



Clean Plant Programme

Revolutionizing Indian Horticulture

The Clean Plant Programme is set to revolutionize India's horticulture sector by providing farmers with access to virus-free, high-quality planting material, regardless of their landholding size or socio-economic background. With its comprehensive strategy, the Clean Plant Programme marks a transformative step toward building a more sustainable, productive, and prosperous future for Indian horticulture, ensuring farmers, consumers, and the economy all benefit from enhanced horticultural practices.

***Dr. Shashi Bhushan**

India's horticulture sector, with its vast diversity of climate and soil conditions, has long been a cornerstone of the nation's agricultural landscape. As the second-largest producer of fresh fruits and vegetables globally, only behind China, India holds immense potential to meet both domestic and international demand. However, to sustain and expand this leadership, the sector faces the challenge

of enhancing crop quality, boosting productivity, and ensuring long-term sustainability. Recognizing the need for strategic intervention, the Union Cabinet made a groundbreaking decision on August 9th, 2024, by approving the Clean Plant Programme (CPP) under the Mission for Integrated Development of Horticulture (MIDH), with an investment of Rs. 1,765.67 crore.

The Clean Plant Programme is set to revolutionize India's horticulture sector by providing farmers with

access to virus-free, high-quality planting material, regardless of their landholding size or socio-economic background. This inclusive approach aims to level the playing field, especially for small-scale and marginalized farmers, empowering them with the tools needed to thrive in an increasingly competitive agricultural environment. By improving the quality of planting material, the CPP promises to enhance crop yields, reduce plant disease-related losses, and strengthen long-term food security for India.

In addition to providing better access to planting material, the CPP will streamline the certification processes and offer targeted infrastructure support to nurseries. The programme plans to establish nine state-of-the-art Clean Plant Centres across India, which will serve as hubs for research, development, and distribution of clean plant material. These facilities will introduce cutting-edge horticultural technologies, helping farmers access advanced solutions for cultivating healthy and productive crops. The programme also takes into account the country's diverse agro-climatic conditions, focusing on developing region-specific clean plant varieties to help farmers adapt to local environmental challenges.

This integrated approach will not only increase productivity but will also make Indian agriculture more resilient to the impacts of climate change, ensuring that the sector remains viable and sustainable in the face of evolving weather patterns. The Clean Plant Programme's commitment to improving plant health



KEY CABINET DECISIONS
09th August, 2024

Clean Plant Programme *under*
Mission for Integrated Development of Horticulture

Benefits:

■ **Consumers:**

Superior, virus-free produce with enhanced quality

■ **Exports:**

Strengthened global export position, increase in market share



and crop quality offers numerous benefits across the horticulture value chain. From farmers who will receive superior planting material to consumers who will enjoy healthier, more nutritious produce, the programme is poised to transform Indian horticulture. By improving the competitiveness of Indian fruit and vegetable exports, the CPP strengthens India's position as a global leader in the sector.

With its comprehensive strategy, the Clean Plant Programme marks a transformative step toward building a more sustainable, productive, and prosperous future for Indian horticulture, ensuring farmers, consumers, and the economy all benefit from enhanced horticultural practices.

Empowering Stakeholders, Enhancing Quality: The Far-Reaching Benefits of the Clean Plant Programme

The Clean Plant Programme (CPP) brings with it a host of significant benefits that extend across various stakeholders in the horticulture sector, including farmers, nurseries, consumers, and the broader export market. Each of these groups stands to gain from the program's strategic interventions, which are designed to foster sustainable growth, improve product quality, and increase market competitiveness.

For Farmers, the most immediate benefit of the CPP is the potential for increased crop yields. By providing virus-free, high-quality planting material, the programme ensures that farmers can grow healthier plants that are less prone to diseases, resulting in better yields. This not only enhances productivity but



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■ **Investment:**

₹1,765.67 crore

■ **Aims to revolutionise India's horticulture sector**

■ **Ensuring enhanced quality and productivity of fruit crops**



also opens up new income opportunities for farmers. Higher-quality produce, free from the constraints of plant viruses, is likely to fetch better prices in the market, directly boosting the income of farmers and improving their financial sustainability in the long run.

