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# NURSERY PLANT PRODUCTION

## SKILLS DEVELOPMENT PROJECT

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## LU 1.1: Introduction to Nursery

### Introduction to Nursery Plant Production

Nursery plant production is the process of growing and caring for young plants, typically from seed or cuttings, until they are ready to be transplanted into larger containers or directly into the landscape. This process involves several stages, including propagation, growth, and hardening off.

### Stages of Nursery Plant Production:

1. **Propagation:** This stage involves creating new plants from seeds, cuttings, or other plant parts.

2. **Growth:** The young plants are nurtured and grown in a controlled environment, such as a greenhouse or nursery, until they reach a suitable size for transplanting.

3. **Hardening Off:** The plants are gradually acclimated to outdoor conditions, such as sunlight, wind, and temperature fluctuations, to prepare them for transplanting.

### Types of Nursery Plants:

1. **Ornamental Plants:** These include flowering plants, shrubs, and trees used for landscaping and decorative purposes.

2. **Fruit Plants:** These include plants grown for fruit production, such as citrus, apples, and berries.

3. **Vegetable Plants:** These include plants grown for vegetable production, such as tomatoes, peppers, and cucumbers.

## Importance of Nursery Plant Production:

1. **Conservation:** Nursery plant production helps conserve plant species and preserve genetic diversity.

2. **Economic Benefits:** The nursery industry provides employment opportunities and generates revenue for local economies.

3. **Environmental Benefits:** Plants produced in nurseries help improve air quality, mitigate climate change, and support biodiversity.

## Challenges in Nursery Plant Production:

1. **Climate Change:** Changing weather patterns and rising temperatures affect plant growth and development.

2. **Pests and Diseases:** Nursery plants are susceptible to pests and diseases, which can impact plant quality and yield.

3. **Water Management:** Nurseries require significant water resources, which can strain local water supplies.

## Best Practices in Nursery Plant Production:

1. **Integrated Pest Management (IPM):** Use a combination of techniques to manage pests and diseases.

2. **Water Conservation:** Implement efficient irrigation systems and water-saving practices.

**3. Sustainable Growing Media:** Use environmentally friendly growing media, such as compost and coconut coir.

## LU 1.2: The concept of nursery plant production.

The concept of nursery plant production involves growing and caring for young plants, typically from seed or cuttings, until they are ready to be transplanted into larger containers or directly into the landscape. This process includes several stages, such as propagation, growth, and hardening off, to produce high-quality plants.

Nursery plant production is a vital part of horticulture, providing plants for landscaping, gardening, and conservation purposes. It requires careful planning, precise growing conditions, and attention to detail to ensure healthy and robust plants.

## LU 1.3: How to develop a nursery.

**Developing a nursery involves several steps:**

**1. Plan and research:** Define your target market, identify the types of plants to grow, and create a business plan.

**2. Choose a location:** Select a site with suitable climate, soil, and water resources.

**3. Prepare the land:** Clear the land, prepare the soil, and install irrigation systems.

**4. Obtain necessary licenses:** Register your business and obtain required permits.

**5. Acquire seeds and materials:** Source high-quality seeds, cuttings, or seedlings.

6. **Build infrastructure:** Construct greenhouses, shade houses, or other necessary structures.

7. **Hire staff:** Employ experienced staff to help with planting, maintenance, and sales.

8. **Monitor and maintain:** Regularly inspect and care for plants, and manage pests and diseases.

## LU 1.4: Challenges

### Challenges in developing a nursery:

1. **Climate and weather:** Unpredictable weather conditions, such as extreme temperatures, drought, or flooding, can impact plant growth.

2. **Pests and diseases:** Managing pests and diseases without harming the environment or plants can be difficult.

3. **Water management:** Ensuring adequate water supply and managing water waste is crucial.

4. **Market fluctuations:** Changes in demand or market trends can affect sales and profitability.

5. **Financial constraints:** Securing funding and managing expenses can be challenging.

6. **Regulations and permits:** Complying with local regulations and obtaining necessary permits can be time-consuming.

