Appendix F. ECOTOX Bibliography
(ECOTOX Queries: May 2010, January 2005)

Explanation of OPP Acceptability Criteria and Rejection Codes for ECOTOX Data

Studies located and coded into ECOTOX must meet acceptability criteria, as established in the *Interim Guidance of the Evaluation Criteria for Ecological Toxicity Data in the Open Literature, Phase I and II*, Office of Pesticide Programs, U.S. Environmental Protection Agency, July 16, 2004. Studies that do not meet these criteria are designated in the bibliography as "Accepted for ECOTOX but not OPP." The intent of the acceptability criteria is to ensure data quality and verifiability. The criteria parallel criteria used in evaluating registrant-submitted studies. Specific criteria are listed below, along with the corresponding rejection code.

- The paper does not report toxicology information for a chemical of concern to OPP; (Rejection Code: NO COC)
- The article is not published in English language; (Rejection Code: NO FOREIGN)
- The study is not presented as a full article. Abstracts will not be considered; (Rejection Code: NO ABSTRACT)
- The paper is not publicly available document; (Rejection Code: NO NOT PUBLIC (typically not used, as any paper acquired from the ECOTOX holding or through the literature search is considered public)
- The paper is not the primary source of the data; (Rejection Code: NO REVIEW)
- The paper does not report that treatment(s) were compared to an acceptable control; (Rejection Code: NO CONTROL)
- The paper does not report an explicit duration of exposure; (Rejection Code: NO DURATION)
- The paper does not report a concurrent environmental chemical concentration/dose or application rate; (Rejection Code: NO CONC)
- The paper does not report the location of the study (e.g., laboratory vs. field); (Rejection Code: NO LOCATION)
- The paper does not report a biological effect on live, whole organisms; (Rejection Code: NO IN-VITRO)
- The paper does not report the species that was tested; and this species can be verified in a reliable source; (Rejection Code: NO SPECIES)
- The paper does not report effects associated with exposure to a single chemical. (Rejection Code: NO MIXTURE). It should be noted that all papers including data on pesticide mixtures are considered.

Additionally, efficacy studies on target species are excluded and coded as NO TARGET.

Data that originated from the OPP Pesticide Ecotoxicity Database is coded as NO EFED. These data are already available to the chemical team.

CHLOROPHACINONE (only) – January 2005
Papers that Were Accepted for ECOTOX

ECOTOX and OPP

1. Byers, R. E. and Carbaugh, D. H. (1987). **Efficacy of Rodenticides for Control of Orchard Voles.** *J.Am.Soc.Hortic.Sci.* 112: 267-272.

   EcoReference No.: 75393
   Chemical of Concern: BDL,BDP,CPC,DPC,CLC,ZnP; Habitat: T; Effect Codes: POP,BEH.

2. Byers, R. E. and Carbaugh, D. H. (1991). **Rodenticides for the Control of Pine and Meadow Voles in Orchards.** *J.Environ.Hortic.* 9: 167-172.

   EcoReference No.: 75474
   Chemical of Concern: BDL,DFT,DPC,CPC,CLC,ZnP,OXT; Habitat: T; Effect Codes: BEH,MOR,POP.

3. Byers, R. E. and Carbaugh, D. H. (1989). **Vole Population Shifts Related to Rodenticide Usage.** *Hortscience* 24: 783-785.

   EcoReference No.: 75463
   Chemical of Concern: CPC,ZnP,CLC,BDL; Habitat: T; Effect Codes: POP.

4. Merson, M. H. and Byers, R. E. (1985). **Weathering and the Field Efficacy of Pelletized Rodenticide Baits in Orchards.** *Crop Prot.* 4: 511-519.

   EcoReference No.: 75532
   Chemical of Concern: PVL,BDF,BDL,DPC,CPC,ZnP; Habitat: T; Effect Codes: POP,MOR,BEH.

5. Radvanyi, A., Weaver, P., Massari, C., Bird, D., and Broughton, E. (1988). **Effects of Chlorophacinone on Captive Kestrels.** *Bull.Environ.Contam.Toxicol.* 41: 441-448.

   EcoReference No.: 39765
   Chemical of Concern: CPC; Habitat: T; Effect Codes: GRO,MOR,PHY.

6. Tuyttens, F. A. M. and Stuyck, J. J. J. M. (2002). **Effectiveness and Efficiency of Chlorophacinone Poisoning for the Control of Muskrat (Ondatra zibethicus) Populations.** *N.Z.J.Zool.* 29: 33-40.

   EcoReference No.: 75541
   Chemical of Concern: CPC; Habitat: T; Effect Codes: MOR.

ECOTOX only

1. Arjo, W. M. and Nolte, D. L. (2004). **Assessing the Efficacy of Registered Underground Baiting Products for Mountain Beaver (Aplodontia rufa) Control.** *Crop Prot.* 23: 425-430.

   EcoReference No.: 75340
   Chemical of Concern: CPC,ZnP,STCH,DPC; Habitat: T; Effect Codes: MOR.

2. Askham, L. R. (1985). **Effectiveness of Two Anticoagulant Rodenticides (Chlorophacinone and Bromadiolone) for Columbian Ground Squirrel (Spermophilus columbianus) Control in Eastern Washington.** *Crop Prot.* 4: 365-371.

   EcoReference No.: 75482

Chemical of Concern: BDL,CPC; Habitat: T; Effect Codes: MOR.

3. Askham, L. R. and Poche, R. M. (1992). **Biodeterioration of Chlorophacinone in Voles, Hawks and an Owl.** *Mammalia* 56: 145-150.

   EcoReference No.: 73126
   Chemical of Concern: CPC; Habitat: T; Effect Codes: GRO,BEH,ACC.

4. Byers, R. E. and Carbaugh, D. H. (1987). **Bait Shyness of Pine Voles to Zinc Phosphide and Anticoagulants Stored with Pesticides.** *Hortscience* 22: 239-241.

   EcoReference No.: 75534
   Chemical of Concern: BDF,CPC,ZnP; Habitat: T; Effect Codes: MOR,BEH.

5. Marsh, R. E., Howard, W. E., , W. E., and Cole, R. E. (1977). **The Toxicity of Chlorophacinone and Diphacinone to Deer Mice.** *J.Wildl.Manag.* 41: 298-301.

   EcoReference No.: 35337
   Chemical of Concern: DPC,CPC; Habitat: T; Effect Codes: MOR.

6. Mathur, R. P. and Prakash, I. (1980). **Laboratory Evaluation of Anticoagulant-Treated Baits for Control of the Northern Palm Squirrel, Funambulus pennanti Wroughton.** *J.Hyg.* 85: 421-426.

   EcoReference No.: 37842
   Chemical of Concern: WFN,CPC,BDF; Habitat: T; Effect Codes: MOR.

7. Mathur, R. P. and Prakash, I. (1984). **Reduction in Population of Indian Desert Rodents with Anticoagulant Rodenticides.** *Proc.Indian Acad.Sci.Anim.Sci.* 93: 585-589.

   EcoReference No.: 75442
   Chemical of Concern: BDF,CPC; Habitat: T; Effect Codes: POP.

8. NGAZIZAH, Idris, A. G., SHAMSIAH, M., Nasir, M. K., and RADZI, H. (1993). **The Palatability of Three Type Anticoagulant Rodenticides to Rice Field Rats (Rattus argentiventer).** *Malays.Agric.J.* 54: 195-199.

   EcoReference No.: 75437
   Chemical of Concern: BDF,CPC,WFN; Habitat: T; Effect Codes: BEH,MOR.

9. Office of Pesticide Programs (2000). **Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB)).** *Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.*

   EcoReference No.: 344
   User Define 2: REPS,WASH,CALF,CORE,SENT
   Chemical of Concern: 24DXY,ACL,ACP,ACR,AQS,ATZ,AZ,BDF,BMC,BML,BMN,BS,BT,Captan,CBF,CBL,CFE,CFE,CLNB,CMPH,CPC,CPY,CTN,CTZ,Cu,CuO,CuS,CYD,CYF,CYP,CYT,DBN,DCNA,DFT,DFZ,DM,DMB,DMM,DMP,DMT,DOD,DPC,DPDP,DS,DU,DZ,DZM,EFL,EFS,EFV,EP,FHX,FMP,FO,Folpet,FPP,FVL,GYP,HCCH,HXZ,IPD,IZP,LNR,MAL,MB,MBZ,MDT,MFX,MFZ,MGK,MLN,MLT,MOM,MP,MTC,MTL,MTM,NAA,Naled,NFZ,NPP,NTP,OXF,OXT,OYZ,PDM,PEB,PHMD,PMR,PMT,PNB,PPB,PPG,PPMH,PQT,PRB,PRT,PSM,PYN,PYZ,RTN,SMM,SMT,SS,SXD,SZ,TBC,TDC,TDZ,TET,TFN,TFR,TMT,TPR,TRB,WFN,ZnP; Habitat: AT; Effect Codes: MOR,POP,PHY,GRO,REP.

10. Pelz, H. J. and Gemmeke, H. (1988). **Methods to Control the Two Forms of Arvicola terrestris in Orchards in the Federal Republic of Germany.** *Bull.OEPP (Org.Eur.Medit.Prot.Plant)* 18: 435-439.

   EcoReference No.: 75487

Chemical of Concern: BDL,CPC,CLC; Habitat: T; Effect Codes: BEH.

11. Schafer, E. W. and Bowles, W. A. (1985). **Acute Oral Toxicity and Repellency of 933 Chemicals to House and Deer Mice.** *Arch.Environ.Contam.Toxicol.* 14: 111-129.

EcoReference No.: 35426
User Define 2: REPS,CORE,SENT
Chemical of Concern: ADC,CST,MOM,CPC,ZnP,DOD,MLN,Cu,AQS; Habitat: T; Effect Codes:

CHLOROPHACINONE
Papers that Were Excluded from ECOTOX

1. Arends, J. J. and Robertson, S. H. (1986). **Integrated Pest Management for Poultry Production: Implementation Through Integrated Poultry Companies.** *Poult.Sci.* 65: 675-682.

   Chem Codes: Chemical of Concern: BDF,DPC,CPC,WFN,BDL,CLC,BML; Rejection Code: NO CONC/NO DURATION.

2. Arjo, Wendy M. and Nolte, D. L. Dale L. (2004). **Assessing the efficacy of registered underground baiting products for mountain beaver (Aplodontia rufa) control.** *Crop Protection* 23: 425-430.

   Chem Codes: Chemical of Concern: ZnP; Rejection Code: INCIDENT.
   The mountain beaver (Aplodontia rufa) is a fossorial rodent species endemic to the Pacific Northwest and portions of California. This herbivore inflicts millions of dollars of damage annually to forest seedling plantations. Currently, extensive trapping prior to planting is the most reliable method for reducing damage. With increasing restrictions placed on trapping, forest resource managers need alternative tools to minimize forest damage. This study assessed the potential of four toxicants registered for underground use to control mountain beaver; zinc phosphide, diphacinone, chlorophacinone, and strychnine. Zinc phosphide and strychnine are acute toxicants, whereas diphacinone and chlorophacinone are anticoagulants. Anticoagulants prevent the recycling of vitamin K in the body, which inhibits the production of clotting factors. Efficacy varied among treatments. Zinc phosphide and strychnine were avoided by mountain beaver. Pre-baiting marginally increased acceptance of strychnine, but did not alter mountain beaver acceptance of zinc phosphide. Diphacinone and chlorophacinone were both readily consumed, but only chlorophacinone was 100% effective after a 14-day baiting regime. Subsequently, we tested the effects of diet on the efficacy of diphacinone by varying the availability of food containing vitamin K, the anticoagulant antidote. Restricting access to potential sources of vitamin K appeared to increase efficacy. We conclude that anticoagulants hold some promise as additional tools for managers to reduce mountain beaver populations with chlorophacinone showing the most promise. However, limitations to anticoagulant baits include the necessity of long-term baiting (greater than 10 days), a possible decrease in toxicity if baits contact moisture, and potential primary hazards.

3. Arjo, Wendy M. and Nolte, D. L. Dale L. (2004). **Assessing the efficacy of registered underground baiting products for mountain beaver (Aplodontia rufa) control.** *Crop Protection* 23: 425-430.

   Chem Codes: Chemical of Concern: CPC; Rejection Code: INCIDENT.
   The mountain beaver (Aplodontia rufa) is a fossorial rodent species endemic to the Pacific Northwest and portions of California. This herbivore inflicts millions of dollars of damage annually to forest seedling plantations. Currently, extensive trapping prior to planting is the most reliable method for reducing damage. With increasing restrictions placed on trapping, forest resource managers need alternative tools to minimize forest damage. This study assessed the potential of four toxicants registered for underground use to control

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4. Arjo, Wendy M. and Nolte, D. L. Dale L. (2004). **Assessing the efficacy of registered underground baiting products for mountain beaver (Aplodontia rufa) control.** *Crop Protection* 23: 425-430.

   Chem Codes: Chemical of Concern: CPC; Rejection Code: INCIDENT.
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5. Arjo, Wendy M. and Nolte, D. L. Dale L. (2004). **Assessing the efficacy of registered underground baiting products for mountain beaver (Aplodontia rufa) control.** *Crop Protection* 23: 425-430.

