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## Cultivating the Future: Training for Farmers & Bio-Entrepreneurs in IHT

In an era, demanding climate-resilient and chemical-free agriculture, the Institute of Horticulture Technology (IHT) bridges traditional wisdom with modern technology to train farmers, bio-entrepreneurs, and agricultural professionals for a sustainable future. The institute conducts various short-term training courses for farmers, bio-entrepreneurs, and students for building their capacities, the main focus being on several key areas.

Recognizing the urgent shift toward sustainability, IHT makes Organic and Natural Farming an important component of its curriculum. For farmers, the institute provides practical training in chemical-free cultivation, biological pest control, vermicomposting, and soil health management, thereby reducing input costs while improving long-term farm viability. For bio-entrepreneurs, IHT offers guidance on scaling organic produce, developing on-farm input units such as bio-fertilizers and compost, and meeting the growing market demand for certified organic products.

In the field of Mushroom Cultivation, IHT offers specialized online and hands-on production training, equipping aspiring entrepreneurs with essential skills in cultivation, processing, and marketing. The program covers compost making, pasteurization, spawn production, casing, nutrition, pest management, and value-added products. Farmers can diversify their income through high-value, short-duration mushroom farming, which is ideal for small spaces and off-season production, while bio-entrepreneurs can set up commercial mushroom units for button and oyster varieties, tapping into growing urban and hospitality markets.

IHT also provides specialized training in Soilless Crop Production (Hydroponics) and protected agriculture, a rapidly growing field for urban and high-value farming. The institute offers real-time production experience with world-class equipment and qualified faculties. Farmers benefit by growing high-yield, pesticide-free crops without soil, which is ideal for water-scarce or degraded land conditions, while bio-entrepreneurs can establish commercial hydroponic units for premium leafy greens, herbs, and vegetables targeting urban markets and hotels.

In Hi-Tech & Precision Agriculture Training, IHT covers protected cultivation through polyhouse training for off-season, high-value crops including baby corn and exotic vegetables. The institute also trains participants in micro-irrigation and fertigation techniques for water-efficient farming, and maintains a soil analysis lab equipped with the Pusa STFR meter for rapid soil health assessment.



Under Landscaping & Garden Maintenance, IHT offers comprehensive hands-on training covering landscape design, lawn establishment, and garden upkeep. Farmers can diversify their farm income by offering landscaping services or developing agri-tourism spaces, while bio-entrepreneurs can launch ventures in garden maintenance, ornamental plant nursery, or landscape consultancy.

In terms of outreach and target audience, IHT actively partners with state governments to train progressive farmers under schemes like the National Horticulture Mission. The institute's programs are specifically designed for farmers (progressive and small-holder) seeking practical, low-cost organic and hi-tech solutions; prospective bio-entrepreneurs looking to launch ventures in organic inputs, hydroponics, polyhouse farming, mushroom cultivation, saffron cultivation, landscaping services and graduates and agricultural professionals seeking career advancement. By blending organic farming, mushroom cultivation, soilless production, and landscaping expertise, IHT empowers both farmers and bio-entrepreneurs to build profitable, sustainable, and future-ready agricultural enterprises.

## Capacity Building Programmes: Out of the State Trainings of Farmers- Chhattisgarh

The Institute of Horticulture Technology (IHT), Greater Noida organized an Out-of-State Training Programme under NHM for farmers from Korba and Balodabazar districts of Chhattisgarh to different progressive farmers' fields, Institutions across NCR Delhi. The programme witnessed active participation of farmers interested in adopting modern horticultural practices. During the training, participants had a practical exposure and hands on training in protected cultivation, soilless plug nursery production, micro-irrigation, fertigation, mushroom cultivation, organic farming and nursery management. Exposure visits to the Regional Mushroom Research Centre, Murthal (Sonipat) and IHT Technology Park provided practical insights into polyhouse farming, hydroponics- soilless crop production technology and other modern production systems. A key highlight was hands-on training in vegetable grafting (brinjal and tomato), where farmers gained practical skills in the grafting technology and were explained advantages of the use of grafted vegetable seedling like improved plant vigor, yield and disease resistance. The programme was highly beneficial by enhancing farmers' technical knowledge, building practical skills and encouraging the adoption of hi-tech horticulture for increased productivity and income.



