

Report on the Rodenticides Stewardship Regime

Assessment of Implementation – March 2020

Rodenticides Stewardship Government Oversight Group



Contents

Introduction	Page 2
Background	Page 2
Principles of the Rodenticides Stewardship Regime	Page 3
Assessment of the Rodenticides Stewardship Regime	Page 4
Annex 1 – Performance monitoring and assurance requirements for the Rodenticides Stewardship Regime	Page 6
Annex 2 – Overview of CRRU evaluation data	Page 11

Introduction

1. The Rodenticides Stewardship Government Oversight Group is chaired by the Health and Safety Executive (HSE) and comprises representatives of other government stakeholders: HSE NI, DEFRA, Public Health England, Natural England, the Welsh and Scottish Governments and an independent scientific adviser. For the purposes of this report, this group will be referred to as 'Government'.
2. This paper provides an overview of the delivery of the UK Rodenticides Stewardship Regime, sets out the Government's view of its progress and future plans, and provides a broad assessment of the extent to which the regime continues to meet the principles set out by Government. This paper responds to the CRRU Annual Report 2019¹ and does not seek to duplicate earlier considerations and views which remain valid at the time of publication.
3. The regime was developed and implemented by manufacturers and suppliers of rodenticide users, and its delivery is managed and coordinated by the Campaign for Responsible Rodenticide Use (CRRU), to secure responsible use of these products, and to reduce exposure to people and non-target wildlife.

Background

4. Rodenticides are biocidal products that contain active substances in scope of the EU Biocidal Products Regulation (EU) 528/2012 (BPR). BPR aims to ensure that biocides can be used without causing significant harm to people, the environment and non-target animals. It sets the requirement for the assessment and authorisation of biocides, and HSE is the UK Competent Authority (CA) for BPR and leads UK policy on biocides.
5. All first and second-generation anti-coagulant rodenticides fail the environmental risk assessment for use outdoors², but Government recognises that this use is sometimes necessary to control pests and the threat they can present, including to public health.
6. As part of HSE's authorising the use of anti-coagulant rodenticide products, Industry, co-ordinated by CRRU, committed to improving and promoting good practice alongside robust arrangements to control the use of professional rodenticide products, via an industry-led, *Rodenticides Stewardship Regime*. The regime was accepted by Government, as meeting its High-Level-Principles, and the regime came into force in April 2016.
7. Earlier reports of the Government Oversight Group have reviewed the implementation of the regime to assess the extent to which the High-Level-Principles it set out, are met. This report builds on the earlier findings and key conclusions.

¹ Campaign for Responsible Rodenticide Use (CRRU) (2019) The UK Rodenticide Stewardship Regime 2019 Annual Report. UK.

² Also covers use "in and around buildings", "open areas" and "waste dumps", see Larson (2003) Emission Scenario document for biocides used as rodenticides. CA-Jun03-Doc.8.2-PT14.

Principles and monitoring requirements

Principles:

8. Government set the following principles for the UK's anticoagulant Rodenticides Stewardship Regime.
 - a. Use of Integrated Pest Management, including use of rodenticides, involving a hierarchy of risk controls for rodents.
 - b. Responsible use of rodenticides, when demonstrated they are needed, because of their potential threat to human, animal health and the environment.
 - c. Applicability to all suppliers, handlers and professional users of rodenticides approved under stewardship to address these risks.
 - d. The need for the regime to be robust, effective and workable, while remaining as simple as possible.
 - e. The need for the regime to cover the whole life-cycle of the rodenticide products: manufacture, supply chain, end-use, disposal and environmental fate.
 - f. The enabling of good practice in the control of rodent populations, as part of an Integrated Pest Management system, while minimising resistance build-up and secondary poisoning in non-target species.
 - g. Delivery of key benefits, such as:
 - **governance of the supply chain**, which gives governance over, and provides the driver for, later stages;
 - **a competent workforce** capable of delivering stewardship standards and of demonstrating an appropriate understanding and attitude toward case-specific control of rodents and use of rodenticides; and
 - **monitoring compliance** with the regime and its environmental impacts, and if possible, of the level of conflict reduction – i.e. an assessment of whether rodenticides and stewardship together are actually tackling the problems.

Monitoring:

9. In addition to the principles above, Government set out requirements for monitoring the regime, and agreed these with the industry, via CRRU. These are set out in full at **Annex 1**.

