

## PERFORM CROP PROTECTION

**UNIT CODE:** AGR/OS/EXT/CR/02/4

### UNIT DESCRIPTION

This unit specifies the competencies required to perform crop protection. It involves preparing for disease and pest control, controlling diseases and pest, waste management and documentation.

### ELEMENTS AND PERFORMANCE CRITERIA

| <b>ELEMENT</b><br>These describe the <b>key outcomes</b> which make up workplace function (to be stated in active voice) | <b>PERFORMANCE CRITERIA</b><br>These are <b>assessable statements</b> which specify the required level of performance for each of the elements (to be stated in passive voice)<br><i><b>Bold and italicized terms are elaborated in the Range</b></i>  |
|--|--|
| 1. Prepare for disease and pest control.   | 1.1 <i><b>Personal protective equipment</b></i> is worn as per the Occupational Health and Safety policy<br>1.2 <i><b>Disease</b></i> control area/plot is identified according to the <i><b>farm plan</b></i> .<br>1.3 <i><b>Pest</b></i> control area/plot is identified according to the farm plan<br>1.4 Scouting for pest is done based on crop scouting manual<br>1.5 The affected areas are mapped out according to type of pest<br>1.6 Scouting for disease is done based on crop scouting manual<br>1.7 The infected areas are mapped according to the type of disease<br>1.8 Pest control <i><b>method</b></i> is chosen based on the type of pest identified<br>1.9 Disease control method is chosen based on the disease identified<br>1.10 <i><b>Materials, tools and equipment</b></i> are identified and verified based on the method chosen. |

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| 2. Control pest and disease          | 2.1 Pest control is carried out based on the method chosen<br>2.2 Disease control is carried out based on the method chosen   |
| 3. Complete pest and disease control | 3.1 Waste and recyclable materials are collected and sorted according to workplace policy<br>3.2 The unused materials are stored according to the manufacturer's instructions<br>3.3 The tools and equipment are cleaned and stored according to manufacturer's manual.<br>3.4 Crop protection activities are documented in the journal as per the good agricultural practices manuals (FAO GAP, MOALF GAP) |

## RANGE

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

| VARIABLE  | RANGE (May include but are not limited to:)  |
|-----------|--|
| Diseases  | <ul style="list-style-type: none"> <li>• Fungal</li> <li>• Bacterial</li> <li>• Viral</li> <li>• Physiological injuries</li> </ul>   |
| Farm plan | <ul style="list-style-type: none"> <li>• Crop programme</li> <li>• Planting schedule</li> <li>• Type of crop planted</li> <li>• Rotational programme/plan</li> <li>• Enterprise location.</li> </ul> |
| Pest      | <ul style="list-style-type: none"> <li>• Insect</li> <li>• Birds</li> <li>• Mammals</li> <li>• Nematodes</li> </ul>  |
| Method    | Disease and Pest control <ul style="list-style-type: none"> <li>• Chemical</li> <li>• Biological</li> <li>• Physical</li> <li>• Cultural</li> <li>• Integrated</li> </ul>                            |

|                                      |   |
|--------------------------------------|---|
| Materials, tools and equipment       | <ul style="list-style-type: none"> <li>• Materials <ul style="list-style-type: none"> <li>- Pegs</li> <li>- Flag</li> <li>- Labels</li> <li>- Water</li> <li>- Chemicals</li> <li>- Biological agents</li> <li>- Cleaning agents</li> </ul> </li> <li>• Tools and equipment <ul style="list-style-type: none"> <li>- Sprayers</li> <li>- Mixing tanks</li> <li>- Measuring cylinders</li> </ul> </li> </ul> |
| Personal protective equipment        | <p>May include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Gumboots</li> <li>• Overall</li> <li>• Gloves</li> <li>• Breathing mask</li> <li>• Goggles</li> <li>• Caps</li> </ul>   |
| Environmental protection regulations | <ul style="list-style-type: none"> <li>• Environmental Management and Coordination Act – EMCA</li> <li>• National environmental management authority regulations</li> <li>• Food and Agriculture Organisation</li> </ul>  |

## 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:

- Disease and pest scouting
- Tools and equipment handling
- Measurement
- Recording
- Use of personal protective equipment
- Waste handling
- Agro-chemical handling

## Required Knowledge

The individual needs to demonstrate knowledge of:

- Disease and pest symptoms and their control
- Environmental protection guidelines
- Basic first aid
- Maintenance of tool and equipment
- Occupational Safety and health
- Good Agricultural practices.
- Sanitary and phyto-sanitary measures
- Safe use of agro-chemicals

## 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 | Assessment requires evidence that the candidate:<br>1.1 Thoroughly Scouted and mapped out areas infected with pests and diseases<br>1.2 Observed occupational safety and health measures appropriately<br>1.3 Controlled pest and disease effectively<br>1.4 Stored unused materials correctly<br>1.5 Observed laid down environmental workplace policy appropriately<br>1.6 Documented crop protection activities correctly<br>1.7 Cleaned tools and equipment properly<br>1.8 Used crop protection tools and materials appropriately |
| 2. Resource Implications          | The following resources must be provided:<br>2.1 Assessment location- functional farm with land, crops, tools, equipment and materials for crop protection<br>2.2 Personal protective equipment  |
| 3. Methods of Assessment          | Competency in this unit may be assessed through:<br>3.1 Observation<br>3.2 Oral interview<br>3.3 Written exam<br>3.4 Third party report  |

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| 4. Context of Assessment               | Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace 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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