Appendix H Bibliography of ECOTOX Open Literature Not Evaluated

Phorate Refresh (10/05-02/28/08
Papers that Were Excluded from ECOTOX

Excluded

1. Ahmed, M. M., Arif, M., Chikuma, T., and Kato, T. (Pentylenetetrazol-Induced Seizures Affect the Levels of Prolyl Oligopeptidase, Thimet Oligopeptidase and Glial Proteins in Rat Brain Regions, and Attenuation by Mk-801 Pretreatment. *Neurochem int. 2005, sep; 47(4):248-59. [Neurochemistry international]: Neurochem Int.*
   Chem Codes: Chemical of Concern: PRT Rejection Code: IN VITRO.

   ABSTRACT: The regulatory mechanisms of neuropeptide-metabolizing enzymes often play a critical role in the pathogenesis of neuronal damage. A systemic administration of pentylenetetrazol (PTZ), an antagonist of GABA(A) receptor ion channel binding site, causes generalized epilepsy in an animal model. In the present study, we examined the involvement of prolyl oligopeptidase (POP), thimet oligopeptidase/neurolysin (EP 24.15/16) and glial proteins in PTZ-treated rat brain regions, and the suppressive effect of MK-801, a non-competitive NMDA receptor antagonist, pretreatment for their proteins. The activity of POP significantly decreased in the hippocampus at 30min and 3h, and in the frontal cortex at 3h after PTZ treatment, and pretreatment with MK-801 recovered the activity in the cortex at 3h. The activity of EP 24.15/16 significantly decreased in the hippocampus at 3h and 1 day, and in the cortex at 3h after the PTZ administration, whereas pretreatment with MK-801 recovered the change of the activity. The Western blot analysis of EP 24.15 showed significant decrease of the protein level in the hippocampus 3h after the PTZ treatment, whereas pretreatment with MK-801 recovered. The expression of GFAP and CD11b immunohistochemically increased in the hippocampus of the PTZ-treated rat as compared with controls. Pretreatment with MK-801 also recovered the GFAP and CD11b expression. These data suggest that PTZ-induced seizures of the rats cause indirect activation of glutamate NMDA receptors, then decrease POP and EP 24.15/16 enzyme activities and EP 24.15 immunoreactivity in the neuronal cells of the hippocampal formation. We speculate that changes of those peptidases in the brain may be related to the levels of the neuropeptides regulating PTZ-induced seizures.
   MESH HEADINGS: Animals
   MESH HEADINGS: Antigens, CD11b/drug effects/metabolism
   MESH HEADINGS: Brain/drug effects/*metabolism/physiopathology
   MESH HEADINGS: Cerebral Cortex/drug effects/metabolism/physiopathology
   MESH HEADINGS: Convulsants
   MESH HEADINGS: Disease Models, Animal
   MESH HEADINGS: Dizocilpine Maleate/*pharmacology/therapeutic use
   MESH HEADINGS: Down-Regulation/drug effects/physiology
   MESH HEADINGS: Epilepsy/chemically induced/drug therapy/*physiopathology
   MESH HEADINGS: Excitatory Amino Acid Antagonists/pharmacology/therapeutic use
   MESH HEADINGS: GABA Antagonists/pharmacology
   MESH HEADINGS: Glial Fibrillary Acidic Protein/drug effects/*metabolism
   MESH HEADINGS: Hippocampus/drug effects/metabolism/physiopathology
   MESH HEADINGS: Male
   MESH HEADINGS: Metalloendopeptidases/drug effects/*metabolism
   MESH HEADINGS: Nerve Degeneration/drug therapy/metabolism/prevention &amp
   MESH HEADINGS: control
   MESH HEADINGS: Neuroglia/drug effects/metabolism/pathology

MESH HEADINGS: Neurons/drug effects/metabolism/pathology
MESH HEADINGS: Pentylenetetrazole
MESH HEADINGS: Rats
MESH HEADINGS: Rats, Wistar
MESH HEADINGS: Receptors, N-Methyl-D-Aspartate/agonists/metabolism
MESH HEADINGS: Serine Endopeptidases/drug effects/*metabolism
LANGUAGE: eng

2. Ahmed, Md. Mahiuddin, Arif, Mohammad, Chikuma, Toshiyuki, and Kato, Takeshi (2005). Pentylenetetrazol-induced seizures affect the levels of prolyl oligopeptidase, thimet oligopeptidase and glial proteins in rat brain regions, and attenuation by MK-801 pretreatment. *Neurochemistry International* 47: 248-259.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

PTZ/ Seizure/ MK-801/ POP/ EP 24.15/ GFAP http://www.sciencedirect.com/science/article/B6T0B-4GGXX5M-1/2/7553b4a45b635fb4830f6be8730c0126

3. Al-Rehiayani, Suloiman M. (Acetylcholinesterase in selected plant-parasitic nematodes: Inhibition, kinetic and comparative studies. *Pesticide Biochemistry and Physiology* In Press, Corrected Proof: 490.
Chem Codes: Chemical of Concern: PRT Rejection Code: NO SOURCE.

AChE/ Nematodes/ Inhibition/ Kinetic/ Organophosphate/ Carbamate
http://www.sciencedirect.com/science/article/B6WP8-4P9SNBN-2/2/6f4e2679bc2615b48601e35d3dff9d09

4. Arif, M., Chikuma, T., Ahmed, M. M., Yoshida, S., and Kato, T. (Suppressive Effect of Clozapine but Not Haloperidol on the Increases of Neuropeptide-Degrading Enzymes and Glial Cells in Mk-801-Treated Rat Brain Regions. *Neurosci res. 2007, feb; 57(2):248-58. [Neuroscience research]: Neurosci Res.*
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: MK-801, a noncompetitive N-methyl-d-aspartate (NMDA) receptor antagonist, produces neurotoxicity in adult rodent brain, and causes schizophrenia-like psychosis and cognitive dysfunction. Since neuropeptides and neuropeptide-degrading enzymes play important roles in cognitive function, we examined whether or not MK-801-induced schizophrenia-like psychosis is co-related with the changes of these enzymes in rat brain regions. In the present study, we investigated the effect of systemic treatment with MK-801 (0.5mg/kg) on neuropeptide-degrading enzymes, prolyl oligopeptidase (POP) and thimet oligopeptidase (EP 24.15), and glial marker proteins GFAP and CD11b in rat brain regions. The levels of POP and EP 24.15 activities increased significantly three days after treatment with MK-801 in the posterior cingulate/retrosplenial cortices (PC/RSC). Since atypical neuroleptic clozapine but not typical neuroleptic haloperidol prevents the MK-801-induced schizophrenia-like symptoms, we further examined the pretreated effects of the neuroleptics. Clozapine, but not haloperidol, significantly attenuated MK-801-induced changes in the levels of the neuropeptide-degrading enzymes. Immunohistochemical studies on GFAP and CD11b showed the increase in the PC/RSC of MK-801-treated rat brain and the pretreatment with clozapine suppressed these changes. Double immunostain experiments of EP 24.15 and GFAP antibodies demonstrated some co-localization of the neuropeptidase with astrocytes. The present findings suggest that change of neuropeptidases in the brain is in part correlated with changes of glial cells, and may play an important role in the control of schizophrenia-like psychotic disorders.
MESH HEADINGS: Animals
MESH HEADINGS: Antipsychotic Agents/*pharmacology
MESH HEADINGS: *Brain/cytology/drug effects/enzymology
MESH HEADINGS: Clozapine/*pharmacology
MESH HEADINGS: Dizocilpine Maleate/*pharmacology
MESH HEADINGS: Drug Interactions
MESH HEADINGS: Excitatory Amino Acid Antagonists/*pharmacology
MESH HEADINGS: Female

MESH HEADINGS: Glial Fibrillary Acidic Protein/metabolism
MESH HEADINGS: Haloperidol/pharmacology
MESH HEADINGS: Metalloendopeptidases/metabolism
MESH HEADINGS: Neuroglia/*drug effects
MESH HEADINGS: Oligonucleotides/*metabolism
MESH HEADINGS: Rats
MESH HEADINGS: Rats, Wistar
MESH HEADINGS: Serine Endopeptidases/metabolism
LANGUAGE: eng

5. Atkinson, B. (1976). Organophosphate Insecticide Poisoning. *J.Miss.Acad.Sci.* 17: 91-94.
Chem Codes: Chemical of Concern:
TCF,DEM,MLN,DDVP,CMPH,AZ,MP,DCTP,DS,MVP,DZ,PRN,DDT,PRT Rejection Code:
HUMAN HEALTH.

6. Boldt, G. E., Kennedy, J. P., Hixon, M. S., Mcallister, L. A., Barbieri, J. T., Tzipori, S., and Janda, K. D. (Synthesis, Characterization and Development of a High-Throughput Methodology for the Discovery of Botulinum Neurotoxin a Inhibitors. *J comb chem. 2006 jul-aug; 8(4):513-21. [Journal of combinatorial chemistry]: J Comb Chem.*
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS.

ABSTRACT: Botulinum neurotoxins (BoNTs), etiological agents of the deadly food poisoning disease botulism, are the most toxic proteins currently known. Although only a few hundred cases of botulism are reported in the United States annually, there is growing interest in BoNTs attributable to their potential use as biological warfare agents. Neurotoxicity results from cleavage of the soluble NSF-attachment protein receptor complex proteins of the presynaptic vesicles by the BoNT light chain subunit, a Zn endopeptidase. Few effective inhibitors of BoNT/A LC (light chain) activity are known, and the discovery process is hampered by the lack of an efficient high-throughput assay for screening compound libraries. To alleviate this bottleneck, we have synthesized the peptide SNAPtide and have developed a robust assay for the high-throughput evaluation of BoNT/A LC inhibitors. Key aspects for the development of this optimized assay include the addition of a series of detergents, cosolvents, and salts, including 0.01% w/v Tween 20 to increase BoNT/A LC catalysis, stability, and ease of small molecule screening. To evaluate the effectiveness of the assay, a series of hydroxamate-based small molecules were synthesized and examined with BoNT/A LC. The methodology described is superior to other assays reported to date for the high-throughput identification of BoNT/A inhibitors.
MESH HEADINGS: Botulinum Toxin Type A/*antagonists &amp
MESH HEADINGS: inhibitors
MESH HEADINGS: Catalysis
MESH HEADINGS: Chemical Warfare Agents/toxicity
MESH HEADINGS: Detergents/chemistry
MESH HEADINGS: Metalloendopeptidases/antagonists &amp
MESH HEADINGS: inhibitors
MESH HEADINGS: Neuromuscular Agents/toxicity
MESH HEADINGS: Protease Inhibitors/*chemical synthesis/pharmacology
MESH HEADINGS: SNARE Proteins/*chemical synthesis/pharmacology
MESH HEADINGS: Salts/chemistry
MESH HEADINGS: Solvents/chemistry
MESH HEADINGS: Spectroscopy, Fourier Transform Infrared
MESH HEADINGS: Styrene/chemistry
MESH HEADINGS: Time Factors
LANGUAGE: eng

7. Burga, C. A., Frauenfelder, R., Ruffet, J., Hoelzle, M., and Ka(dieresis)a(dieresis)b, A. (2004). Vegetation on Alpine Rock Glacier Surfaces: a Contribution to Abundance and Dynamics on Extreme Plant Habitats. *Flora, 199 (6) pp. 505-515, 2004.*
Chem Codes: Chemical of Concern: PRT Rejection Code: SURVEY.

Descriptors: Vegetation cover
Descriptors: Pioneer plants
Descriptors: Rhizocarpon geographicum
Descriptors: Permafrost
Descriptors: Upper Engadin (Canton of Grisons, Switzerland)
Descriptors: Valais
Descriptors: Livigno-Sondrio (Valtellina, Italy)
Abstract: In the area of Piz Corvatsch (Upper Engadin, Grisons, Switzerland), the actual vegetation on active and inactive rock glacier surfaces has been mapped. The floristic composition (vascular plants and lichens) of the different rock glacier surfaces has been mapped and compared with photogrammetrical measurements of surface movements of the active rock glaciers. In general, the active rock glacier surfaces show a very low cover of vascular plants. Most of them are located at the edge and at the front of the rock glacier where fine-grained soil material occurs in small pockets. Lichenometry has been used as an additional method on Murte(grave)l rock glacier and on the protalus rampart. Measurements of Rhizocarpon geographicum thalli revealed increasing sizes from the root zone of the rock glacier to its front. On the Murte(grave)l rock glacier, Rhizocarpon geographicum thalli with a diameter >4cm occur on surfaces with ages between 5000 and 6000 years B.P. The statistical analysis (MULVA-5) of the dense vegetation cover of the inactive and relict rock glaciers revealed four plant sociological groups, which are composed of species reflecting well consolidated sites: alpine grassland, subalpine dwarf shrubs and small patches with single small trees of Swiss stone pine (Pinus cembra) and larch (Larix decidua).
37 refs.
Language: English
English
Publication Type: Journal
Publication Type: Article
Country of Publication: Germany
Classification: 92.13.1.2 ENVIRONMENTAL BIOLOGY: Ecology: Population structure and processes
Subfile: Plant Science 0367-2530

8. Camel, V. (1997). The Determination of Pesticide Residues and Metabolites Using Supercritical Fluid Extraction. *Trends Anal.Chem.* 16: 351-369.
Chem Codes: Chemical of Concern: MXC,PN,BPCB,HCB,DS,DMT,AZ,CMPH,FNT,FMP,PRN,CPY,ETN,MP,PIRM,MTM,MVP,EP,PRT,OMT,TBO,PPHD,MDT,PSM,FNF,CTN,DCPA,ES,DDE,DDT,PSM Rejection Code: REFS CHECKED/REVIEW.

9. Carre&Ntilde, O, F. R., Go&Ntilde, I, C. N., Castro, L. M., and Ferro, E. S. (14-3-3 Epsilon Modulates the Stimulated Secretion of Endopeptidase 24.15. *J neurochem. 2005, apr; 93(1):10-25. [Journal of neurochemistry]: J Neurochem*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: Endopeptidase 24.15 (ep24.15: EC3.4.24.15), a secreted protein involved in peptide metabolism, is unusual in that it does not contain a signal peptide sequence. In this work, we describe the physical interaction between ep24.15 and 14-3-3 epsilon, one isoform of a family of ubiquitous phosphoserine/threonine-scaffold proteins that organizes cell signaling and is involved in exocytosis. The interaction between ep24.15 and 14-3-3 epsilon increased following phosphorylation of ep24.15 at Ser(644) by protein kinase A (PKA). The co-localization of ep24.15 and 14-3-3 epsilon was increased by exposure of HEK293 cells (human embryonic kidney cells) to forskolin (10 microm). Overexpression of 14-3-3 epsilon in HEK293 cells almost doubled the secretion of ep24.15 stimulated by A23187 (7.5 microm) from 10%[1.4 +/- 0.24 AFU/(min 10(6) cells)] to 19%[2.54 +/- 0.24 AFU/(min 10(6) cells)] ($p < 0.001$) of the total intracellular enzyme activity. Treatment with forskolin had a synergistic effect on the A23187-stimulated secretion of ep24.15 that was totally blocked by the PKA inhibitor KT5720. The ep24.15 point mutation S644A reduced the co-localization

of ep24.15 and 14-3-3 in stably transfected HEK293 cells. Indeed, secretion of the ep24.15 S644A mutant from these cells was only slightly stimulated by A23187 and insensitive to forskolin, in contrast to that of the wild type enzyme. Together, these data suggest that prior interaction with 14-3-3 is an important step in the unconventional stimulated secretion of ep24.15.
MESH HEADINGS: 14-3-3 Proteins/physiology/*secretion
MESH HEADINGS: Animals
MESH HEADINGS: Blotting, Western/methods
MESH HEADINGS: Brain/metabolism
MESH HEADINGS: Cloning, Molecular/methods
MESH HEADINGS: Cyclic AMP-Dependent Protein Kinases/pharmacology
MESH HEADINGS: Forskolin/pharmacology
MESH HEADINGS: Gene Expression Regulation/drug effects/physiology
MESH HEADINGS: Humans
MESH HEADINGS: Immunohistochemistry/methods
MESH HEADINGS: Immunoprecipitation/methods
MESH HEADINGS: Metalloendopeptidases/*metabolism
MESH HEADINGS: Microscopy, Confocal
MESH HEADINGS: Mutagenesis, Site-Directed/physiology
MESH HEADINGS: Phosphorylation/drug effects
MESH HEADINGS: RNA, Messenger/biosynthesis
MESH HEADINGS: Radioligand Assay/methods
MESH HEADINGS: Rats
MESH HEADINGS: Recombinant Fusion Proteins
MESH HEADINGS: Reverse Transcriptase Polymerase Chain Reaction/methods
MESH HEADINGS: Secretory Rate/drug effects
MESH HEADINGS: Transfection/methods
MESH HEADINGS: Trypan Blue/diagnostic use
MESH HEADINGS: Tumor Cells, Cultured/drug effects/secretion
MESH HEADINGS: Two-Hybrid System Techniques
LANGUAGE: eng

10. Chen, Xiping , Zhang, Zhongyao, and Tao, Luyang (Determination of male age at death in Chinese Han population: Using quantitative variables statistical analysis from pubic bones. *Forensic Science International* In Press, Corrected Proof: 490.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

Forensic anthropology/ Age determination/ Personal identification/ Pubic symphysis
http://www.sciencedirect.com/science/article/B6T6W-4P18B83-1/2/e15f91319126791074abf3c77fa8f14b

11. Childers, C. C., Easterbrook, M. A., and Solomon, M. G. (1996). Chemical Control of Eriophyoid Mites. *In: E.E.Lindquist, M.W.Sabelis, and J.Bruin (Eds.), World Crop Pests, Volume 6, Eriophyoid Mites: Their Biology, Natural Enemies and Control, Elsevier Sci.Publ., Amsterdam, Netherlands* 6: 695-726.
Chem Codes: EcoReference No.: 92105
Chemical of Concern:
SFR,DCF,OTQ,PPG,ETN,FTT,Zineb,MZB,BMY,FO,HTX,DFZ,ABM,AMZ,CAP,CPY,PYT,CBL,DM,DCF,ES,FPP,FPY,FCX,PIRM,PRB,TFY,DINO,FRM,TDF,PHSL,PRT,DDT,MDT,Maneb,Folpet,TFR,MLX,Captan,CHX,EN,DDVP,PPHD,OXD,DMT,OMT,DCTP,DZ,ADC,OML,BFT,FYT,FUL,PPX,MCB,CTZ,HFR Rejection Code: REVIEW.

