DR. C's
ORGANIC VANILLA PROJECT, PALAWAN

A Regenerative Organic Vanilla Production Rooted in Soil Health, Biodiversity, and Integrity

2026

WELLNESS INSTITUTE INTERNATIONAL, INC.
Organic CENTER
"Where Nourishment Becomes Healing"

For Organic Certification Renewal Documentation

*ORGANIC CERTIFICATION BINDER * PGS ABORLAN, PALAWAN*

WELLNESS INSTITUTE INTERNATIONAL, INC.
Organic CENTER
"Where Nourishment Becomes Healing"

Dr. C's Organic Vanilla Project, Palawan

For inquiries, contact WII Organic Center
+63 917888-HEAL (4325)

Designed by Prof. Jerry S. Macatuno

Printed in the Philippines

DR. C'S ORGANIC VANILLA PROJECT, PALAWAN

A Regenerative Organic Vanilla Production Rooted in Soil Health, Biodiversity, and Integrity

Vanilla

ESSENTIAL OIL

Christine E Gonzalez, ND, PhD

TABLE OF CONTENTS

Note from the Author

This manual covers the policies, procedures, and practices implemented within the **Dr. C Organic Vanilla Project** in support of its **organic certification renewal under the Participatory Guarantee System (PGS)**.

The scope of this manual is limited to the **internal operations and activities of the Dr. C Organic Vanilla Project**. It is intended solely to document and guide the project's own approach to organic vanilla production, post-harvest handling, processing, and compliance with PGS requirements.

Specifically, this manual includes:

- The **Internal Control System (ICS)** and organizational structure of the project
- Procedures for **internal inspection, documentation, and record-keeping**
- Standards and practices applied in **organic vanilla cultivation, harvesting, curing, and storage**
- Systems for **traceability and product integrity** within the project
- Processes for **identifying, documenting, and addressing non-compliance**
- Requirements and protocols for **engagement with PGS inspectors and certification processes**

This manual does **not** intend to prescribe, regulate, or standardize practices beyond the Dr. C Organic Vanilla Project. It respects the diversity of approaches, systems, and methodologies used by other independent growers, groups, and organizations.

Rather, it serves as a **project-specific reference document**, demonstrating how the Dr. C Organic Vanilla Project meets applicable organic standards and maintains compliance within its own operational context.

Farm Profile

Project Name:
Farm Name: DR. C ORGANIC VANILLA PROJECT

Location:
SITIO MAYLIGAN, BARANGAY IRAAN, ABORLAN, PALAWAN

Total Farm Area:
15 HECTARES

Year Established:
2012

Area Devoted to Vanilla:
6000SQM * Established in 2017

Crop:
VANILLA PLANIFOLIA

Production System:
Organic Vanilla Plantation using vertical column support system

Number of Columns:
1,610

Number of Vines:
3,220 vines

Farm Owner/Operator:
DR. CHRISTINE E. GONZALEZ

PGS Membership/Organization:
BAFS-POC-R4B-2023-012

Dr. C Organic Farm currently maintains
over 3,000 vines planted in a structured column system
with organic management inputs like fermented plant juice, fermented fruit juice, and vermi tea.

Section 1 — Farm Profile and Background

1.1 Introduction to the Dr. C Organic Vanilla Project

The **Dr. C Organic Vanilla Project** was established to demonstrate sustainable and environmentally responsible agriculture through the cultivation of organic vanilla *(Vanilla planifolia)* in Palawan. The farm integrates regenerative farming practices that emphasize soil health, biodiversity conservation, and ecological balance while producing a high-value crop suitable for smallholder farmers.

The project operates under an organic farming system that includes the use of vermicompost, vermi tea, fermented plant extracts, and beneficial microorganisms such as Trichoderma to support soil fertility and plant health. Botanical pest management and careful crop monitoring are used to maintain plant vitality while avoiding synthetic chemical inputs.

Beyond agricultural production, the farm also serves as a **center of knowledge and learning** for farmers, local communities, and agricultural practitioners interested in sustainable crop systems. Through documentation of best practices, farmer training activities, and collaboration with agricultural institutions, the project seeks to contribute to the advancement of organic agriculture in the Philippines. The Dr. C Organic Vanilla Project reflects a long-standing commitment to environmental stewardship and sustainable farming practices. With careful management and knowledge sharing, the project aims to support rural livelihoods, protect natural ecosystems, and promote a responsible approach to agricultural development.

