



IARI

Indian Agricultural Research Institute

New Delhi

Courses

1. Plant Variety Protection System in India
2. Seed Quality Evaluation
3. Seed Production and Quality Evaluation
4. Global Climate Change and Agriculture: Assessment of Impact, Adaptation and Mitigation Potential
5. Advanced Environmental Impact Assessment Techniques for Natural Resource Management
6. Integrated System Approaches for Value-addition and Loss Reduction in Fruits and Vegetables
7. Enhancing Management Skills for Sustainable Rural Development
8. Entrepreneurship Development Process among Women
9. Method of Developing, Sustainable Extension System
10. Method of Monitoring and Evaluation of Extension Programme

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The Indian Agricultural Research Institute (IARI) is the country's premier institute for agricultural research, education and extension. It has served the cause of science and society with distinction through first rate research, generation of appropriate technologies and development of human resources. The Green Revolution was born in the fields of IARI and our graduates constitute the core of the quality human resource in India's agricultural research and education. The Institute has all along been adjusting and improving its policies, plans and programmes to effectively respond to the needs and opportunities of the nation.

1. Plant variety production system in India

Faculty

The Division has well experienced faculty to deal the various aspects of PVP and DUS testing. It is also amply supported by the resource persons with drawn from the Divisions of Genetics, Vegetable Science and other institutes of ICAR.

Course Contents

Lectures

- The Intellectual Property Rights
- Provision of PPV & FR Act and functions of PPV & FR Authority
- Legal issues of PPV & FR Act
- Principles and procedures of DUS Testing
- Handling of software, development, maintenance and use of data base
- Statistical analysis of data
- Other national and international Laws, Acts and Agreements.

Practical

- Development of DUS test guideline
- Planning and conduct of DUS field trials
- Recording observations on morphological characteristics, and their interpretation
- Special tests
- Filling of application forms for variety registration and protection
- Search, matching and retrieval of information from the database
- Reporting of results

Course Directors : Dr. S. K. Chakrabarty, Principal Scientist, Division of Seed Science and Technology, Indian Agricultural Research Institute, New Delhi-110012

Duration : 10 days

Course Fee : US \$1000

Number of Trainee : 15 per course

Accommodation : Institute's Guest House/Hotel in City

Eligibility : Master's degree in Genetics / Plant Breeding / Seed Technology / Horticulture/ Plant Biotechnology and allied fields or Bachelor's degree in Agriculture/ biological Sciences with minimum of 3 years working experiences in variety development and /or management of seed industry, nominated by the Government and private seed sectors.

2. Seed quality evaluation

Faculty

Highly experienced faculty is available in the Seed Technology Div. Institute and invited speakers from others Division & Institute and viz.; professors from the Institute/Division and high level personnel from the seed industry will constitute the faculty.

Course Contents

Seed quality system - internationally, Indian Seeds Act, 1966 and New Seeds Bill, 2004, Generation system of seed multiplication and certification, Principles of seed quality evaluation, Principles and procedures of seed sampling, moisture testing, seed processing, physical purity testing, germination testing, quick viability test, embryo test, seed health testing, genetic purity testing and seed vigour testing. Variety and species identification, Testing of coated seeds and GM seeds, Principles and procedures of DUS testing for plant variety protection.

Course Directors : Dr. Malavika Dadlani, Head, Division of Seed Science and Technology, IARI, New Delhi-110012 and Co-Director: Dr. Shiv K. Yadav, Senior Scientist, Division of Seed Science and Technology, IARI, New Delhi-110012.

Duration : 15 days

Course Fee : US \$1500

Number of Trainee : 15
per course

Accommodation : Institute's Guest House/Hotel in City

Eligibility : Master's degree in Seed Technology/Genetics/ Plant Breeding/Economic Botany or equivalent Or Seed Analysts/ Officers having Bachelor's degree in Agriculture/Botany or equivalent with minimum 3 years' experience in seed testing, nominated by the respective Governments on deputation.



3. Seed production and quality evaluation

Faculty

Scientists from IARI, New Delhi and regional stations Karnal and Katrain, persons actively engaged in seed quality control, commercial seed production and processing will constitute the faculty. As part of the training programme, visit will be arranged to IARI-Research Station, Karnal (Haryana), which has state of art facility for seed production, post harvest handling and seed storage.

Course Contents

- Principles and practices of seed production
- Generation system of seed multiplication
- Techniques in hybrid seed production of field crops and vegetables
- Seed processing, packaging and storage
- Operation and management of seed processing plants
- Principles and procedures of seed certification
- Seed testing: seed purity, germination, viability, seed health and genetic purity
- Economics of seed production. Plant Variety Protection and seed regulations

Course Directors : Dr Sudipta Basu

Duration : 12 days

Course Fee : US \$1500/trainee

Number of Trainee : Maximum 15 per course per course

Accommodation : Institute's Guest House/Hotel in City

Eligibility : Masters degree in Seed Technology, Plant breeding, Genetics, Horticulture and Plant physiology. Scientists/Managers/ Technical persons involved in seed production and quality control OR

Bachelors degree in Agriculture/ Biological Sciences with a minimum of three years experience in seed quality evaluation/seed production and processing



4. Global climate change and agriculture: assessment of impact, adaptation and mitigation potential

The training course is designed to strengthen the knowledge and skills of the participants about the technologies for assessing the impact of rise in temperature and CO₂ on crop productivity and quality such as TGT, OTC and FACE, and measurement of GHG emission from the soils. The course is also aimed to understand the mechanism and magnitude of climate change impact on the physical and biological components of environments and agriculture.