12. Comellas-Bigler, M., Lang, R., Bode, W., and Maskos, K. (2005). Crystal Structure of the E. coli Dipeptidyl Carboxypeptidase Dcp: Further Indication of a Ligand-dependant Hinge Movement Mechanism. *Journal of Molecular Biology* 349: 99-112.
Chem Codes: Chemical of Concern: PRT Rejection Code: BACTERIA.

hinge bending/ peptidyl dipeptidase/ carboxypeptidase/ Dcp/ neurolysin

http://www.sciencedirect.com/science/article/B6WK7-4FSX4C3-2/2/c18a63999098d5c5a243ed8700604295

13. Cooper, J.-F., Wynn, N. R., Deuse, J. P. L., Coste, C. M., Zheng, S. Q., and Schiffers, B. C. (1997). Impact of Insecticides on Wild Fauna: A Proposed Toxicity Index. *Meded.Fac.Landbouwkd.Rijksuniv.Race* 62: 599-606.
Chem Codes: Chemical of Concern: PRT,PHSL,PPHD,PIM,PIRM,PFF,PTP,PPX,PRB,RTN,SFT,SPS,TFT,TMP,TBO,TMT,TDC,TLM,TCF,HPT,HFR,IMC,IZF,IFP,LCYT,HCCH,MLN,MTM,MDT,MOM,MTPN,MXC,Naled,OMT,OML,OXD,PRN,MP,PCB,PMR,PTR,CYH,CYP,CHT,CYR,DD,DZM,DDT,DM,DEM,DZ,DDVP,DLD,DFZ,DMT,DS,ES,EFV,ETN,FNT,FPP,FNTH,FNV,FPN,FCX,FYT,FVL,FNP,ABM,ACP,ADC,AND,ATN,AMZ,AZM,AZ,BDC,BCY,BFT,BRSM,BPZ,CBL,CBF,CHD,CLP,CPY,CPYM,CMPH,CST,CYF,CYR Rejection Code: REFS CHECKED/REVIEW.

14. Curini, M., Lagana, A., Petronio, B. M., and Russo, M. V. (1980). Determination of Organophosphorus Pesticides by Thin-Layer Chromatography. *Talanta* 27: 45-48.
Chem Codes: EcoReference No.: 36297
Chemical of Concern: DS,AZ,DZ,MP,PRN,OXD,ETN,DMT,PRT,MLN,CMPH Rejection Code: METHODS.

15. Dalvi, R. R. and Salunkhe, D. K. (1975). Toxicological Implications of Pesticides: Their Toxic Effects on Seeds of Food Plants. *Toxicol.* 3: 269-285.
Chem Codes: Chemical of Concern: PRT,DS,HCCH,AND,DLD,HPT,24DXY,CP,DBN,BMN
Rejection Code: REFS CHECKED/REVIEW.

16. Das, Amal Chandra, Chakravarty, Arunabha, Sen, Gargi, Sukul, Premasis, and Mukherjee, Debatosh (2005). A comparative study on the dissipation and microbial metabolism of organophosphate and carbamate insecticides in orchaqualf and fluvaquent soils of West Bengal. *Chemosphere* 58: 579-584.
Chem Codes : Chemical of Concern: PRT Rejection Code: FATE.

Carbofuran/ Metabolites/ Microorganisms/ Persistence/ Phorate/ Residues/ Soil
http://www.sciencedirect.com/science/article/B6V74-4D4D15T-1/2/e68b57d97dde29304491e097c6f8a5dc

17. Dieter, C. D. (1993). Effects of Phorate on Ducklings, Macroinvertebrates, and Microtox in Northern Prairie Wetlands (Anas platyrhynchos, South Dakota). *Ph.D.Thesis, South Dakota State Univ.* 130 p. (PUBL AS #19989,40187).
Chem Codes: Chemical of Concern: PRT Rejection Code: PUBL AS.

18. Dubois, V., Nieder, M., Collot, F., Negrouk, A., Nguyen, T. T., Gangwar, S., Reitz, B., Wattiez, R., Dasnois, L., and Trouet, A. (Thimet Oligopeptidase (Ec 3.4.24.15) Activates Cpi-0004na, an Extracellularly Tumour-Activated Prodrug of Doxorubicin. *Eur j cancer. 2006, nov; 42(17):3049-56. [European journal of cancer]: Eur J Cancer*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: CPI-0004Na is a tetrapeptidic extracellularly tumour-activated prodrug of doxorubicin. The tetrapeptide structure ensures blood stability and selective cleavage by unidentified peptidase(s) released by tumour cells. The purpose of this work was to identify the enzyme responsible for the first rate-limiting step of CPI-0004Na activation, initially attributed to a 70 kDa acidic (pI=5.2) metallopeptidase active at neutral pH that was subsequently purified from HeLa cell homogenates. Two electrophoretic bands were isolated and identified by matrix-assisted laser desorption ionisation-time of flight (MALDI-tof) and electrospray ionisation-quadrupole-time of flight (ESI-Q-tof) mass spectrometry as thimet oligopeptidase (TOP). The identity of the CPI-0004Na activating enzyme and TOP was further supported by the similar substrate specificity of the purified enzyme and recombinant TOP, by thiol stimulation of CPI-0004Na cleavage by cancer cell conditioned media (unique characteristic of TOP) and by the inhibition of CPI-0004Na activation by specific inhibitors or

immunoprecipitation. Although other enzymes can be involved, TOP clearly appears to be a likely candidate for extracellular activation of the CPI-0004Na prodrug.
MESH HEADINGS: Antineoplastic Agents/*therapeutic use
MESH HEADINGS: Doxorubicin/*analogs &amp
MESH HEADINGS: derivatives/metabolism/therapeutic use
MESH HEADINGS: Drug Interactions
MESH HEADINGS: Hela Cells
MESH HEADINGS: Humans
MESH HEADINGS: Mass Spectrometry
MESH HEADINGS: Metalloendopeptidases/*pharmacology
MESH HEADINGS: Neoplasms/*drug therapy/*metabolism
MESH HEADINGS: Oligopeptides/*metabolism/therapeutic use
MESH HEADINGS: Prodrugs/*metabolism/therapeutic use
MESH HEADINGS: Tumor Cells, Cultured
LANGUAGE: eng

19. Epstein, S. S. and Legator, M. S. (1971). The Mutagenicity of Pesticides Concepts and Evaluation. *In: S.S.Epstein and M.S.Legator (Eds.), The Mutagenicity of Pesticides Concepts and Evaluation, MIT Press* 52-69, 185, 213.
Chem Codes: EcoReference No.: 36559
Chemical of Concern:
PRN,MP,MLN,DEM,DMT,PRT,PPHD,AND,PYN,24DXY,DDT,EDB,MLH,PAQT,PCP,CBL,PCH,HPT,CBF,ADC,THM,Ziram,DU,LNR,AMTL,AZ,ACL,ACY,TBR,CCA,ATZ,TFN,DNT,DDT,PCL,DMB,DZ,TXP,CHD,EN,DOD,MB,HCCH,Captan,PYT,DU Rejection Code: REFS CHECKED/REVIEW.

20. Felsot, A. S. and Pedersen, W. L. (1991). Pesticidal Activity of Degradation Products. *In: I.Somasundaram and J.R.Coats (Eds.), ACS (Am.Chem.Soc.) Symp.Ser., Volume 459, Pesticide Transformation Products: Fate and Significance in the Environment, 200th Natl.Meet., Aug.26-31, 1990, Washington, D.C., Am.Chem.Soc., Washington, DC* 172-187.
Chem Codes: EcoReference No.: 90690
Chemical of Concern: PRT,MLN,MLO,DEM Rejection Code: REVIEW.

21. Ferhatoglu, Yurdagul, Avdiushko, Sergei, and Barrett, Michael (2005). The basis for the safening of clomazone by phorate insecticide in cotton and inhibitors of cytochrome P450s. *Pesticide Biochemistry and Physiology* 81: 59-70.
Chem Codes: Chemical of Concern: PRT Rejection Code: MIXTURE.

Clomazone/ Safening/ Phorate/ Cotton/ Corn/ P450/ Microsomes/ 5-OH clomazone/ P450 inhibitors
http://www.sciencedirect.com/science/article/B6WP8-4DXJT11-3/2/b84a407aefcbef856822202fa867b2bb

22. Gan, Q. and Jans, U. (Nucleophilic Reactions of Phorate and Terbufos With Reduced Sulfur Species Under Anoxic Conditions. *J agric food chem. 2007, may 2; 55(9):3546-54. [Journal of agricultural and food chemistry]: J Agric Food Chem.*
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS.

ABSTRACT: The reactions of phorate and terbufos with bisulfide (HS-), polysulfide (Sn2-), thiosulfate (S2O32-), and thiophenolate (PhS-) were examined in well-defined aqueous solution under anoxic conditions to investigate their role in the degradations of phorate and terbufos. Reactions were monitored at various concentrations of reduced sulfur species to obtain the second-order rate constants. The reactivity of the reduced sulfur species decreased in the order Sn2- > PhS- > HS- > S2O32-. Hydrolysis products, formaldehyde and diethyl disulfide/di-tert-butyl disulfide, indicated that OH-/H2O attacked the carbon atom between the two sulfur atoms, the so-called thioacetal carbon, which is very reactive due to the presence of the two neighboring sulfur atoms. The reaction of phorate and terbufos with PhS- was investigated to study the transformation products in the reactions with reduced

sulfur species. The transformation products demonstrated that the observed increase in rate constants in the reaction with reduced sulfur species compared to hydrolysis could result from the nucleophilic attack of reduced sulfur species at the alpha-carbon of the ethoxy group and at the thioacetal carbon atom. The temperature dependence of measured second-order rate constants of the reaction of phorate and terbufos with HS- over 25-50 degrees C was investigated to explore activation parameters, which are not significantly different for phorate and terbufos. All of the observations may imply similar pathways in the degradation of phorate and terbufos in the presence of reduced sulfur species. Slightly higher hydrolysis rates of terbufos and second-order reaction rate constants for the reactions with sulfur species of terbufos compared with those for phorate are observed, which could be attributed to the slightly different substituents.
MESH HEADINGS: Hydrolysis
MESH HEADINGS: Insecticides/*chemistry
MESH HEADINGS: Kinetics
MESH HEADINGS: Organothiophosphorus Compounds/*chemistry
MESH HEADINGS: Oxidation-Reduction
MESH HEADINGS: Oxygen/*analysis
MESH HEADINGS: Phorate/*chemistry
MESH HEADINGS: Solutions
MESH HEADINGS: Sulfur Compounds/*chemistry
LANGUAGE: eng

23. Grue, C. E., Fleming, W. J., Busby, D. G., and Hill, E. F. (1983). Assessing Hazards of Organophosphate Pesticides to Wildlife. *Wildlife Management Institute, Washington, DC* 200-220.
Chem Codes: EcoReference No.: 36894
Chemical of Concern: PRN,ACP,TCF,FNTH,MLN,CPY,DZ,DDVP,FNT,PPHD,MP,PRT,MVP
Rejection Code: REVIEW.

24. Holstege, D. M., Scharberg, D. L., Richardson, E. R., and Moller, G. (1991). Multiresidue Screen for Organophosphorus Insecticides Using Gel Permeation Chromatography - Silica Gel Cleanup. *J.Assoc.Off.Anal.Chem.* 74: 394-399.
Chem Codes: Chemical of Concern:
PTP,PPHD,MDT,IFP,FNF,FMP,EP,ACP,AZ,CPY,CMPH,DZ,DDVP,DMT,FNTH,MLN,MP,MVP,Naled,PRN,PRT,PHSL,PSM,TBO,DEM,DS,ETN Rejection Code: IN VITRO.

25. Hoppin, J. A., Umbach, D. M., London, S. J., Lynch, C. F., Alavanja, M. C., and Sandler, D. P. (Pesticides Associated With Wheeze Among Commercial Pesticide Applicators in the Agricultural Health Study. *Am j epidemiol. 2006, jun 15; 163(12):1129-37. [American journal of epidemiology]: Am J Epidemiol*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: Pesticides are potential risk factors for respiratory disease among farmers, but farmers are also exposed to other respiratory toxicants. To explore the association of pesticides with wheeze in a population without other farming exposures, the authors analyzed data from 2,255 Iowa commercial pesticide applicators enrolled in the Agricultural Health Study. Controlling for age, smoking status, asthma and atopy history, and body mass index, the authors calculated odds ratios for the relationship between wheeze and 36 individual pesticides participants had used during the year before enrollment (1993-1997). Eight of 16 herbicides were associated with wheeze in single-agent models; however, the risk was almost exclusively associated with the herbicide chlorimuron-ethyl (odds ratio (OR) = 1.62, 95% confidence interval (CI): 1.25, 2.10). Inclusion of chlorimuron-ethyl in models for the other herbicides virtually eliminated the associations. The odds ratios for four organophosphate insecticides (terbufos, fonofos, chlorpyrifos, and phorate) were elevated when these chemicals were modeled individually and remained elevated, though attenuated somewhat, when chlorimuron-ethyl was included. The association for dichlorvos, another organophosphate insecticide, was not attenuated by chlorimuron-ethyl (OR = 2.48, 95% CI: 1.08, 5.66). Dose-response trends were observed for chlorimuron-ethyl, chlorpyrifos, and phorate; the strongest odds ratio was for applying chlorpyrifos on more than 40 days per year (OR = 2.40, 95% CI: 1.24, 4.65). These results add to the emerging literature linking organophosphate insecticides and respiratory health and suggest a role for

chlorimuron-ethyl.
MESH HEADINGS: Adolescent
MESH HEADINGS: Adult
MESH HEADINGS: Aged
MESH HEADINGS: Aged, 80 and over
MESH HEADINGS: Chi-Square Distribution
MESH HEADINGS: Cross-Sectional Studies
MESH HEADINGS: Dose-Response Relationship, Drug
MESH HEADINGS: Female
MESH HEADINGS: Humans
MESH HEADINGS: Iowa/epidemiology
MESH HEADINGS: Male
MESH HEADINGS: Middle Aged
MESH HEADINGS: Occupational Exposure/*adverse effects
MESH HEADINGS: Organophosphorus Compounds/*adverse effects
MESH HEADINGS: Pesticides/*adverse effects
MESH HEADINGS: Pyrimidines/*adverse effects
MESH HEADINGS: *Respiratory Sounds
MESH HEADINGS: Risk Factors
MESH HEADINGS: Sulfonylurea Compounds/*adverse effects
LANGUAGE: eng

26. Hurt, Christie Anne (**Evaluation of cultural practices to reduce the incidence of tomato spotted wilt virus in North Carolina peanut (Arachis hypogaea)**.
Chem Codes: Chemical of Concern: PRT Rejection Code: MIXTURE.

M.S. , 2003 , North Carolina State University Director: Rick L. Brandenburg Volume: 42/04 of MASTERS ABSTRACTS. PAGE 1206Order Number: AADAA-IEP10208 (109 PAGES)
Abstract: Tomato spotted wilt virus (TSWV), a thrips-vectored tospovirus, has recently become one of the most devastating pathogens of peanut (<italic>Arachis hypogaea </italic> L.) In North Carolina. Certain cultural practices in Georgia have shown to reduce the incidence of virus, and these were evaluated to determine their effect on TSWV incidence in North Carolina. The production systems are discrete between the runner-type peanuts grown in Georgia and the virginia-type peanuts in North Carolina. Treatments included plant populations, cultivars, tillage systems, planting dates, and in-furrow insecticides. During the growing seasons of 2001 and 2002, treatments compared were plant populations of 7, 13, and 17 plants/m-row; cultivars Gregory, NC V-11, and Perry; conventional tillage and strip tillage; early and late planting dates; and aldicarb [O-methylcarbamoyl)oxime], acephate (O, <italic>S</italic>-Dimethyl acetylphophoramidothioate), and phorate [O, O-Diethyl <italic>S</italic>-[(ethylthio)methyl]phosphodithioate]. Research plots were scouted for thrips feeding damage, percentage of plants infected with TSWV, and estimates of severity of TSWV. (Abstract shortened by UMI.)
Subjects:
- AGRICULTURE, PLANT PATHOLOGY
- BIOLOGY, ENTOMOLOGY

File Number 35 Accession Number 1992128

27. Jain, Rinku and Chan, Michael K. (2007). Support for a potential role of E. coli oligopeptidase A in protein degradation. *Biochemical and Biophysical Research Communications* 359: 486-490.
Chem Codes: Chemical of Concern: PRT Rejection Code: BACTERIA.

E. coli/ Protein degradation pathway/ M3A peptidases/ OpdA/ Lon/ HslUV/ ClpAP
http://www.sciencedirect.com/science/article/B6WBK-4NVJYKW-4/2/7baf80e955f5cdc7418ce3b14e3c9ff7

28. Khan, M., Gassman, M., and Haque, R. (1976). Biodegradation of Pesticides. *Chem.Technol.* 6: 62-69.

Chem Codes: Chemical of Concern:
MLO,PCH,HMTL,ATZ,DMT,PPN,MXC,DMT,PRN,MLN,DCTP,DEAC,DLD,PRT,PPX,NCTN,DDT,SZ,CBL,DZ,24DXY Rejection Code: FATE.

29. Klopman, G., Contreras, R., Rosenkranz, H. S., and Waters, M. D. (1985). Structure-Genotoxic Activity Relationships of Pesticides: Comparison of the Results from Several Short-Term Assays. *Mutat.Res.* 147: 343-356.
Chem Codes: Chemical of Concern:
Maneb,PNB,Zineb,BPH,DMB,PCP,PPN,SID,SZ,TRL,TFN,24DXY,Captan,Folpet,MZB,FNF,FTT,MLN,MOM,MXC,MP,PRN,PMR,PRT,RSM,SMT,BMC,ACP,ATN,AZ,CBF,CPY,CHRY,CYP,DZ,DCB,ETN,FNT Rejection Code: YEAST.

30. Koontz, M., Price, P., Hamilton, J., Daggett, D., Sielken, R., Bretzlaff, R., and Tyler, T. (Modeling Aggregate Exposures to Glycol Ethers From Use of Commercial Floor Products. *Int j toxicol. 2006 mar-apr; 25(2):95-107. [International journal of toxicology]: Int J Toxicol.*
Chem Codes: Chemical of Concern: PRT Rejection Code: MODELING.

