Abstract

Agriculture is the backbone of global food security and economic growth, yet it faces critical challenges such as climate change, soil degradation, pest infestations, and resource depletion. Addressing these issues requires innovative and sustainable solutions to enhance productivity and resilience.

This documentation proposes the integration of modern technologies, such as precision farming, artificial intelligence (AI), the Internet of Things (IoT), and smart irrigation systems, to optimize resource utilization and improve crop yields. Sustainable agricultural practices, including organic farming, agroforestry, and soil conservation techniques, are also emphasized to ensure long-term environmental balance.

The key methodology involves data-driven decision-making through remote sensing, drone-based monitoring, and automated farming systems to enhance efficiency. Additionally, blockchain technology is explored for transparent supply chain management, ensuring fair trade and traceability of agricultural products.

Expected outcomes include increased agricultural productivity, reduced environmental impact, improved farmer livelihoods, and enhanced food security. By leveraging technology and sustainable practices, this approach aims to create a resilient and efficient agricultural system for future generations.

INTRODUCTION

→Introduction with a Specific Focus

This practicum report focuses on the crop production and management aspects of the agricultural field practicum conducted. The report highlights our experiences with crop selection, soil preparation, irrigation management, and pest control, as well as our observations on the challenges and opportunities in crop production.

→Introduction with a Personal Touch

We have always been fascinated by the complexities of farm management and crop/animal production. The agricultural field practicum provided with a unique opportunity to apply theoretical knowledge in a real setting. This report shares our experiences, and challenges during the practicum.

METHODOLOGY:

Extreme Weather in Agriculture

Extreme weather events, such as droughts, floods, hurricanes, and heatwaves, pose significant challenges to global agriculture. These events can damage crops, reduce soil fertility, disrupt livestock production, and threaten food security. Climate change has intensified the frequency and severity of such events, making resilience and adaptation strategies critical for sustainable agriculture.

→*Types of Extreme Weather and Their Impact*

1. **Droughts** – Prolonged periods of dry conditions lead to water shortages, reduced crop yields, and soil degradation.
2. **Floods** – Heavy rainfall can cause soil erosion, crop loss, and damage to farm infrastructure.
3. **Heatwaves** – High temperatures can stress plants, reduce pollination, and affect livestock health.
4. **Hurricanes and Storms** – Strong winds and heavy rain can destroy crops, uproot trees, and damage irrigation systems.
5. **Frost and Cold Waves** – Sudden temperature drops can kill crops, especially in regions unaccustomed to extreme cold.

→*Adaptation and Mitigation Strategies*

- **Drought-Resistant Crops** – Developing and planting crop varieties that require less water.
- **Improved Irrigation Systems** – Using drip irrigation and rainwater harvesting to manage water efficiently.

- **Flood-Resilient Farming** – Constructing drainage systems and using raised-bed farming techniques.
- **Greenhouse and Vertical Farming** – Creating controlled environments to protect crops from extreme weather.
- **Early Warning Systems** – Utilizing satellite data and AI for climate monitoring and disaster preparedness.

SEEDS

RED GRAM

The Red Gram is uses for grown dal and green manure or fodder. Red Gram appearance of medium sized, oval seeds, usually brown, cream, or mottled.

- Season: Red Gram season for (June-July)
- Soil and climate: Grows well in well-drained loamy soil and requires moderate rainfall.
- Growth Duration: Takes around 4-6 months to mature.
- Organic Seeds: Free from chemical treatment.

FIELD BEANS

- The Field Beans uses of a Consumed as food (fresh or dried).
- Used as fodder for animals. Acts as a green manure to improve soil fertility

Growing season:

The growing season for a Best grown in a the (winter crop).

Soil & Climate:

Thrives in well-drained loamy soils. Requires cool weather for better growth.

Benefits:

Fixes nitrogen in the soil enhancing soil quality. Grows in marginal lands with less water.

IMPLEMENTATION AND RESULTS:

Climate Change in Agriculture

Climate change significantly impacts agriculture by altering weather patterns, increasing the frequency of extreme weather events, and affecting soil and water resources. Rising temperatures, irregular rainfall, and increased incidences of droughts and floods threaten crop yields, livestock health, and overall food security.

