

**SKILLS FRAMEWORK FOR LANDSCAPE  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE**

<b>TSC Category</b>	Horticulture					
<b>TSC</b>	Horticultural Chemical Usage					
<b>TSC Description</b>	Manage the safe use of chemicals and biological agents for horticultural works					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
	<b>LNS-GNM-1011-1.1</b>	<b>LNS-GNM-2011-1.1</b>	<b>LNS-GNM-3011-1.1</b>	<b>LNS-GNM-4011-1.1</b>		
	Assist in the use of chemicals under supervision for horticultural works	Handle and use chemicals for horticultural works in adherence with personal and environmental safety standards	Supervise the handling, transportation and usage of chemicals on site for horticultural works	Drive safe chemical usage practices for horticultural works		
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Types of chemicals used in horticultural works</li> <li>Types of application equipment and tools used with chemicals</li> <li>Standard Operating Procedures (SOPs) for handling chemicals</li> <li>Types of application modes for commonly used chemicals</li> <li>Symptoms of chemical exposure</li> <li>Personal Protective Equipment (PPE) used while handling chemicals</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Types of chemicals used in horticultural works</li> <li>Types of application equipment and tools used with chemicals</li> <li>Safe handling practices and guidelines for different classes of chemicals</li> <li>Types of application modes for commonly used chemicals</li> <li>Absorption methods of pesticides</li> <li>Hazards and risks associated with handling chemicals used in horticulture works</li> <li>Environmental impact of chemical usage</li> <li>Personal Protective Equipment (PPE) used while handling chemicals</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Types of chemicals used in horticultural works</li> <li>Interpretation of instructions for handling and transporting chemicals</li> <li>Hazards and risks associated with handling and transporting chemicals used in horticulture works</li> <li>Actions to be taken to control chemical spills and contaminations</li> <li>Calibration and application methods of different chemicals for use with various plant species</li> <li>Procedures to use application equipment and tools used with chemicals</li> <li>Waste management standards and practices for hazardous chemicals</li> <li>Environmental impact of chemical usage</li> <li>Personal Protective Equipment (PPE) used while handling chemicals</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Types of biological agents, chemicals and their mode of action</li> <li>Best practices in safe handling and usage of chemicals</li> <li>Current and upcoming tools, technologies and techniques for handling and use of chemicals</li> <li>Calibration and application methods of different chemicals for use with various plant species</li> <li>Mitigation of environmental impact of chemical usage</li> <li>Hazardous chemicals and waste management standards</li> <li>Legislative compliance requirements pertaining to chemical usage in a horticultural context</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>		

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<p><b>Abilities</b></p>	<ul style="list-style-type: none"> <li>Wear appropriate PPE before commencing handling of chemicals</li> <li>Assist in site preparation for the usage of chemicals</li> <li>Select appropriate tools and equipment for the application of chemicals as instructed by supervisor</li> <li>Assist in the application of chemicals as instructed by the supervisor</li> <li>Assist in the cleaning of tools and equipment, and general housekeeping for area where chemicals are used</li> <li>Report incidents of contamination, spillage or exposure to the supervisor</li> </ul>	<ul style="list-style-type: none"> <li>Wear appropriate PPE before commencing handling of chemicals</li> <li>Prepare site for application of chemicals by erecting appropriate barriers and signage to segregate site</li> <li>Select appropriate tools and equipment for the preparation of chemicals for application</li> <li>Assist in the preparation of chemicals for application as instructed</li> <li>Recognise conditions suitable for the application of chemicals</li> <li>Apply chemicals using manual or mechanised methods as instructed</li> <li>Perform cleaning of tools and equipment, and general housekeeping for area where chemicals are used</li> <li>Assist in the handling of contamination or spill of chemicals in a safe manner</li> <li>Check for symptoms of potential chemical exposure on a person</li> </ul>	<ul style="list-style-type: none"> <li>Use appropriate PPE when transporting and handling chemicals</li> <li>Select appropriate methods for storing chemicals on site</li> <li>Mix chemicals in accordance with established instructions and guidelines</li> <li>Calibrate application equipment in accordance with horticultural requirements to ensure appropriate amounts of chemicals are used</li> <li>Supervise the application of chemicals in accordance with established safety standards</li> <li>Prepare for risk control measures in the event of a leaks or spillages</li> <li>Dispose excess chemicals in accordance with established standards</li> <li>Report cases of contamination, spill or other incidents</li> <li>Manage incidents of chemical exposure</li> </ul>	<ul style="list-style-type: none"> <li>Communicate the role of common chemicals and biological agents in an integrated plant health management programme</li> <li>Establish guidelines for the safe handling, transportation and usage of chemicals in horticultural works</li> <li>Prescribe the required chemicals and/or biological agents for a range of common pests and diseases</li> <li>Establish procedures for the storage, handling and application of chemicals and biological agents in alignment with relevant WSH guidelines</li> <li>Establish procedures for risk management in the event of a chemical spill, leakage or personal exposure</li> <li>Enforce practices for safe disposal of chemicals and associated waste</li> <li>Manage contingency situations in a responsive manner</li> </ul>		
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