For Nurseries, the Clean Plant Programme offers a transformative opportunity. Streamlined certification processes and the provision of infrastructure support will enable nurseries to efficiently propagate clean planting material at a larger scale. This will ensure that nurseries can meet the growing demand for high-quality plants and contribute to a more robust horticulture sector. Additionally, the program's emphasis on sustainability will help nurseries grow in a manner that benefits both their business and the environment, encouraging eco-friendly practices and long-term viability.

For Consumers, the benefits are equally substantial. With the widespread adoption of the CPP's virus-free plants, consumers will have access to superior produce that is not only free from harmful pathogens but also enhanced in taste, appearance, and nutritional value. This means that fruits will not only be safer to eat but also more flavorful and nutritious, offering a more satisfying and healthy food experience for Indian households.

On the global stage, the Clean Plant Programme holds significant promise for India's export market. By ensuring that the country's fruit crops meet the highest standards of quality and disease-free certification, India will be better positioned to strengthen its presence in

the international fruit trade. As demand for premium, virus-free produce rises worldwide, India stands to gain a competitive edge in the global market. This will not only expand export opportunities but also increase the country's share of the international fruit trade, positioning India as a key player in global agriculture.

Hence, the Clean Plant Programme offers a holistic approach that benefits all stakeholders in the horticulture value chain. From farmers and nurseries to consumers and global markets, this initiative promises to create a more resilient, productive, and sustainable horticultural ecosystem in India.

Building a Robust Future: Core Components Driving the Clean Plant Programme

The Clean Plant Programme (CPP) is underpinned by several core components designed to establish a robust infrastructure for the propagation of high-quality, virus-free planting material across India. One of the key pillars of the CPP is the establishment of Clean Plant Centres (CPCs), which will serve as state-of-the-art facilities dedicated to the production and certification of clean plant material for various fruit crops.

A total of nine advanced CPCs will be strategically located across India, with each centre focusing on specific fruit types. These centres will be equipped with cutting-edge diagnostic and therapeutic facilities, including tissue culture laboratories, to ensure the propagation of virus-free plants. The CPCs will play a crucial role in maintaining the health and integrity of planting material, acting as hubs for research, development, and the distribution of clean plants to farmers nationwide.

The Clean Plant Centres will be situated at key agricultural institutions across the country, with each one specializing in a particular type of fruit. For instance, Grapes will be handled by the National Research Centre (NRC) in Pune, while Temperate Fruits such as Apples, Almonds, and Walnuts will be managed at the Central Institute of Temperate Horticulture (CITH) in Srinagar and Mukteshwar. The Citrus Fruits sector will be supported by the Central Citrus Research Institute (CCRI) in Nagpur and the Central Institute for Arid Horticulture (CIAH) in Bikaner. Other centres will focus on crops like Mango, Guava, Avocado, and Litchi, with dedicated centers in Bengaluru (Indian Institute of Horticultural Research, IIHR), Lucknow (Central Institute for Subtropical Horticulture, CISH), and Pomegranate at

Ministry of Information and Broadcasting
Government of India

KEY CABINET DECISIONS

09th August, 2024

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under
Mission for Integrated Development of Horticulture

Benefits:

- Farmers:**
Access to virus-free, high-quality planting material
- Nurseries:**
Streamlined certification & infrastructure support



the NRC in Sholapur. Additionally, the programme will also support tropical and sub-tropical fruits in Eastern India, ensuring that diverse agro-climatic conditions are addressed with region-specific varieties and technologies.

These specialized centres will be instrumental in ensuring that India's horticulture sector can access the highest-quality, disease-free planting material for a wide range of fruit crops. By strengthening the infrastructure and scientific capabilities of these CPCs, the Clean Plant Programme aims to lay a solid foundation for sustainable, high-yielding horticulture that benefits farmers, consumers, and the broader agricultural economy.

