

## PROCESS ANIMAL FEED

UNIT CODE:0721 351 03A

### UNIT DESCRIPTION

This unit covers the competencies required in processing animal feed. It involves source feedstuffs, process feed ingredients, mix feed batches, package processed feeds and store processed feeds.

### ELEMENT AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function	These are assessable statements which specify the required level of performance for each of the elements. <i><b>Bold and italicized terms are elaborated in the Range</b></i>
1. Source feedstuff	1.1 <i><b>Personal Protective Equipment (PPEs)</b></i> are worn as per work requirement 1.2 A list of required <i><b>feedstuffs</b></i> is prepared as per <b>Feed Formulation Manual (FFM)</b> 1.3 Quantities of <i><b>feed ingredients</b></i> to be sourced are determined as per FFM 1.4 <i><b>Feed ingredients</b></i> are acquired based on the list of required feedstuffs 1.5 Ingredients proportions are weighed as per FFM 1.6 Feedstuff records are maintained as per FFM 1.7 Waste is managed according to environmental protection regulations
2. Process Feed Ingredients	2.1 Personal Protective Equipment (PPEs) are worn as per work requirement 2.2 <b>Feed processing tools, equipment and materials</b> are assembled as per FFM 2.3 <b>Feedstuff treatment methods</b> for various feed ingredients are applied as per FFM 2.4 Quality control measures are adhered to as per FFM 2.5 Waste is managed according to environmental protection regulations
3. Mix feed batches	3.1 Personal Protective Equipment (PPEs) are worn as per work requirement

	<p>3.2 <b>Feed mixing tools and equipment</b> are assembled as per FFM</p> <p>3.3 Feed ingredients are assembled as per work requirement</p> <p>3.4 Feed ingredients are weighed as per feed ration formula</p> <p>3.5 Feed ingredients are mixed as per feed ration formula</p> <p>3.6 Feed sample is collected for analysis as per FFM</p> <p>3.7 Feed records are maintained as per work requirement</p> <p>3.8 Feed waste is managed according to environmental protection regulations</p>
4. Package processed feeds	<p>4.1 Personal Protective Equipment (PPEs) are worn as per work requirement</p> <p>4.2 Packaging materials are assembled as per work requirement</p> <p>4.3 Feed is weighed as per work requirement</p> <p>4.4 Feed is packaged as per work requirement</p> <p>4.5 Packaged feed is labelled as per national feed quality standards</p> <p>4.6 Packaged feed records are maintained as per work requirement</p> <p>4.7 Waste is managed according to environmental protection regulations</p>
5. Store processed feeds	<p>5.1 Personal Protective Equipment (PPEs) are worn as per work requirement</p> <p>5.2 <b>Storage tools and equipment</b> are assembled as per work requirement</p> <p>5.3 Feed store is prepared as per work requirement</p> <p>5.4 Processed feeds are arranged as per work requirement</p> <p>5.5 Stored processed feed records are maintained as per work requirement</p> <p>5.6 Stored feeds are monitored for quality as per national feed quality standards</p> <p>5.7 Waste is managed according to environmental protection regulations</p>

## RANGE

This section provides a work environment and conditions to which the performance criteria apply. It allows for a different work environment and situations that will affect performance.

Variable	Range
1. Personal Protective Equipment (PPEs) may include but are not limited to:	<ul style="list-style-type: none"> <li>• Eye protection equipment</li> <li>• Hearing protection equipment</li> <li>• Feet protection equipment</li> <li>• Respiratory protection equipment</li> <li>• Gloves</li> <li>• Full body suits</li> </ul>
1. feed ingredients may include but are not limited to:	<ul style="list-style-type: none"> <li>• proteins</li> <li>• carbohydrates</li> <li>• fats and oils</li> <li>• Vitamins;</li> <li>• Minerals;</li> <li>• Antibiotics;</li> <li>• Chemical preservatives;</li> <li>• Fermentation products</li> <li>• Probiotics</li> <li>• Flavors</li> <li>• Sweeteners</li> <li>• Any other additives</li> </ul>
2. Feed Formulation Manual (FFM) may include but are not limited to:	<ul style="list-style-type: none"> <li>• KARLO feed formulation manual</li> <li>• MOA feed formulation manual</li> </ul>
3. Feed processing tools, equipment and materials may include but are not limited to:	<ul style="list-style-type: none"> <li>• Grinders</li> <li>• Crushers</li> <li>• Hammer mills</li> <li>• Shovels</li> </ul>
4. Feedstuff treatment methods may include but are not limited to:	<ul style="list-style-type: none"> <li>• Drying</li> <li>• Flaking</li> <li>• Pelleting</li> <li>• Grinding</li> <li>• Mixing</li> <li>• Crushing</li> <li>• Roasting</li> <li>• Cooling</li> <li>• Dry rolling</li> </ul>

	<ul style="list-style-type: none"> <li>• Pressure cooking</li> <li>• Exploding</li> <li>• Reconstitution</li> <li>• Extrusion</li> <li>• Gelatinization</li> <li>• Popping</li> <li>• Micronizing</li> <li>• Crumbling</li> </ul>
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## REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

### Required Skills

The individual needs to demonstrate the following skills:

- Measuring
- ICT skills
- Mixing
- Packaging
- Storing

### Required Knowledge

The individual needs to demonstrate knowledge of:

- Animal nutrition requirements
- Feed ingredients that supply nutrients required
- Sources of quality feed ingredients
- Calculation of animal feed ratios
- Computer programs
- Types of feeds and feedstuffs
- Animal nutrition
- Procurement
- Agricultural economics (cost benefit analysis)
- Animal feedstuffs processing
- Animal feedstuffs mixing techniques
- Packaging
- Standard bodies e.g. KEBS
- Feeds storage structures

- Feed storage conditions
- Characteristics of a good store
- Feed quality materials.
- Design of feed processing premises
- Processing of feed

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical aspects of Competency	1.1 Determined quantities of feed to be sourced 1.2 Weighed the received feed ingredients 1.3 Stored received as per feed industry standards 1.4 Followed established recipes for feed processing 1.5 Packaged and stored the processed feed. 1.6 Sampled mixed feed using appropriate equipment 1.7 Collected samples of received feed ingredients for analysis
2. Resource Implications	The following resources should be provided: 2.1 Appropriately simulated environment where assessment can take place. 2.2 Access to relevant assessment environments. 2.3 Resources relevant to the proposed assessment activity or tasks.
3. Methods of Assessment	3.1 Practical 3.2 Third party report 3.3 Projects 3.4 Portfolio of evidence 3.5 Written tests 3.6 Oral questions
4. Context of Assessment	Competency may be assessed: 4.1 Workplace 4.2 Simulated work environment

5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
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