



PulseAfrika

SAQA ID

48972

DURATION

12 Months

CREDITS

120

SETA

AGRI

NATIONAL CERTIFICATE:

PLANT PRODUCTION

NQF Level 1



PURPOSE AND RATIONALE OF THE QUALIFICATION

The purpose of this qualification is to allow new entrants access to the Primary Agricultural Sector with specific reference to Plant Production. The contextualised purpose and usage of the qualification is as follows:

- A learner assessed against this qualification will have the necessary competence to participate as part of a working team, performing the agricultural processes as applicable to Plant production in a closely defined context and under close supervision.
- Competency will be gained in any of the specialized sub-fields of Plant Production as specified under Areas Of Specialization (i.e. Vegetables, Fruit Production, Hydroponics, etc.)
- The learner will be able to take responsible decisions within a limited range based on a sound understanding of the basic principles of agri-business and good agricultural practices, in meeting the set objectives and targets within the broader farm plan which includes the economical application of general resources, agricultural production and technical knowledge and skills, all in an Plant Production context.
- The Learner will be able to carry out repetitive procedures in a predictable environment and will be able to adhere to the relevant safety, quality, hygiene and technical standards as applicable within the industry.
- In addition to the above, the learner will be well positioned to extend learning and practice into other sub-fields such as Plant Production and Mixed Farming, since such efforts will only require additional learning within the elective scope of other qualifications at this level.
- The learner will be well positioned to progress towards higher levels of Management and Technical production practices as defined by qualifications at the next level.
- Learners will be enabled to actively participate in the Primary Agricultural Sector through the production of quality agricultural products, enhancing the overall agricultural process and gain opportunities to access local, national and international agricultural markets.
- Finally, this qualification will allow qualifying learners to become economically active in farming practices that will have a direct impact on Local Economic Development through the production of food, the improvement of household food security and access to mainstream agriculture.

Rationale

This qualification provides learners the opportunity to gain a qualification in Plant Production.

The range of typical learners that will enter this qualification will vary and includes:

- New entrants in farming who wish to progress to the level of Junior Labourer within farming operations in Plant Production;
- New entrants that wishes to enter the sector as farmers;
- Learners in possession of different levels of practical experience in farming operations, which will be assessed and RPL'ed;
- Possible candidates for promotion identified by the community as leaders.
- Learners may come from both genders.

The learner will engage in operational activities relevant to Plant Production.

Requests and expressions of need for this qualification, coming from the broad, but also specific farming communities (Plant Production) forms the basis for the development of this qualification.

This qualification will form the basis for learners to extend their learning into more specialised areas of plant production and provides the basis of the establishment of sustainable farming operations through the inclusion of a wide spectrum of competencies required by farmers in South Africa. Whilst technical production orientated competencies are ensured, other aspects such as agri-business and good agricultural practices are included in the range of competencies required by farmers in order to enable them to strive towards agricultural management standards and practices at higher levels.

Competent qualifying learners in this qualification will participate in the production of quality agricultural products in Plant Production whereby enhancing the overall agricultural process and gain opportunities to access local, national and international agricultural markets.

EXIT LEVEL OUTCOMES

Exit Level Outcomes are divided into five categories of competencies, namely:

- Fundamental Competencies
- Agri-business
- Agricultural Practices
- Plant Production; and
- Animal Production (This component has been included to ensure that Learners at this level is exposed to a small component of animal production)

ASSOCIATED ASSESSMENT CRITERIA

Fundamental Competencies:

1.

- Oral reports are made or data is entered on pre-printed forms or screens.
- Instructions (including challenging, inappropriate or incorrect instructions) are received, evaluated, clarified and acted on.
- Workplace language, e.g. special purpose gestures and terminology to describe conditions, events, problems and actions is used.
- Meetings (describe conditions, state own opinions) are participated in.
- Information is collected from a variety of sources by recognising / reading / and/or using sensory cues.
- Information (collected from instruments, gauges, outputs, incidents, operations) is organised, summarised and responded to.
- Conditions or states are determined by measuring (i.e. temperature, size, mass, colour).

2.