→*Challenges Faced by Agriculture Due to Climate Change*

1. **Temperature Variations** – Rising temperatures can reduce crop productivity and alter growing seasons.
2. **Water Scarcity** – Prolonged droughts affect irrigation and water availability for crops and livestock.
3. **Extreme Weather Events** – Storms, floods, and wildfires cause crop loss and damage infrastructure.
4. **Soil Degradation** – Increased temperatures and erratic rainfall lead to soil erosion and nutrient loss.
5. **Pest and Disease Outbreaks** – Warmer climates create favorable conditions for pests and diseases, affecting crops and livestock.

→*Proposed Solutions*

- **Climate Resilient Crops** – Development of drought-tolerant, heat-resistant, and pest-resistant crop varieties.
- **Sustainable Farming Practices** – Adoption of agroforestry, crop rotation, and conservation tillage to enhance soil health.
- **Efficient Water Management** – Use of smart irrigation, rainwater harvesting, and precision agriculture to optimize water usage.

- **Technology Integration** – Implementation of AI, IoT, and remote sensing for climate monitoring and precision farming.
- **Carbon Sequestration Techniques** – Promoting reforestation, cover cropping, and soil carbon management to reduce greenhouse gas emissions.

→*Key Technologies Used*

- **Precision Agriculture** – Sensors, drones, and AI-driven analytics for real-time monitoring of soil and crops.
- **IoT-Based Smart Farming** – Automated irrigation systems and climate monitoring devices for efficient farm management.
- **Greenhouse and Vertical Farming** – Controlled environments to ensure stable crop production regardless of external climate conditions.
- **Blockchain for Supply Chain Transparency** – Ensuring food security and fair trade practices through traceability.

→*Expected Outcomes*

- Increased agricultural resilience to climate change.
- Enhanced crop productivity and food security.
- Reduced environmental impact and greenhouse gas emissions.
- Improved farmer adaptation strategies and livelihoods.

By integrating modern technologies and sustainable agricultural practices, the agricultural sector can mitigate the adverse effects of climate change and ensure a stable food supply for future generations.

MILK PRODUCTON IN AGRICULTURAL

Nutritional value:

Milk is a nutrient-rich product containing protein, calcium, and vitamins, making it essential for human diets. It supports rural nutrition and food security.

Economic Contribution:

- ✔Dairy farming can be a standalone or complementary income source for farmers.
- ✔It creates opportunities for small-scale farmers to enter markets through cooperatives or local distribution.
- ✔Free-ranging cattle can damage crops and degrade soil quality.

Health Management:

Disease outbreaks in cattle can reduce milk production and increase costs.

Soil management techniques enhance fertility sustainably:

Sustainable soil management techniques that enhance fertility focus on maintaining soil health and productivity without depleting resources or causing long-term environmental harm.

Crop Rotation:

Growing different crops in a sequence rather than monocropping helps restore soil nutrients, breaks pest cycles, and improves soil structure.

Cover Cropping:

Planting cover crops like legumes (e.g., clover or vetch) improves soil fertility by fixing nitrogen, reducing soil erosion, and enhancing organic matter content.

Composting and Organic Amendments:

Adding organic materials like compost, manure, or mulch improves soil structure, increases microbial activity, and adds essential nutrients.

Green Manuring:

Incorporating certain crops into the soil, such as legumes, when they are plowed under, enriches the soil with nutrients, particularly nitrogen.

Soil pH Management:

Regularly testing soil pH and amending it (e.g., using lime to raise pH or sulfur to lower it) ensures optimal nutrient availability for plants.

Integrated Pest Management (IPM):

Using natural pest control methods, such as beneficial insects or crop diversity, reduces chemical dependency, helping maintain a balanced ecosystem.

Water Conservation Practices:

Techniques like mulching and drip irrigation improve water use efficiency, preserving soil moisture and preventing erosion.

Benefits of integrating AI and IOT in precision farming:

Integrating AI (Artificial Intelligence) and IoT (Internet of Things) in precision farming offers numerous benefits that improve agricultural efficiency, sustainability, and productivity.

Improved Crop Monitoring:

IoT sensors collect real-time data on soil moisture, temperature, humidity, and other environmental factors.

AI analyzes this data to identify trends, predict crop needs, and optimize irrigation, ensuring that plants receive the right conditions for growth.

