



Bhopal Chapter

of Indian Society of Soil Science

at ICAR-Indian Institute of Soil Science



Newsletter ●

Patron's Message



It fills my heart with joy to know that the 68th UN General Assembly has officially recognized the 2015 as the International Year of Soils. This has been possible because of untiring efforts of his Majesty King Bhumibol of Thailand, International Union of Soil Science (IUSS), and the FAO Global Soil Partnership (GSP), and we all must thank them for their achievement. This official recognition emphasizes the importance of soils beyond the soil science. However, this also reposes a greater responsibility to Soil Scientists towards not only their usual role of doing research on the management of soil resources but also towards creating an awareness among people on the roles and functions of soils in the sustenance of whole civilization. In this endeavour, the International Union of Soil Sciences (IUSS) has announced to cooperate with United Nations, and other organizations to improve the scientific knowledge and to promote the global acceptance of soils as one of the most important natural resources. Several other international organization viz., Food and Agricultural Organization, British Society of Soil Science; The Soil Science Society of America and others are celebrating the year with new programmes and initiatives to educate the society on soils. In this bandwagon, ICAR-Indian Institute of Soil Science feels proud and privileged in celebrating the International Year of Soils 2015 with great zeal and energy. The main goal of the International Year of Soils 2015 (IYS) is to raise awareness about the importance of healthy soils and to advocate for sustainable soil management in order to protect this precious natural resource.

This was a maiden attempt on the part of Chapter to compile all the activity during 2014-15 in the form of a news letter, and I appreciate this modest attempt.

Dr. Ashok K. Patra
Patron and Director
ICAR-IISS

President's Remarks



Bhopal Chapter of Indian Society of Soil Science was established in a modest way with approximately 25 memberships during 1994, now it has expanded and recognized as one of the vibrant chapters of ISSS for promoting the objectives of main society and providing the platform for interaction among soil scientists working in different organizations in the State. This chapter comprises of the largest member of soil scientists and scientists and members from allied fields. This chapter feels privileged in organizing various events and programmes with great zeal and energy to sensitize various stakeholders in the Country.

Since establishment, the Chapter was actively involved in a number of activities related to research, education and transfer of technology in the field of soil science in organizing symposia, invited/guest lectures, seminars, discussions, etc. for students and scientists and also to create awareness among school children. Bringing the activities of the Bhopal Chapter in the form of newsletter to commemorate World Soil Day on 5th December as well as International Year of Soils 2015 will be befitting tribute to Soil.

Activities of the chapter include organizing various meetings, lectures soil awareness programmes on World Soil Day and International Year of Soil 2015 through drawing competition, elocution competition, panel discussion, quiz programmes, farmer's training and meetings.

Dr. Ashis K. Biswas
President &
HOD (Soil Chemistry and Fertility)



1. Invited lecture by Prof. Rattan Lal, Ohio State University (OSU), Columbus

Distinguished Prof. Rattan Lal, Ohio State University (OSU), Columbus delivered a lecture on "Climate Strategic Agriculture" during his visit to IISS, 12th March, 2014. About 60 members representing Scientists from IISS and CIAE, Research Associates, Senior Research Fellows and Students participated in the event.



2. Invited lecture by Prof. Lingaraj Sahoo, IIT-Guwahati and Dr. Junpei Takano, Japan

Prof. Lingaraj Sahoo, Dept of Biotechnology, IIT-Guwahati and Dr. Junpei Takano, Hokkaido university, Japan delivered guest lectures on 3rd November, 2014. Dr. Junpei Takano delivered a talk on "Boron Transport in Plants". He also highlighted that the Boron deficiency is a world-wide



agricultural problem affecting yield of various crop plants. Boron mainly exists as uncharged boric acid in solution, and thus is relatively easily transported across membranes in plant cells. However, their analysis of B transport using *Arabidopsis thaliana* identified a boric acid channel NIP5;1 and a boric acid/borate exporter BOR1, required for efficient B uptake and translocation under low B conditions. He also highlighted the mechanisms underlying the polar localization and the vacuolar-trafficking of boric acid/borate transporters. To overcome the problem of B deficiency in agriculture, a promising approach is generation of B-efficient cultivar using boric acid/borate transporters. He indicated that over-expression of AtBOR1 improved B translocation and seed yield under low B conditions. Scientists are working at Hokkaido University to apply this technique to crop plants to improve B-use efficiency in the field. Prof. Lingaraj Sahoo delivered talk on 'Crop Improvement Programme'. During his lecture he briefed about the crop improvement programme at IIT and also emphasized for the need for transgenic plant to overcome salt and drought tolerance in annual crops. He also highlighted the work of development of transgenic mustard and cowpea for salt and drought tolerance at IIT Guwahati in collaboration with Hokkaido University, Japan.

