

**Specification of Competency Standards**  
**for the Arboriculture & Horticulture Industry**  
**Unit of Competency**

Functional Area - Diagnosis and Treatment of Pests and Diseases

Title	Develop work plans for biological and integrated control of pests and diseases
Code	109132L6
Range	This unit of competency is applicable to managers or technical personnel who engaged in biological and integrated control of pests and diseases in the arboriculture and horticulture industry. Practitioners should be capable of mastering the methods for controlling pests and diseases using biological and integrated approaches. They should also be able to develop corresponding work plans for biological and integrated control of pests and diseases through field investigations and analysis of the health of plants.
Level	6
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge related to developing work plans for biological and integrated control of pests and diseases</p> <ul style="list-style-type: none"> <li>• Comprehend the types, characteristics, causes, infection cycles and modes of transmission of common pests and diseases of plants</li> <li>• Comprehend the characteristics, measures to be taken and impact on the environment of various pest and disease control methods</li> <li>• Comprehend the management strategies and established cycles of the integrated control of pests and diseases</li> <li>• Comprehend the species, properties and health conditions of the target plants</li> <li>• Comprehend the types and characteristics of pathogens, and the corresponding control methods</li> <li>• Possess knowledge of plant pathology, entomology and toxicology</li> <li>• Familiarise with the use of the equipment and tools related to pest and disease control operations</li> <li>• Comprehend the government legislation and regulations related to pest and disease control operations</li> </ul> <p>2. Develop work plans for biological and integrated control of pests and diseases</p> <ul style="list-style-type: none"> <li>• Conduct site visits to inspect the health conditions of the target plants</li> <li>• Identify the symptoms and signs of the target plants, as well as the types of pathogens</li> <li>• Analyse the collected environmental information and pest samples</li> <li>• Consider the effectiveness of different control methods and their impact on the environment</li> <li>• Choose a series of suitable physical, chemical and biological control methods</li> <li>• Develop management strategies and work cycles for the work plans of the integrated control operations</li> <li>• Develop the workflow, guidelines and safety codes for the integrated control operations</li> <li>• Set the work schedules, work objectives and quality objectives of work processes for the integrated control operations</li> <li>• Plan corresponding manpower and resource allocation with regard to the area the control operations cover, the number of plants affected by pests and diseases, and the amount of pathogens</li> <li>• Develop monitoring and assessment mechanisms for the projects to ensure the work quality</li> </ul> <p>3. Exhibit professionalism</p>

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	<ul style="list-style-type: none"><li>• Keep abreast of the latest technical knowledge and management modes of integrated pest and disease management</li></ul>
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"><li>• Able to identify the symptoms and signs of the target plants as well as the types of pathogens, so as to select a series of suitable control methods;</li><li>• Able to develop management strategies and work cycles for the work plans of the integrated control operations in accordance with the analysis results and the characteristics of different control methods; and</li><li>• Able to develop monitoring and assessment mechanisms for the projects to ensure that the work progress and quality meet the contract requirements.</li></ul>
Remark	