

ASSESSMENT GUIDE

FOR

ASSESSORS & FACILITATORS

Enterprise Selection, Planning and Establishment

Level 4

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Title:		Evaluate, Adjust and Implement Factors Influencing Agricultural Enterprises Implement Integrated Farm Layout and Site Selection					
Applied Title:		Evaluate, Adjust and Implement Factors Influencing Agricultural (Citrus) Enterprises Implement Integrated Farm Layout and Site Selection					
Field:		Agriculture and Nature Conservation					
Sub-Field:		Primary Agriculture					
SETA (SGB):		AgriSETA					
Skills Area:		Enterprise Selection and Planning					
Context:		Citrus Production					
US No:	116293 116309	Level:	4	Credits:	3 3	Notional Hours:	30 30
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Based on the Production Guidelines of:



Supported by:



Unit standard alignment and assessment tool development:

Cabeton Training and Development

Project coordinator:

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Directions

Please Note: There is a separate assessment guide for the learner. The learner must use this guide to prepare himself / herself for the assessment.

This assessment guide contains all necessary activities and instructions that will enable the assessor and learner to gather evidence of the learner's competence as required by the unit standard. This guide was designed to be used by a trained and accredited assessor who is registered to assess this specific unit standard as per the requirements of the AgriSETA ETQA.

Prior to the delivery of the program the facilitator and assessor must familiarise themselves with content of this guide, as well as the content of the assessment guide for learners.

The assessor, facilitator and learner must plan the assessment process together, in order to offer the learner the maximum support, and the opportunity to reflect competence.

The policies and procedures that are applicable during the execution of this assessment are available on the website of the Citrus Academy, contained in a document named Policies and Procedures for Assessment, and must be strictly adhered to. The assessor must familiarise himself with this document before proceeding.

This guide provides step-by-step instructions for the assessment process of:

US No:	116293 & 116309	Level:	4	Credits:	3+3 (6)
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The step-by-step instructions agree and are conducted in concert with the steps described in the learner assessment guide. The steps are as follows:

Step	Description	Timeframe
1	Learner Assessment Contract	Before delivery of program
2	Learner Declaration of Authenticity	Before delivery of program
3	Diagnostic Assessment of Learning Assumed to be in Place	Before delivery of program
4	Assessment Plan for Gathering of Evidence	Before delivery of program
5	Learner Formative Assessment Activities	During delivery of program, assessment after delivery of program
6	Learner Summative Assessment	After delivery of program
7	Integrated Summative Assessment Tool	After delivery of program
8	Re-assessment Procedures	After completion of assessment
9	Documentation	After completion of assessment
10	Administration and Completion of Portfolio of Evidence	After completion of assessment

Step 1

Pre-Assessment Briefing and Checklist

A pre-assessment briefing for learners is held before the delivery of the program. Use the checklist below to ensure that all these points are addressed and discussed with the learners.

Pre-Assessment Briefing Checklist		
	√	X
Organise resources – people, equipment, venue, etc.		
Explain the purpose of the assessment		
Discuss the standards or criteria to be used		
Discuss assessment roles and accountabilities		
Decide on assessment venues		
Negotiate evidence required, and where or how this evidence may be gathered		
Explain the methods of assessment that will be used during the gathering and summing up of evidence		
Negotiate the date of submission for the activity workbook and the date for the summative assessment		
Discuss resources required for the assessment e.g. equipment, materials, etc.		
Explain the procedure if the learner is found to be not yet competent		
Explain the appeal and review procedures		
Identify any potential learning barriers and negotiate strategies to overcome these		
Complete and sign the assessment plan with the learner		

The learner and assessors must sign the **Learner Contract** in the learner assessment guide.

Step 2

Learner Declaration of Authenticity

The learner is requested to complete and sign the Declaration of Authenticity in the learner assessment guide. This should be checked and co-signed by the assessor.

The format is as reflected in the learner assessment guide.



Step 3

Diagnostic Assessment of Learning Assumed to be in Place

In the learner assessment guide, the learner is asked to indicate whether they have completed the learning assumed to be in place as prescribed by the unit standard.

The assessor must guide the learners through this step, explaining in detail the content of the mentioned learning areas, because names of learning programs do not always agree with the names of the unit standards, and learners might indicate the incorrect information.

If learners indicate that they have not yet completed the mentioned unit standards, the assessor should prescribe an action plan to allow the learner to obtain the skills required by recommending additional training, competence portfolios, or the relevant RPL assessment for the given unit standards.

The format is as reflected in the assessment guide for learners. Please read it and familiarise yourself with its content.



Step 4

Assessment Plan for Gathering of Evidence

A pro-forma assessment plan for this unit standard has been drafted in the learner assessment guide. Explain the plan to the learner and complete the dates and signatures as indicated.

The format for the assessment plan is as reflected in the assessment guide for learners. Please read it and familiarise yourself with its content. Make a note of the dates agreed upon in the table provided below.

Learner and Assessor Assessment Plan		
Unit Standard	Evaluate, adjust and implement factors influencing agricultural enterprises. Implement integrated farm layout and site selection	
Registration Number	116293 and 116309	
<i>Step</i>	<i>Description</i>	<i>Completion / Submission Date</i>
Step 5	Learner Formative Assessment Activities	
Step 6	Summative Assessment	
Step 7	Integrated Summative Assessment	
Step 8	Re-Assessment Procedures	
Step 9	Documentation	
Step 10	Administration and Completion of Portfolio of Evidence	

Step 5

Learner Formative Assessment Activities

The learner assessment guide contains comprehensive activities and worksheets that the learner must complete during the delivery of the learning program. It is imperative that these activities be completed as part of the learning process in order to give the learner the opportunity to develop the skills, knowledge and attitudes that are required for competence.