Assessment of the Rodenticides Stewardship Regime against the principles

10. Evaluation of the Rodenticides Stewardship Regime comprises 3 stages:
 - (i) Evidence that the industry has put in place what it said it would
 - (ii) Evidence / indicators of industry's response / changes of behaviour
 - (iii) Evidence / indicators of impact
11. In relation to (i), Government remains content that key features of the CRRU Scheme continue to meet the requirements of the *High-level Principles*. CRRU's efforts to adjust existing arrangements for training and certification across the sector with the aim of improving the overall competence of professional rodenticide users is welcomed.
12. The Government notes CRRU's feedback highlighting where further work is needed. Specifically, transparency on actions taken where controls operating across supply chains fall below expected standards.
13. In relation to (ii) the Government welcomes the information provided by CRRU, both in terms of the insight provided on the impact the scheme, and the further evidence that the arrangements CRRU has established remain broadly fit for purpose at this time.
14. In relation to (iii) and generally, Government recognises that the extent to which the regime is working will be based on outputs from oversight and evaluation activities over the coming years. Government scrutiny will continue to focus on the behaviour of those operating in the sector and the measurable effect this has on non-target animals.
15. This paper responds to the CRRU Report 2019, which sets out how the regime meets the agreed requirements, available from the CRRU website - <http://www.thinkwildlife.org/>. The Government response is set out below.

Embedding stewardship standards into farm assurance schemes

16. Government welcomes CRRU's ongoing efforts to embed and extend the adoption of good practice across the sector, noting:
 - the continued provision of CRRU-approved training through 154 training providers serving four awarding organisations, namely BASIS Registration Ltd., City and Guilds/National Proficiency Tests Council (NPTC), Royal Society for Public Health (RSPH) and LANTRA.
 - 4,711 certificates were awarded to training participants during the period, bringing the total number of certificates awarded for CRRU-approved courses to 23,538 during the three years of the regime.
 - CRRU's engagement with Farm Assurance Schemes Auditors, responsible for visiting all of their members' premises to conduct audits of compliance with the new standards.

Proof of competence at point of sale (supply chain governance)

17. Government recognises the following positive achievements:
 - Formal implementation of a new independent Rodenticide Point of Sale Audit Procedure.
 - Ongoing provision of a robust industry-led complaints handling service alongside statutory arrangements for complaining or reporting concerns directly to HSE.
18. The high-level Principles set clear expectations for supply-chain governance. This means Authorisation Holders ensuring that their supply chains take steps to ensure that professional rodenticide products are only sold to those competent to use them.

19. CRRU's 2019 independent audit provided assurance that most members of supply chains were in broad compliance with standards for mandatory checks. However, the audit continues to provide evidence that a significant proportion of those audited continue to be non-compliant. The Government has asked CRRU to provide information on the action they are taking in cases where suppliers repeatedly fall below the expected standards.

Communication and engagement

20. Government notes that engagement across the industry, and targeted communication through the sectors' media, has been strong and the significant outputs listed in Table 5 (Page 19) of the CRRU 2019 Report.

Residues monitoring and evaluation

21. The Government requirements for monitoring and evaluation are set out in **Annex 1**. An overview of the monitoring data to be provided by CRRU (linked to the high-level principles set out at paragraph 8 above) is provided at **Annex 2**.

22. Government thanks the Centre for Ecology and Hydrology (CEH) for their 2019 report³ into the SGAR Residues in Barn Owl (*Tyto alba*) Livers and notes the following:

- There was no significant difference between barn owls from baseline years and from 2018 for any individual compound or for summed SGARs (Σ SGARs), although a decrease in the proportion of birds with "high" difenacoum residues approached significance.
- There was no significant difference in the proportion of barn owls with detectable liver residues of flocoumafen between the baseline years and 2018.
- There was a significantly higher proportion of barn owls with detectable liver residues of difethialone in 2018 compared to baseline years.
- There was no significant difference between barn owls from baseline years and from 2018 in the concentrations of either "low" or "high" residues for bromadiolone, difenacoum (data tested statistically only for "low residues"), all residues summed (Σ SGARs), or "high" brodifacoum residues. The median concentration of "low" brodifacoum residues was higher in birds from 2018 than in baseline years (8% vs 0.3%).

