City & Guilds Level 2 Award in Safe Application of Pelleted or Granular Pesticides using Mounted or Trailed Applicators (PA4) (601/5143/2)

Version 1.0 (February 2024)

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0 February 2024	First version	ALL

Contents

Introduction

This assessment relates to the unit in the Qualification handbook. The assessment can be achieved at pass only. If any task is not yet met the candidate is unsuccessful.

This assessment is for the following units and learning outcomes:
131 Safe application of pelleted or granular pesticides using mounted or trailed applicators covering the following learning outcomes:

1. Know the legislative and safety regulations relating to the application of granular pesticides
2. Be able to assess the environmental factors relating to the application site
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the application equipment
5. Be able to operate the application equipment
6. Know how to carry out post-operational processes

132 Operating mounted or trailed slug pellet applicators covering the following learning outcomes:

1. Know the legislative and safety regulations relating to the application of slug pellets
2. Be able to assess the environmental factors relating to the application site
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the application equipment
5. Be able to operate the application equipment
6. Know how to carry out post-operational procedures

General guidance on the requirements for assessment can be found in the Assessor Guidance General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site **www.nptc.org.uk**

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)
A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms
An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate is either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time
The expected assessment time for this qualification is 1.5 – 3 hours.

Summary of responsibilities in the assessment process		
Centre responsibilities	Candidate responsibilities	Assessor responsibilities
A suitable site is made available for the assessment to take place		Ensuring that the site provided is suitable for the assessment to take place
Machinery, equipment and materials are available to enable assessment of all the activities to take place	To be familiar with the machinery/equipment being used for the assessment	Ensuring that the machinery, equipment and materials provided satisfy the assessment requirements
	To bring appropriate Personal Protective Equipment (PPE) to the assessment	Ensuring that candidate's PPE complies with the requirements of the assessment
	To bring relevant training materials (including calibration sheet if applicable)	
	To bring a product label appropriate for the assessment	To ensure that the product label is appropriate for the assessment (or provide a suitable alternative)

This is not an open book assessment, however additional technical information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

131 Operating mounted or trailed granular pesticide applicators

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying granular pesticides using mounted or trailed equipment	May include: • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply granular pesticides safely using mounted or trailed equipment following industry best practice	Operator safety regulation may include: • comply with codes of best practice • ensure that all required guards are in place and in good condition • be aware of any safety implications imposed by Risk/COSHH Assessment on the machine and the operation and comply with their requirements Sealed cab:

		Checks to protect self from pesticide contamination: • carbon filter fitted • use of in cab controls • ensure a functioning ventilation system • close all windows • no contaminated PPE into operator cab Open cab/canopy/platform: • use of appropriate PPE Checks to protect self from physical danger during operation: • compatibility of prime mover and applicator • appropriate additional weighting • correct tyre pressures • condition of tyres • wheel track width • brakes functioning correctly Safe practice when driving on uneven/sloping terrain: • assess conditions • select four wheel drive (if fitted) • appropriate speed • correct gear selected • effect of changing load on stability • use of counterbalance weights • correct turning procedure • keep a low centre of gravity Consideration for safe driving on a public highway: • independent brakes locked • instability at high speeds • correct road legal tyres (ATV)
2.1	Identify risks to the environment	May include: • water courses • drains • boreholes • ground conditions • environmental margins/strips/areas • wildlife • sensitive crops or areas • hedgerows • housing • public access • any other risks particular to the site
2.2	Explain how to minimize risks to the environment	Explanation may include the following points: • check and maintain application rate • erect warning signs • observe environmental margins/strips/areas • inform neighbours

