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PESTICIDES, ENVIRONMENT AND FOOD SAFETY

Pesticides are commonly used on the food we eat to control pests that may damage the crops during production, storage or transport. Pesticides allow growers to increase the amount of usable food from each crop at the time of harvest. Pesticides may also improve the quality, safety, and shelf-life of certain foods. For consumers, this means access to a wide variety of affordable foods, grown locally or imported from other countries.

Pesticides are used on fruits, vegetables and other field crops like paddy, wheat, maize, oil seeds and on non-food crops such as cotton, grass, and flowers. The OP pesticides malathion, imadicolp and chlorpyrifos etc. are commonly used on all fruits, vegetables, and wheat. Pesticides are also used on crops that are fed to animals thus finding place in food chain. Although pesticide residues on the food we eat are highly regulated in various countries with regulations for it in force yet some residues may remain at the time of harvest, residues tend to decline as the pesticide breaks down over time. Worldwide surveys have documented the contamination and impact of agrochemical residues in soils, and terrestrial and aquatic ecosystems including coastal marine systems, and their toxic effects on humans and nonhuman biota.

In India during 2017-18, of the total 99,353 samples tested across the country, more than 24 per cent samples were found adulterated. The situation is equally worrisome in many other states (see map: Poison in food; Percentage samples found adulterated or misbranded in 2017-18)

Many farmers do not know which pesticides are banned in the country, or what is their correct dosage. They are ill-formed even about their personal safety during the use of the pesticide and rarely trained for it.

Although serious attempts have been made to phase out persistent organic chemicals like chlorinated hydro carbons and replaced by more biodegradable chemicals, contamination by legacy residues and recent residues still impacts on the quality of human food, water, and environment. Alternative paths to the intensive use of crop protection are open, such as use of cultural, biological, mechanical and chemical means. Agro industries need to further develop advanced practices to protect public health, which requires more cautious use of agrochemicals through prior testing, careful risk assessment, and licensing, but also through education of farmers and users in general, measures for better protection of ecosystems, and good practices for sustainable development of agriculture, fisheries, and aquaculture.



IHT- EDUCATION

Institute of Horticulture Technology launched Diploma and Certificate programmes in various disciplines of horticulture that will open new opportunities for the employment of youth in public and private sector besides helping them in establishing their own enterprises. These new study programmes are being undertaken in collaboration and certification with Dr. Rajendra Prasad Agricultural University, Pusa, Bihar for full time courses and TNAU, Coimbatore, Tamil Nadu for open distance learning courses. The programmes are as under-

DIPLOMA PROGRAMMES

Full Time Courses

- Protected Cultivation of Vegetable Crops
- Protected Cultivation of Flower and Ornamental Plants
- Seed, Nursery and Quality Planting Material Production
- Fruit Production and Orchard Management
- Commercial Vegetable Production
- Commercial Floriculture
- Landscape Horticulture and Design
- Organic Farming / Agriculture

Open Distance Learning

- Diploma in Agri-Inputs

POST GRADUATE DIPLOMA PROGRAMMES

Full Time Courses

- Protected Cultivation of Vegetable Crops
- Protected Cultivation of Flower and Ornamental Plants
- Seed, Nursery and Quality Planting Material Production
- Fruit Production and Orchard Management
- Commercial Vegetable Production
- Commercial Floriculture
- Landscape Horticulture and Design
- Organic Farming / Agriculture

Open Distance Learning

- Protected Cultivation
- Food Science and Processing
- Organic Farming / Agriculture
- Commercial Production of Bio Control Agents

CERTIFICATE COURSES

Open Distance Learning

- Nursery Techniques and Propagation of Horticultural Plants
- Landscaping Horticulture and Planting Design
- Flower Cultivation with special reference to protected cultivation
- Organic Farming
- Mushroom Cultivation
- High Density Planting, Fertigation and Orchard Management in Major Fruits
- Basic propagation techniques in horticultural crops

TECHNOLOGY DEMONSTRATIONS

Field Demonstration of Cultivation and Development of Process Technologies of Aromatic Crops (Patchouli, Citronella and Sugandh Mantri) in Assam

Technology demonstration for the cultivation of aromatic plants is being undertaken in IHT's NE Centre Mandira, Assam and farmers' fields in Goalpara, Kamrup and Berpeta districts of Assam. The farmers are being provided hands on training for the technological interventions used for improved production of the biomass from the plants.



