Agrotechnol 2014, 2:4
http://dx.doi.org/10.4172/2168-9881.S1.008

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference on
Agricultural & Horticultural Sciences
Radisson Blu Plaza Hotel, Hyderabad, India February 03-05, 2014

Integrated weed management and dynamics of weed seedbank in rabi fennel (*Foeniculum vulgare*)

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A field experiment was conducted during *rabi* season of 2011-12 at Junagadh to find out most effective and economical method of weed control in *rabi* fennel (*Foeniculum vulgare* Mill.). The dominant weed species observed were *Cyperus rotundus* L., *Chenopodium album* L., *Digera arvensis* Forsk and *Asphodelus tenuifolius* L. Cav. Results revealed that besides weed free treatment, significantly higher plant height, number of branches/plant, number of umbels/plant, number of seeds/umbellate, test weight, seed weight per plant, and seed and stover yields of fennel were recorded with pre-emergence (PRE) application of pendimethalin at 0.90 kg/ha + post-emergence (POE) application of fenoxaprop-ethyl at 75 g/ha at 45 DAS, which was at par with pendimethalin at 0.90 kg/ha PRE + hand weeding (HW) at 45 DAS and HW twice at 15 and 45 DAS. These treatments also recorded lower weed density and dry weight of weeds along with higher net returns and B:C ratio owing to lower weed index and higher weed control efficiency. The highest depletion of weed seedbank was observed with pendimethalin at 0.90 kg/ha PRE + HW at 45 DAS.

Biography

Bhagirathsinh Sahdevsinh Gohil has completed his BSc (Agriculture) with first class distinction and was awarded two gold medals for best all over performance in BSc (Agriculture) batch of 2011 and M.Sc. (Agriculture) with first class distinction under the guidance of Dr. R K Mathukia, Associate Research Scientist, Weed Control Scheme, Department of Agronomy, JAU, Junagadh at the age of 23 years from Junagadh Agricultural University, Junagadh (Gujarat). He is now Ph.D. student of Agronomy Department, JAU, Junagadh. He has participated in All India Agricultural University Games and Sports meet at Kerala as Athletic player and he is also a captain university cricket team.

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An innovative approach to screen sterility mosaic disease (SMD) in ratoon *Cajanus cajan*

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Pigeonpea [*Cajanus cajan* (L.) Millsp] is one of the important grain legumes and is known for rich source of protein. Globally pigeon pea is cultivated on 4.68 M ha. India is the primary pigeon pea growing country in the world, accounting for 3.53 M ha area and 2.51 million tons of production. Sterility mosaic disease (SMD), considered as the "green plague of pigeon pea" in the Indian subcontinent is caused by a distinct virus, named as pigeon pea sterility mosaic virus (PPSMV). In current study, SMD disease was initially programmed for screening on 189 RIL populations developed from cross involving a susceptible parent ICP-8863 and a resistant parent ICPL-20097 by both leaf stapling and spreading method at green house, IBT and on an isolated plot at ARS, Tandur during kharif 2012. However, because of heavy rains after inoculation satisfactory level of disease incidence was not observed. In order to make up the loss of one entire season, an alternative approach was programmed i.e. to screen SMD on ratoon crop. In this approach, crop was ratooned at maturity and inoculated by both leaf stapling and spreading method after 25 days (at fresh growth appearing) at both the places. Disease development was observed with good similarity at both the places. This is the first report of this kind i.e. when main crop fails for disease screening one can attempt the same on ratoon crop and can save the season.

Biography

Shourabh Joshi has completed his M.Sc. at the age of 24 years from UAS-Banglore and pursuing Ph.D. at Institute of Biotechnology, College of Agriculture, Rajendranagar, ANGRAU, Hyderabad, Andhra Pradesh. He has received various scholarships throughout his educational carrier as CSIR-UGC, DBT-JNU-JRF, NTS and received prestigious awards like 'Bhamashah Award'. He has attended more than half dozen conferences and also contributed more than half dozen popular articles in Agrobios and has published research paper in reputed journals.

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