ABSTRACT: Computer modeling of aggregate exposure provides the capability to estimate the range of doses that can occur from product use and to understand the relative importance of different routes of exposure. This paper presents an assessment of aggregate occupational exposure to two glycol ethers used as solvents in floor maintenance products for industrial and institutional facilities, using a simulation tool named PROMISE. Three commercial floor-care products were assumed to be applied in sequence--a floor stripper, then a floor cleaner, and lastly a protective coating. The glycol ethers modeled were ethylene glycol butyl ether (EGBE) in the floor stripper and in the floor cleaner, and dipropylene glycol methyl ether (DPGME) in the coating. Modeling uncertainty was assessed through a comparison of the PROMISE inhalation exposure estimates with those from an independent model (MCCEM), and parameter uncertainty was investigated using PROMISE software's Monte Carlo simulation capabilities. Modeling results indicated that inhalation is the dominant exposure route. The predicted average air concentration and inhalation dose from PROMISE agreed with the second model (MCCEM) within 10%. Monte Carlo simulation indicated that the upper end of the aggregate-dose distribution for the scenario was more than 50% higher than the value of the point estimate. The modeled 8-h TWA concentrations for EGBE and DPGME were lower than the corresponding permissible exposure limits American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) by at least a factor of 20, indicating that under the assumed conditions workplace exposures to glycol ethers are below levels of concern.
MESH HEADINGS: Adult
MESH HEADINGS: Air Pollutants/analysis/standards
MESH HEADINGS: Air Pollution, Indoor/analysis
MESH HEADINGS: Environmental Monitoring
MESH HEADINGS: Ethylene Glycols/*analysis/standards
MESH HEADINGS: Floors and Floorcoverings
MESH HEADINGS: Humans
MESH HEADINGS: Inhalation Exposure/analysis
MESH HEADINGS: Intestinal Absorption
MESH HEADINGS: Male
MESH HEADINGS: *Models, Theoretical
MESH HEADINGS: Monte Carlo Method
MESH HEADINGS: Occupational Exposure/*analysis
MESH HEADINGS: Propylene Glycols/*analysis/standards
MESH HEADINGS: Skin Absorption
MESH HEADINGS: Solvents/*analysis/standards
MESH HEADINGS: Threshold Limit Values
MESH HEADINGS: Uncertainty
LANGUAGE: eng

31. Ku, Y., Lin, H. S., Wang, W., and Ma, C. M. (Decomposition of Phorate in Aqueous Solution by Ozonation. *J*

environ sci health b. 2007, feb; 42(2):143-9. [Journal of environmental science and health. Part. B, pesticides, food contaminants, and agricultural wastes]: J Environ Sci Health B.
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS, FATE.

ABSTRACT: Phorate (O,O-diethyl S-ethylthiomethyl phosphorodithioate) dissolved in aqueous solution was almost completely decomposed by ozonation to form various species within 10 minutes of reaction time for the experimental conditions examined in this research. The generation rate of sulfate was found to be fairly independent of solution pH value. However, the formation of phosphate and carbonate was more favorable for alkaline solutions where hydroxyl free radical is the primary oxidative species. The reaction rates increased with initial gaseous ozone concentrations, indicating the reaction was mass transfer-controlled within the experimental range of this research. Combining the analytical results by various instruments, including gas chromatograph equipped with an electron ionization detector (GC-EID), high performance liquid chromatography (HPLC), ion chromatography (IC), and total organic carbon (TOC), the temporal sequence of phorate ozonation was proposed in this study. The oxidation of sulfur atoms on the phosphorus-sulfur double bond or carbon-sulfur-carbon bond by ozonation was found to occur at first to form sulfate and various intermediates.
MESH HEADINGS: Hydrogen-Ion Concentration
MESH HEADINGS: Insecticides/*chemistry
MESH HEADINGS: Kinetics
MESH HEADINGS: Oxidation-Reduction
MESH HEADINGS: Ozone/*chemistry
MESH HEADINGS: Phorate/*chemistry
MESH HEADINGS: Photolysis
MESH HEADINGS: Solubility
MESH HEADINGS: Time Factors
MESH HEADINGS: Water/*chemistry
LANGUAGE: eng

32. Lowcock, L. A., Sharbel, T. F., Bonin, J., Ouellet, M., Rodrigue, J., and DesGranges, J. L. (1997). Flow Cytometric Assay for In Vivo Genotoxic Effects of Pesticides in Green Frogs (Rana clamitans). *Aquat.Toxicol.* 38: 241-255.
Chem Codes: EcoReference No.: 83840
Chemical of Concern: ATZ,PRT,CTN,LNR,GYP Rejection Code: MIXTURE.

33. Luttik, R. and Aldenberg, T. (1997). Extrapolation Factors for Small Samples of Pesticide Toxicity Data: Special Focus on LD50 Values for Birds and Mammals. *Environ.Toxicol.Chem.* 16: 1785-1788.
Chem Codes: Chemical of Concern:
4AP,ADC,AND,AZ,CBF,CHD,CPY,DEM,DZ,DDVP,DCTP,DLD,DMT,DS,ES,EN,FNT,FNTH,FNF,HPT,IFP,MLN,MCB,MOM,MP,MVP,PAQT,PRN,PRT,PPHD,PIM,PPX,STAR,STCH,TMP,TCF,24DXY,ACP,ADC,BDC,BDF,CBL,CBF,CHD,CPY,CPYM,DZM,DZ,DLD,DMT,DINO,EN,HCCH,MTM,MDT,OMD,OXD,TDC,TPM,THM Rejection Code: MODELING.

34. Machado, M. F., Rioli, V., Dalio, F. M., Castro, L. M., Juliano, M. A., Tersariol, I. L., Ferro, E. S., Juliano, L., and Oliveira, V. (The Role of Tyr605 and Ala607 of Thimet Oligopeptidase and Tyr606 and Gly608 of Neurolysin in Substrate Hydrolysis and Inhibitor Binding. *Biochem j. 2007, jun 1; 404(2):279-88. [The biochemical journal]: Biochem J.*
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS, FATE.

ABSTRACT: The physicochemical properties of TOP (thimet oligopeptidase) and NEL (neurolysin) and their hydrolytic activities towards the FRET (fluorescence resonance energy transfer) peptide series Abz-GFSXFRQ-EDDnp [where Abz is o-aminobenzoyl; X=Ala, Ile, Leu, Phe, Tyr, Trp, Ser, Gln, Glu, His, Arg or Pro; and EDDnp is N-(2,4-dinitrophenyl)-ethylenediamine] were compared with those of site-mutated analogues. Mutations at Tyr605 and Ala607 in TOP and at Tyr606 and Gly608 in NEL did not affect the overall folding of the two peptidases, as indicated by their thermal stability, CD analysis and the pH-dependence of the intrinsic fluorescence of the protein. The kinetic parameters for the hydrolysis of substrates with systematic variations at position P1 showed that Tyr605 and Tyr606

of TOP and NEL respectively, played a role in subsite S1. Ala607 of TOP and Gly608 of NEL contributed to the flexibility of the loops formed by residues 600-612 (GHLAGGYDGQYYG; one-letter amino acid codes used) in NEL and 599-611 (GHLAGGYDAQYYG; one-letter amino acid codes used) in TOP contributing to the distinct substrate specificities, particularly with an isoleucine residue at P1. TOP Y605A was inhibited less efficiently by JA-2 {N-[1-(R,S)-carboxy-3-phenylpropyl]Ala-Aib-Tyr-p-aminobenzoate}, which suggested that the aromatic ring of Tyr605 was an important anchor for its interaction with wild-type TOP. The hydroxy groups of Tyr605 and Tyr606 did not contribute to the pH-activity profiles, since the pKs obtained in the assays of mutants TOP Y605F and NEL Y606F were similar to those of wild-type peptidases. However, the pH-kcat/Km dependence curve of TOP Y605A differed from that of wild-type TOP and from TOP Y606F. These results provide insights into the residues involved in the substrate specificities of TOP and NEL and how they select cytosolic peptides for hydrolysis.
MESH HEADINGS: Alanine/*metabolism
MESH HEADINGS: Amino Acid Sequence
MESH HEADINGS: Chromatography, High Pressure Liquid
MESH HEADINGS: Circular Dichroism
MESH HEADINGS: Enzyme Stability
MESH HEADINGS: Fluorescence
MESH HEADINGS: Fluorescence Resonance Energy Transfer
MESH HEADINGS: Glycine/*metabolism
MESH HEADINGS: Hydrogen-Ion Concentration
MESH HEADINGS: Hydrolysis
MESH HEADINGS: Kinetics
MESH HEADINGS: Metalloendopeptidases/antagonists &amp
MESH HEADINGS: inhibitors/chemistry/genetics/*metabolism
MESH HEADINGS: Molecular Sequence Data
MESH HEADINGS: Mutagenesis, Site-Directed
MESH HEADINGS: Protease Inhibitors/*metabolism
MESH HEADINGS: Spectrometry, Mass, Matrix-Assisted Laser Desorption-Ionization
MESH HEADINGS: Substrate Specificity
MESH HEADINGS: Tyrosine/*metabolism
LANGUAGE: eng

35. Machado, M. F. M., Cunha, F. M., Berti, D. A., Heimann, A. S., Klitzke, C. F., Rioli, V., Oliveira, V., and Ferro, E. S. (2006). Substrate phosphorylation affects degradation and interaction to endopeptidase 24.15, neurolysin, and angiotensin-converting enzyme. *Biochemical and Biophysical Research Communications* 339: 520-525.
Chem Codes: Chemical of Concern: PRT Rejection Code: FATE.

Neurolysin/ Thimet oligopeptidase/ Intracellular peptide metabolism/ Phosphorylation/ Proteasome/ Peptidase http://www.sciencedirect.com/science/article/B6WBK-4HK031C-8/2/62b30f384e9039f2b076a0e9d5a187d8

36. Madhuri, R. J. and Rangaswamy, V. (2002). Influence of Selected Insecticides on Phosphatase Activity in Groundnut (Arachis hypogeae L.) Soils. *J.Environ.Biol.* 23: 393-397.
Chem Codes: Chemical of Concern: CPY,MP,PRT,MOM Rejection Code: NO SPECIES.

37. Mahajan, R., Bonner, M. R., Hoppin, J. A., and Alavanja, M. C. (Phorate Exposure and Incidence of Cancer in the Agricultural Health Study. *Environ health perspect. 2006, aug; 114(8):1205-9. [Environmental health perspectives]: Environ Health Perspect.*
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: BACKGROUND: We recently reported a link between use of the organophosphate pesticide phorate and risk of prostate cancer among applicators with a family history of prostate cancer in the Agricultural Health Study (AHS). OBJECTIVE: This finding, together with findings of associations between other organophosphate pesticides and cancer more broadly, prompted us to

examine phorate exposure and overall cancer incidence in the AHS. Adding 3 years of follow-up and using more detailed exposure information allowed us to see whether the prostate cancer finding held. METHODS: The AHS is a prospective study of licensed restricted-use pesticide applicators from North Carolina and Iowa. To our knowledge, this is the largest examination of workers occupationally exposed to phorate. Pesticide exposure and other information was collected using two self-administered questionnaires completed from 1993 to 1997. Poisson regression was used to calculate rate ratios (RR) and 95% confidence intervals (CI), adjusting for potential confounders. RESULTS: Phorate use was not related to the incidence of all cancers combined or to any individual cancer, although we had insufficient numbers to study non-Hodgkin lymphoma or leukemia, which have been linked to organophosphates in other studies. Although prostate cancer risk was not significantly related to phorate use overall or among those without a family history, the risk tended to increase among applicators with a family history of prostate cancer. The interaction RR was 1.53 (95% CI, 0.99-2.37). CONCLUSION: The observed statistical interaction suggests a gene-environment interaction between family history and phorate exposure in the incidence of prostate cancer, but other explanations are also possible.
MESH HEADINGS: Adult
MESH HEADINGS: Aged
MESH HEADINGS: Agricultural Workers' Diseases/*epidemiology
MESH HEADINGS: Alcohol Drinking/epidemiology
MESH HEADINGS: Cohort Studies
MESH HEADINGS: Follow-Up Studies
MESH HEADINGS: Humans
MESH HEADINGS: Insecticides/*adverse effects/*analysis
MESH HEADINGS: Iowa/epidemiology
MESH HEADINGS: Male
MESH HEADINGS: Middle Aged
MESH HEADINGS: North Carolina/epidemiology
MESH HEADINGS: Occupational Exposure/*adverse effects
MESH HEADINGS: Phorate/*adverse effects/*analysis
MESH HEADINGS: Prostatic Neoplasms/*epidemiology
MESH HEADINGS: Questionnaires
MESH HEADINGS: Socioeconomic Factors
MESH HEADINGS: Zea mays
LANGUAGE: eng

38. Mathew, S. B., Pillai, A. K., and Gupta, V. K. (A Rapid Spectrophotometric Assay of Some Organophosphorus Pesticide Residues in Vegetable Samples. *Spectrochim acta a mol biomol spectrosc. 2007, aug; 67(5):1430-2. [Spectrochimica acta. Part a, molecular and biomolecular spectroscopy]: Spectrochim Acta A Mol Biomol Spectrosc.*
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS.

ABSTRACT: A rapid and sensitive spectrophotometric method for the determination of some organophosphorus insecticides, i.e. malathion, dimethoate and phorate is described. It is based on the oxidation of organophosphorus pesticide with slight excess of N-bromosuccinimide (NBS) and the unconsumed NBS is determined with rhodamine B (lambda max: 550 nm). Beer's law is obeyed in the concentration range 0.108-1.08, 0.056-0.56 and 0.028-0.28 microg mL(-1) for malathion, phorate and dimethoate, respectively. The method has been successfully applied for the determination of organophosphorus pesticide residues in various vegetable samples.
MESH HEADINGS: Pesticide Residues/*analysis
MESH HEADINGS: Spectrophotometry/*methods
MESH HEADINGS: Vegetables/*chemistry
LANGUAGE: eng

39. McCain, E. B., Zlotoff, J. I., and Ebersole, J. J. (2003). Effects of Elk Browsing on Aspen Stand Characteristics, Rampart Range, Colorado. *Western North American Naturalist, 63 (1) pp. 129-132, 2003.*
Chem Codes: Chemical of Concern: PRT Rejection Code: SURVEY.

Descriptors: Aspen
Descriptors: Browsing effects
Descriptors: Cervus elaphus
Descriptors: Colorado
Descriptors: Elk
Descriptors: Plant-animal interactions
Descriptors: Populus tremuloides
20 refs.
Language: English
Publication Type: Journal
Publication Type: Note
Country of Publication: United States
Classification: 92.13.1.5 ENVIRONMENTAL BIOLOGY: Ecology: Non-symbiotic interactions
Subfile: Plant Science 1527-0904

40. McCully, K. A. (1978). Report on Phosphated Pesticides. *J.Assoc.Off.Anal.Chem.* 61: 364-368.
Chem Codes: Chemical of Concern:
DDVP,Naled,DZ,PHSL,PRT,MDT,CPY,DDVP,TCF,PPHD,MPO,MVP,DCTP,FNT,PRN,DEM,MP,DMT,CPY,AZ,ABT,MLN,TMP,TVP,FNF,ETN Rejection Code: NO TOX DATA.

41. Mendoza, C. E. (1972). Analysis of Pesticides by the Thin-layer Chromatographic-Enzyme Inhibition Technique. *In: Gunther,F.A.and Gunther,J.D.(Eds), Residues Reviews, Springer Verlag, NY* 43: 105-142.
Chem Codes: EcoReference No.: 37931
Chemical of Concern:
CBZ,OXD,ADC,BS,DCTP,MOM,FTT,MCB,PSM,FBM,THM,PPHD,DDT,MXC,EN,HCCH,AND,DLD,HPT,FNT,CF,DZ,MUP,ETN,Nalcd,MCB,CBL,DS,PRT,DDVP,DMT,MP,DEM,TCF,AZ,CMPH,MLN,MLO,PRN,MPO,ES,DCF Rejection Code: REVIEW.

42. Mendoza, C. E. (1974). Analysis of Pesticides by the Thin-Layer Chromatographic-Enzyme Inhibition Technique, Part II. *In: Gunther,F.A and Gunther,J.D.(Eds), Residue Reviews, Springer Verlag,NY* 50: 43-72.
Chem Codes: EcoReference No.: 37930
Chemical of Concern:
BZO,ABT,DS,CMPH,CBL,ETN,FNT,MLN,MVP,PRN,PHSL,PPHD,SFT,Naled,MOM,DEM,CPY,MLO,PRT,DMT,MPO,DDVP,PSM,MP,AZ,DZ,DEM,TCF,FNTH,PCP Rejection Code: REVIEW.

43. Mohssen, M. (2001). Biochemical and Histopathological Changes in Serum Creatinine and Kidney Induced by Inhalation of Thimet (Phorate) in Male Swiss Albino Mouse, Mus Musculus. *Environmental Research [Environ. Res.]. Vol. 87, no. 1, pp. 31-36. Sep 2001.*
Chem Codes: Chemical of Concern: PRT Rejection Code: INHALE.

Descriptors: Article Subject Terms: Kidney
Descriptors: Histopathology
Descriptors: Creatinine
Descriptors: Inhalation
Descriptors: Insecticides
Descriptors: Article Taxonomic Terms: Mus musculus
Abstract: This work was conducted to investigate the biochemical and histopathological changes in serum creatinine level and kidney of male Swiss albino mouse, Mus musculus, exposed to the recommended field dose of Thimet (20 kg ha super(-1)). The animals were exposed to this dose in a whole-body inhalation chamber for 12 weeks and the biochemical and histopathological changes were studied in the 2nd, 4th, 6th, 8th, 10th, and 12th weeks of exposure. Creatinine level of serum was measured by the Jaffe method, and histopathological lesions were studied by the hematoxylin-eosin staining method. A significant rise in creatinine level was observed from the 4th week of exposure

until the end of the experiment. This rise suggests impairment of the glomerular function and tubular damage in the kidneys. These changes were confirmed by histopathological studies in the tubules. Kidney lesions were present throughout the experimental period. These consisted of mild to severe multifocal cloudy and hydropic degeneration with necrosis in the tubules, though the glomerular damage was not seen by light microscopy. After a 30-day recovery period, the histopathological and biochemical changes were absent and normal patterns were restored. Copyright 2001 Academic Press.
Publisher: Academic Press
DOI: 10.1006/enrs.2001.4285
Language: English
English
Publication Type: Journal Article
Classification: X 24134 Pathology
Subfile: Toxicology Abstracts 0013-9351

44. Mouginis-Mark, Peter J. and Garbeil, Harold (2005). Quality of TOPSAR topographic data for volcanology studies at Kilauea Volcano, Hawaii: An assessment using airborne lidar data. *Remote Sensing of Environment* 96: 149-164.
Chem Codes: Chemical of Concern: PRT Rejection Code: SURVEY.

