

Winter School
on
Recent Advances in Breeding Approaches and
Varietal Development of Perennial Horticultural Crops
(January 12 to February 1, 2017)



Sponsored by

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
NEW DELHI



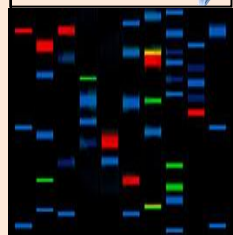
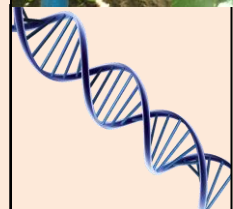
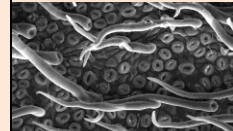
Organized by

DIVISION OF FRUITS AND HORTICULTURAL TECHNOLOGY
ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE
NEW DELHI-110 012

IMPORTANT DATES

Last date of receipt of application	: 12 November, 2016
Intimation of Selection	: 21 November, 2016
Confirmation of participation by candidates	: 28 November, 2016

<http://www.iari.res.in>



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Recent Advances in Breeding Approaches and Varietal Development of
Perennial Horticultural Crops

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The ICAR-Indian Agricultural Research Institute, New Delhi, invites applications from faculty members and researchers of Indian universities / research institutions for a 3-week training programme on “*Recent advances in breeding approaches and varietal development of perennial horticultural crops*” sponsored by the Indian Council of Agricultural Research, New Delhi, scheduled from **January 12 to February 1, 2017**.

OBJECTIVE

The major objective of the training programme is to train young faculty and scientists on the basic and strategic areas of genetic improvement of perennial horticultural crops with particular reference to latest approaches on classical breeding methods and molecular tools. The exposure to recent advances on breeding approaches will assist researchers to update their skills on varietal development in perennial horticultural crops. Hands-on training will also be imparted in addition to lectures by eminent experts so that the participants could apply the same in their ongoing/ future research programmes.

ABOUT THE TRAINING PROGRAMME

Horticulture has made significant contributions in the terms of development of improved varieties in mango, grape, papaya, guava etc. with better fruit quality. Division has made major breakthroughs by developing globally famous mango varieties like Amrapali and Mallika. Five mango hybrids namely Pusa Arunima, Pusa Pratibha, Pusa Shreshth, Pusa Peetamber and Pusa Lalima having red peel colour and a selection (Pusa Surya) were developed and released. These mango hybrids are gaining popularity among the mango growers. In grape, four hybrids, namely, Pusa Urvashi, Pusa Navrang, Pusa Aditi and Pusa Trishar were released. The tenturier hybrid Pusa Navrang is commercially adopted in grape growing especially for juice making purpose. Number of papaya varieties have been released by the division and two potential gynodioecious lines has also been identified. In citrus four new varieties, namely, Pusa Abhinav & Pusa Udit (acid lime) and Pusa

Sharad, Pusa Round (sweet orange) were released. The Division is also credited with the development of first guava rootstock, Pusa Srijan, which imparts dwarfness on the scion varieties. Mango, grape and citrus germplasm have been characterized using diverse molecular marker systems. A SSR marker related to green fruit colour was also identified in mango. Two EST-SSRs have been identified having potential to ascertain the hybridity in mango. The transcriptome analysis of mango germplasm from diverse eco-geographical regions is underway. The annotation of transcripts has provided several indications which would be useful in ascertaining the genetics of several traits. Recently, Division has been instrumental in successfully developing *in vitro* approaches in crop improvement for developing desired scion/ rootstock genotypes. In the proposed training, these approaches will be discussed and demonstrated.

LOCATION AND WEATHER CONDITION:

The ICAR-Indian Agricultural Research Institute, popularly known as ‘Pusa Institute’, is the country’s premier institution for research and higher education in the field of agricultural sciences. Delhi is well connected through railways and roads with different parts of the country. It is located about 8 km west of New Delhi railway station and 10 km from the Maharana Pratap Inter-State Bus Terminus (ISBT). The weather during training period is predicted to be cold with temperatures ranging from 16⁰C to 22⁰C (High) and 7⁰C to 11⁰C (Low).

COURSE CONTENTS

Breeding for higher productivity, quality and other horticultural traits in fruits and perennial vegetable and flower crops. Molecular breeding and marker assisted selection for crop improvement, Advances in heterosis and plant breeding; Innovative in plant breeding techniques in developing climate smart genotypes of horticultural crops. This training aims to introduce the participants to recent advances in breeding approaches and varietal development, particularly in perennial horticultural crops. Further, there will be discussion on application of various emerging tools and techniques towards developing breeding and varietal development. Apart from basic of crop improvement and molecular techniques, the participants will also be provided with hands on training in conducting breeding exercises under laboratory and field condition together with different phenotyping and genotyping techniques.

