

# **ASSESSMENT GUIDELINES**

## **Unit 22179**

Maintain a hydroponic system

---

Level 3, Credit 5, version 1

# Maintain a hydroponic system

## Unit standard 22179

Level 3, Credit 5, Version 1

### Level of performance required for this unit standard

This is a level 3 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under general supervision, with some independence; with significant responsibility for the standard of the outcome achieved.
- To apply technical skills and knowledge to complete the task to the specified standard, in a familiar context.
- To interpret available information, and use discretion and judgment.

### Workplace assessment:

For guidelines on Workplace Assessment, please refer to the NZHITO Workplace Assessors Manual, and for further information, please contact: NZHITO, P O Box 8638, Christchurch. Ph 03 9644 735, fax 03 9644 737, website [www.hortito.org.nz](http://www.hortito.org.nz)

### Special notes:

1. *Workplace procedures* refer to verbal or written instructions to staff on procedures for the worksite and equipment.
2. Legislation relevant to this unit standard includes but is not limited to the Health and Safety in Employment Act 1992.
3. The *hydroponic system* may include plants grown in a nutrient film technique system or grown in an inorganic substrate (pumice, sawdust, perlite/vermiculite or rockwool). The *irrigation system* can be either a run to waste or circulatory operation.

**Unit 22179: Maintain a hydroponic system  
(Apprentice copy)**

<b>ELEMENT</b>	<b>Competent</b>	<b>Range of evidence an assessor should consider</b>
<b>Element 1</b> Maintain a hydroponic system.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Make routine daily checks of the hydroponic system in accordance with workplace procedures. Range: may include but not limited to – equipment monitoring, pipes, nutrient levels and temperatures, flow rate.</li> <li>▪ Measure, dissolve and add nutrients to maintain the desired concentrations to meet crop needs in accordance with workplace procedures.</li> <li>▪ Adjust flow rates to maintain consistency with crop needs.</li> <li>▪ Discard old nutrient solutions and start new batches of nutrient solutions in accordance with workplace procedures.</li> <li>▪ Describe techniques to minimize plant damage in the event of pump failure.</li> <li>▪ Record daily data for a three month period. Range: may include but not limited to – air temperature, nutrient concentrations, nutrient levels, routine maintenance.</li> </ul>
<b>Element 2</b> Maintain plants in a hydroponic system.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Establish young plants in a hydroponic system in accordance with workplace procedures.</li> <li>▪ Monitor the root development of plants in a hydroponic system in accordance with workplace procedures.</li> <li>▪ Identify plants that are diseased or unhealthy.</li> <li>▪ Identify and monitor blockages from root growth.</li> </ul>

\_\_\_\_\_ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 22179. (version 1)

**Signed (Assessor):** \_\_\_\_\_

WPA Registration Number: \_\_\_\_\_ Date: \_\_\_\_\_

**Unit 22179: Maintain a hydroponic system  
(Assessor copy)**

<b>ELEMENT</b>	<b>Competent</b>	<b>Range of evidence an assessor should consider</b>
<b>Element 1</b> Maintain a hydroponic system.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Make routine daily checks of the hydroponic system in accordance with workplace procedures. Range: may include but not limited to – equipment monitoring, pipes, nutrient levels and temperatures, flow rate.</li> <li>▪ Measure, dissolve and add nutrients to maintain the desired concentrations to meet crop needs in accordance with workplace procedures.</li> <li>▪ Adjust flow rates to maintain consistency with crop needs.</li> <li>▪ Discard old nutrient solutions and start new batches of nutrient solutions in accordance with workplace procedures.</li> <li>▪ Describe techniques to minimize plant damage in the event of pump failure.</li> <li>▪ Record daily data for a three month period. Range: may include but not limited to – air temperature, nutrient concentrations, nutrient levels, routine maintenance.</li> </ul>
<b>Element 2</b> Maintain plants in a hydroponic system.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Establish young plants in a hydroponic system in accordance with workplace procedures.</li> <li>▪ Monitor the root development of plants in a hydroponic system in accordance with workplace procedures.</li> <li>▪ Identify plants that are diseased or unhealthy.</li> <li>▪ Identify and monitor blockages from root growth.</li> </ul>

\_\_\_\_\_ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 22179. (version 1)

**Signed (Assessor):** \_\_\_\_\_

WPA Registration Number: \_\_\_\_\_ Date: \_\_\_\_\_

Please send this page to your NZHITO Regional Manager, who will forward it to National Office to register the credits on your NZQA Record of Learning.

## **Unit 22179: Maintain a hydroponic system**

---

*(Name of Apprentice)*

**is Competent in Unit Standard 22179.** (version 1)

**Signed (Assessor):**

---

WPA Registration Number: \_\_\_\_\_

Date: \_\_\_\_\_