

DAIRY FEED FORMULATION

UNIT CODE: DA/CU/FM/CR/04/3/B

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Formulate dairy feed

Duration of Unit:24 hours

Unit Description

This unit specifies the competencies required to formulate dairy feed. It involves applying food safety measures while participating in collection of feed ingredient and ration samples; processing and mixing feed ingredients; and ration packaging and storage.

Summary of Learning Outcomes

1. Apply food safety measures to formulate dairy feed
2. Prepare to formulate dairy feed
3. Formulate dairy feed
4. Evaluate dairy feed formulation
5. Complete dairy feed formulation

Learning Outcomes, Content and Methods of assessment

| Learning Outcome | Content | Methods of assessment |
|---|--|--|
| 1. Apply food safety measures to formulate dairy feed | <ul style="list-style-type: none">• Meaning of food safety• Importance of food safety• Principles of food safety• Prerequisite programmes<ul style="list-style-type: none">○ Meaning and importance of prerequisite programmes○ Relevant programmes<ul style="list-style-type: none">▪ Good agricultural practices▪ Good manufacturing practices▪ Standard Sanitary Operating Procedures• Hazard analysis<ul style="list-style-type: none">○ Significance of hazards○ Types and sources of hazards○ Methods of hazard control• Components of HACCP plan<ul style="list-style-type: none">○ Critical control points○ Critical control limits | <ul style="list-style-type: none">• Written tests• Oral questioning• Observation |

| Learning Outcome | Content | Methods of assessment |
|------------------------------------|---|---|
| | <ul style="list-style-type: none"> ○ Monitoring procedures on the control limits ○ Corrective actions ○ Verification and validation ○ Record keeping | |
| 2. Prepare to formulate dairy feed | <ul style="list-style-type: none"> ● Dairy species ● Classes of dairy animals <ul style="list-style-type: none"> ○ Calves and kids ○ Heifers and doelings ○ Lactating animals (early, mid and late lactation) ○ Dry animals ○ Bulls, bucks, steers and wethers ● Feedstuff sample collection ● Ration package labeling | <ul style="list-style-type: none"> ● Written tests ● Observation ● Oral questions ● Third party reports ● Interviewing |
| 3. Formulate dairy feed | <ul style="list-style-type: none"> ● Feeds and feedstuff classes ● Animal feed manufacturing requirements ● Forms of feed presentation ● Feed processing methods ● Feed mixing methods <ul style="list-style-type: none"> ○ Manual ○ Mechanical ● Feed mixers <ul style="list-style-type: none"> ○ Vertical ○ Horizontal ○ Transverse ● Packaging ● Feed storage | <ul style="list-style-type: none"> ● Observation ● Written tests ● Oral questions ● Interviewing ● Third party reports |
| 4. Evaluate dairy feed formulation | <ul style="list-style-type: none"> ● Feed ration sample collection ● Feed ration visual appraisal | <ul style="list-style-type: none"> ● Observation ● Written tests ● Oral questions ● Interviewing ● Third party reports |
| 5. Complete dairy feed formulation | <ul style="list-style-type: none"> ● Good manufacturing practices ● Waste product disposal | <ul style="list-style-type: none"> ● Observation ● Written tests ● Oral questions |

| Learning Outcome | Content | Methods of assessment |
|------------------|---------|--|
| | | <ul style="list-style-type: none"> • Interviewing |

Suggested Methods of Instruction

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

Recommended Resources

| Functional dairy farm with the following: | | |
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| <ul style="list-style-type: none"> • Tractors • Trailer • Chopping implements • Hammer mills • Grinding mills • Feed mixers • Feedstuff | <ul style="list-style-type: none"> • Water • Packaging material • Labels • Feed stores • Weighing balances • Pest control equipment and materials | <ul style="list-style-type: none"> • Pelleting machines • Sampling kits • Gunny bags • Twines • PPEs • Detergents • Fumigants |