## LU 1.5: Different types of nurseries and site selection.

### Different types of nurseries:

1. **Retail nurseries:** Sell plants directly to consumers.

2. **Wholesale nurseries:** Supply plants to retailers, landscapers, or other businesses.

3. **Mail-order nurseries:** Sell plants online or through catalogs.

4. **Specialty nurseries:** Focus on specific types of plants, like orchids or succulents.

5. **Production nurseries:** Grow plants for reforestation, conservation, or large-scale landscaping projects.

**Site selection considerations:**

1. **Climate:** Choose a location with a suitable climate for the plants you want to grow.

2. **Soil:** Ensure the soil is suitable for plant growth and drainage is good.

3. **Water access:** Reliable water source is essential.

4. **Accessibility:** Consider proximity to markets, transportation, and labor.

5. **Space:** Ensure enough space for plants, equipment, and future expansion.

**Practical Exercises:**

**Nursery Layout and Infrastructure Planning Soil Media Preparation & Containers.**

**Nursery Layout and Infrastructure Planning**

A well-designed nursery layout is crucial for efficient operations, plant health, and profitability. Consider the following components:

1. **Production areas:** Separate areas for propagation, growing, and hardening off plants.

2. **Storage areas:** Space for equipment, supplies, and packaging materials.

3. **Display areas:** Showcase plants for sale or customer viewing.

4. **Pathways and aisles:** Wide enough for equipment and easy navigation.

5. **Irrigation system:** Efficient water distribution and drainage system.

6. **Greenhouses or shade structures:** Provide protection from extreme weather.

## Soil Media Preparation

1. **Components:** Mix soil, compost, peat moss, perlite, and vermiculite to create a well-draining medium.

2. **pH adjustment:** Adjust pH levels according to plant requirements.

3. **Sterilization:** Sterilize the mix to prevent pests and diseases.

## Containers

1. **Types:** Choose from pots, trays, cell packs, or grow bags.

2. **Size and shape:** Select containers suitable for plant size and growth stage.

3. **Material:** Consider biodegradable, recyclable, or reusable options.

## M2

## LU2.1: Sexual and Asexual

## Propagation Methods Problem

diagnosis.

### Sexual Propagation

1. **Seed Propagation:** Produces new plants from seeds, promoting genetic diversity.

2. **Characteristics:** Seed-grown plants may exhibit variation, taking longer to mature.

### Asexual Propagation

1. **Methods:** Includes cuttings, grafting, budding, layering, and tissue culture.

2. **Characteristics:** Produces genetically identical plants, often faster and more predictable.

### Problem Diagnosis

Identify issues like poor germination, disease, or poor rooting in sexual and asexual propagation methods.

## LU2.2: Nursery management

### Key Aspects

1. **Monitor and Maintain:** Regularly inspect and care for plants, including watering, fertilizing, and pruning.

2. **Pest and Disease Management:** Implement integrated pest management (IPM) strategies.

3. **Record Keeping:** Keep accurate records of plant inventory, sales, and maintenance activities.

### Best Practices

- Ensure proper labeling and organization
- Maintain cleanliness and sanitation
- Monitor weather and climate conditions

## LU2.3: Seed Propagation – Collection, Storage, Sowing

### Collection

1. **Mature Seeds:** Collect seeds from mature, healthy plants.
2. **Proper Handling:** Handle seeds carefully to avoid damage.

### Storage

1. **Cool, Dry Place:** Store seeds in a cool, dry environment to maintain viability.
2. **Labeling:** Label seeds with species, collection date, and storage conditions.

### Sowing

1. *Optimal Conditions*: Sow seeds in suitable growing media, providing optimal moisture, temperature, and light.