Data-Driven Decision Making:

AI algorithms process vast amounts of data from various sources (such as weather forecasts, satellite imagery, and sensor data) to generate actionable insights.

Precision Irrigation:

IoT-enabled systems can monitor soil moisture levels and weather patterns, while AI can adjust irrigation schedules to minimize water waste.

This helps conserve water, reduces costs, and ensures optimal crop growth.

Pest and Disease Detection:

AI models, combined with IoT sensors and cameras, can detect early signs of pests or diseases through image recognition and environmental factors.

This allows for targeted interventions, reducing the need for broad-spectrum pesticide use and minimizing crop damage.

Optimized Fertilizer Application:

AI can analyze soil nutrient levels and crop requirements to recommend precise amounts and types of fertilizers.

IoT-enabled devices can apply fertilizers directly to where they are needed, improving efficiency and reducing the risk of over-fertilization or runoff.

Predictive Analytics for Yield Forecasting:

AI can analyze data on weather conditions, soil health, and crop performance to predict future yields with high accuracy.

This helps farmers plan better for harvests, optimize storage, and manage supply chain logistics.

Automation of Farm Operations:

IoT devices, such as automated tractors and drones, can perform tasks like planting, monitoring, and harvesting with minimal human intervention.

AI-powered systems can schedule and optimize these tasks, increasing productivity and reducing labor costs.

Real-Time Decision Support:

Farmers can access real-time data and recommendations through mobile apps or dashboards, enabling them to make timely decisions, even remotely, improving overall farm management efficiency.

Enhanced Supply Chain Management:

AI and IoT can optimize logistics, track crop growth stages, and predict harvest times, allowing farmers to better plan for transportation, storage, and market delivery.

Genetically modified (GM) crops can affect biodiversity in both positive and negative ways:

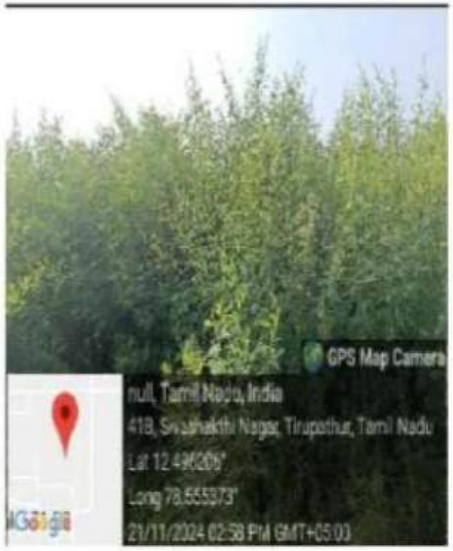
Positive Effects:

Reduced Pesticide Use:

GM crops engineered for pest resistance (e.g., Bt crops) reduce the need for chemical pesticides, which can benefit non-target species and overall ecosystem health.

Improved Yield Efficiency:

By increasing productivity on existing farmland, GM crops may reduce the need to clear additional natural habitats, preserving biodiversity.



Scaling organic farming for mass production can be achieved through:

Efficient Land Use:

Rotate crops and use intercropping to maximize yields.

Soil Health:

Use compost, cover crops, and reduced tillage to maintain fertility.

Pest Control:

Employ natural predators and mechanical weeding.

Water Management:

Use drip irrigation and rainwater harvesting to conserve water.

Technology:

Adopt precision farming, drones, and automation for efficiency.

Cooperatives:

Share resources and market products collectively.

Market Development:

Build supply chains and educate consumers on organic benefits.

These methods maintain sustainability while increasing output.

Effective Methods for controlling pests and diseases:

1. Cultural Control

Crop rotation:

Change crops grown in the same area to disrupt pest and disease cycles.

Intercropping:

Planting different crops together can confuse pests and reduce infestations.

Proper sanitation:

Remove crop residues, weeds, and infected plants to reduce breeding grounds for pests and pathogens.

Resistant varieties:

Use pest- and disease-resistant plant varieties.

Optimal planting times:

Planting during periods less favourable to pests can minimize damage.

Healthy soil management:

Enhance soil fertility and structure to strengthen plant immunity.

2. Biological Control

Natural predators:

Introduce or encourage beneficial insects like ladybugs, parasitic wasps, or lacewings.