		• use an appropriate pesticide (minimal environmental impact) • maintain application rate • careful timing of application • comply with Environmental Assessment Factors to protect the environment: • awareness and implications of product entering watercourses • avoid contamination of hedgerows & field margins • avoid contamination of wildlife/domestic pets • effect of wind speed and direction • appropriate direction of travel • maintain accuracy of application Check wind speed and direction: • anemometer at suitable height or visible signs • wind direction Factors that affect uniformity of spread from applicator: • applicator levelled according to manufacturer's recommendations • applicator at correct height • correct settings of spreading mechanism • size/density of granules • wind • slope • forward speed • ground conditions
3.1 – 3.2	Read product information Interpret product information	May include: • product name • active substance(s) (ingredient(s)) • field of use • operator protection • specific product precautions • appropriate for type of applicator • application (dose) rate • maximum number of treatments • timing • environmental protection • restrictions on use • additional label information
4.1	Identify applicator components and controls	May include: • on/off control • metering mechanism • hopper • lid • emptying outlet/mechanism

		• agitator • fan and /or other items specific to the applicator • boom isolators (if applicable) • other controls specific to the applicator
4.2	Carry out pre-use checks to the prime	May include: • guards in place and in good condition • visual inspection of the wheels and tyres • tyre pressures • fuel level adequate • engine oil level is within acceptable limits • hydraulic oil level is within acceptable limits (if accessible) • transmission oil level is within acceptable limits (if accessible) • coolant level is adequate • engine air filter is clean
4.3	Carry out pre-use and operational checks to the applicator	Security of attachment • fasteners tight • straps inspected and adjusted if necessary • linkage secure • sideways movement restricted • drawbar pin secured Possible mechanical defects: • seized, worn or damaged controls/components • electrical connectors/cable routing • air supply impeded Applicator lubrication: • identification of lubrication points • visual inspection of lubrication points • visual inspection of levels Boom settings, suspension and break-back devices: • boom suspension operational (if applicable) • break-back efficiency (if applicable) • height adjustment (if applicable) Part fill applicator to include: • suitable site selected • fill by usual on-site method, following approved procedures • manual handling considerations • optimum positioning for efficiency

		• security of pesticide on site • facility for dealing with/containing spillages Use of control panel may include: • functions of control panel • recognition of malfunctions before and during operation • check accuracy of base settings • switch to manual/test mode where applicable Action in event of control panel failing: • stop pesticide application • switch to manual operation
4.4	Calibrate the applicator and record relevant data	Select and record forward speed: • trial run on typical ground to establish acceptable applicator performance • accurate measurement of distance • time in seconds to cover distance using gear and rpm established • correct use of formula to establish forward speed Calculate required output: • use of manufacturers handbook/application charts • correct use of formula Set applicator: • use of manufacturers handbook/application charts • follow recommendations given in manufacturers operator handbook Adjust applicator: • run applicator for specific period of time or distance • care to avoid moving parts • collect product distributed (if applicable) • accurate weighing of output • compare with target rates (check product label) • repeat until target rates achieved Calibration data: • applicator settings • granule used for calibration • application rate achieved • registration number of prime mover • gear selected • engine speed (rpm) • vehicle forward speed

		• vehicle wheel sizes and tyre pressure
4.5	Calculate the quantity of granules required for a specified area	To include: • the correct amount required for the specified area
5.1	Weigh the required quantity of granules and add to the applicator	To include: • ensure approved techniques are followed with due regard to safe practice • correct selection of PPE/RPE as determined by label/COSHH Assessment • suitable site selected • fill safely observing safe lifting techniques • accurate weighing of granules • avoidance of spillage
5.2	Demonstrate safe and accurate application procedures	Methods to achieve accurate application May include the following: • tramlines • wheelings • crop rows • marker poles • GPS Procedure to refill tank part way through application: • carefully avoid contact with the contaminated area • mark the spot where the application stopped (any appropriate method) • refill the applicator • return to marked spot to continue application Demonstrate safe and accurate application procedures to include: • ensure applicator is level • applicator set at the correct height • operate controls to start and finish applying accurately at beginning and end of each bout • maintain correct forward speed • accurate matching of bouts/use of driving aids • awareness of techniques to counteract unbalanced applicator performance • coping with obstacles • correct application rate