1.2 Statement of Vision and Commitment to Organic Agriculture

My commitment to organic agriculture and environmental stewardship began long before my formal academic training. I have long believed that human health, environmental protection, and sustainable agriculture are deeply interconnected. As an early member of Greenpeace in California and a member of Physicians for Social Responsibility (San Francisco Chapter), I have been actively involved in environmental and public health advocacy for many years. The Dr. C Organic Vanilla Project in Palawan reflects this lifelong commitment by demonstrating regenerative farming practices that protect soil health, biodiversity, and ecological balance. Through organic cultivation, farmer education, and community engagement, the project seeks to contribute to the long-term development of sustainable agriculture in the Philippines.

1.3 Farm History and Development

Dr. C Organic Vanilla Project – Aborlan, Palawan

The Dr. C Organic Vanilla Project began as part of a broader commitment to sustainable agriculture, environmental protection, and community development in Palawan. Since arriving in the Philippines in 2000, the farm's founder has been actively engaged in grassroots work with rural and indigenous communities, particularly in promoting ecological stewardship and sustainable livelihoods.

In 2010, the opportunity arose to establish an organic farm in Aborlan, Palawan, an area known for its rich biodiversity and strong agricultural traditions. The farm was developed at the foothills of Aborlan, where the surrounding landscape includes coastal ecosystems, forested areas, and traditional farming communities, including the Tagbanua indigenous people.

From its inception, the farm was managed using **100% organic principles**. The property gradually developed into a diversified organic farm with a wide variety of fruit trees and crops, including cashew, dragon fruit, citrus, banana, coconut, calamansi, papaya, pineapple, passion fruit, moringa, and other medicinal and aromatic plants. The abundance of organic produce eventually led to the development of small-scale artisanal products, including the production of organic vinegars made from farm-grown fruits.

In 2017, a new phase of agricultural development began when vanilla ***(Vanilla planifolia)*** was introduced and propagated on the farm as part of a backyard cultivation project. Over time, the original vanilla mother plants multiplied successfully, demonstrating the suitability of the local environment for vanilla production.

VANILLA MOTHER PLANTS * 2017-2021

Encouraged by this success, the project expanded from a small propagation effort into a commercial plantation. In May 2022, the farm established a structured vanilla cultivation using vertical columns support system under controlled shade conditions. By June 2022, cuttings from the propagated vines were planted, and the young vines began climbing the support structures within a few months.

The farm currently maintains approximately **3,220 vanilla vines supported by 1,610 columns**, managed under an organic farming system that includes microbial soil enhancement, vermicomposting, fermented plant extracts, and careful crop monitoring.

The development of the vanilla plantation represents the next stage in the evolution of the farm—from a diversified organic homestead into a **demonstration site for sustainable vanilla cultivation in**

NEWLY PLANTED VANILLA, JULY 16, 2022

Palawan. Through continued documentation, farmer training, and knowledge sharing, the Dr. C Organic Vanilla Project aims to contribute to the development of organic agriculture and sustainable rural livelihoods in the region.

1.4 Farm Description of the current Organic Farming System

The Dr. C Organic Vanilla Project operates under a comprehensive organic farming system designed to maintain soil health, ecological balance, and sustainable crop production. The farm cultivates *Vanilla planifolia* under a structured shade system consisting of a 6,000 square meter greenhouse with approximately 50% shade coverage, which helps regulate temperature, humidity, and light conditions suitable for vanilla growth.

Soil fertility is maintained through natural and biological inputs produced on the farm. These include **vermicompost, vermi tea, fermented plant juice (FPJ), and microbial soil enhancers such as Trichoderma**, which support nutrient cycling, strengthen plant resistance, and promote beneficial soil microorganisms. Organic mulching and careful moisture management are also used to protect soil structure and maintain long-term fertility.

