

Apply Fertilizers to Ornamental Plants and Landscapes

Assessment Guide

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CANDIDATE DETAILS

Candidate Name: _____	
Contact Details:	Physical Address: _____
Identity Number _____	
Tel: _____	Email: _____
Assessor Name: _____	
Tel: _____	Email: _____
Moderator Name: _____	
Tel: _____	Email: _____
Physical Address: _____	

Tel: _____	

Declaration:

I, _____ (assessor) hereby declare that the information contained in the attached documentation is, to my knowledge, correct and valid.

Candidate

signature

Date

Assessor

signature

Date

Moderator

signature

Date

UNIT STANDARD

TITLE

Apply Fertilizers to Ornamental Plants and Landscapes

UNIT STANDARD NUMBER:	119695
UNIT STANDARD LEVEL:	NQF 1
CREDITS:	3
FIELD:	Agriculture and Nature Conservation
SUB FIELD:	Horticulture
ISSUE DATE:	2006-02-09
REVIEW DATE:	2009-02-09

PURPOSE OF THE UNIT STANDARD

This standard is aimed at people who work in or intend to work within the Horticulture industry in general and as applied in a specific environment.

Those learners who acquire the outcomes of this standard will be able to:

- Understand the role that fertilizers play in providing health and growth in plants.
- Distribute fertilizers to trees and shrubs manually.
- Operate a fertilizer distributor to apply fertilizer to lawn areas.
- Utilise fertilizing practices for the maintenance of planted containers and landscapes.

The qualifying learner is able to:

- Recognise the various types of fertilizers that are utilised in plant production and landscapes and the benefits to the plants.
- Demonstrate an understanding of the role of the 3 macro elements in synthetic general fertilizers.
- Describe how the life span of the macro elements are affected when introduced to the soil.
- Apply fertilizer to various horticultural and landscape situations.
- Clean and care of fertilizer applicators and storage of unused fertilizers.

LEARNING ASSUMED TO BE IN PLACE

Demonstrate knowledge of communication and numeracy at Abet level 3.

Specific Outcomes and Assessment Criteria:**Specific Outcome 1**

Recognise the various types of fertilizers that are utilized in plant production and landscapes and the benefits to the plants.

Outcome Range:

- Inorganic i.e. synthetic – granular, liquid, high concentrate, can burn plants if not well watered.
- Organic i.e. sived compost – liquid seaweed extract, liquid compost extract, balanced feed.

Assessment Criteria

1. Explain the benefits that fertilizers provide in plant growth.
2. Describe the two fertilizer mediums.
3. Explain the advantages and disadvantages of each fertilizer medium.

Specific Outcome 2

Demonstrate an understanding of the role of the 4 macro elements in synthetic general fertilizers.

Outcome Range:

- Nitrogen – photosynthesis, green, speed of growth.
- Phosphorous – roots, resistance to disease.
- Potassium – cellular growth and structure.
- Percentage – ratios of NPK on packaging.

Assessment Criteria

1. Describe the role that nitrogen plays in plant growth.
2. Describe the role that phosphorous plays in plant growth.
3. Describe the role that potassium plays in plant growth.
4. Explain the percentage content of macro elements, as listed on fertilizer packaging..

Specific Outcome 3

Describe how the life span of the macro elements is affected when introduced to the soil.

Outcome Range:

- Season, rain, sun, soil dampness, soil temperature, deficiencies, base dressing, top dressing.

Assessment Criteria

1. Explain the necessity of renewing nutrients in the soil.
2. Describe the ideal conditions for the application of fertilizers.
3. Describe the use of fertilizers for base dressing and top dressing.

Specific Outcome 4

Apply fertilizer to various horticultural and landscape situations.

Outcome Range:

- Hand scattering – flower beds, trees and shrubs.
- Walk behind spreader – turf grass areas.
- Measures – plant bags and containers.
- Liquid – plant propagation, foliar feeding, spray tank, watering can, no leaf burn.

Assessment Criteria

1. Demonstrate the precise application of small quantities of fertilizer to plant bags and containers.
2. Demonstrate the broadcasting of fertilizer to small grassed areas by hand.
3. Demonstrate the application of fertilizer to grassed areas using a fertilizer distributor.
4. Demonstrate the application of fertilizer to trees, shrubs and herbaceous plants.
5. Explain the two methods by which liquid fertilizer can be applied to plants and the advantages of these methods.

