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Evaluation of garlic (*Allium sativum* L.) cultivars for growth, yield and storability

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The experiment was carried out at Horticulture Research Station, Mondouri, Bidhan Chandra Krishi Viswavidyalaya, during the *rabi* season of two consecutive years *ie*. 2009-2010 and 2010-2011. The five improved cultivars of garlic viz., Yamuna Safed-1, Yamuna Safed-2, Yamuna Safed-3, Yamuna Safed-4 and Agrifound White collected from NHRDF, Nasik, Maharashtra along with two locally adaptable cultivars 'Katki' and 'Gangajali' were grown during middle of October in RBD with three replications, to evaluate the most promising cultivar. The cloves were planted at 20 cmx15 cm spacing. The recommended dose of manures and fertilizers were FYM at 20 t/ha and NPK at 150:125:150 kg/ha. Storability of the bulbs was studied in ambient condition for a period of 6 months taking 20 random bulbs per replication in each cultivar. The maximum plant height (73.62 cm), dry weight of leaves (7.78 g), neck thickness (1.13 cm), bulb weight (33.54 g), number of cloves per bulb (37.24) and plot yield (3.15 kg/3m^2) were recorded in cultivar Yamuna Safed-2. The maximum number of leaves (12.76), polar diameter of bulb (4.12 cm), weight of cloves (1.38 g), both length (3.14 cm) and breadth (1.38 cm) were observed in Yamuna Safed-3.

The cultivar Yamuna Safed-1 exhibited the maximum breadth of leaves (1.72 cm), number of roots (98.34 cm), length of roots (9.15) and equatorial diameter of bulb (4.53 cm). In respect to quality parameters, the maximum total soluble solids (38.26^0 brix) and dry matter content (40.32%) of bulb were recorded in Agrifound White and Yamuna Safed-3 respectively. In respect of storability of bulb the maximum sprouting (6.25%) and physiological loss in weight (18.45%) were observed in Gangajali but maximum rooting (5.26%) and discolouration of bulb(4.28%) were recorded in Agrifound White and Katki respectively. Considering the yield, Yamuna Safed -2, Yamuna Safed-1 and Yamuna Safed-3 were found suitable in the new alluvial plains of West Bengal.

Biography

Soumya Ghanti was born in West Bengal in 1983. He did his M.Sc. (Horticulture) (Horticulture) from Bidhan Chandra Krishi Viswavidyalaya during the year 2008 and continuing his Ph.D. program from same university. He enjoyed (3 years) University Research Scholarship during his Ph.D. programme. He has published two research papers in reputed journals and newsletter. He has attended ten national and international seminar and symposiums altogether.

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Variability studies in open pollinated seedlings of Heliconia (*Heliconia* spp.)

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An investigation on vegetative performance and extent of variability among open pollinated seedlings of fifteen genotypes of heliconia (*Heliconia spp.*) was conducted at Vellayani, Kerala. Wide range of variation was observed in most of the seed, vegetative and pigment characters. The variability was high both at phenotypic and genotypic level for most of the characters. GCV for various characters ranged from 14.1 (leaf length) to 45.42 (number of suckers). Estimate of heritability ranged from 32.31 (Chlorophyll A) to 99.99 (plant height). High heritability along with high genetic advance was observed for seed characters, plant height and leaf characters. Following Mahalanoblis statistic, these species and varieties of heliconia were subjected to D^2 analysis and grouped into five clusters.

Biography

D S Kadam has completed his master's degree in Horticulture in 2011 from Kerala Agricultural University (Kerala), India. Currently, he is Ph.D. scholar at Dr. PDKV, Akola (MS), India. He was recipient of ASPEE JRF for master's degree and he is receiving INSPIRE Fellowship from DST, Govt. of India to pursue Ph.D..

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