   Chem Codes: Chemical of Concern: DPC; Rejection Code: INCIDENT.
   The mountain beaver (Aplodontia rufa) is a fossorial rodent species endemic to the Pacific Northwest and portions of California. This herbivore inflicts millions of dollars of damage annually to forest seedling plantations. Currently, extensive trapping prior to planting is the most reliable method for reducing damage. With increasing restrictions placed on trapping, forest resource managers need alternative tools to minimize forest damage. This study assessed the potential of four toxicants registered for underground use to control mountain beaver; zinc phosphide, diphacinone, chlorophacinone, and strychnine. Zinc phosphide and strychnine are acute toxicants, whereas diphacinone and chlorophacinone are anticoagulants. Anticoagulants prevent the recycling of vitamin K in the body, which inhibits the production of clotting factors. Efficacy varied among treatments. Zinc phosphide and strychnine were avoided by mountain beaver. Pre-baiting marginally increased acceptance of strychnine, but did not alter mountain beaver acceptance of zinc phosphide. Diphacinone and chlorophacinone were both readily consumed, but only chlorophacinone was 100% effective after a 14-day baiting regime. Subsequently, we tested the effects of diet on the efficacy of diphacinone by varying the availability of food containing vitamin K, the anticoagulant antidote. Restricting access to potential sources of vitamin K appeared to increase efficacy. We conclude that anticoagulants hold some promise as additional tools for managers to reduce mountain beaver populations with chlorophacinone

showing the most promise. However, limitations to anticoagulant baits include the necessity of long-term baiting (greater than 10 days), a possible decrease in toxicity if baits contact moisture, and potential primary hazards.

6. ASKHAM LR (1985). **MECHANICAL EVALUATION OF THE WEATHERABILITY OF PELLETIZED RODENTICIDES.** *INT PEST CONTROL; 27 (6). 1985 (RECD. 1986). 138-140.*

   Chem Codes: Chemical of Concern: BDF,BDC,DPC,CPC,ZNP; Rejection Code: NO TOX DATA. BIOSIS COPYRIGHT: BIOL ABS. RRM BAIT FORMULATION Climate/ Ecology/ Meteorological Factors/ Animals, Wild/ Conservation of Natural Resources/ Ecology/ Biochemistry/ Poisoning/ Animals, Laboratory/ Disinfection/ Pest Control/ Disease Vectors/ Pesticides/ Disease Vectors/ Herbicides/ Pest Control/ Pesticides

7. Bennett, B. R. and Grimes, G. S. (1982). **Reverse Phase Liquid Chromatographic Determination of Chlorophacinone and Diphacinone in Bait Formulations.** *J.Assoc.Off.Anal.Chem.* 65: 927-929.

   Chem Codes: EcoReference No.: 35801
   Chemical of Concern: DPC,CPC; Rejection Code: NO SPECIES.

8. BUCKLE AP (1994). **RODENT CONTROL METHODS CHEMICAL.** *BUCKLE, A. P. AND R. H. SMITH (ED.). RODENT PESTS AND THEIR CONTROL. X+405P. CAB INTERNATIONAL: WALLINGFORD, ENGLAND, UK. ISBN 0-85198-820-2.; 0* 127-160.

   Chem Codes: Chemical of Concern: BDF,BDL,DPC,CPC,WFN,ZNP,DFT ; Rejection Code: METHODS. BIOSIS COPYRIGHT: BIOL ABS. RRM BOOK CHAPTER RODENTICIDE POISON BAIT ANTICOAGULANT FUMIGANT Animals, Wild/ Conservation of Natural Resources/ Ecology/ Biochemistry/ Poisoning/ Animals, Laboratory/ Herbicides/ Pest Control/ Pesticides/ Mammals/ Rodentia

9. BUCKLE AP (1994). **RODENT CONTROL METHODS CHEMICAL.** *BUCKLE, A. P. AND R. H. SMITH (ED.). RODENT PESTS AND THEIR CONTROL. X+405P. CAB INTERNATIONAL: WALLINGFORD, ENGLAND, UK. ISBN 0-85198-820-2.; 0* 127-160.

   Chem Codes: Chemical of Concern: BDF,BDL,DPC,CPC,WFN,ZNP,DFT ; Rejection Code: METHODS. BIOSIS COPYRIGHT: BIOL ABS. RRM BOOK CHAPTER RODENTICIDE POISON BAIT ANTICOAGULANT FUMIGANT Animals, Wild/ Conservation of Natural Resources/ Ecology/ Biochemistry/ Poisoning/ Animals, Laboratory/ Herbicides/ Pest Control/ Pesticides/ Mammals/ Rodentia

10. Bullard, R. W., Holguin, G., and Peterson, J. E. (1975). **Determination of Chlorophacinone and Diphenadione Residues in Biological Materials.** *J.Agric.Food Chem.* 23: 72-74.

   Chem Codes: EcoReference No.: 36003
   Chemical of Concern: CPC; Rejection Code: IN VITRO.

11. Bullard, R. W., Holguin, G., and Peterson, J. E. (1975). **Determination of Chlorophacinone and Diphenadione Residues in Biological Materials.** *J.Agric.Food Chem.* 23: 72-74.

   Chem Codes: EcoReference No.: 36003
   Chemical of Concern: CPC; Rejection Code: IN VITRO.

12. Chardard, D. and Dournon, C. (1999). **Sex reversal by aromatase inhibitor treatment in the newt Pleurodeles waltl.** *J Exp Zool* 283: 43-50.

   Chem Codes: Chemical of Concern: CPC; Rejection Code: NO TOXICANT.
   CAS Registry Number EC-1-14-13-- (Aromatase); 0 (Antifungal Agents); 0 (Estrogen Antagonists); 0 (Estrogens); 102676-47-1 (Fadrozole); 22916-47-8 (Miconazole). Pleurodeles waltl is a newt with a ZZ male-ZW female sex determination mechanism, and a temperature-sensitive gonadal sex differentiation. Raising

larvae at 32 degrees C from stage 42 to stage 54 (thermosensitive period) drives genetic females to differentiate into functional males. Estrogens are intimately linked with temperature action in this species, as well as in other vertebrates with temperature-dependent sex determination. We report here the masculinization of female ZW larvae and one WW larva by aromatase inhibitor treatment. Larvae were treated from stage 52 (before the onset of histological differentiation of the gonads) to stage 56 (metamorphosis), with the non-steroidal inhibitors fadrozole or miconazole. Miconazole proved to be very toxic, but not fadrozole. Fadrozole at a concentration of 300 micrograms/l in the rearing water resulted in complete sex reversal of 9 out of 30 ZW larvae and 1 out 9 WW larvae. Only one individual (ZW) was intersex, all the remainder being typical females. Gonadal aromatase activity was measured in several individuals at different developmental stages during treatment. The activity was low in all individuals at the beginning of the treatment, but varied strongly and was well correlated with gonadal structure at the end of the treatment. Despite these differences in individual responses to treatment inhibiting aromatase, results confirm the important role of estrogens in ovary differentiation in Pleurodeles waltl

13. Chardard, D. and Dournon, C. (1999). **Sex reversal by aromatase inhibitor treatment in the newt Pleurodeles waltl.** *J Exp Zool* 283: 43-50.

    Chem Codes: Chemical of Concern: CPC; Rejection Code: NO TOXICANT.
    CAS Registry Number EC-1-14-13-- (Aromatase); 0 (Antifungal Agents); 0 (Estrogen Antagonists); 0 (Estrogens); 102676-47-1 (Fadrozole); 22916-47-8 (Miconazole). Pleurodeles waltl is a newt with a ZZ male-ZW female sex determination mechanism, and a temperature-sensitive gonadal sex differentiation. Raising larvae at 32 degrees C from stage 42 to stage 54 (thermosensitive period) drives genetic females to differentiate into functional males. Estrogens are intimately linked with temperature action in this species, as well as in other vertebrates with temperature-dependent sex determination. We report here the masculinization of female ZW larvae and one WW larva by aromatase inhibitor treatment. Larvae were treated from stage 52 (before the onset of histological differentiation of the gonads) to stage 56 (metamorphosis), with the non-steroidal inhibitors fadrozole or miconazole. Miconazole proved to be very toxic, but not fadrozole. Fadrozole at a concentration of 300 micrograms/l in the rearing water resulted in complete sex reversal of 9 out of 30 ZW larvae and 1 out 9 WW larvae. Only one individual (ZW) was intersex, all the remainder being typical females. Gonadal aromatase activity was measured in several individuals at different developmental stages during treatment. The activity was low in all individuals at the beginning of the treatment, but varied strongly and was well correlated with gonadal structure at the end of the treatment. Despite these differences in individual responses to treatment inhibiting aromatase, results confirm the important role of estrogens in ovary differentiation in Pleurodeles waltl

14. Dijkman, G. A., Fernandez, del Moral, Bruynseels, J., de Porre, P., Denis, L., and Debruyne, F. M. (1997). **Liarozole (R75251) in hormone-resistant prostate cancer patients.** *Prostate* 33: 31.

    Chem Codes: Chemical of Concern: CPC; Rejection Code: DRUG/HUMAN HEALTH.
    CAS Registry Number EC-3-4-21-77 (Prostate-Specific Antigen); 0 (Antineoplastic Agents, Hormonal); 0 (Hormones); 0 (Imidazoles); 115575-11-6 (liarozole). BACKGROUND: Liarozole is an imidazole derivative that has been identified as an inhibitor of the cytochrome P450-dependent all-trans retinoid acid (RA) breakdown. RA is one of the principal endogenous compounds that controls growth and differentiation of epithelial tissues in mammals. METHODS: Fifty-five patients with hormone-resistant prostate cancer in progression, following at least first-line androgen ablation therapy, were evaluated. Thirty-one patients were treated with liarozole 300 mg b.i.d., while 24 patients started with 150 mg b.i.d., which was increased to 300 mg b.i.d. after 4 or 8 weeks. Two patients were not evaluable because they withdrew after initial consent. The WHO performance status was 0 (n = 18), 1 (n = 22), 2 (n = 17), and 3 (n = 6). Most patients (80%) used analgesics. RESULTS: For 11 out of the 53 patients, treatment lasted less than 1 month (they were therefore not evaluable for response) due to: poor compliance (n = 1); early death (n = 3); side-effects (n = 2); and decline of physical condition and continuous progression (n = 4). One patient refused to report for follow-up. In all responders, except one, the dose was increased to 300 mg b.i.d. In 23 of the 42 patients evaluable for response, the pain score improved. In 5 patients the pain score had reduced from 2 or 3 to 0. In 11 out of the 42 patients there was a 1-point improvement of WHO performance status. The prostatic-specific antigen (PSA) response rate was 41%; 15 out of 42 evaluable patients presented a decrease of > or = 50%, whereas PSA normalized in 2 further patients. Most of the side effects mimicked retinoid acid toxicity: cutaneous

manifestations (such as dry skin, dry lips, sticky skin, brittle nails, erythema, or itch). All patients experienced one or more of these side effects. Other side effects include nausea, fatigue, and slight alopecia. CONCLUSIONS: Liarozole can be an enrichment of the therapeutic armamentarium for treatment of hormone-resistant prostate cancer patients after first-line androgen ablation therapy without serious toxicity

15. ELLIOTT AC (1995). **RODENTICIDES.** *GODFREY, C. R. A. (ED.). AGROCHEMICALS FROM NATURAL PRODUCTS. X+418P. MARCEL DEKKER, INC.: NEW YORK, NEW YORK, USA; BASEL, SWITZERLAND. ISBN* 0-8247-9553-9.; 0: 341-368.

    Chem Codes: Chemical of Concern: BDF,BDL,DPC,CPC,WRN,ZPN,CLC ; Rejection Code: REVIEW.
    BIOSIS COPYRIGHT: BIOL ABS. RRM BOOK CHAPTER LITERATURE REVIEW NATURAL PRODUCT Biochemistry/ Biophysics/ Macromolecular Systems/ Molecular Biology/ Biophysics/ Plants/Chemistry/ Herbicides/ Pest Control/ Pesticides/ Rodentia

16. ELLIOTT AC (1995). **RODENTICIDES.** *GODFREY, C. R. A. (ED.). AGROCHEMICALS FROM NATURAL PRODUCTS. X+418P. MARCEL DEKKER, INC.: NEW YORK, NEW YORK, USA; BASEL, SWITZERLAND. ISBN* 0-8247-9553-9.; 0: 341-368.

    Chem Codes: Chemical of Concern: BDF,BDL,DPC,CPC,WRN,ZPN,CLC ; Rejection Code: REVIEW.
    BIOSIS COPYRIGHT: BIOL ABS. RRM BOOK CHAPTER LITERATURE REVIEW NATURAL PRODUCT Biochemistry/ Biophysics/ Macromolecular Systems/ Molecular Biology/ Biophysics/ Plants/Chemistry/ Herbicides/ Pest Control/ Pesticides/ Rodentia

17. Fiedler, L. A. (1988). **Rodent Pest Problems and Management in Eastern Africa.** *FAO Plant Prot.Bull.* 36: 125-134.

    Chem Codes: EcoReference No.: 75721
    Chemical of Concern: BDF,Tl,NaFA,ZnP,WFN,CPC,RSG; Rejection Code: REVIEW.

18. Fiedler, L. A. (1988). **Rodent Pest Problems and Management in Eastern Africa.** *FAO Plant Prot.Bull.* 36: 125-134.

