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Discussion & Recommendations for Rodenticide Action Plan (RAP)

Summary of recommendations

- Scientific evidence demonstrates significant negative impacts on wildlife, particularly raptors and owls, due to all rodenticides.
- Effective and sustainable alternative solutions exist to address human-rodent conflicts, including high quality snap traps, captive bolt traps, rodent contraceptives, and exclusion and preventative measures.
- The current temporary, partial ban is unenforceable and it's impossible for the public to identify non-compliance. The exemptions will continue to result in significant animal suffering and wildlife losses.
- Following the current 18-month ban, 2582 B.C. residents signed on to a statement supporting a comprehensive ban on all rodenticides and a significant decrease in exemptions, which have been shown to threaten wildlife. The signatories include B.C.-based residents only and any duplicate signatures have been removed, to ensure an accurate total.

Introduction

The Vancouver Humane Society (VHS) is a registered charity dedicated to the humane treatment of animals. The VHS advocates for humane wildlife management practices and, as such, supports an end to the use of inhumane and indiscriminate rodenticides, in favour of humane alternatives and preventative measures that address the root cause of human-rodent conflict.

Background

Rodenticide use

The use of rodent poisons has become a primary approach for managing unwanted rodent populations. In British Columbia, the quantity of rodenticide products sold increased from 62,233 kg in 2010 to 81,340 kg sold in 2015.ⁱ Despite suggestions that rodenticides are intended to be a temporary, last resort, it appears that in practice these products are used much more routinely, at times even proactively and permanently.ⁱⁱ

There is no evidence that indicates the permanent use of rodenticides is the most effective method for reducing rodent populations. In fact, the regular use of rodenticides has resulted in resistance among rodent populations to some poisons.ⁱⁱⁱ

Negative impacts of rodenticides

The impact of rodenticides not only on target species, but also on non-target wildlife, pets, and the environment is a growing public concern. By design, rodenticide baits aim to attract animals, creating a risk for primary poisoning of wildlife and pets, should they access the bait directly. Secondary poisoning of non-target species that may consume poisoned rodents, such as coyotes, raccoons, hawks, eagles and owls, is also a major concern. Data has shown that residues of anticoagulant rodenticides have been found in all tested species of raptors that inhabit agricultural landscapes in southwestern British Columbia, reflecting the widespread impacts of secondary poisoning among predators and scavengers.^{iv} In addition to this, B.C.-based Orphaned Wildlife Rehabilitation Society (OWL) noted that a few years ago a blood test study found that more than half of the animals in their care had poison residue in their system.^v

There are also concerns surrounding the bioaccumulation of rodenticides across a variety of species and the impact of these poisons on the larger environment. Evidence of contamination among insects, slugs, and songbirds reflect how these poisons may move through the food chain.^{vi} Meanwhile, the prevalence of these toxins in the environment, along with the decomposing remains of poisoned animals, may also contribute to contamination of soil and water.^{vii}

Rodenticides contribute to significant and prolonged suffering for target and non-target species, taking days and sometimes even weeks for poisoned animals to die.^{viii} For animals that don't die, the effects of sub-lethal rodenticide poisoning, including lethargy and internal bleeding, may put them at increased risk of injury or death due to other causes, such as window and vehicle strikes. For example, a sub-lethal dose of anticoagulant rodenticides, which prevents blood clotting, in an owl could mean an injury causing an otherwise survivable cut could lead to the animal bleeding to death.^{ix} Research also suggests that rats that experience external bleeding or bloody diarrhea, as a result of consuming anticoagulants, present a public health risk as contact with their blood can increase the chance of pathogen transmission to humans.^x

Current situation

Municipal & provincial bans

While recent action by a growing number of B.C. municipalities to restrict or ban rodenticides on city property, along with the provincial government's temporary, partial ban on second generation anticoagulant rodenticides are important first steps, further action is needed to effectively address the widespread use and impacts of rodenticide products.