Pathogens:

Use biopesticides made from bacteria, fungi, or viruses (e.g., Bacillus thuringiensis).

Steps in growing Thoovari (Pigeon Pea) seeds

1. PREPARATION (DAY 1)

Pick the right location: Choose a spot with good sunlight and well-drained soil.

Soil preparation: Loosen the soil about 6 inches deep. Add compost or organic manure.

2. PLANTING THE SEEDS (WEEK 1)

Spacing: Sow seeds 1-2 inches deep, leaving about 1 foot between each seed.

Watering: Water lightly to keep the soil moist but not soggy.

3. SPROUTING (WEEK 2–3)

Growth: Tiny sprouts appear within 10–14 days, growing to about 2–3 inches tall.

Care: Water once every 2-3 days or whenever the topsoil feels dry.

4. SEEDLING STAGE (WEEK 4–6)

Height: Plants will be 6–8 inches tall by the end of the first month.

Maintenance: Remove weeds and ensure the soil stays slightly moist.

5. GETATIVE GROWTH (MONTH 2–3)

Height: The plant grows rapidly, reaching 12–24 inches.

Care:

- Thin out weaker plants to allow space for stronger ones.
- Add organic fertilizer to support growths.

8. HARVESTING (MONTH 7–8)

Pods ready: Once the pods turn brown and dry, they are ready to harvest.

Yield: Each plant can produce multiple pods with seeds inside.

TIPS FOR SUCCESS

- ✓ Watering: Adjust watering frequency based on climate. Too much water can cause root rot.
- ✓ Pest control: Check regularly for pests like aphids and treat early.
- ✓ Crop rotation: Avoid planting Thoovari in the same spot every year to maintain soil health.

Types Of Thoovari (Pigeon Pea) Seeds

1. **Short-duration varieties**

- ➢ Grows faster (3–4 months to harvest).
- ➢ Best for areas with less rainfall.

2. Medium-duration varieties

- ➢ Takes about 5–6 months to mature.
- ➢ Suitable for moderate rainfall regions.

3. Long-duration varieties

- Grows slowly and takes 7–9 months for harvest.
- Ideal for areas with consistent rainfall or irrigation.

4. Local traditional varieties

- Adapted to specific regions (like Tamil Nadu or Karnataka).
- Can be more resistant to local pests and diseases.

5. Hybrid varieties

- Needs proper care and regular fertilization.

STEP-BY-STEP GUIDE ON HOW TO PREPARE AND STORE THOOVARI SEEDS

a) **DRYING THOOVARI SEEDS**
b) **ROASTING THOOVARI SEEDS (OPTIONAL)**
c) **STORING THOOVARI SEEDS**

GRAPHS

The graph shows the number of farmers predicting changes in crop production for different crops: cardamom, kiwi, vegetables, potato, maize, millet, rice, and wheat. It categorizes the farmers' projections into three groups: more production, average production, and less production.

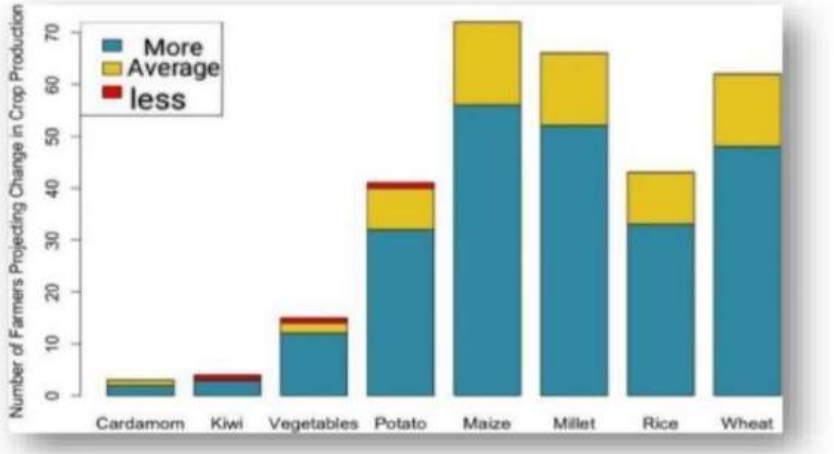
Maize, millet, and wheat have the highest number of farmers expecting increased production, with maize leading.