ELIGIBILITY OF PARTICIPANTS

M.Sc./Ph.D. degree in Horticulture with specialisation in Fruit Science/ Vegetable Science or Plant Breeding involved in breeding of perennial horticultural crops and working not below the rank of Scientist/ Assistant Professor and equivalent in Horticulture or relevant subjects of ICAR Institute/ State Agricultural University/CAU/ Horticulture faculty of AMU, BHU, Vishwa Bharati and Nagaland University.

TRAVEL, BOARDING AND LODGING

HOW TO APPLY: The participants should apply online (ICAR mandate) using CBP portal through or under the link; Capacity Building Programme at portal through <http://iasri.res.in/cbp> or under the link Capacity Building Programme at <http://icar.org.in>. After filling the online application, take a printout of the same and get it approved by the competent authority of the organization and upload the scanned copy of application through CBP portal on or before 10.11.2016. Selection of participants will be from online applications and the selected participants list will be uploaded/ displayed on the portal. However, he/she may send an advance copy (*via email*) directly to the Course Director. The selected candidates will also be informed individually.

TA/DA & Accommodation: The participants will be provided; to and fro fare restricted to AC-II-Tier train ticket or any State road transport services as per the ICAR guidelines. Participants should produce a Certificate that they have not availed TA/DA from their host organization (Head of the Department/Institute) and the training period should be considered 'On Duty' by the participant's parent institution. Boarding and lodging for the participants will be provided at the ICAR and the charges will be met under the grant of training programme. Actual TA for the shortest route will be paid on production of the travel tickets. Participants are requested not to bring their spouse or any family members as there is no scope for their accommodation. Participants are requested to make his/her own arrangement of transport to reach at ICAR-IARI, Pusa Campus. Free shared accommodation in the Sindhu Guest House of the Institute and free boarding (food) will be provided to the selected candidates during the training duration. The local candidates are not eligible for boarding, however, they will be provided local hospitality (lunch, tea, snacks *etc.*).

After the candidates are intimated about their selection, they should immediately reply with firm acceptance. Cancellation at the last moment for casual reasons after acceptance will be regarded as a serious breach of ethical conduct since it may deprive other candidates who could have availed of the opportunity.



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Application form for training programme on “Recent Advances in Breeding Approaches and Varietal Development of Perennial Horticultural Crops”, January 12 to February 1, 2017

1. Name of the applicant:.....
 2. Sex: Male/ Female
 3. Present position:.....
 4. Age and date of birth:.....
 5. Communication Address:
- Phone:..... Office:..... Residence:.....
 Mobile:..... Fax:..... E-mail:.....

10. Permanent address:.....

8. Marital Status: Married/ Unmarried.

11. Educational Qualifications (from graduation onwards):

Degree	Subject	Year	Percentage of marks/Division	University/Institution

12. Research Experience

- a) Area of research:.....
 b) Publications during last five years (Please attach list):
 c) Indicate the future plans (one page) on utilizing the technical expertise gained from the training programme in your research (Attach separate sheet)
 d) Indicate whether you have attended for Summer/ Winter School /Training programme earlier:

13. Relevance of the training to the applicant’s present academic and research activity:

14. Registration fee of Rs. 50/- (DD/ Postal Order No..... dated..... (in favour of Director, ICAR-IARI, New Delhi) (Non-refundable).

Date:

Signature of the Applicant

Place:

CERTIFICATE

It is certified that the information furnished by the candidate has been verified and found correct.

Recommendation of the forwarding authority.....

(SEAL)

CORRESPONDENCE WILL BE ADDRESSED TO

Dr Jai Prakash, Course Director

Division of Fruits and Horticultural Technology,
ICAR-Indian Agricultural Research Institute, New Delhi-110012

Telephone No.: 011-25843214(O); Fax: 011-25843214

Mobile: 09654761955

E-mail: singhjai2001@rediffmail.com, jaiprakash@iari.res.in

Detailed information is also available at:

<http://cbp.icar.gov.in/> and <http://www.iari.res.in>

FOR MORE INFORMATION KINDLY CONTACT

1	Dr Jai Prakash Course Director Email: singhjai2001@rediffmail.com, jaiprakash@iari.res.in Mobile No.: 09654761955
2	Dr Amit Kumar Goswami Course Coordinator Email: amitk@iari.res.in, amit.tkg@gmail.com, Mobile No: 07428928799
3	Prof. S.K. Singh Course Coordinator Email: sanjaydr2@gmail.com, Mobile No: 09868450329, phone No.: 011-25843214

