



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Secondary Agriculture

Registered by NSB 01, Agriculture and Nature Conservation, publishes the following qualifications and unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards upon which qualifications are based. The full qualification and unit standards can be accessed via the SAQA web site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the unit standards should reach SAQA at the address ***below and no later than 13 March 2004***. All correspondence should be marked **Standards Setting – SGB for Secondary Agriculture** and addressed to

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Further Education and Training Certificate: Dry Pet Food Advanced Processing Technology NQF 4

Field: Agriculture and Nature Conservation
Sub-field: Secondary Agriculture
NQF level: 4
Credits: 131

Rationale for the qualification

This qualification reflects the workplace-based needs of the dry pet food industry that are expressed by employers, employees and members of the Pet Food Institute (PFI) both now and for the future. This qualification affords the learner the opportunity to advance from the dry pet food processing NQF level 3 qualification and to specialise further within the dry pet food industry.

This qualification further provides the flexibility to articulate at the same level in the animal feeds and food manufacturing industry. The level and flexibility within the range of electives will allow the individual to pursue a career within Secondary Agriculture – Animal Feeds and Food and Beverage manufacturing management and manufacturing supervision.

Purpose of the qualification

The qualification and the level of flexibility within the range of electives will allow the individual to pursue a specialised career of processing, packaging and quality control, including process artisan and manufacturing supervision in the industries of dry pet food, animal feeds and foods.

The fundamental learning, which learners will acquire, will allow them to be able to compile verbal and written communications and perform basic calculations. The core learning will enable the learner to obtain competence in Dry Pet Food processing operations. This qualification complies with the objectives of the NQF with regard to facilitating access to, mobility and progression within the Dry Pet Food Processing Industry.

The qualification focuses on the skills, knowledge, values and attitude required to progress in industry. The intention is to release the potential of people, in order for them to grow, develop and become more competent workers in industry and the manufacturing industry in particular.

A person acquiring this qualification will be able to supervise and manufacture technically advanced safe, quality assured and packaged dry pet foods from raw materials until the final manufactured product is ready to be distributed to the market.

This qualification will enable the qualifying learner to progress to a national diploma in Food and Beverage and Secondary Agriculture- Animal Feeds / Dry Pet Food.

Rules of Combination

To obtain this qualification the learner must complete 56 fundamental, 63 core and a minimum of 12 from the electives to total 131 credits.

Access to the qualification

There are no restrictions placed on learners which may prevent them from gaining access to this qualification.

Learning assumed to be in place

It is assumed that learners wishing to enter a programme leading to this qualification have demonstrate competence in mathematical literacy, communication and languages at NQF level 3.

Exit level outcomes and associated assessment criteria

Exit level outcome 1

Demonstrate an understanding of the manufacture of dry pet food kibbles.

Associated assessment criteria

- Basic principles, processes and operations of pre-batching, mixing and milling of raw materials followed by extrusion, drying, coating cooling and packing are identified and explained.
- Different types of equipment used in the dry pet food manufacturing process are identified and described.
- Functions of raw materials are identified.
- The data capturing procedure relating to equipment operation and product are explained
- Reasons and consequences of not adhering to statutory, operational requirements, safety and hygiene are identified and explained.
- Stock level and stock control is adjusted according to worksite procedures and statutory requirements.

Exit level outcome 2

Prepare for extrusion of a dry pet food or treat.

Associated assessment criteria

- Knowledge of start up routine maintenance procedures are understood and implemented
- Sound knowledge of theoretical principles of advanced dry or semi-moist pet food extrusion is interpreted and implemented.
- Knowledge of advanced extruded treat manufacturing techniques is interpreted for implementation.

Exit level outcome 3

Operate equipment and machinery related to Dry Pet Food manufacturing.

Associated assessment criteria

- Reasons and consequences of not adhering to principles, processes and operations are identified and explained.
- Machinery and equipment related to Dry Pet Food manufacturing are operated according to manufacturers specifications and standard operating procedures.
- Principles of safety requirements and hygiene factors are explained and applied.
- Process conditions are monitored and maintained according to standard operating procedures.
- Sound knowledge of different types of advanced extruders and associated equipment used in the manufacture of dry and semi-moist pet foods is interpreted and implemented.

Exit level outcome 4

Analyse and evaluate process and product data related to Dry Pet Food.

Associated assessment criteria

Samples, information and reporting results in accordance with work site procedures are collected and analysed.

Criteria for internal and external assessors

Assessors need experience in the following areas:

Interpersonal skills, subject matter and assessment.

The assessor needs to be competent in the planning and conducting of assessment of learning outcomes and in the design and development of assessments as described in the unit standards Plan and conduct assessment of learning outcomes NQF level 5, and Design and develop assessment NQF level 6. Subject matter experience must be well developed within the field of processed cheese manufacturing. The assessor must have completed a similar qualification with a minimum of 6-12 months field experience after he/she has completed the qualification or a food science and technology qualification on level 5 or higher. The subject matter experience of the assessor can be established by recognition of prior learning.

Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

International comparability

Comparisons were done against unit standards and the only qualification registered at level 3 and 4 with the New Zealand Qualifications Authority:

- National Certificate in Food and Related Products Processing (Level 4)
- National Certificate in Dairy Manufacturing (Level 3)
- National certificate in Dairy Manufacturing - workplace safety- (Level 3)

A comparison of the above qualification was undertaken and the best practice points were highlighted and used to benchmark this qualification's unit standards.

Because of the difference in levels and types of qualifications across the 2 countries, difficulty was found in making actual direct comparisons, level to level. It was found that the South African qualifications seem to contain more detail and therefore are slightly more complex in their presentation and execution.

Articulation possibilities

The generic nature of this qualification and the focus on multi-skilling will provide for portability across various sectors in the processing domain.

It prepares the learner and forms the basis for progression towards other qualifications such as National Certificate in Tobacco Processing at NQF Level 5 and Food and Beverage manufacturing qualification.

While the qualification will diverge as they progress upwards, there is enough commonality to provide for a solid base of generic skills. The learner will have multiple choices of learning paths and career paths in various technical occupations namely, training supervisor and factory manager.

Integrated Assessment Criteria

The practical, applied, foundational and reflective competencies demonstrated for the group of unit standards in this qualification must prove that the whole competence is more than the sum of the parts of the competencies.

An assessor will observe the manufacturing and packaging of dry pet food. Oral or written questioning regarding the reflective competencies within the qualification is essential. If the identifying and solving of problems, team work, organising one-self, the using of applied science, the implication of actions and reactions in the world as a set of related systems are not clear from the observation through a method of oral or written questioning, a case study can also be used to determine the person's development and integration of applied knowledge and skills.

The preparation to processing, cleaning and sanitation, first line maintenance and quality assurance related to processing in the workplace can be assessed in one application.

Applicable assessment tool(s) must be used to establish the foundational, reflective and embedded knowledge to problem solving and application of the world as a set of related systems within the processing environment.

A detailed portfolio of evidence is required to proof the practical, applied and foundational competencies of the learner.

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Unit standards in the qualification must be used to assess specific and critical cross-field outcomes. During integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

Recognition of prior learning (RPL)

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records. The assessor and the learner shall decide upon the assessment methods and tools to be used to assess Prior Learning jointly.

Moderation

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

Further Education and Training Certificate: Dry Pet Food Advanced Manufacturing Technology at NQF level 4									
NQF Level 3					NQF Level 4				
	ID No	Credits	ID No	Credits	ID No	Credits	ID No	Credits	Total
Fundamental	Accommodate audience and context needs in oral communication	8968	5	Engage in sustained oral communication and evaluate spoken texts	8974	5			
	Interpret and use information from texts	8969	5	Read, analyse and respond to a variety of texts	8975	5			
	Write texts for a range of communicative contexts	8970	5	Write for a wide range of contexts	8976	5			
	Use language and communication in occupational learning programmes	8973	5	Use language and communication in occupational learning programmes	8979	5			
	Language/Communication		20	Language/Communication		20			40
Core	Receive food raw materials	9047	8	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	9014	6			
	Stock take of commodities in bulk			Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems	9015	6			
	Monitor quality control practices in a food manufacturing environment	8902	4	Measure, estimate and calculate physical quantities and explore, critique and prove geometrical relationships in two and three dimensional space in the life and workplace of the adult with increasing responsibility	9016	4			
				Mathematics/Numeracy		16			16
				Control raw material and final product stock		8			
			3	Demonstrate an understanding of advanced petfood extrusion principles		12			
				Operate and control dry petfood extrusion equipment using advanced extrusion technology		8			
				Operate and control advanced kibble coating equipment		8			
				Maintain a food safety programme	9058	4			
				Supervisory management		4			
Electives			15			44			63
	Demonstrate an understanding of supply chain management		3	Contamination control of animal feed manufacturing		4			
				Demonstrate an understanding of the relationship between micro organisms and food spoilage	8870	8			
				Demonstrate knowledge of financial principles		4			
				Process automation and control (Elementary)		6			
			Demonstrate knowledge of industrial relationship principles and legislation		4				
		3			26			12	
Total Credits for Qualification - 131 A minimum of 12 Credits must be achieved in the elective area of learning									



Further Education and Training Certificate: Grain Milling at NQF Level 4

Field: Agriculture and Nature Conservation
Sub-field: Secondary Agriculture
NQF level: 4
Credits: 142

Rationale for the qualification

This qualification is aimed at people who are already competent in grain processing applied competencies. It provides learners with the necessary background knowledge and skills to be portable within the wheat and maize milling industry. The qualification provides learners with access to milling production processes within the milling industry, which includes opportunities for learners' career development. It also provides learners with the necessary knowledge and skills to enhance the NQF principles.

