

First Report on the Rodenticides Stewardship Regime

Assessment of Implementation – February 2017

Rodenticides Stewardship Government Oversight Group

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Introduction

1. This paper provides an overview of the implementation of the UK Rodenticides Stewardship Regime, sets out the Government's view of its progress and future plans, and an initial assessment of the extent to which the regime meets the principles set out by Government.
2. The regime has been developed by suppliers and representatives of rodenticide users, co-ordinated by the Campaign for Responsible Rodenticide Use (CRRU), to secure responsible use of these products, and to reduce exposure to non-target wildlife.
3. The Rodenticides Stewardship Government Oversight Group is chaired by the Health and Safety Executive (HSE) and represents 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'.

Background

4. Rodenticides are biocides, with active substances incorporated into biocidal products. The EU Biocidal Products Regulation (EU)528.2012 (BPR) aims to ensure that biocides can be used without causing significant harm to people, the environment and non-target animals. BPR sets the process 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 outdoors¹, but Government recognises that this use is sometimes necessary to control pests and the threat they can present, including to public health. In order for HSE to authorise the use of anti-coagulant rodenticides products, it asked the industry, co-ordinated by CRRU, to explore ways to improve and spread good practice and self-policing of professional use of these products, via an industry-led, voluntary stewardship regime.
6. CRRU brought together manufacturers and distributors, professional pest controllers, game-keeping, and farming sectors to develop the regime. The Government Oversight Group was set up and developed principles for the regime, (paragraph 8 refers). Proposals were developed by CRRU and were accepted by Government, as meeting its principles, and the regime was put in place in April 2016.
7. The Government Oversight Group has reviewed the regime, to date, to assess the extent to which the principles it set out, are met. Its key conclusions are set out in this paper.

¹ This 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 – ie 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 will comprise 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. At time of writing, some 9 months into operation of the regime, this initial assessment is limited to (i) above – ie, what has been put in place. In relation to (ii), Government is content with the way the regime has been developed and implemented to this point. It does not under-estimate the significance of this challenge and recognises the significant efforts and achievements of CRRU and all involved.
12. However, on-going oversight and evaluation over the coming years will be required to establish the extent of any behavioural change and its effect, particularly on non-target animals. We will fully evaluate the regime after 5 years of operation, and will publish a report annually as part of the on-going monitoring process.
13. The remainder of this paper sets out in brief what is in place, referencing the principles and requirements set by Government, and notes where further work is required / planned to fully meet the requirements of the regime. Note that CRRU will be publishing a more detailed report of progress on its own website - <http://www.thinkwildlife.org/> - in March 2017.

Stewardship-conditions

14. The regime was in place from April 2016, when the first rodenticide products with 'stewardship conditions' labels came on to the market. As smooth a transition as possible was facilitated by CRRU and HSE working together to co-ordinate the timing of the stewardship-linked authorisations, and ensuring consistency and clarity of labels.
15. These conditions of authorisation needed to be underpinned by the development of clear and appropriate standards for use of the products and the embedding of those standards into a comprehensive framework of training, certification, auditing, point of sale verification of competence, supply chain governance and effective communication across the target sectors. These elements are discussed below.

Development of standards

16. The CRRU Code of Best Practice sets out the principles of safe and effective rodenticide use, as part of an integrated approach to rodent control, and it forms the basis of the stewardship standards. These standards, if followed, meet the stewardship principles as set out in paragraph 8 of this paper.
17. A key element of the regime is to ensure that these standards form the basis of required training / awareness and certification of competence, and, that the appropriate verification is in place, to enable self-policing within the system. This is discussed below.

Embedding stewardship standards into independently accredited training and certification

18. The Government notes the following positive achievements:

- The creation of a comprehensive training framework, involving the relevant awarding bodies², course providers, and industry sectors.
- The development of a training standard, considered appropriate for proof of professional competence at point of sale, permitting purchase of professional use stewardship-labelled rodenticides.
- The development and mapping of appropriate course content of relevant training providers, along with qualifications and certificates, and their approval by a panel of awarding organisations, in consultation with other stakeholders. The publication of a stewardship-compliant list is also recognised.

19. Government notes that there is further work to do on the development of continuous professional development (CPD) and auditing arrangements, and is content that appropriate plans are in place to achieve what is required.

Embedding stewardship standards into Farm Assurance Schemes

20. CRRU has worked with the agricultural sector to provide an alternative to the training competence route for farmers, by embedding the standards into Farm Assurance Schemes, where compliance is assessed via audits.

21. This element of the regime will take more time to implement. Interim approval (to December 2017) has been given to those Farm Assurance Schemes that have demonstrated they meet initial criteria³, but full stewardship standards must be in place by the end of December 2017. Farms will be audited against the new standards, according to the on-going audit cycle (1 to 2 years).