Ensuring Quality and Traceability: Strengthening the Certification and Legal Framework

A key element of the Clean Plant Programme (CPP) is the establishment of a robust certification and legal framework to ensure the quality and traceability of planting material. Under the Seeds Act of 1966, a certification system will be implemented to hold producers and distributors accountable, ensuring that farmers receive virus-free, high-quality seedlings. This system will enforce clear standards and maintain records, creating a transparent mechanism for plant material production and sale.

In parallel, the CPP will enhance infrastructure in large-scale nurseries, vital to the horticulture value chain. Targeted support will improve facilities

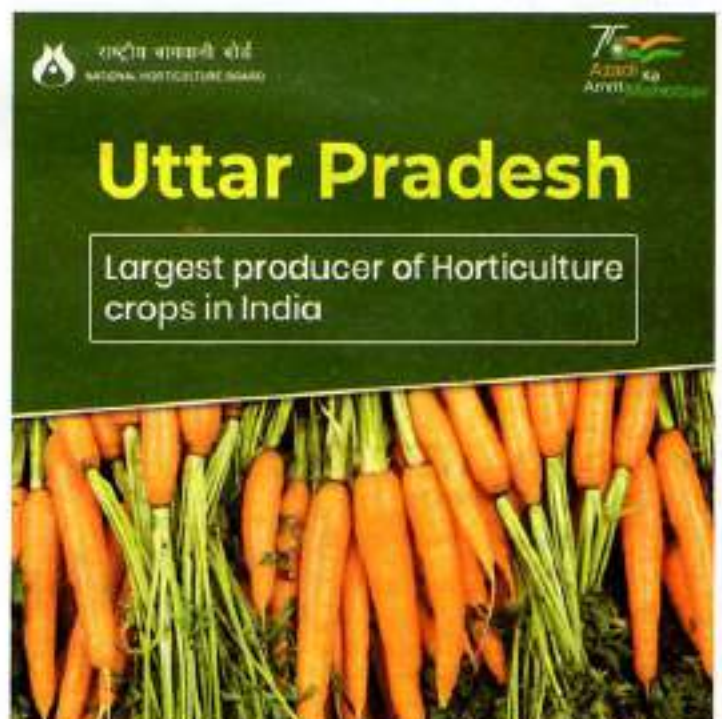
for propagation, storage, and distribution, enabling nurseries to efficiently supply clean planting material at scale. These infrastructure upgrades will enhance efficiency, sustainability, and quality control, ensuring farmers have access to healthy planting material for increased crop yields.

Together, the regulatory framework and infrastructure development will establish a cohesive system, ensuring the widespread availability of clean plant material and reinforcing sustainable agricultural practices.

Synergizing Growth: Integrating CPP with MIDH for Sustainable Horticulture

The Clean Plant Programme aligns seamlessly with the Mission for Integrated Development of Horticulture (MIDH), a flagship initiative launched by the Government of India in 2014-15 to promote the holistic growth of the horticulture sector. While MIDH addresses cultivation, infrastructure, and post-harvest management across a broad range of crops, the CPP focuses specifically on enhancing the quality of planting material, particularly for fruit crops.

MIDH supports diverse crops such as fruits, vegetables, spices, and more, while the CPP emphasizes providing clean, virus-free planting material. This targeted approach addresses critical plant health issues, directly impacting productivity and sustainability in horticultural farming. The integration of the two programs strengthens India's horticulture sector by





ensuring high-quality planting material is available to farmers, thus improving yields and contributing to long-term agricultural growth.

Together, the CPP and MIDH form a comprehensive strategy to elevate India's horticulture sector, creating a more resilient, sustainable ecosystem that benefits farmers, consumers, and the economy.

Transforming Horticulture: Key Initiatives Under MIDH for a Sustainable and Resilient Future

Under the Mission for Integrated Development of Horticulture (MIDH), several transformative measures are being implemented to foster the growth and sustainability of India's horticulture sector. These initiatives focus on improving the infrastructure, productivity, and market access for farmers, creating a more resilient and productive horticultural landscape across the country.

