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Influence of planting time on seed yield and seedling vigour in aggregatum Onion genotypes

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Onion (*Allium cepa* L. var. *cepa*) is an important vegetable crop of our country, stands at premier position among the vegetable crops. It is valued for its unique pungency, which is very important character for better storage and processing qualities. Production of quality seeds is an important factor in successful onion cultivation with the growing consciousness about the high yielding varieties among the farmers. Cultivar performance and date of planting plays an important role in the selection of genotypes for yield improvement and adaptation to particular environmental condition. The time of planting is the most important factor in seed set and delayed or early planting adversely affects seed yield of onion. The present experiment was undertaken to study the seasonal influence on flowering and seed set in the identified genotypes of aggregatum Onion at experimental farm of Horticultural College and Research Institute, Coimbatore during 2010-2011. The experiment was laid out in a Factorial Randomized Block Design with three replications including four different planting seasons viz., September, October, November and December were evaluated as treatments under factor (A) and three genotypes viz., Co(on 5), Puttarasal type and Santhaipadugai local as treatments under factor (B). Out of three genotypes, Puttarasal type recorded significantly higher seed yield (807 kg ha⁻¹) when transplanted during September season. Seedling vigour characters viz., germination percentage (92.76 %), root length (7.20 cm), shoot length (8.80 cm), dry matter production (15.82 mg 10 S₂⁻¹) and vigour index (1484.14) were the highest with Puttarasal type when transplanted during September month.

Biography

Rohini N, M.Sc. (Horticulture), presently is a Ph.D. scholar in the Department of Vegetable Crops, Horticultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore. She is presently doing research in "Genetic and biochemical studies in chilli Germplasm *capsicum annum* var. *Annuum*."

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Wild banana 'Bee hee kela (BB)' (*Musa balbisiana*) and its reaction to prolonged moisture stress

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Banana is the second most important fruit crops in India after mango. Drought tolerance in bananas can be described as the ability to survive under water scarcity during various stages of crop growth, without significant yield reductions. There are reports that stress symptoms are evident when available moisture drops below 66 percent of full field capacity. A study was conducted at IIHR, Hessaraghatta to analyze banana cultivars to stress tolerance during 2011-2013. The average annual maximum temperature was 29°C, total average annual rainfall during experimental period was 568 mm/year, and average RH was 77%. Seven commercial cultivars of different genomic groups viz., Grand Naine (AAA), Neypoovan (AB), Karpooravally (ABB), Jourmoney (dessert ABB type), Nendran (AAB), Rajapuri (Pome-AAB), Mysore poovan (AAB) and wild *Musa balbisiana* Bee hee kela (BB) were planted in the month of August 2011, in isolation using cement rings of one and half meter diameter recommended cultural practices were followed and provided regular irrigation for establishment of plants. Stress was imposed by withholding any irrigation under open field conditions. The observations revealed that all the commercial varieties survived 6-8 months of complete water stress. Whereas the wild *Musa balbisiana* 'Bee hee kela' (BB) survived even after a year up to 2013, which can be attributed to inbuilt tolerance of B genome to moisture stress as per Stover and Simmonds, 1987. The identified water stress tolerant genotype Bee hee kela (BB) can be an important genome source for moisture stress tolerance banana breeding.

Biography

V Ramanjinappa has completed his M.Sc. (Agri) at the age of 24 years from University of Agricultural Sciences, Raichur and post graduate diploma studies from Annamalai University, Tamil Nadu. He is working as SRF under the project 'National Initiative on Climate Resilient Agriculture' at IIHR, Bangalore. He has published 8 papers in reputed journals and 10 popular articles in reputed magazine.

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