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

UNIT PA6 – HAND HELD APPLICATORS

ASSESSMENT SCHEDULE

Unit PA6 HAND HELD APPLICATORS
Including Pedestrian Controlled Machines but EXCLUDING misters and foggers

Candidates are required to complete:

- Either option A: hydraulic nozzle or rotary atomiser type sprayers
All assessment activities, option A
- or option AW: hydraulic nozzle or rotary atomiser type sprayers including application in or near water
All assessment activities, options A and AW
- or option C: granule applicators
All assessment activities, option C
- or option CW: granule applicators including application in or near water
All assessment activities, options C and CW
- or option D: other hand held applicators requiring minimal calibration
All assessment activities, option D

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

Objective - Candidates will be able to:-

1. Prepare a hand held pesticide applicator for work, calibrate it 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 on a hand held pesticide applicator.
4. Carry out the correct procedure for cleaning personal protective equipment and application equipment which may have been contaminated with pesticide.

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

Qualification and Credit Framework (QCF) – credit value

PA6 has a credit value of 1 credit on the QCF.

Safe Practice

Operating the equipment in such a way as to put the candidate, examiner, the equipment or the environment at risk will cause the candidate to fail the assessment.

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

Candidates must wear personal protective equipment appropriate to the COSHH assessment whenever carrying out work on the applicator e.g. checking filters, replacing nozzles, etc.

Pre-requisites

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

Validation of Equipment

Hand held applicators constitute any equipment either wholly carried by a person or where the pesticide delivery nozzle or outlet is supported directly by the operator.

Pedestrian operated equipment is supported by a mechanical form of carriage operated by a person who does not ride in or on the equipment carriage.

Sprayers are equipment used to apply sprays having droplets within a maximum and minimum size range described by the BCPC nozzle classification scheme categories Coarse, Medium and Fine.

NB Mists and Fogs (**which are excluded – see PA 9**) are particulate clouds having particles of a size range 100 microns or less Volume Median Diameter.

Manufacturer's operators instruction books plus any relevant literature issued during training should be available for use by the candidate throughout the assessment.

Site

Work site with suitable sprayer filling/washing facilities which comply with current environmental best practice and an area to be sprayed.

The candidate should then select, prepare and calibrate the applicator for that 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.

Suggested facilities and equipment required to run the assessment:

(select equipment appropriate to applicator being used):

Application equipment appropriate to the option selected by the candidate.

Clean product labels.

Appropriate working areas for filling, testing, calibrating and site work.

Spare nozzles/filters for applicator.

Manufacturer's operators instruction book.

Clean water supply/hosepipe.

Appropriate containers with pesticide or simulated pesticide for site work.

Marking aids.

Wind speed gauge.

Measuring cylinder.

Pocket calculator.

Accurate and suitable measuring jug.

Tape measure at least 10m for measuring walking area and swath width.

Measuring wheel.

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

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

Mixing buckets.

Appropriate Application Record Sheets.

Scales.

Option A: Hydraulic Nozzle and Rotary Atomiser Applicators

| Assessment Activity | Assessment Criteria |
|---|--|
| Preparation | |
| 1. Inspect applicator Demonstrate knowledge of legal requirements and safety regulations | <ul style="list-style-type: none"> - Applicator de-pressurised - Use a systematic method to identify contamination and serviceability: - Tank, lid, filters, straps, hoses, lance, connections, batteries, engine, - Be aware of and comply with, the safety implications identified in the risk assessment - Check all equipment guards are in place - Comply with the code of practice |
| 2. Demonstrate knowledge of nozzles | <ul style="list-style-type: none"> - Use of manufacturers literature - Types of nozzles and their uses: <ul style="list-style-type: none"> • <i>Deflector (anvil) nozzle</i>. Medium to coarse droplet quality for herbicides. • <i>Flat fan nozzle</i>. Fine, medium or coarse droplet quality. Suitable for use with knapsacks. • <i>Air inclusion</i>. Medium/coarse droplet to reduce drift - for herbicides. • <i>Cone</i>. Fine to medium droplet for application of fungicides and insecticides. |
| 3. Read and interpret product label (as supplied or approved by the Assessor). | <ul style="list-style-type: none"> - Field of use - PPE requirements - Product being used - Crop/target on which product can be used - Specific product precautions - Appropriate for type of applicator - Dose rate - Volume rate - Maximum number of treatments - Application timing and guidance - Additional label information - Restrictions on use - Use of adjuvants - Recommended nozzles - Recommended spray quality - Risk of drift - Target - Reduced volume restrictions if applicable |
| Calibration | |
| 4. Fit suitable nozzle or restrictor. Set pressure | <ul style="list-style-type: none"> - Spray quality - Correct nozzle / restrictor - Correct assembly - Correct pressure selected |
| 5. Part fill applicator and check for satisfactory operation | <ul style="list-style-type: none"> - Even spray pattern - No leaks or drips |
| 6. Measure and calculate area to be treated | <ul style="list-style-type: none"> - Accurate measurement of dimensions - Accurate calculation of area |
| 7. Calibrate applicator | <ul style="list-style-type: none"> - Calibration formula used must be capable of accommodating different speeds and spray widths - Calculate volume rate and check against label recommendations |
| 8. Calculate quantities required. | Calculate: <ul style="list-style-type: none"> - Volume of water required for area in activity 6 - Amount of pesticide required for area in activity 6 - Amount of pesticide required for full tank |