Through the above the qualification will address one of the key priorities of the Department of Labour in the reduction of unemployment and under employment. It will assist in creating job opportunities.

Purpose of the qualification

This qualification is registered at level 4 on the National Qualification Framework. It provides learners with the opportunity to obtain competence in assessing quality of and storage of raw materials (wheat/maize) and best practice in milling. Learners will be able to grade, store and control stocks of raw material as well as process, control and maintain quality wheat or maize milled end products to be sold to customers. The qualification will provide learners with the opportunity to grow in these milling fields.

This qualification serves as a set of building blocks, which will upgrade an NQF 2 level learner to NQF 4 status and will lead to a more defined career path within the milling industry.

The qualification focuses on the skills, knowledge, values and attitude to ensure competence at this level of learning. The intention is to release the potential of people, in order for them to grow and develop. This qualification will furthermore add value to the individuals, their workplace and the economy as a whole.

Rules of combination

To obtain this qualification the learner must complete 56 fundamental, 55 core and a minimum of 31 or 35 credits from the elective categories of maize or wheat milling to total 142 or 146 credits

Access to the qualification

There are no restrictions placed on learners, which may prevent them from gaining access to this qualification.

Learning assumed to be in place

The learner will have appropriate levels of competence in Communication, Languages and Numeracy equivalent to NQF 3.

Exit level outcomes and associated assessment criteria**1. Exit level Outcome**

Sample grain, determine mass, grade wheat, group wheat, unload consignment, manage intake and storage facility and implement storage hygiene and combat contamination in grain (Wheat Mill Silo Operative).

Associated assessment criteria

- Sequence of flow in the silo, screen room and screening disposal is explained according to work site procedures.
- Implication of failing to determine grade, store and group wheat according to quality requirements.
- Implication of failing to measure consignment mass.
- Implication of failing to apply storage hygiene and combat contamination of grain.
- Implication of failing to properly manage intake and storage facilities.
- Reason for determining bulk storage levels.
- Maintain Occupational health and safety.

2. Exit level outcome

Manage the process of manufacturing (Wheat Mill Shift Miller).

Associated assessment criteria

- Sequence of flow in the grain preparation and screenings disposal departments and the consequences of not adhering to them are explained.
- Calculations for applying correct amounts of water and lying time to wheat are explained.
- Consequences of failure to do above are explained.
- Consequences of failure to recognise certain impurities and insects in wheat are explained.
- Sequence of flow in the wheat mill operation and the consequences of failure to adhere to them are explained.
- The technical data for roller mills and plansifters are explained.
- Consequences of not monitoring and setting up of mill machinery are explained and correct methods are demonstrated according to work site procedures.
- Product quality assurance test are monitored and consequences of not taking corrective action are explained.

3. Exit level outcome

Sample grain, determine mass, determine grade maize, unload consignment, manage intake and storage facility in accordance with worksite procedures, implement storage hygiene and combat contamination in grain (Maize Mill Silo Operative).

Associated assessment criteria

- Sequence of flow in the silo is explained according to work site procedures.
- Implications of failing to determine grade and store maize according to quality requirements is explained.
- Implication of failing to measure consignment mass.
- Implication of failing to apply storage hygiene and combat contamination of grain.
- Implication of failing to properly manage intake and storage facilities.
- Reason for determining bulk storage levels.
- Maintain Occupational health and safety.

Exit level outcome 4

Manage the process of manufacturing (Maize Mill Shift Miller).

Associated assessment criteria

- Sequence of flow in the cleaning and disposal of screenings department are explained.
- Consequences of not adhering to the above sequences are explained.
- Calculation for applying correct amounts of water and lying time to maize and the consequences of failing to do so are explained.
- Consequences of failure to recognise certain impurities and insects in maize
- Sequence of flow in the milling operation and the consequences of failure to adhere to this sequence are explained.
- The technical data for roller mills and plansifters are explained.
- Consequences of not monitoring and setting up of machinery are explained and correct methods are demonstrated according to work site procedures.
- Product quality assurance test are monitored and consequences of not taking corrective action are explained.

International comparability

A thorough search was done to find international qualifications and unit standards in seed processing countries specific to the seed production, but no formal unit standards and qualifications could be found.

However, areas such as seed production and technology were compared to United Kingdom and America. These were:

- Advanced Certificate in Flour Milling (Nabim).
- Diploma in Flour Milling (AOM).

A comparison of the above qualifications was undertaken and the best practice points were incorporated and used in the generation of this qualification's unit standards.

Because of the difference in levels across the different countries, difficulty was found in making actual direct comparisons, level to level. It was found that the South African qualifications seem to contain more detail and therefore are slightly more complex in their presentation and execution.

Integrated Assessment Criteria

Unit standards associated with this qualification must be used to assess specific and critical cross-field outcomes. Assessment should focus in an integrated way on determining the competence of the learner in terms of the overall purpose and title of this qualification.

The term integrated assessment also implies that the theoretical and practical components should be assessed together and assess combinations of practical, applied, foundational and reflective competencies.

Assessment activities should be done in real workplace situations and where simulations or role-plays are used, there should be supporting evidence to show that the learner is able to display the competencies to the real work situation.

All assessments should be conducted in line with the following documented principles of assessment: appropriateness, fairness, manageability, and integration into work of learning, validity, direct, authentic, sufficient, systematic, open and consistent.

Learners wishing to be assessed will need to provide evidence of the following:

- Verbal and written explanations of reasons for adhering to operational and work site procedures as well as statutory requirements, adhering to specific sequence of operations, identifying deviations, taking corrective actions and recording relevant data, and reporting deviations outside the jobholder's responsibility.
- Documentation and explanation of administrative records completed during the process of milling wheat and maize.
- Demonstration of a range of skills required to prepare, operate and carry out running maintenance of milling equipment.
- Demonstrate a range of skills in applying general safety and hygiene practises at the work site.
- A portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner, which may include production and quality data.

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practise and performance records. The assessment methods and tools to be used to assess Prior Learning shall be decided upon jointly by the assessor and the learner.

Articulation possibilities

This qualification lends itself to both vertical and horizontal articulation possibilities. These possibilities ensure both mobility and progression for the learner in other fields of learning such as the grain handling, feed milling and baking industries.

Vertical articulation possibilities:

- National Diploma in Grain Handling Management NQF 5
- National Diploma in Specialist Agricultural Technician NQF 5

Moderation options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA.

Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

UNIT STANDARDS TITLES AND SPECIFIC OUTCOMES

1. Collect representative grain sample
2. Measure consignment mass
3. Unload grain consignment in bulk
4. Intake of grain
5. Combat contamination
6. Apply storage hygiene
7. Determine bulk stock
8. Utilize electronic and measuring equipment
9. Provide assistance in implementing and assuring project work is conducted in accordance with the project quality plan
10. Determine produce grade maize
11. Apply technology to maize preparation
12. Determine produce grade wheat
13. Apply technology to wheat milling

UNIT STANDARDS AND SPECIFIC OUTCOMES AT NQF LEVEL 4**1. TITLE APPLY TECHNOLOGY TO MAIZE PREPARATION**

- | | |
|----------------------|--|
| Specific Outcome 1:1 | Plan and prepare for the application of technology. |
| Specific Outcome 1:2 | Apply flow sequence technology to maize preparation. |
| Specific Outcome 1:3 | Assess water addition requirements. |
| Specific Outcome 1:4 | Assess knowledge of impurities found in maize. |
| Specific Outcome 1:5 | Complete application of technology. |

2. TITLE: APPLY TECHNOLOGY TO MAIZE MILLING

- | | |
|----------------------|--|
| Specific Outcome 2:1 | Plan and execute technology for maize milling. |
| Specific Outcome 2:2 | Apply and control flow sequence technology for the mill. |
| Specific Outcome 2:3 | Assure achievement of extraction rates. |
| Specific Outcome 2:4 | Control mill stocks. |
| Specific Outcome 2:5 | Maintain quality of finished products. |
| Specific Outcome 2:6 | Control application of milling technology. |

3. TITLE: APPLY TECHNOLOGY TO WHEAT PREPARATION

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|----------------------|--|
| Specific Outcome 3:1 | Plan and control technology for wheat preparation. |
|----------------------|--|

- Specific Outcome 3:2 Control wheat grouping.
Specific Outcome 3:3 Control flow sequence technology for wheat preparation.
Specific Outcome 3:4 Control water addition.
Specific Outcome 3:5 Demonstrate ability to identify impurities.
Specific Outcome 3:6 Control execution of technology process.

