DPR RODENTICIDE UPDATE

APCAC

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RODENTICIDES FOR COMMENSAL RODENT CONTROL

- Commensal rodents (house mouse, Norway rat, roof rat)
  - Live in close association with humans and their habitat

- Two types of rodenticides used for commensal rodent control
  - 1) Acute toxicants. No known antidote.
    - Bromethalin (nerve toxicant that causes respiratory distress)
    - Cholecalciferol (causes excessive calcium in the blood and other body tissues)
    - Zinc Phosphide (causes liberation of phosphine gas in the stomach)

  - 2) Anticoagulants: Interfere with blood clotting, animals die from internal bleeding typically after several days following ingestion. Can administer Vitamin K1 as antidote.
    - First generation anticoagulants
    - **Second generation anticoagulants**

FIRST GENERATION ANTICOAGULANT RODENTICIDES

- Developed in the 1940s
- Active ingredients:
  - Chlorophacinone
  - Diphacinone
  - Warfarin
- "Multiple dose" because rodents require multiple feedings over time for lethal dose
- Unrestricted uses
  - In and around buildings; sewers; manual, below-ground pest control (e.g., gophers & moles)
- Restricted uses
  - Ag field uses
  - Tracking powders
  - Some ground squirrel products
- Some reports of resistance issues (primarily with warfarin)

SECOND GENERATION ANTICOAGULANT RODENTICIDES

- Developed in response to resistance concerns
- Four active ingredients:
  - Brodifacoum
  - Bromadiolone
  - Difenacoum
  - Difethialone
- In and around structures & sewer uses only--no ag field uses
- “Single dose” because designed to be toxic in a single feeding
- Non-target wildlife concerns for SGARs:
  - Delayed action allows multiple feedings on a SGAR leading to “super” lethal concentrations in rodents
  - Impacts to non-target predators consuming these rodents

DPR REEVALUATION OF BRODIFACOUM

- 1999 CA Department of Fish and Wildlife request
- Concerns about wildlife being exposed and adversely affected by brodifacoum products
  - Primarily from ingesting rodents with lethal concentrations
- DPR placed brodifacoum into reevaluation
  - Data review, determine if pesticide presents significant adverse effects
- Meanwhile, U.S. EPA completed draft ecological assessment of rodenticides indicating similar concerns
  - DPR decided to wait for completion of U.S. EPA's assessment

U.S. EPA RISK MITIGATION DECISION

- May 2008 U.S. EPA RMD for Ten Rodenticides
  - In and around buildings only, not ag field uses
  - Originally within 50 feet of buildings, changed to 100 feet in May 2012
  - "Building" changed to "man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations."

Two major components:

- Reducing children's exposure to rodenticides used in the home
  - FGARs & non-anticoagulants marketed to residential consumers (≤1 lb bait) sold in solid formulations (no loose pellets) with bait stations
    - 4 tiers of bait stations

- Reducing wildlife/ecological risks:
  - No residential consumer size products (≤1 lb bait)
  - Bait stations for all outdoor, above-ground uses
    - Tamper resistant in areas within reach of children, pets, domestic animals, and non-target wildlife

U.S. EPA RISK MITIGATION DECISION DISTRIBUTION & PACKAGE SIZE LIMITS

For SGARs, two types of products allowed

- 8 lb+
  - In and within 100 feet of ag buildings and man-made ag structures, some burrow baiting
    - Intended user: ag other than field use, livestock producers
- 16 lb+
  - In and within 100 feet of man-made structures such as homes, food processing facilities, industrial, commercial buildings, etc., some burrow baiting and sewer use
    - Intended user: PCOs, public health officials, etc.

- Prohibited from being sold in stores oriented towards residential consumers
  - Existing stocks allowed to be sold

U.S. EPA CANCELLATION ORDER

- 3 companies (20 products) refused to comply with the RMD
  - In CA, 8 total products (6 SGARs) out of the 20 federal products
- Argued that U.S. EPA had violated FIFRA by using misbranding instead of going through cancellation process
- Draft Notice of Intent to Cancel 11/2/11
- Scientific Advisory Panel met Dec. 2011
- 1/30/13, U.S. EPA moving forward with cancellation
  - Only Reckitt Benckiser is challenging RMD
- Next step: formal hearing before an Administrative Law Judge
- Lengthy process

CA WILDLIFE IMPACTS

- August 2011, request from DFW to designate all SGARs as CA restricted materials
- DPR analyzed wildlife incident and mortality data, land use data, and sales and use data
- Data indicate exposure & toxicity to non-target wildlife to SGARs is a statewide problem
- Data suggest problem in both urban & rural areas
- Draft document currently in external peer review
- DPR is looking at mitigation measures

NEXT STEPS

- U.S. EPA is pursuing cancellation
  - Expect several years for an outcome
- DPR is meeting with stakeholders to discuss mitigation measures
  - Potentially designating SGARs as restricted materials
  - Possibility of exempting certain consumer-sized indoor use only products while federal cancellation underway

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