Pest and disease management relies primarily on **preventive ecological practices** rather than synthetic chemical inputs. The farm maintains a border of citronella plants around the greenhouse as a natural pest deterrent, while botanical extracts and regular crop monitoring are used to manage occasional pest pressures. Healthy soil biology and proper plant nutrition are considered the primary defense against disease.

Daily farm monitoring, pollination management, and record keeping ensure that crop development is carefully observed throughout the growing cycle. Organic input production, pollination, harvest, and curing activities are documented to maintain traceability and compliance with organic certification standards.

Through this integrated system of soil biology, organic inputs, and careful farm management, the project demonstrates a sustainable model of vanilla cultivation that supports both agricultural productivity and environmental stewardship.

1.5 Farm Layout and Land Use * Annex 1

The farm is divided into the following functional areas:

- Vanilla production plot
- Nursery and propagation area
- Composting and vermiculture area
- Shade tree and agroforestry zones
- Water source : Rainfall Utilization & 02-03 Ozonated Water (ANNEX 2)
- Buffer zones and natural vegetation strips

Section 2 — Agroforestry Design

The Palawan Vanilla Project utilizes a **controlled greenhouse production system** rather than a traditional open-field agroforestry design. Vanilla is cultivated in **vertical column structures**, a protected nursery environment, ensuring optimal growth conditions and efficient space utilization.

The greenhouse is covered with **50% shade nets**, which provide the appropriate level of filtered sunlight required for vanilla growth while protecting the plants from excessive heat, heavy rainfall, and wind exposure. This controlled shading replaces the need for natural canopy trees typically used in conventional agroforestry systems.

Instead of using living support trees (tutors), vanilla vines are trained to climb **engineered column supports**, allowing for better management, uniform growth, and easier maintenance.

The nursery is **not integrated with fruit trees or multi-strata vegetation**. Instead, a bio-protective approach is implemented by surrounding the entire greenhouse perimeter with **citronella plants**, which act as a natural barrier to repel non-beneficial insects and reduce pest pressure.

This system ensures:

- Controlled light exposure through 50% shade netting
- Efficient vertical growth using column supports
- Reduced pest incidence through citronella perimeter planting
- Improved crop management, monitoring, and harvesting efficiency
- Protection from environmental stress through greenhouse conditions

2.1 ORGANIC SYSTEM PLAN (OSP)

The Palawan Vanilla Project follows a **controlled organic production system**, a greenhouse environment, ensuring high-quality vanilla cultivation while minimizing external risks and chemical inputs.

All production activities are designed to comply with **organic agriculture principles**, emphasizing plant health, soil integrity, and ecological balance within a managed setting rather than relying on open-field biodiversity.

Key principles:

- **Strict avoidance of synthetic fertilizers, pesticides, and herbicides**
- **Prohibition of GMO materials and derivatives**
- **Use of organic growing media** composed of composted, fermented materials and natural soil amendments
- **Application of organic inputs** such as vermicast, compost tea, and fermented plant extracts. All inputs are verified against organic standards and recorded in the input log.
- **Manual weed control and sanitation practices** in the greenhouse

- **Water management systems** that prevent contamination and optimize plant hydration
- **Biodiversity-based pest management**
- **Growing media and water conservation practices**

This approach ensures that vanilla beans produced meet **premium organic standards** while maintaining consistency and traceability.

2.2 Propagation and Planting System

Species:
Vanilla Planifolia

Vanilla is propagated from **healthy stem cuttings** selected from disease-free mother plants. Propagation protocols include:

- Only healthy, disease-free mother plants are selected for propagation. Selection criteria include strong vine growth, absence of fungal infection, and consistent leaf coloration.
- Pre-planting treatment using **organic disinfectants** (e.g., botanical solutions)
- Establishment **controlled nursery conditions** before planting to production columns
- Planting in **vertical column support systems** that support optimal vine development

Spacing and arrangement are designed to maximize airflow, reduce disease risk, and improve operational efficiency.

2.3 Cutting Preparation

Cuttings are prepared from mature vines with:

- Length: 1.5 to 2 meters
- Minimum of 8–12 nodes
- Leaves retained except lower 2 nodes

Cuttings are air-dried for 2–3 days prior to planting to reduce rot risk.