A View of Citronella and Sugandh Mantri in Farmer Field at Assam

Biotech-KISAN

Empowering farmers of Assam and Nagaland as scientific grass root leaders through skill up-gradation, advance technology percolation and market information in the area of Malbhog banana.



A View of Malbhog Banana Field at IHT Mandira, Assam



A View of Elite Banana Plant Selected for Healthy Planting Material

Pilot Scale Demonstration of Strawberry Cultivation with Sustainable Agro-technological Interventions in Farmers Field of Meghalaya

Under this project appropriate crop production modules/agro-technological packages are being demonstrated to farmers at Bio-Resources Development Centre- BRDC, Meghalaya and farmers' fields in districts of West and East Khasi Hills, Jaintia Hills, Garo Hills districts of state.



Demonstration Plots of Strawberry Plantation in Farmer's Fields

Empowering Farmers of Assam and Nagaland as Scientific Grass Root Leaders through Skill Up-gradation, Advance Technology Percolation and Market Information in the Area of Turmeric

Integrated development of turmeric sector in north eastern and Bundelkhand regions through sustainable technological interventions for improvement of productivity, quality and post-harvest processing under good agricultural practices (gap) production system.

By implementing this system of turmeric cultivation, the seed rate which is 8-10 qts/ha. can reduced by 70-80 per cent. Also, the gestation period is reduced by one-and-a-half to two months



Turmeric Production at IHT Mandira under Good Agricultural Practices

Farmers Training at IHT Mandira on Turmeric Propagation

CAPACITY BUILDING E-TRAININGS PROGRAMMES

Commercial Hydroponics e-Trainings Programmes

A well-rounded course for those who are interested in hydroponic crop production and covers activities from growing to marketing. During the month e-trainings were undertaken in Commercial Hydroponics, the main contents for the course was: Importance of Hydroponic Technology, Plant Growth Requirements – light, artificial light, light balances, nutrition- nutrient requirements, deficiencies, toxicities, pH, conductivity, temperature, hydroponic growing systems - types, properties, uses, hydroponic nutrient solutions, hydroponic equipment, growing structures, environmental controls- heating, cooling, lighting, shading, carbon dioxide enrichment, plant culture in hydroponics- trellising, pruning, pollination, transplanting, nutrient film technique (NFT) culture, irrigation systems, pest and diseases - identifying the problem, and IPM.



Mushroom Production e-Trainings Programmes

Institute successfully organized e-training programs on “Mushroom Production”, the major sessions dealt with Mushroom Culture, Spawn Production and Spawning, Making and Casing Beds, Growing Conditions for Mushroom, Pests, Diseases and Growing Mushrooms Outside, Harvesting, Storing and Using Mushrooms. This course does provide a valuable introduction to a much wider range of mushrooms. This course is aimed at those who would like to work in the industry, those who would like to set up their own commercial mushroom farm, those who would like to grow mushrooms for their own pleasure.





Home Gardening e-Trainings Programmes

IHT completed 2 days e-training program on "Home Gardening" the major content of the training Programme were:

- Basic Plant Identification & Culture: Plant names, planting, transplanting, tools & equipment.
- Soils & Nutrition: Soil structure, nutrition, composting, soil building, drainage, fertilizers.
- Pests & Weeds: Identifying problems, sprays, biological control, weed identification & control.
- Propagation: Propagating materials, seed, and cuttings.
- Lawns: Turf varieties, laying a lawn, lawn care.
- Indoor Gardening: Hardy indoor plants, container growing.
- The Kitchen Garden: Vegetable gardening, fruit trees, herbs.

Key Points about the training programme of Home Gardening in Institute of Horticulture Technology:

- Easy and cost-effective methods- to help you on your budget
- Low maintenance tips- considering many of us are working full time.
- Recycling and reusing techniques- to be more eco-friendly and save pollution
- Making your own soil- with the waste that we always ignore
- Finding the shortest and simplest way between earth, hands and mouth

Upcoming e-Trainings

S. No.	Title	Date	Duration
1.	Protected Cultivation of Vegetable Crops	5th October	2 Weeks
2.	Hydroponics Crop Production	22nd to 24th October	3 Days
3.	Commercial Hydroponics	26th October	2 Weeks

Customized courses also offered on demand



ISO 9001 : 2008

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