BROMETHALIN: SECONDARY TOXICITY

PRODUCT SCOPE

Secondary toxicity of Bromethalin, the active ingredient in Fastrac and Talpirid Mole Bait.

SECONDARY TOXICITY

Bromethalin exerts its primary toxicity after conversion to the toxic metabolite, desbromethalin, which prevents cells from converting food into energy, leading to swelling of nerve cells, increased cerebrospinal pressure, and lethal disruption of the nervous system.[1]

In general, secondary toxicity occurs when an animal ingests a poisoned animal and then itself is impacted by the poison. The risk of secondary poisoning is affected by many factors: the sensitivity of the secondary consumer to the active ingredient, the amount and timing of rodenticide ingestion by the primary consumer, and the length of time the rodenticide remains in the rodent tissue.

LABORATORY STUDIES AND ANALYSIS OF WILDLIFE EXPOSURES

Laboratory studies that involve feeding tissue from poisoned rodents to non-target animals and information from wildlife exposures are used to help assess secondary risk; however, the amount of data available for bromethalin is limited.

In a secondary toxicity study in dogs conducted by an independent laboratory, daily feeding for two weeks with tissue from rats that were killed with 0.005% bromethalin showed no evidence of toxicity.[2]

PREVENTION

As of 2018, to the best of our knowledge, there have been no reported cases of secondary poisoning from bromethalin rodenticides. However, rodenticide labels contain standard warning language to alert the user to the potential for unknown secondary toxicity risks. Pest control operators can reduce the risk for secondary poisoning in non-target animals by employing least hazardous methods and adhering to the label restrictions when using rodenticides. Homeowners can reduce the potential risk for secondary poisoning to pets by supervising them during the baiting period and consistently removing dead rodents from their property.

[1]vanLier, RBL, and Cherry, LD. 1988 The toxicity and mechanism of action of bromethalin: a new single-feeding rodenticide. Fund Appl Tox. 11: 664-72.
[2]Jackson, WB et. al. 1982 Bromethalin-a promising new rodenticide. Proc. Vertebr. Pest Conf. 10: 10-16.