Learners must complete all the activities in the workbook.

Learners must be encouraged to take control of their learning by indicating areas in the workbook where they experience difficulty.

The learner hands in the learner assessment guide to the assessor or the facilitator, only if the facilitator is a subject matter expert, for the assessment of the formative assessment activities. The assessment of these activities must be done according to the prescribed benchmarks and according to the following marking matrix.

The learner should not move on to the next step before this step has been completed and learners show sufficient capacity and readiness for summative assessment. If problems areas are identified, the learner should be guided with a developmental action plan, which is documented separately and signed by the learner, the facilitator and the assessor.

Model answers are provided below.

Activity 1 – Workplace Research		
Compile a database for the farm where you work of the suppliers and service providers that supply goods and services related to the external and internal infrastructure of the farm.		
No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.		
Name	Location	Goods / Services Supplied

Activity 2 – Worksheet
Answer the questions below in your own words.
Why is it important for a farm to have information about the soil, climate, slope, water quality, etc.?
Availability, quality and sustainability of natural resources determine the viability and sustainability of a farming enterprise.
How does this type of information assist in decision-making and planning for the layout and development of the farm?
This information directly impacts on cultivar selection and production practices that are employed, including aspects such as soil preparation, infrastructure design (roads, irrigation, etc.), orchard layout, and ongoing production tasks.

Activity 3 – Interview an Expert

Interview an expert and find answers to the following questions:

No model answer provided due to workplace variation. Observe all requirements, assess reasonability.

What has the farm recently learnt through soil and / or water analysis?

How did the farm respond to the results of the soil and / or water analysis?

What does the farm learn from weather forecasts?

Give an example of a response to a weather forecast that recently occurred on the farm.

Details of Interviewee

Name and surname:

Date of interview:

Signature of interviewee:

Activity 4 – Research and Report

Conduct research to find answers to the questions below.

What are production records?

Production information must include the following:

- **Use of personnel for all production processes like irrigation, spraying, pruning and harvesting**
- **Use and maintenance of machinery and equipment records**
- **Correct application of production chemicals**
- **Use of irrigation water records**
- **Crop statistics per cultivar per orchard**
- **Crop estimates including external and internal quality as well a fruit size**
- **Expected time of harvesting**

Why are production records kept?

The management and control of the production process through a well organised monitoring process, is basic to good farm management. The information systems within the production department form the basis of the broader management information systems, providing management with the necessary details to make meaningful decisions to manage, adjust and improve the enterprise.

What can be learnt from comparing the last 5 years' production records against the current year's production record?

- **Number of workers employed in production tasks, productivity, skills needs**
- **Sufficiency of machinery and equipment, effectiveness of maintenance plans, need for replacement of machinery / equipment, turnaround time for repairs**
- **Changes in agrochemical usage, effectiveness of fertilisation / fertigation / plant protection / weed control / chemical plant manipulation, compliance with MRLs**
- **Effectiveness of irrigation scheduling, water usage, changes in water quality, changes in rainfall, effectiveness of reaction to weather changes**
- **Changes in yield, variations in orchard and cultivar yield**
- **Changes in yield, fruit size, and internal and external quality**
- **Changes in harvest time**

If there has been a decrease in yield of 35% this year compared to last year, where will you start investigating to find out what the problem?

Compared detailed records of:

- **Use of personnel for all production processes like irrigation, spraying, pruning and harvesting**
- **Correct application of production chemicals**
- **Use of irrigation water records**
- **Crop estimates including external and internal quality as well a fruit size**
- **Weather conditions**
- **Emergencies and other unusual occurrences**

Gather further information by interrogating farm workers, supervisors and management

If you found that the 35% decrease in yield is due to a negligent farm worker who caused the outbreak of a fire and some of the orchards either burnt down or the fruit was too badly scorched to harvest, what would you recommend the farm does in future to increase the yield again?

- **Address worker awareness of fire dangers through training**
- **Address management and supervisor awareness of fire danger posed by excess vegetation in or around orchards**
- **Revisit weed control and fire break procedures to ensure sufficient protection against fire**
- **Revisit standard operating procedures for emergencies to ensure faster response**

When do you think you will have recovered from this 35% yield decrease?

Dependent on cultivar and severity of damage: where damage was only to the fruit, recovery should be in next season, if trees were damaged, recovery may take up to three years, depending on damage, and may even require replacement or top-working of trees

Activity 5 – Worksheet

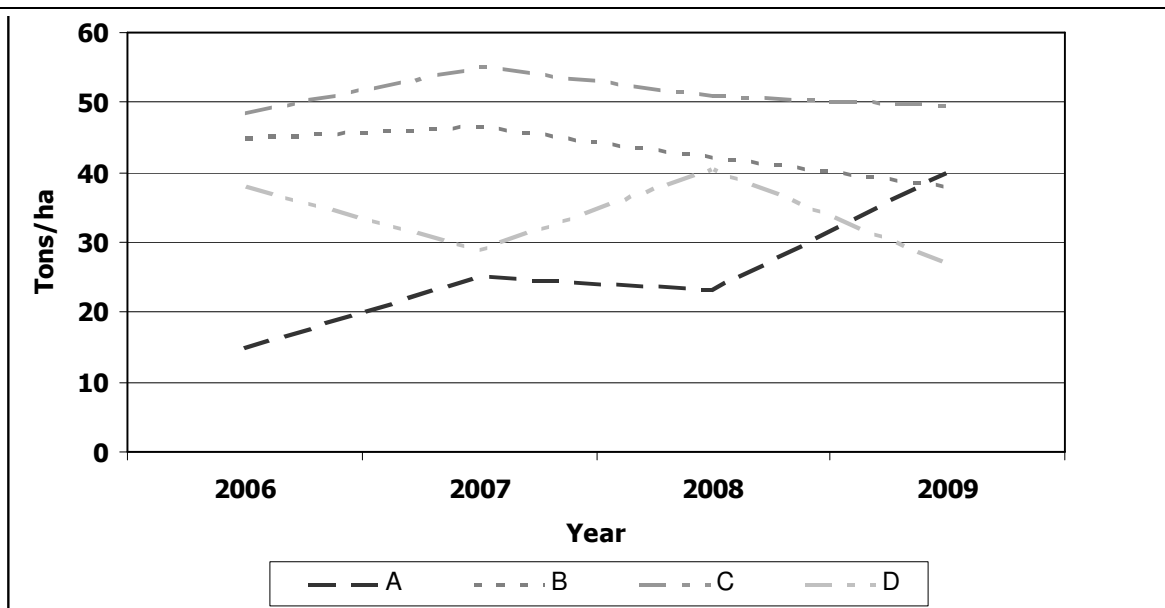
Draw graphs to represent the following information as reported by a farm after analysing their production records.