Kilauea Volcano/ TOPSAR/ Lidar/ Topographic mapping/ Interferometric radar
http://www.sciencedirect.com/science/article/B6V6V-4G65CBF-1/2/3f1c7302edf25998181a60049333355f

45. Noetzel, D. and Ricard, M. (1988). Wireworm and White Grub Control in Potato, 1987. *Insectic.Acaric.Tests* 13: 160-161 (No. 89E).
Chem Codes: Chemical of Concern: FNF,PRT,TFT,EP,ADC Rejection Code: NO DURATION.

46. Oehme, F. W. and Barrett, D. S. (1986). Veterinary Gastrointestinal Toxicology. *K.Rozman and O.Hanninen (Eds.), Gastrointestinal Toxicology, Elsevier Sci.Publ.B.V., Amsterdam, Netherlands, (Dist.In the USA and Canada) by Elsevier Sci.Publ.Co.Inc., New York, NY* 464-513.
Chem Codes: Chemical of Concern: 24D,MLN,DDVP,DZ,PRT,PRN,CBL,CBF,PAQT Rejection Code: REFS CHECKED/REVIEW.

47. Ohkawa, H. (1976). Synthesis and Biological Action of Optical Isomers of Organophosphorus Esters. *J.Pestic.Sci.(Nihon Noyakugaku Kaishi)* 1: 325-334 (JPN).
Chem Codes: EcoReference No.: 90710
Chemical of Concern: PRT Rejection Code: NON-ENGLISH.

48. Oliveira, V. , Garrido, P. A., Rodrigues, C. C., Colquhoun, A., Castro, L. M., Almeida, P. C., Shida, C. S., Juliano, M. A., Juliano, L., Camargo, A. C., Hyslop, S., Roberts, J. L., Grum-Tokars, V., Glucksman, M. J., and Ferro, E. S. (Calcium Modulates Endopeptidase 24.15 (Ec 3.4.24.15) Membrane Association, Secondary Structure and Substrate Specificity. *Febs j. 2005, jun; 272(12):2978-92. [The febs journal]: FEBS J.*
Chem Codes: Chemical of Concern: PRT Rejection Code: IN VITRO.

ABSTRACT: The metalloendopeptidase 24.15 (EP24.15) is ubiquitously present in the extracellular environment as a secreted protein. Outside the cell, this enzyme degrades several neuropeptides containing from 5 to 17 amino acids (e.g. gonadotropin releasing hormone, bradykinin, opioids and neurotensin). The constitutive secretion of EP24.15 from glioma C6 cells was demonstrated to be stimulated linearly by reduced concentrations of extracellular calcium. In the present report we demonstrate that extracellular calcium concentration has no effect on the total amount of the extracellular (cell associated + medium) enzyme. Indeed, immuno-cytochemical analyses by confocal and electron microscopy suggested that the absence of calcium favors the enzyme shedding from the plasma membrane into the medium. Two putative calcium-binding sites on EP24.15 (D93 and D159) were altered by site-directed mutagenesis to investigate their possible contribution to binding of the enzyme at the cell surface. These mutated recombinant proteins behave similarly to the wild-type

enzyme regarding enzymatic activity, secondary structure, calcium sensitivity and immunoreactivity. However, immunocytochemical analyses by confocal microscopy consistently show a reduced ability of the D93A mutant to associate with the plasma membrane of glioma C6 cells when compared with the wild-type enzyme. These data and the model of the enzyme's structure as determined by X-ray diffraction suggest that D93 is located at the enzyme surface and is consistent with membrane association of EP24.15. Moreover, calcium was also observed to induce a major change in the EP24.15 cleavage site on distinctive fluorogenic substrates. These data suggest that calcium may be an important modulator of ep24.15 cell function.
MESH HEADINGS: Animals
MESH HEADINGS: Binding Sites
MESH HEADINGS: Calcium/*metabolism
MESH HEADINGS: Cell Line, Tumor
MESH HEADINGS: Cell Membrane/*metabolism
MESH HEADINGS: Central Nervous System Neoplasms/enzymology
MESH HEADINGS: Circular Dichroism
MESH HEADINGS: Glioma/enzymology
MESH HEADINGS: Metalloendopeptidases/*chemistry/genetics/*metabolism
MESH HEADINGS: Models, Molecular
MESH HEADINGS: Mutagenesis, Site-Directed
MESH HEADINGS: Protein Structure, Secondary
MESH HEADINGS: Rats
MESH HEADINGS: Substrate Specificity
LANGUAGE: eng

49. Pagliuca, G. , Serraino, A., Gazzotti, T., Zironi, E., Borsari, A., and Rosmini, R. (Organophosphorus Pesticides Residues in Italian Raw Milk. *J dairy res. 2006, aug; 73(3):340-4. [The journal of dairy research]: J Dairy Res*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: Organophosphorus pesticides (OPPs), widely used in agriculture, can cause toxic effects to humans and animals. The main purpose of the present work was to determine the contamination in raw milk by the main organophosphorus pesticides used in Italy and to evaluate the opportunity to start specific procedures of risk management along the milk production chain. The samples, collected in 4 Italian dairy plants directly from the tank trucks during the delivering, were representative of 920 tonnes of raw milk. The isolation of the OPPs (acephate, chlorpyriphos, chlorpyriphos-methyl, diazinon, methamidophos, methidathion, phorate, pirimiphos-methyl) was performed by liquid partition followed by clean-up with solid phase extraction. The analyses were carried out by dual column gas chromatography using two nitrogen-phosphorus detectors. Among the 135 samples analysed, 37 were positive in traces and 10 showed an OPP contamination ranging from 5 to 18 microg/kg. The higher results were recorded in the samples collected during the autumn-winter period. The main pollutants detected were acephate and chlorpyriphos. In every positive sample found, the OPP contamination was lower than the maximum residue level (MRL) fixed by the European Commission.
MESH HEADINGS: Animals
MESH HEADINGS: Cattle
MESH HEADINGS: Chromatography, Gas/methods
MESH HEADINGS: Dairying/*methods
MESH HEADINGS: Female
MESH HEADINGS: Food Contamination/*analysis
MESH HEADINGS: Maximum Allowable Concentration
MESH HEADINGS: Milk/*chemistry
MESH HEADINGS: Organophosphorus Compounds/analysis
MESH HEADINGS: Pesticide Residues/*analysis
MESH HEADINGS: Seasons
LANGUAGE: eng

50. Paschoalin, Thaysa, Carmona, Adriana K., Oliveira, Vitor, Juliano, Luiz, and Travassos, Luiz R. (2005). Characterization of thimet- and neurolysin-like activities in Escherichia coli M3A peptidases and description of a specific substrate. *Archives of Biochemistry and Biophysics* 441: 25-34.
Chem Codes : Chemical of Concern: PRT Rejection Code: BACTERIA.

Thimet oligopeptidase/ Neurolysin/ Oligopeptidase A (OpdA)/ Dipeptidyl dipeptidase (Dcp)/ Escherichia coli/ Expression vector/ Recombinant protein/ Co-purification/ M3A subfamily/ Specific substrate http://www.sciencedirect.com/science/article/B6WB5-4GKW5VM-4/2/782b8947bcb26e72297be4ec1b4ef64c

51. Paske, N., Berry, B., Schmitz, J., and Sullivan, D. (Determination of Low-Level Agricultural Residues in Soft Drinks and Sports Drinks by Liquid Chromatography/Tandem Mass Spectrometry: Single-Laboratory Validation. *J aoac int. 2007 mar-apr; 90(2):521-33. [Journal of aoac international]: J AOAC Int*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH, CHEM METHODS.

ABSTRACT: In this study, sponsored by PepsiCo Inc., a method was validated for measurement of 11 pesticide residues in soft drinks and sports drinks. The pesticide residues determined in this validation were alachlor, atrazine, butachlor, isoproturon, malaoxon, monocrotophos, paraoxon-methyl, phorate, phorate sulfone, phorate sulfoxide, and 2,4-dichlorophenoxyacetic acid (2,4-D) when spiked at 0.100 microg/L (1.00 microg/L for phorate). Samples were filtered (if particulate matter was present), degassed (if carbonated), and analyzed using liquid chromatography with tandem mass spectrometry. Quantitation was performed with matrix-matched external standard calibration solutions. The standard curve range for this assay was 0.0750 to 10.0 microg/L. The calibration curves for all agricultural residues had coefficient of determination (r2) values greater than or equal to 0.9900 with the exception of 2 values that were 0.9285 and 0.8514. Fortification spikes at 0.100 microg/L (1.00 microg/L for phorate) over the course of 2 days (n=8 each day) for 3 matrixes (7UP, Gatorade, and Diet Pepsi) yielded average percent recoveries (and percent relative standard deviations) as follows (n=48): 94.4 (15.2) for alachlor, 98.2 (13.5) for atrazine, 83.1 (41.6) for butachlor, 89.6 (24.5) for isoproturon, 87.9 (24.4) for malaoxon, 96.1 (9.26) for monocrotophos, 101 (25.7) for paraoxon-methyl, 86.6 (20.4) for phorate, 101 (16.5) for phorate sulfone, 93.6 (25.5) for phorate sulfoxide, and 98.2 (6.02) for 2,4-D.
MESH HEADINGS: 2,4-Dichlorophenoxyacetic Acid/chemistry
MESH HEADINGS: Beverages
MESH HEADINGS: Calibration
MESH HEADINGS: Chemistry, Analytical/*methods
MESH HEADINGS: Chromatography, Liquid/*methods
MESH HEADINGS: Food Analysis
MESH HEADINGS: Food Contamination/*analysis
MESH HEADINGS: Laboratories
MESH HEADINGS: Pesticide Residues/*analysis
MESH HEADINGS: Pesticides/*chemistry
MESH HEADINGS: Tandem Mass Spectrometry/*methods
LANGUAGE: eng

52. Pauli, B. D., Perrault, J. A., and Money, S. L. (2000). RATL: A Database of Reptile and Amphibian Toxicology Literature. *Tech.Rep.Ser.No.357, National Wildlife Res.Centre* 494 p.
Chem Codes: EcoReference No.: 93024
Chemical of Concern:
FMP,FNT,FTH,FNV,FRN,HPT,Hg,IFP,MLN,MDT,MCB,ACP,Ag,Al,ADC,AND,PCB,As,ATZ,AZ,Ba,Bc,BDC,HCCH,CBL,CBF,Cd,CHD,CPH,Co,CMPH,Cr,Cu,DDT,DEM,DZ,DDVP,DLF,DCTP,DLD,DMT,DXN,DS,ES,EN,ETN,EP,Fe,MOM,MXC,MTL,MVP,Mg,MRX,Mn,Mo,MYC,Nalcd,Ni,PHTH,OML,PAH,PRN,MP,Pb,PCP,PRT,PHSL,PSM,PPHD,PTP,PPX,Se,TCDD,TBO,TXP,V,An,ATN,NHN,BDF,BTY,CPY,CTN,Cl,CuS,CYP,DM,DBN,DFZ,Nabam,PA,PAH,GYP,LNR,MLN,MZB,MLX,MBZ,NH,NRM,RTN,Zns,ANT,PAH,TBC,BNZ,CdN,CTC,CBZ,CF,CZE,CYH,DU,EDT,EFV,EGY,Maneb,MCPA,HgCl2,MLT,NAPH,PAH,NBZ,PAQT,PPB,PCL,PCH,PPN,CET,REM,24DXY,ATP,ACL,ACY,AMTL,ANZ,AN,BRA,BPZ,TC,CdS,CaCl2,CBD,CdCl,CoCl,CN,CYF,DMB,DINO,NP,ETHN,EDB,FPP,FBM,GIB,FAME,IoDN,IMC,MLO,MTB,NCTN,NHP,SRT,OMT,PQT,PbAC,PbN,PHE,PAH,P

L,PTR,PND,K2CrO4,K2Cr2O7,PYPG,PYR,PAH,PYN,SBA,SAC,SCA,Sb,AgN,nABr,SFL,NaNO3,STCH,SFT,SA,TBT,TMP,TMT,TI,TBA,TPM,THM,TOL,3CE,TEG,FRN,TPR,UREA,MTPN,VCZ,WFN,Zineb Rejection Code: REVIEW.

53. Peck, A. M. and Hornbuckle, K. C. (Gas-Phase Concentrations of Current-Use Pesticides in Iowa. *Environ sci technol. 2005, may 1; 39(9):2952-9. [Environmental science & technology]: Environ Sci Technol*.
Chem Codes: Chemical of Concern: PRT Rejection Code: FATE.

ABSTRACT: Local and regional atmospheric transport of current-use pesticides is an important source of these compounds to nontarget plants and ecosystems. Current-use pesticides were measured at urban, rural, and suburban sites in eastern Iowa during 2000-2002. The most detected compounds were hexachlorobenzene and trifluralin, which were found in 89% and 78% of the samples, respectively. As expected, many pesticides showed a strong seasonal trend with the most detections and highest concentrations occurring during the spring and early summer. The average detected concentrations of five heavily used herbicides were 0.52 ng/ m3 for trifluralin, 4.6 ng/m3 for acetochlor, 2.3 ng/m3 for metolachlor, 1.1 ng/m3 for alachlor, 1.7 ng/m3 for pendimethalin, and 1.2 ng/m3 for atrazine. The most frequently detected insecticides were phorate and chlorpyrifos, which were found in 20% and 19% of the samples, respectively. The average phorate and chlorpyrifos concentrations were 25 ng/m3 and 1.0 ng/m3, respectively. The maximum phorate concentration, the highest measured for all pesticides, was 91.2 ng/m3. The most frequently detected current-use fungicides were chloroneb and etridiazole, which were found in 14% and 10% of the samples, respectively.
MESH HEADINGS: Air Pollutants/*analysis
MESH HEADINGS: Environmental Monitoring
MESH HEADINGS: Iowa
MESH HEADINGS: Pesticides/*analysis
MESH HEADINGS: Seasons
LANGUAGE: eng

54. Perring, T. M. (1996). Damage and Control of Eriophyoid Mites in Crops Vegetables. *In: E.E.Lindquist, M.W.Sabelis, and J.Bruin (Eds.), World Crop Pests, Volume 6, Eriophyoid Mites: Their Biology, Natural Enemies and Control, Elsevier Sci.Publ., Amsterdam, Netherlands* 6: 593-610.
Chem Codes: EcoReference No.: 90459
Chemical of Concern: PRT,DEM,DZ,DMT,DCF,CBL,PRN,ES Rejection Code: REVIEW.

55. Pimentel, D. and Edwards, C. A. (1982). Pesticides and Ecosystems. *Bioscience* 32: 595-600.
Chem Codes: EcoReference No.: 38343
Chemical of Concern:
PPHD,24DXY,HCCH,SZ,AND,PRT,EN,CHD,TPM,BMY,DMT,DDT,DLD,PRN Rejection Code:
REFS CHECKED/REVIEW.

56. Ruzicka, J. H. (1973). Methods and Problems in Analysing for Pesticide Residues in the Environment; In: Edwards,C.A. (Ed) Environmental Pollution by Pesticides. *Plenum Press, London and NY* 11-56.
Chem Codes: EcoReference No.: 38603
Chemical of Concern:
ETO,PPHN,MB,PCB,DLD,HCCH,4NP,MCB,ADC,SFR,Hg,NP,DMT,PPHD,PRT,DS,DZ,THM,LNR,ANZ,CLNB,CBZ,MLN,DDVP,24DXY, Rejection Code: METHODS.

57. Saldana, T. M., Basso, O., Hoppin, J. A., Baird, D. D., Knott, C., Blair, A., Alavanja, M. C., and Sandler, D. P. (Pesticide Exposure and Self-Reported Gestational Diabetes Mellitus in the Agricultural Health Study. *Diabetes care. 2007, mar; 30(3):529-34. [Diabetes care]: Diabetes Care*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

ABSTRACT: OBJECTIVE: To examine the association between pesticide use during pregnancy and gestational diabetes mellitus (GDM) among wives of licensed pesticide applicators. RESEARCH DESIGN AND METHODS: Using data from the Agricultural Health Study (AHS), we estimated the association between self-reported pesticide-related activities during the first trimester of the most

recent pregnancy and GDM among 11,273 women whose pregnancy occurred within 25 years of enrollment. RESULTS: A total of 506 (4.5%) women reported having had GDM. Women who reported agricultural pesticide exposure (mixing or applying pesticides to crops or repairing pesticide application equipment) during pregnancy were more likely to report GDM (odds ratio [OR] 2.2 [95% CI 1.5-3.3]). We saw no association between residential pesticide exposure (applying pesticides in the home and garden during pregnancy) and GDM (1.0 [0.8-1.3]). Among women who reported agricultural exposure during pregnancy, risk of GDM was associated with ever-use of four herbicides (2,4,5-T; 2,4,5-TP; atrazine; or butylate) and three insecticides (diazinon, phorate, or carbofuran). CONCLUSIONS: These findings suggest that activities involving exposure to agricultural pesticides during the first trimester of pregnancy may increase the risk of GDM.
MESH HEADINGS: Adolescent
MESH HEADINGS: Adult
MESH HEADINGS: *Agriculture
MESH HEADINGS: Body Mass Index
MESH HEADINGS: Continental Population Groups
MESH HEADINGS: Diabetes, Gestational/*epidemiology/etiology
MESH HEADINGS: Educational Status
MESH HEADINGS: Female
MESH HEADINGS: Humans
MESH HEADINGS: Iowa/epidemiology
MESH HEADINGS: Maternal Age
MESH HEADINGS: Middle Aged
MESH HEADINGS: North Carolina/epidemiology
MESH HEADINGS: Parity
MESH HEADINGS: Pesticides/*toxicity
MESH HEADINGS: Pregnancy
MESH HEADINGS: Questionnaires
MESH HEADINGS: Smoking/epidemiology
LANGUAGE: eng

58. Salyi, G., Fazekas, B., Gaalne, E. D., and Fazekas, G. (2005). [Pesticide Toxicoses of Wild Animals, Especially Protected Birds, With Special Regard to Carbofurane-Caused Damages]. *Magyar Allatorvosok Lapja [Magy. Allatorv. Lapja]. Vol. 127, no. 6, pp. 376-383. 2005.*
Chem Codes: Chemical of Concern: PRT Rejection Code: NON-ENGLISH.

