DAIRY FORAGE PRODUCTION

ISCED UNIT CODE: 0811 241 01A

TVETCDACC UNIT CODE:DA/CU/FM/CR/01/3/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Produce dairy forage

Duration of Unit: 60 hours

Unit Description

This unit specifies the competencies required to produce dairy forage. It involves applying food safety measures while participating in land preparation; soil fertility maintenance; and forage establishment, management, conservation and storage.

Summary of Learning Outcomes

By the end of this unit, the learner should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Prepare to produce dairy forage	15
2.	Produce dairy forage	30
3.	Complete dairy forage production	15
Total		**60**

Learning Outcomes, Content and Methods of assessment

Learning Outcome	Content	Methods of assessment

Learning Outcome	Content	Methods of assessment

1. Prepare to produce dairy forage	1.1. PPEs used in forage production
	1.2. Methods of land preparation
	1.3. Land preparation tools, implements and machinery
	1.4. Planting materials
	    1.4.1. Types
	    1.4.2. Preparation
	1.5. Soil conservation
	1.6. Environmental protection measures
	1.7. Occupational safety and health procedures
		• Written tests
		• Observation
		• Oral questions
		• Third party reports
		• Interviewing

2. Produce dairy forage	2.1. Forage types
	    2.1.1. Pasture
	    2.1.2. Fodder crops
	    2.1.3. Multi-purpose trees
	2.2. Forage planting methods
	    2.2.1. Direct planting
	    2.2.2. Under sowing
	    2.2.3. Over over sowing.
	2.3. Forage spacing requirements
	    2.3.1. Seed rates
	    2.3.2. Gapping
	2.4. Pest, weed and disease control
	    2.4.1. Types
	    2.4.2. Control methods
	2.5. Fertilizer application
	    2.5.1. Types of fertilizer
	    2.5.2. Application rates and methods
	    2.5.3. Time
	2.6. Irrigation methods
	    2.6.1. Overhead
	    2.6.2. Furrow / canal
	    2.6.3. Drip
		• Observation
		• Written tests
		• Oral questions
		• Product analysis
		• Interviewing

Learning Outcome	Content	Methods of assessment
3. Evaluate dairy forage production	3.1. Forage quality and safety 　3.1.1. Crude protein 　3.1.2. Neural detergent fibre 　3.1.3. Moisture content 　3.1.4. Acid detergent fibre 　3.1.5. Digestibility 　3.1.6. Total digestible nutrients 　3.1.7. Metabolizable energy. 　3.1.8. Forage quantity forecasting 3.2. Forage quantity 　3.2.1. Importance of forage yields 　3.2.2. Factors influencing forage yield. 3.3. Forage production errors and rectification measures.	• Observation • Written tests • Oral questions • Interviewing
4. Complete dairy forage production	4.1. Forage conservation methods 　4.1.1. Hay making 　4.1.2. Standing hay. 　4.1.3. Silage making 4.2. Waste disposal 　4.2.1. Types of waste 　　4.2.1.1. Stem 　　4.2.1.2. Leaves 　　4.2.1.3. Weeds 　4.2.2. Methods of disposal 　　4.2.2.1. Composting 　　4.2.2.2. Mulching 　　4.2.2.3. Green manure 　　4.2.2.4. Animal feed 　　4.2.2.5. Biogas production.	• Observation • Written tests • Oral questions • Interviewing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Field trips
- Discussions
- Direct instruction

Recommended Resources for 25 Trainees

Functional dairy farm with the following:		
• Tractors • Land • Trailer • Ploughs • Harrows • Tillers • Sprayers • Rakes • Tedders	• Mowers • Forage choppers / chaff cutters • Balers • Forage harvesters • Hammer mills • Molasses • Silage silos • Forage planting materials	• Hay barn • Farm tools (Hoe, fork, rake, panga, shovel and watering cans) • Polythene sheets and tubes • Baling twines • Forage box