Other rodenticides

B.C.'s temporary 18-month ban prohibits only second-generation anticoagulant rodenticides (SGARs), leaving first-generation anticoagulants (FGARs) and other rodenticides permitted for

use. Many of these products not included in the ban, such as bromethalin, zinc phosphide, chlorophacinone, diphacinone, and warfarin, are also inhumane and pose the above mentioned threats to wildlife, pets and the environment. Diphacinone and chlorophacinone, for example, are high risk for secondary poisoning for wild mammals, dogs and cats.^{xi} Concerns have also been raised by veterinarians in regards to secondary poisoning by bromethalin, a neurotoxin that targets the central nervous system and causes paralysis and convulsions, as there is no specific antidote.^{xii} Another non-anticoagulant, zinc phosphide, produces a toxic gas in the animal's body, leading to respiratory distress. Warfarin has been so widely used that rodents are becoming increasingly resistant to it, yet its use continues to harm non-target wildlife.^{xiii} In practice, pest control companies can simply replace the now-banned SGAR products with these other types of rodenticides.

Exemptions

The current temporary ban also permits the continued use of SGARs by a long list of exempt users, including agricultural operators, hospitals, gas stations, food processing and storage facilities, restaurants, grocery stores, convenience stores, transportation facilities, sanitation facilities, coroners and facilities performing mortuary services.^{xiv} Given the lengthy list of exemptions, it's inevitable that the use of these products will continue to result in direct and indirect poisoning of wildlife, pets, as well as negative impacts on our food systems that would benefit from more research. The current list of exemptions is based on the Covid-19 essential services list, raising questions about the list's applicability to a very different issue of rodenticides and the government's justifications for allowing the continued use of SGARs in each of these situations. For example, allowing the continued use of SGARs in locations where wildlife activity is common, such as at garbage dumps or recycling facilities, is especially problematic in terms of the strong likelihood of poisoning of non-target wildlife.

Issues of non-compliance & lack of transparency

Non-compliance with the current SGAR ban is an area of concern, as evidence of suspected SGAR use in prohibited locations continues to be found and reported by members of the public. In a number of these situations, upon the public reporting bait boxes labeled as containing SGARs in prohibited locations, the Ministry has responded that the bait boxes were mislabeled and did not contain SGARs. This was the case in a recent report of a SGAR bait box at the Ministry of Environment's office in Victoria.^{xv} The mislabeling of these bait boxes fails to align with the Integrated Pest Management regulations, which require labeling indicating the pesticide's active ingredient or its registration number under the federal Act.^{xvi} This raises questions about overall compliance with and enforcement of the regulations and the recent ban. It also creates issues around transparency, as the public cannot be certain as to whether or not poisons (and prohibited poisons specifically) are in use in their community.

Enforcement of ban and Integrated Pest Management (IPM)

The provincial government also requires that rodenticides only be used after following the principles of "Integrated Pest Management" (IPM). Specifically, IPM requires that preventative measures to address rodent attractants and structural flaws are implemented and that rodenticides are a last resort and temporary treatment, with other sustainable long-term

strategies prioritized.^{xvii} It is unclear how IPM is tracked and enforced to ensure the use of alternative approaches are exhausted before resorting to rodenticides, but the outcome of a series of inspections by provincial IPM officers in 2019 raises cause for concern. A total of 311 inspections were conducted, which found that only 39% were in compliance.^{xviii}

In public education webinars hosted by Ministry staff outlining the temporary ban, it was noted that SGAR users must keep records about rodenticide use and IPM measures implemented, but these records are not required to be submitted to government.^{xix} Without strong government oversight and proactive enforcement of the ban and IPM requirements related to preventative measures and rodenticide use, industry compliance will largely be based on the honour system and there will be a heavy reliance on the public to identify suspected violations. As previously noted, with the allowances given by government regarding labelling (e.g. mislabeled or label inside box) it's not possible for the public to identify where prohibited poisons are in use.

