



THE ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE EXAMINATIONS NOTICE 1982

PURSUANT to the Royal New Zealand Institute of Horticulture Act 1953, the Minister of Agriculture and Fisheries hereby gives the following notice.

NOTICE

1. Title and commencement—(1) This notice may be cited as the Royal New Zealand Institute of Horticulture Examinations Notice 1982.

(2) This notice shall come into force on the 14th day after the date of its notification in the *Gazette*.

2. Approval of scheme of examination—The Minister of Agriculture and Fisheries hereby approves—

- (a) The scheme submitted by the Examining Board of the Royal New Zealand Institute of Horticulture Incorporated, with the authority of the said Institute, for the examination of candidates for the Horticultural Sales Certificate (H.S.C.), which scheme is set out in the Schedule hereto:
- (b) The revocation by clause 8 of that scheme of the scheme for the examination of candidates for the Horticultural Salesman's Certificate [H.S.C. (N.Z.)] of the said Institute, which last-mentioned scheme is set out in the Schedule to the Royal New Zealand Institute of Horticulture Examinations Notice 1968*.

3. Revocation—The Royal New Zealand Institute of Horticulture Examinations Notice 1968* is hereby revoked.

SCHEDULE

Cl. 2

SCHEME FOR THE EXAMINATION OF CANDIDATES FOR THE HORTICULTURAL SALES CERTIFICATE (H.S.C.)

1. In this scheme, unless the context otherwise requires,—
“Horticultural requisites” includes garden tools, fertilisers, spray materials, garden furniture, and other goods commonly sold for use in horticulture, but does not include animals, birds, or fish or goods of any description used in connection with keeping animals, birds, or fish:

SCHEDULE—*continued*

- “Identification”, in relation to each of the plants, weeds, pests, and diseases which are of more or less general occurrence in New Zealand, means the assigning thereto of its correct common name or of its correct scientific name:
- “The Institute” means the Royal New Zealand Institute of Horticulture Incorporated:
- “Pesticide” shall have the same meaning as in the Pesticides Act 1979:
- “Plants” is to be interpreted in its widest sense, and includes seeds, trees, shrubs, vegetables, and flowers, both indoor and outdoor:
- “Recommendation”, in relation to a pesticide, manure, or fertiliser which is commonly sold in New Zealand, means the assigning thereto of its common name or of its scientific name, and stating the method and purpose of use and any precautions to be observed in its use.

Award of Horticultural Sales Certificate

2. The Institute, on the recommendation of the Examining Board, may issue a Horticultural Sales Certificate to a candidate who complies with all the conditions and requirements hereinafter prescribed and who passes the examinations hereinafter prescribed.

General Requirements

3. (1) The examinations shall be open to candidates who are engaged in the retail sale of horticultural plants and horticultural requisites.
- (2) Before being eligible to qualify for the Horticultural Sales Certificate, a candidate shall:
- (a) Register with the Institute:
 - (b) Satisfy the Examining Board that the candidate is competent to proceed with the examinations of the Institute.
- (3) A candidate who has not previously been engaged in horticultural retailing shall, in addition to complying with the conditions specified in clause 3 (2) (a) and (b) of this scheme, satisfy the Examining Board that the candidate has attained the standard prescribed by the Examining Board in a practical training programme for horticultural retailing approved by the Examining Board.
- (4) The Horticultural Sales Certificate may be awarded only to a candidate who has completed at least 2 years in the retail sale of horticultural plants and horticultural requisites.
- (5) The Examining Board may, in its discretion, waive compliance by a candidate with the requirements of clause 3 (3) and (4) if it is satisfied that the candidate has complied with substantially similar requirements.

Conduct of Examinations

4. (1) The examinations for the Horticultural Sales Certificate shall be held at such times and at such centres as shall be decided by the Examining Board.
- (2) A candidate shall give written notice to the Examining Board of intention to sit an examination in such manner as the Examining Board may determine not later than the 31st day of July preceding the date fixed for the conduct of the examination. Such notice shall be accompanied by payment of the prescribed fee.

SCHEDULE—*continued**Examination Fees*

5. Every candidate for any examination for the Horticultural Sales Certificate conducted by the Institute shall pay to the Institute such fee as the Board may prescribe not exceeding \$25 in respect of each Part of the examination.