Specific Outcome 5

Clean and care of fertiliser applicators and storage of unused equipment.

Outcome Range:

- Fertilizer store, keep dry and secure, retain original packaging.
- Store on pallets, keep different types apart, do not mix different types together.
- Corrosive properties of fertilizers – wash and dry, distributors, spray equipment, watering cans.

Assessment Criteria

1. Explain the reasons for cleaning the fertilizer application equipment.
2. Demonstrate the procedures for the cleaning, drying and storage of fertilizer application equipment.
3. Describe the essential elements of maintaining a fertilizer store.
4. Explain why different types of fertilizer should not be mixed or stored together.
5. Explain why fertilizers should be stored in their original packaging.
6. Demonstrate the procedures for the packing of fertilizers.

Unit Standard Accreditation and Moderation Options

1. Internal moderation.
2. External moderation.
3. Moderation of assessment will be overseen by the relevant ETQA, according to the moderation guidelines in the relevant qualification the agreed ETQA procedures.
4. Internal assessment.
5. External assessment with the relevant registered/accredited industry body/ETQA.
6. An Assessor accredited by the relevant ETQA, will assess the Learner's competency.
7. Formative and summative assessment of qualifying Learners against this unit standard should be in alignment with the requirements of the NSB.
8. Practical assessment activities will be used that are appropriate to the contents in which the qualifying Learners are working.
9. Assessment will include self and peer assessment, practical and oral assessment, observations, questions and answers, etc.
10. Direct observation is required in simulated or actual work conditions.
11. Reporting skills are demonstrated by effective communication, using verbal and/or writing skills.
12. Assessments are to be structured to include formative and summative component, as well as the submission of a Portfolio of Evidence.
13. The assessment should ensure that all the specific outcomes, critical cross-field outcomes and embedded knowledge are assessed.
14. Specific outcomes must be assessed in their own right, through oral and practical evidence and cannot be assessed by observation only.
15. Essential embedded knowledge must be assessed in their own right, through oral and practical evidence and cannot be assessed by observation only.
16. Special outcomes and essential embedded knowledge must be assessed in relation to each other.
17. If qualifying Learners are able to explain the essential embedded knowledge, but are unable to perform the specific outcomes, then they should not be assessed as competent.
18. If qualifying Learners are able to perform specific outcomes, but are unable to explain the essential embedded knowledge, they should not be assessed as competent.
19. Evidence of the specified critical cross-field outcomes should be found, both in performance and in essential embedded knowledge.
20. All assessment activities must be fair, so that all Learners have equal opportunities. Activities must be free of gender, ethnic or other bias.
21. This unit standard can be assessed together with any other relevant registered unit standard.

Embedded Knowledge

Embedded knowledge is reflected within the assessment criteria of each specific outcome and must be assessed in its own right, through oral and written evidence. Observation cannot be the only assessment.

Developmental Outcomes

1. Reflecting on and exploring a variety of strategies to learn more effectively.
2. Participating as responsible citizens in the life of local, national and global communities.
3. Being culturally and aesthetically sensitive across a range of social contexts.
4. Exploring education and career opportunities.
5. Developing entrepreneurial opportunities.

Critical Cross Field Outcomes

- Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made – specific outcomes 1, 2, 3, 4 and 5.
- Work effectively with others as a member of a team, group, organisation or community. Specific outcome embedded in the learning for this level of learner.
- Organise and manage oneself and one's activities responsibly and effectively. Specific outcome 4 and 5.
- Collect, analyse, organise and critically evaluate information. Specific outcome 1, 2, 3, 4 and 5.
- Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation. Specific outcome embedded in the learning for this level of learner.
- Use science and technology effectively and critically, showing responsibility toward the environment and health of others. Specific outcome 1, 2, 3, 4 and 5.
- Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation. Specific outcome 1, 2, 3 and 4.

