



IIHR

Indian Institute of Horticultural Research Bangalore

Courses

1. Post-Harvest Management in Tropical and Sub-tropical Horticultural Crops
2. Integrated Pest Management in Tropical and Sub-tropical Horticultural Crops
3. Protected Cultivation of commercial Vegetable and Ornamental crops
4. Integrated Nutrient and Water Management Techniques in Horticultural Crops
5. Tropical Viticulture

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The Indian Institute of Horticultural Research was established on 5th September 1967 at the headquarters of Indian Council of Agricultural Research, New Delhi and later shifted to Bangalore on 1st February 1968. The Institute has experimental lands with excellent state of art infrastructure facilities for conducting basic as well as applied research on horticultural crops.

These facilities coupled with a pool of talented, experienced scientific and technical human resources (154 scientists, 22 technicians, 93 administrative and accounts, and 165 supporting staff) makes the Institute a premier organisation for research, teaching and extension in all branches of horticultural science. While serving as repository of genetic material and scientific information related to horticulture, the institute is also engaged in dissemination of these information through various human resource developmental programmes such as training programmes, seminars, symposiums, brain storming sessions, technical consultancy services, field based extension programmes etc. The institute also organizes international training programmes on many aspects of tropical horticulture. Some of these programmes are being planned for the year 2008-09.

1. Post-Harvest Management in Tropical and Sub-tropical Horticultural Crops

Training programme

The present course is designed to strengthen the knowledge and skill of the participants on the techniques to minimize the pre and post-harvest losses of horticultural crops and also to provide value addition. This course also will provide information on post harvest management of pest and diseases, pesticide residual in fruit and vegetables, mechanization and economic feasibility of establishing small-scale co-operative processing units.

Faculty

The institute has highly trained devoted and motivated scientists, who are working in frontier areas of horticultural science.

Course Director : Director, IIHR

Duration : 11 days (11-21 November 2009)

Course fee per trainee : US \$ 2,400

No. of trainees per course : 10

Accommodation : Participants will be accommodated in the hotels at Bangalore City. Transport will be provided to the trainees to commute between the institute and the city.

Eligibility : Bachelor's degree or equivalent in Agriculture, Horticulture, Biology with basic knowledge of horticultural crops productivity and technology

Course Contents

- Recent Developments in Post harvest management of horticultural crops
- Handling, Packing and storage of fresh fruits, vegetables
- Preservation of fruits and vegetables by fermentation
- Processing of fresh fruits and vegetables
- Harvesting and posts harvest handling of cut flowers
- Post harvest management of pests in fruits and vegetables and their management
- Post harvest diseases of fruits and vegetables and their management
- Pesticide residues in fruits and vegetables
- Economic feasibility of establishing a small scale cooperative processing unit in rural areas
- Development of packages for export of horticultural produce
- Scope for mechanization of pickle manufacturing in the new millennium
- Visit to commercial horticultural crop processing industries and firms in and around Bangalore and CFTRI, DFRL in Mysore



2. Integrated Pest Management in Tropical and Sub-Tropical Horticultural Crops

Training programme

Despite the widespread use of insecticides and fungicides, the pest damage causes heavy yield losses (30-32%) in horticultural crops. Indiscriminate use of hazardous pesticides to control pests in horticultural crops disturbs the biodiversity of natural enemies, encourages the outbreak of secondary pests and diseases, promotes resistance to pesticides and pollutes the food and ecosystem, and therefore, there is a need for integrated insect-pest and disease management. Hence, this training will provide is designed to strengthen the knowledge and skill of the participants from developing countries on the integrated approach using resistance breeding, botanicals and bio-pesticides, cultural and Bio-control methods in management of pests and diseases in horticultural crops.

Faculty

The institute has highly trained, experienced and motivated scientists, who are working in frontier areas of horticultural sciences.

Course Director : Director, IIHR

Duration : 11 days (11-21 December 2009)

Course fee : US \$ 2,300 per trainee

No. of trainees per course : 10

Accommodation : Participants will be accommodated in the hotels at Bangalore City. Transport will be provided to the trainees to commute between the institute and the city

Eligibility : Bachelors degree of equivalent in Agriculture/Horticulture, Biology with at least 3 years of experience in the diseases and insect pest management of horticultural crops.

Course Contents

- Integrated Pest Management in Fruit crops
- Integrated Pest Management in Vegetable crops
- Pest Management in Ornamental, Medicinal and Aromatic crops
- Microbial control of Horticultural crop pests
- Biological control of Horticultural crop pests
- Integrated Nematode Management in Horticultural Crops
- Breeding for Pest and Disease Resistant varieties of Horticultural Crops
- Management of Pesticide residues in Fruits, Vegetables and Ornamental Crops
- Integrated Weed Management Practices in Horticultural crops
- Application of Biotechnology in development of Insect pest resistant varieties in Horticultural crops
- Application of Bio-pesticides in IPM of Horticultural crops
- Study Tour to IPM farmers fields and Bio-control research laboratories



3. Protected Cultivation of Commercial Vegetable and Ornamental Crops

Training programme

Protected cultivation provides much needed protection against both biotic and abiotic stresses. Vegetable yield increases by 2-3 times and superior quality vegetables and flowers are produced when grown under protected structures. Year round cultivation of superior quality vegetables in a green house is the need of the day to regulate continuous supply to the quality conscious consumers in near and far markets. The major hurdle in spread of this proven technology is the initial cost of the structure, which can be reduced considerably by using locally available material for construction of the green house. The present course is designed to strengthen the knowledge and skill of the participants on the techniques on protected cultivation. The course will empower the trainees on various aspects of cultivation, fertigation, Designing and fabrication of various structures for protected cultivation, plant protection techniques under protected environment.