About 50 members representing Scientists, Research Associates, Senior Research Fellow and Students participated in the event.



3. Organized the 25th Dr. S.P. Raychaudhuri Memorial Lecture

Prof. A. Raja Rajan, Former Dean, TNAU, Coimbatore delivered 25th Dr. S.P. Raychaudhuri Memorial lecture on “Applications of Nuclear Techniques in Soil Fertility and Plant Nutrition Studies: Prospects and New Vistas” during 23rd Sept, 2014. Prof. A. Raja Rajan, shared his vast experience during memorial lecture, about 70 members participated and got benefitted.



4. Celebration of the World Soil Day on 5th December, 2014

ICAR-Indian Institute of Soil Science, Bhopal in association with Bhopal Chapter of Indian Society of Soil Science celebrated the World Soil Day on December 05, 2014. During the event, importance of soil was highlighted, it is a critical component of the natural system and as a vital contributor to the human common wealth through its contribution to food, water and energy security and as a mitigator of biodiversity loss and climate change.

Dr. Ashok K. Patra, Patron & Director and **Dr. A.K. Biswas**, President of Bhopal Chapter welcomed the children and dignitaries. **Dr. G. A. Kinhal**, Director, Indian Institute of Forest Management and Chief Guest of the function emphasized the importance of soils for sustaining forest ecosystem. He urged the people to protect the soils with a slogan 'Plant a tree whenever you are free'. **Dr. S. S. Khanna**, Former Member, Planning Commission and a famous of Soil Scientist highlighted the functions and roles of soils.



Dr. P. J. Sudhakar, Addl. Director General, PIB, Ministry of Information and Broadcasting informed the participants about soil as the 'Soul Of Infinite Life'. He told that every human being is born out of soil and hence it is the duty of all to protect our soils. A drawing competition was also arranged on the theme 'S (Soul) O (Of) I (Infinite) L (Life)'. About 75 children participated in the competition. The children also visited Soil Museum and were shown the different types of soils present in India. A video film highlighting the importance of soil in agriculture and civilization was shown to participants.



5. Training cum Awareness Programme Organized for Tribal Farmers of Madhya Pradesh

ICAR-Indian Institute of Soil Science, Bhopal in collaboration with Bhopal chapter of ISSS successfully organized three training cum awareness programmes to the tribal farmers of Jhabua, Alirajpur and Dhar districts of Madhya Pradesh on “Sustainable Soil Health and Integrated Nutrient Management for Better Crop Productivity” on 8th October, 2015 at KVK, Jhabua,



9th October, 2015 at DDA office, Alirajpur and 13th October, 2015 at KVK, Dhar. During the training programme, pamphlets on: i) Soil Testing: Why, When and How; ii) Resource Conservation Technologies; iii) Best Management Practices for Soybean Cultivation; and iv) Scientific Methods of Wheat Cultivation were

released and distributed to the farmers. A group discussion session was also arranged and many technical problems and issues raised by the farmers regarding crop cultivation, particularly on soil management were clarified. Farmers in the region used to apply very low amount of fertilizer nutrient. Therefore, it was recommended for balanced and integrated use of fertilizers as per the crop need. Overwhelming response has been received from farmers. About 250, 175 and 110 farmers from Jhabua, Alirajpur and Dhar districts, respectively participated in the training programmes.



6. Invited Lecture delivered by Prof. Himanshu Pathak

Prof. Himanshu Pathak, CESCRA, IARI, New Delhi delivered a Lecture on '**Simulating Agricultural Processes**' in commemoration of 'International Year of Soil-2015' at ICAR-IISS, Bhopal. More than 40 scientists along with winter school trainees (20 Nos) also participated during the lecture.



7. Commemorating International Year of Soils 2015

Series of events were organized both at Regional Science Centre, Bhopal and ICAR-IISS, Bhopal for commemorating International Year of Soils 2015.

Students Awareness Programme

a) At Regional Science Centre, Bhopal

Around 240 students including teachers and faculties from IISS were participated during the event on 18th Nov, 2015. **Dr. D.L.N. Rao**, PC (BNF) delivered an interesting speech on '**Bright Horizons of Soil Science**' followed by a live demonstration of "Mridaparikshak"-A minilab for soil testing by team of IISS Scientists.



