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**NPTC LEVEL 2 AWARD  
IN THE  
SAFE USE OF PESTICIDES (QCF)**

**MODULE PA4  
PESTICIDE GRANULE APPLICATOR**

**ASSESSMENT SCHEDULE**

## Module PA 4 PESTICIDE GRANULE APPLICATOR

Mounted or Trailed (excluding pedestrian controlled machines or held equipment).

Candidates undertaking assessment will need to complete all test items appropriate to the applicator they use. Assessors will conduct the assessment in the context of the equipment available.

### Objective - Candidates will be able to:-

1. Prepare a pesticide granule applicator for work, calibrate and operate it to ensure correct application rate without risk to themselves, other people and the environment.
2. Use the information detailed on product labels to determine the approved uses for the product and its potential hazards to human safety, non-target areas and the environment in general.
3. Carry out daily and routine maintenance of the applicator.
4. Carry out the correct procedure for clearing personal protective equipment and application equipment which may have been contaminated with pesticide.

There are a number of methods of calibration candidates may use provided that it produces the correct end result.

### Qualification and Credit Framework (QCF) – credit value

PA1 has a credit value of 2 credits on the QCF

### Safe Practice

Operating the prime mover and/or the equipment in such a way as to put the candidate, Assessor, equipment or the environment at risk will cause the candidate to be declared not yet competent.

All equipment must be of the standard required under current Health & Safety legislation.

Candidates must wear personal protective equipment (PPE) appropriate to the risk whenever carrying out work on the applicator e.g. checking metering devices.

Contaminated PPE should never be taken into tractor cab.

In addition, before entering the cab any PPE not required by legislation (other than coveralls and rubber boots) should be removed and placed in a suitable tractor locker or enclosed container outside the cab.

Candidates must be especially careful to avoid personal contamination when operating uncabbed or partially cabbed prime movers and be aware of the effect that changing circumstances have on the stability of the equipment.

### Pre-requisites

The foundation unit (PA1) is required by candidates before being assessed for this application unit.

### Validation of Equipment

Any type of full width broadcast or placement pesticide granule applicator eg. Spinning disc, pendulum or pneumatic type.

Operator's instruction book and calibration charts/calculators should be available for use by the candidate throughout the assessment. Any other relevant literature may also be used.

The assessment should be conducted in the context of the work situation.

Candidates who undertake this assessment and are judged 'competent' are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

### Site

Work site with area to allow calibration and an area where field operation can be undertaken.

### Suggested facilities and equipment required to run the assessment:

Granule applicator and additional equipment appropriate to the candidate.

First Aid kit which complies with the Health & Safety (First Aid) Regulations 1981

Prime mover matched to granule applicator.

Instruction books for prime mover and granule applicator.

Washing facilities.

Personal Protective Equipment to comply with pesticide label/COSHH risk assessment

Tape measure/Measuring wheel to measure 100m run.

Wind speed gauge.

Suitable tools.

Appropriate containers with pesticide or simulated pesticide granules.

**Clean** product labels or label duplicates appropriate to the candidate.

Containers for collecting product during calibration.

Accurate scales.

Field markers.

Site for practical work.

Pocket calculator.

Tyre pressure gauge.

Suitable lubricants.

Appropriate site for cleaning applicator.

Appropriate Application Record Sheets.



Assessment Activity	Assessment Criteria
<p>4. Check applicator for cleanliness and mechanical defects</p> <p>Check security of attachment of application mechanisms.</p> <p>Demonstrate knowledge of lubrication of components.</p>	<ul style="list-style-type: none"> <li>- Hopper, metering and delivery systems checked – free and undamaged</li> <li>- Seized, worn or damaged components</li> <li>- Drive systems</li> <li>- Condition and tension of belts</li> <li>- Method of belt adjustment</li> <li>- Guards serviceable and fitted</li> <li>- Fan blades</li> <li>- Fan deflector plates</li> <li>- Air supply unimpeded</li> <li>- Boom suspension/break back-devices (if appropriate)</li> <li>- Bolts tight</li> <li>- Straps adjusted</li> <li>- All linkage secure</li> <li>- Side sway restricted</li> <li>- Identify all lubrication points by using the instruction book</li> <li>- Components that should not be lubricated</li> </ul>
<p>5. Read and interpret product label (as supplied or approved by the Assessor)</p>	<ul style="list-style-type: none"> <li>- Field of use</li> <li>- PPE requirements</li> <li>- Product being used</li> <li>- Specific product precautions</li> <li>- Appropriate for type of applicator</li> <li>- Dose rate</li> <li>- Maximum number of treatments</li> <li>- Timing</li> <li>- Additional label information</li> <li>- Restrictions on use</li> <li>- Target</li> <li>- Incorporation</li> </ul>
<p>6 Part fill Applicator</p>	<ul style="list-style-type: none"> <li>- Suitable site selected</li> <li>- Fill by usual on-site method following approved safe procedures</li> <li>- Optimum positioning for efficiency</li> <li>- Security of pesticide on site</li> <li>- Safe storage of empty containers</li> <li>- Facility for dealing with/containing spillage</li> </ul>
<b>Calibrate the Applicator</b>	
<p>7. Select and calculate speed (if applicable)</p> <p>Calculate required output</p>	<ul style="list-style-type: none"> <li>- Trial run on typical ground to establish acceptable applicator performance</li> <li>- Accurate measurement of 100 m</li> <li>- Time in seconds to cover 100 m using gear and rpm established</li> <li>- Correct use of formula</li> </ul>
<p>8. Set applicator to achieve required application rate</p> <p>Carry out check of application rate</p> <p>Adjust applicator to achieve the correct application rate</p>	<ul style="list-style-type: none"> <li>- Use of manufacturers handbook</li> <li>- Safe procedures followed</li> <li>- NB Method used will depend on type of machine and recommendations given in manufacturers operators handbook</li> <li>- Rotate metering mechanism relevant number of turns for given area/distance</li> <li>- Run machine for specific period of time or distance</li> <li>- Accurate weighing</li> <li>- Compare with target rates</li> <li>- Care to avoid moving parts</li> <li>- Use of manufacturers handbook</li> </ul>
<p>9. Demonstrate knowledge of factors affecting uniformity of spread.</p>	<ul style="list-style-type: none"> <li>- Machine set level in both planes</li> <li>- Machine at correct height</li> <li>- Correct settings of spreading mechanism</li> <li>- Bulk density of granules</li> <li>- Factors affecting distribution pattern <ul style="list-style-type: none"> <li>• Wind</li> <li>• Slope</li> </ul> </li> </ul>