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ASSESSMENT STRATEGY

UNIT STANDARD TITLE	Apply fertilizers to ornamental plants and landscapes	UNIT STANDARD NUMBERS	119695
LEVEL	NQF Level 1	TOTAL CREDIT VALUE	3
TARGET GROUP	<p>This standard is aimed at people who work in or intend to work within the Horticulture industry in general and as applied in a specific environment.</p> <p>Those learners who acquire the outcomes of this standard will be able to show an understanding of the role of fertilizer and manually apply fertilizer.</p> <p>The qualifying learner is able to:</p> <ul style="list-style-type: none"> ▪ Recognise the various types of fertilizers that are utilized in plant production and landscapes and the benefits to the plants. ▪ Demonstrate an understanding of the role of the 3 macro elements in synthetic general fertilizers. ▪ Describe how the life span of the macro elements is affected when introduced to the soil. ▪ Apply fertilizer to various horticultural and landscape situations. ▪ Clean and care of fertilizer applicators and storage of unused fertilizers. 		

Context of Assessment	The Purpose of the Assessment
	<p>Range Addressed</p> <ul style="list-style-type: none"> • <p>The range covered, refers to all the specific outcomes and assessment criteria as outlined by the unit standard.</p> <p>Candidates produce evidence that he/she can understand the role of fertilizers and apply fertilizer manually.</p>

	Assessment Approach
	<p>Assessment is focused on the applied competence of the learner and the relevant unit standard determines the assessment criteria.</p> <p>Summative Assessment This is a summative assessment and assesses Candidates taking part in the National Certificate in Ornamental Horticulture Learnership at NQF Level 1.</p> <p>RPL This assessment may also be used to assess Candidates for RPL purposes</p> <p>Diagnostic The results from this assessment can also be used for the purpose of Gap Fill training and will assist in the development of the Workplace Skills Plan.</p> <p>Rating Learners are rated "Competent" or "Not Yet Competent".</p>

Assessment Instruments	
Types of Evidence	Assessment Method
Direct	Observation of manual application of fertilizer. Questioning by means of an oral or written test to determine foundational and reflective competence.
Assessment Conditions	
<p>The collection of evidence for the purposes of this assessment will take place in either the candidate’s natural work environment or in the classroom. The candidate will be expected to demonstrate an understanding of the role of fertilizers and apply fertilizers manually as stipulated by the Unit Standards specific outcomes, range statements and assessment criteria.</p>	

	Assessment Team
	<p>The assessment team consists of the following:</p> <ul style="list-style-type: none">▪ Evidence Collection Facilitator▪ Assessor▪ Internal Moderator (20% of all portfolios are moderated)▪ External Moderator (20% of portfolios are moderated)
	Special Assessment Needs

	<p>Special needs are dealt with in the Assessment Preparation Interview. Should the candidate present any special needs requests, the assessment will be adjusted, provided that the fairness, validity and reliability of the assessment are not compromised.</p> <p>In addition the knowledge test may be administered as an oral interview or as a written test depending on the confidence and language levels of the candidates.</p>
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ASSESSMENT PROCESS

The Steps:	How:
Prepare for the Assessment	<p>1. Review this assessment guide to:</p> <ul style="list-style-type: none"> ▪ Ensure that you understand all the requirements of the assessment in terms of evidence required to prove competence. ▪ Validate the assessment instruments against the candidate's context. ▪ Ensure that you have familiarised yourself with all the policies and procedures referred to in the assessment guide. <p>2. Identify and prepare the candidate for the assessment by:</p> <ul style="list-style-type: none"> ▪ Conducting the <i>“Assessment Preparation Interview, Sheet”</i> where all the details regarding the assessment are discussed and agreed to by all parties. <p>OR</p> <ul style="list-style-type: none"> ▪ Provide the candidate with a letter detailing all the specifications covered in the <i>“Assessment Preparation Interview Sheet.”</i>
Conduct Assessment	<p>1. Review the assessment plan with the candidate.</p> <p>2. Collect the evidence in accordance with the instrument requirements.</p> <p>Please note that the checklist covers the following:</p> <p><u>Observation</u> This assessment covers specific outcome 4 and 5 and their related range statements and assessment criteria.</p> <p><u>Knowledge Questioning</u> This assessment covers all the foundational competence as outlined by the specific outcomes, range statements and assessment criteria in the unit standard and may be conducted as a written or oral test.</p> <p>Gather, record and make judgments on all the evidence.</p>