    Chem Codes: EcoReference No.: 75721
    Chemical of Concern: BDF,Tl,NaFA,ZnP,WFN,CPC,RSG; Rejection Code: REVIEW.

19. Fiedler, L. A. (1988). **Rodent Pest Problems and Management in Eastern Africa.** *FAO Plant Prot.Bull.* 36: 125-134.

    Chem Codes: EcoReference No.: 75721
    Chemical of Concern: BDF,Tl,NaFA,ZnP,WFN,CPC,RSG; Rejection Code: REVIEW.

20. Fiedler, L. A. (1988). **Rodent Pest Problems and Management in Eastern Africa.** *FAO Plant Prot.Bull.* 36: 125-134.

    Chem Codes: EcoReference No.: 75721
    Chemical of Concern: BDF,Tl,NaFA,ZnP,WFN,CPC,RSG; Rejection Code: REVIEW.

21. GORNIK, A. and BILITSER, N. (1992). **OBSERVATION OF TREATMENTS FOR THE PREVENTION OF SILVER SPOTS AND VIRUSES IN SQUASH.** *PHYTOPARASITICA;* 20: 243.

    Chem Codes: Chemical of Concern: CPC; Rejection Code: ABSTRACT.
    BIOSIS COPYRIGHT: BIOL ABS. RRM ABSTRACT BEMISIA-TABACI FENPROPATHRIN ENDOSULFAN VIROL OIL KARATE VECTOR CONTROL Congresses/ Biology/ Biochemistry/ Plant Viruses/ Vegetables/ Plant Diseases/ Viruses/ Plant Diseases/ Preventive Medicine/ Herbicides/ Pest Control/ Pesticides/ Arachnida/ Entomology/Economics/ Plants/ Plant Viruses/ Plants/ Insects

22. GORNIK, A. and BILITSER, N. (1992). **OBSERVATION OF TREATMENTS FOR THE PREVENTION OF SILVER SPOTS AND VIRUSES IN SQUASH.** *PHYTOPARASITICA;* 20: 243.

Chem Codes: Chemical of Concern: CPC; Rejection Code: ABSTRACT.
BIOSIS COPYRIGHT: BIOL ABS. RRM ABSTRACT BEMISIA-TABACI FENPROPATHRIN ENDOSULFAN VIROL OIL KARATE VECTOR CONTROL Congresses/ Biology/ Biochemistry/ Plant Viruses/ Vegetables/ Plant Diseases/ Viruses/ Plant Diseases/ Preventive Medicine/ Herbicides/ Pest Control/ Pesticides/ Arachnida/ Entomology/Economics/ Plants/ Plant Viruses/ Plants/ Insects

23. Grolleau, G. and Paris, G. (1975). **Essais d'Intoxication du Canard Col-Vert Anas platyrhynchos L. a l'Aide du Coumafene et du Chlorophacinone.** *Ann.Zool.-Ecol.Anim.* 7: 553-556.

Chem Codes: EcoReference No.: 36889
Chemical of Concern: CPC; Rejection Code: NON-ENGLISH.

24. Hoffmann, Michael P., Gardner, Jeffrey, and Curtis, Paul D (20031023). **Fiber-supported pesticidal compositions.** 41 pp.

Chem Codes: Chemical of Concern: SPM,BDL; Rejection Code: NO TOX DATA.
The invention provides fibrous pest deterrents that combine the useful properties of a phys. barrier in the form of a nonwoven fibrous matrix with a chem. deterrent such as a pesticide, behavior-modifying compd. or a pest repellent. The use of such fibrous pest deterrents protects plants, animals and structures in both agricultural and nonagricultural settings from damage inflicted by pests. Unlike traditional pesticides, the behavior-modifying compd., pesticide or chem. deterrent of the invention is adsorbed or attached to a fibrous matrix, and so it is not so readily dispersed into the environment. Hence, use of the fibrous pest deterrents can reduce the levels of pesticides that inadvertently contaminate nontarget areas and pollute water supplies. [on SciFinder (R)] fiber/ supported/ pesticide/ compn Copyright: Copyright 2004 ACS on SciFinder (R))
Database: CAPLUS
Accession Number: AN 2003:836400
Chemical Abstracts Number: CAN 139:318718
Section Code: 5-4
Section Title: Agrochemical Bioregulators
Coden: USXXCO
Index Terms: Glycols Role: MOA (Modifier or additive use), USES (Uses) (alyplastic, fiber; support for pest-behavior-modifying compn.); Polyester fibers Role: MOA (Modifier or additive use), USES (Uses) (arom.; support for pest-behavior-modifying compn.); Naphthenic acids Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (copper salts, mammal repellent; fiber-supported pest-behavior-modifying compn.); Anethum graveolens; Insect attractants; Insect feeding inhibitors; Insect repellents; Nepeta cataria; Piper; Repellents; Zingiber officinale (fiber-supported pest-behavior-modifying compn.); Allomones; Kairomones; Monoterpenes; Phenols; Pheromones Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pest-behavior-modifying compn.); Bacillus thuringiensis; Pesticides; Quassia; Schoenocaulon (fiber-supported pesticidal compn.); Pyrethrins Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pesticidal compn.); Fibers Role: MOA (Modifier or additive use), USES (Uses) (fiber-supported pesticidal compn.); Albumins; Collagens; Gelatins; Neoprene rubber; Ovalbumin; Polyamides; Polyanhydrides; Polycarbonates; Polyoxyalkylenes; Polysiloxanes; Polyurethane fibers; Rayon Role: MOA (Modifier or additive use), USES (Uses) (fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (glycolide-based, fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (hydroxycarboxylic acid-based, fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (lactide, fiber; support for pest-behavior-modifying compn.); Capsicum annuum annuum (longum group, paprika; fiber-supported pest-behavior-modifying compn.); Capsicum annuum annuum (longum group; fiber-supported pest-behavior-modifying compn.); Polyethers Role: MOA (Modifier or additive use), USES (Uses) (polyamide-, fiber; support for pest-behavior-modifying compn.); Synthetic polymeric fibers Role: MOA (Modifier or additive use), USES (Uses) (polyamide-polyethers; support for pest-behavior-modifying compn.); Synthetic polymeric fibers Role: MOA (Modifier or additive use), USES (Uses)

(polycarbonates; support for pest-behavior-modifying compn.); Polyamide fibers Role: MOA (Modifier or additive use), USES (Uses) (polyether-; support for pest-behavior-modifying compn.); Aves (repellents; fiber-supported pest-behavior-modifying compn.); Insecticides (sterilants; fiber-supported pest-behavior-modifying compn.); Polyester fibers; Polyolefin fibers Role: MOA (Modifier or additive use), USES (Uses) (support for pest-behavior-modifying compn.); Naphthenic acids Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (zinc salts, mammal repellent; fiber-supported pest-behavior-modifying compn.)

CAS Registry Numbers: 84-65-1 (Anthraquinone); 137-30-4 (Ziram.); 333-41-5 (Diazinon); 1332-40-7 (Copper oxychloride); 2032-65-7 (Methiocarb); 12407-86-2 (Trimethacarb); 15879-93-3 (Chloralose); 108173-90-6 (Guazatine) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (bird repellent; fiber-supported pest-behavior-modifying compn.); 57-50-1D (Sugar); 58-08-2 (, Caffein); 404-86-4 (Capsaicin) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pest-behavior-modifying compn.); 50-14-6 (> Ergocalciferol); 50-29-3 (DDT); 52-68-6 (Trichlorfon); 52-85-7 (Famphur); 54-11-5 (Nicotine); 55-38-9 (Fenthion); 55-98-1 (Busulfan); 56-23-5 (Carbon tetrachloride); 56-38-2 (Parathion); 56-72-4 (Coumaphos); 56-75-7 (Chloramphenicol); 57-24-9 (Strychnine); 58-89-9 (Lindane); 60-51-5 (Dimethoate); 60-57-1 (Dieldrin); 62-73-7 (Dichlorvos); 62-74-8 (Sodium fluoroacetate); 63-25-2 (Carbaryl); 67-66-3 (Chloroform); 70-38-2 (Dimethrin); 70-43-9 (Barthrin); 71-55-6 (Methylchloroform); 72-43-5 (Methoxychlor); 74-83-9 (Methyl bromide); 74-90-8 (Hydrogen cyanide); 75-09-2 (Methylene chloride); 75-21-8 (Ethylene oxide); 76-06-2 (,Chloropicrin); 76-44-8 (Heptachlor); 78-34-2 (Dioxathion); 78-53-5 (Amiton); 78-57-9 (Menazon); 78-87-5 (1,2-Dichloropropane); 79-34-5 (Tetrachloroethane); 80-05-7 (Bisphenol A); 81-81-2 (Warfarin); 81-82-3 (Coumachlor); 82-66-6 (Diphacinone); 83-26-1 (Pindone); 83-79-4 (Rotenone); 85-34-7 (Chlorfenac); 86-50-0 (Azinphosmethyl); 86-88-4 (Antu); 87-86-5 (Pentachlorophenol); 91-20-3 (Naphthalene); 96-24-2 (a-Chlorohydrin); 97-11-0 (Cyclethrin); 97-17-6 (Dichlofenthion); 97-27-8 (Chlorbetamide); 104-29-0 (Chlorphenesin); 106-46-7 (Paradichlorobenzene); 106-93-4 (Ethylene Dibromide); 107-06-2 (Ethylene dichloride); 107-13-1 (Acrylonitrile); 109-94-4 (Ethyl formate); 114-26-1 (Propoxur); 115-90-2 (Fensulfothion); 115-93-5 (Cythioate); 116-01-8 (Ethoatemethyl); 116-06-3 (Aldicarb); 118-75-2 (Chloranil); 119-12-0 (Pyridaphenthion); 121-20-0 (Cinerin II); 121-21-1 (Pyrethrin I); 121-29-9 (Pyrethrin II); 121-75-5 (Malathion); 122-14-5 (Fenitrothion); 122-15-6 (Dimetan); 126-22-7 (Butonate); 126-75-0 (Demeton-S); 131-89-5 (Dinex); 133-06-2 (Captan); 133-90-4 (,Chloramben); 141-66-2 (Dicrotophos); 143-50-0 (Chlordecone); 144-41-2 (Morphothion); 152-16-9 (Schradan); 288-14-2 (Isoxazole); 298-00-0 (Parathionmethyl); 298-02-2 (Phorate); 298-03-3 (Demeton-O); 298-04-4 (Disulfoton); 299-84-3 (Fenchlorphos); 299-86-5 (Crufomate); 300-76-5 (Naled); 301-12-2 (Oxydemetonmethyl); 302-04-5 (Thiocyanate); 309-00-2 (Aldrin); 314-40-9 (Bromacil); 315-18-4 (Mexacarbate); 327-98-0 (Trichloronat); 333-20-0 (Potassium thiocyanate); 370-50-3 (Flucofuron); 371-86-8 (Mipafox); 470-90-6 (Chlorfenvinphos); 483-63-6 (Crotamiton); 485-31-4 (Binapacryl); 494-52-0 (Anabasine); 500-28-7 (Chlorothion.); 507-60-8 (Scilliroside); 535-89-7 (Crimidine); 555-89-5 (Bis(p-chlorophenoxy)methane); 563-12-2 (Ethion); 572-48-5 (Coumithoate); 584-79-2 (Bioallethrin); 640-15-3 (Thiometon); 640-19-7 (Fluoroacetamide); 644-06-4 (Precocene II); 644-64-4 (Dimetilan); 671-04-5 (Carbanolate); 682-80-4 (Demephion-O); 732-11-6 (Phosmet); 786-19-6 (Carbophenothion); 867-27-6 (Demeton-O-methyl); 919-54-0 (Acethion); 919-76-6 (Amidithion); 919-86-8 (Demeton-S-methyl); 944-22-9 (FOnofos); 947-02-4 (Phosfolan); 950-10-7 (Mephosfolan); 950-37-8 (Methidathion); 991-42-4 (Norbormide); 1113-02-6 (Omethoate); 1129-41-5 (Metolcarb); 1172-63-0 (Jasmolin II); 1303-96-4 (Borax); 1314-84-7 (Zinc phosphide); 1327-53-3 (Arsenous oxide); 1344-81-6 (Calcium Polysulfide); 1403-17-4 (Candicidin); 1491-41-4 (Naftalofos); 1563-66-2 (Carbofuran); 1563-67-3 (Decarbofuran); 1646-88-4 (Aldoxycarb); 1716-09-2 (Fenthionethyl); 2032-59-9 (Aminocarb); 2104-96-3 (Bromophos); 2274-67-1 (Dimethylvinphos); 2275-14-1 (Phenkapton); 2275-18-5 (Prothoate); 2275-23-2 (Vamidothion); 2310-17-0 (Phosalone); 2385-85-5 (Mirex); 2425-10-7 (Xylylcarb); 2463-84-5 (Dicapthon); 2540-82-1 (Formothion); 2550-75-6 (Chlorbicyclen); 2587-90-8 (Demephion-S); 2595-54-2 (Mecarbam); 2597-03-7 (Phenthoate); 2631-37-0 (Promecarb); 2631-40-5 (Isoprocarb); 2633-54-7 (Trichlormetaphos-3); 2636-26-2 (Cyanophos); 2642-71-9 (Azinphosethyl); 2655-19-8 (Butacarb); 2669-32-1 (Lythidathion); 2674-91-1 (Oxydeprofos); 2699-79-8 (Sulfuryl fluoride); 2778-04-3 (Endothion); 2921-88-2 (Chlorpyrifos); 3383-96-8 (,Temephos); 3604-87-3 (.a.-Ecdysone); 3689-24-5 (Sulfotep); 3691-35-8 (Chlorophacinone); 3734-95-0 (Cyanthoate); 3761-41-9 (,Mesulfenfos); 3766-81-2 (Fenobucarb); 3811-49-2 (Dioxabenzofos); 4097-36-3 (Dinosam); 4104-14-7 (Phosacetim); 4151-50-2 (Sulfluramid); 4466-14-2 (Jasmolin I); 4824-78-6 (Bromophosethyl); 5221-49-8 (Pyrimitate); 5598-13-0 (Chlorpyrifosmethyl); 5598-52-7 (Fospirate); 5826-76-6 (Phosnichlor); 5834-96-8 (Azothoate); 5836-29-3 (Coumatetralyl); 5989-27-5;