4. TITLE: APPLY TECHNOLOGY TO WHEAT MILLING

- Specific Outcome 4:1 Plan and execute technology for wheat milling.
Specific Outcome 4:2 Control flow sequence.
Specific Outcome 4:3 Implement and control extraction rates.
Specific Outcome 4:4 Control mill stocks.
Specific Outcome 4:5 Maintain quality of finished products.
Specific Outcome 4:6 Control application of milling technology.

Further Education & Training Certificate: Grain Milling at NQF level 4						
NQF Level 3			NQF Level 4			Total
	ID No	Credits		ID No	Credits	
F u n d a m e n t a l	Accommodate audience and context needs in oral communication	5	Engage in sustained oral communication and evaluate spoken texts	8974	5	
	Interpret and use information from texts	5	Read, analyse and respond to a variety of texts	8975	5	
	Write texts for a range of communicative contexts	5	Write for a wide range of contexts	8976	5	
	Use language and communication in occupational learning programmes	5	Use language and communication in occupational learning programmes	8979	5	
	Language/Communication	20	Language/Communication		20	40
			Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	9014	6	
			Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems	9015	6	
			Measure, estimate and calculate physical quantities and explore, critique and prove geometrical relationships in two and three dimensional space in the life and workplace of the adult with increasing responsibility	9016	4	
C o r e			Mathematics/Numeracy		16	16
	Measure consignment mass	3	Combat contamination in grain		11	
	Collect representative grain sample	4	Function in a team	8561	4	
	Intake of grain	10	Operate a Computer	7786	8	
	Unload grain consignment in bulk	2				
	Maintain health, and safety and security within the internal environment	2				
	Apply storage hygiene	4				
	Utilize electronic and measuring equipment	4				
	Determine bulk stock level	3				
			32			23
Determine produce grade maize	6		Apply technology to wheat milling		15	
Determine produce grade wheat	10		Apply technology to maize preparation		10	
			Apply technology to maize milling		15	
			Apply technology to wheat preparation		10	
		16			50	
Total Credits for Qualification: Wheat (146), Maize (142)						



National Certificate: Milling and Blending of Spice Powder NQF level 2

Field: Agriculture and Nature Conservation

Sub-field: Secondary Agriculture

NQF Level: 2

Credits: 120

Rationale for the Qualification

This qualification provides the learner with the opportunity to access learning in Oleoresin extraction and blending processes and practices that include opportunities for the learner's career development in the Paprika Industry. It also provides learner with the background knowledge and skills to be portable with other Secondary Agriculture Processes.

Purpose of the qualification

This qualification is registered at level 3 on the National Qualification Framework. Learners will, once assessed and qualified, be able to demonstrate competence in milling and blending of paprika powder according to prescribed industry quality standards, showing an understanding of operating and work site procedures. This will provide the learner with opportunities to grow within any of these fields.

Learners who embark on obtaining this qualification will find that the acquisition of competence in the respective unit standards, which make up the qualification, will add value not only to their respective positions, but to the industry as well.

It will provide the broad knowledge, skills and values needed in the Paprika Powder industry and will facilitate access to, and mobility and progression within, education and training to progress along a learning path for learners who:

- Were previously disadvantaged or were unable to complete their schooling.
- Have worked in the macadamia industry for a number of years, but have no formal qualification or recognition of skills in this area.
- Wish to extend their range of skills and knowledge of the industry so that they can become competent workers in the macadamia industry and the economy as a whole

Rules of combination

This qualification consists of a minimum of 120 credits taken from 36 Fundamental, 62 core and a minimum of 22 to total 120 credits.

Access to the Qualification

The learner is limited by the "Learning assumed to be in place" as outlined below. There are no further restrictions placed on learners that may prevent them from gaining access to this qualification.

Learning assumed to be place

The learner will have appropriate levels of Communication, Language, Numeracy and occupational competence equivalent to NQF1.

Exit level outcomes and associated assessment criteria**Exit level outcome 1**

Handling of spice powder raw material

Associated assessment criteria

- Spice powder raw material is offloaded and inspected according to standard operating procedures
- Principles of grading and sampling paprika raw material must be explained and applied.
- Reasons and consequences for not rejecting non-conforming material to be explained.
- Machinery is prepared, maintained and used according to manufacturers specifications and work site procedures.
- Raw material received is weighed, documented and communicated according to standard working procedures.

Exit Level Outcome 2

Demonstrate an understanding of the deseeding of spice powder raw material

Associated assessment criteria

- Machinery start-up, operating and shut procedures to be applied according to standard operating procedures.
- Process principles of deseeding of paprika to be explained.
- Consequences of not storing seed and pericarp according to standard operating procedures to be explained.
- Deseeding processes are reconciled, documented and communicated according to standard working procedures.

Exit Level Outcome 3

Show an understanding of the basic principles and processes to operate a primary spice powder mill.

Associated assessment criteria

- Machinery start-up, operating and shut procedures to be applied according to standard operating procedures.
- Reasons and consequences of not monitoring particle size and taking corrective action when required to do so to be explained.
- Basic principles of interpreting and applying a milling sheet to be explained.
- Paprika must be sterilized according to standard operating procedures.
- Basic principles of spice powder drying with specific reference to speed rate, temperature and steam pressure in the process to be explained.
- Reasons and consequences of not cooling pice powder according to quality requirements and standard operating procedures to be explained.
- Mill Process is documented and communicated according to standard operating procedures.

Exit Level Outcome 4

Operate secondary spice powder mill

Associated assessment criteria

- Machinery start-up, operating and shut procedures to be applied according to standard operating procedures.
- Reasons and consequences of not monitoring particle size and taking corrective action when required to do so to be explained.
- Mill stones to be adjusted according to manufactures specifications and standard operating procedures.
- Basic principles of weigh, bag and numbering processes of final product to be explained.

Exit Level Outcome 5

Demonstrate an understanding of blending spice powder.

Associated assessment criteria

- Reasons and consequences of not taking cognisance of customer requirements regarding the blending of spice powder are identified and applied.
- Principles of adding additives to obtain required blend as per blending sheet to be recalled and applied.
- Basic principles of weigh, bag and numbering processes of final product to be explained.
- The reasons and consequence of not taking representative samples of blended product to be explained.
- Blending process to be documented and communicated according to standard working procedures.

Exit Level Outcome 6

Dispatch final product

Associated assessment criteria

- Dispatch client orders according to standard working procedures.
- Reasons and consequences of not dispatching client orders according to standard working procedures to be explained.

Exit Level Outcome 7

Show an understanding of the basic principles, processes, and operations within the Paprika powder milling and blending industry.

Associated assessment criteria

- Reasons and consequences of not adhering to principles, processes and operations are identified and explained.
- Basic principles of work ethics are recalled and described.
- Principles of safety requirements and hygiene factors are explained.

Criteria for internal and external assessors

Assessors need experience in the following areas:

Interpersonal skills, subject matter and assessment expertise.

The assessor needs to be competent in the planning and conducting of learning outcomes and design and develop assessments as described in the relevant unit standards. The subject matter experience must be well developed within the field of milling and blending of paprika powder.

The subject matter experience of the assessor can be established by recognition of prior learning.

Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

The unit standards within the qualification are structured to contain specific and critical cross-field outcomes with assessment criteria. Within each unit standard, the assessment criteria, accreditation and moderation options guide the assessors to develop assessment tools and methods. The specific, critical cross-field outcomes and assessment criteria guide the providers in developing the learning material.

The unit standards within the qualification serve as exit points from the qualification and these unit standards represent meaningful recognizable outcomes within secondary agriculture, and

specifically will allow the learner to at these exit points successfully qualify as operators within sub departments of Paprika milling and blending.

International comparability

A thorough search was done to find international qualifications and unit standards in Paprika producing countries specific to the milling and blending of paprika powder, but no formal unit standards and qualifications could be found.

