



Results by Standard

2024-2025 Technical Skills Assessment Ornamental Horticulture

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Ornamental Horticulture Number tested: 54	% Correct 21-22	% Correct 22-23	% Correct 23-24	% Correct 24- 25
CONTENT STANDARD 1.0: SAFETY IN THE ORNAMENTAL HORTICULTURE INDUSTRY	62.14%	73.47%	68.23%	71.20%
Performance Standard 1.1: Safe Work Practices	62.14%	73.47%	68.23%	71.20%
1.1.1 Identify and properly use personal protection equipment.	75.00%	77.14%	73.28%	70.63%
1.1.2 Read, understand and follow label directions and SDS (safety data sheet).	62.50%	72.86%	69.83%	80.95%
1.1.3 Properly identify common hand tools and power equipment.	45.00%	64.29%	58.62%	54.76%
1.1.4 Safely use common hand tools and power equipment.	70.00%	85.71%	74.14%	85.71%
CONTENT STANDARD 2.0: PLANT ANATOMY	53.67%	53.71%	58.97%	64.13%
Performance Standard 2.1: Plant Cells	22.50%	22.86%	24.14%	26.19%
2.1.1 Label the parts of a plant cell.	22.50%	22.86%	24.14%	26.19%
Performance Standard 2.2: Root Anatomy	85.00%	82.86%	91.38%	95.24%
2.2.1 Investigate the functions of roots in plants.	85.00%	82.86%	91.38%	95.24%
Performance Standard 2.3: Stem Anatomy	40.00%	40.00%	37.07%	46.83%
2.3.1 List the functions of a stem.	40.00%	25.71%	32.76%	46.03%
2.3.2 Recognize the external structures of a stem.	40.00%	54.29%	41.38%	47.62%
Performance Standard 2.4: Leaf Anatomy	63.75%	57.86%	63.36%	69.05%
2.4.1 Name the main parts of a leaf.	77.50%	67.14%	76.72%	80.95%
2.4.3 List three functions of a leaf, including photosynthetic energy conversion.	80.00%	82.86%	79.31%	88.89%
2.4.4 Differentiate major leaf arrangements.	20.00%	14.29%	20.69%	25.40%
Performance Standard 2.5: Flower Anatomy	57.50%	60.71%	73.28%	71.03%
2.5.2 Summarize the purpose of a flower.	100.00%	94.29%	98.28%	98.41%
2.5.3 Distinguish between different types of flowers.	32.50%	44.29%	62.93%	57.94%
2.5.5 Diagram the process of plant pollination and fertilization.	65.00%	60.00%	68.97%	69.84%
Performance Standard 2.6: Fruit Anatomy	55.00%	61.43%	62.07%	80.16%

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2.6.1 Label and describe the parts of a fruit.	60.00%	54.29%	62.07%	77.78%
2.6.2 Identify and distinguish between basic types of fruits.	50.00%	68.57%	62.07%	82.54%
CONTENT STANDARD 3.0 PLANT PHYSIOLOGY	36.25%	48.57%	55.60%	52.78%
Performance Standard 3.3: Environmental Requirements for Plant Growth	36.25%	48.57%	55.60%	52.78%
3.3.1 Examine the effects of light quality on plant growth (i.e., spectrum, light measurement).	30.00%	57.14%	62.07%	60.32%
3.3.2 Examine the effects of water quality on plant growth (i.e., pH, hardness).	20.00%	34.29%	31.03%	33.33%
3.3.3 Examine the effects of temperature on plant growth.	47.50%	51.43%	64.66%	58.73%
CONTENT STANDARD 4.0: PLANT IDENTIFICATION SKILLS	56.67%	58.10%	72.13%	68.78%
Performance Standard 4.1: Categorize Plants	56.67%	58.10%	72.13%	68.78%
4.1.3 Correctly categorize common plants by life cycle (i.e., annuals, perennials, etc.).	75.00%	62.86%	70.69%	80.95%
4.1.4 Correctly categorize plants by growth habits (i.e., mounding, trailing, etc.).	67.50%	67.14%	72.41%	73.81%
4.1.5 Utilize resources to establish plant suitability for a selected site (i.e., Hardiness Zone Maps, Heat Zone Maps).	40.00%	41.43%	73.28%	55.56%
4.1.6 Identify common plants by botanical and common names.	50.00%	68.57%	70.69%	73.02%
CONTENT STANDARD 5.0: GROWING MEDIA	38.57%	49.80%	63.79%	59.18%
Performance Standard 5.1: Soil Texture and Structure	48.75%	55.00%	69.40%	61.51%
5.1.2 Describe the concept of soil texture and its importance.	40.00%	44.76%	65.52%	55.03%
5.1.3 Classify the texture of a soil sample.	75.00%	85.71%	81.03%	80.95%
Performance Standard 5.2: Soilless Growing Media	40.00%	42.86%	41.38%	57.14%
5.2.1 Identify the components and source of soilless growing media.	40.00%	42.86%	41.38%	57.14%
Performance Standard 5.3: Chemical Characteristics of Growing Media	17.50%	42.86%	63.79%	55.56%
5.3.2 Interpret pH test results of a growing media sample.	35.00%	51.43%	72.41%	68.25%
5.3.5 Interpret soil test results and make recommendation accordingly.	0.00%	34.29%	55.17%	42.86%
CONTENT STANDARD 6.0: PLANT NUTRITION	42.50%	43.71%	51.03%	51.75%
Performance Standards 6.1:Fertilizer Formulation	44.38%	47.50%	54.74%	54.17%
6.1.1 Differentiate between macronutrients and micronutrients.	20.00%	22.86%	34.48%	36.51%
6.1.2 Measure pH and describe how it is modified.	25.00%	31.43%	39.66%	41.27%
6.1.4 Interpret a fertilizer label.	48.33%	55.24%	58.62%	58.73%
6.1.6 Evaluate application methods to ornamental crops.	55.00%	53.33%	62.64%	59.79%
Performance Standards 6.2: Plant Nutrients	35.00%	28.57%	36.21%	42.06%
6.2.1 Correlate plant symptoms to the appropriate nutritional deficiency.	35.00%	31.43%	34.48%	33.33%
6.2.2 Correlate plant symptoms to the appropriate plant toxicity.	35.00%	25.71%	37.93%	50.79%

Assessment: Ornamental Horticulture	% Correct	% Correct	% Correct	% Correct 24-
Number tested: 54	21-22	22-23	23-24	25
CONTENT STANDARD 7.0: INTEGRATED PEST MANAGEMENT (IPM)	61.52%	68.20%	70.54%	77.64%
Performance Standard 7.1: Integrated Pest Management	81.67%	81.90%	78.74%	87.30%
7.1.1 Define Integrated Pest Management (IPM).	81.67%	81.90%	78.74%	87.30%
Performance Standard 7.2: Common Pests and Diseases	52.50%	58.93%	65.73%	71.03%
7.2.1 Identify types of plant pests and diseases.	63.33%	66.67%	78.16%	75.13%
7.2.2 Identify weed, insect, rodent, and fungi pests.	30.00%	31.43%	39.66%	57.14%
7.2.3 Differentiate between infectious and noninfectious diseases.	70.00%	80.00%	79.31%	81.75%
7.2.4 Identify abiotic plant injuries.	30.00%	48.57%	53.45%	65.08%
Performance Standard 7.3: Safe Handling, Use, and Storage of Pesticides	62.50%	70.95%	71.70%	79.63%
7.3.1 Identify and utilize appropriate safety measures when applying pesticides.	47.50%	57.14%	59.48%	75.40%
7.3.2 Interpret pesticide labels.	75.00%	85.71%	85.63%	93.12%
7.3.3 Explain procedures for storing and disposing of pesticides.	77.50%	85.71%	72.41%	85.71%
7.3.4 Evaluate environmental and consumer concerns regarding pest management and biodiversity.	35.00%	40.00%	50.00%	49.21%
7.3.5 Demonstrate how to mix pesticides according to label directions.	65.00%	88.57%	82.76%	88.89%
7.3.6 Calibrate common application equipment and calculate application rate.	62.50%	61.43%	69.83%	65.87%
7.3.7 Explore requirements for obtaining pesticide applicator licenses.	50.00%	57.14%	67.24%	84.13%
CONTENT STANDARD 8.0: PLANT PROPAGATION	65.00%	70.00%	75.86%	71.43%
Performance Standard 8.1: Sexual Propagation of Ornamental Plants	65.00%	70.00%	75.86%	71.43%
8.1.3 Identify the conditions needed for seed germination.	60.00%	62.86%	75.86%	66.67%
8.1.4 Compare the methods of seed preparation.	70.00%	77.14%	75.86%	76.19%
CONTENT STANDARD 9.0: ORNAMENTAL HORTICULTURE CROPS	56.00%	66.67%	65.06%	66.46%
Performance Standard 9.1: Crop Production	80.00%	88.57%	93.10%	87.30%
9.1.1 Plan a growing schedule to maximize the production of a growing facility.	80.00%	88.57%	93.10%	87.30%
Performance Standard 9.2: Growth Maintenance Procedures	54.29%	63.27%	63.30%	61.68%
9.2.2 Pinch plants using best management practices.	85.00%	88.57%	86.21%	85.71%
9.2.3 Examine proper pruning techniques.	27.50%	47.14%	34.48%	26.98%
9.2.4 Demonstrate proper watering techniques.	60.00%	65.00%	71.98%	73.02%
Performance Standard 9.3: Transplanting	53.00%	67.43%	62.07%	68.25%
9.3.1 Identify the proper stage of plant growth for transplanting.	30.00%	54.29%	65.52%	69.84%
9.3.2 Select appropriate plants for transplanting.	80.00%	60.00%	53.45%	74.60%
9.3.3 Demonstrate transplanting procedures to industry standards.	51.67%	74.29%	63.79%	65.61%
Performance Standard 9.4: Production Standards	57.50%	65.71%	64.66%	68.25%
9.4.1 Compare hardening processes	50.00%	57.14%	56.90%	60.32%

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9.4.2 Prepare plants for sale using best management practices.	65.00%	74.29%	72.41%	76.19%
CONTENT STANDARD 10.0:BUSINESS CONCEPTS	32.50%	51.43%	53.45%	57.94%
Performance Standard 10.2:Principles of Sales	32.50%	51.43%	53.45%	57.94%
10.2.3 Complete a sales ticket.	55.00%	71.43%	63.79%	76.19%
10.2.5 Determine cost of sales.	10.00%	31.43%	43.10%	39.68%
1 CONTENT STANDARD 11.0: PLANT TECHNOLOGIES	0.00%	2.86%	29.31%	31.75%
Performance Standard 11.2: Genetic Engineering of Plants	0.00%	2.86%	29.31%	31.75%
11.2.2 Identify transgenic plants on the market.	0.00%	2.86%	29.31%	31.75%
1CONTENT STANDARD 12.0: ORNAMENTAL DESIGN STANDARDS	57.50%	63.57%	66.81%	61.90%
Performance Standards 12.1:Principles and Elements of Design	57.50%	63.57%	66.81%	61.90%
12.1.1 Compare and contrast balance using symmetry, asymmetry, and massing.	75.00%	75.71%	80.17%	74.60%
12.1.3 Determine appropriate proportion and scale in a design.	40.00%	51.43%	53.45%	49.21%
1CONTENT STANDARD 13.0: CAREER OPPORTUNITIES IN ORNAMENTAL HORTICULTURE	76.67%	81.90%	72.99%	80.95%
Performance Standard 13.1: Careers in Ornamental Horticulture	76.67%	81.90%	72.99%	80.95%
13.1.1 Research potential careers in ornamental horticulture and plant science.	76.67%	81.90%	72.99%	80.95%
1CONTENT STANDARD 14.0: LEADERSHIP TRAINING THROUGH AGRICULTURAL EDUCATION	90.00%	82.86%	72.41%	82.54%
Performance Standard 14.1: Effective Leadership and Leadership Training	90.00%	82.86%	72.41%	82.54%
14.1.2 Participate in a career development event at the local level or above.	90.00%	82.86%	72.41%	82.54%