- Numbers are used to count and measure.
- A calculator is used to add, subtract, divide or multiply.
- Simple fractions and decimals are read and written.
- Simple ratios / percentages are applied as part of an instruction.
- Proper use is made of number sequence, i.e. batch numbers.
- Shapes are recognised.
- Money is calculated in Rands and cents (related to pay, deductions, price, etc.)
- Business related application are applied.
- Underpinning natural science principles are applied.

3.

- Different elementary data collection methods are applied whilst agricultural data is collected.
- Collected agricultural data is recorded correctly and accurately.
- Data collection equipment is used and maintained.
- Appropriate health, safety and hygiene standards

are maintained throughout the data collection process.

4.

- Basic environmental patterns and processes such as soils, climate, water sources, topography, ecosystems pertaining to local conditions only are recognized.
- An elementary comprehension of farming systems and design such as internal and external inputs; local, regional and export markets; diverse income sources; needs and aspirations of people is demonstrated.
- Measurable indicators of sustainability such as social, economic and ecological are identified and described.

Agri-business:

5.

- Agricultural inputs are received.
- Storage information on inputs is sourced.
- Stock levels are maintained.
- Accurate records are kept.
- Safety regulations are observed.

6.

- The concept of production is explained.
- The basic functions within the production process are explained.
- The transformation/conversion process is explained.

7.

- The marketing concept is explained.
- The principles of supply and demand are explained.
- The components and importance of marketing mix are explained.

8.

- Capital investment is explained.
- Flow of money is explained.
- Flow of cost is explained.
- The concept of profit and loss is explained.
- The basic components of basic financial record keeping system are explained.

9.

- Explain HR management rules and procedures applicable to the immediate work environment.
- Adhere to relevant LR legislation.
- Identify the different types and purposes of contracts and agreements.
- Describe and apply health and safety rules and practices applicable to the workplace.

10.

- The natural resources required for the selection of an agricultural enterprise are identified, recognized and described.
- The infrastructural requirements for the selection of the relevant enterprise are determined and described.
- All livestock or crops on the farm are identified.
- The relation between the natural resources, infrastructure, the choice of stock or crop and production cycle is explained.

Agricultural Practices:

11.

- Good personal hygiene practices are applied.
- Preventative measures against food contamination are applied.
- Warning signs regarding product safety (where applicable) are adhered to.

12.

- Water is sampled correctly and quality observed.
- Water quality is recorded and reported on.
- Minor maintenance tasks are performed on water quality technical systems.

13.

- The impact of farming operations and practices on the environment is explained.
- Environmentally friendly methods of disposal and/or re-use of farm and domestically generated waste and pollutants are applied.
- Biodiversity is maintained and increased.
- Invasive alien plant species and noxious weeds are cleared.
- On farm fire breaks and/or fire guards are established.

14.

- Veld, planted pasture and arable land are recognized.
- Soil physical characteristics are related to land capability.
- A swale (level contour bund), using a simple water level is constructed.
- Swales and soil erosion prevention structures are maintained.

15.

- Tools and equipment that had been selected from a range of tools, are appropriate to the agricultural task.
- Problems related to the use of tools and equipment are recognized and appropriate action is taken.
- Routine maintenance tasks are performed in a safe manner.
- Agricultural equipment is cleaned and stored correctly.

Plant Production:

16.

- The different parts of a plant are located, identified and described.
- The role of the parts of the plant is described.
- The relation between the plant and environment is explained.

17.

- Identify and apply nutrients correctly by using the appropriate application techniques.

- Basic symptoms of nutritional deficiencies are identified.
- Soil properties are explained.

18.

- The propagation environment and the components thereof are identified and the role/effect on propagation is described.
- Propagation material and media are prepared according to the propagation environment.
- Routine propagation methods are applied.
- Routine post propagation methods are applied.
- Safety and hygiene measures are applied.

19.

- Tools, appropriate to the harvesting method and crop, are selected and the correct usage is demonstrated.
- Crop is sampled for maturity indexing.
- Harvesting procedures are applied.
- Health, hygiene and safety measures are adhered to and applied.

20.

- Soil or growth medium is prepared and irrigated according to the plant/crop requirements.
- Planting material is handled correctly for the successful establishment.
- The effects of the environment on the specific crop are explained.
- Correct placing, spacing and depth of the plant material is determined.

21.