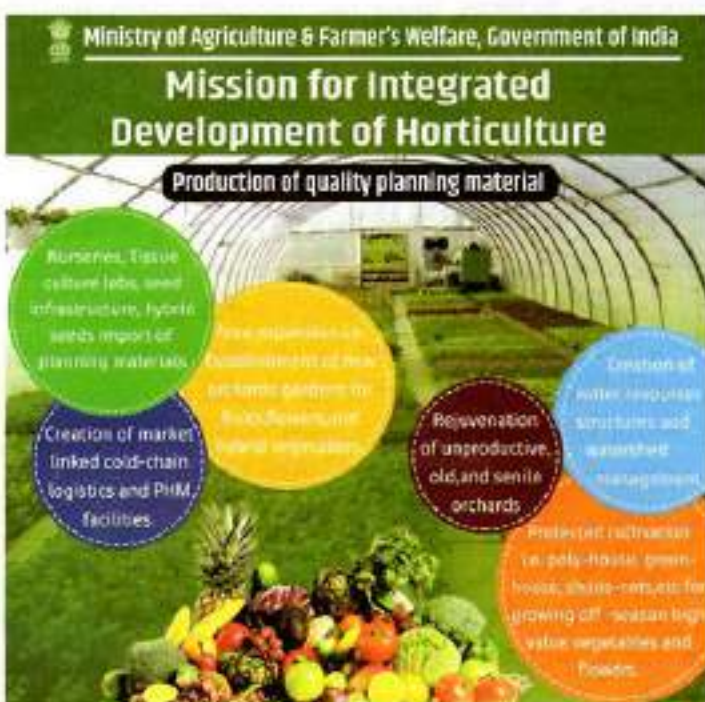
One of the key components of MIDH is Plantation Infrastructure Development, which involves the establishment of nurseries and tissue culture units aimed at producing high-quality seed and planting material. By ensuring that farmers have access to superior planting material, this measure lays the foundation for improved crop yields and healthier orchards. In addition to infrastructure development, Area Expansion is being prioritized, with efforts focused on creating new orchards and gardens for various crops, including the integration of advanced technologies like drip irrigation to ensure efficient water use and

improved crop productivity.

Rejuvenation is another critical focus area under MIDH, with programs designed to revitalize old, unproductive orchards. This initiative helps extend the productive life of orchards, ensuring that they continue to provide valuable yields for farmers. Alongside this, Protected Cultivation is being promoted through the establishment of poly-houses, greenhouses, shade net houses, and walk-in tunnels, which provide a controlled environment for growing high-value crops. These facilities are complemented by micro irrigation systems, which further optimize water use, increase crop output, and improve sustainability.

MIDH also emphasizes Organic Farming by encouraging farmers to adopt organic practices, obtain organic certification, and establish vermi compost units. This helps improve soil health, reduce dependency on chemical inputs, and create a more sustainable farming system. In parallel, the creation of Water Resources is being prioritized, with the development of community tanks, on-farm ponds, and water harvesting systems to ensure a steady supply of water, especially in regions prone to drought or water scarcity.

Pollination Support is another important area under MIDH, with beekeeping programs aimed at producing bee colonies, honey bee hives, and related equipment. This initiative enhances pollination efficiency, leading to better crop yields, particularly for fruits and vegetables that rely on insect pollination. To further improve farm productivity, Horticulture Mechanization programs are





providing farmers with modern equipment like power tillers, tractors, and plant protection tools, making farming more efficient and reducing labor costs.

MIDH also focuses on Human Resource Development through a variety of programs, including awareness campaigns, farmer training sessions, exposure visits, and study tours. These initiatives empower farmers with the knowledge and skills they need to adopt new technologies and improve their farming practices. In addition, Post-Harvest Management (PHM) Infrastructure is being developed, with facilities like cold storage, pack houses, ripening chambers, reefer vehicles, processing units, and food processing facilities being set up, particularly in the North Eastern States. These investments ensure that farmers can store, process, and transport their produce efficiently, reducing post-harvest losses and improving the quality of fresh produce in the market.

Finally, Marketing Infrastructure is being developed to improve farmers' access to markets. This includes the creation of static and mobile vending carts, retail outlets, rural markets, and wholesale markets, along with the establishment of direct market platforms that connect farmers with consumers, ensuring fair prices and greater profitability for agricultural products.