However, areas such as food processing were compared to New Zealand qualifications, and these were:

- National Certificate in food and related products processing-Level 2 (0342)
- National Certificate in food and related products processing-Level 3 (0343)

Unit standards in the New Zealand Qualifications Authority without qualifications in the related field were found with some similar aspects:

- Blend finished products manually-level 2 (7836)
- Blend liquid food products using automated product equipment-level 2 (7836)

A comparison of the above qualifications and unit standards was undertaken and the best practice points were highlighted and used in the generation of this qualification's unit standards.

Articulation possibilities

This qualification lends itself to both vertical and horizontal articulation possibilities. These possibilities ensure both mobility and progression for the learner in other fields of learning such as the dairy, macadamia and fish industries and areas where supervisory competence is required. The learning areas outlined in the purpose of the qualification indicate the horizontal articulation possibilities.

Horizontal and Vertical articulation possibilities:

- National Certificate Farming NQF level 3 (ID 20289)
- National Certificate: Agri Trade processes NQF Level 2 (14851)

Integrated assessment criteria

All assessments should be conducted in line with the following documented principles of assessment: appropriateness, fairness, manageability, integration into work of learning, validity, direct, authentic, sufficient, systematic, open and consistent.

Learners will produce evidence of the following:

- Verbal and written explanations of reasons for adhering to operational and work site procedures as well as statutory requirements, adhering to specific sequence of operations, identifying deviations, taking corrective actions and recording relevant data, and reporting deviations outside the jobholder's responsibility.
- Demonstrations of a range of operational actions relating to applying quality control in intake-, deseeding-, and milling of paprika raw material and applying general safety in the work place. Learners will also demonstrate an understanding of the Paprika Industry.

- Oral or written competence regarding the reflective competencies within the qualification.
If the identifying and solving of problems, team work, organising oneself, the using of applied science, the implication of actions and reactions in the world as a set of related systems are not clear from the observation, a method of oral questioning or a case study should be applied to determine the whole person development and integration of applied knowledge and skills.
- A portfolio of evidence is required to prove the practical applied and foundational competencies of the learner which may include the milling, deseeding, and blending of paprika powder.
- Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.
- Unit standards in the qualification must be used to assess the specific and critical cross-field outcomes. During the integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practise and performance records. The assessment methods and tools to be used to assess Prior Learning shall be decided upon jointly by the assessor and the learner.

Moderation Options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

Titles of Unit Standards at NQF Level 2

1. Deseed paprika raw material
2. Intake of raw material
3. Operate primary mill
4. Operate secondary mill
5. Blending of paprika powder
6. Dispatch final product

Titles of Unit Standards at NQF Level 3

1. Introduction to paprika processing

Titles of Unit Standards and Specific Outcomes at NQF level 2**1. TITLE DESEED PAPRIKA RAW MATERIAL**

- Specific Outcome 1.1: Prepare for the deseeding of Paprika
Specific Outcome 1.2: Deseed Paprika
Specific Outcome 1.3: Complete deseeding of paprika

2. TITLE INTAKE OF RAW MATERIAL

- Specific Outcome 2.1: Prepare for the intake process
Specific Outcome 2.2: Handle Paprika
Specific Outcome 2.3: Complete the intake process

3. TITLE OPERATE PRIMARY MILL

- Specific Outcome 3.1: Prepare for the primary milling process
Specific Outcome 3.2: Mill Paprika
Specific Outcome 3.3: Sterilise Paprika
Specific Outcome 3.4: Dry Paprika
Specific Outcome 3.5: Cool Paprika
Specific Outcome 3.6: Complete Primary Paprika Mill Process

4. TITLE OPERATE SECONDARY MILL

- Specific Outcome 4.1: Prepare for secondary paprika mill process
Specific Outcome 4.2: Mill Paprika
Specific Outcome 4.3: Weigh and bag Paprika
Specific Outcome 4.4: Complete the Secondary Paprika mill process

5. TITLE BLEND PAPRIKA POWDER

- Specific Outcome 5.1: Prepare for blending process
Specific Outcome 5.2: Blend Paprika powder
Specific Outcome 5.3: Weigh and bag paprika powder
Specific Outcome 5.4: Complete the blending process

6. TITLE DISPATCH FINAL PRODUCT

- Specific Outcome 6.1: Prepare for dispatching process
Specific Outcome 6.2: Dispatch client product
Specific Outcome 6.3: Complete the dispatching process

Titles of Unit Standards and Specific Outcomes at NQF level 3**1. TITLE INTRODUCTION TO PAPRIKA PROCESSING**

- Specific Outcome 1.1: Demonstrate a basic understanding of Paprika processing
Specific Outcome 1.2: Demonstrate an understanding of Safety in the workplace
Specific Outcome 1.3: Demonstrate an understanding of work ethics
Specific Outcome 1.4: Demonstrate an understanding of quality management

National Certificate: Milling and Blending of Spice Powder at NQF level 2					
NQF Level 2		NQF Level 3		Total	
	ID No	Credits	ID No	Credits	
Fundamental	Accommodate audience and context needs in oral communication	5			
	Interpret and use information from texts	5			
	Write texts for a range of communicative contexts	5			
	Use language and communication in occupational learning programmes	5			
	Language/Communication	20			
	Demonstrate an understanding of rational and irrational numbers, and number systems within the context of relevant calculations	3			
	Use mathematics to investigate and monitor the financial aspects of personal and community life	2			
	Apply basic knowledge of statistics in order to investigate life and work related problems	3			
	Identify, describe, compare, classify, explore, shape and motion in 2 and 3 dimensional shapes in different contexts	3			
	Work with a wide range of patterns and transformations of functions and solve related problems	5			
Core	Mathematics/Numeracy	16			
	Intake of raw material	12		8	
	Deseed paprika raw material	6			
	Operate primary mill	12			
	Operate secondary mill	12			
	Blending of paprika powder	8			
	Dispatch final product	4			
			54		62
	Operate in a team	4	8000		9
	Perform basic first aid	4	12483	9527	4
Electives			8016	8	
			9530	3	
				24	
A minimum of 22 credits must be selected from the elective component of learning				17	
Total Credits for Qualification - Minimum 120					



National Certificate in Tea Production and Processing – NQF level 2

Field: Agriculture and Nature Conservation

Sub-field: Secondary Agriculture

NQF level: 2

Credits: 137

Rationale for the qualification

This qualification is aimed at people who are working in the Tea industry or who would like to start a career in the industry. It is aimed at formalising the skills required in the Tea production and manufacturing processes to facilitate career-pathing and to provide access to new entrants. The qualification provides learners with access to learning in specialised areas within the Tea industry. It also provides learners with the necessary background knowledge and skills to be portable within other Agricultural Industries.

Through the above the qualification will address one of the key priorities of the Department of Labour in the reduction of unemployment and under employment. It will assist in creating job opportunities and to create a better nation at large.

Purpose of the qualification

This qualification will provide learners with the opportunity to obtain competence in broad tea production and manufacturing processes and practices, namely plucking and pruning of tea, fertilization of tea fields, irrigation of tea, manufacturing of tea. This will provide the learner with opportunities to grow within any of these fields.

Through fundamental learning, learners will be able to apply skills required to effectively communicate either verbally or in writing and to perform basic calculations. This qualification complies with the objectives of the NQF with regard to facilitating access to, mobility and progression within the tea industry.

The qualification focuses on the skills, knowledge, values and attitude required to operate effectively in the tea industry. The intention is to release the potential of people, in order for

them to grow, develop and become more competent workers. This qualification will furthermore add value to the individuals, their workplace and the economy as a whole.

Rules of Combination

To complete this qualification the learner must obtain 36 fundamental 97 core and 4 electives to total 137 credits.

Access to the qualification

There are no restrictions placed on learners that may prevent them from gaining access to this qualification.

Learning assumed to be place

The learner will have appropriate levels of Communication, Language, Numeracy and occupational competence equivalent to NQF1.

Exit level outcomes and associated assessment criteria

Exit level outcome 1

Organise nursery beds and decide on suitable plant material

Associated assessment criteria

- Nursery beds and pots are prepared according to standard operating procedures.
- Consequences of not preparing beds and pots correctly are explained.
- Suitable plant material for cuttings is selected according to organizational standards and operating procedures.
- Cuttings are planted and treated according to standard working procedures.

Exit level outcome 2

Construct tea fields and down drains

Associated assessment criteria

- Reasons and consequences of not adhering to building principles and operations related to tea fields and down drains are identified and explained.
- Basic principles of down drains and stepping material are recalled and described.
- Ground cover is planted according to standard working procedures

Exit level outcome 3

Prepare stations and plant tea bushes.