**2. Depth and Spacing:** Sow seeds at correct depth and spacing for the species.

## LU2.4: Vegetative Propagation – Cutting, Grafting, Budding.

### Methods

**1. Cutting:** Take cuttings from healthy, mature plants, and root them in a suitable medium.

**2. Grafting:** Join a stem or bud from one plant to the root system of another.

**3. Budding:** Insert a bud from one plant into the stem of another.

## LU2.5: Use of Plant Growth Regulators (PGRs)

1. Types: Auxins, gibberellins, cytokinins, and ethylene regulators.

2. Applications: Promote rooting, stem elongation, flowering, or fruiting.

## LU2.6: effect of abiotic and Biotic factors on the nursery Plants.

• Temperature, Moisture,

Photoperiod

• wind storms, rain and hail

Storms

• food

• natural enemies

## Abiotic Factors

1. Temperature: Manage temperature fluctuations to promote healthy growth.

2. Moisture: Ensure adequate water supply and drainage.

3. Photoperiod: Manipulate day length to control flowering or growth.

4. Wind, Rain, and Hail: Protect plants from extreme weather events.

## Biotic Factors

1. Food: Provide balanced nutrition to promote healthy growth.

2. Natural Enemies: Manage pests and diseases using IPM strategies.

## LU2.7. Maintenance of Mother Plants Practical Exercises:

## identification of Different pests/diseases and its Developmental stages

## Maintenance of Mother Plants

1. Healthy Stock: Select and maintain healthy mother plants for propagation.

2. Regular Monitoring: Regularly inspect and care for mother plants.

## Practical Exercises

1. Pest and Disease Identification: Identify common pests and diseases, and their developmental stages.

2. Developmental Stages: Understand life cycles to inform management strategies.

## M3

## LU3.1: Economics of nursery

## Management:

• Economic injury level (EIL)

• Economic threshold level (ETL)

• General equilibrium position (GEP)

## Economics of Nursery Management

### Key Concepts

1. Economic Injury Level (EIL): The level of pest infestation where cost of control equals damage value.

2. Economic Threshold Level (ETL): The level of pest infestation where control measures are initiated.

3. General Equilibrium Position (GEP): The point where supply and demand are balanced.

### Why It Matters

Understanding these concepts helps nursery managers make informed decisions about pest management and resource allocation.

## U3.2: Operational Practices and Nursery Hygiene

## Operational Practices and Nursery Hygiene

### Key Aspects

1. Sanitation: Maintain cleanliness to prevent pest and disease spread.

2. Monitoring: Regularly inspect plants for signs of pests or diseases.

3. Record Keeping: Keep accurate records of maintenance activities.

## Best Practices

- Use clean tools and equipment

- Dispose of infested or diseased plants properly

- Implement integrated pest management (IPM) strategies

## LU3.3: Culture Control

• Tillage

• Clean seeds

• Irrigation

• Resistant varieties

• Fertilization

• Crop/Plant rotation

• Traps

• Pruning, thinning, Budding, Layring And grafting.

• Plant Sowing/Cultivation and

Harvesting

• Plants residues destruction

Culture Control*

## Methods

1. Tillage: Prepare soil for planting, controlling weeds and pests.
2. Clean Seeds: Use disease-free seeds to prevent spread.
3. Irrigation: Manage water supply to promote healthy growth.
4. Resistant Varieties: Use varieties resistant to pests and diseases.
5. Fertilization: Provide balanced nutrition for healthy growth.
6. Crop/Plant Rotation: Rotate plants to break pest and disease cycles.
7. Traps: Use traps to monitor and control pests.

8. Pruning, Thinning, Budding, Layering, and Grafting: Use techniques to promote healthy growth.

## LU3.4: Mechanical control

• Hand destruction

• Exclusion by screens, barriers

• Trapping, suction devices and

Collecting machines

### Mechanical Control Methods: More Details and Examples

1. Hand Destruction: Remove infested or diseased plants or plant parts to prevent spread.
    - Example: Remove infected leaves or stems to control fungal diseases.
2. Exclusion: Use physical barriers like screens, nets, or bags to prevent pest entry.
    - Example: Cover plants with fine mesh to prevent whitefly infestation.
3. Trapping: Use sticky traps, pitfall traps, or pheromone traps to capture pests.
    - Example: Use yellow sticky traps to monitor and control aphid populations.