6164-98-3 (Chlordimeform); 6392-46-7 (Allyxycarb); 6923-22-4 (Monocrotophos); 6988-21-2 (Dioxacarb); 7219-78-5 (Mazidox); 7257-41-2 (Dinoprop); 7292-16-2 (Propaphos); 7446-18-6 (Thallium sulfate); 7645-25-2 (Lead arsenate); 7696-12-0 (Tetramethrin); 7700-17-6 (Crotoxyphos); 7723-14-0 (Phosphorus); 7778-44-1 (Calcium arsenate); 7786-34-7 (Mevinphos); 7803-51-2 (Phosphine); 8001-35-2 (Camphechlor); 8022-00-2 (Demetonmethyl); 8065-36-9 (Bufencarb); 8065-48-3 (Demeton); 8065-62-1 (Demephion); 10112-91-1 (Mercurous chloride); 10124-50-2 (Potassium Arsenite); 10265-92-6 (Methamidophos); 10311-84-9 (Dialifos); 10453-86-8 (Resmethrin); 10537-47-0 (Malonoben); 10605-21-7 (Carbendazim); 11141-17-6 (Azadirachtin); 12002-03-8 (C.I. Pigment Green 21); 12789-03-6 (Chlordane); 13067-93-1 (Cyanofenphos); 13071-79-9 (Terbufos); 13171-21-6 (Phosphamidon); 13194-48-4 (Ethoprophos); 13457-18-6 (Pyrazophos); 13464-37-4 (Sodium arsenite;); 13593-03-8 (Quinalphos); 13593-08-3 (Quinalphosmethyl); 13804-51-8 (Juvenile hormone I); 14168-01-5 (Dilor); 14255-88-0 (Fenazaflor); 14816-16-1 (Phoximmethyl); 14816-18-3 (Phoxim); 14816-20-7 (Chlorphoxim); 15096-52-3 (Cryolite); 15263-53-3 (Cartap); 15589-31-8 (Terallethrin); 15662-33-6 (Ryania); 16752-77-5 (Methomyl); 16893-85-9 (Sodium hexafluorosilicate); 16984-48-8 (Fluoride); 17080-02-3 (Furethrin); 17125-80-3 (Barium hexafluorosilicate); 17598-02-6 (Precocene I); 17606-31-4 (Bensultap); 17702-57-7 (Formparanate); 18181-70-9 (Jodfenphos); 18181-80-1 (Bromopropylate); 18854-01-8 (Isoxathion); 19691-80-6 (Athidathion); 20276-83-9 (Prothidathion); 20425-39-2 (Pyresmethrin); 21548-32-3 (Fosthietan); 21609-90-5 (Leptophos); 22248-79-9 (>Tetrachlorvinphos); 22259-30-9 (Formetanate); 22431-62-5 (Bioethanomethrin); 22439-40-3 (Quinothion); 22569-71-7 (Phosphide); 22662-39-1 (Rafoxanide); 22781-23-3 (Bendiocarb); 22868-13-9 (Sodium Disulfide,<); 22963-93-5 (Juvenile hormone III); 23031-36-9 (Prallethrin); 23103-98-2 (Pirimicarb); 23135-22-0 (Oxamyl); 23505-41-1 (Pirimiphosethyl); 23526-02-5 (Thuringiensin,<); 23560-59-0 (Heptenophos); 24017-47-8 (Triazophos); 24019-05-4 (Sulcofuron); 24934-91-6 (Chlormephos); 25171-63-5 (Thiocarboxime); 25311-71-1 (Isofenphos); 25402-06-6 (Cinerin); 25601-84-7 (Methocrotophos); 26002-80-2 (Phenothrin); 26097-80-3 (Cambendazole); 28434-01-7 (Bioresmethrin); 28772-56-7 (Bromadiolone); 29173-31-7 (Mecarphon); 29232-93-7 (Pirimiphosmethyl); 29672-19-3 (Nitrilacarb); 29871-13-4 (Copper arsenate); 30087-47-9 (Fenethacarb); 30560-19-1 (Acephate); 30864-28-9 (Methacrifos); 31218-83-4 (Propetamphos); 31377-69-2 (Pirimetaphos); 31895-21-3 (Thiocyclam); 33089-61-1 (Amitraz); 33399-00-7 (Bromfenvinfos); 33629-47-9 (Butralin); 34218-61-6 (Juvenile hormone II); 34264-24-9 (Promacyl); 34643-46-4 (Prothiofos); 34681-10-2 (Butocarboxim); 34681-23-7 (Butoxycarboxim); 35367-31-8 (Penfluron); 35367-38-5 (Diflubenzuron); 35400-43-2 (Sulprofos); 35575-96-3 (Azamethiphos); 35764-59-1 (Cismethrin); 36145-08-1 (Chlorprazophos); 37032-15-8 (Sophamide); 38260-63-8 (Lirimfos); 38524-82-2 (Trifenofos); 38527-91-2 (Etaphos); 39196-18-4 (Thiofanox); 39247-96-6 (Primidophos); 39515-40-7 (Cyphenothrin); 39515-41-8 (Fenpropathrin); 40085-57-2 (Tazimcarb); 40596-69-8 (Methoprene); 40596-80-3 (Triprene); 40626-35-5 (Heterophos); 41096-46-2 (Hydroprene); 41198-08-7 (Profenofos); 41219-31-2 (Dithicrofos); 41483-43-6 (Bupirimate); 42509-80-8 (Isazofos); 42588-37-4 (Kinoprene); 50512-35-1; 51487-69-5 (Cloethocarb); 51596-10-2 (Milbemectin); 51630-58-1 (Fenvalerate); 51877-74-8 (Biopermethrin); 52315-07-8 (,Zetacypermethrin); 52645-53-1 (Permethrin); 52918-63-5 (Deltamethrin); 53558-25-1 (Pyrinuron); 54406-48-3 (Empenthrin); 54593-83-8 (Chlorethoxyfos); 55179-31-2 (Bitertanol); 55285-14-8 (Carbosulfan); 56073-07-5 (Difenacoum); 56073-10-0 (Brodifacoum); 56716-21-3 (Hyquincarb); 57808-65-8 (Closantel); 58481-70-2 (Dicresyl); 58842-20-9 (Nithiazine); 59669-26-0 (Thiodicarb); 60238-56-4 (Chlorthiophos); 60589-06-2 (Metoxadiazone); 60628-96-8 (Bifonazole); 61444-62-0 (Nifluridide); 61949-77-7 (Trans-Permethrin); 63333-35-7 (Bromethalin); 63771-69-7 (Zolaprofos); 63837-33-2 (Diofenolan); 63935-38-6 (Cycloprothrin); 64628-44-0 (Triflumuron); 64902-72-3 (Chlorsulfuron); 65383-73-5 (Precocene III); 65400-98-8 (Fenoxacrim); 65691-00-1 (Triarathene); 65907-30-4 (,Furathiocarb); 66215-27-8 (Cyromazine); 66230-04-4 (Esfenvalerate); 66841-25-6 (Tralomethrin); 67485-29-4 (Hydramethylnon); 68359-37-5 (Betacyfluthrin); 68523-18-2 (Fenpirithrin); 69327-76-0 (Buprofezin); 69409-94-5 (Fluvalinate); 70124-77-5 (Flucythrinate); 70288-86-7 (Ivermectin); 71422-67-8 (Chlorfluazuron); 71697-59-1 (Thetacypermethrin); 71751-41-2 (Abamectin); 72490-01-8 (Fenoxycarb); 72963-72-5 (Imiprothrin); 75867-00-4 (Fenfluthrin); 79538-32-2 (Tefluthrin); 80060-09-9 (Diafenthiuron); 80844-07-1 (Etofenprox); 81613-59-4 (Flupropadine); 82560-54-1 (Benfuracarb); 82657-04-3 (Bifenthrin); 83121-18-0 (Teflubenzuron); 83130-01-2 (Alanycarb); 83733-82-8 (Fosmethilan); 86479-06-3 (Hexaflumuron); 89784-60-1 (Pyraclofos); 90035-08-8 (Flocoumafen); 90338-20-8 (Butathiofos); 95465-99-9 (Cadusafos); 95737-68-1 (Pyriproxyfen); 96182-53-5 (Tebupirimfos); 96489-71-3 (Pyridaben); 101007-06-1 (Acrinathrin); 101463-69-8 (,Flufenoxuron); 102851-06-9 (Taufluvalinate); 103055-07-8 (Lufenuron); 103782-08-7 (Allosamidin); 104653-34-1 (Difethialone); 105024-66-6 (Silafluofen); 105779-78-0 (Pyrimidifen); 107713-58-6 (Flufenprox); 111872-58-3 (Halfenprox); 112143-82-5 (Triazamate.); 112226-61-6 (Halofenozide); 112410-23-8 (Tebufenozide);

112636-83-6 (Dicyclanil); 113036-88-7 (Flucycloxuron); 116714-46-6 (NOvaluron); 117704-25-3 (Doramectin); 118712-89-3 (Transfluthrin); 119168-77-3 (Tebufenpyrad); 119791-41-2 (Emamectin); 120068-37-3 (Fipronil); 121451-02-3 (Noviflumuron); 122453-73-0 (Chlorfenapyr); 123997-26-2 (Eprinomectin); 129558-76-5 (TOlfenpyrad); 143807-66-3 (Chromafenozide); 150824-47-8 (Nitenpyram); 153719-23-4 (Thiamethoxam); 158062-67-0 (Flonicamid); 161050-58-4 (Methoxyfenozide); 165252-70-0 (Dinotefuran); 168316-95-8 (Spinosad); 170015-32-4 (Flufenerim); 173584-44-6 (Indoxacarb); 179101-81-6 (Pyridalyl); 181587-01-9 (Ethiprole); 201593-84-2 (Bistrifluron); 209861-58-5 (Acetoprole); 210880-92-5 (Clothianidin); 220119-17-5 (Selamectin); 223419-20-3 (Profluthrin); 240494-70-6 (Metofluthrin); 283594-90-1 (Spiromesifen) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pesticidal compn.); 51-79-6 (Urethane); 78-79-5 (Isoprene); 108-05-4 (Vinyl acetate); 7782-42-5 (Graphite); 9002-88-4 (Polyethylene); 9002-89-5 (Poly(vinyl alcohol); 9003-05-8; 9003-39-8 (Poly(vinylpyrrolidone); 9003-53-6 (,Polystyrene); 9004-32-4 (Carboxymethyl cellulose sodium salt); 9004-34-6D (Cellulose); 9004-65-3 (Hydroxypropyl methylcellulose); 9005-25-8 (Starch); 9005-32-7 (Alginic acid); 9005-49-6 (Heparin sulfate); 9007-28-7 (Chondroitin sulfate); 24980-41-4 (Polycaprolactone); 25085-53-4 (Isotactic polypropylene); 25248-42-4 (Polycaprolactone); 25322-68-3 (Poly(ethylene oxide); 25702-74-3 (Polysucrose); 25805-17-8 (Poly(ethyloxazoline); 26023-30-3 (Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)]); 26100-51-6 (Polylactic acid); 26780-50-7 (Poly(Lactide-co-glycolide); 31621-87-1 (Polydioxanone) Role: MOA (Modifier or additive use), USES (Uses) (fiber; support for pest-behavior-modifying compn.); 84-74-2 (Dibutyl phthalate); 94-96-2 (Ethohexadiol); 131-11-3 (Dimethyl phthalate); 134-62-3 (DEET); 532-34-3 (Butopyronoxyl); 3653-39-2 (,Hexamide); 19764-43-3 (Methoquin-butyl); 39589-98-5 (Dimethyl carbate); 66257-53-2 (Oxamate); 105726-67-8 (Methylneodecanamide); 119515-38-7 (Picaridin) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (insect repellent; fiber-supported pest-behavior-modifying compn.); 7783-06-4 (Hydrogen sulfide) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (mammal repellent; fiber-supported pest-behavior-modifying compn.); 9010-98-4 Role: MOA (Modifier or additive use), USES (Uses) (neoprene rubber, fiber; support for pest-behavior-modifying compn.)
Patent Application Country: Application: US
Priority Application Country: US
Priority Application Number: 2001-345349
Priority Application Date: 20011025

25. Hoffmann, Michael P., Gardner, Jeffrey, and Curtis, Paul D (20031023). **Fiber-supported pesticidal compositions.** 41 pp.