Faculty

The institute has highly trained devoted and motivated scientists, who are working in frontier areas of horticultural sciences.

Course Director	: Director, IIHR
Duration	: 15 days, (16-30 January 2009)
Course fee	: US \$ 2,400 per trainee
No. of trainees per course	: 10
Accommodation	: Participants will be accommodated in the hotels at Bangalore City. Transport will be provided to the trainees to commute between the institute and the city.

Eligibility	: Bachelor's degree or equivalent in Agriculture, Horticulture, Biology with basic knowledge of horticultural crops productivity and technology.
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Course Contents

- Advanced production technology for quality production of selected fruits, vegetables, ornamental crops and mushrooms
- Protected cultivation of high-value vegetables and ornamental crops

- Designing and fabrication of structures for protected cultivation of vegetables and ornamental crops
- Advances in production and management of dryland horticultural crops
- Integrated nutrient management techniques in horticultural crops
- Advances in integrated pest management in horticultural crops
- Advances in integrated disease management in horticultural crops
- Tissue culture and micro-propagation of horticultural crops
- Advances in post-harvest technology of horticultural crops
- Economics of production and marketing of commercial horticultural crops
- Visit to commercial and export oriented production, marketing and processing units of horticultural crops



4. Integrated Nutrient and Water Management Techniques in Horticultural Crops

Training programme

Nutrient and water management plays a vital role in realizing targeted production in Horticultural crops. Providing water based on the need and stage of the crops is important in utilizing water judiciously and to realize higher yield per unit water. Horticultural crops being long duration ones, needs continuous supply of nutrient for better growth and productivity. In recent times there is increased demand for micronutrient in most of the horticultural crops. The interaction of water and nutrient is also very much important in achieving better growth, yield and productivity. Due to the limited availability of water and increased cost of fertilizers it is essential to give attention for judicious management of both these critical inputs. There is increase awareness on use of drip irrigation and also fertigation. The Institute has standardised irrigation and fertilizer management schedule for most of the horticultural crops. This training programs aims at providing complete knowledge and skill on efficient and integrated use of both water and nutrients in realizing higher yields of horticultural crops.

Faculty

The institute has highly trained devoted and motivated scientists, who are working in frontier areas of horticultural sciences.

Course Director : Dr S D Sikhamany

Duration : 11 days (12-22 February 2009)

Course fee : US \$ 2,400 per trainee

No. of trainees per course : 10

Accommodation : Participants will be accommodated in the hotels at Bangalore City. Transport will be provided to the trainees to commute between the institute and the city.

Eligibility : Bachelor's degree or equivalent in Agriculture, Horticulture, Biology with basic knowledge of horticultural crops productivity and technology.

Course Contents

- Importance of integrated nutrient and water management in horticultural crops
- Integrated Water management techniques in fruit, vegetable, ornamental, medicinal and Aromatic crops
- Integrated Nutrient management techniques in fruit, vegetable, ornamental, medicinal and Aromatic crops
- Principles and interpretation of leaf, soil and water analysis for nutrient management in horticultural crops
- Fertilizer management in horticultural crops based on isotopes studies
- Growing horticultural crops under saline and sodic soils
- Micro irrigation and fertigation methods in horticultural crops
- Micro irrigation and fertigation practices in fruit, vegetable, ornamental, medicinal and Aromatic crops
- Diagnosis and management of Micro-nutrients in horticultural crops
- Role of Biofertilizers in horticultural crops
- Visit to farmers fields and commercial organisations

5. Tropical Viticulture

Training programme

Grapes are one of the important fruit crops having multiple uses. Grape has got demand as fresh fruit, resins, wine and ready-to-serve juice. The course is designed to strengthen the knowledge and skill of the participants on the techniques in tropical viticulture. The course will cover all aspects of grape production including planting, training, location-based agro techniques, plant protection, post-harvest value-addition and economics of production.

Faculty

The institute has highly trained devoted and motivated scientists, who are working in frontier areas of horticultural sciences.

Course Director : Director, IIHR

Duration : 11 days (10-20 March 2009)

Course fee : US \$ 2,400 per trainee

No. of trainees per course : 10

Accommodation : To be arranged in hotels of Bangalore City. Transport will be provided to the trainees to commute between the institute and the city

Eligibility : Bachelor's degree or equivalent in Agriculture/Horticulture/Biology with basic knowledge of fruit production and at least three years' experience in fruit production and closely related subjects



Course Contents

- Crop improvement and improved varieties of grapes
- Agro-techniques of grapes including pruning and training techniques
- Integrated nutrient and water (including drip irrigation, fertigation) management techniques for grapes
- Integrated insect pest management (including biocontrol and nematode management) in grapes
- Pesticide residues analysis and their management in grapes
- Post-harvest management (handling, storage, preservation and processing) in grapes
- Economics and production and marketing of grapes
- Field visits and study tours to various relevant organizations and grape farmers field



A view of the interaction of Trainees and resource persons