| Assessment Activity | Assessment Criteria |
|---|--|
| Cleaning and Storage | |
| 13 Demonstrate knowledge of: a) Cleaning applicator. b) Procedures for storing applicator | <ul style="list-style-type: none"> - Use an appropriate site for cleaning - Triple rinse the applicator - Follow manufacturers recommendations - Dispose of washings in appropriate manner - De-pressurise. - Ensure the applicator is clean and dry. - Inspect for wear or damage. - Lubricate where required. - Store in a secure area. - Store under cover and away from sunlight |
| 14 Complete application record | <ul style="list-style-type: none"> - Records completed - Accurate recording |

Option AW: Hydraulic Nozzle and Rotary Atomiser Applicators
Application in or near water

| | |
|--|---|
| 15. Demonstrate knowledge of preparing to apply a pesticide in or near water | <ul style="list-style-type: none"> - Ensure the pesticide has aquatic approval - Seek environmental agency approval - Establish the direction of water flow. - Work in an upstream direction |
| 16. Demonstrate knowledge of the principles of application in or near water | <ul style="list-style-type: none"> - Any areas, which include drainage channels, streams, rivers, ponds, lakes, reservoirs, canals and dry ditches and the banks or areas immediately adjacent - Seek Environmental Agency approval - Ensure pesticide is approved for aquatic use - Assess the risk of contamination downstream, e.g. water extraction, sensitive sites and livestock - Appropriate operator certification - Water extraction - Sensitive sites - Livestock drinking and grazing - De-oxygenation of water - Removal of fish cover - Domestic water |
| 17. Calibrate applicator | <ul style="list-style-type: none"> - Label recommendations - Application rates - Surface area - Degree of weed cover - Spray width - Waterside safety - Speed of flow |

Option C: Granule Applicators

| Assessment Activity | Assessment Criteria |
|---|--|
| Preparation | |
| <p>1. Check satisfactory condition and operation of applicator</p> <p>Demonstrate knowledge of legal requirements and safety regulations.</p> | <ul style="list-style-type: none"> - Condition of hopper/spreader - Adjustment of metering device - Free movement of all components - Be aware of and comply with, the safety implications identified in the risk assessment. - Check all equipment guards are in place. - Comply with the code of practice. |
| <p>2. Read and interpret product label (as supplied or approved by the assessor)</p> | <ul style="list-style-type: none"> - Dose rate - Product being used - Field of use - Specific product precautions - PPE requirements - Appropriate for type of applicator - Application timing and guidance - Pesticide application rate appropriate to target - Product incorporated (if applicable) |
| Calibration | |
| <p>3. Measure and calculate area to be treated</p> | <ul style="list-style-type: none"> - Accurate measurement of dimensions - Accurate calculation of area |
| <p>4. Calibrate applicator.</p> | <ul style="list-style-type: none"> - Appropriate to the type of applicator - Check application rate against label recommendations. |
| <p>5. Calculate quantity required.</p> | <ul style="list-style-type: none"> - Accurate calculation of pesticide required. |
| <p>6. Carry out procedures for measuring and filling applicator with pesticide for the area identified in activity 3</p> | <ul style="list-style-type: none"> - Accurate measuring of quantity - Correct/safe filling procedure - Avoidance of spillage - Safe storage of unused concentrated pesticide |

| Assessment Activity | Assessment Criteria |
|---|---|
| Site Work | |
| <p>7. Carry out an environmental risk assessment of the application site</p> <p>Protection of the environment</p> <p>Demonstrate knowledge of the factors that affect accuracy of application</p> | <p>May include:</p> <ul style="list-style-type: none"> - Ground conditions - Water courses - Buffer zones - Drains - Wildlife - Flowering plants - Public access - Sensitive crops/areas - Hedgerows - Housing - Factors particular to site <ul style="list-style-type: none"> - Visible signs or wind speed gauge at suitable height - Wind direction <ul style="list-style-type: none"> - Check and maintain application rate - Observe buffer zones - Observe environmental margins - Warn neighbours - Use an appropriate pesticide - Careful timing of application - Comply with environmental assessment - Erect warning signs. <ul style="list-style-type: none"> - Effect of wind speed on distribution pattern. - Evenness of spread. - Height of spreading mechanism. |
| <p>8. Operate the applicator to apply to the area identified in activity 3</p> | <ul style="list-style-type: none"> - Candidate to demonstrate correct application technique - Matching of bouts/distribution width - Height of application - Direction of travel - Avoidance of sensitive areas - Avoid operator contamination - Accuracy of application |
| Cleaning and Storage | |
| <p>9. Demonstrate knowledge of:</p> <p>a) cleaning and decontamination of the applicator</p> <p>b) Storing applicator.</p> | <ul style="list-style-type: none"> - Select appropriate site - Follow manufacturer's cleaning procedures - Risk of contamination - Frequency of cleaning - Follow safe procedures <ul style="list-style-type: none"> - Ensure the applicator is clean and dry. - Inspect for wear or damage. - Lubricate where required. - Store in a secure area. - Store away from sunlight |
| <p>10. Complete application record</p> | <ul style="list-style-type: none"> - Records completed - Accurate recording |