2.4 Rooting Method

Cuttings are planted directly into prepared soil enriched with vermicompost. The lower nodes are positioned near organic mulch to encourage root development. Nutrient supply is managed through **organic fertilization strategies** tailored to greenhouse conditions.

Key components include:

- Regular application of **compost and vermicast**
- Use of **liquid organic fertilizers** (compost tea, fermented plant juice)

- Periodic soil/media testing to maintain nutrient balance
- Mulching within columns to retain moisture and enhance microbial activity

This ensures steady plant growth while preserving the integrity of the organic system.

2.5 Planting Procedure

- Plant at base of support column
- Maintain partial shade
- Apply mulch immediately
- Avoid waterlogging

2.6 Spacing

- 2.5 meters between columns
- 2 vines per column

Section 3 : Soil Fertility Management

3.1 Soil Philosophy

Soil health is the foundation of organic production. Biological activity is prioritized over synthetic inputs.

3.2 Organic Inputs Used

- Fermented Plant Juice (FPJ)
- Fermented Fruit Juice (FFJ)
- Fish Amino Acid (FAA)
- Vermicompost
- Vermi tea
- Trichoderma inoculants
- On-farm compost production
- Oriental Herbal Nutrient
- Calphos

NOTE: All inputs are prepared on farn or sourced from approved organic suppliers and documented in the Input Register.

* Applications occur weekly during active vine growth. Prior to flowering Fermented Fruit Juice & CalPhos

3.3 Vermicompost Production

Organic waste materials are processed using earthworms to produce nutrient-rich compost.

3.4 FPJ Preparation

FPJ is produced using local plant materials fermented with Molasses over 7–10 days.

3.5 Application Schedule

- Weekly during active growth
- Increased before flowering

3.6 Mulching

Organic mulch is applied to:

- Retain moisture
- Suppress weeds
- Improve soil biology

Section 4 — Pest and Disease Management

4.1 Preventive Approach

The project adopts a **preventive and biological pest management approach** rather than chemical control. Focus is on plant health and ecological balance. Regular field monitoring.

Key strategies:

- **Citronella perimeter planting** to repel non-beneficial insects
- Strict **greenhouse sanitation protocols**
- Regular plant monitoring for early detection
- Use of **organic pest control solutions** (botanical sprays, biological agents if needed)

NOTE: Chemical pesticides and synthetic substances are strictly prohibited under all circumstances.

* This system reduces pest pressure while maintaining organic compliance.

4.2 Common Risks

- Root rot
- Fungal infections
- Leaf damage

4.3 Control Measures

- Removal of infected material
- Neem-based treatments * Infusion & Essential Oil
- Botanical extracts
- Maintaining plant health through proper nutrition

4.4 Sanitation Protocol

All diseased plant material is removed immediately.

- Botanical extracts

* No synthetic pesticides are used.

Section 5 — Vanilla Growth Management

5.1 Vine Training

Vines are guided upward and looped to encourage flowering.

5.2 Pruning

Minimal pruning to maintain airflow.

5.3 Shade Management

Shade is adjusted regularly to maintain balance.

5.4 Growth Stages

- Establishment
- Climbing
- Maturity
- Flowering

Section 6 — Water and Climate Management

6.1 Rainfall Utilization

Primary water source is natural rainfall.

6.2 Ozonated Water

Secondary water source located at the fermentation lab. ANNEX 2 * Complete Information. Water sources are monitored to ensure they are free from contamination with prohibited substances.

6.3 Drainage System

Drainage within columns are constructed to prevent waterlogging, especially during heavy rains.

6.4 Misting System

Used during dry periods to maintain humidity.

6.4 Soil Moisture Monitoring

Regular inspection ensures optimal moisture without saturation. Efficient water use to reduce waste and maintain consistent moisture levels

* This prevents plant stress and supports healthy flowering.

Section 7 — Contamination Prevention and Farm Sanitation

- Controlled access to greenhouse
- Tool sanitation procedures
- Worker hygiene protocols
- Separation of organic and non-organic materials
- Cleaning of containers and equipment

Section 8 — Flowering and Pollination

Vanilla pollination at the Dr. C Organic Vanilla Project is conducted **manually** in accordance with organic production standards to ensure high fruit set, product quality, and full traceability.