		• all areas treated, minimising overlaps or misses • awareness of changes in wind speed and direction
5.3	Carry out all activities avoiding risks to human health and the environment	To include: • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information and/or COSHH/Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • safe on-site storage of pesticide • avoidance of off target application • avoidance of over dosing/under dosing crop/target • possible soil incorporation
5.4	Complete a treatment record	Completion of the treatment record must be: • accurate • legible (if handwritten)
6.1	State how to recover and store surplus granules and how to dispose of waste material	Recovering surplus granules: • avoid personal contamination • select appropriate PPE/RPE • ensure that the applicator is made safe (engine stopped, power isolated) • select appropriate site • appropriate container used • correct label attached Storing surplus granules: • return to temporary mobile store • return to fixed storage facility Waste packaging: • packaging thoroughly emptied • placed in secure storage until disposal • collection by licensed waste disposal contractor
6.2	Explain how to clean and contaminate the applicator and the prime mover	May include: • danger of personal contamination • select appropriate PPE • select an appropriate containment site • appropriate containers for contaminated material • follow manufacturers cleaning procedure

		• ensure that the applicator is made safe (engine stopped, power isolated) • suitable containment/disposal of granules or contaminated soil arising from cleaning operation • when the applicator should be cleaned
6.3	Describe the storage requirements for the applicator	May include: • refer to manufacturers handbook • ensure applicator is clean and decontaminated • inspect for wear and damage • replace any worn or damaged parts • carry out lubrication procedures • store under cover and out of direct sunlight • store in a secure area

132 Operating mounted or trailed slug pellet applicators

1.1	Describe the legal requirements relating to applying slug pellets using mounted or trailed equipment	May include: • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply slug pellets safely using mounted or trailed equipment following industry best practice	Operator safety regulations may include: • comply with codes of best practice • ensure that all required guards are in place and in good condition • be aware of any safety implications imposed by Risk/COSHH Assessment on the machine and the operation and comply with their requirements Checks to protect self from pesticide contamination: Sealed cab: • carbon filter fitted • use of in cab controls • ensure a functioning ventilation system

		• close all windows • no contaminated PPE into operator cab Open cab/canopy/platform: • use of appropriate PPE • pellet shield Protect self from injury during operation: • compatibility of prime mover and applicator • appropriate additional weighting • correct tyre pressures • condition of tyres • wheel track width • brakes functioning correctly Safe practice when driving on uneven/sloping terrain: • assess conditions • select four wheel drive (if fitted) • appropriate speed • correct gear selected • effect of changing load on stability • use of counterbalance weights • correct turning procedure • keep a low centre of gravity Consideration for safe driving on a public highway: • independent brakes locked • instability at high speeds • correct road legal tyres (ATV)
2.1	Identify risks to the environment	May include: • water courses • drains • boreholes • ground conditions • environmental margins/strips/areas • wildlife • sensitive crops or areas • hedgerows • housing • public access • any other risks particular to the site
2.2	Explain how to minimize risks to the environment	Explanation may include the following points: • adopt stewardship recommendations relating to individual/maximum doses of active ingredients • check and maintain application rate • erect warning signs • observe environmental margins/strips/areas

		• inform neighbours • use an appropriate pesticide (minimal environmental impact) • maintain application rate • careful timing of application • comply with Environmental Assessment Factors to protect the environment: • awareness and implications of product entering watercourses • avoid contamination of 'no spread zone', hedgerows and other field margins • avoid contamination of wildlife/domestic pets • effect of wind speed and direction • appropriate direction of travel • maintain accuracy of application Check wind speed and direction: • wind speed gauge at suitable height or visible signs • wind direction Factors that affect uniformity of spread from applicator: • applicator levelled according to manufacturer's recommendations • applicator at correct height • correct settings of spreading mechanism • consistency of disc speed • size/density of pellets • wind • slope • forward speed • ground conditions
3.1 - 3.2	Read product information Interpret product information	May include: • product name • active substance(s) (ingredient(s)) • field of use • operator protection • specific product precautions • appropriate for type of applicator • application (dose) rate • maximum number of treatments • timing • environmental protection • no spread zone • baiting recommendations