Alternative approaches & products

The expansion of humane alternative products and approaches in recent years presents an opportunity for government to shift from rodenticide use and to prioritize further research and trials around innovative and sustainable alternatives. Alternative products for rodent control or lethal management, when necessary, range from high-quality snap traps; captive bolt traps and other mechanical systems (e.g. Goodnature device); rodent contraceptives (e.g. Contrapest); remote monitoring technology; and measures to support the presence of natural rodent predators, such as owls, through building owl boxes. Natural predators can help keep rodent populations in check, with evidence suggesting that a family of owls can consume more than 1,000 rodents per year.^{xx} It's worth reiterating that the use of rodenticides reduces natural rodent control through secondary poisoning of owls and other predators.

Some initial research surrounding the Goodnature A24 rat and mouse trap has been conducted, including recently in North Vancouver and at the University of British Columbia. The evidence suggests the Goodnature trap is more cost-effective than rodenticides and it eliminates the risk of poisoning of other animals and the environment.^{xxi xxii}

Humane Solutions, a B.C.-based wildlife management and pest control company, reports strong success with their poison-free approach to dealing with rodent conflict, including in high-attractant scenarios, such as in agricultural, industrial and commercial settings. Their approach focusses on resolving attractants, structural flaws and access points. Structural removal includes the use of one-way doors that allow rodents to leave the structure and prevents them from re-entering. Rodent-proofing can include addressing gaps in foundations, venting, and utility lines. In high-attractant locations, further rodent-proofing steps can be taken inside of buildings to reduce human-rodent conflict. For example, in a feed store this may involve keeping feed in rodent-proof containers. If lethal management is justified, it is conducted through the use of high quality snap traps enclosed in containers to exclude non-target species. The company says that their poison-free approach is scale-able and adaptable to a variety of settings, ranging from households to large institutions. For example, Humane Solutions reports successfully working with Langara College to become rodenticide-free in their operations.^{xxiii}

Ultimately, the best long-term approach for addressing human-rodent conflicts is exclusion and preventative measures. This includes removing attractants, such as open garbage, compost bins, fallen fruit or bird seed, and leaking plumbing. It also involves fixing and rodent-proofing structural flaws and access points in buildings, as these provide sources of shelter for rodents. Habitat modification and sanitation, such as cutting back dense vegetation and tall grass from along the perimeter of buildings and storing firewood and other materials away from buildings and off the ground, can also reduce the presence of rodents by making the immediate environment around a location less desirable to them. ^{xxiv xxv}

Conclusion & Recommendations

The humane treatment of animals is a central value of Canadian society and it's crucial that this value be reflected in the many ways we as a society interact with animals, ranging from those we label as "pets" and others we label as "pests". Regardless of the labels assigned to them, commensal rodents share the same capacity to suffer as other vertebrates and therefore the same humaneness considerations should apply in how they are managed.^{xxvi} Likewise, the continued use of poisons threatens the balance of our ecosystem with raptors and owls suffering significant losses in B.C. each year.

The VHS suggests that the continued use of rodenticides presents significant animal welfare, conservation and environmental concerns. The growing body of data and public awareness around the issues associated with rodenticides, along with the expansion of humane alternative approaches and products requires that more be done to urgently move away from these indiscriminate and inhumane poisons.

Specifically, the VHS recommends a comprehensive and permanent rodenticide ban, including first and second generation anticoagulants and non-anticoagulant rodenticides. It's also recommended that the lengthy list of current exemptions under the temporary ban, which is based on the Covid-19 essential services list, be re-evaluated for appropriateness and applicability to the issue of rodenticides. It's also crucial that government prioritize enforcement of the current temporary ban. Ultimately, the VHS believes that the issues surrounding compliance with IPM practices and the current ban reflect the difficulty in enforcing a partial rodenticide ban. The VHS recommends that the remainder of the temporary ban timeframe be spent prioritizing research around innovating and sustainable alternatives and planning a transition away from rodenticides, in favour of approaches that address the underlying causes of human-rodent conflict.

The recommendations outlined in this submission are supported by 2582 B.C. residents that have signed on to a statement which asks the provincial government to implement these recommendations. The signatories include B.C.-based residents only and any duplicate signatures have been removed, to ensure an accurate total. ^{xxvii}

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