.55	0.96	1.02	0.08	0.14	0.18	0.023	0.69	1.84	0.52
C.D. (P=0.05)	NS	1.60	2.82	2.96	0.25	0.41	0.55	0.067	2.00	5.35	1.53