The Steps:	How:
<p>Make assessment Decision</p>	<ol style="list-style-type: none"> 1. Make assessment decision and discuss the results with the learner in a face-to-face interview. 2. Ensure that your feedback is developmental and supportive in nature. 3. Advise the candidate on what action to follow in the event of a “Not-Yet-Competent”. 4. Advise the candidate on what action to take where he/she feels the need to appeal your decision. 5. Allow the candidate time to provide you with feedback relevant to the process. 6. Ensure the candidate counter-signs the “Assessment Decision” to indicate his/her agreement to the feedback and overall score. 7. Record the candidate’s feedback in this guide and ensure that it is provided to the person responsible for the quality assurance of assessment tools. 8. Handle any disputes and identify matter that requires contingency planning.
<p>Review the Assessment Process</p>	<p>Complete the “Assessment Review” documents and submit to the assessment co-ordinator.</p>

<p>Assessor Signature</p>		<p>Date</p>	
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ASSESSMENT CONFIRMATION

Dear : _____

(Candidate Name & Surname)

This serves as a confirmation that your “**Assessment Preparation Interview**” will be conducted on the _____ (date) at _____ (venue).

We will discuss:

- The purpose of the assessment.
- The date, time and venue of your assessment.
- The context of the NQF.
- And select the Unit Standard against which you will be assessed.
- The credit value, level, of the unit standard against which you will be assessed.
- The assessment procedure.
- The assessment methods to be used in your assessment.
- How the evidence will be collected.
- What evidence you are required to present on the day, whether direct, historical or indirect.
- Your special requirements, whether medical or personal, that will affect the assessment procedure.
- And agree to feedback procedures.
- The moderation process.
- Appeals procedure.
- Agree to and sign the assessment plan.

Please do not hesitate to contact me should you have any further queries.

Thank you

Assessor Signature	_____	Date	_____
Candidate Signature	_____	Date	_____

**ASSESSMENT PREPARATION INTERVIEW
SHEET**

	√	X	Contingency
<p>_____, your assessment will be conducted at(time) on the(day) of(month) 200...(year) at(venue).</p> <ul style="list-style-type: none"> <i>(Allow the candidate to provide alternative dates, times or venues, where feasible.)</i> 			
<p>I will briefly explain the context of the NQF to you, to ensure that you understand the reasons for the assessment being conducted in this manner.</p>			
<p>You will be assessed against Unit Standard No: Apply fertilizers to ornamental plants and landscapes.</p> <p>@ NQF Level :1</p>			
<p>The Unit Standard is worth 3 credits <i>(Where the assessment is not based on an NQF Standard, please explain to the candidate that this field will not be completed.)</i></p>			
<p>In order to determine your competence levels, we will be conducting the assessment using various methods:</p> <p>You will be required to produce the following evidence in order to demonstrate your competence:</p> <ul style="list-style-type: none"> <i>(Explain the evidence requirements in terms of the assessment criteria.)</i> <i>(Explain what documentary evidence the candidate should produce on the day of the assessment, i.e. historical evidence, indirect evidence.)</i> <p><u>Observation</u> This covers specific outcome 4 and 5 in the unit standard and its related range statements and assessment criteria but excludes the knowledge questions.</p> <p><u>Knowledge Questionnaire</u> This covers all the specific outcomes, range statement and assessment criteria as outlined by the unit standard.</p>			

	√	X	Contingency
<p>Please provide us with details regarding any special needs you may have.</p> <ul style="list-style-type: none"> <i>(Explain to the candidate that these special needs may be of a medical or personal nature, e.g. requiring an interpreter, making provision for guide dogs, etc.)</i> <i>(Explain to the candidate that these needs will be catered for, within the parameters of assessment validity, fairness, and reliability.)</i> 			
<p>You will be provided with detailed feedback regarding your performance on(date) by means of (explain methods, i.e. written, interview.)</p> <ul style="list-style-type: none"> <i>(Explain how and when feedback will be provided – indicate to the candidate, at which intervals feedback will be provided, using the assessment instrument.)</i> <i>(Explain the Moderation Process.)</i> 			
<p>In the event that you are rated “Not-Yet-Competent”, you will be entitled to one (1) re-assessment opportunity.</p> <ul style="list-style-type: none"> <i>(Explain the re-assessment procedure in terms of remedial coaching, etc.)</i> 			
<p>You are entitled to lodge an appeal should you not be in agreement with the assessor’s decision.</p> <ul style="list-style-type: none"> <i>(Explain the appeals procedure to the candidate...see appeals procedure attached.)</i> 			
<p>Your assessment results will be forwarded to the following departments:</p> <ul style="list-style-type: none"> <i>(Advise candidate of rights in terms of confidentiality agreements.)</i> <i>(Advise candidate of storage procedures.)</i> 			
<p>You will be afforded an opportunity to provide the assessor with feedback regarding the assessment procedure, to assist us in improving our assessment practices.</p> <ul style="list-style-type: none"> <i>(Advise candidate that the Assessor Review Document should be returned, together with the signed Assessment Decision Form (this is where you would acknowledge feedback provided by the Assessor))</i> 			