All tools used are kept clean and free from contamination. Primary sterilization is performed using a UV sterilization cabinet. When necessary, tools may be cleaned using alcohol (ethyl or grain), and are allowed to dry completely before contact with plant material."

All pollination activities are carried out by trained personnel using **non-invasive, chemical-free methods**, consistent with EU Organic, USDA, RA, and PGS requirements.

Practices include:

- Manual hand pollination during the flowering period
- Training of workers in proper pollination techniques
- Daily monitoring of flowering cycles
- Recording of pollination activities for traceability

8.1 Flowering Monitoring

Flowering is monitored **daily during the flowering season** to identify newly opened flowers.

Only **freshly opened flowers** are selected for pollination to ensure successful fertilization and optimal pod development.

8.2 Pollination Timing

Pollination is conducted **in the morning between 6:00 AM and 11:00 AM**, when flowers are fully open and receptive.

Pollination outside this time window is avoided, as it reduces pollination success rates.

8.3 Pollination Procedure

The following standardized procedure is applied:

1. Identify a newly opened and healthy flower
2. Gently lift the rostellum using a clean stick or finger
3. Press the anther onto the stigma to transfer pollen
4. Ensure proper pollen contact
5. Mark the pollinated flower for monitoring and record-keeping

8.4 Post-Pollination Monitoring

Pollinated flowers are monitored regularly to confirm successful pod development.

Unsuccessful pollination (flower drop) is noted and recorded for production assessment.

8.5 Pollination Records and Traceability

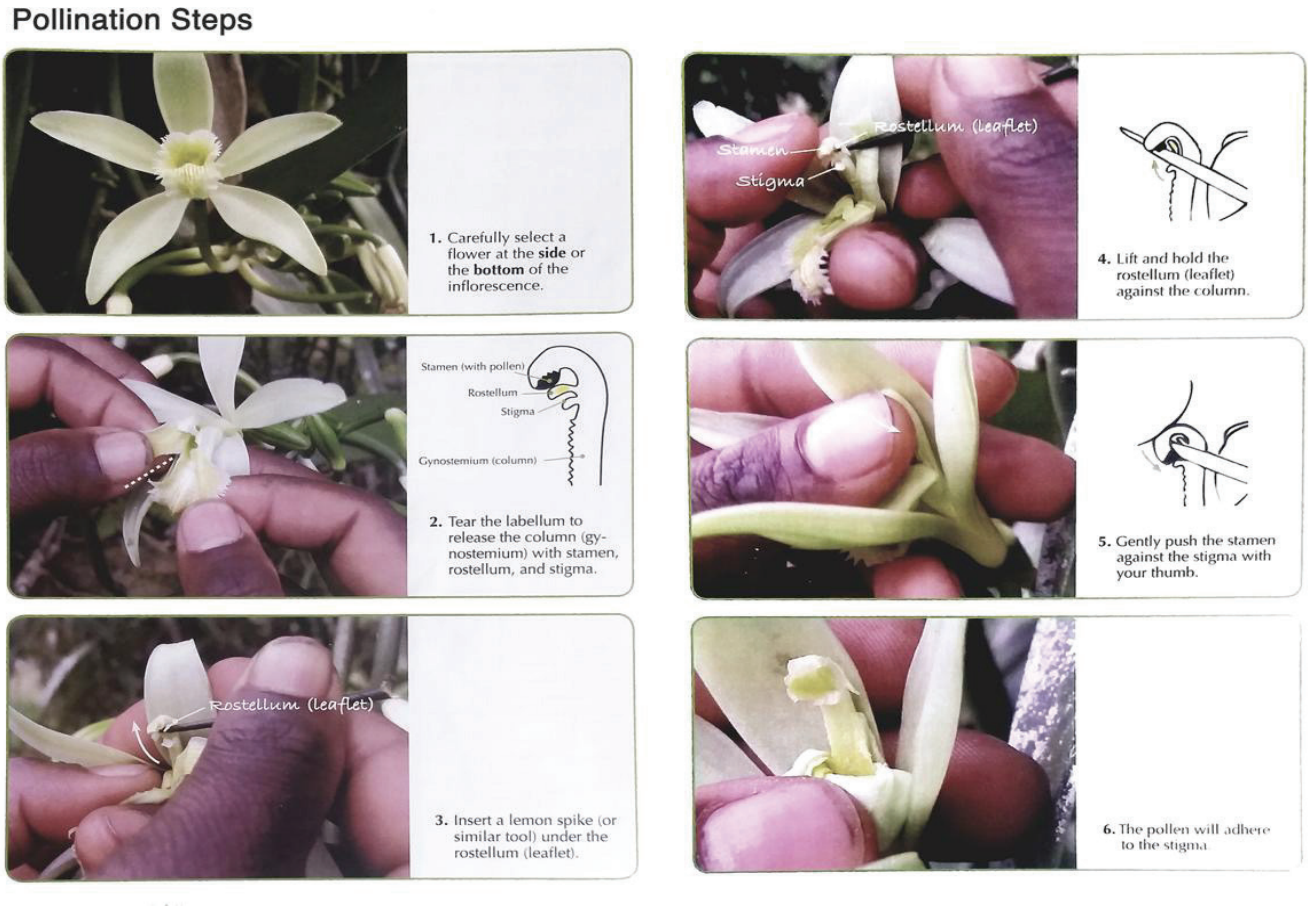
All pollination activities are recorded daily in the Pollination Logbook, including:

- Date of pollination
- Column or plant identification
- Number of flowers pollinated
- Personnel responsible

This ensures full traceability from pollination to harvest, in compliance with organic certification requirements.

8.6 Compliance Statement

- No synthetic substances, growth regulators, or chemical agents are used during pollination.



Section 9 — Harvesting, Post-Harvest, Handling, and Curing

9.1 Harvesting Principles

Harvesting of vanilla beans is carried out in accordance with organic standards, ensuring product quality, traceability, and prevention of contamination.

All harvesting activities are:

- Conducted manually
- Performed by trained personnel
- Documented in the Harvest Logbook
- Carried out using clean and sanitized tools and containers

Only mature vanilla beans are harvested to ensure optimal flavor development and market quality.

9.2 Maturity Index for Harvesting

Vanilla beans are harvested based on the following maturity indicators:

- Color transition from dark green to light green/yellow at the tip
- Full bean size and development
- Approximately 8–9 months after pollination
- Slight softening of the distal end

Immature beans are not harvested, as this negatively affects curing quality and violates quality standards.

9.3 Harvesting Procedure

Harvesting is conducted using the following steps:

1. Inspect vines and identify mature beans
2. Carefully detach beans by hand without damaging the vine
3. Avoid contact with soil or non-clean surfaces
4. Place beans directly into clean, food-grade containers
5. Separate damaged or diseased beans immediately

All harvested beans are:

- Labeled by date, plot/column number, and batch
- Transported promptly to the processing area

9.4 Hygiene and Contamination Prevention

To comply with organic standards:

- Workers must wash hands before harvesting
- No smoking, eating, or introduction of contaminants inside the harvest area
- Tools and containers must be cleaned and sanitized before use
- Harvested beans must not come into contact with:
  - Soil
  - Chemicals
  - Non-organic products

This ensures organic integrity and certification compliance.

9.5 Post-Harvest Handling

Immediately after harvest:

- Beans are sorted to remove defective or diseased pods
- Acceptable beans are grouped by batch
- Beans are processed within 24 hours of harvest

No chemical treatments or preservatives are used at any stage.

9.6 Vanilla Curing Process (Organic-Compliant)

The curing process transforms raw vanilla beans into high-value cured vanilla through controlled enzymatic reactions.

All curing stages are conducted:

- In a clean, designated processing area
- Using non-reactive, food-grade materials
- With full documentation for traceability

9.6.1 Stage 1: Killing (Initiation of Enzymatic Process)

Purpose: Stop vegetative growth and initiate enzyme activity.

Method:

- Beans are immersed in hot water (60–65°C) for 2–3 minutes

OR (alternative method):

- Sun heating under controlled conditions

Requirements:

- Use clean water source
- Avoid overheating (prevents quality loss)

9.6.2 Stage 2: Sweating

Purpose: Promote enzymatic reactions that develop aroma.

