2\textsuperscript{nd} 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
Crop Brassicas are important sources of edible oil with the 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**

<table>
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<tr>
<th>Time</th>
<th>Session/Event</th>
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<tr>
<td>08:30-09:00</td>
<td>Registration*</td>
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<td>09:00-11:00</td>
<td>Conference Inauguration</td>
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<td>11:00-11:30</td>
<td>Session 1: Evolution, Trait Genetics &amp; Breeding</td>
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<td>13:30-14:30</td>
<td>Lunch</td>
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<td>14:30-17:00</td>
<td>Session 1 (cont.)</td>
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**Saturday – February 15, 2014**

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<th>Time</th>
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<tr>
<td>09:00-11:30</td>
<td>Session 2: Plant Protection: Challenges &amp; Prospects</td>
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<tr>
<td>11:30-12:00</td>
<td>Tea</td>
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</tbody>
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**Notes**

- **Registration**: Dr. S. Ayyappan, Secretary, DARE & DG, ICAR, New Delhi, India
- **Crop Management**: Dr. Arvind Kumar, DGO (Education), ICAR, New Delhi, India
- **Crop Physiology & Nutritional quality**: Dr. S. Ayyappan, Secretary, DARE & DG, ICAR, New Delhi, India
- **Crop Protection**: Challenges & Prospects: Dr. Arvind Kumar, DGO (Education), ICAR, New Delhi, India

**Innovative agriculture**

- Dr. S. Ayyappan, Secretary, DARE & DG, ICAR, New Delhi, India
- Dr. Arvind Kumar, DGO (Education), ICAR, New Delhi, India
- Dr. Dhiraj Singh, Director, ORMR, Bhubaneswar, India
- Dr. Surinder Baniga, ICAR-National Professor, PAU, Ludhiana, India
- Dr. D.K. Yadav, Pr. Scientist, IARI, New Delhi
- Dr. Pritam Kalia, Head, Division of Vegetable Sciences, IARI, New Delhi
- Dr. Jay Patel, Pioneer HiBred International, Canada
- Dr. Pratibha Sharma, Pr. Scientist, Div. of Plant Pathology, IARI, New Delhi
- Prof. Martin Barbetti, University of Western Australia
- Prof. Baocheng Hui, Vice-President, Anhui Academy of Agri. Sciences, China
- Dr. Pratibha Sharma, Pr. Scientist, Div. of Plant Pathology, IARI, New Delhi

**Crop physiology & Nutritional quality**

- Dr. Dhiraj Singh, Director, ORMR, Bhubaneswar, India
- Dr. Surinder Baniga, ICAR-National Professor, PAU, Ludhiana, India
- Dr. D.K. Yadav, Pr. Scientist, IARI, New Delhi
- Dr. Pritam Kalia, Head, Division of Vegetable Sciences, IARI, New Delhi
- Dr. Jay Patel, Pioneer HiBred International, Canada
- Dr. Pratibha Sharma, Pr. Scientist, Div. of Plant Pathology, IARI, New Delhi
- Prof. Martin Barbetti, University of Western Australia
- Prof. Baocheng Hui, Vice-President, Anhui Academy of Agri. Sciences, China
- Dr. Pratibha Sharma, Pr. Scientist, Div. of Plant Pathology, IARI, New Delhi
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, CSSR, 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, DRM, 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 Dr. P.R.Kumar, CCS HAU, Hisar  
Canopy architecture & crop Modelling: need for change Dr. R.K. Panuru, 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 : Prof. 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 Ramchhariya, 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  
13:30-14:30  Conference Closure  
14:30-15:00  Lunch  
15:30-17:00  Field visit (Optional)  
Post Conference tour (fully paid): Golden Temple, Amritsar (subject to sufficient numbers)  

Monday – February 17, 2014  
09:00-11:45  Session 5: Genomics and Transgenics  
Chair : Prof. S. K. Datta, DDG (Crop Science), ICAR, New Delhi  
Co Chair : Prof. 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 Ramchhariya, Asstt. Professor, School of Life Sciences, JNU, New Delhi  
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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.htm).

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 Mahendra & 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.

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 Pratap, Former Vice Chancellor, University of Delhi
Dr. Anvind Kumar, DDG (Education), ICAR & President, SRMR

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

Organizing Secretary

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

Conveners

Dr. R.C. Yadav, CCSHAU, Hisar
Dr. P.S. Sandhu, PAU, Ludhiana
Dr. (Mrs.) S.K. Dhillon, PAU, Ludhiana

Dr. (Mrs.) Gurpreet Kaur, PAU, Ludhiana
Dr. H.S. Meena, DRMR, Bharatpur
Dr. Parvinder Sheoran, CSSRI, Karnal

Dr. Arun Kumar, DRMR, Bharatpur
Dr. A.S. Rath, CCSHAU, Hisar
Dr. Liq Thomas, DRMR, Bharatpur

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 Ahli, Dr. (Mrs.) Sanjula Sharma