23. Overall, Government continues to consider the barn owl dataset provides a good indicator of non-target species exposed to rodenticides. The Government accepts the findings of the CEH study, including its conclusion that "Overall, there were few differences in liver SGAR accumulation between barn owls that died in baseline years and in 2018. The lack of significant reductions in SGAR residues in barn owls in 2018 suggests that full implementation of stewardship since 2016 has yet to result in a reduction in exposure of barn owls to SGARs".

24. The Government acknowledges CRRU's continued work to provide additional information about barn owl breeding performance in the areas of study⁴, and the important insight provided by the CEH study of anticoagulant rodenticides in red kites (*Milvus milvus*) in Britain 2017 and 2018⁵.

Conclusion

25. The Government remains content that the Rodenticides Stewardship Regime is fit for purpose and continues to meet the high-level principles and requirements set out at paragraph 8, with the caveats provided regarding the further work identified.

26. In June 2020 the Government will fully evaluate the regime after 5 years of operation.

³ Shore, R. et al. (2019) Second Generation Anticoagulant Rodenticide Residues in Barn owls 2018. Centre for Ecology & Hydrology, Lancaster, UK.

⁴ Prescott, C. et al (2019) Breeding performance of barn owls in five regions of the United Kingdom – 2018 dataset. Reading, UK.

⁵ Walker, L.A., et al. (2019) Anticoagulant rodenticides in red kites (*Milvus milvus*) in Britain in 2017 and 2018. Centre for Ecology & Hydrology, Lancaster, UK.

Annex 1 – Performance Monitoring and Assurance Requirements: Rodenticide Stewardship Regime

Introduction

1. The high-level principles that underpin the Rodenticides Stewardship Regime place a responsibility on the Government Oversight Group to monitor performance in delivering the agreed outcomes for regimes established under the industry led Rodenticide Stewardship regime.
2. This paper describes the monitoring arrangements necessary for the Government to deliver its role in determining whether the regimes established under stewardship are delivering the expected outcomes. Performance (including environmental) monitoring and reporting will provide the necessary assurance that professional quantities of anti-coagulant rodenticides are being used in a safe and sustainable way and that the risks to human health and the environment are being properly managed. Monitoring will focus on the following areas (links to high level principles in brackets):
 - Environmental Impacts (Monitoring Compliance)
 - Whether the rodenticides are effective (Competent Workforce)
 - Awareness using the Knowledge, Attitude and Practice (KAP) survey (Competent Workforce/Monitoring Compliance)
 - Point of sale information (Supply Chain Governance)
 - Training (Competent Workforce)

Monitoring arrangements

3. The monitoring framework defined in the high-level principles would include an assessment of the following:
 - a. **Governance of the supply chain**, which gives control over supply and provides the driver for later stages. The possible performance indicators are:
 - Information from the relevant Rodenticides Stewardship Regime working group.
 - The KAP survey.
 - Enforcement data from regulators.
 - Stewardship Regime figures on the take up of training.
 - b. **A competent workforce** capable of delivering stewardship standards and of demonstrating an appropriate understanding and attitude toward case-specific control of rodents and use of rodenticides. Demonstrating the work force is competent will be an area where results may take time to feed through, but possible performance indicators are as follows:
 - The KAP survey - This may be the first indication of positive effects of stewardship.
 - Competence could be indicated by a decline in environmental impacts through reduced secondary contamination.
 - The take up of training by sector.
 - Reported attempts to purchase rodenticides covered by the regime without producing appropriate documentation to evidence compliance with the regime.
 - c. **Monitoring compliance** with the regime and its environmental impacts, and if possible the level of conflict reduction – i.e. an assessment of whether rodenticides and stewardship together are actually tackling the problem. A detailed paper has been

drafted on monitoring the environmental aspects of secondary poisoning (see Annex 1A). Indicators in this area could include the following:

- Using point of sales information.
- The predatory bird monitoring scheme and other similar data will allow for some assessment, as will monitoring of compliance.
- Enforcement information.

How the data will be managed.

4. Government will have the ultimate say over the interpretation of the data, assessing the significance of any data gaps and determining if the outcomes detailed in the high-level principles have been delivered.
5. The Government Oversight Group will hold annual meetings to assess how the regime is operating. Smaller interim working groups may meet to assess separate issues. It will be open to the Government Oversight Group to meet at any time should it deem necessary. The Government Oversight Group will undertake a more formal evaluation of stewardship with a target of doing so (at the latest) five years from the start of the regime. This will allow time for resilient quantitative data to be collected and assessed.