Chem Codes: Chemical of Concern: AZD,SPM; Rejection Code: NO TOX DATA.
The invention provides fibrous pest deterrents that combine the useful properties of a phys. barrier in the form of a nonwoven fibrous matrix with a chem. deterrent such as a pesticide, behavior-modifying compd. or a pest repellent. The use of such fibrous pest deterrents protects plants, animals and structures in both agricultural and nonagricultural settings from damage inflicted by pests. Unlike traditional pesticides, the behavior-modifying compd., pesticide or chem. deterrent of the invention is adsorbed or attached to a fibrous matrix, and so it is not so readily dispersed into the environment. Hence, use of the fibrous pest deterrents can reduce the levels of pesticides that inadvertently contaminate nontarget areas and pollute water supplies. [on SciFinder (R)] fiber/ supported/ pesticide/ compn Copyright: Copyright 2004 ACS on SciFinder (R))
Database: CAPLUS
Accession Number: AN 2003:836400
Chemical Abstracts Number: CAN 139:318718
Section Code: 5-4
Section Title: Agrochemical Bioregulators
Coden: USXXCO
Index Terms: Glycols Role: MOA (Modifier or additive use), USES (Uses) (alyplastic, fiber; support for pest-behavior-modifying compn.); Polyester fibers Role: MOA (Modifier or additive use), USES (Uses) (arom.; support for pest-behavior-modifying compn.); Naphthenic acids Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (copper salts, mammal repellent; fiber-supported pest-behavior-modifying compn.); Anethum graveolens; Insect attractants; Insect feeding inhibitors; Insect repellents; Nepeta cataria; Piper; Repellents; Zingiber officinale (fiber-supported pest-behavior-modifying compn.); Allomones; Kairomones; Monoterpenes; Phenols; Pheromones Role: BUU (Biological use,

unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pest-behavior-modifying compn.); Bacillus thuringiensis; Pesticides; Quassia; Schoenocaulon (fiber-supported pesticidal compn.); Pyrethrins Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pesticidal compn.); Fibers Role: MOA (Modifier or additive use), USES (Uses) (fiber-supported pesticidal compn.); Albumins; Collagens; Gelatins; Neoprene rubber; Ovalbumin; Polyamides; Polyanhydrides; Polycarbonates; Polyoxyalkylenes; Polysiloxanes; Polyurethane fibers; Rayon Role: MOA (Modifier or additive use), USES (Uses) (fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (glycolide-based, fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (hydroxycarboxylic acid-based, fiber; support for pest-behavior-modifying compn.); Polyesters Role: MOA (Modifier or additive use), USES (Uses) (lactide, fiber; support for pest-behavior-modifying compn.); Capsicum annuum annuum (longum group, paprika; fiber-supported pest-behavior-modifying compn.); Capsicum annuum annuum (longum group; fiber-supported pest-behavior-modifying compn.); Polyethers Role: MOA (Modifier or additive use), USES (Uses) (polyamide-, fiber; support for pest-behavior-modifying compn.); Synthetic polymeric fibers Role: MOA (Modifier or additive use), USES (Uses) (polyamide-polyethers; support for pest-behavior-modifying compn.); Synthetic polymeric fibers Role: MOA (Modifier or additive use), USES (Uses) (polycarbonates; support for pest-behavior-modifying compn.); Polyamide fibers Role: MOA (Modifier or additive use), USES (Uses) (polyether-; support for pest-behavior-modifying compn.); Aves (repellents; fiber-supported pest-behavior-modifying compn.); Insecticides (sterilants; fiber-supported pest-behavior-modifying compn.); Polyester fibers; Polyolefin fibers Role: MOA (Modifier or additive use), USES (Uses) (support for pest-behavior-modifying compn.); Naphthenic acids Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (zinc salts, mammal repellent; fiber-supported pest-behavior-modifying compn.)
CAS Registry Numbers: 84-65-1 (Anthraquinone); 137-30-4 (Ziram.); 333-41-5 (Diazinon); 1332-40-7 (Copper oxychloride); 2032-65-7 (Methiocarb); 12407-86-2 (Trimethacarb); 15879-93-3 (Chloralose); 108173-90-6 (Guazatine) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (bird repellent; fiber-supported pest-behavior-modifying compn.); 57-50-1D (Sugar); 58-08-2 (, Caffein); 404-86-4 (Capsaicin) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pest-behavior-modifying compn.); 50-14-6 (> Ergocalciferol); 50-29-3 (DDT); 52-68-6 (Trichlorfon); 52-85-7 (Famphur); 54-11-5 (Nicotine); 55-38-9 (Fenthion); 55-98-1 (Busulfan); 56-23-5 (Carbon tetrachloride); 56-38-2 (Parathion); 56-72-4 (Coumaphos); 56-75-7 (Chloramphenicol); 57-24-9 (Strychnine); 58-89-9 (Lindane); 60-51-5 (Dimethoate); 60-57-1 (Dieldrin); 62-73-7 (Dichlorvos); 62-74-8 (Sodium fluoroacetate); 63-25-2 (Carbaryl); 67-66-3 (Chloroform); 70-38-2 (Dimethrin); 70-43-9 (Barthrin); 71-55-6 (Methylchloroform); 72-43-5 (Methoxychlor); 74-83-9 (Methyl bromide); 74-90-8 (Hydrogen cyanide); 75-09-2 (Methylene chloride); 75-21-8 (Ethylene oxide); 76-06-2 (,Chloropicrin); 76-44-8 (Heptachlor); 78-34-2 (Dioxathion); 78-53-5 (Amiton); 78-57-9 (Menazon); 78-87-5 (1,2-Dichloropropane); 79-34-5 (Tetrachloroethane); 80-05-7 (Bisphenol A); 81-81-2 (Warfarin); 81-82-3 (Coumachlor); 82-66-6 (Diphacinone); 83-26-1 (Pindone); 83-79-4 (Rotenone); 85-34-7 (Chlorfenac); 86-50-0 (Azinphosmethyl); 86-88-4 (Antu); 87-86-5 (Pentachlorophenol); 91-20-3 (Naphthalene); 96-24-2 (a-Chlorohydrin); 97-11-0 (Cyclethrin); 97-17-6 (Dichlofenthion); 97-27-8 (Chlorbetamide); 104-29-0 (Chlorphenesin); 106-46-7 (Paradichlorobenzene); 106-93-4 (Ethylene Dibromide); 107-06-2 (Ethylene dichloride); 107-13-1 (Acrylonitrile); 109-94-4 (Ethyl formate); 114-26-1 (Propoxur); 115-90-2 (Fensulfothion); 115-93-5 (Cythioate); 116-01-8 (Ethoatemethyl); 116-06-3 (Aldicarb); 118-75-2 (Chloranil); 119-12-0 (Pyridaphenthion); 121-20-0 (Cinerin II); 121-21-1 (Pyrethrin I); 121-29-9 (Pyrethrin II); 121-75-5 (Malathion); 122-14-5 (Fenitrothion); 122-15-6 (Dimetan); 126-22-7 (Butonate); 126-75-0 (Demeton-S); 131-89-5 (Dinex); 133-06-2 (Captan); 133-90-4 (,Chloramben); 141-66-2 (Dicrotophos); 143-50-0 (Chlordecone); 144-41-2 (Morphothion); 152-16-9 (Schradan); 288-14-2 (Isoxazole); 298-00-0 (Parathionmethyl); 298-02-2 (Phorate); 298-03-3 (Demeton-O); 298-04-4 (Disulfoton); 299-84-3 (Fenchlorphos); 299-86-5 (Crufomate); 300-76-5 (Naled); 301-12-2 (Oxydemetonmethyl); 302-04-5 (Thiocyanate); 309-00-2 (Aldrin); 314-40-9 (Bromacil); 315-18-4 (Mexacarbate); 327-98-0 (Trichloronat); 333-20-0 (Potassium thiocyanate); 370-50-3 (Flucofuron); 371-86-8 (Mipafox); 470-90-6 (Chlorfenvinphos); 483-63-6 (Crotamiton); 485-31-4 (Binapacryl); 494-52-0 (Anabasine); 500-28-7 (Chlorothion.); 507-60-8 (Scilliroside); 535-89-7 (Crimidine); 555-89-5 (Bis(p-chlorophenoxy)methane); 563-12-2 (Ethion); 572-48-5 (Coumithoate); 584-79-2 (Bioallethrin); 640-15-3 (Thiometon); 640-19-7 (Fluoroacetamide); 644-06-4 (Precocene II); 644-64-4 (Dimetilan); 671-04-5 (Carbanolate); 682-80-4 (Demephion-O); 732-11-6 (Phosmet); 786-19-6 (Carbophenothion); 867-27-6 (Demeton-O-methyl); 919-54-0 (Acethion); 919-76-6

(Amidithion); 919-86-8 (Demeton-S-methyl); 944-22-9 (FOnofos); 947-02-4 (Phosfolan); 950-10-7 (Mephosfolan); 950-37-8 (Methidathion); 991-42-4 (Norbormide); 1113-02-6 (Omethoate); 1129-41-5 (Metolcarb); 1172-63-0 (Jasmolin II); 1303-96-4 (Borax); 1314-84-7 (Zinc phosphide); 1327-53-3 (Arsenous oxide); 1344-81-6 (Calcium Polysulfide); 1403-17-4 (Candicidin); 1491-41-4 (Naftalofos); 1563-66-2 (Carbofuran); 1563-67-3 (Decarbofuran); 1646-88-4 (Aldoxycarb); 1716-09-2 (Fenthionethyl); 2032-59-9 (Aminocarb); 2104-96-3 (Bromophos); 2274-67-1 (Dimethylvinphos); 2275-14-1 (Phenkapton); 2275-18-5 (Prothoate); 2275-23-2 (Vamidothion); 2310-17-0 (Phosalone); 2385-85-5 (Mirex); 2425-10-7 (Xylylcarb); 2463-84-5 (Dicapthon); 2540-82-1 (Formothion); 2550-75-6 (Chlorbicyclen); 2587-90-8 (Demephion-S); 2595-54-2 (Mecarbam); 2597-03-7 (Phenthoate); 2631-37-0 (Promecarb); 2631-40-5 (Isoprocarb); 2633-54-7 (Trichlormetaphos-3); 2636-26-2 (Cyanophos); 2642-71-9 (Azinphosethyl); 2655-19-8 (Butacarb); 2669-32-1 (Lythidathion); 2674-91-1 (Oxydeprofos); 2699-79-8 (Sulfuryl fluoride); 2778-04-3 (Endothion); 2921-88-2 (Chlorpyrifos); 3383-96-8 (,Temephos); 3604-87-3 (.a.-Ecdysone); 3689-24-5 (Sulfotep); 3691-35-8 (Chlorophacinone); 3734-95-0 (Cyanthoate); 3761-41-9 (,Mesulfenfos); 3766-81-2 (Fenobucarb); 3811-49-2 (Dioxabenzofos); 4097-36-3 (Dinosam); 4104-14-7 (Phosacetim); 4151-50-2 (Sulfluramid); 4466-14-2 (Jasmolin I); 4824-78-6 (Bromophosethyl); 5221-49-8 (Pyrimitate); 5598-13-0 (Chlorpyrifosmethyl); 5598-52-7 (Fospirate); 5826-76-6 (Phosnichlor); 5834-96-8 (Azothoate); 5836-29-3 (Coumatetralyl); 5989-27-5; 6164-98-3 (Chlordimeform); 6392-46-7 (Allyxycarb); 6923-22-4 (Monocrotophos); 6988-21-2 (Dioxacarb); 7219-78-5 (Mazidox); 7257-41-2 (Dinoprop); 7292-16-2 (Propaphos); 7446-18-6 (Thallium sulfate); 7645-25-2 (Lead arsenate); 7696-12-0 (Tetramethrin); 7700-17-6 (Crotoxyphos); 7723-14-0 (Phosphorus); 7778-44-1 (Calcium arsenate); 7786-34-7 (Mevinphos); 7803-51-2 (Phosphine); 8001-35-2 (Camphechlor); 8022-00-2 (Demetonmethyl); 8065-36-9 (Bufencarb); 8065-48-3 (Demeton); 8065-62-1 (Demephion); 10112-91-1 (Mercurous chloride); 10124-50-2 (Potassium Arsenite); 10265-92-6 (Methamidophos); 10311-84-9 (Dialifos); 10453-86-8 (Resmethrin); 10537-47-0 (Malonoben); 10605-21-7 (Carbendazim); 11141-17-6 (Azadirachtin); 12002-03-8 (C.I. Pigment Green 21); 12789-03-6 (Chlordane); 13067-93-1 (Cyanofenphos); 13071-79-9 (Terbufos); 13171-21-6 (Phosphamidon); 13194-48-4 (Ethoprophos); 13457-18-6 (Pyrazophos); 13464-37-4 (Sodium arsenite;); 13593-03-8 (Quinalphos); 13593-08-3 (Quinalphosmethyl); 13804-51-8 (Juvenile hormone I); 14168-01-5 (Dilor); 14255-88-0 (Fenazaflor); 14816-16-1 (Phoximmethyl); 14816-18-3 (Phoxim); 14816-20-7 (Chlorphoxim); 15096-52-3 (Cryolite); 15263-53-3 (Cartap); 15589-31-8 (Terallethrin); 15662-33-6 (Ryania); 16752-77-5 (Methomyl); 16893-85-9 (Sodium hexafluorosilicate); 16984-48-8 (Fluoride); 17080-02-3 (Furethrin); 17125-80-3 (Barium hexafluorosilicate); 17598-02-6 (Precocene I); 17606-31-4 (Bensultap); 17702-57-7 (Formparanate); 18181-70-9 (Jodfenphos); 18181-80-1 (Bromopropylate); 18854-01-8 (Isoxathion); 19691-80-6 (Athidathion); 20276-83-9 (Prothidathion); 20425-39-2 (Pyresmethrin); 21548-32-3 (Fosthietan); 21609-90-5 (Leptophos); 22248-79-9 (>Tetrachlorvinphos); 22259-30-9 (Formetanate); 22431-62-5 (Bioethanomethrin); 22439-40-3 (Quinothion); 22569-71-7 (Phosphide); 22662-39-1 (Rafoxanide); 22781-23-3 (Bendiocarb); 22868-13-9 (Sodium Disulfide,<); 22963-93-5 (Juvenile hormone III); 23031-36-9 (Prallethrin); 23103-98-2 (Pirimicarb); 23135-22-0 (Oxamyl); 23505-41-1 (Pirimiphosethyl); 23526-02-5 (Thuringiensin,<); 23560-59-0 (Heptenophos); 24017-47-8 (Triazophos); 24019-05-4 (Sulcofuron); 24934-91-6 (Chlormephos); 25171-63-5 (Thiocarboxime); 25311-71-1 (Isofenphos); 25402-06-6 (Cinerin); 25601-84-7 (Methocrotophos); 26002-80-2 (Phenothrin); 26097-80-3 (Cambendazole); 28434-01-7 (Bioresmethrin); 28772-56-7 (Bromadiolone); 29173-31-7 (Mecarphon); 29232-93-7 (Pirimiphosmethyl); 29672-19-3 (Nitrilacarb); 29871-13-4 (Copper arsenate); 30087-47-9 (Fenethacarb); 30560-19-1 (Acephate); 30864-28-9 (Methacrifos); 31218-83-4 (Propetamphos); 31377-69-2 (Pirimetaphos); 31895-21-3 (Thiocyclam); 33089-61-1 (Amitraz); 33399-00-7 (Bromfenvinfos); 33629-47-9 (Butralin); 34218-61-6 (Juvenile hormone II); 34264-24-9 (Promacyl); 34643-46-4 (Prothiofos); 34681-10-2 (Butocarboxim); 34681-23-7 (Butoxycarboxim); 35367-31-8 (Penfluron); 35367-38-5 (Diflubenzuron); 35400-43-2 (Sulprofos); 35575-96-3 (Azamethiphos); 35764-59-1 (Cismethrin); 36145-08-1 (Chlorprazophos); 37032-15-8 (Sophamide); 38260-63-8 (Lirimfos); 38524-82-2 (Trifenofos); 38527-91-2 (Etaphos); 39196-18-4 (Thiofanox); 39247-96-6 (Primidophos); 39515-40-7 (Cyphenothrin); 39515-41-8 (Fenpropathrin); 40085-57-2 (Tazimcarb); 40596-69-8 (Methoprene); 40596-80-3 (Triprene); 40626-35-5 (Heterophos); 41096-46-2 (Hydroprene); 41198-08-7 (Profenofos); 41219-31-2 (Dithicrofos); 41483-43-6 (Bupirimate); 42509-80-8 (Isazofos); 42588-37-4 (Kinoprene); 50512-35-1; 51487-69-5 (Cloethocarb); 51596-10-2 (Milbemectin); 51630-58-1 (Fenvalerate); 51877-74-8 (Biopermethrin); 52315-07-8 (,Zetacypermethrin); 52645-53-1 (Permethrin); 52918-63-5 (Deltamethrin); 53558-25-1 (Pyrinuron); 54406-48-3 (Empenthrin); 54593-83-8 (Chlorethoxyfos); 55179-31-2 (Bitertanol); 55285-14-8 (Carbosulfan); 56073-07-5 (Difenacoum); 56073-10-0 (Brodifacoum); 56716-21-3 (Hyquincarb); 57808-65-8 (Closantel); 58481-70-2 (Dicresyl); 58842-20-9 (Nithiazine); 59669-26-0 (Thiodicarb); 60238-56-4 (Chlorthiophos);