These methods are effective for managing pests and diseases in nurseries, reducing chemical use and promoting integrated pest management (IPM) strategies.

## LU3.5 Pest and Disease Management In Nursery

### Pest and Disease Management in Nursery: Details and Examples

1. Monitor Regularly: Inspect plants for signs of pests or diseases, such as unusual growth, discoloration, or damage.

   - Example: Regularly inspect plants for aphid infestations, checking for curled or distorted leaves.

2. Identify Pests and Diseases: Accurately identify issues to inform management strategies.

   - Example: Identify powdery mildew fungal disease by its white, powdery coating on leaves.

3. Use IPM Strategies: Combine cultural, mechanical, and biological controls.

   - Example: Use neem oil to control aphids, introduce ladybugs as biological control, and prune infested areas.

### Some common nursery pests and diseases include:

- Aphids

- Whiteflies

- Spider mites

- Powdery mildew

- Root rot

## Practical Exercises: Collection, Preservation and identification of Biological control agents

### Biological Control Agents: Details and Examples

### Collection

1. Identify Target Pests: Determine which pests or diseases to target (e.g., aphids or powdery mildew).

2. Collect Natural Enemies: Collect predators (e.g., ladybugs), parasites (e.g., parasitoid wasps), or pathogens (e.g., Bacillus thuringiensis).

### Preservation

1. Proper Storage: Store agents in suitable conditions (e.g., refrigerate ladybugs at 4°C or freeze Trichoderma fungi spores).

2. Labeling: Label agents with collection data (e.g., date, location, host, and collector).

### Identification

1. Taxonomic Keys: Use keys to identify agents (e.g., morphological characteristics, such as ladybug elytra patterns).

2. Expert Consultation: Consult experts if needed (e.g., entomologists or plant pathologists).

Example: Collect ladybugs (Hippodamia convergens) from aphid-infested plants, store in a ventilated container with sugar or honey, and identify using taxonomic keys.

## LU4.1: Record Keeping and Inventory Management

### Record Keeping and Inventory Management

### Key Aspects

1. Accurate Records: Maintain detailed records of plant inventory, sales, and maintenance activities.

2. Inventory Tracking: Track plant stock levels, including quantity, size, and location.

3. Data Analysis: Analyze records to inform decision-making and optimize nursery operations.

### Benefits

- Improved inventory management and stock control

- Enhanced customer service and satisfaction

- Increased efficiency and productivity

## LU4.2: Logisticalal Arrangement/Requirements.

## Lu4.2Logistical Arrangement/Requirements

### Key Aspects

1. Supply Chain Management: Manage sourcing and procurement of inputs.

2. Transportation: Arrange transportation for plants, materials, and equipment.

3. Storage and Handling: Ensure proper storage and handling of plants and materials.

4. Delivery and Distribution: Plan delivery and distribution of products to customers.

## LU4.3: Waste Management and

## Sanitation in Nursery.

### Waste Management and Sanitation in Nursery: Details and Examples

1. Waste Collection and Disposal: Collect and dispose of waste, including plant debris and packaging materials.

- Example: Segregate plant waste and packaging materials, and dispose of them through designated channels.

2. Composting: Compost organic waste to reduce landfill waste and create nutrient-rich soil amendments.

- Example: Compost fallen leaves and stems to create nutrient-rich potting mix.

3. Sanitation Practices: Implement sanitation practices, such as cleaning and disinfecting tools and equipment.

- Example: Regularly clean and disinfect pruning tools to prevent disease spread.

Some best practices include:

- Use designated bins for different types of waste

- Train staff on proper waste management and sanitation procedures

- Regularly inspect and maintain sanitation facilities

M5

LU5.1: Legal

Requirements/Documentations.