Faculty

Scientist with long experiences and expertise in the field of climate change research from the Environmental Science and other divisions of the IARI and other invited speakers from reputed institutions such as IMD and IITM will be involved in constituting the faculty

Course Contents

The course content will broadly cover the following topics:

- Global climate change and variability
- Evidence and IPCC scenario and projections of climate change-Physical and Biological
- Possible causes of climate change—Natural and anthropogenic
- Greenhouse gases, their genesis and emissions (CO₂, CH₄, N₂O and O₃)
- Impact of rising atmospheric CO₂ level on crop growth, productivity and quality
- Impact of rising atmospheric temperature on crop productivity and quality
- Climate change and loss of biodiversity
- Adaptation and vulnerability to climate change
- Mitigation option to climate change
- Advanced methodology of assessing the impacts of climate change on crops
- Climate change and crop simulation modeling

Course Directors	: Dr S D Singh, Professor, Env. Science Division, IARI
Course Coordinator	: Dr H Pathak, Sr Scientist, Env. Science Division, IARI, Dr Naresh Kumar, Sr Scientist, Env. Science Division, IARI
Duration	: 10 days (15-24 February 2010)
Course Fee	: US \$1000/trainee
Number of Trainee per course	: 20
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Masters degree in any discipline of Agriculture

5. Advanced Environmental Impact Assessment (EIA) Techniques for Natural Resource Management

The course is designed for strengthening knowledge and skill of the participants in the use/ application of modern environmental monitoring and impact assessment techniques for recommending sustainable adaptation strategies for natural resource management and effective policy making.

Faculty available

Scientists of the Division and reputed Guest Speakers.

Course Contents

- Principles of environmental impact analysis
- Processes and methodologies of EIA, Identification, Prediction and Assessment of Impacts, Environmental Risk Assessment, Environmental monitoring and regulation
- Design of small and large scale environmental quality monitoring programs, Environmental monitoring methods & their strengths & weaknesses, *In-situ/ ex-situ* environmental monitoring techniques,
- Environmental impact analysis with GIS & GPS systems, Satellite remote sensing based EIA

- System analysis approaches for quantifying impacts of land/water management strategies
- Fusion of multi-source/multi-scale data for efficient environmental impact assessment
- Field scale decision support system based environmental impact analysis of salt affected soils and irrigation waters (Case studies)
- Basin scale decision support systems for analyzing environmental impacts of climate change (Case studies)
- Recommending appropriate adaptation strategies through advanced EIA techniques (Case studies)

Course Director : Dr Ravinder Kaur

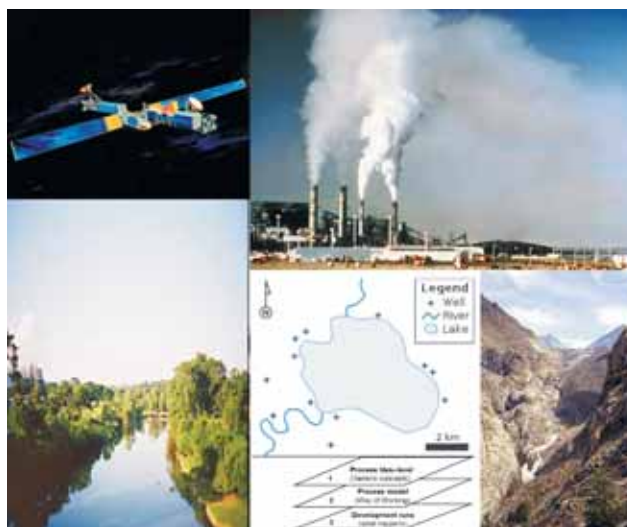
Duration : 10 days

Course Fee : US \$1456/trainee

Number of Trainee : 10
per course

Accommodation : Institute's Guest House/Hotel in
City

Eligibility : Masters degree in any discipline
of Natural Resource
Management. Working
experience in concerned field/
officers nominated by
government on deputation with
basic knowledge of computers.