- Insects and other classes of animals are distinguished.
- The basic anatomy of an insect is described.
- Crop damaging appendages are located and the damages to plants are explained.
- The life cycle of an insect is explained.

- Distinguish between harmful and useful insects and pests.

22.

- Frameworks are developed according to the requirements of the crop.
- Pruning, training and other manipulation techniques are applied.
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- NOTE: Assessment should be specific to the area of operation (i.e. Either horticulture or agronomy including but not limited to arable and/or dry land production).

Animal Production:

23.

- Environmental factors influencing the veld are identified and described.
- Environmental factors that influence livestock selection are analysed and described.
- Supplementary feeding options for livestock production are identified and described.
- Beneficial and harmful organisms that influence livestock production are identified and described. [Range: emphasis on locally important parasites and diseases]
- The effects of agricultural management practices on the sustainability of the environment identified and assessed.

INTEGRATED ASSESSMENT

Integrated assessment at the level of the qualification provides an opportunity for learners to show that they are able to integrate concepts, ideas and actions across unit standards to achieve competence that is relevant and coherent in relation to the purpose of the qualification.

Integrated assessment must judge the quality of the observable performance, but also the quality

of the thinking that lies behind it. Assessment tools must encourage learners to give an account of the thinking and decision-making that underpin their demonstrated performance. Some assessment practices will be of a more practical nature while others will be of a more theoretical nature. The ratio between action and interpretation is not fixed, but varies according to the type and level of qualification.

A broad range of task-orientated and theoretical assessment tools may be used, with the distinction between practical knowledge and disciplinary knowledge maintained so that each takes its rightful place.

Generic nature of the unit standards and the context of assessment:

Because of the diverse nature of the primary agricultural sector, a generic approach to developing the unit standards has been adopted. This resulted in generic unit standards which should be contextualised within a specific area of operation, a specific agricultural commodity or specific agricultural system. Assessment therefore, should not be divorced from the context of application. All assessment tools, such as guides as well as the interpretation of unit standards and specifically range statements, should be contextualised within a specific agricultural commodity and/or system.

ADMISSION REQUIREMENTS

It is assumed that a learner entering a programme leading to this qualification has achieved numeracy, literacy and communication equivalent to ABET 3.

	Unit Standard	NQF	credits
CORE MODULES	Apply basic agricultural enterprise selection principles	1	2
	Apply basic food safety practices	1	1
	Apply basic human resource management principles and practices applicable in an agricultural environment	1	2
	Apply elementary farm layout and infrastructure	1	2
	Collect agricultural data	1	2
	Define production and understand the basic activities of production / conversion in the agri-business environment	1	2
	Demonstrate a basic understanding of the structure and function of a plant in relation to its environment	1	4
	Demonstrate an understanding of the basic concepts of sustainable farming systems	1	4
	Demonstrate an understanding of the importance of marketing	1	2
	Fertilise soil and attend to basic plant nutrition	1	5
	Handle inputs and stock in agri-business	1	2
	Harvest agricultural crops	1	5
	Identify the need for capital and understand the need for the recording of the income and different costs in an agri-business	1	2
	Maintain basic water quality	1	1
	Manipulate plants	1	5
	Operate and maintain irrigation systems	1	2
	Plant the crop under supervision	1	4
	Propagate plants	1	4
	Recognise pests, diseases and weeds on crops	1	5
	Select, use and care for hand tools and basic equipment and infrastructure	1	4
Understand how sustainable farming systems conserve natural resources	1	4	



FUNDAMENTAL MODULES

Unit Standard	NQF	credits
Analyse cultural products and processes as representations of shape, space and time	1	2
Assess the influence of the environment on sustainable livestock production	1	4
Collect, analyse, use and communicate numerical data	1	2
Critically analyse how mathematics is used in social, political and economic relations	1	2
Demonstrate an understanding of and use the numbering system	1	1
Describe and represent objects and the environment in terms of shape, space, time and motion	1	2
Engage in a range of speaking and listening interactions for a variety of purposes	1	6
Explore and use a variety of strategies to learn (revised)	1	5
Read and respond to a range of text types	1	6
Use maps to access and communicate information concerning routes, location and direction	1	1
Working with numbers in various contexts	1	6
Write for a variety of different purposes	1	6

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