Data required of Campaign for Responsible Rodenticide Use (CRRU)

6. CRRU is the only current operator of a Rodenticides Stewardship Regime. Government Oversight Group will expect from them an annual report with an assessment on progress against principles. The elements of this report may change over time. It would also be open to CRRU to submit additional data should they consider it will assist the Government Oversight Group to assess how the regime is operating. General headings under which CRRU will submit data are as follows:
 - Knowledge, Attitude and Practice (KAP) survey
 - Data on secondary contamination
 - Data from CRRU Point of Sales Monitoring
 - Training
7. Government will draw on other sources of data such as:
 - any relevant evidence from enforcement activity
 - product authorisations

Next steps

8. Approach CRRU for discussion on these arrangements as a framework. Further detail will need to be added in the course of discussions and afterwards.

Annex 1A - Monitoring the potential impact on wildlife

Background

1. All First-Generation Anticoagulant Rodenticides (FGAR) and Second Generation Anticoagulant Rodenticides (SGAR) fail the environmental risk assessment as required under the Biocides Product Regulation (BPR, Regulation (EU) 528/2012). Due to the essential need to control problem rodents, it has been agreed to permit use, providing that users comply with a regime compliant with the high level Principles for Rodenticides Stewardship Regimes. This paper aims to outline the success criteria with which the regime will need to comply in respect of secondary poisoning.
2. The regime must include monitoring in order to determine whether Stewardship is achieving its aim of reducing the risk of primary and secondary poisoning to non-target predatory and scavenging birds and mammals to a minimum.
3. Monitoring will take several forms, including an assessment of the awareness of the regime by end-users, up take of training and competence of users. Monitoring related to these activities will include a knowledge, attitudes and practices survey (KAP). There will also be an assessment of whether the exposure to and/or impact on predatory and scavenging birds are improving. This brief paper outlines the performance measures for the latter assessment. The outcome of this and other performance measures along with any other relevant information will be considered by those operating the Rodenticide Stewardship Regime and presented to the Government as evidence the regime is operating as envisaged.
4. The outputs from the monitoring will not be used as ‘hard’ triggers for specific actions, but the performance measures discussed below will be used, along with information from other elements of the monitoring programme (e.g. the KAP survey), to form a judgement as to how a Rodenticide Stewardship Regime is progressing and whether any changes are required. Depending on the outcome of the above, changes could range from minor modifications to the Rodenticide Stewardship Regime (e.g. improved training or awareness), changes to the approved uses (e.g. amendment of the approval of specific products) or revocation of uses/products.

Performance measures

Predatory birds

5. In order to determine if the exposure and hence potential impact on predatory bird species has changed due to the implementation of the Rodenticide Stewardship Regime, use will be made of the analysis and resulting outputs from Shore *et al* (2014)⁶ which provides the pre-stewardship level, baseline levels for comparison. Outlined below is the performance measure that will be used for predatory birds:
 - *There should be a significant⁷ decrease in the exposure of the sentinel species⁸ – Barn Owl – in terms of sum residues of SGARs detected in livers of barn owl carcasses collected over the first four years.*

⁶ Shore R F, Henrys P A and Walker L A (2014) Power analysis of liver second generation anticoagulant rodenticide (SGAR) residue data in barn owls from Britain: A Predatory Bird Monitoring Scheme (PBMS) report. Contract Report to the Health and Safety Executive <https://wiki.ceh.ac.uk/download/attachments/134414860/HSE%20Power%20analysis%20report%202014-final%20version.pdf?version=1&modificationDate=1410527042000&api=v2>

⁷ Changes will be compared to Table 6 of Shore *et al* (2014). It should be noted that statistically significant changes are only likely to be detected within the timeframe indicated in the table. Therefore, in the first instance, statistically significant changes will be considered but there will also be an assessment of whether there are non-statistically significant changes in the pattern or trend of residues that potentially indicate concern.

⁸ Whilst the Barn Owl is used as a sentinel species, it does also have conservation value as well.