*Some glimpses of farmer's practical session on high value vegetable crop production technology, mushroom farming, vegetable grafting and hydroponic technology*

## Out of the State Exposure Visit of Farmers- Dumka Jharkhand

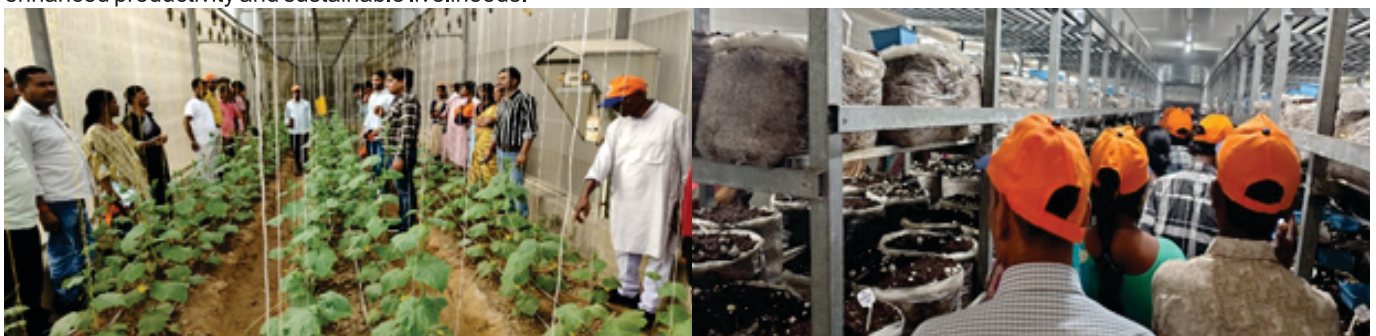
IHT organized an Exposure Visit for farmers from Dumka district, Jharkhand to Raipur, Chhattisgarh with the objective of enhancing their practical knowledge of modern horticultural practices. During the visit, farmers were exposed to advanced techniques in vegetable cultivation like vegetable grafting, nursery management, integrated farming systems and sustainable agriculture practices. They visited progressive farms and leading agri-training centres like Chawda Bagh, Raipur, Indira Gandhi Krishi Vishwavidyalaya, Raipur, a premier agricultural university widely recognized for its research, education and extension activities in agriculture and horticulture, Precision Farming Development Centre (PFDC), Raipur, a leading center dedicated to protected cultivation and hi-tech horticulture research and demonstration and SAMETI Raipur (State Agriculture Management and Extension Training Institute), a key institution for horticultural training and capacity building, where they interacted with experts and experienced farmers to understand improved crop production technologies, efficient resource management and market-oriented farming approaches. The participants also gained insights into hi-tech horticulture practices, plant protection measures and value addition techniques, enabling them to better understand scientific and profitable farming methods.



*Dumka Farmers on Exposure Visit to Raipur, Chhattisgarh*

## Out-of-State Exposure Visit– Meghalaya and Assam Farmers

Central Institute of Horticulture (CIH), Nagaland deputed trainees from NE States like Meghalaya and Assam to IHT Greater Noida for Out-of-State Exposure Visit Programme on Modern Horticulture Crop Production Technology. The programme aimed to enhance farmers' knowledge through practical exposure to advanced horticultural practices like vegetable grafting, polyhouse farming and use of modern technologies in open field crop production. Participants were introduced to modern technologies including protected cultivation, nursery management, micro-irrigation, fertigation and high-value crop production. During the visit to Haryana, trainees explored leading centres like Centre of Excellence for Vegetables Indo-Israel in Gharaunda, Karnal Haryana, MHU Regional Mushroom Research Centre, Murthal, Sonapat, Haryana, and IHT Technology Park, Greater Noida, where they observed polyhouse structures, organic farming, mushroom farming, controlled environment agriculture systems, micro-irrigation, fertigation, hydroponics, mulching and scientific nursery and orchard management practices. The exposure visit proved highly beneficial in improving technical knowledge, building practical skills and motivating farmers to adopt modern horticultural technologies for enhanced productivity and sustainable livelihoods.



