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**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: Processing

Registered by Organising Field 01, Agriculture and Nature Conservation, publishes the following qualification for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification. The qualification can be accessed via the **SAQA** web-site at www.sqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the qualification should reach SAQA at the address **below and no later than 16 December 2006**. All correspondence should be marked **Standards Setting – SGB for Secondary Agriculture: Processing** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

General Education and Training Certificate: Grain Handling Processes

SAQA QUAL ID	QUALIFICATION TITLE		
57829	General Education and Training Certificate: Grain Handling Processes		
SGB NAME	(ORGANISING FIELD ID	PROVIDER NAME	
SGB for Secondary Agriculture: Processing	1		
QUAL TYPE	ORGANISING FIELD DESCRIPTION	SUBFIELD	
National Certificate	Agriculture and Nature Conservation	Secondary Agriculture	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	1120	Level 1	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

Learners acquiring this qualification will be able to combine Fundamental, Core, and Elective unit standards in order to obtain competence linked to best practice.

Learners will, once assessed and qualified, be able to:

- > Demonstrate competence in basic grain handling principles.
- > Perform routine maintenance.
- > Care for tools and equipment.
- > Perform cleaning functions related to the grain handling industry, according to prescribed industry quality standards.

Acquiring these skills and knowledge will allow for progression towards other qualifications within grain handling as well as portability of learning to other qualifications in Secondary Agriculture Processing.

Rationale:

The sector for secondary agriculture processes conducted a field analysis study that eventually pointed out at two major areas, namely, the gap that exists between NQF level 1 and NQF level 2 qualifications in terms of skills need and the level of literacy in foundational knowledge required to carry out certain functions in the sub-sector. The learners who are currently employed in the sector don't necessarily hold a formal qualification at NQF level 1. Findings confirmed the need to ensure progression and access to level 2 on the NQF.

This qualification is aimed at equipping learners who have no foundational knowledge and the necessary skills required in the areas of grain handling and processing of agricultural product. Currently, the category of learners employed at the entry level do not necessarily have the required skills. Those that have the skills have not gone through a formal recognition process. This qualification will also provide learners with access to basic knowledge and skills required to perform routine maintenance and grain handling at NQF level 2 in the grain handling industry.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

Learners who would like to access this qualification should have demonstrated competency in Communication and Mathematical Literacy at ABET level 3.

Recognition of prior learning:

The qualification may be achieved in part or as a whole through the Recognition of Prior Learning process for the unit standards.

QUALIFICATION RULES

This qualification consists of a minimum of 120 credits, composed of:

- > Fundamental: 39 credits.
- > Core: 65 credits.
- > Electives: 16 credits.

EXIT LEVEL OUTCOMES

1. Demonstrate an understanding and use of work place related tools and equipment, safety practices and technology associated with Grain handling processes.
2. Demonstrate an understanding of intake and grain storage hygiene.
3. Perform duties to collect representative grain samples according to statutory requirement.
4. Apply communication and numeric skills effectively in a Grain handling environment.

ASSOCIATED ASSESSMENT CRITERIA

1.
 - > The processes to care for hand tools, utensils and electronic equipment are explained and utilized according to worksite requirements.
 - > Appropriate procedures for dealing with safety, health and environmental emergencies or incidents in the work place are recognised and applied.
2.
 - > The process to inspect contamination in grain is explained.
 - > The grain dispatch containers are disinfected and sealed according to industry based standards.
 - > The grain bins are depleted according to safety regulations.
3.
 - > Tools and equipment are identified and utilized to collect grain sample.
 - > Effects of noxious seeds are explained.
 - > Process of sifting sample is explained and demonstrated.
4.
 - > Appropriate communication strategies are used and applied in a coherent manner to accommodate cultural diversity.
 - > Numeracy and mathematical skills are recognized and applied in personal financial transactions.

Integrated assessment

The integrated assessment allows the Learners the opportunity to show that they are able to utilize concepts, ideas and actions across the unit standards. This will allow Learners to achieve competency that is in keeping with the purpose of the qualification.

An integrated assessment will indicate how theoretical learning is demonstrated in a practical environment in such a way that the application of the work learnt becomes second nature.

In conducting an assessment, the quality of the performance must also be evaluated that is both the performance and the thinking behind the action must be qualitative.

The assessment should include both formative and summative options and should use various assessment tools that are not by observation only. It is required that a Portfolio of evidence should form part of the summative assessment, with practical outcomes being demonstrated in a simulated or real work place situation.

A broad range of task-orientated and theoretical tools may be used, with the distinction between practical knowledge and foundational knowledge being maintained.

It is recommended that the assessment tools give Learners the opportunity to account for their decision-making and problem solving in line with the specific outcomes and related assessment criteria.