Rice also shows significant projections for increased production, though less than maize and millet.

Potato and vegetables have a moderate number of farmers expecting higher production, but some also predict less production.

Cardamom and kiwi have the least projections for production changes, with most farmers predicting stable or average yields.

This indicates that staple crops like maize, millet, and wheat are expected to perform better, while specialty crops like cardamom and kiwi show minimal change.



Profit from mango farming depends on factors like the variety grown, yield per

tree, production costs, and market price. Here's an example scenario:

Mango Variety: Alphonso (premium variety).

Yield Per Tree: 200-300 mangoes after 4-5 years of growth.

Market Price: ₹50 per mango (varies based on quality and location).

Calculation: Total Revenue: ₹50 × 10,000 mangoes = ₹5,00,000 (approx).

Production Costs: ₹1,50,000 (includes planting, fertilizers, labor, irrigation, and maintenance).

Net Profit: ₹5,00,000 - ₹1,50,000 = ₹3,50,000 annually.

This is a simplified estimate; profits can increase with better management, value addition, or export opportunities.

→ Profit from Banana

Profit from banana farming depends on factors like the variety, yield per acre, production costs, and market price.

Here's an example calculation:

Banana Variety: G-9 (popular high-yield variety).

Plants : 1,200–1,500 (using tissue culture plants with proper spacing).

Yield Per Plant: 20–30 kg (average yield).

Total Yield Per Acre: Approximately 25–30 tons.

Market Price: ₹15 per kg (varies based on demand and location).

Calculation:

Total Revenue: 25,000 kg × ₹15 = ₹3,75,000 (approx).

Production Costs: ₹1,50,000 (includes planting, fertilizers, irrigation, pest control, and labor).

Net Profit: ₹3,75,000 - ₹1,50,000 = ₹2,25,000 .

→Profit from papaya

from papaya farming depends on factors such as the variety, cultivation practices, yield, and market price. Here's an example scenario:

Papaya Variety: Red Lady (high-yield and disease-resistant variety).

Profit

Plants Per Acre: 900–1,000 (with proper spacing).

Yield Per Plant: 50–70 kg of fruit annually.

Total Yield Per Acre: Approximately 45–60 tons.

Market Price: ₹10–₹15 per kg (varies by location and quality).

Calculation:

Total Revenue: 50,000 kg × ₹12 (average price) = ₹6,00,000.

Production Costs: ₹2,00,000 (includes planting, fertilizers, irrigation, labor, and maintenance).

Net Profit: ₹6,00,000 - ₹2,00,000 = ₹4,00,000 per acre annually.

Land Preparation and Soil Requirements:

- Soil Testing: Before planting, check the soil's pH, texture, and nutrients to know what it needs for better growth.
- Tilling or Plowing: Break up the soil by tilling or plowing to allow the roots to grow better.


- Organic Matter: Add compost or organic materials to make the soil richer, hold more water, and provide nutrients.
- Drainage: Make sure the soil drains well to prevent too much water from harming the roots.
- Fertilization: Based on soil tests, add fertilizers or soil conditioners to provide the nutrients your plants need.
- Conduct soil testing to assess the pH, nutrient levels, and texture. Coconut palms prefer slightly acidic soil with a pH of 5.0 to 8.0.
- Adding Organic Matter: Incorporate organic compost or well-rotted manure to improve soil fertility and structure. Organic matter also helps in moisture retention.

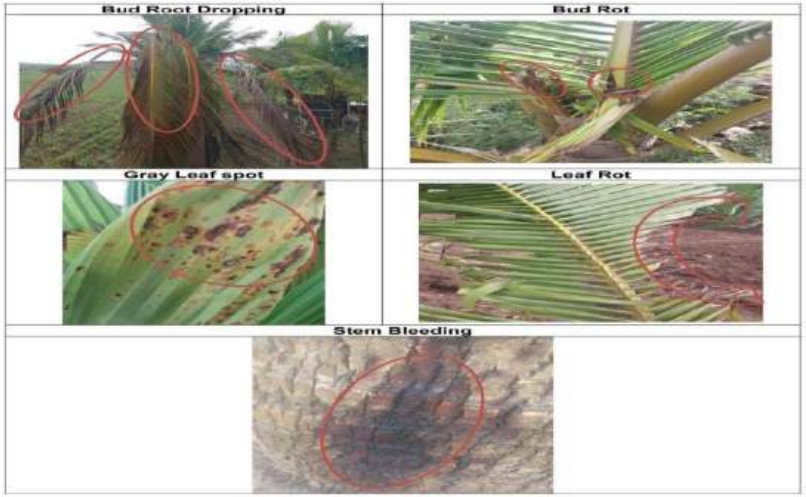
Planting Techniques and Spacing:

