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| **National Vocational Certificate in Farm Machinery and Infrastructure (Level 3)** |

**Level of qualification: 3**

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| --- | --- | --- |
|  | **Compulsory** | **Elective** |
| **Level 4 credits available** | **None** | **7** |
| **Level 3 credits available** | **52** | **32** |
| **Level 2 credits available** | **None** | **30** |
| **Minimum totals required** | **52** | **8** |

**Registration date:** <entered by the Namibia Qualifications Authority>

**Scheduled review date:** <entered by the Namibia Qualifications Authority>

**Body responsible for the qualification: Namibia Training Authority - NTA**

**Other bodies whose unit standards are included in the qualification:** None

# Purpose

This qualification recognises people who have the competencies required for performing agricultural tasks. It is awarded to people who have demonstrated the skills and knowledge required to carry out repair and maintenance of complex machinery, automated irrigation systems, tyres for tractors and agricultural machinery, fabricate metal structures using arc and oxy-acetylene welding, operate agricultural post production machinery and equipment, install an irrigation system for a small-scale agricultural operation, automated irrigation systems coordinate construction, repair and maintenance tasks for farm fences, crush pens and Kraals, farm roads and firebreaks, farm buildings. demonstrate knowledge of economically important livestock in Namibia and their component, coordinate workforce in agriculture, maintain agricultural records.

It also requires electives with a minimum total of **8 credits** from the competence below,

Harvest field crops, fruit and vegetable crops, conduct post-harvest operations for field crops and horticultural products, use draught animal, maintain livestock housing, demonstrate an understanding of energy sources used on a farm, make harness for draught animals, care for support animals, handle farm animals, perform soil and leaf sampling techniques and apply nutrient amendments, control pests, diseases, disorders and weed, demonstrate knowledge of rainwater harvesting, handling and storage systems, install solar water pumping system for small scale agricultural operations, , select and train draught animals, prevent and respond to wildfire, carry out soil and crop fertility amendments and practices, assess pest, disease, disorder and weed control tasks in crop production, perform storage and handling of, coordinate tasks for irrigation of crops.

basic energy structures, repair wind, solar and diesel pumps, prepare a basic farm enterprise plan.

The entry requirement is Certificate in Farm Machinery and Infrastructure, level 2.

This qualification leads to the National Vocational Certificate in Agriculture (Level 4).

# Regulations for the qualification

* 1. Summary of qualification requirements

This qualification will be awarded to people who are credited with a minimum of 60 credits and have met the requirements of both the compulsory and elective sections.

* 1. Detailed qualification requirements

**Compulsory sets**

*All the unit standards listed below are required.*

FIELD: Agriculture and Nature Conservation

Subfield: Machinery and Equipment

Domain: Repairs and maintenance

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1390 | Fabricate metal structures using arc and oxy-acetylene welding | 3 | 4 |
| Unit ID: 1392 | Carry out [repairs and maintenance of complex farm machinery](https://dl-web.dropbox.com/get/ProVET%20Agriculture/Downloads/Mechanisation/Repair%20and%20maintain%20complex%20farm%20machinery%20-%20L3.docx) | 3 | 4 |
| Unit ID: FMI 4 | Change tyres for tractor and agricultural machinery | 3 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Machinery and Equipment

Domain: Operate machinery, Tools and Equipment

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FMI 3 | Operate agricultural postproduction machinery and equipment | 3 | 5 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Roads, Kraals and fences

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1343 | Coordinate construction, repair and maintenance tasks for farm fences, crush pens and kraals | 3 | 5 |
| Unit ID: 1344 | Coordinate construction and maintenance tasks for farm roads and firebreaks | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Buildings and Fixtures

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1338 | Coordinate construction and maintenance tasks for farm buildings | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Farm Production Planning

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1329 | Demonstrate knowledge of the livestock industry in Namibia | 3 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Record Keeping

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1335 | Maintain agricultural records | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Human Resources Management

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1332 | Coordinate workforce in agriculture | 3 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Machinery and Equipment

Domain: Operate machinery, tools and equipment

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1383 | Operate automated irrigation systems | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Machinery and Equipment

Domain: Repairs and maintenance

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1389 | Carry out repair and maintenance of automated irrigation systems | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Buildings and Fixtures

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1338 | Coordinate construction and maintenance tasks for farm buildings | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Water supplies

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FMI 6 | Install an irrigation system for a small-scale agricultural operation | 3 | 5 |

**Electives sets**

A minimum of 8 credits is required from the following unit standards.

