Open Awards Qualification Unit

This unit forms part of a regulated qualification.

1 Unit Details

Unit Title:	Understanding the Principles of Rodent Control
Unit Reference Number:	L/650/4846
Level:	2
Credit Value:	2
Minimum GLH:	13

2 Learning Outcomes and Criteria

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand what is meant by the term rodent and non-target biology and behaviour	1.1 Identify which rodent species may be 'target' species for control operations and those which are 'non-target'
	1.2 Identify the characteristics of various target rodent species
	1.3 Identify the characteristics of other non-target rodent species
2. Understand the reasons for rodent control	2.1 Identify the different reasons for controlling rodents in the context of public health pest control
	2.2 Identify the important diseases transmitted by rodents, their prevalence in rat and mouse populations
	2.3 Identify aspects of the animals' biology and behaviour to their pest status

	2.4	Identify the role of rodent pest management in the following: a) protecting public health and animal health b) preventing rodent damage to structures c) preventing contamination of foodstuffs by rodents d) preventing distress caused by rodent activity
3. Understand the signs of infestation and inspecting for rodents	3.1	Identify what evidence would indicate rodent activity
	3.2	Identify what evidence would indicate non-target species activity
	3.3	Identify the principles of inspecting for rodents
	3.4	Identify the importance of a good inspection or survey
	3.5	Identify tools and techniques required for inspection
	3.6	Identify how inspections may be linked to the principles of integrated pest management
4. Understanding the legislation relevant to rodent control	4.1	Identify the relevant Acts, Orders and Regulations by their correct title and associated year
	4.2	Identify the relevance of the legislation and how it impacts on safe and effective rodent control
	4.3	Identify how to protect health and safety in line with legislative requirements
	4.4	Identify the practicalities of waste disposal requirements
5. Understand non-chemical treatments	5.1	Identify appropriate non-chemical control options with their advantages and disadvantages
	5.2	Identify the correct use of live capture and spring traps
	5.3	Identify codes of practice and legal requirements of non-chemical treatments.
6. Understand the use of chemical treatments	6.1	Identify which chemical control options are available in anticoagulant form
	6.2	Identify which chemical control options are available in non-anticoagulant form

	6.3	Identify the difference between primary and secondary poisoning
	6.4	Identify rodenticide labels and approvals
	6.5	Identify appropriate methods of bait protection
	6.6	Identify the principles of rodent monitoring
	6.7	Identify how anticoagulant resistance is managed
7. Understand reporting and risk assessments	7.1	Identify when an environmental risk assessment is appropriate and what it entails
	7.2	Identify the key points of conducting an environmental risk assessment
	7.3	Identify appropriate features of a treatment report
	7.4	Identify the requirement for and benefits of keeping records of treatments
8. Understand the environmental impact of rodenticides and the Campaign for the Responsible Rodenticide Use (CRRU) Code	8.1	Identify the risks presented by the first and second-generation anticoagulants (ie the 'risk hierarchy')
	8.2	Identify what is meant by 'least severe but effective'
	8.3	Identify different exposure routes, and different exposure pathways within secondary and primary exposure routes
	8.4	Identify procedures conducted in the UK to obtain information about non-target impacts of rodenticides
	8.5	Identify exposure routes and the current extent of wildlife contamination with rodenticides
	8.6	Identify the objectives of the CRRU initiative
	8.7	Identify responsible rodenticide use in terms of the regulation of rodenticide use
	8.8	Identify the relationship between the CRRU code and product labels
	8.9	Identify benefits of the CRRU Code's seven points in terms of their individual effects in reducing wildlife exposure to rodenticides

Learning Outcome 1 - Indicative Content

The following information will be helpful when teaching and preparing learners for the following assessment criteria:

*1.1*Learners must be able to identify commensal rats and mice (*M. domesticus, R. norvegicus, and R. rattus).*

1.2 Learners must be able to identify the behavioural traits which link biology to behaviour, including habitats, feeding, reproduction, movement and rodent senses. Learners should be aware of aspects of rodent behaviour contributing to their status as pests ie dental structure, gnawing, burrow systems, urination, and defecation.

1.3 Learners must be able to identify non-target species including wood mouse (*Apodemus sylvaticus*), water vole (*Arvicola amphibius*).

Learning Outcome 2 - Indicative Content

The following information will be helpful when teaching and preparing learners for assessment criteria (ACs) 2.1 and 2.2.

All other AC's should be explicit in assessment requirements, and therefore, there should be clarity in teaching and assessment requirements.

2.1 Learners must be able to identify the reasons for control: damage and contamination caused by rodents, distress caused by rodents, rodents as carriers of disease organisms.

2.2 Learners must be able to identify pathogens carried: E. coli, Salmonella, Leptospira, Toxoplasma, and others, means of transmission, symptoms, effects of disease.

Learning Outcome 3 - Indicative Content

The following information will be helpful when teaching and preparing learners for the following assessment criteria:

3.1 Learners should be able to identify the evidence rodent activity including droppings, runs, smears, footprints, tails wipes, urine pillars and holes.

3.2 Learners should be able to identify evidence of non-target species activity, including bat droppings, covering over of bait by wood mice, water vole field signs.

3.3 When inspecting for rodents' learners should be able to identify the importance of a good inspection or survey.

3.4 & 3.5 Learners should be able to identify tools and techniques to use, as well as places to inspect in a variety of situations (domestic, commercial, and industrial sites and farms).

