



ISWS News Letter

A publication of Indian Society of Weed Science

July – December

2012

MESSAGE FROM THE PRESIDENT

It is indeed a great moment for me. I started the re-unification process and, finally, a new council of some dynamic members has been emerged out. I congratulate all the elected members. It is a democratic beginning of re-shaping our own ISWS. This strengthened platform will certainly take care of the messy situation of weed problems. A complicated situation really it is! Exotic weeds, weed-threat under changing climate, resistance, herbicide residues, disturbed biodiversity, and there are some more. We have to work in tandem to combat them to secure the food production. The collectiveness and ingenuity of weed scientists of our country may form a formidable force to resolve long standing and newly created problems in weed science. I am sure that our newly constituted council will catalyse us to move ahead.

NEWS

Dr. Sushil Kumar wins 'Swami Sahajanand Saraswati Outstanding Extension Scientist Award

Dr. Sushil Kumar, Principal Scientist of the Directorate won the prestigious 'Swami Sahajanand Saraswati Outstanding Extension Scientist Award 2011' on the 84th Foundation Day of ICAR. Dr. Kumar carried our research extension work in the field of biological control of Parthenium, a problematic weed. He developed cost effective and

sustainable techniques for the mass multiplication of bioagent *Zygogramma bicolorata* and distributed the live bioagent throughout India. The biological control helped in suppression of Parthenium and restored other vegetation in large area on sustainable basis.

This award carries certificate and a cheque of Rs one lakh.



RESEARCH NOTES

Leucasaspera- a potential source of allelochemicals

Scientists from Kagawa University, Japan has observed the allelopathic potentiality in medicinal plant *Leucasaspera*. A.K.M. Mominul Islam and Hisashi Kato-Noguchi tested the aqueous methanol extracts of this plant at four different concentrations (3, 10, 30 and 100 mg dry weight equivalent extract mL⁻¹) against seven test plant species, namely cress (*Lepidumsativum* L.), alfalfa (*Medicago sativa* L.), lettuce (*Lactuca sativa* L.), Italian ryegrass (*Loliummultiflorum* Lam.),

barnyard grass (*Echinochloa crusgalli* L.), jungle rice (*Echinochloa colonum* L. Link) and timothy (*Phleum pratense* L.). The aqueous methanol extract of *L. aspera* significantly inhibited the seedlings growth of all the test plant species at different inhibition levels. The root growth was more sensitive than the shoot growth to the plant extract and the inhibitory activity was concentration dependent. Comparing the extract concentrations required for 50% inhibition, the seedlings growth of timothy was most sensitive to the extract, whereas jungle rice was less sensitive. These results indicated that *L. aspera* may contain growth inhibitory substances and possess allelopathic activity. It could be used as a potential candidate for isolation and identification of allelochemicals, which can lead to the development of ecologically acceptable bio-herbicides used for sustainable agriculture.

(International Journal of Sustainable Agriculture 4 (1): 01-07, 2012)

Octreotide for the treatment of sulfonylurea poisoning

M. Glatstein, D. Scolnik and Y. Bentur of the Division of Pediatric Emergency Medicine, Department of Pediatrics, Dana's Children Hospital, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel has established octreotide as an antidote to sulphonylurea poisoning. Octreotide, a synthetic peptide analog of somatostatin, binds to G protein-coupled somatostatin-2 receptors in pancreatic beta-cells, resulting in decreased calcium influx and inhibition of insulin secretion. Octreotide markedly inhibited insulin secretion and decreased the number of hypoglycemic events and supplemental dextrose requirements in animal studies. In humans octreotide markedly inhibited insulin release, increased serum glucose concentration, reduced dextrose requirement,

prevented recurrent hypoglycemia and was superior to IV dextrose and diazoxide after administration of sulfonylureas. Based on the published clinical and pharmacokinetic data of sulfonylureas and octreotide, they suggest the following dose regimens: in children, octreotide 1-1.5 µg/kg IV or SC, followed by 2-3 more doses 6 hours apart. In adults, octreotide 50 µg SC or IV, followed by three 50 µg doses every 6 hours. They suggest that octreotide should be considered first-line therapy in both pediatric and adult sulfonylurea poisoning with clinical and laboratory evidence of hypoglycemia. Maintenance doses of octreotide may be required to prevent recurrent hypoglycemia.

(Clinical Toxicology (Phila) 50(9):795-804, 2012)

Occurrence of quarantine weed *Ambrosia psilostachya* DC in Turuvekeretaluk, Karnataka for the first time in India

Dr. T.V. Ramachandra Prasad,

Professor of Agronomy & Principal Investigator, DWSRC, Bengaluru.

Ambrosia artemisiifolia L. or *Ambrosia psilostachya* DC. has been observed for 15 - 20 years in waste lands, road sides, plantations, cultivated crops and forest shrubs in MuniyuruBevinahally, TuruvekereTaluk, Tumkur District.

Weed biology: The weed resembles parthenium in leaf structure. The plant is erect with less than 2 feet tall, sessile leaves, opposite at the base, alternate at the top, lanceolate with pinnate toothed - blunt ends, upper half of the plant is branched, each branch or stem terminate with inflorescence - a spike, 6 to 12" long; plant is monoecious with staminate (male) flowers at the top (spike) and pistillate heads (female) at the leaf axils. The weed is propagating through rhizomatous

like roots and cover entire land. The weed does not allow other plants to grow nearby including grasses. Now, the weed is reported to have spread to more than 100 acres. The root system grows up to 9 to 12". The superficially the plant can be uprooted and even shallow cultivation can remove the weed from the land. The root fragments left in the soil sprouts and the plant starts establishing.