Associated assessment criteria

- Reasons and consequences of not adhering to mark and hole principles and operations related to planting of tea bushes are identified and explained.
- Tea bushes are planted correctly according to principles and standard work procedures.
- Consequences of not compacting the soil around the plant hole are explained.
- Cover-crops and wind-breaks are planted according to protective measures.
- Mulch is placed according to standard operating procedure.
- The importance of communicating the planting process is explained.

Exit level outcome 4

Harvest and prune tea.

Associated assessment criteria

- Plucking and pruning process preparation are conducted according to standard working procedures.
- Reasons for developing a bush frame and creating new growth points are explained and applied.
- Reasons for plucking tea on seedling and clonal tea fields according to quality requirements to maintain the plucking round and plucking table are explained and applied.
- Tea is pruned according to standard operating procedures at predetermined height as dictated by the specific pruning cycle.
- Tea plucking and pruning processes are finalised, documented and communicated according to standard working procedures.

Exit level outcome 5

Conduct tea field husbandry practices.

Associated assessment criteria

- Pest and weed control practices are implemented according to standard operating procedures.
- Pest and weed control chemicals are mixed according to manufacturers specifications and applied according to standard working procedures.
- Consequences of not fertilizing tea fields according to standard operating procedures are explained.
- Procedures for handling irrigation equipment correctly and according to standard working procedures are explained and applied.
- Reasons for determining water needs of tea fields are explained and applied.
- Tea fields are irrigated according to irrigation schedules and standard operating procedures.

Exit level outcome 6

Intake and preparation of green tea leaf.

Associated assessment criteria

- Reasons and consequences for conducting inspection, grading and sampling of green leaf are explained and applied.
- Non-conforming green leaf is rejected according to quality requirements.
- Green leaf is designated correctly to withering troughs according to standard working procedures.
- Importance of start up, operating and shut down procedure of machinery and equipment is explained and applied.
- Consequences and reasons for not attaining chemical and physical withering of green tea leaf are explained.
- The importance of documenting and communicating the intake and withering processes are explained.

Exit level outcome 7

Cut, ferment and dry tea leaf.

Associated assessment criteria

- Cut tear and curl rollers are monitored to comply with quality requirements
- Reasons and consequences of not cutting withered tea leaf according to quality requirements are explained.
- Consequences of not adhering to pre determined fermentation time of doohl for respectively seedling and clonal tea are explained.
- Temperature and air flow changes during fermentation to be effected and monitored according to standard operating procedures.
- Reasons for even feed of doohl to dryers to be explained.
- Importance of start-up, operating and shut down procedures of Omniburners and Boilers are explained and applied.
- Reasons and consequences of not adhering to drying principles and procedures are explained.
- The importance of plotting dryer curves is explained.

Exit level outcome 8

Sort, grade, blend and store secondary tea grades.

Associated assessment criteria

- Stork and fibre to be extracted from unsorted tea using machinery and equipment according to standard operating procedures.
- Reasons and consequences of not separating particle size according to market required grades are explained.

- Basic principles of determining volumetrics are recalled and explained.
- Tea grades are binned and bag filled according to individual grade requirements and specific operating procedures.
- Tea bags are palletized and stacked according to required standards and procedures.
- Basic principles of the intake and handle of secondary tea grades are explained and applied.
- Procedures for handling equipment and machinery correctly and according to safety requirements are explained and applied.

Criteria for internal and external assessors

Assessors need experience in the following areas:

Interpersonal skills, subject matter and assessment expertise.

The assessor needs to be competent in the planning and conducting of learning outcomes and design and develop assessments as described in the relevant unit standards. The subject matter experience must be well developed within the field of tea production and manufacture.

The subject matter experience of the assessor can be established by recognition of prior learning.

Assessors need to be registered with the relevant Education and Training Quality Assurance Body.

International comparability

A thorough search was done to find international qualifications and unit standards in tea producing countries such as Kenya, Malawi, and Sri Lanka specific to the Tea production and manufacturing Industry, but no formal unit standards and qualifications could be found. It is however a fact that similar processes for production and manufacture of tea are used internationally by other producing tea countries.

However, specific areas such as irrigation and fertilization were compared to New Zealand qualifications on Horticulture and these were:

- National Certificate in Horticulture Level 2
- National Certificate on Horticulture (Horticultural Theory) Level 3

Integrated assessment criteria

The term integrated assessment also implies that the theoretical and practical components should be assessed together and assess combinations of practical, applied, foundational and reflective competencies.

Assessment activities should be done in real workplace situations and where simulations or role-plays are used, there should be supporting evidence to show that the learner is able to display the competencies to the real work situation.

All assessments should be conducted in line with the following documented principles of assessment: appropriateness, fairness, manageability, integration into work of learning, validity, direct, authentic, sufficient, systematic, open and consistent.

Learners will produce evidence of the following:

- Verbal and written explanations of reasons for adhering to operational and work site procedures as well as statutory requirements, adhering to specific sequence of operations, identifying deviations, taking corrective actions and recording relevant data, and reporting deviations outside the jobholder's responsibility.
- Demonstrations of a range of operational actions relating to applying quality control in plucking-, pruning-, fertilising-, irrigating of tea, and withering-, fermenting-, drying-, sorting-, and packing of tea, and applying general safety in the work place. Learners will also demonstrate an understanding of the Tea Industry.
- Oral or written competence regarding the reflective competencies within the qualification.

In the identifying and solving of problems, team work, organising oneself, the using of applied science, the implication of actions and reactions in the world as a set of related systems are not clear from the observation, a method of oral questioning or a case study should be applied to determine the whole person development and integration of applied knowledge and skills.

- A portfolio of evidence is required to prove the practical applied and foundational competencies of the learner which may include plucking programs, withering and fermentation of green leaf, and the drying and sorting of tea.
- Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.
- Unit standards in the qualification must be used to assess the specific and critical cross-field outcomes. During the integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practise and performance records. The assessment methods and tools to be used to assess Prior Learning shall be decided upon jointly by the assessor and the learner.

Articulation possibilities

This qualification lends itself to both vertical and horizontal articulation possibilities. These possibilities ensure both mobility and progression for the learner in other fields of learning such as the dairy, macadamia and fish industries and areas where supervisory competence is required. The learning areas outlined in the purpose of the qualification indicate the horizontal articulation possibilities.

Vertical articulation possibilities:

- National Certificate Farming NQF level 3 (ID 20289)
- National Certificate: Agri Trade processes NQF Level 2 (14851)

Moderation options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

Notes:

The unit standards within the qualification are structured to contain specific and critical cross-field outcomes with assessment criteria. Within each unit standard, the assessment criteria, accreditation and moderation options guide the assessors to develop assessment tools and methods. The specific, critical cross-field outcomes and assessment criteria guide the providers in developing the learning material.

The unit standards within the qualification serve as exit points from the qualification and these unit standards represent meaningful recognizable outcomes within secondary agriculture, and specifically will allow the learner to at these exit points successfully qualify as operators within sub departments of Tea production and manufacture.

New Unit standards and specific outcomes at NQF level 1**1. TITLE PREPARE NURSERY BED AND FILL POT**

- Specific Outcome 1:1 Prepare Nursery beds
Specific Outcome 1:2 Make Nursery beds
Specific Outcome 1:3 Fill pots
Specific Outcome 1:4 Complete bed preparation process

2. TITLE SELECT PLANT MATERIAL

- Specific Outcome 2:1 Prepare for plant selection
Specific Outcome 2:2 Select plants
Specific Outcome 2:3 Hardening-off of mature plants
Specific Outcome 2:4 Complete selection process

3. TITLE BUILD TEA FIELD TERRACES AND DOWN DRAINS

- Specific Outcome 3:1 Prepare for building process
Specific Outcome 3:2 Build terraces and down drains
Specific Outcome 3:3 Complete terraces and down drain process

4. TITLE PLANT TEA BUSHES

- Specific Outcome 4:1 Prepare for planting process
Specific Outcome 4:2 Plant tea bushes
Specific Outcome 4:3 Complete plant process

5. TITLE MARK AND HOLE PLANT STATIONS

- Specific Outcome 5:1 Prepare for mark and hole process
Specific Outcome 5:2 Mark and hole plant stations
Specific Outcome 5:3 Complete mark and hole process

6. TITLE PLUCK TEA

- Specific Outcome 6:1 Prepare for plucking process

- Specific Outcome 6:2 Pluck tea
Specific Outcome 6:3 Complete pluck process

7. TITLE PRUNE TEA

- Specific Outcome 7:1 Prepare for prune process
Specific Outcome 7:2 Prune tea
Specific Outcome 7:3 Complete prune process