Together, these measures under MIDH create a comprehensive, multi-faceted approach to the development of India's horticulture sector. By focusing on infrastructure, sustainable practices, and market linkages, MIDH is paving the way for a brighter,

more prosperous future for Indian farmers and the horticultural industry as a whole.

Empowering Farmers: Promoting Inclusivity and Sustainability Through the Clean Plant Programme

The CPP prioritizes inclusion and sustainability, aiming to provide affordable access to clean, virus-free planting material for all farmers, regardless of landholding size or socio-economic background. This ensures that even small-scale and marginalized farmers can improve productivity and income, fostering equitable growth in the horticulture sector. The programme also empowers women farmers by actively involving them in planning, resource access, training, and decision-making, promoting gender equality in agricultural development.

Furthermore, recognizing India's diverse agro-climatic conditions, the CPP takes a region-specific approach, developing clean plant varieties and technologies tailored to local environmental challenges. This strategy maximizes productivity and sustainability, benefiting farmers across the country.

In essence, the CPP combines enhanced plant health and productivity with a strong commitment to inclusivity and environmental sustainability, paving the way for a more resilient and equitable future for Indian horticulture.

Fostering Sustainability: CPP's Synergy with National and Global Environmental Initiatives

The CPP plays a crucial role in India's horticulture sector while aligning with national and global environmental initiatives like Mission LiFE (Lifestyle for Environment) and the One Health approach. This alignment strengthens India's commitment to sustainability, environmental stewardship, and holistic well-being.

The CPP supports Mission LiFE's goal of promoting sustainable lifestyles by encouraging farming practices that reduce reliance on harmful chemicals. By providing virus-free, high-quality planting material, the programme enables healthier crops that require fewer chemical inputs, thus minimizing the ecological footprint of agriculture and fostering long-term environmental sustainability.

Similarly, the CPP aligns with the One Health approach, which emphasizes the interconnection between human, animal, and environmental health.



By ensuring healthy, virus-free plants, the programme not only protects the environment but also safeguards human health and food security. Fewer crop diseases and reduced chemical use contribute to a healthier ecosystem and a more resilient agricultural sector.

Additionally, the CPP enhances India's self-reliance by reducing dependence on imported planting materials. By developing region-specific clean plant varieties and fostering local production, the programme strengthens domestic agriculture, reduces vulnerability to global supply chain disruptions, and positions India as a potential leader in global fruit production and export.

Thus, the CPP's alignment with Mission LIFE and the One Health approach underscores its role in promoting sustainable, healthy, and resilient agricultural practices. By reducing import dependency and supporting India's position in global markets, the programme paves the way for a prosperous, sustainable future for Indian horticulture.

Collaborative Leadership: Ensuring Success Through Strategic Implementation and Oversight

The CPP will be implemented and overseen by the National Horticulture Board (NHB) in collaboration with the Indian Council of Agricultural Research (ICAR). This strategic partnership combines NHB's extensive horticultural network and ICAR's research expertise, ensuring the program's objectives are achieved efficiently. NHB will lead the coordination, while ICAR

will contribute to the development of clean plant technologies, varieties, and best practices, fostering growth and sustainability in India's horticulture sector.

Through this collaboration, the CPP will ensure the availability of high-quality, virus-free planting material, boosting the productivity and quality of horticultural crops across the country. This comprehensive, science-driven approach will enhance both the quantity and quality of India's fruit production, benefiting farmers, consumers, and the global market. The programme will help India strengthen its position as a global leader in horticulture, creating new opportunities for fruit exports.

Conclusion: A Transformative Step Towards Sustainable Horticulture

The Clean Plant Programme (CPP) stands as a pivotal initiative that promises to reshape the future of India's horticulture sector. By ensuring access to high-quality, virus-free planting material, the programme addresses critical challenges of crop health and productivity, driving sustainability and resilience. Through its inclusive approach, it empowers farmers of all sizes, including marginalized groups, and strengthens India's competitive edge in the global market. Supported by cutting-edge infrastructure and a robust certification framework, the CPP will not only enhance domestic production but also increase export potential, positioning India as a global leader in horticulture. □