- Spacing for Growth: Leave enough space between plants so they can get enough air, sunlight, and water, which helps avoid diseases.
- Depth of Planting: Plant seeds or seedlings at the right depth to help them grow strong roots.

- Planting Methods: Use the right method for each crop, like seeding directly or transplanting seedlings.
- Timely Planting: Plant at the right time and space plants evenly to reduce competition for light, water, and nutrients.
- Plowing and Tilling: Deep plowing and tilling (about 20–30 cm depth) help break up compacted soil, improve aeration, and enhance root penetration **Water Management and Irrigation**.

- Water Needs of Plants: Know how much water each plant needs, as too much or too little can harm them.
- Efficient Irrigation: Use methods like drip irrigation to give water directly to the roots, reducing waste.
- Watering Schedule: Water plants based on the weather, season, and soil type to keep them healthy.
- Water Conservation: In areas with less water, use mulch to keep moisture in the soil and reduce evaporation.

Pest and Disease Management:



- Prevention: Keep the field clean, remove weeds, and use plants that are resistant to pests and diseases.
- Integrated Pest Management (IPM): Combine methods like using natural predators, rotating crops, and careful pesticide use to control pests and diseases.
- Regular Monitoring: Check plants regularly for signs of pests or diseases and act early to prevent spreading.
- Cultural Practices: Rotate crops and maintain healthy watering and pruning habits to keep pests away and protect plant health.

→Avarakkai(Broad Beans)

seed selection and germination process:

1. Choose fresh seeds: Select seeds that are less than 6 months old for optimal germination.

2. Opt for disease-resistant varieties: Look for seeds with built-in resistance to common diseases like powdery mildew or rust.

3. Select suitable varieties for your region: Avarakkai is typically grown in temperate climates. Choose varieties that thrive in your local climate.

Germination Process

1. Soak the seeds in water for 24 hours to encourage germination.

2. Fill a tray with a mixture of compost and sand. Moisten the mixture.

3. Plant the soaked seeds 1-2 inches deep and 1-2 inches apart in the germination tray.

4.Keep the tray in a warm, humid environment with indirect sunlight. Ideal temperatures for germination are between 65°F to 75°F (18°C to 24°C).

5. Keep the soil consistently moist but not waterlogged.

6. Once seedlings have 2-3 sets of leaves, transplant them into individual pots or directly into the field.

Harvesting Techniques for High-Quality Avarakkai

Pre-Harvesting Tips

1. Check for maturity: Avarakkai pods are ready to harvest when they're bright green, tender, and slightly soft to the touch.

2. Inspect for pests and diseases: Regularly monitor the crop for signs of pests or diseases, and take action promptly to prevent damage.

Harvesting Techniques

1. Hand-picking: Gently pull the pods from the plant, taking care not to damage the stem or surrounding pods.

2. Cutting: Use scissors or a sharp knife to cut the pods from the plant, leaving a small piece of stem attached.

3. Machine harvesting: For larger commercial operations, mechanical harvesters can be used to cut the pods from the plant.

Post-Harvesting Handling

1. Cooling: Immediately cool the harvested Avarakkai to around 10°C (50°F) to slow down respiration and prevent spoilage.
2. Cleaning: Gently remove any dirt, debris, or damaged pods.
3. Packaging: Store the Avarakkai in breathable packaging, such as mesh bags or ventilated containers, to maintain humidity and prevent moisture buildup.
4. Storage: Keep the packaged Avarakkai in a cool, dry place (around 10°C/50°F and 80% relative humidity) to maintain freshness.

Quality Control Measures

1. Regular inspections: Monitor the Avarakkai for signs of spoilage, damage, or contamination.
2. Sorting and grading: Separate the Avarakkai into different grades based on size, color, and quality.
3. Temperature and humidity control: Maintain optimal storage conditions to prevent degradation.