6. Integrated system approaches for value addition and loss reduction in fruits and vegetables

The course is designed for strengthening knowledge on Post Harvest Technology of horticultural crops and skill of the participants on various aspects of handling transportation, processing and storage techniques of horticultural produce

Faculty

Scientist with long experience and expertise in the field of PHT from the Institute and invited speakers from different Divisions/institutions/Universities will be involved in the conductance of lectures/practical

Course Contents

The key contents of the proposed international training programme includes:

- Pre-harvest operations in relation to post harvest quality and shelf life of produce, harvesting techniques, on-farm storage techniques for fruits and vegetables, advances in packaging technology, CA & MA storage, Drying and dehydration of vegetables, Minimal processing, juice concentrate and beverages, bio-preservation, quality and food safety standards of functional food
- Low cost innovative techniques for processing of fruits and vegetables
- Irradiation in PHM of fruits and vegetables
- Bio-colors from flowers
- Handling and processing promising genotypes in vegetables and fruit cultivars
- Protected cultivation for quality vegetables

Course Directors	: Dr R K Pal, Head, PHT Dr V R Sagar, Professor, PHT
Duration	: 08 days
Course Fee/ trainee	: US\$ 1200 (US Dollar)
Number of Trainee : 10 per course	
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Ph.D/Master Degree in Post Harvest Technology/ Horticulture/Food Technology/ Structures & Process Engineering or Officers/Consultant nominated by Govt. on deputation



7. Enhancing management skills for sustainable rural development

The course aims to impart knowledge and skills to the participants about various aspect related to enhancing management competencies for rural development.

Faculty

Scientists with long experience and expertise in the field from IARI and invited speakers from other reputed institutions will constitute the faculty.

Course Contents

- The key contents of the proposed international training programme includes strategic planning, management by objectives, visioning-scenario building, forecasting techniques, project management, problem solving & decision-making, leadership, delegation, motivation, achievement motivation, emotional intelligence, understanding self, creativity, team building & group dynamics, managerial communication, ICT in extension & feedback, developing entrepreneurial competencies, stress management, conflict management, time management, transactional analysis, impact assessment and evaluation skills

Course Director	: Dr K Vijayaragavan, Head, Division of Agricultural Extension, IARI, New Delhi-12
Course fee/ trainee	: US \$ 1000
No. of trainee/ Course	: 10
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Master's degree in Agriculture/ Extension Education/ Rural Development/ Rural Sociology



8. Entrepreneurship development process among women

The training course is designed for equipping participants with knowledge and skills of entrepreneurship development process amongst women.

Faculty

Accredited Entrepreneurial Motivation Trainers and Internationally Acclaimed Process Trainers invited speakers from reputed institution will constitute the faculty.

Course Contents

The Key concepts related to Entrepreneurship Development Process among Women will include:

- Concept of Entrepreneurship
- Psychological Mainsprings of the Process of Entrepreneurship Development
- Aspirations and Motives to set up an Enterprise
- Social Values and Environmental Facilitators and Inhibitors of the Process
- Strategies and Models for Initiating and Sustaining the Process
- Entrepreneurial Competencies Development
- Agribusiness Managerial Abilities Development among women
- Group Entrepreneurship

Course Director	: Dr Rashmi Singh Senior Scientist & International Expert for Asian Productivity Organization Division of Agricultural Extension IARI, New Delhi-12
Course fee/	: US \$ 1000 only (One thousand US dollars only)
No. of trainee/ Course	: 15
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Master's degree in Extension/ Social Sciences. Working experience in the area Gender Empowerment or Capacity Building of Women or officer nominated by Government on deputation

9. Methods of developing sustainable extension system

Course Contents

- The content of the international training will be introduction of farmers problems at grassroots level, inadequate input availability locally, problem of organizing farmers, its advantages, steps of organizing farmers in the form of cooperatives, theories of cooperation, legally linking with line departments, developing bylaws, constituting executive and delineating its roles.

Course Director	: Dr Ram Bahal, Professor
Duration	: 8 days
Course Fee	: US \$ 1000/trainee
Number of Trainee	: Maximum 15 per course per course
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Extension professionals holding master's degree in agricultural extension, veterinary extension, fishery extension or lecturers, assistant professors, subject matter specialists holding Ph. D. degree in above fields. Preference will be given to the experienced persons.



10. Methods of monitoring and evaluation of extension programmes

Course Contents

- Major components of project monitoring. Monitoring standards: Past performance, desired performance, professional standards, planning targets and optimal performance
- New approaches to participatory impact monitoring.
- Project management in practice.
- Types of evaluation, activities involved in conducting evaluation.
- Evaluation standards, identifying and selecting the evaluative questions, criteria and issues.
- Planning the information collection, analysis and interpretation.
- Developing management plan.
- Dealing with political, ethical and interpersonal aspects.
- Reporting and using evaluation information and meta Evaluation



Course Directors	: Dr. Ram Bahal, Professor
Duration	: 8 days
Course Fee	: US \$ 1000/trainee
Number of Trainee	: Maximum 15 per course per course
Accommodation	: Institute's Guest House/Hotel in City
Eligibility	: Extension professionals holding master's degree in agricultural extension, veterinary extension, fishery extension or lecturers, assistant professors and subject-matter specialists holding Ph. D. degree in above fields. Preference will be given to the experienced persons