22. Government supports this approach to securing the participation of the agricultural industry, but notes the specific challenges associated with ensuring these standards are in place in some 100,000 farms by 2019. The importance of the awareness raising is recognised here and the expectation is that farmers will not wait for audit to implement the standards. Further work will be required to consider how to validate stewardship compliance on the ground.

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

23. Government recognises the following positive achievements:

- A supply chain governance structure is in place, which requires manufacturers and suppliers to implement requirements of ‘stewardship conditions’ on the sale of professional rodenticides, as per the labels.
- This responsibility is shared with supply-chain partners, whether dealing with customers face to face, on-line or by phone.
- All manufacturers of, and UK authorisation holders for, anticoagulant rodenticides products for use by professionals outdoors, have joined CRRU, contributed to the implementation of the regime and stated their commitment to it.

24. In brief – the requirements for proof of professional competence at point of sale, in line with “stewardship conditions” labels, have been implemented – i.e. stewardship compliant

² BASIS (Registration), City and Guilds, LANTRA, and Royal Society for Public Health

³ They must have effective integrated pest management approaches, require documentation and operate regular audits.

certification is required to purchase professional use rodenticides. The requirements apply throughout the supply chain. However, we do not know how consistently this is working. HSE and CRRU have received correspondence from potential customers of these products, who have been prevented from purchasing them, without the proof of competence. This provides anecdotal evidence (only) that the regime is operating. In relation to this point, Government makes the following comments:

- We would support CRRU in seeking to ensure that point of sales communication is also consistent in supporting customers' understanding of the options available to them for effective rodent control.
- We note further work is in progress to explore options for point of sale verification audits. This must be a priority, as those suppliers complying with the requirements need confidence that others will not seek commercial advantage by not doing so. If this is not the case, a key plank of the regime could fall.
- We encourage CRRU to consider whether further point of sale information could be used to indicate further awareness / compliance, e.g. to develop a metric based on refusals to supply.

Communication and engagement

25. Government notes that engagement across the industry and targeted communication through the sectors' media has been strong. Evaluation through the next Knowledge, Attitudes and Practice survey (Annex 1 refers) is expected to provide evidence of raised awareness and changes in behaviour.

Monitoring and evaluation

26. Prior to implementation of the regime, Government set out its requirements for monitoring and evaluation, and agreed with CRRU, the key evaluation objectives, indicators, expectations and data sources. This is provided at **Annex 1**. An overview of the monitoring data to be provided by CRRU (linked to the high level principles set out at paragraph 8) is provided at **Annex 2**.

27. A key achievement has been the development of baseline surveys and studies prior to implementation of the regime, both to capture pre-stewardship knowledge, attitudes and practices, and studies on residues in barn owls, pre-stewardship . This baseline data was agreed by Government as adequate to permit a comparison in levels of exposure over a reasonable period of time.

28. Government is content that this evaluation framework is fit for purpose and - accepting that the data will not be perfect – as described, the approach, (including analysis of data from the Wildlife Incident Investigation Scheme, and of scavenging raptors through the Predatory Bird Monitoring Scheme), is expected to provide the information Government, industry and stakeholders will require to assess the success of the regime, over the next 3 to 4 years. However, it is acknowledged that the phased implementation of the regime with regard to Farm Assurance Schemes (paragraphs 22 and 23 refer) may complicate the evaluation picture. There is further detail to be developed, and additional data required, e.g. on the validation of compliance, to enable the insight we need, to be gained by 2020, and the Government has provided CRRU with some specific suggestions to address data gaps or strengthen data in key areas.

Conclusion

29. In conclusion, Government is content that the Rodenticides Stewardship Regime is fit for purpose and meets the principles and requirements set out at paragraph 8, with the caveats provided, regarding the further work planned. A key priority area here is the development of independent checks, that point-of-sale restrictions are being applied. We also note that the analysis of the monitoring data will need to take account of the phased implementation of the regime, particularly with regard to Farm Assurance Schemes.

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 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 and/or impact to predatory and scavenging birds is improving. This brief paper outlines the performance measures for the latter only. 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)⁴ which provides the pre-stewardship level, baseline for comparison. Outlined below is the performance measure that will be used for predatory birds:

⁴ 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>

- *There should be a significant⁵ decrease in the exposure of the sentinel species⁶ – Barn Owl – in terms of sum residues of SGARs detected in livers of barn owl carcasses collected over the first four years.*
 - *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 assessment⁷ 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 target 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 get 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 be 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.

⁵ 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.

⁶ Whilst the Barn Owl is used as a sentinel species, it does also have conservation value as well.

⁷ 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

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

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 in to 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	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	5 Point of sale information (Supply Chain Governance)	1. Examination of options for point of sale compliance audits by independent organisations
6	6 Training (Competent Workforce)	(see point 2 above)