As a result of this qualification being generic in forming the foundation for a career in Grain Handling processes, learners should be assessed in occupational contexts and activities. The assessment should ensure that the foundational skills are portable and prepare them for further learning, whatever career path they may choose.

INTERNATIONAL COMPARABILITY

Benchmarking was done on an international basis and a search was done to find international unit standards, qualifications and courses specific to the grain handling industry. The United States of America is one of the world's leaders in grain production and handling and therefore it was more extensively used in the comparability study, It must be noted that their requirements differ from the South African Qualification.

However, unit standards in the milling area were found but nothing specific to grain handling could be found. It must be noted that extensive short courses or programmes were found which is extensively done by organizations and companies involved in the industry, no formal qualification exist on level 1 or below. The type of training offered is mainly for learners working in storage facilities and handling equipment but not specifically related to the grain handling industry. This training is predominantly designed to prevent injuries, death as main causes in the industry.

Furthermore, an extensive investigation was done in Industry Training Advisory Bodies within the sector and evolving learning strategy was considered as best practice for the market.

In conducting research the following countries were looked at:

- > United States of America.
- > Zambia.
- > India.
- > New Zealand.

These were examined, and the notable similarities and dissimilarities are:

United States of America
RSI Educational Foundation

One-day Grain Handling Operations Safety Training Seminar.

- > How to deal with common health hazards.
 - > Dust.
 - > Fire.
 - > Explosions.
 - > Pesticides.
 - > Fumigants.
 - > Falls.
 - > Confined Space.
 - > Man Lifts.
 - > Tool Safety.
 - > .Guards& Shields.
 - > Electrical.
 - > Hazard Communications.
 - > Bucket Elevator leg Safety Issues.

Three-day Grain Handling Operations Safety Training Seminar.

- > Course Content.
 - > General Safety Orientation.
 - > Hazard Communications.
 - > Bucket Elevators.
 - > Dust Control.
 - > Contractor Safety.
 - > Electrical Equipment Control & Hazards.
 - > Emergency Action Planning.
 - > Fires & explosions.
 - > Grain Dust Hazards.
 - > Hot Work Permits.
 - > Housekeeping.
 - > Ladders.
 - > Lock-out/Tag-out.
 - > Man lifts.

- > Pesticide & Chemical Handling.
- > Rail Car Handling.
- > Preventative Maintenance.
- > Respiratory Protection.
- > Dump Truck Operations.
- > Walkways & Work Surfaces.
- > Safety Procedure Development.

These two courses do not compare well with ours as they focus on educating the people on hazard recognition, safe work practices and compliance with OHSA. They do not focus on the actual handling of grain and the maintenance required. The only operator training is for elevators and dump trucks.

Systems Interface Consultants

Grain Handling Facility.

- > Course Content.
- > Emergency Action Plan.
- > General Precautions & Hazards.
- > Entry into Bins, Silos and Tanks.
- > Contractors.
- > Housekeeping.
- > Grate Openings.
- > Filters.
- > Preventative Maintenance.
- > Grain Stream Processing Equipment.
- > Emergency Escape.
- > Continuous Flow Bulk Raw Grain.
- > Inside a Bucket Elevator.

This course also focuses mainly on the health and safety aspects of working with grain in storage, with some emphasis placed on preventative maintenance. It also appears to be for a higher level than level 1.

Worldwide Training

Food & Agriculture Organisation of The United Nations

Grain Storage Techniques.

- > Economics of Grain Handling.
- > The Biodeterioration of Grain and the Risk of Mycotoxins.
- > Quality and Grading of Grain.
- > Grain Harvesting, Threshing and Cleaning.
- > Drying Methods.
- > Storage at Farm/Village Level and in Warehouses.
- > Bulk Storage.
- > Insect Control.
- > Rodent Control.

The above learning is not comparable at this level and it is evident this course is for a much higher level than our Qualification. Although it covers areas of grain storage it looks at it from a management and control perspective.

Zambia

The In-Service Training Trust Of Zambia

Grain Management

- > Accounting & Budgeting.
- > Preparation of Business Plans.
- > Capital Investment.
- > Costing and Pricing.
- > Grain Quality Determination.
- > Sampling, Grain Drying, Cleaning and Shelling.
- > Storage structures.
- > Stacking & Grain Handling Equipment.

It is evident from the title that this course is for a much higher level and therefore does not compare well with our Qualification. The only similar areas are that of Grain Handling Equipment.

India
Indian Grain Storage Management & Research Institute

Long Term Training (two months) on 'Scientific Methods of Storage and Inspections of Food grains'

- > Course Details
- > Storage Pest Management and Fumigation.
- > Pesticide Residue Analysis.
- > Chemical and Physical of Food grain.
- > Rodent Control.