Legal Requirements and Documentations

Key Aspects

1. Licenses and Permits: Obtain necessary licenses and permits for nursery operations.

2. Plant Quarantine Regulations: Comply with regulations for importing and exporting plants.

3. Labeling and Certification: Ensure accurate labeling and certification of plants.

### Documentations

1. Nursery Registration: Register nursery with relevant authorities.

2. Plant Health Certificates: Obtain certificates for plant shipments.

3. Pest and Disease Management Plans: Develop plans for managing pests and diseases.

## LU5.2: Nursery Certification: Need And Benefits.

### Nursery Certification: Need and Benefits Need

1. Quality Assurance: Certification ensures nurseries meet standards for plant quality and health.

2. Market Access: Certification can provide access to new markets and customers.

### Benefits

1. Improved Plant Quality: Certification promotes best practices and quality control.

2. Increased Customer Confidence: Certification provides assurance to customers of plant quality and health.

3. Competitive Advantage: Certification can differentiate a nursery from competitors.

## LU5.3: Government Regulations & Licensing Procedure

### Government Regulations and Licensing Procedure: Example and Details

Example

- Plant Quarantine Act: Regulates import of plants, soil, and other materials to prevent pest and disease introduction.

- Nursery Registration: Register with the Department of Agriculture to obtain a nursery license.

### Details

1. Application: Submit application with documents, such as business registration and plant health certificates.

2. Inspection: Nursery inspection to ensure compliance with regulations, such as proper sanitation and pest management.

3. License Issuance: License issued upon meeting requirements, valid for a specified period (e.g., 1-3 years).

### In Pakistan, the relevant authorities for nursery registration and licensing include:

- Department of Agriculture

- Plant Quarantine Department

- Ministry of Food and Agriculture (Federal and Provincial)