Orchard	Size	2006 Yield (tons/ha)	2007 Yield (tons/ha)	2008 Yield (tons/ha)	2009 Yield (tons/ha)
A	10ha	15	25	23	40
B	8ha	45	46.5	42	38
C	12ha	48.5	55	51	49.5
D	4ha	38	29	40.5	27

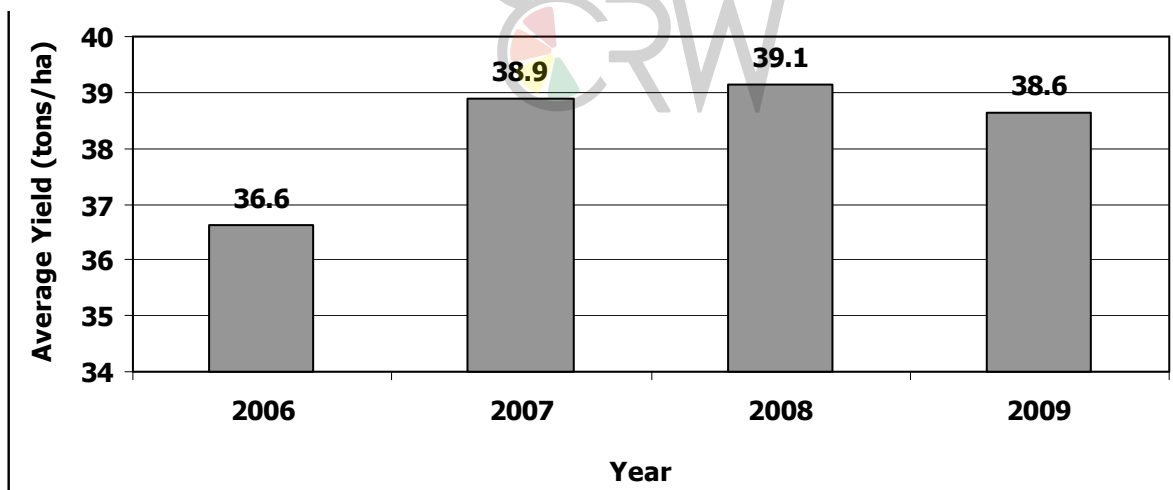
Draw graphs showing:

- Yield comparison (in tons per hectare) per orchard, over four years
- Comparison of average yield (in tons per hectare) over four years
- Proportion per orchard of total tonnage harvested for 2009 (remember to calculate total tonnage harvested in each orchard by multiplying yield per hectare with orchard size)

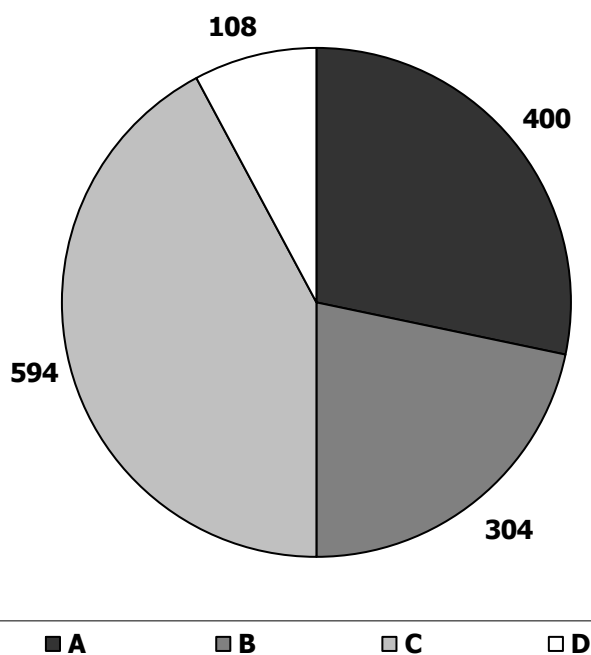
The type of graph used is not prescriptive, but choice must be suitable to type of information and required outcome.



Orchard	Size	2006 Yield (tons/ha)	2007 Yield (tons/ha)	2008 Yield (tons/ha)	2009 Yield (tons/ha)
A	10ha	15	25	23	40
B	8ha	45	46.5	42	38
C	12ha	48.5	55	51	49.5
D	4ha	38	29	40.5	27
Average Yield		36.6	38.9	39.1	38.6



Orchard	Size	2009 Yield (tons/ha)	2009 Total
A	10ha	40	400
B	8ha	38	304
C	12ha	49.5	594
D	4ha	27	108



Activity 6 – Case Study

Read the case study below and complete the assignment.