| Assessment Activity | Assessment Criteria |
|--|---|
| 11. Demonstrate knowledge of preparing to apply a pesticide in or near water | <ul style="list-style-type: none"> - Ensure the pesticide has aquatic approval - Seek environmental agency approval - Establish the direction of water flow. - Work in an upstream direction |
| 12. Demonstrate knowledge of the principles of application in or near water | <ul style="list-style-type: none"> - Any areas, which include drainage channels, streams, rivers, ponds, lakes, reservoirs, canals and dry ditches and the banks or areas immediately adjacent - Seek Environmental Agency approval - Ensure pesticide is approved for aquatic use - Assess the risk of contamination downstream, e.g. water extraction, sensitive sites and livestock - Appropriate operator certification - Water extraction - Sensitive sites - Livestock drinking and grazing - De-oxygenation of water - Removal of fish cover - Domestic water |
| 13. Calibrate applicator | <ul style="list-style-type: none"> - Label recommendations - Application rates - Surface area - Degree of weed cover - Application width - Waterside safety - Depth of water - Speed of flow |

Option D: Other hand held applicators requiring minimum calibration

| Assessment Activity | Assessment Criteria |
|---|---|
| Preparation | |
| 1. Check satisfactory condition and operation of applicator. Demonstrate knowledge of legal requirements and safety regulations. | <ul style="list-style-type: none"> - Systematic check of applicator - Be aware of and comply with, the safety implications identified in the risk assessment. - Check all equipment guards are in place. - Comply with the code of practice. |
| 2. Read and interpret product label (as supplied or approved by the Assessor) | <ul style="list-style-type: none"> - Dose rate - Product being used - Field of use - Specific product precautions - PPE requirements - Appropriate for type of applicator - Application timing and guidance - Pesticide dose rate appropriate to target - Product incorporated (if applicable) |
| Calibration | |
| 3. Measure and calculate area to be treated | <ul style="list-style-type: none"> - Accurate measurement of dimensions. - Accurate calculation of area |
| 4. Calibrate applicator | <ul style="list-style-type: none"> - Appropriate to the type of applicator - Check application rate against label recommendations. |
| 5. Calculate quantity required | <ul style="list-style-type: none"> - Accurate calculation of pesticide required. |
| 6. Carry out procedures for measuring, mixing and filling applicator with pesticide | <ul style="list-style-type: none"> - Accurate measuring of quantities - Availability and correct use of water supply. - Observance of pesticide manufacturer's instructions - Correct/safe filling procedure - Avoidance of spillage - Treatment and storage of empty pesticide containers |

| Assessment Activity | Assessment Criteria |
|--|--|
| Site Work | |
| <p>7. Carry out an environmental risk assessment of the application site</p> <p>Protection of the environment.</p> | <p>May include:</p> <ul style="list-style-type: none"> - Ground conditions - Buffer zones - Drains - Wildlife - Flowering plants - Public access - Sensitive crops/areas - Hedgerows - Housing - Factors particular to site <ul style="list-style-type: none"> - Visible signs or wind speed gauge at suitable height - Wind direction <ul style="list-style-type: none"> - Check and maintain application rate - Observe buffer zones - Observe environmental margins - Warn neighbours - Use an appropriate pesticide - Careful timing of application - Comply with environmental assessment - Erect warning signs |
| <p>8. Operate the applicator to apply pesticide to the area identified in activity 3</p> | <ul style="list-style-type: none"> - Candidate to demonstrate correct application technique - Matching of bouts - Distribution - Height of application - Direction of travel - Avoidance of sensitive areas - Avoid operator contamination - Accuracy of application |
| Cleaning and Storage | |
| <p>9. Demonstrate knowledge of:</p> <p>a) cleaning and decontamination of the applicator</p> <p>b) Storing applicator.</p> | <ul style="list-style-type: none"> - Select appropriate site - Follow manufacturer's cleaning procedures - Risk of contamination - Frequency of cleaning - Follow safe procedures <ul style="list-style-type: none"> - Ensure the applicator is clean and dry. - Inspect for wear or damage. - Lubricate where required. - Store in a secure area. - Store away from sunlight |
| <p>10. Complete application record</p> | <ul style="list-style-type: none"> - Records completed - Accurate recording |