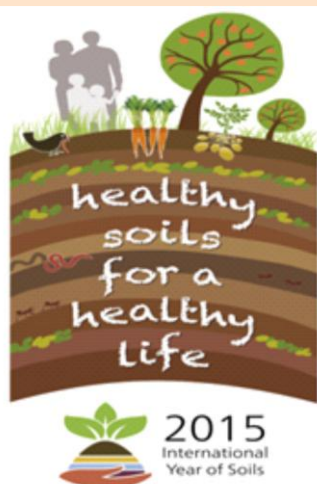
b) At Indian Institute of Soil Science

About 80 children of 8-10th standard accompanied by the teachers representing six different schools from Bhopal region participated during 19th Nov, 2015. Speech competition were also organized on '**Healthy Soils for a Healthy Life**', about 12 students representing 8-10th standards participated in it and expressed their interesting views. Three top students were given prizes on the occasion



8. Workshop and Panel Discussion 'Healthy Soils for a Healthy Life'

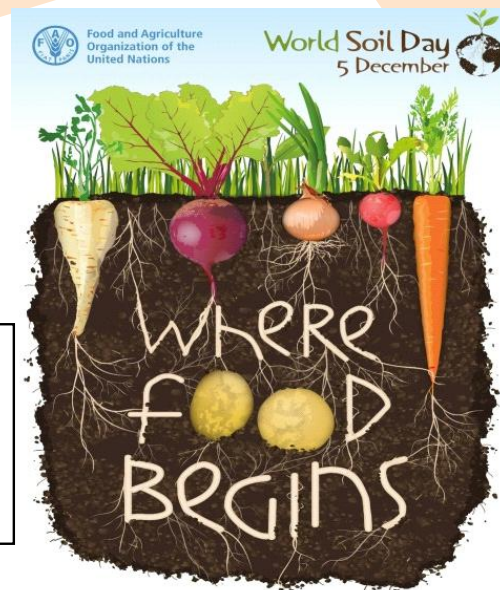
A workshop and panel discussion was Jointly organized by ICAR-IISS and Bhopal Chapter of ISSS on "**Healthy Soils**



Courtesy: FAO

for a Healthy Life” on 19 November, 2015 at the Institute premises located at Nabibagh, Bhopal. This is in line with the flagship programme of Soil Health Card (SHC) of the Govt. of India for assessing and improving the soil health and ensuring sustainable agricultural productivity. **Shri Alok Sanjar, Hon'ble Member of Parliament**, Bhopal was the Chief Guest of the function. Distinguished Policy makers and researchers including **Shri Prem Chand Meena**, IAS, Agricultural Production Commissioner, Govt. of Madhya Pradesh; **Shri R.P. Mishra**, IAS, Director, WALMI, Bhopal; **Dr V K Verma**, VC, AISECT University, Dr. A.K. Patra, Director, Indian Institute of Soil Science, Bhopal; **Dr. K. K. Singh**, Director, Central Institute of Agricultural Engineering, Bhopal; **Dr. V. K. Singh**, Director, National Institute of High Security Animal Diseases, Bhopal; **Dr. Arun Kokane**, Head of Division, AIIMS, Bhopal and **Dr. D.K. Solanki**, Sr. Manager, IFFCO and a large number of scientists from different ICAR institutes participated and shared their views in the workshop. Progressive farmers from Madhya Pradesh and officials from Agriculture Department of Govt. of MP also attended the workshop. A farmer- scientist interaction program was also organized during the occasion. The program was coordinated by **Dr. Arvind K. Shukla**, Project Co-ordinator (Micronutrients). Various eminent personalities representing different fields of specialization expressed their views about the importance of soil resources and its role in food security, prosperity and posterity.

Shri Alok Sanjar, Hon'ble MP appreciated the efforts of the Institute in increasing awareness about the importance of soil and called upon to start a 'Save Soil Campaign' involving students at school and college level. **Shri P.C. Meena** informed the gathering that World Soil Day is to be organized on 05th December in which the State government has planned to distribute one lakh soil health cards to the farmers. Also, soil week is to be celebrated in the state of Madhya Pradesh during 05-12th December, 2015. Progressive farmers were felicitated by the Institute in the program. **Dr. A.K. Biswas**, President of Bhopal Chapter of ISSS proposed vote of thanks.



Courtesy: FAO



9. World Soil Day and Soil Health Card Distribution Program

The World Soil Day was celebrated on 5th December, 2015 at the ICAR-Indian Institute of Soil Science, Nabibagh, Bhopal with a **Kisan Mahasammelan** and Soil Health Card Distribution Ceremony, which was graced by the Hon'ble Chief Minister of Madhya Pradesh, **Shri Shivraj Singh Chouhan Ji**. Among other dignitaries were **Shri Gauri Shankar Bisen**, Hon'ble Minister of Agriculture, Government of Madhya Pradesh; **Shri Vishwas Sarang**, M.L.A.; **Shri Manmohan Nagar**, Chairman, Zila Panchayat, Bhopal; **Shri Prem Chand Meena**, IAS, Agriculture Production Commissioner, Madhya Pradesh; **Dr Rajesh Rajora**, IAS, Principal Secretary (Department of Farmer Welfare & Agriculture) of Government of Madhya Pradesh. The program was jointly organized by the Government of Madhya Pradesh and the ICAR-Indian Institute of Soil Science, Bhopal, which was attended by more than 25,000 farmers from different districts of the State.

The program started with a welcome remark by **Dr. Ashok K. Patra**, Director of the ICAR-Indian Institute of Soil Science and introductory remark by **Dr. Rajesh Rajora**, IAS, Principal Secretary, Department of Farmer Welfare & Agriculture, Government of Madhya Pradesh. On the occasion, **Shri Gauri Shankar Bisen**, the Hon'ble Minister of Agriculture, Government of Madhya Pradesh highlighted the importance of soil health and its testing in sustainable agriculture. He elaborated upon the plan of Government of Madhya Pradesh for state wide soil testing for preparation of soil health cards for the farmers.



In the program, Hon'ble Chief Minister **Shri Shivraj Singh Chouhan Ji** emphasized the importance of soil testing and balanced fertilization in preserving the quality of soil, water and food for the present and future generations. Similar to human health, he said, it is necessary to maintain soil health with balanced fertilization of all nutrients including micro-nutrients. In his address, he expressed the commitment of the government to make agriculture a profitable occupation. He said that a state wide campaign for soil testing is being undertaken with a soil testing laboratory to be opened in each Development Block. He urged the farmers to test their soil and use fertilizers as per the recommendation so as to reduce unnecessary expenditure. He also stressed upon the importance of crop rotation and ill effects of crop residue burning on soil and environment. He appealed the farming community to shed the practice of crop residue burning.

In the program, the Hon'ble Chief Minister distributed soil health cards to farmers from different districts including farmers from tribal districts of Madhya Pradesh. On the occasion, a *Kisan Sangosthi* was organized and exhibition stalls on agricultural technologies were showcased.

Several experts from ICAR-IISS, ICAR-CIAE, Agricultural Universities, and State Departments spoke on various topics including soil health, conservation agriculture, irrigation techniques, pests and disease management, credit availability and Government schemes in agriculture.

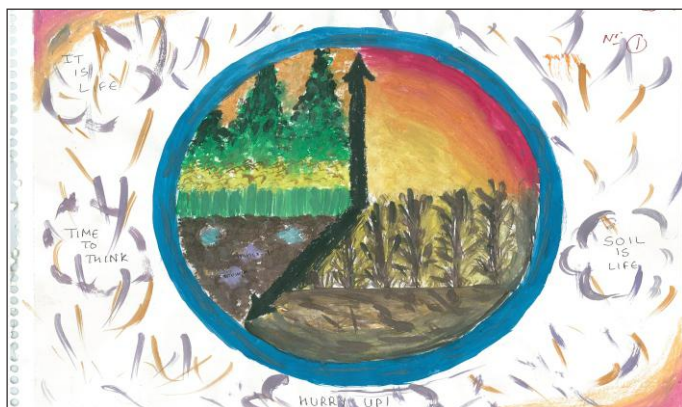
Prize winning picture during a drawing competition organized on the theme 'S (Soul) O (Of) I (Infinite) L (Life)' from School Childrens



Ms. Sneha Kumar, IX Std from St. Paul Sr. Sec. Co-Ed School, Anand Nagar, Bhopal won 1st Prize in drawing competition.



Mr. Rohit Nigam, X Std from B.T.M.H. School, Karond, won 2nd Prize in drawing competition.



Mr. Ziyad Hasan, X Std from St. Paul Sr. Sec. Co-Ed School, Anand Nagar, Bhopal won 3rd Prize in drawing competition.