A citrus farm produced 500 tons of navel oranges, 1,000 tons of Minneola, and 2,500 tons of lemons according to their production records for last year. To date everything has been packed by the local packhouse for export to Europe. The farm's export agent reports that the European market has indicated that it will not be purchasing any more Minneola from next year. The export agent has been negotiating with an Asian supermarket chain, specifically interested in importing navel oranges, but the export agent cannot supply enough to this chain. At this stage the export agent has a total of 9,000 tons of navel oranges to supply to this supermarket, but they want a guarantee that 11,500 tons can be supplied.

Make recommendations to (a) the citrus farm and (b) the packhouse that the farm uses regarding adjusting their production plans based on this information.

Farm:

- **Investigate other market opportunities for Minneola, look at Southern African and worldwide sales and production statistics over last 10 years, identify possible niche markets**
- **As more drastic but possibly unavoidable option: replant Minneola orchard with navel oranges of cultivar that is attractive to Asia and that will grow well with available natural resources**
- **Consider top-working the orchard to bring it into production faster – will depend on existing rootstock, age of plants, root health, etc., obtain expert opinion**
- **Investigate market standards and requirements for specific Asian market, interrogate viability of adjusting production practices, assess cost of new accreditations if required**

Packhouse:

- **Investigate market standards and requirements for specific Asian market, with reference to postharvest treatments, packing requirements, etc.**
- **Investigate capacity for packing more navel oranges, advise farm on possible necessity of planting later / earlier variety if additional seasonal capacity is not available or if season should be spread**

Activity 7 – Workplace Research

Obtain a map of the farm where your work. Answer the questions below by indicating it on the map or by making notes.

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Which areas of the farm are in use for what type of agriculture?
Why are orchards laid out the way that they are (i.e. the row direction; row length etc.)?
Which orchards have the highest yield? Why?
Which orchards have the lowest yield? Why?
Which are the most vulnerable areas in terms of soil erosion?
What is being done to protect these areas from erosion?
Are there other things that can be done to protect these areas against erosion?
Where does the farm source its water from?
Is there a potential suitable place where a water catchment area such as a dam can be developed?
Are there areas that are not used for agriculture? If so, why? If there are any, what type of agriculture would be most suited to these areas?
Are there areas with sensitive natural fauna and flora that needs to be protected on the farm? If so, what is being done to protect theses species?

Activity 8 – Workplace Report

Report on your workplace experience by answering the following questions:

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Give an example of an infrastructure fault that was recently reported.
Who was it reported to?
What happened once the fault was reported?

What records were kept in terms of this fault reporting and the actions that followed?

Activity 8 – Workplace Report

Report on your workplace experience by answering the following questions:

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Give an example of an infrastructure fault that was recently reported.

Who was it reported to?

What happened once the fault was reported?

What records were kept in terms of this fault reporting and the actions that followed?

Activity 9 – Presentation

Choose an infrastructure problem frequently or recently encountered on the farm where you work. Prepare a presentation to your group or to the class, covering the points below. Attach a copy of your presentation to your workbook.

- What goes wrong with this infrastructure?
- What is required for this to work optimally and give fewer problems?
- What tasks should a farm worker perform to inspect and maintain this infrastructure so that fewer problems occur?
- Evaluate the infrastructure of the farm where you work, and indicate where the infrastructure should be changed in the future.
- Evaluate the infrastructure of the farm where you work, and indicate which regulations/legislations govern changes to the infrastructure.

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Activity 10 – Case Study

Read the case study below and answer the questions that follow:

Erosion has caused a serious problem near one of the dams on a farm, threatening the collapse of the dam wall. You are in charge of addressing this problem and averting disaster.

What must be done to solve the immediate problem and to prevent it from recurring?

Immediate:

- **Move earth from other parts of farm that is less vulnerable to erosion to dam wall**
- **Compact soil well, grade as per requirement**

Recurrence:

- **Investigate causes of erosion**
- **Employ suitable erosion control measures, possibly bunds, gabions, and groundcover.**

Which tools and equipment will be needed to do this work?

Possibly earthmoving machinery, grader, spade, shovel, wire, stones, planting equipment

Activity 11 – Case Study and Workplace Research

Read the case study below and answer the questions that follow:

A new orchard of Eureka lemons must be planted this year. The orchard will be located on a southern slope and will be 5.5 ha in size, and planted at a planting distance of 6x3m.

Make a list of the stock, tools and equipment that will be needed to plant this orchard. Investigate the stores on your farm and determine what tools, equipment and stocks are already available and what are still required.

Tool / Equipment / Stock Item	Available	Required
- Nursery trees (555 per hectare, total 3,053 trees) - Stem covers - Agrochemicals for soil amelioration at preparation - Irrigation equipment (sub-mother lines, valves, poly-pipe, emitters) - Soil preparation machinery (ripper, shear plough, ridging machinery) - Orchard layout equipment (theodolite / dumpy level / markers) - Planting equipment (spade, planting board)	As per context	

Activity 12 – Workplace Report

Choose a specific orchard or cultivar on your farm and conduct research on the harvesting practices for this orchard or cultivar. Write a report covering the following aspects:

- Give step-by-step harvesting procedures, based on best practices and including health and hygiene principles.
- Explain what the consequences are of not following these procedures.
- Report on whether these procedures are being followed on your farm at the moment.
- Make recommendations for improving the current harvesting practices on your farm.

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Activity 13 – Workplace Report (continued)

Use the same orchard or cultivar that you used in the previous activity. Write a report covering the following aspects:

- Give step-by-step postharvest procedures, based on best practices and including health and hygiene principles.
- Explain what the consequences are of not following these procedures.
- Report on whether these procedures are being followed in the packhouse your farm uses.
- Make recommendations for improving the current postharvest practices in this packhouse.
- Explain how you will know if the postharvest procedures are implemented well enough to ensure the optimal quality of the crop.