Original Title: Vadon elo allatok, elsosorban vedett madarak noevenyvedoszer-mergezesei, kueloenoes tekintettel a karbofuran okozta kartetelre
Descriptors: Article Subject Terms: Birds of prey
Descriptors: Carcasses
Descriptors: Crops
Descriptors: Eggs
Descriptors: Gizzard
Descriptors: Marshes
Descriptors: National parks
Descriptors: Pesticides
Descriptors: Pests
Descriptors: Plant protection
Descriptors: Poisoning
Descriptors: phorate
Descriptors: toxicosis
Descriptors: Article Taxonomic Terms: Aves
Descriptors: Insecta
Descriptors: Mustela putorius furo
Descriptors: Rodentia
Descriptors: Tyto alba
Abstract: The authors detected pesticide toxicosis in 19 cases, in 508 animals of 22 species (103

buzzards, 7 rough-legged hawks, 8 white tailed eagles, 11 marsh harriers, 1 pallid harrier, 11 ravens, 1 barn owl, 1 rook, 1 jay, 3 magpies, 200 ruffs, 2 common cranes, 6 white herons, 4 grey herons, 127 black-headed gulls, 1 chaffinch, 7 martens, 1 wild cat, 1 ferret, 4 foxes, 4 roe deers and 5 elks) during 5 years (2000-2004). The majority of toxicoses occurred in protected areas, in national parks. In ten cases baits treated with pesticide (preparated chicken eggs, carcasses of roe deers, piglets, fish and fowls, eggs, slaughterhouse by-products) were found near to dead animals. During pathological examination lesions only suspicious to toxicosis were found. Pesticide having caused the toxicosis were analysed by gas-chromatograph with MS and NP detectors in the gastric, crop and gizzard content and visceral organs of carcasses and in the baits. Toxicosis was caused by carbofurane in 14 cases, by phorate in 2 cases, by terbuphos in 2 cases and in 1-1 case by diazinone, clorphacinone and endosulphane. Most of the animals died of toxicosis were protected, whose ideal value is several millions of HUF. The baits "treated" with poison were possibly placed for killing foxes and other pests but in certain cases the circumstances indicate possible intentional poisoning of protected wild birds. Analysis of some cases indicates that the so-called secondary toxicosis of protected birds may occur even in case of plant protection treatment according to rules, when birds of prey consume rodents, insects and vermins dead or unable to escape. The presented cases demonstrate that non-properly planned and otherwise prohibited placing of baits may cause serious damage in the environment.
Language: Hungarian
English; Hungarian
Publication Type: Journal Article
Classification: X 24136 Environmental impact
Subfile: Toxicology Abstracts 0025-004X

59. Sanders, H. J. (1975). New Weapons Against Insects. *Chem.Eng.News* 18-31.
Chem Codes: Chemical of Concern:
ATN,MOM,MDT,DMT,AZ,FNF,PRT,CPY,ADC,DS,CBF,DZ,PRN,MLN,CBL,MP,TXP,HCCH,ES,
MXC,MRX,CHD,HPT,DDT,CBF,PPX Rejection Code: REFS CHECKED/REVIEW.

60. Sarnaik, S. S., Kanekar, P. P., Raut, V. M., Taware, S. P., Chavan, K. S., and Bhadbhade, B. J. (2006). Effect of Application of Different Pesticides to Soybean on the Soil Microflora. *J.Environ.Biol.* 27: 423-426.
Chem Codes: Chemical of Concern: PRT,CBF,IMC Rejection Code: BACTERIA.

61. Sarnaik, S. S., Kanekar, P. P., Raut, V. M., Taware, S. P., Chavan, K. S., and Bhadbhade, B. J. (Effect of Application of Different Pesticides to Soybean on the Soil Microflora. *J environ biol. 2006, may; 27(2 suppl):423-6. [Journal of environmental biology / academy of environmental biology, india]: J Environ Biol*.
Chem Codes: Chemical of Concern: PRT Rejection Code: BACTERIA.

ABSTRACT: Pesticide residues contributing to the contamination of soil may influence microbial population of the soil and in turn fertility of soil. The present paper reports the effect of pesticides applied to soybean i.e. phorate, carbofuran, carbosulfan, thiomethoxam, imidacloprid, chlorpyriphos and monocrotophos on soil microflora. The viable count of rhizobia and phosphate solubilizing bacteria from rhizospheric soil of soybean ranged between 10(7)-10(8) cfu/g soil which was comparable to the count of bacteria from untreated (control) soil. No significant change in the total viable count of any kind of bacteria due to application of pesticides has been found showing their ability to degrade these pesticides.
MESH HEADINGS: Colony Count, Microbial
MESH HEADINGS: Pesticides/*pharmacology
MESH HEADINGS: *Soil Microbiology
MESH HEADINGS: *Soybeans
LANGUAGE: eng

62. Shafik, M. T., Bradway, D., and Enos, H. F. (1971). A Method for Confirmation of Organophosphorus Compounds at the Residue Level. *Bull.Environ.Contam.Toxicol.* 6: 55-66.
Chem Codes: EcoReference No.: 38726
Chemical of Concern:

PRT,ETN,PRN,DZ,DMT,DEM,MLO,FNT,MP,FNTH,TCF,MVP,DCTP,DDVP,MLN,AZ,ABT
Rejection Code: METHODS.

63. Shock, C. C. , Feibert, E. B. G., Saunders, L. D., and James, S. R. (2003). 'umatilla Russet' and 'russet Legend' Potato Yield and Quality Response to Irrigation. *HortScience, 38 (6) pp. 1117-1121, 2003*.
Chem Codes: Chemical of Concern: PRT Rejection Code: NO TOXICANT.

Descriptors: Solanum tuberosum
Descriptors: Soil water potential
Descriptors: Evapotranspiration
Descriptors: 'Russet Burbank'
Descriptors: 'Shepody'
Descriptors: 'Frontier Russet'
Descriptors: 'Ranger Russet'
Abstract: 'Umatilla Russet' and 'Russet Legend', two newly released potato (Solanum tuberosum L.) cultivars were compared with four established cultivars ('Russet Burbank', 'Shepody', 'Frontier Russet', and 'Ranger Russet'). Potatoes were grown under four, season-long, sprinkler irrigation treatments in three successive years (1992-94) on silt loam soil in eastern Oregon. At each irrigation, the full irrigation treatment received up to the accumulated evapotranspiration (ET<inf>c</inf>) since the last irrigation. Three deficit irrigation treatments had progressively less water. The new cultivars 'Umatilla Russet' and 'Russet Legend' performed as well as or better than the other cultivars in the full irrigation treatment, with 'Umatilla Russet' showing a higher yield potential at the higher water application rates than 'Russet Legend'. All cultivars produced more U.S. No. 1 tubers than 'Russet Burbank', except in 1993, an unusually cool and wet year. 'Russet Legend' was the only cultivar showing a tolerance to deficit irrigation. In two out of the three years, 'Russet Legend' was as productive of U.S. No. 1 yield over most of the range of applied water as 'Shepody', 'Frontier Russet', and 'Ranger Russet' were at the higher end of the applied water range. Chemical names used: 0,0-diethyl S-[(ethylthio) methyl] phosphorodithioate (phorate); N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine (pendimethalin); and 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1methyl-ethyl) acetamide (metolachlor).
26 refs.
Language: English
English
Publication Type: Journal
Publication Type: Article
Country of Publication: United States
Classification: 92.10.1.2 CROP SCIENCE: Crop Physiology: Non-cereals
Classification: 92.10.2.3 CROP SCIENCE: Agronomy and Horticulture: Root and tuber crops
Subfile: Plant Science 0018-5345

64. Singh, A., Singh, A., Misra, T. N., and Agarwal, R. A. (1996). Molluscicides of Plant Origin. *Biol.Agric.Hortic.* 13: 205-252.
Chem Codes: EcoReference No.: 83309
Chemical of Concern: DM,NSM,ADC,CBL,PRT,CYP,PMR,FNV Rejection Code: REVIEW.

65. Singh, A. K., Hewetson, D. W., Jordon, K. C., and Ashraf, M. (1986). Analysis of Organophosphorus Insecticides in Biological Samples by Selective Ion Monitoring Gas Chromatography-Mass Spectrometry. *J.Chromatogr.* 369: 83-96.
Chem Codes: Chemical of Concern: Naled,DZ,PRT,DMT,AZ,DS,MLN,ETN,OTN Rejection Code: NO SPECIES.

66. Singh, M., Lal, K., and Singh, S. B. (2002). Effect of Calotropis (Calotropis Procera) Extract on Infestation of Termite (Odontotermes Obesus) in Sugarcane Hybrid. *Indian Journal of Agricultural Sciences, 72 (7) pp. 439-441, 2002*.
Chem Codes: Chemical of Concern: PRT Rejection Code: BIOLOGICAL TOXICANT.

Descriptors: Termite infestation
Descriptors: Sugarcane
Descriptors: Cane yield
Abstract: A field experiment was conducted during 1998-2001 at Shahjahanpur, Uttar Pradesh, to investigate the effect of calotropis (Calotropis procera L.) extract on termite (Odontotermes obesus Rambur) damage to the planted sugarcane setts. Dipping setts in 20.0 or 15.0% solution of Calotropis extract and soil treatment with 2.0% solution of Calotropis extract were equally effective and as effective as the soil application of phorate 10G @ 2.5 kg ai/ha. These treatments were more effective (P= > 0.05) than untreated control in reducing termite infestation from 28.8, 19.4 and 11.6 to 17.7, 12.7 and 4.8% compared with 49.9, 34.4 and 22.9% in control on sett, sett end and sett bud basis, respectively, and increasing the cane yield from 14.15 to 21.10 tonnes/ha over the control.
7 refs.
Language: English
English
Publication Type: Journal
Publication Type: Article
Country of Publication: India
Classification: 92.10.4.3 CROP SCIENCE: Crop Protection: Pests
Classification: 92.11.1.8 PLANT PATHOLOGY AND SYMBIOSES: Plant Pathology: Other pests
Classification: 92.10.2.9 CROP SCIENCE: Agronomy and Horticulture: Weeds
Subfile: Plant Science 0019-5022

67. Singh, S., Chaudhry, D., Behera, D., Gupta, D., and Jindal, S. K. (2001). Aggressive Atropinisation and Continuous Pralidoxime (2-Pam) Infusion in Patients With Severe Organophosphate Poisoning: Experience of a Northwest Indian Hospital. *Human & Experimental Toxicology [Hum. Exp. Toxicol.]. Vol. 20, no. 1, pp. 15-18. Jan 2001*.
Chem Codes: Chemical of Concern: PRT Rejection Code: HUMAN HEALTH.

Descriptors: Article Subject Terms: Organophosphorus compounds
Descriptors: Poisoning
Descriptors: Pesticides (organophosphorus)
Abstract: The aim of the study was to find whether continuous pralidoxime (2-PAM) infusion along with aggressive atropinisation improves the outcome in patients with severe organophosphate poisoning who require assisted ventilation. Sixteen patients admitted to the respiratory intensive care unit (RICU) with severe organophosphate poisoning and requiring assisted ventilation were included in the study. The compounds involved were phorate (six), dichlorvos (four), oxydimeton methyl (one), monocrotophos (one), methyl parathion (one) and in three it was unknown. After decontamination, they were given intravenous (iv) bolus atropine 5 mg at onset and then 2.5 mg every 5-10 min till atropinisation was achieved, and then maintained either by intermittent bolus doses or by continuous infusion if the required dose was large. They were also given continuous iv infusion of 2- PAM in dose of 7.5 mg/kg body weight/h (maximum 500 mg/h) after an initial bolus dose of 2 g. The mean (plus or minus S.D.) dose of atropine was 735.02 plus or minus 742.98 mg (range 85-3000 mg) with maximum dose on day 1. The mean (plus or minus S.D) duration of 2-PAM infusion was 96.4 plus or minus 49.4 h (range 10-216 h). The mean (plus or minus S.D) duration of mechanical ventilation (MV) was 131.5 plus or minus 95.65 h (range 4-336 h). Fourteen patients could be successfully extubated and two died of bronchopneumonia and sepsis (mortality 12.5%). Continuous 2-PAM infusion along with aggressive atropinisation after initial decontamination improved the outcome but not the duration of MV in severely intoxicated patients with organophosphate compounds who required assisted ventilation in this case series.
Language: English
English
Publication Type: Journal Article
Classification: X 24131 Acute exposure
Subfile: Toxicology Abstracts 0960-3271

68. Stephenson, S. A., Burrows, J. A., and Babaluk, J. A. (2005). Long-Distance Migrations by Inconnu (Stenodus

Leucichthys) in the Mackenzie River System. *Arctic [Arctic]. Vol. 58, no. 1, pp. 21-25. Mar 2005.* Chem Codes: Chemical of Concern: PRT Rejection Code: SURVEY.

Descriptors: Article Subject Terms: Anadromous species
Descriptors: Environment management
Descriptors: Fishery management
Descriptors: Freshwater environments
Descriptors: Home range
Descriptors: Life history
Descriptors: Migration
Descriptors: Otoliths
Descriptors: Rivers
Descriptors: Spawning migrations
Descriptors: Stocks
Descriptors: Strontium
Descriptors: Territory
Descriptors: Article Taxonomic Terms: Salmonidae
Descriptors: Stenodus leucichthys
Descriptors: Article Geographic Terms: Canada, British Columbia
Descriptors: Canada, Liard R.
Descriptors: Canada, Northwest Terr.
Descriptors: Canada, Northwest Terr., Great Slave L.
Descriptors: Canada, Northwest Terr., Mackenzie R.
Descriptors: PN, Arctic
Descriptors: PNW, Beaufort Sea
Descriptors: PNW, Canada, Northwest Terr., Inuvik Region, Tuktoyaktuk
Abstract: Inconnu (Stenodus leucichthys) stocks of the Mackenzie River drainage exhibit complex life histories. In a single stock, some fish may make occasional or regular movements between freshwater and marine environments while others lead a completely freshwater existence. Many inconnu migrate between the Mackenzie River system and the Beaufort Sea, but during spawning migrations, most are believed to move only as far south as the Rampart Rapids near the community of Fort Good Hope. However, an inconnu tagged in the Liard River in northern British Columbia in 2001 was recaptured near Inuvik (Northwest Territories) in 2002, and a second inconnu tagged in the Liard River in 2002 was recaptured near Tuktoyaktuk (Northwest Territories) in 2003. These two fish exhibited some of the longest freshwater migrations by a species from Canadian waters other than Pacific salmon. Otolith strontium distributions of these two fish confirmed migrations of close to 1800 km between fresh and marine waters and indicated different life histories. Additional inconnu tagged in the Liard River in 2002 were recaptured in or near Great Slave Lake in 2002 and 2003. The movements of all these fish suggest that the management of inconnu stocks will be far more complicated than previously thought: they point out the need for management plans and protection that incorporate large geographic areas.
Language: English
English; French
Publication Type: Journal Article
Environmental Regime: Freshwater
Classification: D 04700 Management
Classification: Q1 01421 Migrations and rhythms
Classification: O 5080 Legal/Governmental
Subfile: Oceanic Abstracts; ASFA 1: Biological Sciences & Living Resources; Ecology Abstracts
0004-0843

69. Stimmann, M. W. and Ferguson, M. P. (1990). Potential Pesticide Use Cancellations in California. *Calif.Agric.* 44: 12-16.
Chem Codes: Chemical of Concern:
CLP,PAQT,MLN,CBF,DU,PRT,Naled,MOM,MDT,ETN,ES,DMT,DZ,CPY,AZ,PPHD,PSM,PMR,PRN,CYP,ACP,TFN,ODZ,LNR,ATZ,ACR,TPM,SZ,PMT,Captan,CTN,Folpet,MZB,Maneb,MEM,Zineb,DDVP,HCCH,BMY,DINO,PNB,TBA,24DXY,MFD,MTL,OYZ Rejection Code: NO TOX DATA.

70. Struger, J., L'Italien, S., and Sverko, E. (2004). In-Use Pesticide Concentrations in Surface Waters of the Laurentian Great Lakes, 1994-2000. *Journal of Great Lakes Research [J. Great Lakes Res.]. Vol. 30, no. 3, pp. 435-450. 2004.*
Chem Codes: Chemical of Concern: PRT Rejection Code: FATE.

Descriptors: Article Subject Terms: Aquatic Life
Descriptors: Atrazine
Descriptors: Drinking Water
Descriptors: Drinking water
Descriptors: Great Lakes research
Descriptors: Herbicides
Descriptors: Insecticides
Descriptors: Lake Basins
Descriptors: Lakes
Descriptors: Metabolites
Descriptors: Organophosphorus Pesticides
Descriptors: Organophosphorus compounds
Descriptors: Pesticides
Descriptors: Pesticides in lake water
Descriptors: Pollution monitoring
Descriptors: Protection
Descriptors: Seasonal variability
Descriptors: Seasonal variations
Descriptors: Surface Water
Descriptors: Surface water
Descriptors: Variability
Descriptors: Water Quality Standards
Descriptors: Water pollution
Descriptors: Water pollution and agriculture
Descriptors: Water quality
Descriptors: Water quality standards
Descriptors: Water samples
Descriptors: Article Geographic Terms: Canada, Ontario, Huron L., Georgian Bay
Descriptors: Canada, Ontario, Ontario L.
Descriptors: North America, Great Lakes Basin
Descriptors: North America, Ontario L.
Descriptors: North America, Superior L.
Descriptors: USA, Pennsylvania, Erie
Descriptors: USA, Pennsylvania, Erie L.
Abstract: Pesticides are heavily used in agricultural production in the Great Lakes basin. Large-volume surface water samples were collected between 1994 and 2000 from Lakes Ontario, Erie, Huron (including Georgian Bay), and Superior and analyzed for neutral and phenoxy-acid herbicides, and organophosphorus insecticides. Thirty-nine pesticides from these three pesticide classes, including analytes and some metabolites, were measured. Six pesticides - barban, diallate-2, triallate, phorate, phosmet, and disulfoton - were not detected. Atrazine, metolachlor, simazine, and 2,4-D were detected in greater than 50% of the samples. The highest maximum concentrations were observed for atrazine (1,039 ng/L), metolachlor (736 ng/L), and D-simazine (281 ng/L). No pesticide concentrations exceeded water quality guidelines/criteria for the protection of aquatic life and drinking water. In general, an increasing concentration gradient from north to south was observed with Superior < Huron < Ontario < Erie. The spatial and seasonal variability of selected pesticides are discussed in relation to their use and application.
Language: English
English
Publication Type: Journal Article
Environmental Regime: Freshwater
Classification: M2 556.55 Lakes, Reservoirs, Ponds (556.55)

Classification: SW 3010 Identification of pollutants
Classification: P 2000 FRESHWATER POLLUTION
Classification: Q5 01502 Methods and instruments
Classification: EE 40 Water Pollution: Monitoring, Control & Remediation
Subfile: ASFA 3: Aquatic Pollution & Environmental Quality; Environmental Engineering Abstracts; Pollution Abstracts; Meteorological & Geoastrophysical Abstracts; Water Resources Abstracts 0380-1330

71. Suett, D. L., Fournier, J.-C., Papadopoulou-Mourkidou, E., Pussemier, L., and Smelt, J. (1996). Accelerated Degradation: The European Dimension. *Soil Biol.Biochem.* 28: 1741-1748.
Chem Codes: Chemical of Concern: CBD,PNB,MB,BTY,VNT,MLT,PZM,EPTC,OML,MITC,13DPE,PYZ,BDC,CPY,SZ,NPP,LNR,CBF,ADC,DZ,PRT,IPD,VCZ Rejection Code: NO TOX DATA.