60589-06-2 (Metoxadiazone); 60628-96-8 (Bifonazole); 61444-62-0 (Nifluridide); 61949-77-7 (Trans-Permethrin); 63333-35-7 (Bromethalin); 63771-69-7 (Zolaprofos); 63837-33-2 (Diofenolan); 63935-38-6 (Cycloprothrin); 64628-44-0 (Triflumuron); 64902-72-3 (Chlorsulfuron); 65383-73-5 (Precocene III); 65400-98-8 (Fenoxacrim); 65691-00-1 (Triarathene); 65907-30-4 (,Furathiocarb); 66215-27-8 (Cyromazine); 66230-04-4 (Esfenvalerate); 66841-25-6 (Tralomethrin); 67485-29-4 (Hydramethylnon); 68359-37-5 (Betacyfluthrin); 68523-18-2 (Fenpirithrin); 69327-76-0 (Buprofezin); 69409-94-5 (Fluvalinate); 70124-77-5 (Flucythrinate); 70288-86-7 (Ivermectin); 71422-67-8 (Chlorfluazuron); 71697-59-1 (Thetacypermethrin); 71751-41-2 (Abamectin); 72490-01-8 (Fenoxycarb); 72963-72-5 (Imiprothrin); 75867-00-4 (Fenfluthrin); 79538-32-2 (Tefluthrin); 80060-09-9 (Diafenthiuron); 80844-07-1 (Etofenprox); 81613-59-4 (Flupropadine); 82560-54-1 (Benfuracarb); 82657-04-3 (Bifenthrin); 83121-18-0 (Teflubenzuron); 83130-01-2 (Alanycarb); 83733-82-8 (Fosmethilan); 86479-06-3 (Hexaflumuron); 89784-60-1 (Pyraclofos); 90035-08-8 (Flocoumafen); 90338-20-8 (Butathiofos); 95465-99-9 (Cadusafos); 95737-68-1 (Pyriproxyfen); 96182-53-5 (Tebupirimfos); 96489-71-3 (Pyridaben); 101007-06-1 (Acrinathrin); 101463-69-8 (,Flufenoxuron); 102851-06-9 (Taufluvalinate); 103055-07-8 (Lufenuron); 103782-08-7 (Allosamidin); 104653-34-1 (Difethialone); 105024-66-6 (Silafluofen); 105779-78-0 (Pyrimidifen); 107713-58-6 (Flufenprox); 111872-58-3 (Halfenprox); 112143-82-5 (Triazamate.); 112226-61-6 (Halofenozide); 112410-23-8 (Tebufenozide); 112636-83-6 (Dicyclanil); 113036-88-7 (Flucycloxuron); 116714-46-6 (NOvaluron); 117704-25-3 (Doramectin); 118712-89-3 (Transfluthrin); 119168-77-3 (Tebufenpyrad); 119791-41-2 (Emamectin); 120068-37-3 (Fipronil); 121451-02-3 (Noviflumuron); 122453-73-0 (Chlorfenapyr); 123997-26-2 (Eprinomectin); 129558-76-5 (TOlfenpyrad); 143807-66-3 (Chromafenozide); 150824-47-8 (Nitenpyram); 153719-23-4 (Thiamethoxam); 158062-67-0 (Flonicamid); 161050-58-4 (Methoxyfenozide); 165252-70-0 (Dinotefuran); 168316-95-8 (Spinosad); 170015-32-4 (Flufenerim); 173584-44-6 (Indoxacarb); 179101-81-6 (Pyridalyl); 181587-01-9 (Ethiprole); 201593-84-2 (Bistrifluron); 209861-58-5 (Acetoprole); 210880-92-5 (Clothianidin); 220119-17-5 (Selamectin); 223419-20-3 (Profluthrin); 240494-70-6 (Metofluthrin); 283594-90-1 (Spiromesifen) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (fiber-supported pesticidal compn.); 51-79-6 (Urethane); 78-79-5 (Isoprene); 108-05-4 (Vinyl acetate); 7782-42-5 (Graphite); 9002-88-4 (Polyethylene); 9002-89-5 (Poly(vinyl alcohol); 9003-05-8; 9003-39-8 (Poly(vinylpyrrolidone); 9003-53-6 (,Polystyrene); 9004-32-4 (Carboxymethyl cellulose sodium salt); 9004-34-6D (Cellulose); 9004-65-3 (Hydroxypropyl methylcellulose); 9005-25-8 (Starch); 9005-32-7 (Alginic acid); 9005-49-6 (Heparin sulfate); 9007-28-7 (Chondroitin sulfate); 24980-41-4 (Polycaprolactone); 25085-53-4 (Isotactic polypropylene); 25248-42-4 (Polycaprolactone); 25322-68-3 (Poly(ethylene oxide); 25702-74-3 (Polysucrose); 25805-17-8 (Poly(ethyloxazoline); 26023-30-3 (Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)]); 26100-51-6 (Polylactic acid); 26780-50-7 (Poly(Lactide-co-glycolide); 31621-87-1 (Polydioxanone) Role: MOA (Modifier or additive use), USES (Uses) (fiber; support for pest-behavior-modifying compn.); 84-74-2 (Dibutyl phthalate); 94-96-2 (Ethohexadiol); 131-11-3 (Dimethyl phthalate); 134-62-3 (DEET); 532-34-3 (Butopyronoxyl); 3653-39-2 (,Hexamide); 19764-43-3 (Methoquin-butyl); 39589-98-5 (Dimethyl carbate); 66257-53-2 (Oxamate); 105726-67-8 (Methylneodecanamide); 119515-38-7 (Picaridin) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (insect repellent; fiber-supported pest-behavior-modifying compn.); 7783-06-4 (Hydrogen sulfide) Role: BUU (Biological use, unclassified), BIOL (Biological study), USES (Uses) (mammal repellent; fiber-supported pest-behavior-modifying compn.); 9010-98-4 Role: MOA (Modifier or additive use), USES (Uses) (neoprene rubber, fiber; support for pest-behavior-modifying compn.)
Patent Application Country: Application: US
Priority Application Country: US
Priority Application Number: 2001-345349
Priority Application Date: 20011025

26. Mcdonald, A. R. and Harris, S. (2000). **The use of fumigants and anticoagulant rodenticides on game estates in Great Britain.** *Mammal Review [Mamm. Rev.]. Vol. 30, no. 1, pp. 57-64.*

Chem Codes: Chemical of Concern: CPC,WFN; Rejection Code: NO TOX DATA.
Several studies have highlighted the potential risk to nontarget wildlife associated with accidental exposure to vertebrate control agents. In order to provide information that may assist in the mitigation of this problem, we questioned 215 gamekeepers in Great Britain about the use of vertebrate control agents on the land for which they were responsible. Fumigants were used to control Rabbits Oryctolagus cuniculus by 59% of gamekeepers. Use of fumigants was more common than on farms in general. 91% of gamekeepers reported

the use of rodenticides, 95% of which were anticoagulants. Patterns of rodenticide use were similar to those on arable farms, though chlorophacinone and warfarin were used more commonly on game estates. Future studies of the exposure of nontarget wildlife to anticoagulants should be expanded to include these compounds. Rodenticides were apparently used in accordance with label recommendations in most cases. However, better information and guidelines for users may improve standards of agent application and reduce potential risks to nontarget wildlife. Classification: D 04700 Management Rodenticides/ Wildlife management/ British Isles/ Oryctolagus cuniculus/ European rabbit

27. Mcdonald, A. R. and Harris, S. (2000). **The use of fumigants and anticoagulant rodenticides on game estates in Great Britain.** *Mammal Review [Mamm. Rev.]. Vol. 30, no. 1, pp. 57-64.*

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28. Mcdonald, A. R. and Harris, S. (2000). **The use of fumigants and anticoagulant rodenticides on game estates in Great Britain.** *Mammal Review [Mamm. Rev.]. Vol. 30, no. 1, pp. 57-64.*

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29. MEDVEDOVICI, A., DAVID, F., and SANDRA, P. (1997). **Determination of the rodenticides warfarin, diphenadione and chlorophacinone in soil samples by HPLC-DAD.** *TALANTA;* 44: 1633-1640.

    Chem Codes: Chemical of Concern: DPC,CPC,WFN; Rejection Code: NO TOX DATA.
    BIOSIS COPYRIGHT: BIOL ABS. A HPLC-DAD method is described for the analysis of the rodenticides warfarin, diphenadione and chlorophacinone, together with the phenylurea herbicides isoproturon and diuron, in soil samples. The HPLC parameters have been optimised to provide baseline separation with symmetrical peakshapes in short analysis times. The sample preparation consists of Soxhlet extraction followed by SPE clean-up on cyanopropyl silica. Biochemistry/Methods/ Biophysics/Methods/ Methods/ Plants/ Soil/ Herbicides/ Pest Control/ Pesticides

30. Mendenhall, V. M. and Pank, L. F. (1980). **Secondary Poisoning of Owls by Anticoagulant Rodenticides.** *Wildlife Society Bulletin* 8: 311-315.