No model answer provided due to workplace variation. Observe all requirements, assess reasonability and completeness.

Marking Matrix and Assessor Report for Formative Assessment Activities
Formative Evidence Collection Summary for Unit Standard 116293 – Level 4

	<i>Action Required from Learner to Develop Competence</i>	<i>Competence Assessments</i>	<i>Standard for Activity</i>	<i>Allocation of Marks</i>	<i>Feedback to Learner and Comments on Evidence</i>
<i>Specific Outcome 1: Evaluate and adjust production processes for sustainable management of required natural resources</i> <i>Range:</i> Natural resources include soil, water, climate, vegetation and topography	Attend classroom lesson, participate and ask questions	Activities in learner activity book were completed correctly	Activity answers must be at least 85% correct A signature + commentary from the supervisor / coach / mentor or facilitator in learner workbook	As per model answer sheet	
<i>Specific Outcome 2: Compare and evaluate infrastructural factors affecting requirements</i> <i>Range:</i> Infrastructural requirements include fencing, housing, water-supply, electricity, handling facilities, access and others	Attend classroom lesson, participate and ask questions	Activities in learner activity book were completed correctly	Activity answers must be at least 85% correct A signature + commentary from the supervisor / coach / mentor or facilitator in learner workbook	As per model answer sheet	
<i>Specific Outcome 3: Evaluate and adjust stock required</i> <i>Range:</i> All livestock and crops required for the relevant enterprise	Attend classroom lesson, participate and ask questions	Activities in learner activity book were completed correctly	Activity answers must be at least 85% correct A signature + commentary from the supervisor / coach / mentor or facilitator in learner workbook	As per model answer sheet	

Marking Matrix and Assessor Report for Formative Assessment Activities Formative Evidence Collection Summary for Unit Standard 116293 – Level 4					
	<i>Action Required from Learner to Develop Competence</i>	<i>Competence Assessments</i>	<i>Standard for Activity</i>	<i>Allocation of Marks</i>	<i>Feedback to Learner and Comments on Evidence</i>
<i>Specific Outcome 4: Evaluate and adjust required harvesting procedures</i>	Attend classroom lesson, participate and ask questions	Activities in learner activity book were completed correctly	Activity answers must be at least 85% correct A signature + commentary from the supervisor / coach / mentor or facilitator in learner Workbook	As per model answer sheet	
<i>Specific Outcome 5: Compare and integrate the postharvest factors</i>	Attend classroom lesson, participate and ask questions	Activities in learner activity book were completed correctly	Activity answers must be at least 85% correct A signature + commentary from the supervisor / coach / mentor or facilitator in learner Workbook	As per model answer sheet	
US CCFO: Problem solving	Attends all lessons, activities, practical and completes activities and workbook as per instructions	Attendance register and facilitator report	Learner must at least be present and no negative commentary about the learner should be made in the facilitator report.	N/a	
US CCFO: Teamwork					
US CCFO: Self-organisation and management					
US CCFO: Information evaluation					
US CCFO: Communication					
US CCFO: Use science and technology					
US CCFO: Inter-relatedness of systems					
US CCFO: Self-development					

Marking Matrix and Assessor Report for Formative Assessment Activities
Formative Evidence Collection Summary for Unit Standard 116309 – Level 4

	<i>Action Required from Learner to Develop Competence</i>	<i>Competence Assessments</i>	<i>Standard for Activity</i>	<i>Allocation of Marks</i>	<i>Feedback to Learner and Comments on Evidence</i>
Specific Outcome 1: Prepare and categorise collected and recorded information in an agricultural environment that informs the infrastructure development of an agricultural enterprise <i>Range:</i> Infrastructure development may refer to intensive or extensive crop and animal systems, as well as aquaculture and/or horticultural production systems. Data could be collected in a range of forms that include computer, pen and paper, peg board, diagrams, comprehensive farm plans, etc. and can be entered in formats such as tables, graphs, simple markings, maps, etc. Service providers in the agricultural environment include government, non-government, parastatal or other organisations, which render services related to the sustainable use of natural resources.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas	As per model answer sheet	

Marking Matrix and Assessor Report for Formative Assessment Activities
Formative Evidence Collection Summary for Unit Standard 116309 – Level 4

	<i>Action Required from Learner to Develop Competence</i>	<i>Competence Assessments</i>	<i>Standard for Activity</i>	<i>Allocation of Marks</i>	<i>Feedback to Learner and Comments on Evidence</i>
Specific Outcome 2: Demonstrate the ability to identify high and low yield potential areas according to a range of land use options and criteria <i>Range:</i> The land use options may refer to intensive or extensive crop and animal systems, as well as aquaculture and/or horticultural production systems.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.		As per model answer sheet	
Specific Outcome 3: Organise and plan maintenance tasks related to the natural resource base of a farm, including the supervision of other workers <i>Range:</i> Routine tasks may include the repair of items such as roads, fencing, rainwater harvesting structures and the equipment required to execute such tasks. It may also include the supervision of staff and the setting up of monitoring systems.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas	As per model answer sheet	

Marking Matrix and Assessor Report for Formative Assessment Activities Formative Evidence Collection Summary for Unit Standard 116309 – Level 4					
	<i>Action Required from Learner to Develop Competence</i>	<i>Competence Assessments</i>	<i>Standard for Activity</i>	<i>Allocation of Marks</i>	<i>Feedback to Learner and Comments on Evidence</i>
Specific Outcome 4: Monitor and maintain sustainability-based farm layout innovations that have been implemented in an agricultural environment as part of a land use plan <i>Range:</i> The maintenance and monitoring includes but is not restricted to soil erosion prevention measures, soil management strategies and rainwater harvesting and management innovations	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas	As per model answer sheet	
US CCFO: Problem solving	Attends all lessons, activities, practical and completes activities and workbook as per instructions	Attendance register and facilitator report	Learner must at least be present and no negative commentary about the learner should be made in the facilitator report.	N/a	
US CCFO: Teamwork					
US CCFO: Self-organisation and management					
US CCFO: Information evaluation					
US CCFO: Communication					
US CCFO: Use science and technology					
US CCFO: Inter-relatedness of systems					
US CCFO: Self-development					

