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इंस्टीट्यूट ऑफ़ हॉर्टीकल्चर टेक्नोलॉजी
Institute of Horticulture Technology
Recognised by Ministry of Agriculture & Farmers Welfare, Government of India

Monthly Newsletter I.H.T
Newsletter
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Contents

HYDROPONICS FOR A SUSTAINABLE FUTURE

Population is continuously increasing, and the land is decreasing day by day. It is estimated that by the year 2050, the world's population will increase by 3 billion people and close to 80% will live in urban areas. Hydroponic farming has the potential to feed the world's population by creating additional farmland. By 2050, we'll need to produce 70% more food to feed over 9 billion mouths. Luckily, a wide range of vertical farming companies are developing innovative solutions to redefine production, expand urban agriculture and transform consumers into green-fingered growers. The nutritional status of the most vulnerable population groups is likely to deteriorate further due to the health and socio-economic impacts of COVID-19. It is a perception that people in rural areas only face lack of nutrition. But, because most households over there grow their own vegetables, they can easily meet the requirements. In urban areas, lack of proximity to spaces of production is a major issue. Hydroponic culture can help farmers in doubling their incomes in one year. The crops produced are likely to be pesticide-free, so it can reduce burdens on the medical facilities, thus increasing the net income of the farmers and consumers.

Crop production can be increased by increasing the number of crop seasons per year with a controlled environment and the losses due to biotic and abiotic stresses can also be reduced. It ultimately multiplies the productivity of the farm surface by a factor of 4 to 6 depending on the crop. Crops grown in traditional outdoor farming depends on supportive climatic conditions, and suffer from undesirable temperatures rain, monsoon, flooding, wildfires, and drought which ultimately leads to loss of crops or decreased yields. In hydroponic, productivity is mostly independent of weather, as the crops are grown under controlled conditions it substantially saves 90 percent water in comparison to conventional growing.

Food security is one of the primary factors leading to economic upliftment. Production of food in wastelands or places like balcony, the rooftop can help the population to be secure for their consumption. Hydroponic can be a better tool for the growth of the nation as it combines technologies and socioeconomic practices. It allows cities to expand while remaining substantially self-sufficient in food. This would allow large urban/rural centers to grow without food constraints.

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TECHNOLOGY DEMONSTRATIONS

Demonstration of Tissue Cultured Cut Flower Orchids Production in Protected Condition in villages of Assam and Meghalaya

Aiming at development of bio-entrepreneurships based on production of dendrobium orchid cut flower, IHT Mandira, Assam and Bio Resources Development Centre (BRDC), Meghalaya are jointly executing partnership project titled "Demonstration of tissue cultured cut flower orchids production in protected condition" in their respective states.This project is sponsored by Department of Biotechnology, Ministry of Science and Technology, Government of India.

The following is the area of capacity building for farmers of Assam and Meghalaya.

a. Creation of Dendrobium cultivation facilities at homesteads in Mandira Assam and Meghalaya.
b. Production Technology for standard spikes of Dendrobium of high quality for harnessing better market price.
c. Post-harvest storage, management and value addition of the produce for high end trade
d. Market intelligence, marketing skills and collectivization of produce

Amongst the orchids, dendrobium cut flower is in high demand in India and about 2 million spikes of the orchid are imported in the country every week. The climatic conditions prevailing in Assam and Meghalaya are quite suitable for producing Hybrid dendrobium cut flower. The protected production module for hybrid dendrobium cut flower if adopted by potential entrepreneurs/unemployed youth of the states will provide them a profitable venture and will raise their socio economic status as the dendrobium cut flowers are in great demand in India and as such offer a ready market.

Harvesting of Orchids Spikes at IHT Mandira Assam

Harvesting of Orchids Spikes at Beneficiary Farmers Field in Goalpara, Assam

IHT EDUCATION

Skills development during COVID-19 restrictions

The coronavirus disease (COVID-19) pandemic and related lockdown and physical distancing measures although caused unprecedented disruption in the provision of education and training yet it catalyzed innovation in distance learning. Corona period has turned the youth of rural India towards agriculture especially Horticulture for safe food and entrepreneurship. The educated young generation who attend the online classes of IHT are usually technocrats who are becoming more interested in alternate crop production technologies like Hydroponics and are also looking for ways to improve its efficiency in dealing with the problems in the agricultural sector, besides, it is also putting more emphasis on how the adoption of technology can bind agricultural efficiency in urban/rural India.

Capacity building training programmes conducted during July 2021

S. No.	Title	Date	Duration	Mode of Training
1	Commercial Hydroponics	5th – 10th July 2021	1 Week	Online
2	Landscape Horticulture	12th – 17th July 2021	1 Week	Online
3	Mushroom Production Technology	12th – 14th July 2021	3 Days	Online
4	Commercial Hydroponics	19th – 24th July 2021	1 Week	Online
5	Mushroom Production Technology	19th – 21st July 2021	3 Days	Online
6.	Commercial Hydroponics	26th – 31st July 2021	1 Week	Online

Mushroom Production Technology: The 3-day entrepreneur training programme on “Mushroom Production Technology” organized by the Institute of Horticulture Technology from 12th – 14th July 2021 and 19th – 21st July 2021. The trainees were provided relevant information about cultivation of mushroom and was apprised about the demand for mushrooms in the market compared to the market demand.

Commercial Hydroponics: It may sound complicated to become a hydroponic grower, however, actually with the right guidance and patience with hydroponics technology a grower can produce more food per square meter than is true in open field. This technology provides an opportunity to produce higher quality produce in a faster time. Hydroponics is a great solution for safe food production and is becoming more and more popular amongst the prospective entrepreneurs primarily because of its efficiency. This training at IHT provide trainees the all the requirements from structure and climate control of greenhouses to the production of different crops and n utrient recipes required necessary to enter into the wonderful world of hydroponics.

Landscape Horticulture: We are all familiar with gardens and other manmade landscapes, but many people do not have the requisite knowledge to fully understand how to create the different components in different landscapes. The trainees in IHT were provided information about as how to choose appropriate plants as per the local climate and soil conditions. The interactive lectures about design and architecture was liked most by the trainees. This course covered a wide range of topics—from planning a garden to maintaining it.

Upcoming Training Programmes:

Institute of Horticulture technology offers online training courses. Now, take the classes from the comfort of your home, at a time of your choice. Choose the courses that interest you. Pay only for the ones you need. Post your queries any time after the module and get them answered by IHT team of experts.

S. No.	Title	Date	Duration	Mode of Training
1.	Mushroom Production	2nd - 4th August 2021	3 Days	Online
2.	Horticulture Plant Nursery	2nd – 7th August 2021	1 Week	Online
3.	Plug Nursery Production for Vegetables	2nd – 7th August 2021	1 Week	Online
4.	Forest Plant Nursery Management	9th – 14th August 2021	1 Week	Online
5.	Hydroponics	9th – 14th August 2021	1 Week	Online
6.	Protected Cultivation of Vegetables Crops	9th – 14th August 2021	1 Week	Online
7.	Home Gardening	9th – 11th August 2021	3 Days	Online
8.	Commercial Hydroponics	16th - 29th August 2021	2 Weeks	Online cum Offline
9.	Landscape horticulture	23rd Aug- 4th Sept 2021	2 Weeks	Online cum Offline

Customized courses also offered on demand

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