Process:

- Beans are wrapped in clean cloth or blankets
- Placed in insulated boxes or sun exposure cycles
- Maintained at 45–55°C

Duration:

- 7–10 days (depending on conditions)

Monitoring:

- Beans are checked daily
- Moisture and temperature are carefully controlled

9.6.3 Stage 3: Drying

Purpose: Reduce moisture content gradually to prevent spoilage.

Process:

- Beans are dried under controlled conditions:
    - o Sun drying (morning only) OR
    - o Shade drying with ventilation

Target:

- Reduce moisture to 25–30%

Precautions:

- Avoid direct midday sun (prevents case hardening)
- Protect from rain and contamination

9.6.4 Stage 4: Conditioning (Aging)

Purpose: Develop full aroma profile and quality.

Process:

- Beans are stored in:
    - o Wooden boxes OR
    - o Food-grade containers

Conditions:

- Cool, dry, well-ventilated area
- Minimal light exposure

Duration:

- 2–6 months

During this stage:

- Flavor compounds fully develop
- Beans become flexible, dark, and aromatic

9.7 Quality Control During Curing

Quality checks include:

- Visual inspection (color, mold presence)
- Texture (flexibility, oiliness)
- Aroma development
- Moisture level monitoring

Defective beans are:

- Segregated
- Recorded
- Not mixed with export-quality product

9.8 Storage of Cured Vanilla

Finished beans are stored under controlled conditions:

- Clean, dry storage area
- Away from contaminants and strong odors
- Stored in labeled batches

Each batch includes:

- Harvest date
- Processing dates
- Farm identification
- Traceability code

Section 10 — Record Keeping and Traceability

The following records are maintained:

- Harvest Log
- Batch Identification Records
- Curing Process Logs
- Drying and Conditioning Records
- Storage Records

This ensures full traceability from vine to final product, as required by organic certification bodies.

Section 11 — Prohibited Practices

The following are strictly prohibited:

- Use of synthetic chemicals or preservatives
- Artificial flavor enhancement
- Mixing with non-organic vanilla
- Use of contaminated water or materials

Section 12 — Declaration

We hereby declare that all farming practices described above are implemented in accordance with PGS organic standards and are subject to verification through peer review and documentation.

Prepared by: _____

Date: _____

Signature: _____

Main Zones of the Farm

BIODIVERSITY BUFFER ZONE

Native trees, herbs, medicinal plants

VANILLA PRODUCTION AREA

Column Rows (1,610 vertical columns)
3,220 Vanilla planifolia vines

Row spacing designed for airflow and shade

ORGANIC INPUT PRODUCTION AREA

- Vermicomposting unit
- Trichoderma culture production
- Fermented Plant Juice fermentation tanks

WATER MANAGEMENT AREA

- Rainwater collection tanks
- Misting system

PROCESSING AREA

- Vanilla curing room
- Drying racks
- Storage and packaging area

FARM HOUSE / WORKER AREA

- Farm office
- Tool storage
- Worker sanitation facilities

Certification Strategy Dr. C Organic Farm Vanilla Project

The most strategic approach is a **three-layer certification system**:

Layer 1 – Local Certification

PGS Organic Certification
(for Philippine recognition)

Layer 2 – Sustainability Certification

Rainforest Alliance
(for environmental credibility)

Layer 3 – Export Organic Certification

USDA / EU Organic

Note: Dr. C Organic Farm follows Rainforest Alliance sustainability principles and we would like to align these practices with the Philippine PGS organic system.

CONCLUSION * COMMUNITY AND ENVIRONMENTAL IMPACT

Beyond Agricultural Production, The Project Supports Broader Community And Environmental Goals.

The farm promotes:

- environmentally responsible land management
- protection of soil health and biodiversity
- sustainable livelihood opportunities for rural communities
- increased awareness of organic agriculture practices

By demonstrating regenerative farming systems, the project contributes to **long-term environmental stewardship in Palawan**.

FARM MAP

LEGEND

- **A** Vanilla House
- **B** Tool Shed
- **C** Citronella
- **D** Chapel and Bell Tower
- **E** Warehouse
- **F** Staff House
- **G** Fermentation House
- **H** Duplex
- **I** Restaurant
- **J** Cluster / Residences