Assessment Guide – Assessor and Facilitator**Skills Area:** Enterprise Selection, Planning and Establishment**Level:** 4**Unit Standards:** 116293 & 116309

Assessment Feedback Form – Activity Workbook			
		Comments / Remarks	
Feedback to learner on assessment			
Feedback from learner to assessor			
Learner's Signature			Date:
Assessor's Signature			Date:



Step 6

Learner Research Report

Before the summative task is undertaken, the learner must be reminded of what is expected from him / her in terms of summative and reflexive competence. Read and explain to the learner this section in the learner assessment guide. The learner and assessor must sign off this section to acknowledge that this step was completed. The format is as reflected in the assessment guide for learners. Please read it and familiarise yourself with its content.

The exercise is aimed at allowing learners to think through the aspects of establishing and maintaining a commercial citrus production unit.

- Use the planning and questioning format below to help you collect evidence for foundational and embedded knowledge as prescribed by the outcomes of the unit standards.
- Provide learners with an example or advertisement (real estate) of a farm and use this example to complete the assessment. The example should be related to the local area which learners are familiar with.
- The goal is for learners to assess how suitable the farm is in all aspects, thus considering on-farm resources and location of the farm to for example packhouses, distribution points, market, and accessibility for vehicles.
- Provide the questions as listed to the learners as a guide.
- Ensure that you apply the exact same methodology for each learner in order to ensure that VACS principles are adhered to.
- The benchmark for learner competence is an 85% overall test score.
- Only a suitably qualified and registered assessor who is ALSO a subject matter expert in this specific field can mark this assessment tool for learner assessment.
- If no such a person can be found to assess the learner, then it is advised that a qualified assessor consults with the appropriate subject matter expert prior to the assessment in order to establish key points for competence and / or uses model answers as supplied by a subject matter expert to allocate marks. The subject matter expert should be consulted for any answers that the assessor might have queries on.
- Use a header in the following format for each test paper:

Unit Standard:	116293 and 116309	NQF Level:	4
Learner Name			

- The assessor should use the questions below as a marking matrix and to gather evidence and to check for completeness.

<i>Research and Reporting Points</i>	<i>The Research Is Complete and Relevant to the Point</i>	<i>Knowledge Is Applied to Commercial Citrus Farming in South Africa</i>	<i>Sound Conclusions are Drawn and / or Relevant Recommendations are Made</i>
The learner gave credit to research sources			5 points
The learner applied a sound reporting format			5 points
1. Describe and state the relationship between data and information and define the different types of graphs used whilst collecting data stating where to use each type of graphs.	5 points	5 points	5 points
2. Describe the processes that must be implemented to ensure the sustainability of natural resources needed to produce citrus commercially.	5 points	5 points	5 points
3. What is your understanding of high and low yield areas and how do the following factors influence the projected yield of a citrus farm; ✓ soil characteristics, ✓ landscape, ✓ local climate, ✓ water availability?	5 points	5 points	5 points
4. Using the following restraints as a guideline, describe the measures that must be taken during the planning and lay out of a citrus farm in order to ensure sustainability. ✓ Existing drainage patterns ✓ Slope and terrain components ✓ Soil types and associated constraints ✓ Incidence of surface and subsurface rock ✓ Vegetation and areas suitable for retention of windbreaks ✓ Any other limitations such as high water tables	5 points	5 points	5 points
5. How do we identify new innovations that can be used to ensure sustainable land-use?	5 points	5 points	5 points
6. How do we compare and evaluate the infrastructural requirements of a citrus farm during the planning phase?	5 points	5 points	5 points
7. On each farm there are certain infrastructural structures that were established to protect the sustainability of natural resources. Identify these structures and design a recordkeeping system where the maintenance tasks are clearly defined. The recordkeeping system must be designed in such a manner that it can be used to supervise workers and monitor processes.	5 points	5 points	5 points

8. Stock systems are required to ensure that the correct stock is available, to the grower, when needed for production practices. Identify the stocks normally required to ensure the smooth operation of a commercial citrus farm and develop a stock system to ensure that the correct stock will be available for use at the correct time.	5 points	5 points	5 points
9. How do we develop and adjust harvest procedures?	5 points	5 points	5 points
10. What are good postharvest practices and how do we evaluate integrate those practices into other production practices?	5 points	5 points	5 points
11. What is HACCP?	5 points	5 points	5 points
12. Make recommendations on points 1 to 11.	5 points	5 points	5 points



Step 7

Integrated Summative Assessment Tool

One assessment tool is provided in this step, being:

1. Attitudes and Attributes Assessment Tool

This assessment tool has been drafted in its entirety and follows below. It must be copied and completed for every learner in the same manner and according to the same procedure.

Learners must not be given these tools in preparation for summative assessment. This corresponding step in the Learner Assessment Guide is a direct reflection of these tools and is drafted in a format that is appropriate to the learner's level of language competence.

