



State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
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EDMUND G. BROWN, Jr, Governor
JOHN McCAMMAN, Director



July 11, 2011

Christopher Reardon, Acting Director
California Department of Pesticide Regulation
1001 I Street
Sacramento, CA 95812

Dear Mr. Reardon:

As discussed by some of our respective staff, the Department of Fish and Game (DFG) recommends that second-generation anticoagulant rodenticides brodifacoum, bromadiolone, difethialone, and difenacoum be redesignated as State Restricted Materials. As the agency charged with protection of fish and wildlife in California, the DFG believes that regulation change is necessary to mitigate non-target exposure of wildlife in California.

Since 1993, DFG has confirmed 240 cases of nontarget wildlife being exposed to anticoagulant rodenticides. Wildlife species impacted include State threatened and federally endangered San Joaquin kit fox as well as coyote, red fox, grey fox, black bear, badger, fox squirrel, Heermann's kangaroo rat, mountain lion, bobcat, golden eagle, great horned owl, barn owl, turkey vulture, Cooper's hawk, red-shouldered hawk, red-tailed hawk, American kestrel, wild turkey, and Canada goose. Monitoring studies have indicated that 79% of San Joaquin kit foxes in the Bakersfield area have been exposed to anticoagulant rodenticides (McMillin et al 2008) and 92% of raptors collected in San Diego County and 79% of raptors collected in the Central Valley contained anticoagulant rodenticides (Lima and Salmon 2010). Of 104 mountain lions tested for anticoagulants in California from 2005 to present, 82 contained anticoagulants with the majority containing more than one kind (Robert Poppenga, California Animal Health and Food Safety Laboratory, pers. comm.). It is important to note that these test results do not represent samples from a directed surveillance effort, but rather are results from opportunistic testing as part of mortality investigations and management/research projects. Therefore, the distribution and prevalence of exposure to second generation anticoagulants in wildlife species is believed to be more widespread than these data represent.

In 2008, the U.S. Environmental Protection Agency issued a final risk mitigation decision for ten rodenticides. The USEPA stated that:

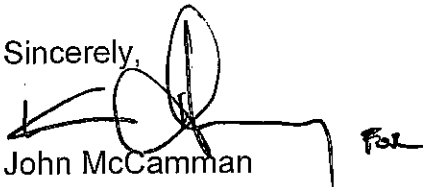
"The second-generation anticoagulants are especially hazardous for several reasons. They are highly toxic, and they persist a long time in body tissues. The second-generation anticoagulants are designed to be toxic in a single feeding,

but since time-to-death is several days, rodents can feed multiple times before death, leading to carcasses containing residues that may be many times the lethal dose. Predators or scavengers that feed on those poisoned rodents may consume enough to suffer harm“.

The USEPA's mitigation decision, set to take effect this year, limits the venues that sell second generation anticoagulant rodenticides to the public. However, it still allows public purchase of large quantities of these materials in other venues, such as farm stores. As some wildlife species, such as mountain lion and bobcat, are likely being exposed in rural or semi-rural areas, it is important that these materials not be available to the public at farm stores.

These second-generation anticoagulant rodenticides have a long, well-documented history of impacting non-target wildlife, and thus, the Department of Fish and Game recommends revising California regulations to make these materials restricted. If you or your staff have any questions please contact Mr. Steve Torres at 916 358-1987 or at storres@dfg.ca.gov.

Sincerely,



John McCamman
Director

cc: Department of Fish and Game
Eric Loft, Wildlife Branch Chief
Steve Torres, Environmental Program Manager
1812 9th Street
Sacramento, CA 95811

References:

Lima, L.L. and T.P. Salmon. In Press. Assessing some potential environmental impacts from agricultural anticoagulant uses. Proceedings of 24th Vertebrate Pest Conference. R.M. Timm, Ed.

McMillin, S.C., R.C. Hosea, B.F. Finlayson, B.L. Cypher, and A. Mekebri. 2008. Anticouglant rodenticide exposure in an urban population of the San Joaquin kit Fox. Proceedings of 23rd Vertebrate Pest Conference. R.M. Timm and M.B. Madon, Eds. Published at University of California Davis. Pages 163-165.