		• restrictions on use • additional label information
4.1	Identify the applicator components and controls	May include: • on/off control • metering mechanism • bias mechanism • hopper • lid • emptying outlet/mechanism • agitator • disc speed control • spread width limiter • fan and /or other items specific to the applicator • boom isolators (if applicable) • other controls specific to the applicator
4.2	Carry out pre-use checks to the prime mover	May include: • guards in place and in good condition • visual inspection of the wheels and tyres • tyre pressures • fuel level adequate • engine oil level is within acceptable limits • hydraulic oil level is within acceptable limits (if accessible) • transmission oil level is within acceptable limits (if accessible) • coolant level is adequate • engine air filter is clean
4.3	Carry out pre-use and operational checks to the applicator	Security of attachment: • fasteners tight • straps inspected and adjusted if necessary • linkage secure • sideways movement restricted • drawbar pin secured Possible mechanical defects: • seized, worn or damaged controls/components • electrical connectors/cable routing • air supply impeded Applicator lubrication: • identification of lubrication points • visual inspection of lubrication points • visual inspection of levels

		Boom settings, suspension and break-back devices: • boom suspension operational (if applicable) • break-back efficiency (if applicable) • height adjustment (if applicable) Part fill applicator: • suitable site selected • fill by usual on-site method, following approved procedures • manual handling considerations • optimum positioning for efficiency • security of pesticide on site • facility for dealing with/containing spillages Use of control panel may include: • functions of control panel • recognition of malfunctions before and during operation • check accuracy of base settings • switch to manual/test mode where applicable Action in event of control panel failing: • stop pesticide application • switch to manual operation
4.4	Calibrate the applicator and record relevant data	Select and record forward speed: • trial run on typical ground to establish acceptable applicator performance • accurate measurement of distance • time in seconds to cover distance using gear and rpm established • correct use of formula to establish forward speed Calculate required output: • use of manufacturers handbook/application charts • correct use of formula Set applicator: • use of manufacturers handbook/application charts Adjust applicator: • follow recommendations given in manufacturers operator handbook • run applicator for specific period of time or distance • care to avoid moving parts

		• collect product distributed (if applicable) • accurate weighing of output • compare with target rates (check product label) • repeat until target rates achieved Calibration data: • applicator settings • pellet used for calibration • application rate achieved • spreading width • registration number of prime mover • gear selected • engine speed (rpm) • vehicle forward speed • vehicle wheel sizes and tyre pressure
4.5	Calculate the quantity of pellets required for a specified area	To include: • the correct amount required for the specified area
5.1	Weigh the required quantity of pellets and add to the applicator	To include: • ensure approved techniques are followed with due regard to safe practice • correct selection of PPE/RPE as determined by label/COSHH Assessment • suitable site selected • fill safely observing safe lifting techniques • accurate weighing of pellets • avoidance of spillage
5.2	Demonstrate safe and accurate application procedures	Methods to achieve accurate application May include the following: • tramlines • wheelings • crop rows • marker poles • GPS Procedure to refill applicator part way through application: • carefully avoid contact with the contaminated area • mark the spot where the application stopped (any appropriate method) • refill the applicator

