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Effect of season and soil fertility level on uptake pattern of N, P and K of Chilli (*Capsicum annuum* L.)

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There was a significant variation in N, P and K content and their uptake by different plant parts with respect to growing seasons, fertility levels and genotypes. Similarly nitrogen (N), phosphorus (P) and potassium (K) content and uptake (except fruit N and fruit P uptake) increased with increasing in the levels of soil fertility from 0 to 200% recommended dose of fertilizers (RDF). Considering yield performance of different genotypes, 'Ulka 686 F1' (24.9 t/ha), 'Jwalan' (20.0 t/ha) and 'CA-29' (19.3 t/ha), were selected for growing at 150% RDF in the winter season. Similarly for rainy season 'Jwalan' (12.2 t/ha), 'Ulka 686 F1' (11.3 t/ha) at 100% RDF and 'Pusa Sadabahar' at 150% RDF (10.4 t/ha) were selected. Highest amount of total N, P and K uptake of 158.55, 68.51 and 195.35 kg/ha, respectively was recorded by Ulka 686 F₁ at 200% RDF. Partitioning of nutrient revealed that fruit N, P and K content increased with increasing fertility level upto 150% RDF in winter season and 100% RDF in rainy season thereafter decreased subsequently. Stem N, P and K percent increased with increasing fertility level whereas reverse case noticed in case of root N, P and K content irrespective of seasons.

Biography

Suchand Datta did Ph.D. from Uttar Banga Krishi Viswavidyalaya. He joined his service during 2001 as the post of Lecturer in Uttar Banga Krishi Viswavidyalaya. During his academic career he guided 3 M.Sc. students as chairman, and published 40 research papers in national and international journals, 5 popular articles in English and a large number of popular articles in local languages. He has participated and presented more than 20 research papers in different national and international level seminar/symposia/conference/world congress in India and abroad. He was associated as Co- Principal Investigator in Central Scheme for the Development of medicinal Plant Sponsored by National Medicinal Plants Board Deptt. of ISM & H, Ministry of Health & Family Welfare, Govt. of India and associated as Scientist Integrated Program for Development of Spices and now it is renamed as NHM- Spices' from 2002 to 2011. He wrote 4 books and 3 book chapters. He has actively participated in different training programs for the benefit of the farmers. He has taught graduate and post graduate students in vegetable and spice crops.

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Weed competitiveness, growth and yield of aerobic rice in the coastal region of Karaikal

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A field experiment was conducted at Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal to study the efficacy of different weed management practices in aerobic rice in the coastal areas of Karaikal. The experiment consisted of eleven treatments laid out in randomized block design with three replications consisting of four pre-emergence (Pendimethalin 0.75 kg ha⁻¹ + H.H at 40 DAS, Pretilachlor + safener 0.50 kg ha⁻¹ + H.H at 40 DAS, Butachlor 1.00 kg ha⁻¹ + H.H at 40 DAS, Anilophos 0.40 kg ha⁻¹ + H.H at 40 DAS) and three early post-emergence herbicides (Cyhalofop 0.10 kg ha⁻¹ + H.H at 40 DAS, Pyrazosulfuron ethyl 0.20 kg ha⁻¹ + H.H at 40 DAS, Metamifop 0.075 kg ha⁻¹ + H.H at 40 DAS, Metamifop 0.100 kg ha⁻¹ + H.H at 40 DAS) followed by one hand hoeing at 40 DAS, hand hoeing at 20 and 40 DAS compared with an unweeded control and hand weeding at 20 and 40 DAT in transplanted rice. The predominant weed flora observed in the experimental field was *Echinocloa colonum, Cyanodon dactylon, Panicum repens, Cyperus rotundus, Trianthema portulacastrum, Cleome viscosa, Aeschynomene indica* and *Eclipta alba*. The application of herbicides reduced the weed population and weed dry weight and increased the grain yield significantly. The results revealed that pre-emergence application of pendimethalin 0.75 kg ha⁻¹ + H.H at 40 DAS recorded significantly higher grain and straw yield (1533 and 2741 kg ha⁻¹, respectively), lower weed density (35.0 to 47.7 no. m⁻²), weed dry matter (10.7 to 39.9 g. m⁻²) and higher weed control efficiency (77.4 to 92.6%).

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