



**Model Training Course**  
**on**  
**Management of Production Problems of Horticultural**  
**Crops for Enhancing Productivity and Quality**  
**(January 27 – 3 February, 2015)**



**Sponsored by**  
Directorate of Extension,  
Department of Agriculture & Cooperation,  
Ministry of Agriculture  
Government of India, New Delhi

**Course Director**  
**Dr. A. K. Singh**  
Head

**Course Coordinators**  
**Dr. Kanhaiya Singh**, Principal Scientist  
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**Division of Fruits and Horticultural Technology**  
**Indian Agricultural Research Institute**  
**New Delhi-110012**  
**Telefax: 91-11-25843214**  
**Website: <http://www.iari.res.in>**

**Background**

Division of Fruits and Horticultural Technology, Indian Agricultural Research Institute New Delhi, conducts basic and applied research to improve production, productivity and quality of different fruit crops. During the last three decades, the division has contributed significantly through research for the advancement of horticulture by ushering in the frontiers of knowledge in fruit crops and providing practical solutions to the problems confronting fruit industry. The division has well trained scientific manpower in various aspects of fruit production technologies including nutrient and water management, rootstock research, high density orcharding, canopy management, fruit physiology, breeding and biotechnology. The division has several landmarks to its credit and developed seven mango hybrids namely Amrapali, Mallika, Pusa Arunima, Pusa Pratibha, Pusa Shreshth, Pusa Peetamber, Pusa Lalima and two grapes hybrids Pusa Navarang for wine making and Pusa Urvashi for table purpose were released for commercial cultivation. The efficacy of Pusa Srijan as a dwarfing rootstock for Allahabad Safeda guava was demonstrated. Whole transcriptome analysis on mango variety Dashehari and Neelum was accomplished and DNA fingerprinting of ber, mango, citrus and grape was carried out using different molecular markers and constitutes some of the first reports. Technologies related to HDP in Allahabad Safeda guava have been demonstrated for its potential and profitability. Selection criteria for screening citrus against salinity have been developed. Kurukkan and Olour were identified as salt tolerant rootstock for mango. Sour orange, RLC-6 and Attani were identified as salt tolerant root stock for citrus. Potential of bio-hardening of in vitro raised grape plants using AMF was demonstrated. The division has well equipped with modern laboratories and to carry out advance analysis on various aspects. The division, on regular basis, organizes training programmes for human resource development in fruit production for different clientele.

India is a second largest producer of fruits after China contributing about 11 per cent to the global production. India leads the world in productivity of papaya, grapes and banana but average productivity of country is much below as compared to

other leading countries, which is merely 11.6 t/ha. There are various factors, which contributes to low productivity like limited availability of quality planting materials, old and senile orchards, poor orchard management practices, insect pest and diseases, poor post-harvest management practices etc. The present training is aimed to acquaint trainees about various production problems and enhance their understanding/skill about recent technological interventions at management levels of production related problems to improve and increase the productivity with quality of fruits without any compromise on production ecology. Series of lectures by experts on carefully chosen topics and titles covering each segment of production scheme have been scheduled during the course. Practical hands-on-training on important issues related to management of production problems will be undertaken. In addition, exposure visit will also be arranged for the trainees. Thereby, the training will equip field level officers to disseminate focused knowledge to the farmers.

**Course Content**

1. An overview on production constraints and management in fruit crops.
2. Good agricultural practices and phytosanitary measures in fruit crops.
3. Constraints in production of fruit crops in arid and wastelands.
4. Approaches to manage effectively physiological disorders in fruit crops.
5. Mitigating biotic and abiotic stresses in fruit crops through rootstocks.
6. Production constraints and management of quality planting materials of fruit crops.
7. Integrated nutrients and water management in fruit crops.
8. Management of production constraints in protected horticulture.
9. Management of production constraints in mango, citrus fruits, banana, grapes, papaya, guava, aonla, ber and bael.
10. Management of production constraints in temperate fruits
11. Biotechnological approaches to overcome production constraints in fruit crops.

12. Integrated disease and pest management in fruit crops
13. Integrated weed management in fruit crops

#### Course Duration

The course duration is eight days from 27<sup>th</sup> January –03<sup>rd</sup> February, 2015. Out-station participants are requested to arrive latest by the evening of January 26, 2015 and can leave after 1800 hrs on February 3<sup>rd</sup>, 2015.

#### Eligibility

Participation for the **MODEL TRAINING COURSE** is restricted to Officers of State Government Development Departments like Agriculture and Horticulture who is involved in horticulture development and extension activities. The total number of participants will be restricted to 20. There is no course fee charged to participants.

#### Nomination

The Director/ District Agriculture Officer/ District Horticulture Officer of the State Departments may nominate eligible candidates. The nomination form is available in the brochure. The last date of receipt of nomination is **20<sup>th</sup> December 2014**. The selected candidates shall be intimated on or before **December 31<sup>st</sup> 2014** either by Fax/Speed cost/Email/mobile, which in turn have to confirm their participation by **January 10<sup>th</sup> 2015**. Participants may start their journey only after confirmation. Selection will be made on the basis of first cum first serve basis.

#### TA & DA

Participants will be paid to and fro travel expenses restricted to AC II tier Train fare on submission of original travel tickets in support of their claim or State Transport Department Bus by shortest route as per Government of India rules.

#### Boarding and Lodging

Free boarding and lodging facilities will be provided to all the participants as per the rules of model training course. The participants will be provided accommodation in the **Kavery Trainees Hostel of the Institute** on twin sharing basis. **Participants are requested not to bring their family.**

#### How to reach

Indian Agricultural Research Institute popularly known as “Pusa Institute” is located at Pusa in East Patel Nagar about 8 km west

of New Delhi Railway Station and about 16 km east of Indira Gandhi International Airport. Pre - paid taxi/auto can be available at railway /airport/bus stations to reach at IARI Pusa New Delhi.

#### Weather

New Delhi will be moderately cold (15 to 20°C) during 27<sup>th</sup> January-3<sup>rd</sup> February, 2015. Woollen sweater /woollen clothing are advised.

#### Please send nomination to

**Dr. A. K. Singh**

Head

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Indian Agricultural Research Institute

New Delhi-110012

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#### For further information please contact

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#### APPLICATION FORM

1. Name:

2. Designation:

3. Present employer and address:

4. Correspondence address:

Fax:

E-mail:

Mobile:

5. Date of birth:

6. Sex: Male/Female

7. Work experience: ( ) years

8. Educational qualifications:

**Date:**

**Signature of the applicant**

**Place:**

**Recommendation of the Forwarding Authority**

**Signature**

**Date**

**Name & Designation**