8. TITLE CONTROL PEST AND WEED IN TEA FIELDS

- Specific Outcome 8:1 Prepare for chemical application and weeding
Specific Outcome 8:2 Application of chemicals
Specific Outcome 8:3 Hand weeding
Specific Outcome 8:4 Complete pest and weed control process

9. TITLE FERTILISE TEA FIELD AND NURSERY

- Specific Outcome 9:1 Prepare for fertilization process
Specific Outcome 9:2 Application of fertiliser
Specific Outcome 9:3 Application of trace elements

10. TITLE IRRIGATE TEA FIELD AND NURSERY

- Specific Outcome 10:1 Prepare for irrigation
Specific Outcome 10:2 Irrigate tea fields and nursery
Specific Outcome 10:3 Complete irrigation process

UNIT STANDARD TITLES AND SPECIFIC OUTCOMES AT NQF LEVEL 2**11. TITLE CUT SELECTED TEA CLONES**

- Specific Outcome 11:1 Prepare cutting process
Specific Outcome 11:2 Take cuttings
Specific Outcome 11:3 Treat cuttings



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Specific Outcome 11:4 Compete cutting process

12. TITLE INTRODUCTION TO TEA PRODUCTION

Specific Outcome 12:1 Demonstrate a basic understanding of tea production

Specific Outcome 12:2 Demonstrate an understanding of safety in the workplace

Specific Outcome 12:3 Demonstrate an understanding of work ethics

Specific Outcome 12:4 Demonstrate an understanding of quality management

13. TITLE INTRODUCTION TO TEA MANUFACTURE

Specific Outcome 13:1 Demonstrate a basic understanding of tea manufacturing

Specific Outcome 13:2 Demonstrate an understanding of safety in the workplace

Specific Outcome 13:3 Demonstrate an understanding of work ethics

Specific Outcome 13:4 Demonstrate an understanding of quality management

14. TITLE INTAKE OF SECONDARY BLACK TEA GRADES

Specific Outcome 14:1 Prepare for the intake process

Specific Outcome 14:2 Handle the secondary grades

Specific Outcome 14:3 Complete the intake process

15. TITLE BLENDING OF SECONDARY GRADES

Specific Outcome 15:1 Prepare for the blending process

Specific Outcome 15:2 Blend secondary grades

Specific Outcome 15:3 Weigh and bag blended product

Specific Outcome 15:4 Complete blending process

16. TITLE LEAF DOWN

Specific Outcome 16:1 Prepare for the feeding process

Specific Outcome 16:2 Feed withered leaf

Specific Outcome 16:3 Complete feeding process

17. TITLE INTAKE OF GREEN LEAF

Specific Outcome 17:1 Prepare for the intake of green leaf

Specific Outcome 17:2 Handle green leaf

Specific Outcome 17:3 Complete the intake process

18. TITLE WITHERING GREEN LEAF

Specific Outcome 18:1 Prepare for withering process

Specific Outcome 18:2 Withering of green leaf

Specific Outcome 18:3 Complete withering process

17. TITLE ROLL AND FERMENT WITHERED LEAF

Specific Outcome 17:1 Prepare for cutting and fermentation process

Specific Outcome 17:2 Cut withered leaf

Specific Outcome 17:3 Ferment macerated leaf (Doohl)

Specific Outcome 17:4 Complete fermentation

18. TITLE FIRING AND DRYING OF TEA

Specific Outcome 18:1 Prepare for firing drying process

Specific Outcome 18:2 Firing/drying of doohl

Specific Outcome 18:3 Control dryer

Specific Outcome 18:4 Complete drying process

19. TITLE SORT BLACK TEA

Specific Outcome 19:1 Prepare for sorting process

Specific Outcome 19:2 Extract stork y

Specific Outcome 19:3 Grade tea

Specific Outcome 19:4 Complete sorting process

20. TITLE PACK AND STACK MADE TEA

Specific Outcome 20:1 Prepare for packing process

Specific Outcome 20:2 Select grades for packing

Specific Outcome 20:3 Fill tea bags

Specific Outcome 20:4 Complete stack and pack process

Electives	Plan and manage time in the workplace	12513	4	Operate in a team	8420	4	Apply basic business principles	8000	9
							Lead a team, plan, allocate and assess their work	9527	4
							Maintain occupational health, safety and general housekeeping	8016	8
									21
A minimum of 4 credits must be achieved from the Elective Area of Learning									
Total Minimum Credits for Qualification - 137									



National Certificate: Macadamia production and de-husking – NQF level 2

Field: Agriculture and Nature Conservation

Sub-field: Secondary Agriculture

NQF Level: 2

Credits: 120

Rationale for the Qualification

This qualification is aimed at people who are working in the Macadamia industry or who would like to start a career in the industry. It is aimed at formalising the skills required in the macadamia production and de-husking processes to facilitate career-pathing and to provide access to new entrants. The qualification provides learners with access to learning in specialised areas within the macadamia industry. It also provides learners with the necessary background knowledge and skills to be portable within other Agricultural Industries.

As the qualification addresses the issue of job creation, the following key labour issues were taken into consideration:

- The unequal access to education and training as well as employment opportunities
- The skills shortage in the labour force
- The effects of race, gender and geographical location on advancement
- The decline in levels of employment in South Africa
- Unequal distribution of income

Purpose of the Qualification

This qualification provides learners with the opportunity to obtain competence in broad macadamia production and de-husking processes and practices, namely harvesting of macadamias, fertilization and irrigation of orchards, scouting of macadamia orchards and de-husking of macadamia nuts. This will provide the learner with opportunities to grow within any of these fields.

Learners who embark on obtaining this qualification will find that the acquisition of competence in the respective unit standards, which make up the qualification, will add value not only to their respective positions, but to the industry as well.

It will provide the broad knowledge, skills and values needed in the macadamia industry and will facilitate access to, and mobility and progression within, education and training to progress along a learning path for learners who:

- Were previously disadvantaged or were unable to complete their schooling.
- Have worked in the macadamia industry for a number of years, but have no formal qualification or recognition of skills in this area.
- Wish to extent their range of skills and knowledge of the industry so that they can become competent workers in the macadamia industry and the economy as a whole

Access to the qualification

The only access restriction is outlined in the 'Learning assumed to be in place', outlined below. There are no further restrictions placed on learners that may prevent them from gaining access to this Qualification.

Learning assumed to be place

The learner will have appropriate levels of competence in Communication, Languages and Numeracy equivalent to NQF1.

Rules of combination

This Qualification consists of a minimum of 120 credits taken from 36 Fundamental, 66 core and a minimum of 18 credits to total 120 credits.

Exit level outcomes and associated assessment criteria

1. Exit Level outcome

Peg plant stations to establish macadamia orchards

Associated assessment criteria

- Consequences of not placing pegs along contour lines correctly are explained.
- Basic principles of pegging out plant stations across contour lines are explained and applied

2. Exit Level outcome

Prepare plant stations and plant macadamia trees

Associated assessment criteria

- Reasons and consequences of not adhering to mark and hole principles and operations related to planting of macadamia trees are identified and explained.
- Consequences of not applying predetermined quantity of fertiliser to soil before planting are explained.

- Macadamia trees are planted correctly according to principles and standard work procedures.
- Plastic mulch is placed around planted tree according to standard operating procedure.
- The importance of communicating the planting process is explained.

3. Exit Level outcome

Harvest of macadamia nut in husk.

Associated assessment criteria

- Harvest preparation is conducted according to standard working procedures.
- Harvesting processes including the pick up of nuts and stripping of nut in husk from predetermined orchards are applied.
- Macadamia nuts harvested are weighed, recorded and quantities communicated according to standard working procedures.

4. Exit Level outcome

Conduct macadamia orchard husbandry practices.

Associated assessment criteria

- Pest and weed control practices are implemented according to standard operating procedures.
- Pest and weed control chemicals are mixed according to manufacturers specifications and applied according to standard working procedures.
- Consequences of not fertilizing macadamia orchards according to standard operating procedures are explained.
- Procedures for handling irrigation equipment correctly and according to standard working procedures are explained and applied.

6. Exit Level outcome

Scout macadamia orchards.

Associated assessment criteria

- Principles of collecting pest samples in orchards to be explained and applied.
- Reasons and consequences of not identifying the type of pest infestation to be explained.
- Appropriate spraying program to be applied according to infestation levels.

7. Exit Level outcome

Manage in take process of nuts and operate de-husking machinery.

Associated assessment criteria

- Principles and procedures of intake process to be recalled and explained.
- Machinery is prepared, maintained and used according to work site procedures.
- Consequences of not adhering to work site procedures and manufacturers specifications are understood and explained.
- Reasons and consequences of not removing partially damaged nuts are to be explained.

