

# **ASSESSMENT GUIDELINES**

## **Unit 22190**

Operate an irrigation system used in  
horticulture

---

Level 4, Credit 10, version 1

# Operate an irrigation system used in horticulture

## Unit standard 22190

Level 4, Credit 10, Version 1

### Level of performance required for this unit standard

This is a level 4 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under broad guidance, independently; with complete responsibility for the standards of the outcome achieved.
- To apply technical skills, knowledge, and innovation to complete the task to the specified standard, in a variety of familiar and unfamiliar contexts.
- To analyse and interpret information, and make an informed 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 and the Resource Management Act 1991.

**Unit 22190: Operate an irrigation system used in horticulture  
(Apprentice copy)**

<b>ELEMENT</b>	<b>Competent</b>	<b>Range of evidence an assessor should consider</b>
<p><b>Element 1</b> Plan and monitor a water budget. Range: use one or more of the following – evapotranspiration readings, local meteorological instruments, tensiometers.</p>	<p><b>Yes/No</b></p>	<ul style="list-style-type: none"> <li>▪ Determine the watering holding capacity of a soil, in terms of irrigation requirements for crop selected.</li> <li>▪ Determine crop use of water for a horticulture crop; keep records on a daily basis in accordance with workplace procedures.</li> <li>▪ Record on a daily basis readings or instrumentations in accordance with workplace procedures.</li> <li>▪ Calculate a water budget plan and identify when to begin irrigating and how much water to apply in accordance with workplace procedures.</li> <li>▪ Record plant growth and soil water content on a daily basis for a period of three consecutive months and monitor in accordance with workplace procedures.</li> </ul>
<p><b>Element 2</b> Operate an irrigation system in a commercial horticulture business.</p>	<p><b>Yes/No</b></p>	<ul style="list-style-type: none"> <li>▪ Maintain irrigation equipment and complete pre-season maintenance in accordance with workplace procedures.</li> <li>▪ Monitor and alter irrigation applications according to water budget/plant requirements.</li> <li>▪ Record irrigation application rates and maintenance in a daily diary for three consecutive months. Range: may include but are not limited to – volume of water irrigated, water budget data, crop growth, crop health, maintenance, fertigation, water leaks, crop nutrient deficiencies, blocked emitters.</li> </ul>

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

is **Competent / Not yet competent** in Unit Standard 22190. (version 1)

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

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

**Unit 22190: Operate an irrigation system used in horticulture  
(Assessor copy)**

<b>ELEMENT</b>	<b>Competent</b>	<b>Range of evidence an assessor should consider</b>
<p><b>Element 1</b> Plan and monitor a water budget. Range: use one or more of the following – evapotranspiration readings, local meteorological instruments, tensiometers.</p>	<p><b>Yes/No</b></p>	<ul style="list-style-type: none"> <li>▪ Determine the watering holding capacity of a soil, in terms of irrigation requirements for crop selected.</li> <li>▪ Determine crop use of water for a horticulture crop; keep records on a daily basis in accordance with workplace procedures.</li> <li>▪ Record on a daily basis readings or instrumentations in accordance with workplace procedures.</li> <li>▪ Calculate a water budget plan and identify when to begin irrigating and how much water to apply in accordance with workplace procedures.</li> <li>▪ Record plant growth and soil water content on a daily basis for a period of three consecutive months and monitor in accordance with workplace procedures.</li> </ul>
<p><b>Element 2</b> Operate an irrigation system in a commercial horticulture business.</p>	<p><b>Yes/No</b></p>	<ul style="list-style-type: none"> <li>▪ Maintain irrigation equipment and complete pre-season maintenance in accordance with workplace procedures.</li> <li>▪ Monitor and alter irrigation applications according to water budget/plant requirements.</li> <li>▪ Record irrigation application rates and maintenance in a daily diary for three consecutive months. Range: may include but are not limited to – volume of water irrigated, water budget data, crop growth, crop health, maintenance, fertigation, water leaks, crop nutrient deficiencies, blocked emitters.</li> </ul>

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

is **Competent / Not yet competent** in Unit Standard 22190. (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 22190: Operate an irrigation system used in horticulture**

---

*(Name of Apprentice)*

**is Competent in Unit Standard 22190. (version 1)**

**Signed (Assessor):**

---

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

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