

Indo-Dutch Partnership to Revolutionize Horticulture

Prelims: Current events of national and international importance | Agriculture

Why in news?

India's horticulture sector to get hi-tech boost with Dutch initiative for pesticide-free food production in high-end green houses.

- **Aim** - To introduce high-tech, sustainable greenhouse technology for the production of pesticide-free food, using advanced systems like AI and IoT for precision agriculture.
- **Collaboration between** - India + Netherlands government via HortiRoad2India.

HortiRoad2India, a public-private partnership consortium, aimed at transforming the Indian horticulture & agriculture sectors through Dutch technology, innovation, and knowledge sharing.

Key Details

- **Technology Focus** - It emphasizes Controlled Environment Agriculture (CEA), offer mid-tech & high-tech greenhouse technologies (including glass houses) with advanced climate control, automation, AI for precision farming.
- **No Chemical pesticide** - This technology uses biological pest control methods, entirely avoiding chemical pesticides.
- **Sustainability** - The technology designed to use up to 96% less water compared to open-field cultivation and gets 30 times more yield for certain crops, improving energy efficiency.
- **Pilot Projects & implementation** - After a 3-year study of the Indian market, an actionable blueprint for projects has been developed, will serve as scalable models for region-specific needs..
 - 1st fully operational **high-tech greenhouse pilot projects** - expected to be operational by the end of 2026 in states like **Karnataka, Punjab, and Tamil Nadu.**
- **Develop clusters near big cities** - To ensure a steady, year-round supply of safe, healthy produce to meet rising urban and middle-class demand in India while reducing transportation costs.
- **Crops & Market** - The high-tech greenhouses are proposed for high-value crops such as strawberries, colored capsicum, cherry tomatoes, microgreens, and lettuce.
- **Economic Viability** - Despite high initial setup costs, the initiative projects a return on investment **exceeding 25%**, with financial models in place through Indian banks to

support investor participation.

- **Challenges** - It address major challenges in Indian agriculture - including food safety, post-harvest losses, and water scarcity—while boosting farmer incomes and advancing climate-smart practices.

References

1. [The Hindu | India's horticulture sector to get hi-tech boost](#)
2. [HortiRoad2India | HortiRoad2India](#)
3. [PIB |Horticulture: Strengthening India's Agri-Economy](#)