- Moisture content of nuts reduced by monitoring airflow into storage bins.

8. Exit Level outcome

Dispatch nut and kernel according to client requirements.

Associated assessment criteria

- Nut in shell is dispatched according to standard work site procedures.
- Records and reports are completed according to work site procedures and explained accordingly.
- Kernel is pallitised and dispatched too client requirements according to standard work procedures.
- Reasons and consequences of not dispatching kernel to client requirements to be understood and explained.
- Dispatch process is documented and communicated according to standard working procedures.

Criteria for internal and external assessors

Assessors need experience in the following areas:

Interpersonal skills, subject matter and assessment expertise.

The assessor needs to be competent in the planning and conducting of learning outcomes and design and develop assessments as described in the relevant unit standards. The subject matter experience must be well developed within the field of macadamia production and de-husking.

International comparability

A thorough search was done to find international qualifications and unit standards in macadamia producing countries but no formal unit standards and qualifications could be found. It is however a fact that similar processes for production and de-husking of macadamias are used internationally by other producing macadamia countries.

However, specific areas such as irrigation and fertilization were compared to qualifications as found with the:

New Zealand Qualifications Authority and these were:

- National Certificate in Agriculture (Level 2) 0985
- National Certificate on Horticulture (Level 2) 0082

Australian National Training authority and these were:

- Certificate in Agriculture (RUA 10198)
- Certificate in Agriculture-Production Horticulture (RUA 11698)

Only very few elements may act as reference points for this qualification and the best practice points were highlighted and used in the generation of this qualification's unit standards.

The differences with the international counterparts are also in the formatting, titles and scope of coverage or focus.

Articulation possibilities

The generic nature of this qualification and the focus on multi-skilling will provide for portability across various sectors in the processing domain. It is envisaged that learners completing this qualification will be employable in fast moving consumer goods industries, amongst others such as the sugar industry, tea processing industry and others.

It prepares the learner and forms the basis for progression towards other qualifications such as National Certificate in Spice Powder Extraction and Blending at NQF Level 3 and National Certificate in Tea Production at NQF Level 2.

While the qualification will diverge as they progress upwards, there is enough commonality to provide for a solid base of generic skills. The learner will have multiple choices of learning paths and career paths in various technical occupations namely, milling and blending.

Integrated assessment criteria

Learners will produce evidence of the following:

- Verbal and written explanations of reasons for adhering to operational and work site procedures as well as statutory requirements, adhering to specific sequence of operations, identifying deviations, taking corrective actions and recording relevant data, and reporting deviations outside the jobholder's responsibility.
- Demonstrations of a range of operational actions relating to applying quality control in harvesting-, fertilising-, irrigating of macadamia trees, and scouting-, and de-husking of nuts, and applying general safety in the work place. Learners will also demonstrate an understanding of the Macadamia Industry.
- Oral or written competence regarding the reflective competencies within the qualification.

If the identifying and solving of problems, team work, organising oneself, the using of applied science, the implication of actions and reactions in the world as a set of related systems are not clear from the observation, a method of oral questioning or a case study should be applied to determine the whole person development and integration of applied knowledge and skills.

- A portfolio of evidence is required to prove the practical applied and foundational competencies of the learner which may include harvesting, irrigation, fertilization, and scouting of orchards, and the de-husking and dispatching of nut in shell.
- Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that

has already been acquired through formal, informal and non-formal learning and work experience.

- Unit standards in the qualification must be used to assess the specific and critical cross-field outcomes. During the integrated assessments the assessor should make use of formative and summative assessment methods and should assess combinations of practical, applied, foundational and reflective competencies.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records. The assessment methods and tools to be used to assess Prior Learning shall be decided upon jointly by the assessor and the learner.

Moderation Options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

Therefore anyone wishing to be assessed against these unit standards may apply to be assessed by any assessment agency, assessor or provider institution, which is accredited by the relevant ETQA.

Notes:

The unit standards within the qualification are structured to contain specific and critical cross-field outcomes with assessment criteria. Within each unit standard, the assessment criteria, accreditation and moderation options guide the assessors to develop assessment tools and methods. The specific, critical cross-field outcomes and assessment criteria guide the providers in developing the learning material.

The unit standards within the qualification serve as exit points from the qualification and these unit standards represent meaningful recognizable outcomes within secondary agriculture, and specifically will allow the learner to at these exit points successfully qualify as operators within sub departments of Macadamia production and de-husking.

Titles of Unit Standards at NQF Level 1

1. Holing Of Plant Stations For Planting
2. Plant Macadamia Trees
3. Harvest Macadamia Nut In Husk
4. Prune Macadamia Trees
5. Irrigate Macadamia Orchards
6. Fertilise Macadamia Orchard
7. Dispatch Nut In Shell

Titles Unit Standards at NQF Level 2

1. Pegging of plant stations for orchards
2. Tree training/selective pruning
3. Scouting macadamia orchard
4. Intake of nut in husk
5. De-husk of macadamia nut in husk
6. Introduction to the macadamia industry

Titles of Unit Standards at NQF Level 3

1. Dispatch kernel

Titles of Unit Standards and Specific Outcomes at NQF level 1**1. TITLE HOLING OF PLANT STATIONS FOR PLANTING**

Specific Outcome 1.1: Prepare for marking and holing process

Specific Outcome 1.2: Holing

Specific Outcome 1.3: Complete holing process

2. TITLE PLANT MACADAMIA TREES

Specific Outcome 2.1: Prepare for planting

Specific Outcome 2.2: Mix fertiliser with soils for planting

Specific Outcome 2.3: Plant trees

Specific Outcome 2.4: Complete planting process

3. TITLE HARVEST MACADAMIA NUT IN HUSK

Specific Outcome 3.1: Prepare for harvesting

Specific Outcome 3.2: Picking up nut in husk

Specific Outcome 3.3: Strip nut in husk

4. TITLE PRUNE MACADAMIA TREES

- Specific Outcome 4.1: Prepare for pruning process
- Specific Outcome 4.2: Prune trees
- Specific Outcome 4.3: Complete prune process

5. TITLE IRIGATE MACADAMIA ORCHARDS

- Specific Outcome 5.1: Prepare for irrigation
- Specific Outcome 5.2: Irrigate orchards
- Specific Outcome 5.3: Complete irrigation process

6. TITLE FERTILISE MACADAMIA ORCHARD

- Specific Outcome 6.1: Prepare for fertilisation
- Specific Outcome 6.2: Application of fertiliser
- Specific Outcome 6.3: Application of trace elements

7. TITLE DISPATCH NUT IN SHELL

- Specific Outcome 7.1: Prepare for dispatch process
- Specific Outcome 7.2: Dispatch nut in shell
- Specific Outcome 7.3: Complete dispatch process

Titles of Unit Standards and Specific Outcomes at NQF level 2**1. TITLE PEGGING OF PLANT STATIONS FOR ORCHARDS**

- Specific Outcome 1.1: Prepare for marking process
- Specific Outcome 1.2: Mark along contours
- Specific Outcome 1.3: Mark across contours

2. TITLE TREE TRAINING/SELECTIVE PRUNING

- Specific Outcome 2.1: Prepare for tree training
- Specific Outcome 2.2: Establish tree frame and form
- Specific Outcome 2.3: Complete tree-training process

3. TITLE SCOUT MACADAMIA ORCHARDS

- Specific Outcome 3.1: Prepare for tree training process
- Specific Outcome 3.2: Scout orchards
- Specific Outcome 3.3: Complete scout program

4. TITLE INTAKE OF NUT IN HUSK

- Specific Outcome 4.1 Prepare for the intake process
- Specific Outcome 4.2 Handle nut in husk

