



Question Distribution by Category

Category	Question Count	Percentage	Key Focus Areas
Fruit Crops	~25 questions	25%	Mango, citrus, guava, banana, papaya, litchi, jackfruit
Vegetable Crops	~15 questions	15%	Carrot, brinjal, cucumber, okra, tomato, bean varieties
Horticulture Institutes/Organizations	~8 questions	8%	Research centers, ICAR institutions, MIDH
Plant Physiology & Hormones	~12 questions	12%	Growth hormones, ripening, nutrient deficiency
Plant Propagation & Breeding	~10 questions	10%	Sexual/asexual methods, rootstocks, tissue culture
Diseases & Disorders	~8 questions	8%	Black tip of mango, buttoning, June drop, calyx splitting
Botanical/Scientific Names	~10 questions	10%	Latin names, chromosome numbers, origins
Agricultural Geography & Climate	~10 questions	10%	Regional crop production, rainfall patterns, monsoon
Ornamental & Miscellaneous	~6 questions	6%	Orchids, flowers, landscape design, turf management

Detailed Topic Breakdown

Fruit Crops (25 Questions)

Major focus areas:

- **Mango:** Black tip disease, propagation, flowering, multiploidy
- **Citrus:** Botanical names (*Citrus sinensis*), monoembryonic types, chromosome numbers
- **Tropical Fruits:** Guava, papaya, banana, litchi, jackfruit, dragon fruit
- **Morphology:** Queen of fruits (Mangosteen), maximum acreage (Banana), edible parts



Vegetable Crops (15 Questions)

- **Root vegetables:** Carrot varieties (Nantes, Pusa Kesar), beetroot, turnip, arrowroot
- **Leaf vegetables:** Knol Khol, brinjal disorders
- **Fruit vegetables:** Tomato, okra, cucumber, chilli
- **Nutritional aspects:** Folic acid, minerals, vitamins

Plant Physiology (12 Questions)

- **Hormones:** IBA (rooting hormone), Ethylene (ripening), Absciscic acid (senescence)
- **Nutrient deficiency:** Magnesium, nitrogen, sulphur yellowing
- **Ripening indicators:** Climacteric peak, respiration rate, maturity indices
- **Plant processes:** Transpiration, evaporation, condensation

Plant Propagation (10 Questions)

- **Rootstocks:** Sapota propagation (jamun, plum, tamarind, khirni)
- **Methods:** Air layering (mango, litchi, grapes), cuttings, budding
- **Sexual propagation:** Monoembryonic fruits (Acid lime, Mandarin, Pummelo)
- **Commercial crops:** Papaya, guava, litchi methods

Geographical & Regional Focus

- **Indian spice gardens:** Kerala (1 question)
- **Rubber production:** Kerala (highest producer)
- **Regional specialization:** Garden city (Bengaluru), monsoon patterns
- **Climate data analysis:** Temperature, rainfall characteristics



Key Trends & Observations

1. Practical Application Focus

- Questions emphasize real-world horticulture practices
- Specific crop varieties, propagation methods, management techniques
- Disease identification and management

2. Scientific Nomenclature

- Botanical names (e.g., *Citrus sinensis*, *Solanum lycopersicum*)
- Chromosome numbers and genetic information
- Scientific classification and terminology

3. Research Institution Knowledge

- Central Institutes (Subtropical, Potato, Vegetable Research)
- Locations of key research centers across India
- Government schemes (MIDH, Mission for Integrated Development)

4. Fruit Production Dominance

- Heavy emphasis on commercial fruit crops
- Quality indicators and maturity assessment
- Post-harvest physiology and respiration patterns



5. Regional & Environmental Context

- Indian agricultural geography (states and crops)
- Climate-crop suitability matching
- Water management and irrigation methods

6. Plant Science Fundamentals

- Basic botany (flower parts, fruit development)
- Plant hormones and their roles
- Soil science and nutrients

Recommended Preparation Strategy for Horticulture

□ **Must Focus:**

- Major fruit crops & diseases
- Vegetable cultivation & varieties
- Plant hormones & physiological processes
- Research institutes & their locations

□ **Important Topics:**

- Propagation methods & rootstocks
- Nutrient management & deficiency symptoms
- Crop-specific management practices
- Scientific names & classifications



□ **Reference Materials Needed:**

- Standard Horticulture textbooks
- ICAR publications
- Regional crop production data
- Plant physiology & biochemistry books

□ **Practice Focus:**

- Matching questions (Institute-Location pairs)
 - Identification questions (disease/disorder recognition)
 - Calculation problems (mixing ratios, calculations)
 - Botanical nomenclature and scientific terminology
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