72. Tang, B., Zhang, J. E., Zang, L. G., Zhang, Y. Z., Li, X. Y., and Zhou, L. (2005). Determination of Nine Organophosphorus Pesticides in Cereals and Kidney Beans by Capillary Gas Chromatography with Flame Photometric Detection. *J.Chromatogr.Sci.* 43: 337-341.
Chem Codes: EcoReference No.: 94179
Chemical of Concern: MLN,PRN,MP,EP,PRT,DZ,CPY Rejection Code: METHODS.

73. Tang, B., Zhang, J. E., Zang, L. G., Zhang, Y. Z., Li, X. Y., and Zhou, L. (2005-). Determination of Nine Organophosphorus Pesticides in Cereals and Kidney Beans by Capillary Gas Chromatography With Flame Photometric Detection. *J.Chromatogr.Sci.* 43: 337-341.
Chem Codes: Chemical of Concern: MLN,PRN,MP,EP,PRT,DZ,CPY Rejection Code: CHEM METHODS.

Journal of chromatographic science//

74. Thomas, R. E., Cohen, J. M., and Bendixen, T. W. (1964). Pesticides in Soil and Water an Annotated Bibliography. *Environ.Health Series, Water Supply and Pollut.Control, U.S.Dep.Health, Education, and Welfare, Public Health Service, September 1964, Cincinnati, OH* 90 p.
Chem Codes: EcoReference No.: 89155
Chemical of Concern: ACY,PMA,NPM,AND,AMTL,AS,ATZ,HCCH,Captan,CHD,CLP,24DXY,DDT,DDVP,DZ,DLD,DMT,DS,DU,ANZ,EDT,EN,FBM,AZ,HPT,MLN,MLH,MCPA,MXC,MB,Nabam,PAQT,PRN,PCP,PRT,MVP,PPHD,PBT,PRO,PPZ Rejection Code: REVIEW.

75. Thompson, H. M., Langton, S. D., and Hart, A. D. M. (1995). Prediction of Inter-Species Differences in the Toxicity of Organophosphorus Pesticides to Wildlife - A Biochemical Approach. *Comp.Biochem.Physiol.C* 111: 1-12.
Chem Codes: Chemical of Concern: DMT,CMPH,PRT,SFT,FNTH,FNT,MLN,AZ,PRN,MP Rejection Code: IN VITRO.

76. Tynes, R. E. and Hodgson, E. (1985). Magnitude of Involvement of the Mammalian Flavin-Containing Monooxygenase in the Microsomal Oxidation of Pesticides. *J.Agric.Food Chem.* 33: 471-479.
Chem Codes: Chemical of Concern: PRT,DS,SPS,FNTH,TBO,ADC,MCB,ETU,NCTN Rejection Code: IN VITRO.

77. Visalakshy, A., Santhakumari, K., Koshy, G., and Nair, M. R. G. K. (1978). Effect of Granular Insecticides on Nodulation, Rhizosphere microflora and Growth Characteristics of Cowpea. *Agric.Res.J.Kerala* 16: 171-175.
Chem Codes: Chemical of Concern: PRT,CBF,CBL,ADC,DS Rejection Code: NO DURATION.

78. Walker, C. H. (1983). Pesticides and Birds - Mechanisms of Selective Toxicity. *Agric.Ecos.Environ.* 9: 211-226.
Chem Codes: Chemical of Concern:

PIRM,OXD,DLD,PPX,MCB,EPTC,CBL,TCF,TVP,TMP,PSM,PRT,FNT,DS,DCTP,DEM,CMPH,AZ,CPY,DDVP,DMT,ETN,FNTH,MVP,PRN,MP,DZ,PPHD Rejection Code: REFS CHECKED/REVIEW.

79. Wilson, L. K., Elliott, J. E., Vernon, R. S., Smith, B. D., and Szeto, S. Y. (2002). Persistence and Retention of Active Ingredients in Four Granular Cholinesterase-Inhibiting Insecticides in Agricultural Soils of the Lower Fraser River Valley, British Columbia, Canada, With Implications for Wildlife Poisoning. *Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 21, no. 2, pp. 260-268. Feb 2002.*
Chem Codes: Chemical of Concern: PRT Rejection Code: FATE.

Descriptors: Article Subject Terms: Agricultural land
Descriptors: Agriculture
Descriptors: Agrochemicals
Descriptors: Cholinesterase
Descriptors: Insecticides
Descriptors: Pesticides (see also Bactericides, Weedkillers)
Descriptors: Poisoning
Descriptors: Pollutant persistence
Descriptors: Pollution (Soil)
Descriptors: Risk assessment
Descriptors: Soil
Descriptors: Soil (types of)
Descriptors: Soil pollution
Descriptors: Toxicity (see also Lethal limits)
Descriptors: Wildlife
Descriptors: Article Geographic Terms: Canada, British Columbia
Abstract: The persistence and retention of active ingredients in granules of Thimet 15G (phorate 15% by weight), Dyfonate 10G (fonofos 10% by weight), Counter 15G (terbufos 15% by weight), and Furadan 10G (carbofuran 10% by weight) were determined in silt loam and organic muck agricultural soils typical of the lower Fraser River valley (BC, Canada). In June 1995, treatment bags made of polyester cloth (7.5 x 7.5 cm) containing granules of a single insecticide, either alone or with soil, were placed during spring planting in the bottom of the furrow and retrieved periodically until April 1996. The parent component of each insecticide declined monotonically except for carbofuran (logistic decline). In the silt loam (organic muck) soil, the average June-to-October first-order rate constants and half-lives were 0.009 (0.010)/d and 80 (71) d for fonofos, 0.012 (0.009)/d and 58 (82) d for phorate, and 0.032 (0.015)/d and 21 (47) d for terbufos; the half-life of carbofuran was 129 (97) d. By December, the average amounts of fonofos and phorate in silt loam (organic muck) were 26% (range: 17-40%; 14% [range: 3.4-21%]) and 21% (range: 15-30%; 10% [range: 5.0-24%]) of the initial amounts of active ingredients measured at time zero, respectively. By April, the percentages dropped to 16% (range: 7.8-24%; 2.3% [range: 0-7.7%]) and 7.3% (range: 1.9-25%; 0.6% [range: 0-1.9%]). During this period, about 95% of the active ingredients were granule bound, the rest remaining in the bag. Only low levels of terbufos and carbofuran persisted in both soils from December to April of the following year. Results indicate an enhanced probability for poisoning of waterfowl and raptors because of the high levels of active ingredients retained on granules of all four insecticides in both soils in the fall. The risk of acute poisoning by phorate and fonofos continued though the winter.
Language: English
English
Publication Type: Journal Article
Classification: AQ 00008 Effects of Pollution
Classification: X 24136 Environmental impact
Classification: P 5000 LAND POLLUTION
Classification: EE 30 Soil Pollution: Monitoring, Control & Remediation
Classification: P 6000 TOXICOLOGY AND HEALTH
Subfile: Pollution Abstracts; Toxicology Abstracts; Aqualine Abstracts; Environmental Engineering Abstracts 0730-7268

80. Xue, W., Liu, Z., and Ke, C. ([Determination of Phorate and Tebuconazole in Their Mixture by Rp-Hplc]. *Se pu. 2005, may; 23(3):320. [Se pu = chinese journal of chromatography / zhongguo hua xue hui]: Se Pu*.
Chem Codes: Chemical of Concern: PRT Rejection Code: CHEM METHODS.

MESH HEADINGS: Chromatography, High Pressure Liquid/*methods
MESH HEADINGS: Insecticides/*analysis
MESH HEADINGS: Phorate/*analysis
MESH HEADINGS: Triazoles/*analysis
LANGUAGE: chi

These are Papers that were excluded since they do not contribute any meaningful data or most sensitive data to assessment.

Phorate Refresh (10/05-02/28/08)
Efficacy/Target Papers that Were Accepted ECOTOX

Acceptable for ECOTOX and OPP (Efficacy/Target)

1. Al-Aazwi, A. F. (1966). Seed Treatment with Phorate, Disulfoton, and Other Insecticides to Control Pea Insects in Iraq. *J.Econ.Entomol.* 59: 859-864.

   Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

2. All, J. N. and Jellum, M. D. (1977). Efficacy of Insecticide-Nematocides on Sphenophorus callosus and Phytophagous Nematodes in Field Corn. *J.Georgia Entomol.Soc.* 12: 283-291.

   EcoReference No.: 39684
   Chemical of Concern: EP,CBF,ACP,FNF,ADC,PRN,OML,PRT,CPY,TBO,PHSL; Habitat: T; Effect Codes: POP; Rejection Code: OK(CBF,ADC,ACP),TARGET(PRT,CPY).

3. Armstrong, J. S., Dregseth, B., and Schroeder, A. (1999). At-Planting and Post-planting Applications Granular Insecticides for Sugarbeet Root Maggot Control, 1998. *Arthropod Manag.Tests* 24: 298-299 (F118).

   EcoReference No.: 88057
   Chemical of Concern: ADC,CPY,TBO,PRT; Habitat: T; Effect Codes: POP; Rejection Code: OK(ADC,TBO),EFFICACY(CPY,PRT).

4. Bacheler, J. S. and Mott, D. W. (1998). Efficacy of Selected Insecticides for Thrips Control on Cotton 1997. *In: K.N.Saxena (Ed.), Arthropod Management Tests, Volume 23, Entomol.Soc.of Am., Lanham, MD* 23: 218-219.

   Chemical of Concern: PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

5. Ball, H. J. (1968). A Five Year Study of Potential Western Corn Rootworm Resistance to Diazinon and Phorate in Nebraska. *J.Econ.Entomol.* 61: 496 p.

Chemical of Concern: PRT; Habitat: T; Rejection Code: TARGET(PRT).

6. Barras, S. J., Clower, D. F., and Merrifield, R. G. (1967). Control of the Nantucket Pine Tip Moth on Loblolly Pine with Systemic Insecticides in Louisiana. *J.Econ.Entomol.* 60: 185-90.

   EcoReference No.: 96294
   Chemical of Concern: DDT,DS,PRT,DMT; Habitat: T; Effect Codes: MOR,POP; Rejection Code: EFFICACY(DS,PRT,DMT).

7. Barwal, R. N. (1996). Evaluation of Carbofuran and Phorate Granules Against Insect Pests of Seed Crop of Cabbage . *J.Insect Sci.* 9: 143-146.

   Chemical of Concern: CBF,PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

8. Bessin, R. T. and Townsend, L. H. (1994). Western Corn Rootworm Larval Control, 1993. *Arthropod Manag.Tests* 19: 183-184 (20F).

   EcoReference No.: 96145
   Chemical of Concern: PRT,PBP,TBO,FNF,TFT,CEX,CBF,CPY; Habitat: T; Effect Codes: PHY,POP; Rejection Code: EFFICACY(PRT).

9. Bhagawati, B. and Phukan, P. N. (1990). Chemical Control of Meloidogyne incognita on Pea. *Indian J.Nematol.* 20: 79-83.

   EcoReference No.: 83912
   Chemical of Concern: CBF,DZ,PRT; Habitat: T; Effect Codes: GRO,POP,REP; Rejection Code: LITE EVAL CODED(DZ),OK(ALL CHEMS),EFFICACY(PRT).

10. Bigger, J. H., Johnson, P. E., and Weibel, R. O. (1965). Controlling Hessian Fly with Phorate and Disulfoton. *J.Econ.Entomol.* 58: 1083-1085.

    Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

11. Bishop, G. W., Halbert, S., and Johnston, R. L. (1986). Wireworm and Foliar Feeding Insect Control on Potatoes, 1985. *Insectic.Acaric.Tests* 11: 154-156 (No. 214).

    EcoReference No.: 88760
    Chemical of Concern: ADC,BFT,FNF,DS,EP,PRT; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET(DS,PRT).

12. Boetel, M. A. and Fuller, B. W. (1999). Planting-Time and Post-Emergence Insecticide Treatments for Controlling Corn Rootworms in South Dakota, 1998. *Arthropod Manag.Tests* 24: 209-210 (F21).

    EcoReference No.: 88058
    Chemical of Concern: PBP,TBO,TFT,CEX,CPY,PRT,CBF; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(CPY,PRT).

13. Brandenburg, R. L. and Hertl, P. T. (1988). Thrips Control on Peanuts, North Carolina, 1987. *Insectic.Acaric.Tests* 13: 271-272 (No. 123F).

    EcoReference No.: 88879
    Chemical of Concern: EP,ADC,PRT,FMP; Habitat: T; Effect Codes: POP; Rejection Code: OK(EP,FMP),TARGET(ADC,PRT).

14. Brandenburg, R. L. and Royals, B. M. (1998). Evaluating Thrips Control in Peanuts Using Percent Damage

Leaflet Ratings 1997. *In: K.N.Saxena (Ed.), Arthropod Management Tests, Volume 23, Entomol.Soc.of Am., Lanham, MD* 23: 252.

Chemical of Concern: PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

15. Brandenburg, R. L. and Royals, B. M. (1994). Thrips Control in Peanuts, North Carolina, 1993. *Arthropod Manag.Tests* 19: 244-245.

EcoReference No.: 96201
Chemical of Concern: ADC,PRT,ACP; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(PRT).

16. Cargill, R. L. and Santelmann, P. W. (1971). Response of Peanuts to Combinations of Herbicides with Other Pesticides. *Weed Sci.* 19: 24-27.

EcoReference No.: 96736
Chemical of Concern: DS,PRT,TFN; Habitat: T; Effect Codes: PHY,GRO; Rejection Code: OK(DS),CROP(PRT).

17. Chisholm, D. and Specht, H. B. (1967). Effect of Application Rates of Disulfoton and Phorate, and of Irrigation on Aphid Control and Residues in Canning Peas. *Can.J.Plant Sci.* 47: 175-180.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

18. Connington, L., Grafius, E., Herrington, D., Derouin, K., Bishop, B., Habbel, P., and Hayden, J. (1988). Colorado Potato Beetle Control, 1986. *Insectic.Acaric.Tests* 13: 137-139 (70E).

EcoReference No.: 88872
Chemical of Concern: ADC,EP,CBF,PRT,CYF,PSM; Habitat: T; Effect Codes: POP,REP,GRO; Rejection Code: OK(CBF,ADC),EFFICACY(PRT,CYF,PSM).

19. Cranshaw, W. S., Jagne, J. F., Lordier, M. K., Wawrzynski, R. P., and Liewehr, D. J. (1986). Potato Insect Control with Systemic Insecticides, Larimer County, Colorado, 1985. *Insectic.Acaric.Tests* 11: 157-158 (No. 216).

EcoReference No.: 88761
Chemical of Concern: DS,CBF,ADC,PRT; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET(DS,PRT).

20. Darekar, K. S., Patil, B. D., and Patil, N. G. (1985). Control of Grapevine Nematodes with Systemic Granular Nematicides and Their Effect on Yield. *Indian J.Nematol.* 15: 249-250.

EcoReference No.: 80205
Chemical of Concern: PRT,CBF,ADC; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(ADC),OK(CBF),EFFICACY(PRT).

21. Das, A. C. and Mukherjee, D. (1998). Insecticidal Effects on the Activity and Numbers of Non-Symbiotic N2-Fixing Bacteria and Phosphate Solubilizing Microorganisms and on Some Chemical Properties of Rice Soil. *Microbiol.Res.* 153: 355-361.

EcoReference No.: 99248
Chemical of Concern: CBF,PRT,FNV; Habitat: T; Effect Codes: BCM,POP; Rejection Code: EFFICACY(PRT,FNV,CBF).

22. Duan, J. J., Head, G., Jensen, A., and Reed, G. (2004). Effects of Trangenic Bacillus Thuringiensis Potato and Conventional Insecticides for Colorado Potato Beetle (Coleoptera: Chrysomelidae) Management on

the Abundance of Ground-Dwelling Arthropods in Oregon Potato Ecosystems. *Environ.Entomol.* 33: 275-281 .

EcoReference No.: 88064
Chemical of Concern: PMR,PRT,DS; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(DS,PRT).

23. Dunning, R. A. and Winder, G. H. (1970). Trials on the Control of Docking Disorder in Sugar Beet; Seed and Row Treatment with Nematicides. *Proc.Brit.Insectic.Fungic.Conf., 5th* 1: 265-273.

EcoReference No.: 92871
Chemical of Concern: PRN,ADC,PRT,MOM,NHSO4,DD; Habitat: T; Effect Codes: POP,GRO; Rejection Code: NO COC(CLPM),OK(MOM,ADC),EFFICACY(DD,PRT).

24. Emmett, B. J. (1981). Effects on Carrot Fly Larvae and Growth of Celery of Some Insecticide Formulations Applied to Peat Blocks Used for Raising Plants. *In: Proc.British Crop Protection Conf.-Pests and Diseases* 495-501.

EcoReference No.: 96078
Chemical of Concern: FNF,CBF,CPY,DZ,DS,PRT; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(CBF,CPY,DZ,DS,PRT).

25. Forsberg, J. L. and Appleby, J. E. (1970). New Chemicals Appear Promising for Gladiolus Disease Control. *Ill.State Florists' Assoc.Bull.* 312: 4, 7,10-11,14.

EcoReference No.: 81161
Chemical of Concern: TCMTB,BMY,TBA,CBX,DS,CBY,FNF,HPT,ADC,PRT; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(TCMTB),EFFICACY(DS,ADC,PRT).

26. Funderburk, J. E., Gorbet, D. W., Teare, I. D., and Stavisky, J. (1998). Thrips Injury can Reduce Peanut Yield and Quality Under Conditions of Multiple Stress. *Agron.J.* 90: 563-566.

EcoReference No.: 87131
Chemical of Concern: ACP,ADC,PRT,DS; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(ACP),EFFICACY(ADC,DS,PRT).

27. Gogoi, B. B. and Phukan, P. N. (1990). Efficacy of Certain Chemicals as Seed Treatment Against Meloidogyne incognita on Lentil. *Indian J.Nematol.* 20: 53-56.