3.6 Learners should be able to identify the importance of integrated pest management (exclusion, restriction, destruction).

Learning Outcome 4 - Indicative Content

For this learning outcome:

Learners should be able to identify the following acts: Animal Welfare Act /Protection of Animals Act, Wildlife and Countryside Act, Prevention of Damage by Pests Act, Food and Environment Protection Act, Health and Safety at Work Act.

Learners should be able to identify Orders, such as: Spring Trap Approval Order, Small Ground Vermin Order.

Learners should be able to identify Regulations, such as: Control of pesticides regs, BPR, Control of Substances Hazardous to Health

In addition, they should have an outline knowledge of the Killgerm Controlled Waste Disposal Schemes in terms of dealing with spent bait.

They should also have summary knowledge of: HSE AIS16 'Guidance on storing pesticides for farmers and

other professional users'.

Learning Outcome 5 - Indicative Content

For this learning outcome:

Learners should have knowledge of various traps (live capture and spring traps).

Learners should be able to identify the frequency of visits in-line with code of practices and legislation and be able to identify how and when to use glue boards.

They should also have knowledge of the place of non-chemical treatments in the 'risk hierarchy', as described in the CRRU CoBP.

Learning Outcome 6 - Indicative Content

For this learning outcome:

Learners should have the following understanding of the definition of key terms (Rodenticide, Active ingredient, Formulation, Product, Acute rodenticides and Chronic rodenticides). In particular:

6.1 Learners should be able to identify anticoagulants currently approved in UK, describe approvals, and describe mode of action

6.2 Learners should be able to identify other chemicals currently approved in UK (Cholecalciferol, Carbon dioxide, Hydrogen cyanide), their approvals and their modes of action. As well as major rodenticide formulations.

6.3 Learners should be able to identify primary and secondary poisoning, stress the risks and outline precautions that must be taken. Identifying LD50 and the figures for both target and non-target animals

6.4 Learners should be able to identify non-standard uses on product labels. Identifying safe use of rodenticides and compliance with label requirements.

6.5 Learners should be able to identify the appropriate methods of bait protection including permanent baiting, covered and protected bait points, pulsed baiting. They should identify methods to protected baiting including bait boxes. They should identify when a chemical treatment should be selected and when it should cease. For example, the issue of permanent perimeter baiting in line with rodenticide labels and the CRRU CoBP.

6.6 Learners should be able to identify monitoring techniques.

6.7 Learners should be able to identify anticoagulant resistance in the Norway rat and Guidelines for the management of resistant rat infestations in the UK. Including the RRAG House Mouse Resistance. Guidelines.

Learning Outcome 7 - Indicative Content/Resources

For this learning outcome:

Learners should be able to identify risks and reporting, in accordance with the Killgerm guide to environmental risk assessments when using rodenticides.

Useful resources for this are:

http://www.killgerm.com/project/environmental-assessment/

http://www.thinkwildlife.org/crru-downloads/environmental-assessment-when-usinganticoagulant-rodenticides-in-the-united-kingdom/?wpdmdl=3143

Learning Outcome 8 - Indicative Content

The following information will be helpful when teaching and preparing learners for assessment criterion (ACs) 8.1, 8.3, 8.4, 8.5, 8.6 and 8.9. All other AC's should be explicit in assessment requirements, and therefore, there should be clarity in teaching and assessment requirements.

8.1 Learners should be able to identify the relationship, within the 'risk hierarchy' between the first- and second- generation anticoagulants.

8.3 Learners should be able to identify routes of exposure to non-targets: primary poisoning, secondary poisoning via consumption of target rodents and non-target rodents

8.3 Learners should be able to identify low-level contamination of wildlife. The distribution and impacts of residues: species exposed, residue levels, methods of monitoring, concerns about unknown sub-lethal effects, possible cumulative effects

8.4 Learners should be able to identify procedures conducted in the UK to obtain information about non-target impact rodenticides, including:

Predatory Bird Monitoring Scheme: data outputs on barn owls, red kites and kestrels, the exposure

finger-print, temporal changes in numbers of barn owls exposed, possible explanations for observed increases

Other studies: observations from other independent studies on stoat/weasel, polecat, red kite, kestrel

Wildlife Incident Investigation Scheme: causes of acute impacts, species affected, role of anticoagulants and other active substances, frequency of wildlife and companion animal casualties, frequency of incidents by type of use (approved, misuse, abuse, unspecified)

8.5 Learners should be able to identify exposure routes and the current extent to wildlife, including the widespread low-level contamination demonstrating multiple exposure pathways, frequent incidents involving harm to wildlife and companion animals, no observed adverse impacts on wildlife populations but significant concern about extent of exposure, requirement for implementation of responsible use.

8.6 Learners should be able to identify the objectives of the Campaign for the Responsible Rodenticide Use (CRRU). Including the purpose of CRRU: ie to focus on low-level residues and not wildlife crime or acute effects, main areas of focus rural landscapes and second generation anticoagulants

Contributing companies: list of responsible companies contributing to CRRU funding and the funding the co-ordination by CRRU of the UK Rodenticide Stewardship Regime.

CRRU Technical advisers: specialists providing CRRU with technical and scientific support.

8.9 Learners should be able to identify the seven elements of the CRRU code, their importance and role in mitigating exposure of non-targets to rodenticides.