1. Attitudes and Attributes Assessment Tool

- Use this rating scale to judge the learner's CCFO competence according to the unit standard.
- The learner's entire performance and all the stages of learning, as well as all gathered evidence must be considered for this section.
- It is advised that the assessor consult with facilitators, mentors, coaches and supervisors in order to ensure that an objective rating is allocated.
- A rating between 1 and 5 should be given, as follows:

Rating	Description
1	No evidence can be found
2	The evidence found is weak and this is still a major development area for the learner
3	The evidence found meets the average expectation for a learner on this level
4	The evidence found is of a high quality and exceeds the average standard expected
5	The evidence found is outstanding and the learner attitudes and traits are very well developed

- Learner must be given constructive feedback on each rating.
- Ensure that you apply the exact same methodology for each learner in order to ensure that VACS principles are adhered to.
- The benchmark for learner competence in this tool is 3:5 in EVERY CCFO.

At the end of this step, an assessment feedback form is provided which must be completed and signed by the assessor, learner and moderator, where applicable.

Attitudes and Attributes Assessment Tool

Use the following rating table in this assessment:

Rating	Description
1	No evidence can be found
2	The evidence found is weak and this is still a major development area for the learner
3	The evidence found meets the average expectation for a learner on this level
4	The evidence found is of a high quality and exceeds the average standard expected
5	The evidence found is outstanding and the learner attitudes and traits are very well developed

CCFO Criteria	Rating
Identifying – The learner can identify problems and deficiencies correctly.	
Working in a Team – The learner is able to work well as member of a team.	
Organising – The learner works in an organised and systematic way whilst performing all tasks and tests.	
Communicating – The learner is able to communicate his or her knowledge orally and in writing, in a way that shows what knowledge he or she has gained.	
Demonstrating – The learner is able to show and perform the tasks required correctly.	
Contributing – The learner is able to link the knowledge, skills and attitudes that he or she has acquired in this module of learning to specific duties in their job or in the community where he or she lives.	
Science – Learner is able to utilise and use science and technology effectively	
Collecting – Learner can effectively gather information	



Assessment Feedback Form			
	Comments / Remarks		
Feedback to learner on assessment and / or overall recommendations and action plan for competence			
Feedback from learner to assessor			
Assessment Judgement	You have been found: ☐ Competent ☐ Not yet competent in this unit standard	Actions to follow: ☐ Assessor report to ETQA ☐ Learner results and attendance certification issued	
Learner's Signature		Date:	
Assessor's Signature		Date:	
Moderator's Signature		Date:	

Step 8

Re-Assessment Procedures

- Note that only outcomes on which the learner was found not yet competent must be re-assessed.
- The same procedures in steps 6 and 7 are repeated.
- The tool must be adapted at discretion of the assessor. Best practice is not to present the exact same format and questions if possible.
- Use your expertise and judgement to ensure that the method of re-assessment remains integrated and relevant to the expected outcomes.



Step 9

Documentation

The following documentation is addressed in this step:

1. Learner and assessor information reports;
2. Assessor report and summative evidence collection summary;
3. Learner assessment re-actionnaire;
4. Assessor's assessment review and improvement document;
5. Assessment appeal form

1. Learner and Assessor Information Forms

The learner information form is in the assessment guide for learners. The assessor information form follows. These forms must be completed for each individual learner and placed in the learner's portfolio of evidence.

2. Assessor Report and Summative Evidence Collection Summary

This report follows after the information report. Use it to summarise the findings during assessment. Please complete the copy of this report that is in the learner assessment guide.

3. Learner Assessment Re-Actionnaire

A pro-forma for the learner assessment re-actionnaire is included in the learner assessment guide. Ask the learner to complete this form and sign it.

4. Assessor's Assessment Review and Improvement Document

The assessor is expected to complete the assessor review of the assessment process, using the pro-forma document of which an example follows. Please complete the copy of the document in the learner assessment guide. This document must be discussed with the learner and any learner commentary should be recorded.

5. Assessment Appeal Form

The assessment appeal form is also provided in the learner assessment guide. Assist the learner to complete the document if necessary.

The learner must be requested to sign-off all reports and documents before they are placed in the portfolio of evidence.

Assessor Information Form			
Unit Standard	116293 and 116309		
Program Date(s)			
Surname			
First Name			
Company Name			
Job / Role Title			
Home Language			
Gender	Male	Female	
Race	African	Coloured	Indian/Asian White
Employment	Permanent	Non-permanent	
Disabled	Yes	No	
Date of Birth			
ID Number			
Contact Telephone Numbers			
Email Address			
Postal Address			

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116293 – Level 4

Description	Evidence Gathered		Benchmark	Competent / Not yet Competent	Feedback and Comments
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
Specific Outcome 1: Evaluate and adjust production processes for sustainable management of required natural resources <i>Range:</i> Natural resources include soil, water, climate, vegetation and topography	Summative Research Report	CCFO Rating Scale	85% competence in all areas		
Specific Outcome 2: Compare and evaluate infrastructural factors affecting requirements <i>Range:</i> Infrastructural requirements include fencing, housing, water-supply, electricity, handling facilities, access and others	Summative Research Report	CCFO Rating Scale	85% competence in all areas		
Specific Outcome 3: Evaluate and adjust stock required <i>Range:</i> All livestock and crops required for the relevant enterprise	Summative Research Report	CCFO Rating Scale	85% competence in all areas		
Specific Outcome 4: Evaluate and adjust required harvesting procedures	Summative Research Report	CCFO Rating Scale	85% competence in all areas		
Specific Outcome 5: Compare and integrate the postharvest factors	Summative Research Report	CCFO Rating Scale	85% competence in all areas		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116293 – Level 4					
Description	Evidence Gathered		Benchmark	Competent / Not yet Competent	Feedback and Comments
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
Embedded Knowledge: The learner is able to demonstrate a basic knowledge of: 1. Role and function of soil and water samples, weather information, vegetation, infrastructure, breed characteristics, production cycles, records, markets, health and hygiene within production processes 2. Description, characteristics and properties of vegetation, infrastructure, weather, production cycles and markets within production processes 3. Observation of the effects of weather patterns, soil and water characteristics, market trends, breed and stock characteristics / performance, health and hygiene conditions, infrastructure conditions, vegetation quality and quantity influencing production processes 4. Purpose of vegetation, infrastructure, weather, production cycles, markets within production processes 5. Implications of ineffective practices on production processes 6. Knowledge of specific livestock and crop characteristics so as to compare and evaluate within production processes and	Summative Research Report		Overall minimum test score of 85%		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116293 – Level 4					
Description	Evidence Gathered		Benchmark	Competent / Not yet Competent	Feedback and Comments
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
environmental conditions 7. Regulations and legislation related to production processes 8. Describe various production procedures as an integral part of the production process 9. Communication and reporting skills 10. Understand the procedures and principles that are followed to determine the viability of an enterprise					
Unit Standard CCFOs: • Problem solving • Teamwork • Self-organisation and management • Information evaluation • Communication • Use science and technology • Inter-relatedness of systems • Self-development	N/a	Rating Scale	Minimum rating of 3:5 in each criteria or overall average of 3:5		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116309 – Level 4

