

**Domain****PLANT HUSBANDRY****Title:****Demonstrate knowledge of soil and water conservation and appropriate relevant technology****Level: 2****Credits: 2****Purpose**

This unit standard specifies the competencies required to demonstrate knowledge of appropriate technology for soil and water conservation in agricultural production. It is intended for those who work in agriculture as well as people in other occupations that work with plants. It includes:

- Demonstrate knowledge of the context of and need for soil and water conservation
- Demonstrate knowledge of systems and techniques for soil and water conservation.

**Special Notes**

1. Entry information:

Prerequisites:

- *Unit 1308 - Demonstrate introductory knowledge of soil, water, nutrient and plant interactions*
- *Unit 1307 - Apply soil sampling techniques and soil fertility and conditioning amendments and practices*

2. This unit standard is to be delivered and assessed in the context of agricultural operations and can be assessed in conjunction with other relevant technical unit standards.

3. The evidence required to demonstrate competency in this unit must be relevant to workplace operations.

4. Assessment evidence may be collected from a real workplace or an appropriate simulated environment in which agricultural operations are carried out.

5. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' guidelines and instructions.

6. Regulations and legislation relevant to this unit standard include the following:

- Labour Act, No. 11, 2007
- Regulations relating to the Health and Safety of employees at work, 1997
- National Agricultural Policy, 1995
- Fertilisers, farm feeds and agriculture and stock remedies Act, No. 46, 1998
- Seed and Seed Varieties Bill, 2009
- Plant Breeders' and Farmers' Rights Bill, 2009
- Biosafety Act, No. 7, 2006
- Water Resources Management Act, No. 24, 2004
- Environmental Management Act, No. 7, 2007
- Forest Act, No. 12, 2001
- Pollution Control and Waste Management Bill, 2003 3rd draft
- National Policy on Human and Wildlife Conflict Management, 2009

- Agronomic Industry Act, 20, 1992
- Plant Quarantine Act, No. 7, 2008
- National Policy on Climate Change for Namibia, 2011
- National Drought Policy, 1997
- United Nations Convention to Combat Desertification, 1994
- United Nations Framework Convention on Climate Change, 1992
- Convention on Biological Diversity, 1992
- Standards Act, 2005, Standards Regulations: Standards Act, 2005 and relevant Namibian Standards as established

and all subsequent amendments to any of the above

- All current sets of *Good Agricultural Practices* to which Namibia subscribes and that regulate agricultural products entering a country to which Namibian producers may export.

### **Quality Assurance Requirements**

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority on [www.namqa.org](http://www.namqa.org) and the Namibia Training Authority on [www.nta.com.na](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1. Demonstrate knowledge of the context of and need for soil and water conservation**

#### **Range**

#### **Performance Criteria**

- 1.1 Soil erosion is defined.
- 1.2 Water conservation is defined.
- 1.3 Knowledge of the quantity and severity of soil erosion globally and in Namibia is demonstrated.
- 1.4 Knowledge of the demand for and use of water for irrigation globally and in Namibia is demonstrated.
- 1.5 Knowledge of global and Namibia's food needs in relation to soil and water resources is demonstrated.

### **Element 2. Demonstrate knowledge of systems and techniques for soil and water conservation**

#### **Range**

Systems and techniques may include, but are not limited to, systems and types of irrigation that reduce water use, hydroponics, rainwater harvesting, conservation agriculture (particularly as practiced in Namibia) and including appropriate mechanisms for integration of livestock management in soil management (such as livestock grazing and impact, temporary in-field kraals), mechanisms for soil erosion control, fallow, permaculture, sustainable, ecological and organic farming, use of soil water testing methods, and agroforestry.

**Performance Criteria**

- 2.1 Systems and techniques for soil and water conservation are described.
- 2.2 Climate change is described.
- 2.3 The relevance of systems and techniques to adaptation to climate change is explained.
- 2.4 Knowledge of the potential impact of systems and techniques to efficiency of production is demonstrated.

**Registration Data**

<b>Subfield:</b>	Agronomy and Horticulture
<b>Date first registered:</b>	25 November 2015
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<b>Body responsible for review:</b>	Namibia Training Authority