Chem Codes: Chemical of Concern: BDF,DPC,CPC; Rejection Code: NO CONC.

31. Mendenhall, V. M. and Pank, L. F. (1980). **Secondary Poisoning of Owls by Anticoagulant Rodenticides.** *Wildlife Society Bulletin* 8: 311-315.

Chem Codes: Chemical of Concern: BDF,DPC,CPC; Rejection Code: NO CONC.

32. Panzica, G. C., Castagna, C., Viglietti-Panzica, C., Russo, C., Tlemcani, O., and Balthazart, J. (1998). **Organizational effects of estrogens on brain vasotocin and sexual behavior in quail.** *J Neurobiol* 37: 684-699.

Chem Codes: Chemical of Concern: CPC; Rejection Code: NO TOXICANT.
CAS Registry Number EC-1-14-13-- (Aromatase); 0 (Triazoles); 118949-22-7 (vorozole); 50-28-2 (Estradiol); 50-50-0 (estradiol 3-benzoate); 57-85-2 (Testosterone); 9034-50-8 (Vasotocin). Reproductive behavior is sexually differentiated in quail: The male-typical copulatory behavior is never observed in females even after treatment with high doses of testosterone (T). This sex difference in behavioral responsiveness to T is organized during the embryonic period by the exposure of female embryo to estrogens. We showed recently that the sexually dimorphic medial preoptic nucleus (POM), a structure that plays a key role in the activation of male copulatory behavior, is innervated by a dense steroid-sensitive network of vasotocin-immunoreactive (VT-ir) fibers in male quail This innervation is almost completely absent in the female POM and is not induced by a chronic treatment with T, suggesting that this neurochemical difference could be organizational in nature. This idea was tested by injecting fertilized quail eggs of both sexes on day 9 of incubation with either estradiol benzoate (EB) (25 microg, a treatment that suppresses the capacity to show copulatory behavior in adulthood) or the aromatase inhibitor R76713 (10 microg, a treatment that makes adult females behaviorally responsive to T), or with the solvents as a control (C). At 3 weeks posthatch, all subjects were gonadectomized and later implanted with Silastic capsules filled with T. Two weeks later, all birds were perfused and brain sections were processed for VT immunocytochemistry. Despite the similarity of the adult endocrine conditions of the subjects (all were gonadectomized and treated with T Silastic implants providing the same plasma level of steroid to all subjects), major qualitative differences were observed in the density of VT-ir structures in the POM of the different groups. Dense immunoreactive structures (fibers and a few cells) were observed in the POM of C males but not females; EB males had completely lost this immunoreactivity (and lost the capacity to display copulatory behavior); and, conversely, R76713 females displayed a male-typical VT-ir system in the nucleus (and also high levels of copulatory behavior). Similar changes in immunoreactivity were seen in the nucleus of the stria terminalis and in the lateral septum (VT-ir fibers only in this case) but not in the magnocellular vasotocinergic system. These neurochemical changes closely parallel the effects of the embryonic treatments on male copulatory behavior. The vasotocinergic system of the POM can therefore be considered an accurate marker of the sexual differentiation of brain circuits mediating this behavior

33. Panzica, G. C., Castagna, C., Viglietti-Panzica, C., Russo, C., Tlemcani, O., and Balthazart, J. (1998). **Organizational effects of estrogens on brain vasotocin and sexual behavior in quail.** *J Neurobiol* 37: 684-699.

Chem Codes: Chemical of Concern: CPC; Rejection Code: NO TOXICANT.
CAS Registry Number EC-1-14-13-- (Aromatase); 0 (Triazoles); 118949-22-7 (vorozole); 50-28-2 (Estradiol); 50-50-0 (estradiol 3-benzoate); 57-85-2 (Testosterone); 9034-50-8 (Vasotocin). Reproductive behavior is sexually differentiated in quail: The male-typical copulatory behavior is never observed in females even after treatment with high doses of testosterone (T). This sex difference in behavioral responsiveness to T is organized during the embryonic period by the exposure of female embryo to estrogens. We showed recently that the sexually dimorphic medial preoptic nucleus (POM), a structure that plays a key role in the activation of male copulatory behavior, is innervated by a dense steroid-sensitive network of vasotocin-immunoreactive (VT-ir) fibers in male quail This innervation is almost completely absent in the female POM and is not induced by a chronic treatment with T, suggesting that this neurochemical difference could be organizational in nature. This idea was tested by injecting fertilized quail eggs of both sexes on day 9 of incubation with either estradiol benzoate (EB) (25 microg, a treatment that suppresses the capacity to show copulatory behavior in adulthood) or the aromatase inhibitor R76713 (10 microg, a treatment that

makes adult females behaviorally responsive to T), or with the solvents as a control (C). At 3 weeks posthatch, all subjects were gonadectomized and later implanted with Silastic capsules filled with T. Two weeks later, all birds were perfused and brain sections were processed for VT immunocytochemistry. Despite the similarity of the adult endocrine conditions of the subjects (all were gonadectomized and treated with T Silastic implants providing the same plasma level of steroid to all subjects), major qualitative differences were observed in the density of VT-ir structures in the POM of the different groups. Dense immunoreactive structures (fibers and a few cells) were observed in the POM of C males but not females; EB males had completely lost this immunoreactivity (and lost the capacity to display copulatory behavior); and, conversely, R76713 females displayed a male-typical VT-ir system in the nucleus (and also high levels of copulatory behavior). Similar changes in immunoreactivity were seen in the nucleus of the stria terminalis and in the lateral septum (VT-ir fibers only in this case) but not in the magnocellular vasotocinergic system. These neurochemical changes closely parallel the effects of the embryonic treatments on male copulatory behavior. The vasotocinergic system of the POM can therefore be considered an accurate marker of the sexual differentiation of brain circuits mediating this behavior

34. PRIMUS TM, RAMEY CA, GRIFFIN DL, and JOHNSTON JJ (1999). **Weatherability of chlorophacinone steam-rolled oat baits under field conditions.** *218TH NATIONAL MEETING OF THE AMERICAN CHEMICAL SOCIETY, PARTS1 AND 2, NEW ORLEANS, LOUISIANA, USA, AUGUST 22-26, 1999.YABSTRACTS OF PAPERS AMERICAN CHEMICAL SOCIETY; 218* AGRO 121.

    Chem Codes: Chemical of Concern: CPC; Rejection Code: ABSTRACT.
    BIOSIS COPYRIGHT: BIOL ABS. RRM WEATHERABILITY OF CHLOROPHACINONE STEAM-ROLLED OAT BAITS UNDER FIELD CONDITIONSYMEETING ABSTRACT MEDICAGO SATIVA SPERMOPHILUS BELDING ALFALFA BELDING'S GROUND SQUIRREL FREE-RANGING PESTICIDES CHLOROPHACINONE PESTICIDE STEAM-ROLLED OAT BAITS WEATHERABILITY FIELD CONDITIONS BIOCHEMISTRY AND BIOPHYSICS Congresses/ Biology/ Ecology/ Biochemistry/ Biophysics/ Plants/Growth & Development/ Soil/ Herbicides/ Pest Control/ Pesticides/ Legumes/ Sciuridae

35. Ramey, Craig A., Primus, Thomas M., Griffin, Doreen L., and Johnston, John J. (2000). **Weatherability of a steam-rolled oat groat chlorophacinone ground squirrel bait under field and laboratory conditions.** *International Biodeterioration & Biodegradation* 45: 209-214.

    Chem Codes: Chemical of Concern: CPC; Rejection Code: NO SPECIES.
    Investigations of the weatherability of spot-baiting for ground squirrel control in northern CA field studies were conducted with a registered bait consisting of 0.01% chlorophacinone (an anticoagulant rodenticide) on steam-rolled oat groats. For reference purposes, a laboratory test was later conducted in an environmental chamber simulating some of the observed weather conditions. Three weathering plots were established in alfalfa for field tests. Each was baited with rodenticide fortified bait that was handled the same as for a simultaneous control project. Test areas were protected with wire mesh to prevent bait consumption by birds and mammals. Bait samples were collected daily over 7 days, then frozen, and shipped for analysis. Test No. 1 conducted under wet conditions showed a 71% loss of chlorophacinone after 1 week. Test No. 2 demonstrated a 57% loss of chlorophacinone under drier conditions. Test No. 3, a 24 h test under very wet conditions within the alfalfa field irrigated by overhead sprinklers, had a 92% loss of chlorophacinone. Laboratory studies using controlled environmental conditions: light (16 h light:8 h dark), with a mean relative humidity of 98%, and a range of temperature 11.1-27.8[deg]C (52-82[deg]F) showed [ap]50% loss of the chlorophacinone. The magnitude was less (37% at 7 days) in the environmental chamber when corrected for water weight gain.

36. Robben, J. H., Mout, H. C. A., and Kuijpers, E. A. P. (1997). **Anticoagulant Rodenticide Poisoning in Dogs in The Netherlands (Rodenticide Anticoagulans-Intoxicatie Bij Honden in Nederland).** *Tijdschr.Diergeneeskd.* 122: 466-471 (DUT) (ENG ABS).

    Chem Codes: EcoReference No.: 75550
    Chemical of Concern: BDF,BDL,DFT,CPC; Rejection Code: NON-ENGLISH.

37. Stone, W B, Okoniewski, J C, and Stedelin, J R (1999). **Poisoning of wildlife with anticoagulant**

rodenticides in New York. *Journal Of Wildlife Diseases* 35: 187-193.

Chem Codes: Chemical of Concern: BDF,BDL,DPC,CPC,WFN; Rejection Code: INCIDENT/SURVEY. From 1971 through 1997, we documented 51 cases (55 individual animals) of poisoning of non-target wildlife in New York (plus two cases in adjoining states) (USA) with anticoagulant rodenticides--all but two of these cases occurred in the last 8 yrs. Brodifacoum was implicated in 80% of the incidents. Diphacinone was identified in four cases, bromadiolone in three cases (once in combination with brodifacoum), and chlorophacinone and coumatetralyl were detected once each in the company of brodifacoum. Warfarin accounted for the three cases documented prior to 1989, and one case involving a bald eagle (Haliaeetus leucocephalus) in 1995. Secondary intoxication of raptors, principally great horned owls (Bubo virginianus) and red-tailed hawks (Buteo jamaicensis), comprised one-half of the cases. Gray squirrels (Sciurus carolinensis), raccoons (Procyon lotor) and white-tailed deer (Odocoileus virginianus) were the most frequently poisoned mammals. All of the deer originated from a rather unique situation on a barrier island off southern Long Island (New York). Restrictions on the use of brodifacoum appear warranted. [Journal Article; In English; United States]

Refresh May 2010

Chlorophacinone Refresh
Papers that Were Accepted

Acceptable for EcoTox and OPP

Arjo, W. M. and Nolte, D. L. (2004). Assessing the Efficacy of Registered Underground Baiting Products for Mountain Beaver (Aplodontia rufa) Control. *Crop Prot.* 23: 425-430.

EcoReference No.: 75340
Chemical of Concern: ZnP,STCH,CPC,DPC; Habitat: T; Effect Codes: MOR; Code: LITE EVAL CODED(ZnP,CPC),NO ENDPOINT(DPC,STCH).

Blus, L. J., Henny, C. J., and Grove, R. A. (1985). Effects of Pelletized Anticoagulant Rodenticides on California Quail. *J.Wildl.Dis.* 21: 391-395.

EcoReference No.: 47636
Chemical of Concern: DPC,DLD,EN,CPC; Habitat: T; Effect Codes: ACC,GRO; Code: LITE EVAL CODED(CPC).

Byers, R. E. (1978). Performance of Rodenticides for the Control of Pine Voles in Orchards. *J.Am.Soc.Hortic.Sci.* 103: 65-69.

EcoReference No.: 69367
Chemical of Concern: BDL,CPC,EN,ZnP,DPC; Habitat: T; Effect Codes: BEH,MOR,POP; Code: LITE EVAL CODED(CPC),OK(BDL,ZnP,DPC).

Byers, R. E. and Carbaugh, D. H. (1987). Efficacy of Rodenticides for Control of Orchard Voles. *J.Am.Soc.Hortic.Sci.* 112: 267-272.

EcoReference No.: 75393
Chemical of Concern: BDL,BDF,CPC,DPC,CLC,ZnP; Habitat: T; Effect Codes: POP,BEH; Code: LITE EVAL CODED(BDL,BDF,CPC,DPC,CLC,ZnP).

Byers, R. E. and Carbaugh, D. H. (1991). Rodenticides for the Control of Pine and Meadow Voles in Orchards.

J.Environ.Hortic. 9: 167-172.

EcoReference No.: 75474
Chemical of Concern: OXT,CLC,ZnP,DFT,BDL,DPC,CPC; Habitat: T; Effect Codes: BEH,MOR,POP; Code: LITE EVAL CODED(BDL,DFT,DPC,CPC,CLC,ZnP),NO ENDPOINT(OXT).

Byers, R. E. and Carbaugh, D. H. (1989). Vole Population Shifts Related to Rodenticide Usage. *Hortscience* 24: 783-785.

EcoReference No.: 75463
Chemical of Concern: CPC,ZnP,CLC,BDL; Habitat: T; Effect Codes: POP; Code: LITE EVAL CODED(CPC,ZnP,CLC,BDL).