Avarakkai (Broad Beans) Growing Stage, Climate, and Season:

Climate:

Avarakkai grows best in moderate to cool climates.

The ideal temperature for growth is between 18°C to 25°C.

It can tolerate slight frost, but it is sensitive to high heat and humidity, which may affect pod formation.

It requires full sunlight for better growth.

Growing Stage:

Seedling Stage: Seeds are planted directly into the soil and germinate within 7–14 days, depending on soil temperature.

Vegetative Stage: The plant grows leaves and stems, requiring adequate water and nutrients.

Flowering and Pod Formation: After about 2–3 months, the plant starts flowering, and pods begin to form.

Maturity and Harvesting: The beans are ready for harvest 3–4 months after planting, depending on the variety.

Pods are harvested when they are green, before they start to turn yellow or brown.

Season:

Best Season: Avarakkai is generally planted during the cool months, typically from October to December, for a winter harvest (from February to April).

In tropical regions, it can also be grown during the rainy season (June to September) but needs protection from excessive rain.

C ow

COW

- ✓ A cow farm is a place where cows are raised for milk, meat, or both. The cows are given good food, shelter, and care to stay healthy.
- ✓ On dairy farms, cows are milked and the milk is sold or used. Some farms also breed cows to produce more milk or raise them for meat.
- ✓ Taking care of the cows by feeding them well, keeping them healthy, and managing their breeding is important for the farm to succeed.

Hen

- ✓ A hen is a female chicken. Hens are kept on farms mainly for eggs and sometimes for meat.
- ✓ They are easy to take care of and their eggs are used in food. Hens live in small houses called coops and need food, water, and a safe place to sleep.

Cow grass

Cow grass is special grass grown for cows to eat. It's important to pick the right grass that cows like and that grows well. To grow it, the soil should be prepared by removing weeds and loosening the ground. Then, grass seeds are planted and watered regularly. Once the grass starts growing, it should be watered when it's dry, but not too much.

Mowing the grass and keeping it clean helps it stay healthy for the cows.

1. Choose the Right Grass: Select grass varieties that are suitable for cows, such as Bermuda, ryegrass, or clover, depending on the climate and soil.

2. Prepare the Soil: Clear the land of weeds and debris. Loosen the soil by plowing or tilling to allow the grass seeds to take root.

3. Plant the Seeds: Sow the grass seeds evenly across the soil. This can be done by hand or using a seed spreader. Lightly rake the soil to cover the seeds.

4.Watering: After planting, water the soil gently to keep it moist, but not too wet. Continue watering regularly until the grass begins to grow.

5. Regular Watering: Once the grass has grown, continue to water it in dry periods, but avoid over-watering. Grass needs about 1–1.5 inches of water per week.

6. Maintenance: Keep the grass free of weeds, and mow it occasionally to ensure it remains healthy for the cows to graze on.

Calculation earning profit from avarakkai and milk and eggs

sum calculation for Avarakkai (Broad Beans)

market rate (per kg): 80

Daily sales:

5 kg x 80 = 400

Monthly sales (30 days):

400 x 30 = 12000

Yearly sales (365 days):

400 x 365 = 146000

sum calculation for

milk:

Milk production (daily):

Milk liters: 10 liters

Milk price: 50 per liter

Daily income: 10 liters x 50 = 500

Monthly income (30 days): 500 x 30 =

15000 Yearly income (365 days): 500 x

365 = 182500 **sum calculation for eggs**:

Egg-laying cow (daily):

Eggs laid: 10 eggs

Egg price: 5 per egg

Daily income: 10 eggs x 5 = 50

Monthly income (30 days): 50 x 30 = 1500

Yearly income (365 days): 50 x 365 = 18250

CONCLUSION :

Agriculture plays a crucial role in sustaining human life by providing food, raw materials, and economic stability. It supports livelihoods, contributes to national economies, and ensures food security. With advancements in technology, sustainable farming practices, and modern techniques, agriculture continues to evolve to meet global demands. However, challenges such as climate change, soil degradation, and water scarcity must be addressed to ensure long-term productivity. By adopting eco-friendly practices and innovative solutions, agriculture can continue to thrive while protecting the environment and ensuring future food supplies.

LINK: