

2nd National Brassica Conference

Brassicas for Addressing Edible Oils and Nutritional Security

February 14 - 16, 2014

**Punjab Agricultural University
Ludhiana, Punjab, India**



Organized by :



Society for Rapeseed-Mustard Research



Punjab Agricultural University



Indian Council of Agricultural Research

National Brassica Conference - 2014

Crop Brassicas are important sources of edible oil with lowest amount of saturated fats, oilseeds and leafy vegetables rich in minerals and anti-oxidants, and tasteful condiments crops. Rapeseed-mustard is an important group of oilseed crops accounting about one-fourth of the total oilseeds production in the country. These crops are predominantly grown on varied soils of diverse agro-climatic regions in India. The current production of oilseeds in the country meets only 50% of domestic needs of edible oils, the deficit is being covered with import mainly of palm oil of more than Rs 50,000 crores per annum. With the present level of production and productivity, the demand-supply gap of edible oils in future is anticipated to increase further due to expected increase in population and better living standard. Rapeseed-mustard group of crops adapted to varied agro-climatic and management conditions have the potential to bridge this gap through genetic enhancement and technological breakthroughs. Vegetable Brassicas such as cabbage, cauliflower and broccoli are also important sources of mineral nutrients and antioxidants.

Production of these crops is impacted by several abiotic and biotic stresses, and uncertain economics. The threat of anticipated climate change is looming and calls for new initiatives to face the challenge. Small and fragmented oil & vegetable processing sector, lack of incentives for quality produce, absence of support from critical input industries etc. are adding to the woes of the brassica producers. The challenges of ensuring edible oil and nutritional security through enhanced access to Brassica oilseeds and vegetables in the face of rising input costs, biotic and abiotic stresses and stakeholders' aspirations can only be addressed with thoughtful deliberations among policy planners, researchers, academicians, corporates, supply chains organizations and farmers. The proposed conference offers a platform to research and extension scientists from research institutions universities, technology dissemination departments, seed and input supplying organizations and industries to focus on different Brassicas for addressing issue pertaining to edible oils production to bridge demand-supply gap and nutritional security to improve human health through nutrient rich oils and vegetables. Bringing together oilseed and vegetable Brassicas on common platform is intended to promote cross learning among larger Brassica fraternity. It will also serve the forum of networking among scientist and promote flow of knowledge and traits across commodity domains.

Thematic Areas

- A. Evolution, Trait Genetics & Breeding
- B. Crop Protection: Challenges & Prospects
- C. Crop Management: Challenges & Possibilities
- D. Crop Physiology & Nutritional quality
- E. Genomics and Transgenics

Conference Programme

Friday – February 14, 2014

08:30-09:00	Registration*	
09:00-11:00	Conference Inauguration	
	Innovative agriculture	Dr. S .Ayyappan, Secretary, DARE & DG, ICAR, New Delhi, India
	Challenge of edible oils: Can Brassicas deliver?	Dr. Arvind Kumar, DDG (Education), ICAR, New Delhi, India
11:00-11:30	Tea	
12:00-13:15	Session 1: Evolution , Trait Genetics & Breeding	
	Chair : Dr. R. P. Sharma, Ex. Director, NRCPB, New Delhi, India	
	Co Chair : Dr. K. C. Bansal , Director, NBPGR, New Delhi, India	
	Genetic enhancement of mustard for seed yield & its sustainability	Dr. Dhiraj Singh, Director, DRMR, Bharatpur, India
	Evolution and divergence in Brassica juncea	Dr. Surinder Banga, ICAR-National Professor, PAU, Ludhiana, India
13:30-14:30	Lunch	
14:30-17:00	Session 1 (cont.)	
	International trends in hybrid Brassica research	Dr. Jay Patel, Pioneer HiBred International, Canada
	Developing and optimizing CMS-FR systems	Dr. S.R.Bhat, Pr. Scientist, NRCPB, New Delhi, India
	Emerging challenges of abiotic stresses in oilseeds Brassicas	Dr. D.K. Yadav, Pr. Scientist, IARI, New Delhi
	Breeding Brassica vegetables	Dr. Pritam Kalia , Head, Division of Vegetable Sciences, IARI, New Delhi
15:30-16:00	Tea	
17:00-18:30	Poster Session Genetics & Breeding, Crop diversity, Genomics	
20:00-21:30	Dinner	

Saturday – February 15, 2014

09:00-11:30	Session 2: Plant Protection: Challenges & Prospects	
	Chair : Dr. P.R. Verma, Former Pathologist, Agriculture Canada Research Station, Saskatoon, Canada	
	Co Chair : Dr. G.S. Saharan, Ex. Prof. & Head, Division of Plant Pathology, CCSHAU, Hisar, India	
	Pathogen variation - Challenge for disease resistance	Prof. Martin Barbetti, University of Western Australia
	Sclerotinia rot	Prof. Baocheng Hu, Vice-President, Anhui Academy of Agri. Sciences, China
	Diseases of Brassica vegetables	Dr. Pratibha Sharma, Pr. Scientist, Div. of Plant Pathology, IARI, New Delhi
11:30-12:00	Tea	

12:00-13:30 **Session 3 : Crop Management: Challenges & Possibilities**
Chair : Dr. D. P. Singh, Ex. Vice-chancellor, JNKVV, Jabalpur, MP
Co Chair : Dr. D.K. Sharma, Director, CSSRI, Karnal
Optimising crop nutrition through precision agriculture Dr. Kaushik Majumdar, Director, IPNI South Asia Programme, Gurgaon
Crop Management in face of climatic change Dr. B. K. Kandpal, Pr. Scientist, DRMR, Bharatpur
13:30-14:30 Lunch
14:30-17:30 **Session 4: Crop Physiology & Nutritional quality**
Chair : Dr. P. R. Kumar, Ex. ADG, ICAR, New Delhi
Co Chair : Dr. B.B.Singh, ADG(OP), ICAR, New Delhi
Climate change: curse or opportunity -----
Canopy architecture & crop Modelling: need for change Dr. R.K. Pannu, CCS HAU, Hisar
Health benefits of Brassica vegetables Dr. Namrata Singh, AIIMS, New Delhi
17:30-18:00 Tea
18:00-19:00 Poster Session : Agronomy, Plant Protection, Crop Physiology & Biochemistry
20:00-21:30 Dinner

Sunday – February 16, 2014

09:00-11:45 **Session 5: Genomics and Transgenics**
Chair : Prof. S. K. Datta, DDG (Crop Science), ICAR, New Delhi
Co Chair : Pro. Deepak Pental, Ex. Vice Chancellor, DU, New Delhi
Transgenics: Possibilities and conflicts Prof. Deepak Pental, Ex. Vice chancellor, University of Delhi, New Delhi
Translational genomics for targeted breeding Dr. Akshay Pradhan, Professor, University of Delhi, South Campus New Delhi
Genomics of abiotic stress tolerance Dr. Paramjeet Khurana, Professor, University of Delhi South Campus New Delhi
Genetics and genomics of vegetable Brassicas Dr. Nirala Ramchiary, Asstt. Professor, School of Life Sciences, JNU, New Delhi
12:00-13:30 **Session 6 : Brassica Challenge Presentations**
Dr P.R.Kumar Outstanding Brassica Scientist Award
Dr P.R.Verma Young Brassica Scientist Award
SRMR awardees (Best Ph.D.Thesis and M.Sc. Thesis awards).
13:30-14:30 Conference Closure
14:30-15:00 Lunch
15:30-17:00 Field visit (Optional)

Monday – February 17, 2014 Post Conference tour (fully paid): Golden Temple, Amritsar (subject to sufficient numbers)

Society for Rapeseed Mustard Research (SRMR) Awards

- SRMR is presenting the Awards, Life time achievement awards, SRMR Fellow, Dr P.R.Kumar Outstanding Brassica Scientist Award, Dr. P.R. Verma Young Brassica Scientist Award for the members of the society. Besides these SRMR also presenting Awards for Best Ph.D and M.Sc. thesis in Brassica Crops. (Details of eligibility and guidelines are available on the website of SRMR)
- Best poster presentation award will be awarded to aspirant after due evaluation in a special session by a team of experts for its scientific content, novelty and relevance of results and interactive skills.
- All awardees will undertake to submit full length manuscript of their research contributions till 30 January, 2014 to the Secretary, SRMR. Manuscript of awardees will be included for publication in the *Journal of Oilseed Brassica*.

Abstract submission

Participants are requested to submit their original contributions (formatted on MS word, A4 size in Times New Roman font, letter size 12 in single line spacing with 5 cm right, 3 cm left, 1.5 cm top and bottom margins) limited to 300 words under / within the prescribed themes online to the conference website www.srmr.org.in

Important Date: Abstract Submission deadline : December 31, 2013
 Registration deadline : January 15, 2014
 Conference dates : February 14-16, 2014

Registration

Registration fee preferably, be submitted online using our payment options on through conference website www.srmr.org.in or by Demand Draft in favour of SRMR Conference, payable at Bharatpur, Rajasthan or direct transfer in the conference account (Account Name : SRMR Conference, Account No.: 33479430343, Branch- Kumher Gate, Bharatpur (Raj.), IFSC : SBIN0002313)

Registration fee: For non members of SRMR Rs. 2500/-
 For members of SRMR Rs. 2000/-
 Students Rs. 1000-

Late fee of Rs. 500/- from members and non-member while Rs. 200/- from students/scholars will be charged after January 15, 2014.

Accommodation

The university has limited accommodation in the campus. Efforts will be made to accommodate the participants in the University Guest Houses on first come-first serve basis. For remaining delegates, arrangements for stay would be made in nearby hotels. The details of tariff for hotel accommodation will be made available at conference website (www.srmr.org.in/nbc2014.html).

Host Institution-Punjab Agricultural University

The Punjab Agricultural University (PAU) was established in 1962 on the pattern of land grant colleges in U.S.A.The PAU has played a key role in increasing food grain production in the Punjab State and ushering in an era of Green Revolution in India. It has also made notable contributions in increasing livestock, poultry and honey production. University was adjudged the Best Agricultural University in India in 1995 and Agricultural University of the Year Award (Krishi Shiksha Samman) by Mahindra & Mahindra in 2011. At present the University, through 28 departments in the four constituent colleges, offers 31 Master's and 30 Ph.D. programmes.

Host City- Ludhiana

PAU is located in Ludhiana city (Punjab State) in north-west India. Ludhiana is situated at 30°56'N, 75°48'E at 247 meters above mean sea level. Average max. and min. temp. during the month of February are ~20°C and ~8°C, respectively. Light woolens are advised. Ludhiana is 316 km from New Delhi on National Highway #1 (Delhi to Amritsar) and frequent train and air services are available. Ludhiana is the richest district in the state of Punjab and is a hub of hosiery industry.

NATIONAL STEERING COMMITTEE

Chief Patron: Dr. S. Ayyappan, Secretary, DARE & DG, ICAR, New Delhi

Patrons

- Dr. Baldev Singh Dhillon, Vice Chancellor, PAU, Ludhiana
Dr. N.K. Krishna Kumar, DDG (Horticulture), ICAR
Dr. Deepak Pentel, Former Vice Chancellor, University of Delhi
Dr. Arvind Kumar, DDG (Education), ICAR & President, SRMR
- Dr. Swapan Kumar Dutta, DDG (Crop Science), ICAR
Dr. J.B. Chowdhury, Former VC, GBPUAT, Pantnagar
Dr. D.P. Singh, Former VC, JNKVV, Jabalpur
Dr. P.R. Kumar, Former ADG, ICAR, New Delhi

Members

- Dr. J.S. Sandhu, Agri. Commissioner, Govt. of India, New Delhi
Dr. S.S. Banga, ICAR National Professor, PAU, Ludhiana
Dr. D.K. Sharma, Director, CSSRI, Karnal
Dr. Abha Agnihotri, Prof. AMITY University, Noida
- Dr. B.B. Singh, ADG (OP), ICAR, New Delhi
Dr. K.C. Bansal, Director, NBPGR, New Delhi
Dr. C. Chattopadhyay, Director, NCIPM, New Delhi
Dr. Dhiraj Singh, Director, DRMR, Bharatpur

ORGANIZING COMMITTEE

Conference Coordinators

- Dr. Dhiraj Singh, Director, DRMR, Bharatpur
Dr Shashi Banga, PAU, Ludhiana
- Dr. P.D. Meena, DRMR, Bharatpur
Dr. Vinod Kumar, DRMR, Bharatpur

Organizing Secretary

Dr. S.S. Banga, ICAR National Professor, PAU, Ludhiana
Ph. : +91-161-2411330 | E-mail : srmrnbcb@gmail.com

Conveners

- Dr. R.C. Yadav, CCSHAU, Hisar
Dr. Virender Sardana, PAU, Ludhiana
Dr. P.S. Sandhu, PAU, Ludhiana
Dr. (Mrs) S.K. Dhillon, PAU, Ludhiana
- Dr. (Mrs.) Gurpreet Kaur, PAU, Ludhiana
Dr. Mahak Singh, CSA UAT Kanpur
Dr. H.S. Meena, DRMR, Bharatpur
Dr. Parvinder Sheoran, CSSRI, Karnal
- Dr. Arun Kumar, DRMR, Bharatpur
Dr. A.S. Rath, CCSHAU, Hisar
Dr. Lijo Thomas, DRMR, Bharatpur
Dr. Naveen Singh, IARI, New Delhi

Local Organizing Committee

- Stay & transport : Dr. Virender Sardana, Dr. Sarwan Kumar, Dr. Sukhpreet Singh
Food arrangement : Dr. P. S. Sandhu, Dr. Pankaj Sharma
Hall arrangement : Dr. S.K. Dhillon, Dr. Pushp Sharma
Publication : Dr. (Mrs.) Shashi Banga, Dr. Vinod Kumar, DRMR, Bharatpur, Dr. Pankaj Sharma
Registration : Dr. (Mrs.) Gurpreet Kaur, Dr. (Mrs.) Chhaya Atri, Dr. (Mrs.) Sanjula Sharma