- *Within the expected long-term downward trend, any significant increase observed in the exposure to the sum and any individual SGAR active substances on a yearly basis will be considered.*
 - *Monitoring will continue through the life time of the Rodenticide Stewardship Regime to ensure that the regime is meeting its objectives.*
 - *Changes to the Rodenticides Stewardship Regime may result if the above are not met.*
 - *The following criteria will be used to determine exposure:*
 - *Mean low hepatic residue level – i.e. $\leq 0.1 \mu\text{g/g}$ wet weight or*
 - *Mean high hepatic residue level – i.e. $> 0.1 \mu\text{g/g}$ wet weight or*
 - *Ratio of Barn Owls with high to low hepatic residues levels*
6. In determining progress there should be a detailed assessment⁹ by those operating a Rodenticide Stewardship Regime of the changes in levels of hepatic residues relative to pre-stewardship levels (both low and high concentrations) of individual active substances as well as the ratio of high to low concentrations. The assessment report to the Government will be undertaken on an annual basis with a full review of the cumulative data in 2020 to help inform an overall assessment of the regime.

Scavenging birds and other species

7. As the above performance measure only covers a single predatory bird species, albeit as a sentinel species, Government consider it important to assess a further species that will be exposed via the consumption of dead and dying rodents (scavenging birds). Unlike the Barn Owl, Red Kite is primarily a scavenger and feeds regularly on the primary targets of rodenticides. Government propose that the Red Kite should be the focus of this performance measure as it is of particular importance as a sentinel species as well as species of conservation importance.
8. In light of the above, the Government thought it would be useful to collect data on Red Kites in order to gauge the effects of stewardship on scavenging birds. These data could be available from a variety of sources. The Government needs to explore how best to acquire such data.
9. Any available data should be used as quantitatively as possible, noting any limitations of the underlying data. It should further be noted that as these monitoring schemes and/or associated work are not being funded by those involved in operating the Rodenticide Stewardship Regime, such data may not always be available throughout the lifetime of the regime.
10. In addition, data on other species, e.g. predatory birds and mammals, scavenging birds and mammals should be considered when they are available.

Wildlife Incident Investigation Scheme (WIIS)

11. Freely available data from the WIIS should be considered by those involved in operating a Rodenticide Stewardship Regime. This assessment should be as quantitative as possible whilst acknowledging any limitation in the underlying data.

Timetable

⁹ This assessment could consider such issues as changes in the availability of the various products/uses, changes due to other elements of the regulatory process, knowledge of the occurrence of rodenticide resistance and occurrence of changes in residues

12. An assessment of performance against the above criteria will be made on a yearly basis and will be made once the PBMS data are available. This will be approximately in the middle of the following year, i.e. the performance and impact in 2016 will be considered in approximately June 2017. The base line for this assessment will be the years (2007-12) covered by Shore *et al* (2014). If however more recent pre-stewardship data become available, then the appropriateness of combining these data with that of Shore *et al* should be considered by those operating the Rodenticide Stewardship Regime.
13. Prior to 2017, Government will consider the results of other monitoring information (assessment of the awareness of the regime by end-users, take up of training and competence of users, knowledge, attitudes and practices surveys (KAP) etc. to assess the progress and implementation of the stewardship arrangements committed to by the regime owners.

Annex 2 – Overview of CRRU Evaluation Data

Required data		Data to be provided
1	Environmental Impacts (Monitoring Compliance)	1. CEH annual survey of residues in livers of 100 barn owls
		2. Annual survey of barn owl breeding performance
		3. Annual review of WIIS incidents
2	Whether the rodenticides are effective (Competent Workforce)	1. Annual report of training uptake and award of certification/ qualification by CRRU-approved awarding bodies
		2. Annual report of number of members of CRRU-approved farm assurance schemes
		3. Provision of up to date, relevant best practice guidance documents
		4. Promotion of regime objectives and raising awareness by stakeholder organisations
3	Resistance monitoring (Competent Workforce)	1. Annual report of status of resistance monitoring in UK and elsewhere in EU
4	Awareness using the Knowledge, Attitude and Practice (KAP) survey (Competent Workforce/Monitoring Compliance)	1. KAP survey baseline study (published)
		2. Repeated KAP surveys in 2017 and 2019
5	Point of sale information (Supply Chain Governance)	1. Output from the Point of Sale Audit. Interim results provided by June 2018.
6	Training (Competent Workforce)	(see point 2 above)