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DEPARTMENT OF
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RE: Pesticide Registration Review: Ecological Risk Assessments for Zinc Phosphide
EPA Docket ID: EPA-HQ-OPP-2016-0140-0017

The following comments are submitted regarding the registration review of the active ingredient zinc phosphide. These comments are being submitted on behalf of the Western IPM Center and Oregon Department of Agriculture (ODA), to provide input on the use of zinc phosphide in the Pacific Northwest. Zinc phosphide is the active ingredient in numerous rodenticide products registered for use in agricultural crops and in non-agricultural settings such as residential uses and golf courses. Our comments focus on key agricultural uses in Oregon.

In Oregon, zinc phosphide is utilized in berry production (blueberry, caneberry, grape vineyard and strawberry), filbert, hop, alfalfa and pasture, clover and grass grown for seed, nursery and Christmas tree production, wheat, barley, potatoes and sugar beets. The primary targets are voles, including gray-tailed voles in the Willamette Valley and meadow voles across the state, and mice and ground squirrels. Zinc phosphide may be applied below ground directly into burrows, or broadcast above ground by ground-driven dispensers or aurally, dependent on the commodity and time of year.

Uncontrolled vole populations can lead to significant crop loss. For example, hundreds of trees in young filbert orchards may be lost due to trunk girdling resulting from vole feeding around the base of the tree. Similarly, uncontrolled voles in blueberries can cause a loss of 15-20% of young bushes in a planting from girdling; mature bushes also sustain damage from vole feeding. Christmas tree producers may lose 10-15% of a new planting to voles when ground cover is also present. Grass grown for seed producers estimate that their losses to voles would average between 30-50% annually if populations were left unmanaged.

There are currently no viable alternatives to zinc phosphide for control of voles in commercial agricultural production in Oregon. Trapping is cost prohibitive over a large production area. First-generation anticoagulant baits are limited in their agricultural uses, and there are concerns about using them because of potential secondary poisoning impacts to raptors. Some growers install raptor poles to encourage hunting by hawks and owls; however, raptors alone don't provide sufficient control. Ground cover and weed management helps maintain lower vole populations in tree plantings, but is not a viable approach for crops such as pasture, clover grown for seed, or grass grown for seed.

Protections for nontarget mammals and migrating birds are provided by the Section 3 zinc phosphide labels, as well as in additional restrictions included on all of Oregon's FIFRA Section 24(c) Special Local Need (SLN) labels for zinc phosphide. Applications in shrub-steppe and grassland habitats in the Oregon counties of Gilliam, Morrow and Umatilla are prohibited to protect the Washington ground squirrel. Applications of zinc phosphide in grass and clover grown for seed are prohibited when geese have been observed in the field within two weeks, and hazing any geese observed following broadcast applications is required to discourage geese from remaining in treated fields. Broadcast applications of zinc phosphide authorized by SLN labels for grass and clover seed production are allowed only after information from Oregon Department of Fish and Wildlife (ODFW) and United States Fish and Wildlife Service (USFWS) indicates that active geese migration has ended.

Oregon growers also implement a variety of measures to discourage migrating geese from grazing on treated fields. Crops such as hazelnuts and caneberries tend not to have migrating waterfowl moving through them because these plantings do not provide areas large enough for unimpeded landing and taking off. In grass, clover, and pastures, which are attractive to waterfowl, growers install propane cannons to discourage geese landing, and/or they install eagle and coyote cutout decoys.

ODA has had 27 compliance cases/investigations involving zinc phosphide since 2014. Most of these cases are records and dealer inspections. Five of these cases resulted in civil penalties, but none of them were related to adverse impacts to endangered species or migratory birds.

In 2014, there was a suspected incident involving streaked horned larks in the Willamette Valley of Oregon. These birds have been listed as threatened since 2013, although there is an agricultural exemption provided in a special rule for this species under Section 4(d) of the Endangered Species Act. There is also a recovery plan. Streaked horned larks are small birds that normally do not feed on anything as large as a zinc phosphide pellet or treated grain bait. However, in the investigation of the incident in 2015, phosphine was detected in the laboratory analysis of the pooled gizzard contents from four larks. USFWS expressed caution about the results of the analysis due to the condition and small size of the sample submitted. The exposure pathway was also uncertain. Federal and state agencies have partnered with private organizations and are successfully working together to mitigate risks through educational and outreach efforts.

Please feel free to contact us with additional questions about zinc phosphide usage in Oregon agricultural production.

Respectfully,



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To compile comments, input is actively solicited from stakeholders throughout the Pacific Northwest in an effort to convey use patterns, benefits, potential impacts, and the availability and efficacy of alternatives. These comments largely reflect expert testimony from stakeholders, including research and extension experts as well as farmers and commodity groups. The comments do not imply endorsement by Oregon State University or the Western IPM Center.