## LU5.4 Documentation and

## Application for Certification Documentation and Application for Certification

## Required Documents

1. Application Form: Completed application form for certification.

2. Nursery Registration: Proof of nursery registration.

3. Plant Health Certificates: Certificates for plant materials.

4. Pest and Disease Management Plan: Plan for managing pests and diseases.

## Application Process

1. Submit Application: Submit application with required documents.

2. Inspection: Nursery inspection to ensure compliance.

3. Certification: Certification issued upon meeting requirements.

## Practical Exercises: Calibration of Equipment's for layouts and Measurements.

## Calibration of Equipment for Layouts and Measurements: Practical Exercises

## Objectives

1. Ensure accuracy of equipment

2. Understand calibration procedures

### Activities

1. Calibration of Measuring Tapes: Check and adjust measuring tapes for accuracy.

2. Calibration of Levels: Check and adjust levels for accuracy.

3. Calibration of Other Equipment: Calibrate other equipment, such as pruning tools and pH meters.

### Steps

1. Check Equipment: Check equipment for damage or wear.

2. Compare with Standards: Compare equipment with known standards.

3. Adjust or Repair: Adjust or repair equipment as needed.

## M6

## LU6.1: Quality Planting Material

### Standards

### Quality Planting Material Standards

### Key Aspects

1. Genetic Purity: Ensure genetic purity of planting material.

2. Physical Quality: Ensure physical quality, such as size and shape.

3. Health Standards: Meet health standards, such as freedom from pests and diseases.

### Standards

1. Seed Quality: Meet seed quality standards, such as germination percentage.

2. Seedling Quality: Meet seedling quality standards, such as height and root development.

3. Grafting and Budding: Ensure proper grafting and budding techniques.

## LU6.2 Advantage and dis advantages Of nursery business.

### Advantage and Disadvantage of Nursery Business

### Advantages

1. Growing Demand: Growing demand for quality planting material.

2. High Returns: Potential for high returns on investment.

3. Diversification: Opportunity to diversify products and services.

### Disadvantages

1. High Initial Investment: High initial investment in infrastructure and equipment.

2. Risk of Pests and Diseases: Risk of pests and diseases affecting plants.

3. Market Fluctuations: Market fluctuations affecting demand and prices.

## LU6.3: Necessary safety precautions During nursery Handling/transportation.

### Necessary Safety Precautions during Nursery Handling/Transportation

### Handling Precautions

1. Wear PPE: Wear personal protective equipment, such as gloves and masks.

2. Handle with Care: Handle plants with care to avoid damage.

3. Keep Clean: Keep plants and equipment clean to prevent pest and disease spread.

### Transportation Precautions

1. Secure Plants: Secure plants during transportation to prevent damage.

2. Ventilation: Ensure proper ventilation during transportation.

3. Monitor Temperature: Monitor temperature during transportation to prevent stress to plants.

## LU6.4: Cost Analysis and Financial Planning

### Cost Analysis and Financial Planning

### Cost Components

1. Initial Investment: Land, infrastructure, equipment, and initial stock.

2. Operating Costs: Labor, inputs, and maintenance.

3. Marketing Costs: Advertising and promotion.

### Financial Planning

1. Budgeting: Create a budget and track expenses.

2. Cash Flow Management: Manage cash flow to ensure timely payments.

3. Return on Investment (ROI): Monitor ROI to evaluate business performance.

## LU6.5 Branding, Packaging, and Labelling.

## Branding, Packaging, and Labelling

### Branding

1. Unique Identity: Create a unique identity for your nursery.

2. Logo and Tagline: Develop a logo and tagline that reflect your brand.

3. Consistency: Ensure consistency across all marketing materials.

### Packaging

1. Protective Packaging: Use protective packaging to prevent damage during transportation.

2. Attractive Design: Use attractive design to make products stand out.

3. Information: Include information, such as plant care instructions and product details.

## Labelling

1. Clear Labelling: Use clear labelling to identify products and provide information.

2. Regulatory Compliance: Ensure compliance with regulatory requirements.

3. Brand Promotion: Use labelling to promote your brand.

## LU6.6 Sales Channels and Market Trends.

The nursery industry is booming, driven by urbanization, health trends, and technological advancements. Let’s break down the sales channels and market trends:

## Sales Channels:

- E-commerce: Online sales are growing rapidly, with a projected value of $45.3 billion by 2035, up from $14.39 billion in 2025.

- Offline Retail: Traditional nurseries and garden centers remain dominant, but e-commerce is gaining traction.

- Direct-to-Consumer: Subscription-based services and online platforms are becoming increasingly popular [1] [2] [3].

## Market Trends:

- Sustainability: Eco-friendly practices and sustainable gardening are in high demand, with 39% of gardeners considering gardening their “me time”.

- Smart Gardening: Integration of technology, such as AI and IoT, is transforming the industry.

- Indoor Gardening: Urbanization and health benefits drive demand for indoor plants and gardening solutions.

- Customization: Consumers seek unique and exotic plants, driving growth in specialty nurseries [4] [5] [6].

## Key Players:

- Major online nurseries, such as Great Garden Plants and Moon Valley Nurseries, dominate the market.

- Traditional nurseries, like Pike Nurseries and Davey Tree, adapt to changing consumer preferences [1].

These trends and sales channels offer opportunities for growth and innovation in the nursery industry

# LU6.7 Digital Tools & e-Marketing for Nurseries

## Digital Tools and e-Marketing for Nurseries

### Digital Tools

1. Website: Create a website to showcase products and services.

2. Social Media: Use social media platforms to engage with customers and promote products.

3. Email Marketing: Use email marketing to promote products and services.

4. Online Ordering System: Implement an online ordering system for customers.

### e-Marketing Strategies

1. Search Engine Optimization (SEO): Optimize website for search engines.

2. Pay-Per-Click (PPC) Advertising: Use PPC advertising to reach target audience.

3. Content Marketing: Create content to attract and engage customers.

4. Influencer Marketing: Partner with influencers to promote products.

### Benefits

1. Increased Online Presence: Increase online presence and reach more customers.

2. Improved Customer Engagement: Improve customer engagement and loyalty.

3. Increased Sales: Increase sales through online channels.

## Practical Exercises:

## Demonstration of using first aid kit.

## Awareness session regarding working in nursery.

Practical Exercises: Demonstration of Using First Aid Kit and Awareness Session

Demonstration of Using First Aid Kit

1. Identify Common Injuries: Identify common injuries in a nursery setting, such as cuts, pricks, and allergic reactions.