Specific Outcome 4.3 Complete the intake process

5. TITLE DEHUSK OF MACADAMIA NUT IN HUSK

Specific Outcome 5.1: Prepare for the de husking process

Specific Outcome 5.2: De-husk nuts

Specific Outcome 5.3: Sort nuts

Specific Outcome 5.4: Complete the de-husking process

6. TITLE INTRODUCTION TO THE MACADAMIA INDUSTRY

Specific Outcome 6.1: Demonstrate a basic understanding of macadamia production

Specific Outcome 6.2: Demonstrate an understanding of safety in the work place

Specific Outcome 6.3: Demonstrate an understanding of work ethics

Specific Outcome 6.4: Demonstrate an understanding of quality management

Titles of Unit standard and specific outcomes at NQF level 3

1. TITLE DISPATCH KERNEL

Specific Outcome 1.1: Prepare for dispatching process

Specific Outcome 1.2: Dispatch client product

Specific Outcome 1.3: Complete dispatch process

National Certificate: Macadamia Production and de-husking at NQF level 2							
NQF Level 1		NQF Level 2		NQF Level 3		Total	
ID No	Credits	ID No	Credits	ID No	Credits		
Fundamental			Accommodate audience and context needs in oral communication	8968	5		
			Interpret and use information from texts	8969	5		
			Write texts for a range of communicative contexts	8970	5		
			Use language and communication in occupational learning programmes	8973	5		
			Language/Communication		20		
			Demonstrate an understanding of rational and irrational numbers, and number systems within the context of relevant calculations	8982	3		
			Use mathematics to investigate and monitor the financial aspects of personal and community life	7469	2		
			Apply basic knowledge of statistics in order to investigate life and work related problems	9009	3		
			Identify, describe, compare, classify, explore, shape and motion in 2 and 3 dimensional shapes in different contexts	9008	3		
			Work with a wide range of patterns and transformations of functions and solve related problems	7457	5		
			Mathematics/Numeracy		16		
			Pegging of plant stations for macadamia orchards		6	8	
	Core			Introduction to macadamia production		3	
				Tree training/selective pruning		12	
			Scout macadamia orchards		8		
			Intake of nut in husk		3		
			De-husk of nut in husk		12		
Electives			Operate in a team	8420	4		
		12513	Plan and manage time in the workplace		4	8	
		9823	Perform basic life support and/or first aid procedures in emergencies		5	9	
			Apply basic business principles	8000	9	17	
			Lead a team, plan, allocate and assess their work	9527	4	21	
		Maintain occupational health, safety and general housekeeping	8016	8	29		
<p style="text-align: center;">A minimum of 18 credits must be achieved from the Elective Area of Learning</p> <p style="text-align: center;">Total Minimum Credits for Qualification - 120</p>						18	



National certificate: Abattoir supervision– NQF Level 3

Field: Agriculture and Nature Conservation

Sub-field: Secondary Agriculture

NQF level: 3

Credits: 149

Rationale for the qualification

This qualification provides learners with the opportunity to specialise in abattoir processes in the red meat industry. It is aimed at formalising the skills required in the red meat industry to facilitate career-pathing and to provide access to new entrants. The qualification provides learners with access to advanced learning in specialised areas within the red meat industry. It also provides learners with the necessary background knowledge and skills to be portable within other Industries.

Through the above the qualification will address one of the key priorities of the Department of Labour in the reduction of unemployment and under employment. It will assist in creating job opportunities and to create a better nation at large.

The learner will have demonstrated an ability to make decisions and consider a range of options after completion of the following unit standards in three specified areas:

Purpose of the qualification

This qualification is registered at level 3 on the National Qualification Framework. It provides learners with the opportunity to supervise and manage in abattoir processes and practices, which includes opportunity for learners to grow in these specific abattoir processes.

The fundamental learning, which learners will acquire, will allow them to be able to compile verbal and written communications and perform basic calculations. This qualification complies with the objectives of the NQF with regard to facilitating access to, mobility and progression within the red meat industry.

The qualification focuses on the skills, knowledge, values and attitude required to progress further in the industry. The intention is to release the potential of people, in order for them to grow, develop and become more competent workers. This qualification will furthermore add value to the individuals, their workplace and the economy as a whole.

Rules of combination

To complete this qualification the learner must obtain 54 fundamental 88 core and 7 electives to total 149 credits.

Access to the qualification

There are no restrictions placed on learners which may prevent them from gaining access to this qualification.

Learning assumed to be in place

The learner will have appropriate levels of Communication, Languages and Numeracy competence equivalent to NQF 2.

Exit level outcomes and associated assessment criteria**Exit level Outcome 1**

- Handle and dispatch chilled carcasses.

Associated assessment criteria

- Procedures and policies for handling chilled carcasses correctly and according to work site procedures, safety regulations and statutory requirements are explained and applied.
- Machinery and equipment for chilling carcasses are operated according to manufacturers specifications.
- Reasons and consequences of not dispatching chilled carcasses according to policies and procedures are identified and explained.

Exit Level Outcome 2

Communicate in a variety of ways

Assessment criteria

- Oral communication is maintained and adapted as required to promote effective interaction in a work context.
- Information is accessed from standing instructions, visual information and a range of other workplace texts and responses where required are appropriate to the context.
- Written communication is clear and unambiguous and at an appropriate level for designated target audiences.

Exit level outcome 3

- Evaluate dressing of carcasses

Associated assessment criteria

- Consequences of not adhering to correct evaluation forms for different species, determining the amount and species to be evaluated are explained.
- Purpose of evaluating results of evaluation to relevant parties is explained
- Procedures for evaluating carcasses according to work site procedures, safety regulations and statutory requirements are explained and implemented

International comparability

Comparisons were done against unit standards and qualifications in the New Zealand Qualifications Authority. This were:

- National Certificate in Meat Processing

A comparison of the above qualifications was undertaken and the best practice points were highlighted and used in the generation of this qualification's unit standards.

In general this qualification and its component unit standards were compared with their international counterparts and the differences are in the formatting, titles and scope of coverage or focus.

Articulation possibilities

This qualification lends itself to both vertical and horizontal articulation possibilities. These possibilities ensure both mobility and progression for the learner in other fields of learning such as the poultry, dairy, and fish industries and areas where examination and supervisory competence is required. The learning areas outlined in the purpose of the qualification indicate the vertical articulation possibilities.

This Qualification will articulate vertically with the:

Further Education and Training Certificate: Meat Classification level 4.

Further Education and Training Certificate: Meat Examination level 4.

Integrated Assessment Criteria

Unit standards associated with this qualification must be used to assess specific and critical cross-field outcomes. Assessment should focus in an integrated way on determining the competence of the learner in terms of the overall purpose and title of this qualification.

The term integrated assessment also implies that the theoretical and practical components should be assessed together and assess combinations of practical, applied, foundational and reflective competencies.

Assessment activities should be done in real workplace situations and where simulations or role-plays are used, there should be supporting evidence to show that the learner is able to display the competencies to the real work situation.

All assessments should be conducted in line with the following documented principles of assessment: appropriateness, fairness, manageability, integration into work of learning, validity, direct, authentic, sufficient, systematic, open and consistent.

Learners wishing to be assessed will need to provide evidence of the following:

- Verbal and written explanations of reasons for adhering to operational and work site procedures as well as statutory requirements, adhering to specific sequence of operations, identifying deviations, taking corrective actions and recording relevant data, and reporting deviations outside the jobholder's responsibility.
- Documentation and explanation of administrative records completed during the process of preparing animals for slaughter and handling of red and rough offal.
- Demonstrations of a range of actions in handling animals and applying general safety in the workplace
- A portfolio of evidence is required to prove the practical, applied and foundational competencies of the learner, which may include production and quality data.

Assessors and moderators should develop and conduct their own integrated assessment by making use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Recognition of prior learning

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. Where RPL is required the learner will need to prove competence in that specific area in order to obtain recognition of that skill and knowledge.

Evidence can be presented in a variety of forms, including international or previous local qualifications, reports, testimonials mentioning functions performed, work records, portfolios, videos of practise and performance records. The assessment methods and tools to be used to assess Prior Learning shall be decided upon jointly by the assessor and the learner.

Moderation Options

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA.

Any institution offering learning that will enable achievement of these unit standards or will assess these unit standards must be accredited as a provider with the relevant ETQA. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

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National Certificate: Abattoir Supervision at NQF level 3			
NQF Level 2	ID No	Credits	NQF Level 3
	ID No	Credits	NQF Level 4
	ID No	Credits	Total
F u n d a m e n t a l		5	Accommodate audience and context needs in oral communication
		5	Interpret and use information from texts
		5	Write texts for a range of communicative contexts
		5	Use language and communication in occupational learning programmes
		20	Language/Communication
		8	Operate a computer
		5	Produce and use spreadsheets for business
		5	Produce word processing documents for business
		6	Use maths to investigate and monitor the financial aspects of personal, business and national issues
		6	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life-related problems
C o r e		4	Measure, estimate and calculate physical quantities and explore, critique and prove geometrical relationships in two and three dimensional space in the life and workplace of the adult with increasing responsibility
		34	Mathematics/Numeracy
		3	Describe the relationship of junior management to the general management function
		4	Provide first aid
		13	Classify small stock carcasses
		8	Classify pork carcasses
		8	Classify beef carcasses
		8	Count incisors
		6	Evaluate dressing of carcasses
		51	
E l e v e n t		23	
		7	Provide customer service in a sales and distribution environment
		9	Apply basic business principles
			88
One elective must be achieved from the given list of unit standards Total Minimum Credits for Qualification - 128			