



PROJECT IMPLEMENTATION PLAN

Ref. No.: 21-CP-40-SP-DMP-C-VN01-PP2200011-005

Date of Issue	06 October 2022
Project Code	21-CP-40-SP-DMP-C-VN01
Title	Improvement of Productivity in Greenhouse Vegetable Production
Timing and Duration	October 2022–August 2024 (23 months)
Hosting Country(ies)	Vietnam
Modality	Virtual and/or face to face
Implementing Organization(s)	Vietnam National Productivity Institute
Participating Country(ies)	Vietnam
Overseas Participants	Not Applicable
Local Participants	Not Applicable
Qualifications of Participants	Not Applicable
Nomination of Participants	Not Applicable
Closing Date for Nominations	Not Applicable

1. Objectives

- a. Establish a demonstration farm with a greenhouse microclimate control system using smart technology applications in Vietnam to promote the productivity and competitiveness of vegetable production.
- b. Showcase gains and successes resulting from the establishment of the demonstration farm to other member countries.
- c. Promote agricultural transformation in member countries through the adoption of smart technology applications.

2. Background

Recently, vegetable demand in Vietnam has diversified as more produce is being processed, frozen, and exported. Vegetable production must be increased and quality adjusted to meet various demands. On the other hand, labor productivity in vegetable production in Vietnam is not high because many workers are from local ethnic groups in remote areas. Some have worked for a long time because of stable salaries, with good benefits and allowances. Therefore, cutting labor costs is an important issue.

To meet such requirements, precise vegetable production control is needed. Microclimate control systems using smart technologies such as the IoT and data analysis are the best solutions. Environmental data in greenhouses such as temperature, moisture, CO₂ levels, and sunlight are accumulated in cloud systems and then compared with crop growth. As a result, such production systems can analyze the optimal crop growth environment to produce the best-quality vegetables with the optimal amounts of inputs.

Establishing a demonstration farm on greenhouse horticulture with a microclimate control system will encourage the adoption of such technologies in Vietnam and other APO members to promote vegetable production in the region.

3. Collaborating Partners

This demonstration farm project will be implemented in collaboration with the following partners:

- Department of Standards, Metrology and Quality of Lam Dong Province
- Lam Dong Crop Production and Plant Protection Sub-department
- Garden Mountain Joint Stock Company

4. Financial Arrangements

To be met by the APO

- a. All assignment costs of the international resource person(s).
- b. Costs for an observational study mission and dissemination workshop for other member countries.
- c. Equipment/systems (up to JPY3,000,000 or about USD23,100) per year including tax, if any and transportation fees.
- d. Partial expenses for dissemination-related activities (documentation, video production, dissemination workshop, dissemination material, etc.).

To be met by the Vietnam National Productivity Institute (VNPI)

- a. Expenses for coordinating and implementing the project.
- b. Partial expenses for dissemination activities (documentation, production of training manual and dissemination materials, dissemination activities, final report, etc.).

To be met by the demonstration farm

- a. Purchase of equipment and physical alterations, if necessary.
- b. Expenses for logistic arrangements, including the local travel costs of the international and local resource person(s) and expenses for interpretation.
- c. All other expenses not covered by the APO and VNPI.

5. Demonstration Farm Plan (Implementation Procedures)

Please refer to the demonstration farm plan circulated with this document.



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Secretary-General