

## DAIRY FORAGE PRODUCTION

**UNIT CODE:** DA/CU/FM/CR/02/3/B

### Relationship to Occupational Standards

This unit addresses the Unit of Competency: Produce dairy forage

**Duration of Unit:** 48 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

1. Apply food safety measures to produce dairy forage
2. Prepare to produce dairy forage
3. Produce dairy forage
4. Evaluate dairy forage production
5. Complete dairy forage production

### Learning Outcomes, Content and Methods of assessment

Learning Outcome	Content	Methods of assessment
1. Apply food safety measures to produce dairy forage	<ul style="list-style-type: none"><li>• Meaning of food safety</li><li>• Importance of food safety</li><li>• Principles of food safety</li><li>• Prerequisite programmes<ul style="list-style-type: none"><li>○ Meaning and importance of prerequisite programmes</li><li>○ Relevant programmes<ul style="list-style-type: none"><li>▪ Good agricultural practices</li><li>▪ Good manufacturing practices</li><li>▪ Standard Sanitary Operating Procedures</li></ul></li></ul></li><li>• Hazard analysis<ul style="list-style-type: none"><li>○ Significance of hazards</li><li>○ Types and sources of hazards</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Written tests</li><li>• Oral questioning</li><li>• Observation</li></ul>

Learning Outcome	Content	Methods of assessment
	<ul style="list-style-type: none"> <li>○ Methods of hazard control</li> <li>● Components of HACCP plan               <ul style="list-style-type: none"> <li>○ Critical control points</li> <li>○ Critical control limits</li> <li>○ Monitoring procedures on the control limits</li> <li>○ Corrective actions</li> <li>○ Verification and validation</li> <li>○ Record keeping</li> </ul> </li> </ul>	
2. Prepare to produce dairy forage	<ul style="list-style-type: none"> <li>● Soil conservation methods</li> <li>● Methods of land preparation</li> <li>● Planting materials               <ul style="list-style-type: none"> <li>○ Types</li> <li>○ Preparation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Written tests</li> <li>● Observation</li> <li>● Oral questions</li> <li>● Third party reports</li> <li>● Interviewing</li> </ul>
3. Produce dairy forage	<ul style="list-style-type: none"> <li>● Forage types               <ul style="list-style-type: none"> <li>○ Pasture</li> <li>○ Fodder crops</li> <li>○ Multi-purpose trees</li> </ul> </li> <li>● Forage planting methods</li> <li>● Seed rates</li> <li>● Gapping</li> <li>● Pest, weed and disease control               <ul style="list-style-type: none"> <li>○ Types</li> <li>○ Control methods</li> </ul> </li> <li>● Fertilizer application               <ul style="list-style-type: none"> <li>○ Types of fertilizer</li> <li>○ Application rates and methods</li> <li>○ Time</li> </ul> </li> <li>● Irrigation methods               <ul style="list-style-type: none"> <li>○ Overhead</li> <li>○ Furrow / canal</li> <li>○ Drip</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Observation</li> <li>● Written tests</li> <li>● Oral questions</li> <li>● Product analysis</li> <li>● Interviewing</li> </ul>

Learning Outcome	Content	Methods of assessment
	<ul style="list-style-type: none"> <li>Forage harvesting <ul style="list-style-type: none"> <li>Stage</li> <li>Methods</li> </ul> </li> </ul>	
4. Evaluate dairy forage production	<ul style="list-style-type: none"> <li>Forage judging</li> <li>Forage quantity forecasting</li> </ul>	<ul style="list-style-type: none"> <li>Observation</li> <li>Written tests</li> <li>Oral questions</li> <li>Product analysis</li> <li>Interviewing</li> </ul>
5. Complete dairy forage production	<ul style="list-style-type: none"> <li>Forage conservation methods <ul style="list-style-type: none"> <li>Hay making</li> <li>Silage making</li> </ul> </li> <li>Forage storage</li> <li>Waste disposal</li> </ul>	<ul style="list-style-type: none"> <li>Observation</li> <li>Written tests</li> <li>Oral questions</li> <li>Interviewing</li> </ul>

#### Suggested Methods of Instruction

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

#### Recommended Resources

Functional dairy farm with the following:		
<ul style="list-style-type: none"> <li>Tractors</li> <li>Land</li> <li>Trailer</li> <li>Ploughs</li> <li>Harrows</li> <li>Tillers</li> <li>Sprayers</li> <li>Rakes</li> <li>Tedders</li> </ul>	<ul style="list-style-type: none"> <li>Mowers</li> <li>Forage choppers / chaff cutters</li> <li>Balers</li> <li>Forage harvesters</li> <li>Hammer mills</li> <li>Molasses</li> <li>Silage silos</li> <li>Forage planting materials</li> </ul>	<ul style="list-style-type: none"> <li>Hay barn</li> <li>Farm tools (Hoe, fork, rake, panga, shovel and watering cans)</li> <li>Polythene sheets and tubes</li> <li>Baling twines</li> <li>Forage box</li> </ul>