<i>Description</i>	<i>Evidence Gathered</i>		<i>Benchmark</i>	<i>Competent / Not yet Competent</i>	<i>Feedback and Comments</i>
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
Specific Outcome 1: Prepare and categorise collected and recorded information in an agricultural environment that informs the infrastructure development of an agricultural enterprise <i>Range:</i> Infrastructure development may refer to intensive or extensive crop and animal systems, as well as aquaculture and/or horticultural production systems. Data could be collected in a range of forms that include computer, pen and paper, peg board, diagrams, comprehensive farm plans, etc. and can be entered in formats such as tables, graphs, simple markings, maps, etc. Service providers in the agricultural environment include government, non-government, parastatal or other organisations, which render services related to the sustainable use of natural resources.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116309 – Level 4

<i>Description</i>	<i>Evidence Gathered</i>		<i>Benchmark</i>	<i>Competent / Not yet Competent</i>	<i>Feedback and Comments</i>
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
<i>Specific Outcome 2: Demonstrate the ability to identify high and low yield potential areas according to a range of land use options and criteria</i> <i>Range:</i> The land use options may refer to intensive or extensive crop and animal systems, as well as aquaculture and/or horticultural production systems.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.			
<i>Specific Outcome 3: Organise and plan maintenance tasks related to the natural resource base of a farm, including the supervision of other workers</i> <i>Range:</i> Routine tasks may include the repair of items such as roads, fencing, rainwater harvesting structures and the equipment required to execute such tasks. It may also include the supervision of staff and the setting up of monitoring systems.	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116309 – Level 4

Description	Evidence Gathered		Benchmark	Competent / Not yet Competent	Feedback and Comments
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
Specific Outcome 4: Monitor and maintain sustainability-based farm layout innovations that have been implemented in an agricultural environment as part of a land use plan <i>Range:</i> The maintenance and monitoring includes but is not restricted to soil erosion prevention measures, soil management strategies and rainwater harvesting and management innovations	Attend all lectures Complete workbook as per instruction	Research report with recommendations. Observation checklist of attitudes and attributes.	85% competence in all areas		
Embedded Knowledge: The learner is able to demonstrate a basic knowledge of: 1. The different options applied in land use 2. The differentiations between high and low yield aspects of a landscape 3. Methods of data gathering and information presentation (e.g. graphs, etc.) 4. The sustainable use of natural resources in an agricultural environment 5. The causes and consequences of soil erosion	Attend all lectures Complete workbook as per instruction	Research report with recommendations.	Overall minimum test score of 85%		

Assessor Report and Summative Evidence Collection Summary for Unit Standard 116309 – Level 4					
Description	Evidence Gathered		Benchmark	Competent / Not yet Competent	Feedback and Comments
	Foundational and Embedded Knowledge	Practical Skills, Underpinning Knowledge and Reflexive Competence			
Unit Standard CCFOs: • Problem solving • Teamwork • Self-organisation and management • Information evaluation • Communication • Use science and technology • Inter-relatedness of systems • Self-development	N/a	Rating Scale	Minimum rating of 3:5 in each criteria or overall average of 3:5		

Assessor's Assessment Review and Improvement Document	
Issues	Comments
Did the assessment go according to plan?	
Did anything unexpected happen?	
Were you pleased with the assessment decision; i.e. was it what you expected?	
How could the process have been carried out more efficiently?	
How could the process of assessing the knowledge be improved?	
How could the Performance Observation checklist be improved?	
Was the evidence you gathered sufficient to make a judgment of competence?	
Was the way you obtained feedback from the learner effective?	
Were you pleased with the way you communicated your decision to the learner? If not, how could this have been improved?	
How would you improve the assessment process?	

Any learner has the right of appeal against any not-yet-competent decision by the assessor. If the learner wishes to appeal, please assist him / her to complete the form below.

Appeal Form			
I hereby appeal against the outcome of my assessment.			
Date:			
Learner's Name:			
Assessors Name:			
Organisation:			
Assessment Details: Criteria, role, standards Used, etc.			
Issue to be Reviewed:			
Learner's Signature		Date:	
Assessor's Signature		Date:	

Step 10

Administration and Completion of Portfolio of Evidence

All the documents or copies thereof, as prescribed previously, must be kept on file as part of the learner portfolio of evidence.

Learner's portfolio of evidence must be readily available for internal and external moderation and verification by the appropriate practitioners, until after the verification process has taken place. The portfolio of evidence may then be kept or returned to the learner according to the service provider's policy.

The prescribed learner results form should be submitted to the ETQA or the National Learner Database as per the SETA procedure.