Assessment Activity	Assessment Criteria
10. Assess the applicator for uniformity of spread	<ul style="list-style-type: none"> <li>- Visual assessment of uniformity of spread using any appropriate and safe method</li> </ul>
11. Demonstrate knowledge of calibration data to be recorded	<ul style="list-style-type: none"> <li>- Machine settings used</li> <li>- Application rate achieved</li> <li>- Bout width</li> <li>- Registration no. of prime mover</li> <li>- Vehicle gear selected</li> <li>- Engine speed (rpm)</li> <li>- Vehicle speed</li> <li>- Vehicle wheel sizes and pressures</li> </ul>
<b>Site Work</b>	
12. Carry out an environmental risk assessment of the application site	<p>May include:</p> <ul style="list-style-type: none"> <li>- Ground conditions</li> <li>- Water courses</li> <li>- Buffer zones</li> <li>- Drains</li> <li>- Wildlife</li> <li>- Flowering plants</li> <li>- Public access</li> <li>- Sensitive crops</li> <li>- Hedgerows</li> <li>- Housing</li> <li>- Factors particular to the site</li> <li>- Warning signs</li> </ul> <ul style="list-style-type: none"> <li>- Check and maintain application rate</li> <li>- Other environmental margins</li> <li>- Warn neighbours</li> <li>- Use an appropriate pesticide</li> <li>- Careful timing of application</li> <li>- Comply with environmental assessment</li> </ul> <ul style="list-style-type: none"> <li>- Wind speed gauge at suitable height or visible signs</li> <li>- Wind direction</li> </ul> <ul style="list-style-type: none"> <li>- Awareness of likely effects of product on non-target crops, wildlife and the environment</li> <li>- Effect of wind speed and direction</li> <li>- Effect of direction of travel</li> <li>- Need for some products to be soil incorporated with minimal delay</li> <li>- Accuracy of application</li> <li>- Avoid contamination of headlands and hedgerows/waterways</li> </ul>
13. Calculate, weigh and add pesticide to the hopper.	<ul style="list-style-type: none"> <li>- Ensure approved techniques are followed with due regard to safe practice.</li> <li>- Determine size of area to be treated</li> <li>- Correct application rate</li> <li>- Accurate weighing of pesticide</li> </ul>

Assessment Activity	Assessment Criteria
14. Demonstrate knowledge of accurate application procedures on site	Methods of marking may include: <ul style="list-style-type: none"> <li>- Tramlines</li> <li>- Row crops.</li> <li>- Blob markers</li> <li>- Marker poles</li> <li>- Carefully avoid contact with the contaminated area,</li> <li>- Mark the spot at which the hopper emptied, either by a marker in a row or tramline or by turning 90 degrees in a grass field as long as the wheelings are clearly visible.</li> <li>- Continue applying by accurately matching at the appropriate point</li> </ul>
15. Apply granules to a given area in a safe and appropriate manner	<ul style="list-style-type: none"> <li>- Avoid operator contact</li> <li>- Operate controls to start and finish applying accurately at beginning and end of each bout</li> <li>- Correct forward speed</li> <li>- Accurate matching of bouts/use of driving aids</li> <li>- Correct height of applicator</li> <li>- Coping with obstacles e.g. electricity poles</li> <li>- All area treated, minimising overlaps or misses.</li> <li>- Awareness of changes in wind speed and direction.</li> </ul>
<b>Post Operation</b>	
16. Demonstrate knowledge of: <ul style="list-style-type: none"> <li>a) cleaning and decontamination of the applicator</li> <li>b) the procedure prior to any repair or replacement of parts</li> <li>c) preparation of applicator for storage</li> </ul>	<ul style="list-style-type: none"> <li>- Select appropriate site</li> <li>- Follow manufacturer's cleaning procedures</li> <li>- Risk of contamination</li> <li>- Frequency of cleaning</li> <li>- Follow safe procedures</li> <li>- Select an appropriate containment site and possible containers for contaminated material.</li> <li>- Ensure that the applicator is made safe (engine stopped, supports if appropriate).</li> <li>- Ensure that section to be repaired/replaced is safely isolated</li> <li>- Applicator decontaminated</li> <li>- Refer to manufacturer's handbook for guidance</li> <li>- Ensure applicator is clean and decontaminated</li> <li>- Carry out lubrication procedures</li> <li>- Danger of personal contamination</li> <li>- Store under cover and out of direct sunlight</li> <li>- Store in a secure area</li> </ul>
17. Complete application record	<ul style="list-style-type: none"> <li>- Records completed</li> <li>- Accurate recording</li> </ul>