Award winning School Childrens in Speech competition held during International Year of Soils 2015



Mr. Shabaz Khan, Jawarlal Nehru School, Habibganj won 1st Prize in Speech Competition



Mr. Aniket Dueby, Red Rose School, Lambakheda won 2nd Prize in Speech Competition

Members of the Chapter received Laurels/ Accolades/ Awards (2014 -2015)

- Dr. A.K. Patra : Biomed Agri-innovation Award 2015 for outstanding contribution in the area of sustainable crop production.
- Drs. Muneshwar Singh, Sammi Reddy, M. Mohanty and A. Subba Rao : FAI Golden Jubilee Award for excellence for "Development of Best Fertilizer Management Practices" for the year 2013.
- Dr. S. Kundu: Fellow of National Academy of Agricultural Sciences 2013
- Dr. M.C. Manna: Fellow of National Academy of Agricultural Sciences 2015



Miss. Shikha Yadav, Maharishi Centre for Education Excellence, Lambakheda, won 3rd Prize in Speech Competition

- Dr. Pradip Dey: Fellow of Indian Society of Soil Salinity and Water Quality 2014; delivered an invited lecture under special symposium on Soil Health: Concept, Status and Monitoring" in 80th Annual Convention on 6th December, 2015.
- Dr. DLN Rao; PC (BNF), Delivered the 7th Professor S.K. Mukherjee memorial lecture of Indian Society of Soil Science at Kolkata on October 8, 2015; Re-appointed as Member, Research Advisory Committee of National Bureau of Agriculturally Important Microorganisms, Mau in 2014 for the second term
- Dr. Ritesh Saha: Selected as Associate of the NAAS Fellowship 2014.
- Dr. Ritesh Saha: ISSS Golden Jubilee Young Scientist Award for the year 2013.
- Dr. N.K. Lenka: Indian Association of Soil and Water Conservationists Young Scientist award for the year 2013
- Dr. N.K. Lenka: ISSS Golden Jubilee Young Scientist Award 2014.
- Dr. N.K. Lenka: Selected as Associate of the NAAS Fellowship 2015.
- Dr. A.K. Biswas: Councillor ISSS (2014-15).
- Dr. Pramod Jha: Councillor ISSS (2015-16).
- Dr. S. Srivastava: Councillor ISSS (2016-17).
- Drs. S.R. Mohanty and K. Bharati: Fellow of Association for the Advancement of Biodiversity Sciences (2014).
- Dr. A.K. Shukla: International Zinc Association and Fertilizer Association of India (IZA-FAI) Award 2014

- Dr. A.K. Shukla: Shri Ram Award 2014 by the Fertilizer Association of India, New Delhi
- Dr. A.K. Shukla, Pankaj Tiwari and Chandra Prakash: FAI award 2015 for Micronutrient deficiencies vis-a- vis food and nutritional security of India
- Dr. S.R. Mohanty and K. Bharti: Fellow of Association for the Advancement of Biodiversity Sciences (2014), Belgaum, Karnataka
- Dr. S. R. Mohanty : Eminent Scientist Award 2014- National Environmental Science Academy, New Delhi.
- Dr. S. R. Mohanty: Young investigator award 2015, Srinagar
- Dr. K. Bharti: Scientist of the Year Award 2014 from National Environmental Science Academy New Delhi.
- Dr. A.K. Vishwakarma: Distinguished scientist award by Society for Extension Education and Management in Agriculture
- Dr. A.K. Vishwakarma: ICAR Award for Outstanding Interdisciplinary Team Research in Agricultural and Allied Sciences
- Dr. R.H. Wanjari: Outstanding Achievement Award 2015 (in the discipline of Agronomy) from Astha Foundation, Meerut in National Conference on GRISAAS 2015 ("Global Research Initiative for Sustainable Agriculture and Allied Sciences)".
- Dr. Tapan Adhikari: JC Bose Gold Medal Award 2014 of Indian Society for Plant Physiology ; Received 20th International Congress Commemoration Award 2014 of the ISSS; Received Endeavour Research Fellowship 2015
- Dr. J. Somasundaram: Received Endeavour Research Fellowship during 2015.
- Dr. Sangeeta Lenka: Young Scientist Award from Education Expo-2014; Received Endeavour Research Fellowship during 2015.
- Dr. I. Rashmi: ISSS Best Doctoral Research Presentation Award during 79th Annual Convention of ISSS.



Bhopal Chapter of Indian Society of Soil Science

Dr. A.K. Patra
Patron

Dr. A.K. Biswas
President

Dr. M.C. Manna
Vice-President

Dr. J. Somasundaram
Secretary

Dr. M. Vassanda Coumar
Treasurer

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