General Conditions

6. (1) PART A specified in this scheme may not be taken until the candidate has completed at least one year of satisfactory experience in the retail sale of horticultural plants and horticultural requisites.

(2) PARTS B AND C of this scheme may not be taken until the candidate has completed at least 2 years of satisfactory experience in the retail sale of horticultural plants and horticultural requisites and has passed Part A.

(3) The Examining Board may, in its discretion, waive compliance by a candidate with the requirements of clause 6 (1) and (2) if it is satisfied that the candidate has complied with substantially similar requirements.

(4) To obtain a pass in PART C specified in clause 7 of this scheme a candidate must attain the standard required in all sections of the examination.

Subjects of Examination

7. The subjects of and requirements for the examination for the Horticultural Sales Certificate shall be—

PART A (Written)—Two Two-Hour Papers

The topics specified in the First Column below and in relation to that topic its practical application specified in the Second Column below and set opposite that topic. Each paper may contain questions relating to any of the topics and the practical application of that topic.

Topic	Practical Application
1. <i>Plant Studies</i> (Note: Candidates will be required to have only an elementary knowledge of botany, soils and plant nutrition and the practical application thereof to gardening and maintaining plants in retail outlets.)	
(a) Botanical Nomenclature and Classification.	
(i) Botanical classification and the binomial system.	Knowing relationships in plant breeding, budding, grafting, pollination, compatibility, and controlling pests, diseases and weeds.
(ii) Botanical and common names.	Using botanical names and confusion caused by use of common names.
(iii) Writing botanical and horticultural names.	Preparing catalogues, planting lists, signs and labels.
(iv) Common botanical terms used to describe plants and plant parts.	Describing and identifying plants.
(v) Classification according to life cycles and growth.	Sowing, planting, and selling annual biennial, and perennial seeds and plants at the right time.

SCHEDULE—*continued*

Topic	Practical Application
(b) Plant Cells.	
(i) Structure and function of plant cells.	
(ii) Vegetative cell division.	
(c) The Root.	
(i) Root function.	
(ii) Root systems; tap and fibrous roots, adventitious roots.	Modifying roots by wrenching and root pruning; damaging by cultivation and incorrect watering.
(iii) Root structure, both external and internal.	Propagating by root cuttings; spreading perennial weeds by cultivation.
(iv) Functions of root tissues.	Recognising the effects on roots of poor drainage, insufficient watering of plants in open ground, and of insufficient and excessive watering of plants in containers.
	Recognising the effects on roots of excessive fertiliser use and soluble salts.
(v) Root modifications.	Propagating by tuberous roots; selecting climbing plants.
(vi) Mycorrhiza.	Inoculating soil and seeds.
(d) The Stem.	
(i) Stem functions.	
(ii) Structure and growth of herbaceous and woody dicotyledon stems and of monocotyledon stems. Functions of stem tissues.	Propagating dicotyledons by cuttings; budding, grafting and layering. Propagating monocotyledons that have specialised stems by vegetative methods. Wound healing; ringbarking.
(iii) Stem modifications both above and below ground.	Propagating by rhizomes, runners, bulbs, corms and tubers. Selecting climbing plants.
(e) The Leaf.	
(i) Leaf shapes, arrangements and modifications.	Describing and identifying plants. Recognising possible cultural needs.
(ii) Leaf structure.	
(iii) Functions of leaf tissues. Photosynthesis and conditions affecting it—light, CO ₂ . Transpiration and conditions affecting it—temperature, humidity.	Recognising effects of poor and excess light; providing adequate light in greenhouses and display areas; ensuring an adequate supply of CO ₂ in greenhouses and display areas; propagating under mist. Determining causes of wilting; controlling heat and humidity in greenhouses, shops and other display areas.
(iv) Respiration (in all plant parts) and conditions affecting it.	Controlling respiration in plants during propagation and subsequent growth.
(f) The Flower.	
(i) Parts of the flower; flower structure and inflorescence types.	Describing and identifying plants.
(ii) Monoecious and dioecious plants. Pollination, fertilisation, cross-pollination, compatibility and incompatibility.	Pollinating fruit trees, bushes, vines and fruiting ornamentals; selecting suitable pollinators.
(iii) Hybrids and hybrid vigour.	Using F ₁ hybrids.
(iv) Botanical and popular use of term fruit.	
(v) Classification of main fruit types.	Describing and identifying plants.