		• return to marked spot to continue application Demonstrate safe and accurate application procedures to include: • ensure applicator is level • applicator set at the correct height • operate controls to start and finish applying accurately at beginning and end of each bout • maintain correct forward speed • accurate matching of bouts/use of driving aids • awareness of techniques to counteract unbalanced applicator performance • coping with obstacles • correct application rate • check uniformity of spread • all areas treated, minimising overlaps or misses • awareness of changes in wind speed and direction
5.3	Carry out all activities avoiding risks to human health and the environment	To include: • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information and/or COSHH/Risk Assessment) • prevention of public/bystander contamination • safe filling procedure • safe on-site storage of pesticide • avoidance of off-target application • avoidance of over dosing/under dosing crop/target
5.4	Complete a treatment record	Completion of the treatment record must be: • accurate • legible (if handwritten)
6.1	State how to recover and store surplus slug pellets and how to dispose of waste material	Recovering surplus pellets: • avoid personal contamination • select appropriate PPE/RPE • ensure that the applicator is made safe (engine stopped, power isolated) • select appropriate site • appropriate container used • correct label attached Storing surplus pellets:

		• return to temporary mobile store • return to fixed storage facility Waste packaging: • packaging thoroughly emptied • placed in secure storage until disposal • collection by licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the applicator and the prime mover	May include: • danger of personal contamination • select appropriate PPE • select an appropriate containment site • appropriate containers for contaminated material • follow manufacturers cleaning procedure • ensure that the applicator is made safe (engine stopped, power isolated) • suitable containment/disposal of pellets or contaminated soil arising from cleaning operation • when the applicator should be cleaned
6.3	Describe the storage requirements for the applicator	May include: • refer to manufacturers handbook • ensure applicator is clean and decontaminated • inspect for wear and damage • replace any worn or damaged parts • carry out lubrication procedures • store under cover and out of direct sunlight • store in a secure area

Appendix 1 Practical table

131 Operating mounted or trailed granular pesticide applicators

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying granular pesticides using mounted or trailed equipment	
1.2 Describe how to apply granular pesticides safely using mounted or trailed equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Identify applicator components and controls	
4.2 Carry out pre-use checks to the prime mover	
4.3 Carry out pre-use and operational checks to the applicator	
4.4 Calibrate the sprayer and record relevant data	
4.5 Calculate the quantity of granules required for a specified area	
5.1 Weigh the required quantity of granules and add to the applicator	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities avoiding risks to human health and the environment	
5.4 Complete a treatment record	
6.1 State how to recover and store surplus granules and how to dispose of waste material	
6.2 Explain how to clean and contaminate the applicator and the prime mover	
6.3 Describe the storage requirements for the applicator	

132 Operating mounted or trailed slug pellet applicators

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying slug pellets using mounted or trailed equipment	
1.2 Describe how to apply slug pellets safely using mounted or trailed equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimize risks to the environment	
3.1 Read product information	

3.2 Interpret product information	
4.1 Identify the applicator components and controls	
4.2 Carry out pre-use checks to the prime mover	
4.3 Carry out pre-use and operational checks to the applicator	
4.4 Calibrate the applicator and record relevant data	
4.5 Calculate the quantity of granules required for a specified area	
5.1 Weigh the required quantity of pellets and add to the applicator	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities avoiding risks to human health and the environment	
5.4 Complete a treatment record	
6.1 State how to recover and store surplus slug pellets and how to dispose of waste material	
6.2 Explain how to clean and decontaminate the applicator and the prime mover	
6.3 Describe the storage requirements for the applicator	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the ***Centre Document Library*** on ***www.cityandguilds.com*** or click on the links below:

Quality Assurance Standards: Centre Handbook
This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment
Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City & Guilds Quality Assurance processes visit: the What is CASS? and Quality Assurance Standards documents on the City & Guilds website.

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The ***Centre Document Library*** also contains useful information on such things as:

- Conducting examinations
- Registering learners

- Appeals and malpractice

Useful contacts
Please visit the Contact Us section of the City & Guilds website, ***Contact us***

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As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

The Group is made up of City & Guilds, ILM, Kineo, The Oxford Group, Gen2, and Intertrain. Together we set the standard for professional and technical education and corporate learning and development around the world.

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