2. First Aid Kit Contents: Demonstrate the contents of a first aid kit, including bandages, antiseptic wipes, and pain relievers.

3. Proper Usage: Demonstrate proper usage of first aid kit items, such as applying bandages and cleaning wounds.

## Awareness Session

1. Safety Precautions: Discuss safety precautions when working in a nursery, such as wearing PPE and handling plants with care.

2. Common Hazards: Identify common hazards in a nursery, such as pests, diseases, and chemicals.

3. Emergency Procedures: Discuss emergency procedures, such as responding to accidents and fires.

### Key Takeaways

1. Importance of First Aid: Importance of having a first aid kit and knowing how to use it.

2. Safety Awareness: Safety awareness when working in a nursery.

3. Emergency Preparedness: Emergency preparedness and response.

## Lu7.1Visit to a Certified Nursery

### Objectives

1. Observe Best Practices: Observe best practices in a certified nursery.

2. Learn about Certification Process: Learn about the certification process and standards.

3. See Quality Planting Material: See quality planting material and learn about production processes.

### Things to Observe

1. Nursery Layout: Observe nursery layout, including organization and sanitation.

2. Plant Health: Observe plant health, including signs of pests, diseases, and nutrient deficiencies.

3. Staff Knowledge: Observe staff knowledge and training, including pruning and pest management techniques.

### Questions to Ask

1. Certification Process: Ask about the certification process and standards.

2. Pest Management: Ask about pest management practices, including use of chemicals and biological controls.

3. Quality Control: Ask about quality control measures, including inspection and testing.

## LU 7.2 Group Presentations/Experience Sharing

1. Share Experiences: Share experiences and lessons learned from the nursery visit.

2. Discuss Best Practices: Discuss best practices and challenges faced by group members.

3. Learn from Each Other: Learn from each other’s experiences and expertise.

### Presentation Guidelines

1. Prepare a Brief Presentation: Prepare a brief presentation (5-10 minutes) on your experience.

2. Cover Key Points: Cover key points, including what you learned, what you found impressive, and areas for improvement.

3. Use Visual Aids: Use visual aids, such as photos or slides, to support your presentation.

## Discussion Questions

1. What did you learn?: What did you learn from the nursery visit?

2. What impressed you?: What impressed you about the nursery?

3. Areas for improvement: What areas for improvement did you identify?

## M7 (a)

## Introduction to Entrepreneurship

## Introduction to Entrepreneurship

## What is Entrepreneurship?

1. Identifying Opportunities: Identifying opportunities and creating value.

2. Taking Risks: Taking calculated risks to start and grow a business.

3. Innovating Solutions: Innovating solutions to meet market needs.

## Key Characteristics

1. Innovative: Innovative mindset and approach.

2. Risk-Taker: Willingness to take calculated risks.

3. Adaptable: Ability to adapt to changing circumstances.

## Types of Entrepreneurs

1. Small Business Owner: Small business owner, focused on local market.

2. Scalable Startup: Scalable startup, focused on rapid growth.

3. Social Entrepreneur: Social entrepreneur, focused on social impact.

## Job Opportunities

- Government Agriculture Departments

- Private Nurseries and Horticulture Farms

- Agriculture Research Institutes and Universities

- NGOs and Development Projects

- Entrepreneurship and Self-Employment

- Forest and Environment Departments

• Certification and Quality Control Bodies

## Recommended Books

1. Plant Propagation: Principles and Practices: (Hudson T. Hartmann, Dale E. Kester,

Fred T. Davies, and Robert Geneve)

2. Nursery Management: Administration and Culture: ( John Mason)

3. The Plant Propagator’s Bible: A Step-by-Step Guide to Propagating Every Plant in

Your Garden: ( Miranda Smith)

4. Principles of Horticulture: (C.R. Adams, K.M. Bamford, and M.P. Early)

5. Seed Certification Standards of Pakistan

( Federal Seed Certification & Registration Department, Government of Pakistan)