

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

<b>TSC Category</b>	Horticulture					
<b>TSC</b>	Soil and Media Assessment and Remediation					
<b>TSC Description</b>	Identify, test and improve soil and media quality to meet planting requirements					
<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-1017-1.1</b>	<b>LNS-GNM-2017-1.1</b>	<b>LNS-GNM-3017-1.1</b>	<b>LNS-GNM-4017-1.1</b>		
	Perform soil and media assessment and amelioration according to instructions provided	Execute sampling, testing and remediation of soil and/or growing media to meet growth requirements of plants	Plan and execute the amelioration of soil and/or growing media in alignment with the growth requirements of specific plants	Manage comprehensive testing and amelioration of soil and/or media to produce optimal growing conditions for plants to be grown		
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Visual characteristics of different types of soil and media</li> <li>Suitability of different types of soil and media for growth of specific plants</li> <li>Tools used in extraction of soil and media samples</li> <li>Components used in potting media</li> <li>Tilling and forking methods to prepare in-field soil</li> <li>Application techniques for additives to improve soils and media</li> <li>Methods for disposal of horticultural waste and debris</li> <li>Personal Protective Equipment (PPE) required for working with soil and media</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Visual characteristics of different types of soil and media</li> <li>Procedures for soil and media extraction and sample collection</li> <li>Tools and equipment used in soil and media extraction and testing</li> <li>Soil aeration methods</li> <li>Application techniques for chemicals and additives to improve soil and media</li> <li>Procedures and guidelines to mix various components to create potting media with required characteristics</li> <li>Personal Protective Equipment (PPE) required for working with soil and media</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Physical characteristics, properties and nutritional requirements of different kinds of soil and media</li> <li>Soil and media sampling techniques, testing methods and organisational procedures</li> <li>Methods to ameliorate nutritional deficiency, toxicity problems and soil structure</li> <li>Methods to apply chemicals and other additives to soil</li> <li>Manipulation of components to modify soil and media properties</li> <li>Personal Protective Equipment (PPE) required for working with soil and media</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Physical and chemical characteristics of different types of soil and media</li> <li>Soil testing methods and objectives</li> <li>Natural elements, phenomena and other factors impacting soil characteristics</li> <li>Benefits of natural and artificial additives to soil and/or media for plant growth</li> <li>Principles of soil and media production and management</li> <li>Soil maintenance and management plans</li> <li>Manipulation of components to modify soil and media properties</li> <li>Relevant workplace safety and health (WSH) guidelines</li> </ul>		
<b>Abilities</b>	<ul style="list-style-type: none"> <li>Prepare soil in containers or beds for amelioration</li> <li>Perform forking to aerate soil and remove compaction</li> </ul>	<ul style="list-style-type: none"> <li>Prepare tools and equipment for soil sample collection and basic testing</li> <li>Extract soil samples using pre-determined</li> </ul>	<ul style="list-style-type: none"> <li>Guide sample collection and in-field testing of soil</li> <li>Interpret soil testing results to determine characteristics of the soil</li> <li>Implement soil and/or media management plan</li> </ul>	<ul style="list-style-type: none"> <li>Manage extraction of soil sample for testing</li> <li>Oversee in-field testing of soil</li> <li>Liaise with professional testing bodies for comprehensive soil</li> </ul>		

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	<ul style="list-style-type: none"> <li>• Apply chemicals and/or other additives for soil and media amelioration as instructed</li> <li>• Dispose debris and horticultural waste left after soil amelioration activities</li> <li>• Adhere to relevant WSH practices and guidelines while working with soil or media</li> </ul>	<p>methods according to sampling plans</p> <ul style="list-style-type: none"> <li>• Identify soil types and profiles using simple tests</li> <li>• Aerate soil with the use of mechanisation</li> <li>• Prepare soil and media using prescribed mixing proportions for various components</li> <li>• Perform soil amelioration by adding of chemicals, mulches and/or any other additives as prescribed</li> <li>• Adhere to relevant WSH practices and guidelines while working with soil or media</li> </ul>	<p>for a site or for growing specific plant species</p> <ul style="list-style-type: none"> <li>• Develop plans to maintain soil and/or media quality</li> <li>• Monitor soil and/or media production, management and amelioration activities</li> <li>• Record all soil and media amelioration activities for compliance and reporting</li> <li>• Lead adherence to relevant WSH standards in soil or media production</li> </ul>	<p>testing by providing necessary soil samples and information</p> <ul style="list-style-type: none"> <li>• Interpret analysis of soil or media testing to determine nutrient deficiencies and/or toxicity</li> <li>• Lead in-house research and experimentation to determine appropriate additives and/or media composition to promote optimal growth of specific plant species</li> <li>• Determine soil and/or media preparation requirements for different plant species</li> <li>• Determine amelioration requirements and ameliorant properties based on soil or media testing and plant requirements</li> <li>• Develop plans for tracking and monitoring soil and/or media properties</li> <li>• Enforce adherence to relevant WSH standards in soil or media production</li> </ul>		
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