EcoReference No.: 83913
Chemical of Concern: CBF,DZ,PRT; Habitat: T; Effect Codes: GRO,POP,REP; Rejection Code: LITE EVAL CODED(DZ),OK(ALL CHEMS),EFFICACY(PRT).

28. Gough, N. (1990). Evaluation of Miticides for the Control of Two-Spotted Mite Tetranychus urticae Koch on Field Roses in Southern Queensland. *Crop Prot.* 9: 119-127.

EcoReference No.: 97445
Chemical of Concern: CTZ,ADC,BFT,CPY,HTX,DMT,PRT,PPG; Habitat: T; Effect Codes: PHY,POP,GRO; Rejection Code: NO ENDPOINT(CTZ,ADC,CPY,HTX,PRT,DMT,PPG),TARGET(PRT).

29. Gray, M. E., Hein, G. L., Walgenbach, D. D., Elliott, N. C., and Kieckhefer, R. W. (1988). Evaluation of Planting-Time Insecticide Treatments and Foliar Applications Against Bird Cherry-Oat Aphid, Corn Leaf Aphid, and Russian Wheat Aphid, 1987. *Insectic.Acaric.Tests* 13: 322-323 (No. 192F).

EcoReference No.: 88883

Chemical of Concern: PRT,BFT,DMT,ES,CBF,PMR,ADC; Habitat: T; Effect Codes: POP,MOR; Rejection Code: OK(ES,CBF,ADC),TARGET(PRT,BFT,DMT,PMR).

30. Gupta, G. P. (1989). Efficacy of Soil Insecticides Against Jassids and Their Effect on Non-Target Soil Organisms. *Pesticides* 23: 37-41.

EcoReference No.: 95540
Chemical of Concern: PRT,DMT,ADC,DS; Habitat: T; Effect Codes: POP,MOR; Rejection Code: EFFICACY(PRT,DMT,ADC,DS).

31. Gupta, P. R., Mishra, R. C., and Dogra, G. S. (1981). Efficacy of Granular and Seedling-Dip Treatments Against Mandibulate Pests Infesting Cauliflower. *Indian J.Agric.Sci.* 51: 514-516.

EcoReference No.: 96065
Chemical of Concern: ADC,CBF,DS,PRT,MP; Habitat: T; Effect Codes: POP,PHY,MOR; Rejection Code: LITE EVAL CODED(DS),OK(ADC,CBF,MP),EFFICACY(PRT).

32. Gurecki, T., Smilowitz, Z., Rebarchak, P., and Yocum, J. O. (1987). Systemic Insecticide Trial, 1986. *Insectic.Acaric.Tests* 12: 134-135 (No. 156).

EcoReference No.: 88640
Chemical of Concern: ADC,CBF,PRT,OML; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),EFFICACY(PRT).

33. Haas, M. J. and Landis, D. A. (1996). 1st Generation European Corn Borer Larvicide Trial, 1995. *Arthropod.Manag.Tests* 21: 219 (36F).

EcoReference No.: 95501
Chemical of Concern: LCYT,CBF,PMR,CPY,FNF,PRT; Habitat: T; Effect Codes: POP; Rejection Code: NO COC(TFZ),TARGET(PMR,CPY,PRT).

34. Hagel, G. T. (1970). Systemic Insecticides and Control of Insects and Mites on Beans. *J.Econ.Entomol.* 63: 1486-1489.

EcoReference No.: 96093
Chemical of Concern: ADC,DS,PRT,PPX; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(ADC,DS,PRT).

35. Hammond, R. B. and Ressler, E. (1987). Soil-Applied Insecticide Trial for Seedcorn Maggot Control on Soybean, 1986 . *Insectic.Acaric.Tests* 12: 273 (No. 324) .

EcoReference No.: 88774
Chemical of Concern: PRT,TBO,CBF,ADC; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),EFFICACY(PRT).

36. Hammond, R. B. and Ressler, E. (1986). Soil-Applied Insecticide Trials for Seedcorn Maggot on Soybeans, 1985. *Insectic.Acaric.Tests* 11: 342-343 (No. 427).

EcoReference No.: 88749
Chemical of Concern: CBF,ADC,PRT,TBO; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),EFFICACY(PRT).

37. Harrison, F. P. (1965). Granulated Insecticides for Control of Some Corn Pests. *J.Econ.Entomol.* 58: 137-139.

EcoReference No.: 96446
Chemical of Concern: DZ,DDT,CBL,PRT,DS; Habitat: T; Effect Codes: POP,GRO; Rejection

Code: EFFICACY(DZ,CBL,PRT,DS).

38. Harrison, F. P. and Wooldridge, A. W. (1966). Green Peach Aphid Control on Tobacco with Systemic Insecticide . *J.Econ.Entomol.* 59: 270-272.

EcoReference No.: 96451
Chemical of Concern: DS,PPHD,PRT; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(DS,PRT).

39. Hein, G. L., Ingemansen, J. A., and Walgenbach, D. D. (1988). First-Generation European Corn Borer Control via Ground, Chemigation, and Aerial Applications, 1986. *Insectic.Acaric.Tests* 13: 211-212 (No. 49F).

EcoReference No.: 88852
Chemical of Concern: PMR,CEX,TBO,FNF,TFT,CBF,PRT,TLM,CPY,CBL,TDC,FNV; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET(PMR,PRT,CBL,TDC,CPY,FNV).

40. Herbert, D. A. (1998). Evaluation of Selected in-Furrow Applied Insecticides/Nematicides with and Without an Additional Foliar Insecticide Band, for Control of Thrips on Cotton, 1997. *In: K.N.Saxena (Ed.), Arthropod Management Tests, Volume 23, Entomol.Soc.of Am., Lanham, MD* 23: 230-231.

Chemical of Concern: PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

41. Herbert, D. A. Jr. (1995). Evaluation of Granular Insecticides, with and Without Vapam, for Control of Tobacco Thrips in Peanut, 1994. *Arthropod Manag.Tests* 20: 224-225 (98F).

EcoReference No.: 96086
Chemical of Concern: ADC,PRT,DS,MTAS; Habitat: T; Effect Codes: POP; Rejection Code: NO MIXTURE(MTAS),EFFICACY(ADC,PRT,DS).

42. Herbert, D. A. Jr and Malone, S. (1999). Evaluation of Selected In-Furrow Applied Insecticide/Nematicides, with and Without an Additional Foliar Insecticide Band, for Control of Thrips on Cotton, 1998. *Arthropod Manag.Tests* 24: 247-248 (F62).

EcoReference No.: 88083
Chemical of Concern: DS,PRT,ACP,ADC; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(ADC,DS,PRT,ACP).

43. Hopkins, A. R. and Taft, H. M. (1965). Control of Certain Cotton Pests with a New Systemic Insecticide, UC-21149. *J.Econ.Entomol.* 58: 746-749.

EcoReference No.: 96398
Chemical of Concern: DS,PRT; Habitat: T; Effect Codes: POP,MOR,REP; Rejection Code: EFFICACY(DS,PRT).

44. Hoy, C. W. and Dunlap, M. J. (1999). Potato Leafhopper Control, 1998. *Arthropod Manag.Tests* 24: 150-151 (E64).

EcoReference No.: 88082
Chemical of Concern: IMC,PRT; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(PRT).

45. Jayaraman, V. (1985). Study on Repellent Action of Phorate Against Rhinoceros Beetle, Oryctes rhinoceros Linn. *In: Behav.Physiol.Approaches Pest Manag., Pap.Natl.Semin.* 116-119.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: TARGET (DS,PRT).

46. Johnson, B. J. (1970). Combinations of Herbicides and Other Pesticides on Soybeans. *Weed Sci.* 18: 128-131.

EcoReference No.: 96735
Chemical of Concern: LNR,PRT,DS,MOM,TFN; Habitat: T; Effect Codes: GRO,POP; Rejection Code: OK(DS,MOM),TARGET(LNR),CROP(PRT).

47. Khan, T. A. and Khan, S. T. (1995). Evaluation of Seed Dressings with Nematicides for Control of Heterodera cajani Infection of Cowpea (Vigna unguiculata). *Tests Agrochem.Cultiv.(Ann.Appl.Biol.126 (Suppl.))* 16: 2-3.

EcoReference No.: 85649
Chemical of Concern: DZ,CBF,PRT; Habitat: T; Effect Codes: POP,GRO; Rejection Code: LITE EVAL CODED(DZ),OK(CBF),EFFICACY(PRT).

48. Kumar, R., Singh, S. K., Khokhar, K. S., and Jaglan, M. S. (1996). Effect of Insecticidal Seed Treatments on the Germination and Vigour of Okra Seeds. *Seed Res.* 24: 73-74.

EcoReference No.: 99243
Chemical of Concern: CBF,PRT; Habitat: T; Effect Codes: REP; Rejection Code: CROP(PRT),OK(CBF).

49. Landis, B. J., Powell, D. M., and Hagel, G. T. (1970). Attempt to Suppress Curly Top and Beet Western Yellows by Control of the Beet Leafhopper and the Green Peach Aphid with Insecticide-Treated Sugarbeet Seed. *J.Econ.Entomol.* 63: 493-496.

EcoReference No.: 96073
Chemical of Concern: PRT,DS; Habitat: T; Effect Codes: POP,PHY; Rejection Code: LITE EVAL CODED(DS),EFFICACY(PRT).

50. Malm, N. R. and Finkner, R. E. (1968). The Use of Systemic Insecticides to Reduce the Incidence of Curly Top Virus Disease in Sugarbeets. *J.Am.Soc.Sugar Beet Technol.* 15: 246-254.

EcoReference No.: 96742
Chemical of Concern: PRT,DS; Habitat: T; Effect Codes: POP,BCM; Rejection Code: EFFICACY(PRT,DS).

51. Mayo, Z. B. and Peters, L. L. (1978). Planting vs. Cultivation Time Applications of Granular Soil Insecticides to Control Larvae of Corn Rootworms in Nebraska. *J.Econ.Entomol.* 71: 801-803.

EcoReference No.: 52024
Chemical of Concern: CBF,TBO,DZ,FNF,PRT,EP; Habitat: T; Effect Codes: GRO,PHY; Rejection Code: EFFICACY(DZ,PRT).

52. Menn, J. J. (1962). The Metabolism of Phorate, an Organophosphorus Insecticide, in Three Insect Species. *J.Econ.Entomol.* 55: 90-96.

EcoReference No.: 91247
Chemical of Concern: PRT; Habitat: T; Effect Codes: PHY,MOR,ACC; Rejection Code: TARGET(PRT).

53. Mishra, P. K., Singh, R. N., Goel, A. K., Jayaswal, J., and Thangavelu, K. (1994). Toxicity of Some Insecticides on the Larvae of Red Beetles Tricliona picea Jacoby (Coleoptera: Chrysomelidae) - A Pest of Tasar Food Plants. *Indian J.Sericult.* 33: 193-194.

EcoReference No.: 90654
Chemical of Concern: HCCH,ES,MP,MLN,PRT,CBF; Habitat: T; Effect Codes: MOR; Rejection

Code: TARGET(MP,MLN,PRT),OK(CBF).

54. Morrow, E. A. and Grafius, E. J. (1986). Colorado Potato Beetle Control, 1985. *Insectic.Acaric.Tests* 11: 164-165 (224).

EcoReference No.: 88759
Chemical of Concern: ADC,DS,PRT,CYF,PMR,FNV,PSM; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(ADC,DS,PRT,PMR,FNV,PSM).

55. Mrig, K. K. and Chaudhary, J. P. (1992). Comparative Efficacy of Carbofuran and Phorate for the Control of Top and Root Borers in Sugarcane Ratoon. *J.Insect Sci.* 5: 57-61.

Chemical of Concern: CBF,PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

56. Narayanasamy, P. and Ramiah, M. (1976). Insecticidal Control of Groundnut Ring Mosaic Disease. *Madras Agric.J.* 63: 417-419.

EcoReference No.: 96718
Chemical of Concern: ES,PRT,DS,CBF,ADC; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(PRT,DS,CBF,ADC).

57. Nath, V. (1980). Relative Effectiveness of Some Chemical Insecticides Against White Grub Holotrichia consanguinea. *Indian J.Plant Prot.* 8: 45-48.

EcoReference No.: 79943
Chemical of Concern: DZM,AND,HPT,PRT,ES; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(DZM),OK(ALL CHEMS),EFFICACY(PRT).

58. Nath, V., Dhari, K., and Srivastava, A. S. (1984). Effect of Insecticides on the Control of White Grub Holotrichia consanquinea Blanch. (Coleoptera: Melolonthidae) in Groundnut. *Pesticides* 18: 30-31.

EcoReference No.: 80106
Chemical of Concern: DZM,PRT,HPT,ES,AND; Habitat: T; Rejection Code: LITE EVAL CODED(DZM),OK(ALL CHEMS),EFFICACY(PRT).

59. Neel, W. W. (1969). Comparison of Systemic Insecticides by Dip Treatments for Control of the Cottonwood Leaf Beetle. *J.Econ.Entomol.* 62: 265-267.

EcoReference No.: 96447
Chemical of Concern: DS,PRT,CBF; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(DS,PRT,CBF).

60. Noetzel, D. and Miller, J. (1993). Evaluation of Phorate in Colorado Potato Beetle Control Verndale Minnesota, 1992. *Insectic.Acaric.Tests* 18: 145-146 .

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: TARGET (DS,PRT).

61. Noetzel, D. and Nyegaard, C. (1988). Flea Beetle Control in Canola, 1987. *Insectic.Acaric.Tests* 13: 196 (30F).

EcoReference No.: 88850
Chemical of Concern: DS,PMR,CBL,FNV,CYH,BFT,CBF,PRT,CYF,ES,TBO,AZ; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(DS,PMR,CBL,FNV,BFT,CBF,PRT,CYF,AZ).

62. Noetzel, D., Ricard, M., and Sheets, B. (1992). Seedcorn Maggot Control in Navy Bean, 1990. *Insectic.Acaric.Tests* 17: 78 (3E).

EcoReference No.: 92309
Chemical of Concern: DZ,PRT,CPY,Captan; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(CPY),NO COC(TDC),NO MIXTURE(Captan),EFFICACY(PRT,DZ).

63. Noetzel, D., Ricard, M., and Wiersma, J. (1988). Comparing 2 Soil Systemics and 2 Foliars in 10 Regimes for Control of Pyrethroid-Resistant Colorado Potato Beetle, 1987. *Insectic.Acaric.Tests* 13: 156-157 (No. 84E).

EcoReference No.: 88870
Chemical of Concern: CYH,EFV,ADC,PRT; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET,NO CROP(EFV),EFFICACY(PRT).

64. Noetzel, D. and Sheets, B. (1992). Seedcorn Maggot Control in Edible Dry Bean, 1989. *Insectic.Acaric.Tests* 17: 78-79 (No. 4E).

EcoReference No.: 92307
Chemical of Concern: DZ,FNF,MXC,PRT,CPY,HCCH,Captan; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(CPY),NO COC(TDC),NO MIXTURE(Captan),EFFICACY(PRT,DZ).

65. Noetzel, D. M. and Nygaard, C. (1987). Flea Beetle Control in Canola, 1985. *Insectic.Acaric.Tests* 12: 181 (No. 212).

EcoReference No.: 88715
Chemical of Concern: CBF,CBL,PRT,ES,FNV,MLN; Habitat: T; Effect Codes: POP; Rejection Code: OK(CBF,ES,OK TARGET(CBL,MLN),TARGET(FNV,CBL,MLN,PRT).

66. Oleson, J. D., Nowatzki, T. M., and Tollefson, J. J. (1999). Corn Rootworm Larval Control, 1998. *Arthropod Manag.Tests* 24: 215-217 (F29).

EcoReference No.: 88115
Chemical of Concern: PBP,TBO,TFT,CBF,CPY,PRT,CEX; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(CPY,PRT),OK(PBP,TBO,TFT,CBF,PRT,CEX).

67. Oleson, J. D., Nowatzki, T. M., and Tollefson, J. J. (1999). Field Corn, Wireworm Larval Control, 1998. *Arthropod Manag.Tests* 24: 217-218 (F30).

EcoReference No.: 88098
Chemical of Concern: PBP,TBO,TFT,CEX,CPY,PRT; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(CPY,PRT).

68. Oleson, J. D., Rouse, J. R., Boeve, P. J., Warshaw, A. R., and Tollefson, J. J. (1993). Field Corn, Wireworm Larval Control, 1992. *Insectic.Acaric.Tests* 18: 208-209 (27F).

EcoReference No.: 95644
Chemical of Concern: TFT,FNF,PBP,PRT,TBO,HCCH; Habitat: T; Effect Codes: POP,PHY; Rejection Code: NO COC(Captan),EFFICACY(PRT).

69. Onsager, J. A. (1969). Nonpersistent Insecticides for Control of Pacific Coast Wireworm. *J.Econ.Entomol.* 62: 1065-1067.

EcoReference No.: 96295
Chemical of Concern: PRT,DZ,DS,13DPE,PRN,CBF; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(PRT,DZ,DS,13DPE,CBF).

70. Patel, H. M., Patel, P. U., Dodia, J. F., Patel, M. C., Korat, D. M., and Mehta, K. G. (1997). Effect of Insecticides on Natural Enemies of Major Insect Pests of Paddy. *Gujarat Agric.Univ.Res.J.* 22: 147-151.

EcoReference No.: 93334
Chemical of Concern: CBF,PRT,CPY,ACP; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(PRT,CPY,ACP),OK(CBF).

71. Patterson, R. S. and Rawlins, W. A. (1964). Evaluation of Phorate and Di-Syston for Potato Insect Control in New York. *Am.Potato J.* 41: 196-200.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: TARGET (DS,PRT).

72. Peswani, K. M., Jain, H. K., Agnihotri, N. P., Bose, B. N., Saxena, A. N., and Pandey, S. Y. (1979). Persistence of Disulfoton and Phorate Against the Cotton Jassid, Amrasca devastans Distant . *J.Entomol.Res.* 3: 84-86.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: TARGET (DS,PRT).

73. Peters, L. L. (1986). Chinch Bug Control, 1980. *Insectic.Acaric.Tests* 11: 327 (No. 414).

EcoReference No.: 87879
Chemical of Concern: CBF,BDC,TXP,TBO,CBL,PRT,PMR; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),OK TARGET(CBL),EFFICACY(PRT).

74. Pitre, H. N., Pluenneke, R. H., Bhirud, K. M., and Palmer, S. E. (1972). Dimethyl Sulfoxide (DMSO): Influence on Bean Pod Mottle Disease and Interaction with Disulfoton and Phorate. *J.Econ.Entomol.* 65: 1195-1197.