The above course like many of its counterparts does not compare well with the level 1 South African one as it is pitched at a much higher level and focuses on pest and rodent control as opposed to ours which deals with the actual grain handling skills.

New Zealand

National Qualifications Framework - Grain, Seeds and Crops.

- > ID9088 - Operate grain, seed or pulse storage equipment and facilities - Level 3 - 15 credits.
- > Organise Crop Storage - Level 3 - 9087 - 2 credits.

These two standards compare quite well with this Qualification in that they deal with the actual process of handling and storing grain.

Other qualifications found in related industries cannot be compared against this qualification. The reason is that other qualifications concentrate on structures and equipment but to the handling of grain. In other countries different methods and systems are used for storage of grain.

The Industry conducted a filed analysis for training and development in grain handling, the outcome was that this qualification offers best practice in the following areas:

- > Collect representative grain samples.
- > Routine maintenance.
- > Apply grain storage hygiene principles.
- > Apply communication and numeric skills effectively in a grain handling environment.

The above mentioned best practise makes the distinction between South-African Qualification and that of other countries. It is believed that this qualification will not be only of benefit to the learner but also to the industry as a whole.

There is no doubt a shortage of standards, courses and qualifications in the international arena from which to make direct comparisons. It must be stated therefore that no formal qualifications exist at this level. Most of what does exist deals with best practices for entering and working within grain storage structures and all Occupational Health and Safety issues pertaining to this.

ARTICULATION OPTIONS

This qualification lends itself to vertical articulation possibilities. These possibilities ensure both mobility and progression for the learner in the fields of learning within the agricultural industry such as feed production and will provide the learner with an opportunity to progress at a higher level of learning:

This qualification articulates with the following qualifications:

- > National Certificate: Grain Milling at NQF Level 2 ID: 48648.
- > National Certificate: Farming at NQF Level 2 ID: 20288.

MODERATION OPTIONS

Anyone assessing a learner against these unit standards must be registered as an assessor with the relevant ETQA and have the experience or in depth knowledge of the Agri Trade or Wholesale and retail industry.

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 procedure.

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.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors must:

- > Be accredited as assessors by the relevant ETQA.
- > Have experience or in depth knowledge of the Grain Handling or Milling industry.
- > Meet any other requirements that may be stipulated by the relevant ETQA.

NOTES

When learners enter into learning program, the fundamental component of this qualification is addressed first. Learners have to be competent in terms of communication and numeracy, before the attempt to complete core and elective unit standards. Learning material for learners for this qualification do exist.

core	8163 Unload grain consignments in bulk	Level 1	2	Reregistered
core	8167 Inspect stored grain	Level 1	4	Reregistered
Core	8176 Prepare grain dispatch containers	Level 1	4	Reregistered
		Level 1	2	Reregistered
core	8182 Care for handtools, utensils and protective equipment	Level 1	2	Reregistered
Core	8186 Routine maintenance of technical- and site equipment	Level 1	5	Reregistered
Core	8190 Introduction to grain handling industry	Level 1	4	Reregistered
Core	12511 Apply quality principles in everyday cleaning tasks	Level 1	4	Reregistered
core	12512 Practice environmental awareness	Level 1	4	Reregistered
Core	12513 Plan and manage time in the workplace	Level 1	4	Reregistered
Core	15092 Plan and manage personal finances	Level 1	5	Reregistered
core	113966 Identify security, safety and environmental risks in the local environment	Level 1	6	Reregistered
Care	8177 Apply grain storage hygiene	Level 2	4	Reregistered
core	8494 Demonstrate an understanding of HIV/AIDS and its implications	Level 2	4	Reregistered
Core	8618 Organise oneself in the workplace	Level 2	3	Reregistered
Elective	8179 Repair bags and tarpaulins	Level 1	3	Reregistered
Elective	8184 Collect a representative groundnut sample	Level 1	2	Reregistered
Elective	8185 Prepare unshelled groundnut sample for grading	Level 1	3	Reregistered
Elective	12620 Apply basic safety principles in the context of conservation	Level 1	3	Reregistered
Elective	8420 Operate in a team	Level 2	4	Reregistered
relations				
Fundamental	7451 Collect, analyse, use and communicate numerical data	Level 1	2	Reregistered
Fundamental	7461 Use maps to access and communicate information concerning routes, location and direction	Level 1	1	Reregistered
Fundamental	7463 Describe and represent objects and the environment in terms of shape, space, time and motion	Level 1	2	Reregistered
			2	Reregistered
and time				
Fundamental	14084 Demonstrate an understanding of and use the numbering system	Level 1	1	Reregistered
Fundamental	119635 Engage in a range of speaking/signing and listening interactions for a variety of purposes	Level 1	6	Registered