*Farmers Gaining Practical Skills in Modern Horticulture*

## Out-of-State Exposure Visits - Jharkhand Farmers

The Institute of Horticulture Technology (IHT), Greater Noida organized an Out-of-State Exposure Visit Programme on Modern Horticulture Crop Production Technology for farmers from Simdega, Pakur, Latehar and Dhanbad districts of Jharkhand at IHT and selected centres in Haryana. The programme aimed to strengthen farmers' practical knowledge through exposure to advanced horticultural technologies. Participants learned about protected cultivation, nursery management, micro-irrigation, fertigation, mushroom cultivation and high-value crop production. During visits to Haryana, farmers interacted with experts and observed modern farming practices, while at the IHT Technology Park, Greater Noida, they explored polyhouses, hydroponics, mulching and scientific nursery and orchard management systems. The exposure visit proved highly beneficial in enhancing technical skills, broadening farmers' perspectives and encouraging the adoption of modern horticulture practices for improved productivity and income.



*Jharkhand Farmers Exploring Hi-Tech Horticulture Technologies*

## Training cum Exposure Visit – Jharkhand Farmers to Nashik, Maharashtra

The Institute of Horticulture Technology (IHT), Greater Noida successfully organized a seven-day Training cum Exposure Visit Programme titled “Hi-Tech Horticultural Production Technology” for farmers along with accompanying officers from Deoghar, Jharkhand under MIDH. The programme, based on the principle of “seeing is believing”, combined interactive lectures, hands-on demonstrations and field exposure. During the visit, farmers were deputed to Nashik, Maharashtra, where they visited the National Horticultural Research and Development Foundation and gained technical knowledge on improved onion and garlic production technologies, including nutrient management, seed production, vermicomposting and scientific storage methods. Participants also visited Sahyadri Farms, one of India's leading farmer producer companies, where they learned about post-harvest management, grading, packaging and market linkage systems. They further observed advanced cultivation practices of grapes, pomegranate and vegetable crops. The programme proved highly beneficial in enhancing farmers' technical knowledge, exposing them to modern horticulture technologies and encouraging the adoption of value addition and market-oriented farming practices to improve productivity and income.



*Exposure to Advanced Grape and Rose Farming Practices*

## Trainings for Youth and Bio- Entrepreneurs

The Institute of Horticulture Technology (IHT), Greater Noida successfully organized a comprehensive series of online and offline training programmes during the month. These programmes witnessed enthusiastic participation from entrepreneurs, students, and aspiring agri-professionals from across India, reflecting the growing interest in modern horticulture and agri-entrepreneurship. The training series covered a wide spectrum of high-demand areas in horticulture, including Herbs Cultivation, Landscape Gardening, Mushroom Production (online & offline), Saffron Cultivation (online & offline), Home Gardening, Protected Cultivation, and Commercial Hydroponics. Each programme was designed to blend theoretical knowledge with practical exposure, ensuring participants not only understood the scientific principles but also gained hands-on experience in modern horticultural practices. During the sessions, participants were trained on advanced cultivation techniques, crop management, nutrient and water management, pest and disease control, post-harvest handling, and value addition practices. Special emphasis was placed on entrepreneurial aspects, enabling participants to translate their technical knowledge into profitable business opportunities. The practical demonstrations, live interactions, and case studies helped participants understand real-world challenges and solutions in modern horticulture.

The programmes were highly interactive, encouraging participants to discuss field-related issues, share experiences, and seek expert guidance, thereby fostering a collaborative learning environment. Exposure to latest technologies in protected cultivation, hydroponics, mushroom production, and saffron farming enabled participants to explore sustainable and innovative farming systems suitable for their regions. These training programmes proved immensely beneficial in enhancing technical skills, promoting agri-entrepreneurship, and creating self-employment opportunities, particularly among youth and small-scale farmers. They also reinforced the importance of adopting modern, market-oriented, and sustainable horticultural practices to increase productivity and profitability. Through these initiatives, IHT continues to play a pivotal role in capacity building and skill development in the horticulture sector, empowering participants to contribute effectively to India's growing horticultural economy and supporting the vision of modern, technology-driven, and profitable farming.



*Youth & Entrepreneurs Empowerment through Horticulture Training*