Candidate’s declaration of understanding

I herewith declare that I am ready for the assessment and that we have reviewed the assessment plan. I understand the assessment process and am happy that the assessment will be conducted in a fair manner.

Assessor Signature _____ • Date _____
 Candidate Signature _____ Date _____

COMPETENCE JUDGEMENT

OVERALL COMPETENCE RECORD

Candidate		Assessor	
Venue		Date	
Unit Standard	Apply fertilizer to ornamental plants and landscapes.		

Evidence evaluation	Relevant	Valid	Authentic	Consistent	Current	Sufficient
Observation Checklist						
Knowledge Questionnaire Checklist						

EVIDENCE SUMMARY

TYPES OF EVIDENCE	ASSESSMENT METHODS	FEEDBACK	REQUIREMENTS MET	
			YES	NO
DIRECT	OBSERVATION			
	KNOWLEDGE QUESTIONNAIRE			

ADDITIONAL FEEDBACK FROM ASSESSOR

ASSESSMENT DECISION

The candidate has submitted evidence that is valid, relevant, current, sufficient and authentic against the listed specific outcomes and covered all range statements. (Yes/No)	
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The candidate is competent in all the assessment criteria listed. (Yes/No)	
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The candidate is not yet competent in the following criteria:	The following items needed some corrective action or improvement:

RE-ASSESSMENT DECISION

The candidate has submitted additional evidence that was required. The evidence is valid, relevant, sufficient and authentic against the listed specific outcomes and covered all range statements. (Yes/No)	
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The candidate is competent in all the assessment criteria listed. (Yes/No)	
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Assessor's name, surname and signature	Date

Declaration by candidate
I,declare that I am satisfied that the feedback given to me by the Assessor was relevant, sufficient and done in a constructive manner. I accept the assessment decisions and have no further questions relating to this particular assessment process.

Candidate	Date	Assessor	Date	Moderator	Date
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APPEALS APPLICATION

Candidate		Application Date	
Assessor		Assessment Date	
Assessment Venue			

Unit Standard against which you were assessed	Apply fertilizers to ornamental plants and landscapes		
	Number - 119694	NQF Level 1	Credits 3

What was the purpose of the assessment?	
Explain how you were assessed?	
List the reasons why you disagree with the assessment decisions.	
Which one of the following options could resolve the matter?	<input type="checkbox"/> <i>Another Assessor</i> <input type="checkbox"/> <i>Different Assessment Instrument</i> <input type="checkbox"/> <i>Different Assessment Method</i> <input type="checkbox"/> <i>Different Venue for Assessment</i> <input type="checkbox"/> <i>Different Time</i>
List any special needs you may have.	

Candidate signature _____ Date _____

Moderator signature _____ Date _____

ASSESSMENT REVIEW

Candidate		Assessor	
Venue		Review date	
Unit standard	Apply fertilizers to ornamental plants and landscapes.		
Review Dimension	ASSESSOR	CANDIDATE	ACTION
The principles/criteria for good assessment were achieved.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The assessment related to the registered unit standard.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The assessment was practicable.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The assessment instruments were fair, clear and understandable.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The assessment judgements were made against set requirements.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The venue and equipment were functional.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
Special needs were identified and assessment plan was adjusted.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
Feedback was constructive against the evidence required.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
An opportunity to appeals was given.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
The evidence was recorded.	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	<input type="checkbox"/> Agree <input type="checkbox"/> Disagree	
CANDIDATES DECLARATION OF UNDERSTANDING			
I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid			
_____	_____	_____	_____
Candidate	Date	Assessor	Date
		Moderator	Date