Merson, M. H. and Byers, R. E. (1985). Weathering and the Field Efficacy of Pelletized Rodenticide Baits in Orchards. *Crop Prot.* 4: 511-519.

EcoReference No.: 75532
Chemical of Concern: PVL,BDF,BDL,DPC,CPC,ZnP; Habitat: T; Effect Codes: POP,MOR,BEH; Code: LITE EVAL CODED(BDF,BDL,DPC,CPC,ZnP),OK(PVL).

Tuyttens, F. A. M. and Stuyck, J. J. J. M. (2002). Effectiveness and Efficiency of Chlorophacinone Poisoning for the Control of Muskrat (Ondatra zibethicus) Populations. *N.Z.J.Zool.* 29: 33-40.

EcoReference No.: 75541
Chemical of Concern: CPC; Habitat: T; Effect Codes: MOR; Code: LITE EVAL CODED(CPC).

Chlorophacinone Refresh
Papers that Were not Accepted

Acceptable for EcoTox but not OPP

Arjo, W. M., Shwiff, S., and Kirkpatrick, K. (2009). Short-Term Evaluation of Two Integrated Pest Management Programs for Mountain Beaver (Aplodontia rufa) Control. *Crop Prot.* 28: 703-709.

EcoReference No.: 120014
Chemical of Concern: CPC; Habitat: T; Effect Codes: POP,MOR; Code: NO CONTROL,NO ENDPOINT(CPC).

Askham, L. R. (1985). Effectiveness of Two Anticoagulant Rodenticides (Chlorophacinone and Bromadiolone) for Columbian Ground Squirrel (Spermophilus columbianus) Control in Eastern Washington. *Crop Prot.* 4: 365-371.

EcoReference No.: 75482
Chemical of Concern: BDL,CPC; Habitat: T; Effect Codes: MOR; Code: NO ENDPOINT(BDL,CPC).

Berny, P. J., De Oliveira, L. A., Videmann, B., and Rossi, S. (2006). Assessment of Ruminal Degradation, Oral Bioavailability, and Toxic Effects of Anticoagulant Rodenticides in Sheep. *Am.J.Vet.Res.* 67: 363-371.

EcoReference No.: 120185
Chemical of Concern: BDL,CPC; Habitat: T; Effect Codes: BCM,ACC; Code: NO ENDPOINT(BDL,CPC).

Byers, R. E. and Carbaugh, D. H. (1987). Bait Shyness of Pine Voles to Zinc Phosphide and Anticoagulants Stored with Pesticides. *Hortscience* 22: 239-241.

EcoReference No.: 75534
Chemical of Concern: BDF,CPC,ZnP; Habitat: T; Effect Codes: MOR,BEH; Code: LITE EVAL CODED(ZnP),NO ENDPOINT(BDF,CPC).

Hadler, M. R., Redfern, R., and Rowe, F. P. (1975). Laboratory Evaluation of Difenacoum as a Rodenticide. *J Hyg.,Camb.* 74: 441-448.

EcoReference No.: 86457
Chemical of Concern: DFM,WFN,CPC,DPC; Habitat: T; Effect Codes: PHY,BEH,MOR; Code: NO CONTROL(DFM,WFN,CPC,DPC).

Marsh, R. E., Howard, W. E., and Cole, R. E. (1977). The Toxicity of Chlorophacinone and Diphacinone to Deer Mice. *J.Wildl.Manag.* 41: 298-301.

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Chemical of Concern: DPC,CPC; Habitat: T; Effect Codes: MOR; Code: NO CONTROL(DPC),NO CONTROL,NO ENDPOINT(CPC).

Mathur, R. P. and Prakash, I. (1980). Laboratory Evaluation of Anticoagulant-Treated Baits for Control of the Northern Palm Squirrel, Funambulus pennanti Wroughton. *J.Hyg.* 85: 421-426.

EcoReference No.: 37842
Chemical of Concern: WFN,CPC,BDF; Habitat: T; Effect Codes: MOR; Code: NO CONTROL(WFN,CPC,BDF).

Mathur, R. P. and Prakash, I. (1984). Reduction in Population of Indian Desert Rodents with Anticoagulant Rodenticides. *Proc.Indian Acad.Sci.Anim.Sci.* 93: 585-589.

EcoReference No.: 75442
Chemical of Concern: BDF,CPC; Habitat: T; Effect Codes: POP; Code: NO CONTROL(BDF,CPC).

Nikodemusz, E., Nechay, G., and Imre, R. (1981). Histopathological Changes Resulting by Some Pesticides in the Common Vole (Microtus arvalis pallas). *Acta Vet.Acad.Sci.Hung.* 29: 317-326.

EcoReference No.: 106598
Chemical of Concern: BMY,CPC; Habitat: T; Effect Codes: CEL,PHY; Code: NO ENDPOINT,NO CONTROL(BMY,CPC).

Pelz, H. J. and Gemmeke, H. (1988). Methods to Control the Two Forms of Arvicola terrestris in Orchards in the Federal Republic of Germany. *Bull.OEPP (Org.Eur.Medit.Prot.Plant)* 18: 435-439.

EcoReference No.: 75487
Chemical of Concern: BDL,CPC,CLC; Habitat: T; Effect Codes: BEH; Code: NO ENDPOINT(BDL,CPC,CLC).

Schafer, E. W. Jr. and Bowles, W. A. Jr. (1985). Acute Oral Toxicity and Repellency of 933 Chemicals to House and Deer Mice. *Arch.Environ.Contam.Toxicol.* 14: 111-129.

EcoReference No.: 35426
Chemical of Concern: ADC,CST,MOM,CPC,ZnP,DOD,MLN,Cu,AQS,CuCO,RSM,ACL,4AP,DZ,As,IAA,CBL,DNB,Captan,Folpet,CAP,DS,TBT,CMPH,FMP,DU,IND,OXT,FNT,BCDI,CXL,STCH,MBTZ,PPX,TDC,FTTCl,LNR,MCB,CuO,CuOX; Habitat: T; Effect Codes: MOR; Code: NO CONTROL(ADC,CST,MOM,CPC,ZnP,DOD,MLN,Cu,AQS,CuCO,RSM,ACL,4AP,DZ,As,IAA,CBL,DN

B,Captan,Folpet,CAP,DS,TBT,CMPH,FMP,DU,IND,OXT,FNT,BCDI,CXL,STCH,PPX,FTTCl,MCB,CuO),NO ENDPOINT,NO CONTROL(TBT,CMPH,DU,BCDI,MBTZ,TDC,LNR,CuOX).

Vidal, D., Alzaga, V., Luque-Larena, J. J., Mateo, R., Arroyo, L., and Vinuela, J. (2009). Possible Interaction Between a Rodenticide Treatment and a Pathogen in Common Vole (Microtus arvalis) During a Population Peak. *Sci.Total Environ.* 408: 267-271.

EcoReference No.: 120171
Chemical of Concern: CPC; Habitat: T; Effect Codes: POP; Code: NO ENDPOINT(CPC).

Webb, R. E., Hartgrove, R. W., Randolph, W. C., Petrella, V. J., and Horsfall, F. Jr. (1973). Toxicity Studies in Endrin-Susceptible and Resistant Strains of Pine Mice. *Toxicol.Appl.Pharmacol.* 25: 42-57.

EcoReference No.: 39313
Chemical of Concern: CPC,DLD,EN; Habitat: T; Effect Codes: MOR; Code: NO CONTROL(CPC).

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Albert, C. A., Wilson, L. K., Mineau, P., Trudeau, S., and Elliott, J. E. (Anticoagulant Rodenticides in Three Owl Species From Western Canada, 1988-2003. *Arch Environ Contam Toxicol. 2010, Feb; 58(2):451-9. [Archives of environmental contamination and toxicology]*.
Chem Codes: Chemical of Concern: CPC Code: SURVEY.

Andr&Eacute, C, Guyon, C., Thomassin, M., Barbier, A., Richert, L., and Guillaume, Y. C. (:9-14 [Journal of chromatography). Association Mechanism Between a Series of Rodenticide and Humic Acid: a Frontal Analysis to Support the Biological Data. *J Chromatogr B Analyt Technol Biomed Life Sci. 2005, Jun 5* 820: B, Analytical technologies in the biomedical and life sciences].
Chem Codes: Chemical of Concern: CPC Code: HUMAN HEALTH.

Bennett, B. R. and Grimes, G. S. (1982). Reverse Phase Liquid Chromatographic Determination of Chlorophacinone and Diphacinone in Bait Formulations. *J.Assoc.Off.Anal.Chem.* 65: 927-929.
Chem Codes: Chemical of Concern: CPC Code: NO SPECIES.

Binks, S. and Davies, P. (Case of the Month: &Quot;Oh! Drat!--A Case of Transcutaneous Superwarfarin Poisoning and Its Recurrent Presentation&Quot. *Emerg Med J. 2007, Apr; 24(4):307-8. [Emergency medicine journal : EMJ]*.
Chem Codes: Chemical of Concern: CPC Code: HUMAN HEALTH.

Blaha, Didier, Sanguin, Hervé, Robe, Patrick, Nalin, Renaud, Bally, René, and Moënne-Loccoz, Yvan (2005-). Physical organization of phytobeneficial genes nifH and ipdC in the plant growth-promoting rhizobacterium Azospirillum lipoferum 4VI. *FEMS Microbiology Letters* 244: 157-163.
Chem Codes: Chemical of Concern: CPC Code: BACTERIA.

Bullard, R. W., Holguin, G., and Peterson, J. E. (1975). Determination of Chlorophacinone and Diphenadione Residues in Biological Materials. *J.Agric.Food Chem.* 23: 72-74.
Chem Codes: Chemical of Concern: CPC Code: IN VITRO.

Chan, J., Vogel, S. M., Wen, J., and Alany, R. G. (Potentiometric Determination of Ionisation Constants for Diphacinone and Chlorophacinone in a Dioxane-Water Cosolvent System. *J Pharm Biomed Anal. 2009, Aug 15; 50(1):86-9. [Journal of pharmaceutical and biomedical analysis]*.
Chem Codes: Chemical of Concern: CPC Code: CHEM METHODS.

Del Piero, F. and Poppenga, R. H. (Chlorophacinone Exposure Causing an Epizootic of Acute Fatal Hemorrhage in Lambs. *J Vet Diagn Invest. 2006, Sep; 18(5):483-5. [Journal of veterinary diagnostic investigation : official publication of the American Association of Veterinary Laboratory Diagnosticians, Inc]*.

Chem Codes: Chemical of Concern: CPC Code: INCIDENT.

Fiedler, L. A. (1988). Rodent Pest Problems and Management in Eastern Africa. *FAO Plant Prot.Bull.* 36: 125-134.
Chem Codes: EcoReference No.: 75721
Chemical of Concern: BDF,Tl,NaFA,ZnP,WFN,CPC,RSG Code: REVIEW.

Fiedler, L. A. (1988). Rodent Pest Problems and Management in Eastern Africa. *FAO Plant Prot.Bull.* 36: 125-134.
Chem Codes: Chemical of Concern: CPC Code: REVIEW.

Fourel, I., Hugnet, C., Goy-Thollot, I., and Berny, P. (Validation of a New Liquid Chromatography- Tandem Mass Spectrometry Ion-Trap Technique for the Simultaneous Determination of Thirteen Anticoagulant Rodenticides, Drugs, or Natural Products. *J Anal Toxicol. 2010; 34(2):95-102. [Journal of analytical toxicology]*.
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Chem Codes: Chemical of Concern: CPC Code: SURVEY.

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Chem Codes: Chemical of Concern: CPC Code: HUMAN HEALTH.

Grolleau, G. and Paris, G. (1975). Trials of Intoxication of Green Collared Duck, Anas platyrhynchos L. with Coumaphene and Chlorophacinone (Essais d'Intoxication du Canard Col-Vert Anas platyrhynchos L. a l'Aide du Coumafene et du Chlorophacinone). *Ann.Zool.Ecol.Anim.* 7: 553-556 (FRE) (ENG ABS).
Chem Codes: Chemical of Concern: CPC Code: NON-ENGLISH.

Huergo, Luciano F., Chubatsu, Leda S., Souza, Emanuel M., Pedrosa, Fábio O., Steffens, Maria B. R., and Merrick, Mike (2006-). Interactions between PII proteins and the nitrogenase regulatory enzymes DraT and DraG in Azospirillum brasilense. *FEBS Letters* 580: 5232-5236.
Chem Codes: Chemical of Concern: CPC Code: BACTERIA.

Huergo, Luciano F., Filipaki, Angela, Chubatsu, Leda S., Yates, M. Geoffrey, Steffens, Maria Berenice, Pedrosa, Fabio O., and Souza, Emanuel M. (2005-). Effect of the over-expression of PII and PZ proteins on the nitrogenase activity of Azospirillum brasilense. *FEMS Microbiology Letters* 253: 47-54.
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Chem Codes: Chemical of Concern: CPC Code: HUMAN HEALTH.

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Johnson-Nistler, C. M., Knight, J. E., and Cash, S. D. (2005). Considerations Related to Richardson's Ground Squirrel (Spermophilus Richardsonii) Control in Montana. *Agronomy Journal* 97 : 1460-1464.

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Chlorophacinone Refresh
Other

Target: Toxicity of Chemical on Intended Pest

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