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Buildings and Fixtures

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1339 | Carry out repairs and maintenance of basic energy structures on the farm | 3 | 2 |
| Unit ID 1337 | Demonstrate an understanding of energy sources used on a farm | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Livestock and poultry

Domain: Draught Animals

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1371 | Select and train draught animals | 3 | 2 |
| Unit ID: 1370 | Use draught animal | 2 | 2 |
| Unit ID: 1369 | Make harness for draught animals | 2 | 5 |

FIELD: Agriculture and Nature Conservation

Subfield: Livestock and poultry

Domain: Animal Husbandry

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1348 | Care for support animals | 2 | 2 |
| Unit ID: 1357 | Handle farm animals | 2 | 3 |
| Unit ID: 1358 | Maintain housing for livestock | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Water supplies

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1347 | Repair wind, solar and diesel operated pumps | 3 | 5 |
| Unit ID: FMI 6 | Install an irrigation system for a small-scale agricultural operation | 3 | 5 |
| Unit ID: FMI 7 | Demonstrate knowledge of rainwater harvesting, handling, and storage systems | 3 | 4 |
| Unit ID: FMI 10 | Install solar water pumping system for small scale agricultural operations | 3 | 6 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Plant Husbandry

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
|  |  |  |  |
| Unit ID: 1306 | Control pest, disease, disorder and weeds | 2 | 4 |
| Unit ID: 1314 | scout pests, diseases, disorders and weeds in crops | 2 | 3 |
| Unit ID: 1307 | Perform soil and leaf sampling techniques and apply nutrient amendments | 2 | 2 |
| Unit ID: 1315 | Carry out soil and crop fertility amendments and practices | 3 | 4 |
| Unit ID: 1317 | Assess pest, disease, disorder and weed control tasks in crop production | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Agronomic Crops

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1295 | Harvest field crops | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Horticulture

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1301 | Harvest fruit and vegetable crops | 2 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Post-Harvest Storage and Handling

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1325 | Perform storage and handling of horticultural products | 3 | 4 |
| Unid ID: 1323 | Conduct post-harvest operations for field crops | 2 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Irrigation

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1304 | Coordinate tasks for irrigation of crops | 3 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm management

Domain: Farm Business

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FB 1 | Prepare a basic farm enterprise plan | 4 | 7 |

FIELD: Agriculture and Nature Conservation

Subfield: Natural Resources Management

Domain: Farm Ecosystem Management

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1394 | Prevent and respond to wildfire | 3 | 4 |

# Credit recognition and transfer arrangements

Credits for any version of a unit standard of the same identification number will be recognised in the award of this qualification.

# Special arrangements

4.1 Providers seeking registration and/or accreditation to deliver this qualification must meet the following special arrangements.

4.1.1 This qualification will be offered to trainees **either** including a period of 2x3 months of **industrial/job attachment at the end of level 2 and level 3**, ***or*** as an **apprenticeship scheme** of a duration determined and agreed upon by the employer and the training provider on a ratio of 70/30 (70% at workplace and 30% at training institution) basis.

**Industrial/job attachment** is defined as a period in a workplace setting where a trainee obtains structured practical experience in a specific occupation in order to complement competencies acquired during training at a technical vocational training provider (TVTP).

**Apprenticeship** refers to the system of work integrated learning, where an apprentice is employed by a company on contractual basis, earning a monthly salary, learning and working side-by-side with an experienced mentor. In this case the employer must be an NTA approved entity (company) to register apprentices and has to identify a suitable training provider to provider to provide the apprentice with the opportunity to gain skills and knowledge from theoretical training.

Employers and training providers are encouraged to consult the **National Policy On Work-Integrated Learning (WIL) for Technical and Vocational Education and Training (TVET) Sector** for further details on WIL implementation.

4.1.2 Providers involved in the assessment of this qualification and the associated unit standards must comply with the national assessment framework for the TVET system up to and including level 5 of the National Qualifications Framework. Assessment will include performance and achievement assessment acquired through work integrated learning periods. Assessment arrangements apply to all occupations and industries which are encompassed in the technical vocational education and training sector. Assessment of some unit standards for this Qualification maybe .be based on Portfolio of evidence but only in conjunction with at least one final evaluation on fields and workshop maintenance.

4.1.3 Providers of this qualification and the associated unit standards must be registered and/or accredited.

4.1.4 Providers of this qualification and their associated unit standards must have access to all equipment and facilities detailed in the tools and equipment list of the relevant training program.

4.2 Competencies covered in this qualification may be assessed through Recognition of Prior Learning (RPL).

4.3 Further relevant information and documentation may be accessed through:

**Namibia Training Authority**

10 Rand Street

Khomasdal

Namibia

Telephone number: 061 207 8550

Facsimile number: 061 207 8551

# Transition arrangements

* 1. Non-National Qualifications Framework transition

None.

* 1. National Qualifications Framework transition

This is the 2nd version of this qualification.