Management:

Avoid using cultivator or plow used in the infested fields to other fields to avoid contamination of root fragments. At present, the farmers do not use such tractor which has been used in infested fields. Spraying of

or glyphosate 71 WP 10 g/liter of water and glyphosate 41 SL 10 ml/liter of water + 2,4-D sodium salt 80 WP 2.0 g/liter of water has given complete top kill for at least 2 to 3 months. Further work is in progress.



Ambrosia artemisiifolia or psilostachya



Closer view of Ambrosia weed – young plant - leaf – lanceolate with widely spaced pinnate lobes – blunt points, plant is erect, terminate with inflorescence



Inflorescence – spike, green flower initially, later yellowish green, upper half of plant may have as many of 10 to 12 spikes/plant, inflorescence about 6" to 12" long



Extent of spread of *Ambrosia* covering the ground



Propagation through rhizomatous roots and also through seeds

Celebration of Parthenium Awareness Week- 2012 in India

Parthenium hysterophorus L. (Asteraceae) locally called gajar ghas or congress grass,

an alien weed sneaked into India along with wheat imported from USA in the early fifties. Since then it has spread alarmingly and invaded about 35 million hectares of land in the country. In view of the seriousness as well as the magnitude of the threat posed by this weed not only to environment but also to the human and cattle health, the Directorate of Weed Science Research (DWSR) has organized a nation-wide "Parthenium Awareness Week" from 16th to 22nd August, 2012 to create awareness in public about its ill effect and ways to manage it by involving SAUs, Krishi Vigyan Kendra (KVKs), institutes of ICAR, AICRP centres of Weed control, many NGOs, municipalities, schools and colleges. To facilitate the event, posters and extension material especially developed for this occasion were distributed to the above organizations with the appeal to develop more material in regional languages and to distribute among stakeholders.

During the week, various activities like organizing awareness lectures, photo exhibition, farmer meetings, students rallies, demonstrations etc. were done by Directorate of Weed Science Research, all the centers of All India Coordinated Research Project on Weed Control (AICRPWC),



many ICAR institutes, several KVKs and by many NGOs throughout the countries. This all resulted more awareness among people about the Parthenium.

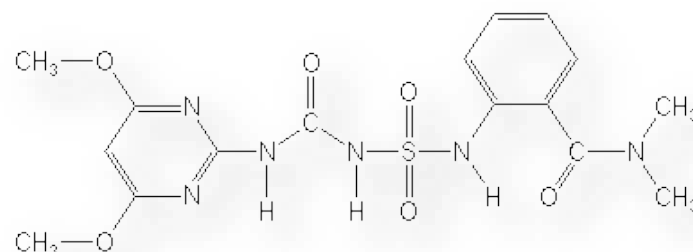
The event was well covered by print and electronic media which helped to spread the message among the masses.



KNOW YOUR HERBICIDE

Orthosulfamuron

Isagro commercialized ORTHOSULFAMURON, an ALS inhibitor herbicide originated by Isagro Ricerca. Orthosulfamuron, a pyrimidinyl sulfonylurea herbicides, is a systemic herbicide that can be used for the control of annual and perennial broadleaf weeds and sedges in rice crop. It is applied as a selective post emergence herbicide at the rate of 75g per ha. The application of orthosulfamuron on emerging and actively growing weeds provides best results.



FUTURE EVENTS

Southern African Weed Science Society will organize its 41st Annual Workshop on Biological Control of Weeds and Symposium on Management of Invasive Alien Plants at **Cape St. Francis** during May 6-10, 2013.

The Invasive Species Centre of ICAIS will organize 18th International Conference on Aquatic Invasive Species at Niagara Falls, Ontario, Canada during April 21-25, 2013.

(<http://www.icaais.org/>)

The 16th European Weed Research Society Symposium will be held at Ondokuz Mayıs University in Samsun, Turkey during June 24-27, 2013.

The 24th Asian-Pacific Weed Science Society Conference on "The role of Weed Science in supporting food security by 2020" will be held at Bandung, Indonesia on October 22-25, 2013.


(<http://apwss2013.com>)

NOTIFICATION

The result of the Election of Indian Society of Weed Science for the various position of EC for the period of 2013-2014 has been declared by Dr. Devraj Arya, Returning Officer of ISWS, Technology Development Lead, Monsanto India Limited, vide his email letter dated 03/01/ 2012 (attached). As per his proceedings, the following office bearers have been declared elected:

S. No.	Office	No. of Position	Elected office bearers	Present address
1.	President	1	Dr. N.T. Yaduraju	ICRISAT, Hyderabad
2.	Vice President	1	Dr. T.V. Ramchandra Prasad	UAS, Bengaluru
3.	Secretary	1	Dr. A.R. Sharma	DWSR, Jabalpur
4.	Joint Secretary	1	Dr. C. Chinnusamy	TNAU, Coimbatore
5.	Treasurer	1	Dr. ShobhaSondhia	DWSR, Jabalpur

This has the approval of Dr. T.V. Muniyappa, President, ISWS



(Sushilkumar)
Secretary, ISWS

The ISWS Newsletter is an electronic quarterly publication to foster better communication and give information to our members and others in the country interested in weed science. Information for publication in the ISWS Newsletter may be sent to the Editor at the following address:

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