SCHEDULE—*continued*

Topic	Practical Application
(g) Influence of the Environment. Environmental factors and their effect on plant growth.	Selecting plants for specific purposes (such as shelter and specimens) in particular soil and climatic conditions.
(h) Soils.	
(i) Origin and development of soils; soil texture; soil structure; characteristics of sand, silt, clay, loam and organic soils; soil pH.	Recognising suitable soils for gardens and plant growth; pH test kits.
(ii) Plant nutrition and availability of nutrients.	Using soil test kits.
(iii) Soil improvement.	Improving drainage and fertility.
(iv) Compost and other organic materials and their uses.	Making and using compost; applying mulches.
(v) Fertilisers and manures and their analysis, uses and application; lime.	Choosing and applying fertilisers and lime.
2. <i>Plant Health.</i>	
(a) Plant Growth. Causes and symptoms of poor growth in plants; pests, diseases and physiological disorders.	Recognising common causes of poor growth in plants; pests, diseases and physiological disorders.
(b) Prevention and Control. Methods of prevention and control by exclusion and by cultural and chemical means.	Controlling common pests, diseases and physiological disorders in the home garden and in retail plant outlets.
3. <i>Plants on Display.</i> The care and maintenance of plants on display.	Watering and fertilising. Maintaining suitable temperatures, humidity and light intensity in shops and other display areas. Providing shade and protection from wind and frost in outdoor display areas. Maintaining plants in a healthy attractive condition.
4. <i>Displays.</i> The arrangement and maintenance of displays.	Arranging and maintaining displays of seeds, plants and horticultural requisites. Writing directional signs and signs for plants and displays; writing labels.
5. <i>Salesmanship.</i> Personal qualities and attributes of a good salesman; characteristics and traits of customers; sales techniques.	Dealing with customers; sales techniques; handling complaints and questions; theft; cash, cheque and credit card transactions.

SCHEDULE—*continued*

PART B (Written)—Two Two-Hour Papers

The topics specified in the First Column below and in relation to that topic its practical application specified in the Second Column below and set opposite that topic. Each paper may contain questions relating to any of the topics and the practical application of that topic.

Topic	Practical Application
6. <i>Weed Control.</i> Methods of weed control; cultivation, mulching, chemicals and cultural practices.	Controlling weeds by cultivation; soil and other conditions necessary for good weed control; spreading weeds by cultivation. Mulching using suitable materials; applying mulches. Controlling weeds in lawns. Controlling mosses and lichens. Selecting herbicides for specific purposes in the home garden such as before sowing or planting, among shrubs, and on paths and waste areas. Applying herbicides.
7. <i>Pesticide Legislation.</i> Legislation covering the safe use of pesticides in the home garden and their display, sale and storage in retail outlets.	Storing, selling and using pesticides.
8. <i>Lawns.</i>	
(a) Soil and other conditions necessary for good lawns. Lawn preparation, sowing and maintenance.	Preparing seed bed; applying fertilisers; pre-sowing weed control; selecting suitable seed mixtures; sowing and treating new lawns. Maintaining established lawns; renovating old lawns.
(b) Non-grass lawns.	Preparing and selecting suitable plants and planting methods for laying non-grass lawns.
9. <i>Planting.</i> Soil and other conditions necessary for good plant growth.	Preparing sites for trees, shrubs, rose beds, flowers, vegetables and hedges. Planting and caring for bare root, balled and container grown plants, bedding plants, vegetable seedlings, herbaceous perennials, bulbs, corms and tubers until established.
10. <i>Sowing.</i> The germination process; soil and other conditions necessary for germination.	Preparing soil for sowing in gardens and seed beds; sowing; growing seedlings; thinning. Sowing in seed boxes; using suitable composts; pricking out.
11. <i>Care of House Plants.</i> Conditions and treatment necessary for good growth and health of house plants.	Potting up, re-potting, using suitable composts. Watering, controlling pests and diseases, feeding and general maintenance of house plants.
12. <i>Pruning.</i> Reasons for pruning; pruning principles.	Pruning fruit trees, bushes, and vines, roses, and commonly grown ornamental shrubs. Disbudding and stopping.

SCHEDULE—*continued*

Topic	Practical Application
13. <i>Propagation.</i> Methods suitable for home gardeners; cuttings, layering, division, budding and grafting.	Propagating common garden plants by these methods.
14. <i>Drainage.</i> Need for drainage. Drainage systems suitable for home gardens such as open drains, field tiles and perforated plastic pipes.	Digging open drains. Installing field tiles and plastic pipes.
15. <i>Garden Construction—(Using materials commonly stocked by garden centres.)</i>	
(a) Paving materials.	Laying paving slabs and bricks.
(b) Ornamental garden pools both fibreglass and polythene lined.	Installing fibreglass garden pools and constructing polythene lined garden pools.
(c) Low maintenance gardens using pebbles, bark and similar materials.	Installing low maintenance gardens.
16. <i>Hand and motorised tools and equipment used by home gardeners.</i> Characteristics and safe use of home garden tools and equipment.	Choosing and using home garden tools and equipment.
17. <i>Greenhouses and Shadehouses.</i> Greenhouses and shadehouses suitable for use by home gardeners; characteristics of covering materials.	Controlling light, temperature and humidity in greenhouses.
18. <i>Organisation and Management.</i>	
(a) Staff control and staff training.	Implementing staff control and staff training techniques.
(b) Elementary business practices.	Buying; advertising; planning; stock-taking.

PART C—ORAL AND PRACTICAL

The topics specified in the First Column below and in relation to each such topic its practical application specified in the Second Column below and set opposite that topic. Candidates may be examined on the practical application of the topics specified in PARTS A and B of this scheme and shall, in addition, be required to answer a question or questions relating to safety in the handling and use of horticultural requisites.

Topic	Practical Application
1. <i>Plant Identification Culture and Use.</i> (Specimens may include plants other than ornamentals and weeds such as fruit and shelter).	Identifying plants commonly found in home gardens in the relevant area, giving botanical and common names and the main points about their characteristics and culture such as hardiness, height and spread, flowering time, uses, soil and climatic requirements.
2. <i>Weed Identification and Control.</i>	Identifying weeds common in the relevant area, giving common names and recommendations for control.
3. <i>Pest and Disease Identification.</i>	Identifying common pests, diseases and physiological disorders, giving common names and recommendations for prevention and control.

SCHEDULE—*continued*

Topic	Practical Application
4. <i>Display Preparation.</i>	Supplying information needed to produce signs suitable for plant displays such as plant size, plant names, cultural information and sign layout. Writing and attaching plant labels. Arranging a display of plants or horticultural requisites or a display of both plants and horticultural requisites.
5. <i>Tools and Equipment.</i>	Using and caring for garden tools.
6. <i>Plant Care.</i>	Maintaining plants in retail outlets including watering, spraying, feeding.
7. <i>Salesmanship.</i>	Dealing with customers and questions frequently asked by customers; explaining and demonstrating the use of garden equipment and tools.
8. <i>Business Practices.</i>	Handling cash, cheque and credit card transactions; checking delivery dockets, invoices, statements and other business documents; stocktaking; use of telephone and other services.

Revocation

8. The scheme for the Examination of Candidates for the Horticultural Salesman's Certificate [H.S.C. (N.Z.)] of the Royal New Zealand Institute of Horticulture Incorporated, which scheme is set out in the Schedule to the Royal New Zealand Institute of Horticulture Examinations Notice 1968*, is hereby revoked.

Dated at Wellington this 10th day of May 1982.

R. L. G. TALBOT,

In the place of the Minister of Agriculture and Fisheries.

*S.R. 1968/122

EXPLANATORY NOTE

This note is not part of the notice, but is intended to indicate its general effect.

This notice gives effect to a new scheme for examination for the Horticultural Sales Certificate (H.S.C.) of the Royal New Zealand Institute of Horticulture. It replaces the scheme for examination for the Horticultural Salesman's Certificate [H.S.C. (N.Z.)] of the Institute.

Issued under the authority of the Regulations Act 1936.

Date of notification in *Gazette*: 20 May 1982.

This notice is administered in the Ministry of Agriculture and Fisheries.