EcoReference No.: 97451
Chemical of Concern: DS,PRT,CBF; Habitat: T; Effect Codes: MOR; Rejection Code: TARGET(DS,PRT),OK(CBF).

75. Prasad, K. S. K. and Rao, Y. S. (1976). Chemotherapy of the Root-Knot Nematode (Meloidogyne graminicola) in Rice. III. Evaluation of Pesticides as Soil Drench. *Z.Pflanzenkr.Pflanzenschutz* 83: 736-741.

EcoReference No.: 94834
Chemical of Concern: OML,CPY,PRT,CBF,CBD,TBA; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(CPY,PRT),NO COC(TFR),OK(CBF).

76. Prasadji, J. K. and Sitaramaiah, K. (1992). Effect of Plant Growth Regulators Alone and in Combination with Nematicides on Root-Knot Severity and Yield in Tomato. *Indian J.Nematol.* 22: 77-81.

EcoReference No.: 87117
Chemical of Concern: PRT,ADC,NHCl; Habitat: T; Effect Codes: GRO,PHY,POP; Rejection Code: LIT EVAL CODED(ADC),EFFICACY(PRT).

77. Raj, B. T. and Nirula, K. K. (1970). Soil Treatment for the Control of Root-Knot Nematode on Potato (Solanum tuberosum L.). *Indian J.Agric.Sci.* 40: 878-882.

EcoReference No.: 96064
Chemical of Concern: DS,PRT; Habitat: T; Effect Codes: REP,MOR,POP; Rejection Code: EFFICACY(PRT),TARGET(DS).

78. Ratchford, K., Graves, J. B., Pavloff, A. M., and Burris, G. (1987). Evaluation of Thimet and Temik Soil Treatments on Early Season Insects and Yields in Cotton, 1986. *Insectic.Acaric.Tests* 12: 239 (No.

277).

EcoReference No.: 88777
Chemical of Concern: PRT,ADC; Habitat: T; Effect Codes: POP,GRO; Rejection Code: EFFICACY(PRT,ADC).

79. Reagan, T. E., Viator, B., Schexnayder, H. P. Jr., Ostheimer, E. A., and Younis, A. M. (1999). Impact of Fall Applied Soil Insecticide on Sugarcane Borer-Soil Insecticide Survey, 1998. *Arthropod Manag.Tests* 24: 298-299 (F119).

EcoReference No.: 88126
Chemical of Concern: PRT; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(PRT).

80. Reed, J. T. (1998). Evaluation of In-Furrow Insecticides for Control of Thrips on Cotton, 1997. *In: K.N.Saxena (Ed.), Arthropod Management Tests, Volume 23, Entomol.Soc.of Am., Lanham, MD* 23: 233-234.

Chemical of Concern: PRT; Habitat: T; Rejection Code: EFFICACY(PRT).

81. Reed, J. T. and Grant, R. R. (1988). Evaluation of Insecticides for Early Season Thrips Control in the Mississippi Delta, 1987. *Insectic.Acaric.Tests* 13: 255-256 (No. 99F).

EcoReference No.: 88810
Chemical of Concern: DCTP,TBO,AZ,MTM,ACP,OML,PRT,ADC; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(MTM),OK(ALL CHEMS),EFFICACY(PRT).

82. Romanow, L. R., Kennedy, G. G., and Sanders, D. C. (1984). Plug-Mix and Banded-and-Incorporated Application of Systemic Insecticides for Control of the Colorado Potato Beetle (Coleoptera: Chrysomelidae) on Direct-Seeded Tomatoes. *J.Econ.Entomol.* 77: 1245-1250.

EcoReference No.: 96071
Chemical of Concern: ADC,CBF,DS,PRT; Habitat: T; Effect Codes: REP,PHY,POP,MOR; Rejection Code: LITE EVAL CODED(DS),OK(ADC,CBF),EFFICACY(PRT).

83. Saikia, D. K. and Phukan, P. N. (1985). Efficacy of Certain Chemicals for the Control of Root-Knot Nematode Meloidogyne incognita on Jute. *J.Res.Assam.Agric.Univ.* 6: 43-46.

EcoReference No.: 86162
Chemical of Concern: DZ,CBF,ADC,PRT; Habitat: T; Effect Codes: GRO,POP,REP; Rejection Code: LITE EVAL CODED(ADC,DZ),OK(CBF),EFFICACY(PRT) .

84. Schuster, D. J. (1978). Tomato Pinworm: Chemical Control on Tomato Seedlings for Transplant. *J.Econ.Entomol.* 71: 195-196.

EcoReference No.: 96419
Chemical of Concern: PRT,Naled,MXC,DMT,MOM,AZ,DS,DZ,CBL,ES,HCCH,ACP,CBF,OML; Habitat: T; Effect Codes: POP,PHY; Rejection Code: TARGET(DMT,MOM,AZ,DS,DZ,CBL,ACP,Naled),OK(CBF),EFFICACY(PRT).

85. Shanks, C. H. Jr. (1966). Apparent Increase in Populations of the Strawberry Aphid Caused by Phorate and Disulfoton. *J.Econ.Entomol.* 59: 935-937.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: TARGET (DS,PRT).

86. Sharma, R., Dhaliwal, S. S., and Chandurkar, P. S. (1997). Evaluation of Chemical and Botanical Nematicides for Nematode Management on Brinjal. *Indian J.Plant Prot.* 25: 4-7.

EcoReference No.: 89394
Chemical of Concern: OXD,DMT,MOM,PRT,AZD; Habitat: T; Effect Codes: GRO,POP; Rejection Code: LITE EVAL CODED(OXD,MOM,DMT),EFFICACY(PRT,AZD).

87. Sharma, S. R. and Varma, A. (1982). Control of Yellow Mosaic of Mungbean Through Insecticides and Oils. *J.Entomol.Res.* 6: 130-136.

EcoReference No.: 98156
Chemical of Concern: PRN,ADC,DS,PRT,PPHD,MOIL,ALSV; Habitat: T; Effect Codes: POP; Rejection Code: OK(ADC),EFFICACY(DS,PRT).

88. Shields, E. J. and Testa, A. M. (1999). Corn Rootworm Control in Field Corn, 1993. *Arthropod Manag.Tests* 24: 223-224 (F38).

EcoReference No.: 88145
Chemical of Concern: CEX,PBP,FNF,TBO,TFT,CBF,CPY,PRT; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(PRT,CPY,CBF).

89. Shields, E. J. and Testa, A. M. (1999). Corn Rootworm Control in Field Corn, 1994. *Arthropod Manag.Tests* 24: 224-226 (F39).

EcoReference No.: 88222
Chemical of Concern: PBP,TBO,FNF,TFT,CEX,CBF,CPY,PRT; Habitat: T; Effect Codes: PHY,POP; Rejection Code: OK(PBP,TBO,FNF,TFT,CEX,CBF),EFFICACY(CPY,PRT).

90. Singh, A., Dalal, M. R., and Bhatti, D. S. (1989). Control of Hirschmanniella oryzae Nematodes in Rice. *Int.Rice Res.Newsl.* 14: 34.

EcoReference No.: 85252
Chemical of Concern: DZ,PRT,CBF; Habitat: T; Effect Codes: POP,GRO; Rejection Code: LITE EVAL CODED(DZ),OK(CBF),EFFICACY(PRT).

91. Singh, S. V. and Singh, Y. P. (1989). Effect of Insecticides on Aphid Population, Plant Growth and Yield of Mustard Crop. *Indian J.Entomol.* 51: 11-18.

EcoReference No.: 87093
Chemical of Concern: PPHD,PRT,DMT,DS,ADC; Habitat: T; Effect Codes: POP,GRO; Rejection Code: LITE EVAL CODED(ADC,DMT),EFFICACY(PRT,DS).

92. Singh, V. S. and Jotwani, M. G. (1977). Control of Sorghum Shootfly, Atherigona soccata Rond. with Phorate and Disulfoton Granules. *Indian J.Entomol.* 37: 219-224.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

93. Singh, V. S. and Jotwani, M. G. (1977). Effect of Soil Application of Phorate and Disulfoton on the Oviposition of Sorghum Shoot Fly, Atherigona soccata Rondani. *Indian J.Entomol.* 37, Pt. 2: 165-168.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

94. Sinha, S. N., Chakrabarti, A. K., and Peshwani, K. M. (1977). Control of Red Pumpkin Beetle, Rhaphidopalpa foveicollis Lucas, Infesting Cucurbit Seedlings in the Field. *Seed Res.* 5: 44-48.

EcoReference No.: 96081
Chemical of Concern: DS,PRT,DMT,CBF,ADC; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(DS,PRT,DMT).

95. Sitaramaiah, S., Prasad, G. R., and Sreedhar, U. (1999). Management of Tobacco Ground Beetle, Mesomorphus villiger with Insecticide Baits on Flue Cured Virginia Tobacco. *Indian J.Agricult.Sci.* 69: 660-663.

EcoReference No.: 93062
Chemical of Concern: AZD,CBL,PRT,ES,CPY,FNV; Habitat: T; Effect Codes: POP,MOR; Rejection Code: EFFICACY(AZD,CBL,PRT,CPY,FNV).

96. Sivaprakasam, K., Pillayarsamy, K., Rangarajan, A. V., Mahadevan, N. R., and Iyemperumal, S. (1976). Efficacy of Certain Insecticides in the Control of Chilli Mosaic. *Madras Agric.J.* 63: 236-237.

EcoReference No.: 96716
Chemical of Concern: PPHD,DS,PRT,ADC,CBF,CBL,DMT; Habitat: T; Effect Codes: POP; Rejection Code: EFFICACY(DS,PRT,ADC,CBF,CBL,DMT).

97. Sivasubramaniam, W. and Wratten, S. D. (1995). Effects of Insecticides on the Abundance of Arthropod Predators in Carrots in Canterbury, New Zealand. *In: A.J.Popay (Ed)., Proc.48th New Zealand Plant Protection Conf.Aug .8-10, 1995, Hastings, New Zealand, New Zealand Plant Protection Society, Inc., Rotorua, New Zealand* 302-307.

EcoReference No.: 95414
Chemical of Concern: PRT,OZ,LNR; Habitat: T; Effect Codes: POP; Rejection Code: NO TOX DATA(LNR),TARGET(DZ,PRT).

98. Stoltz, R. L. and Matteson, N. A. (1998). Colorado Potato Beetle and Green Peach Aphid Control with Soil-Applied Insecticides and Foliar Spray 1997. *In: K.N.Saxena (Ed.), Arthropod Management Tests, Volume 23, Entomol.Soc.of Am., Lanham, MD* 23: 135-137.

Chemical of Concern: PRT; Habitat: T; Rejection Code: TARGET(PRT).

99. Stoltz, R. L. and Matteson, N. A. (1999). Colorado Potato Beetle and Green Peach Aphid Control with Soil Applied Insecticides and Foliar Sprays, 1998. *Arthropod Manag.Tests* 24: 165-169 (E79).

EcoReference No.: 88282
Chemical of Concern: ADC,CBF,PRT,IMC; Habitat: T; Effect Codes: PHY,POP; Rejection Code: EFFICACY(PRT).

100. Teetes, G. L., Schaefer, C. A., Gipson, J. R., McIntyre, R. C., and Latham, E. E. (1975). Greenbug Resistance to Organophosphorous Insecticides on the Texas High Plains. *J.Econ.Entomol.* 68: 214-216.

EcoReference No.: 89282
Chemical of Concern: DEM,MP,DMT,DZ,CBF,DS,PRN,PRT; Habitat: T; Effect Codes: POP,MOR; Rejection Code: TARGET(MP,DMT,DS,PRT).

101. Thompson, A. R., Suett, D. L., Percivall, A. L., and Padbury, C. E. (1982). Protection of Carrots Against Carrot Fly by Carbofuran, Disulfoton or Phorate Applied at Drilling in a Sandy Loam, Followed by Carbofuran Applied in Mid-season. *Tests Agrochem.Cultiv.* 3: 22-23.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

102. Tiyagi, S. A., Ajaz, S., and Azam, M. F. (2004). Effect of Some Pesticides on Plant Growth, Root Nodulation and Chlorophyll Content of Chickpea. *Arch.Agron.Soil Sci.* 50: 529-533.

EcoReference No.: 87168
Chemical of Concern: PRT,FMP,CBF,ADC; Habitat: T; Effect Codes: GRO,BCM; Rejection Code: OK(ADC,CBF),CROP(PRT,FMP).

103. Toba, H. H. and Powell, D. M. (1986). Wireworm Control on Potato, Moxee, WA, 1984. *Insectic.Acaric.Tests* 11: 179-180 (No. 232).

EcoReference No.: 88746
Chemical of Concern: EP,FNF,DS,PRT,CBF; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET(DS,PRT).

104. Tripathi, S. R. and Tripathi, A. K. (1990). Toxicity of Some Pesticides to the Green Semilooper Plusia eriosoma (Doubleday) (Lepidoptera: Noctuidae). *J.Environ.Biol.* 11: 427-429.

EcoReference No.: 96607
Chemical of Concern: DDVP,FNTH,PRT,ADC; Habitat: T; Effect Codes: MOR; Rejection Code: TARGET(PRT).

105. Tryon, E. H., Carvell, K. L., and Dorsey, C. K. (1968). Germination of Acorns from Oaks Treated with Systemic Insecticides. *For.Sci.* 14: 427-428.

EcoReference No.: 97872
Chemical of Concern: DS,PRT; Habitat: T; Effect Codes: GRO,POP; Rejection Code: EFFICACY(DS,PRT).

106. Verma, R. S., Upadhyaya, K. D., Singh, G., and Pandey, R. C. (1976). Efficacy of Some Chemicals Against Root-Knot Nematode (Meloidogyne javanica). *Pesticides* 10: 44, 48.

EcoReference No.: 80096
Chemical of Concern: DZM,CBF,ADC,FNTH,PRT; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(DZM,ADC),OK(ALL CHEMS),EFFICACY(PRT).

107. Vernon, R. S. and Mackenzie, J. R. (1991). Granular Insecticides Against Overwintered Tuber Flea Beetle, Epitrix tuberis Gentner (Coleoptera: Chrysomelidae), on Potato. *Can.Entomol.* 123: 333-343.

EcoReference No.: 96616
Chemical of Concern: ADC,PRT,DS,CBF,CPY,FNF,TBO; Habitat: T; Effect Codes: POP,GRO; Rejection Code: TARGET(PRT).

108. Visalakshi, A., Shobhana, G., Nalinakumari, T., and Mohandas, N. (1984). Residues of Phorate Disulfoton and Carbofuran in Banana Fruits Applied to Control Banana Aphid. *In: A.Regupathy, K.Rajukkannu, and S.Chelliah (Eds.), Natl.Semin.on Pesticides and Environment, Aug.4-5, 1983, Dep.Agric.Entomol.Ctr.for Plant Prot.Stud., Coimbatore, India* 52-54.

Chemical of Concern: DS,PRT; Habitat: T; Rejection Code: EFFICACY (DS,PRT).

109. Watrin, C. G. and Radcliffe, E. B. (1986). Wireworm Control on Potatoes, 1985. *Insectic.Acaric.Tests* 11: 185-186 (No. 238).

EcoReference No.: 88757
Chemical of Concern: EP,PRT,DS,ADC; Habitat: T; Effect Codes: POP; Rejection Code: OK(ALL CHEMS),TARGET(DS,PRT).

110. Whalen, J. and Spellman, M. (1993). Colorado Potato Beetle Control with Soil Insecticides, 1992. *Insectic.Acaric.Tests* 18: 166 (95E).

EcoReference No.: 97484
Chemical of Concern: CBF,PRT,DS,ADC; Habitat: T; Effect Codes: POP,PHY; Rejection Code: NO COC(CYR),OK(CBF,DS,ADC),EFFICACY(PRT).

111. Wilson, H. R. and Eisley, J. B. (1994). Evaluation of Soil Insecticides in Ohio, 1993. *Arthropod Manag.Tests* 19 : 213-214 (51F).

EcoReference No.: 97877
Chemical of Concern: PRT,CPY,CBF,PBP,TBO,FNF,TFT,CEX; Habitat: T; Effect Codes: PHY,POP; Rejection Code: TARGET(PRT,CPY).

112. Yadava, C. P. S., Saxena, R. C., Mishra, R. K., and Dadheech, L. N. (1977). Evaluation of Some Granular Insecticides for Control of Grubs of Holotrichia consanguinea Blanch. *Indian J.Agric.Sci.* 47: 139-142.

EcoReference No.: 96079
Chemical of Concern: HCCH,PRT,DS,ADC,CBF; Habitat: T; Effect Codes: POP,MOR; Rejection Code: EFFICACY(PRT,ADC),TARGET(DS).

113. Yu, S. J. (1986). Host Plant Induction of Microsomal Monooxygenases in Relation to Organophosphate Activation in Fall Armyworm Larvae. *In: 4th Symp.on the Fall Armyworm held at the Entomol.Soc.of Am.Natl.Conf., 1985, Hollywood, FL, Fla.Entomol.* 69: 579-587.

EcoReference No.: 88898
Chemical of Concern: OXD,MLN,IFP,DEM,DS,FNTH,PRT,DZ,PRN; Habitat: T; Effect Codes: BCM,MOR; Rejection Code: OK(ALL CHEMS),TARGET(MLN,OXD,DZ,DS,PRT).

Phorate Refresh (10/05-02/28/08
Papers that Were Excluded from ECOTOX

Excluded

1. Ahmed, M. M., Arif, M., Chikuma, T., and Kato, T. (Pentylenetetrazol-Induced Seizures Affect the Levels of Prolyl Oligopeptidase, Thimet Oligopeptidase and Glial Proteins in Rat Brain Regions, and Attenuation by Mk-801 Pretreatment. *Neurochem int. 2005, sep; 47(4):248-59. [Neurochemistry international]: Neurochem Int.*
   Rejection Code: IN VITRO.

2. Ahmed, Md. Mahiuddin, Arif, Mohammad, Chikuma, Toshiyuki, and Kato, Takeshi (2005). Pentylenetetrazol-induced seizures affect the levels of prolyl oligopeptidase, thimet oligopeptidase and glial proteins in rat brain regions, and attenuation by MK-801 pretreatment. *Neurochemistry International* 47: 248-259.
   Rejection Code: HUMAN HEALTH.

3. Al-Rehiayani, Suloiman M. (Acetylcholinesterase in selected plant-parasitic nematodes: Inhibition, kinetic and comparative studies. *Pesticide Biochemistry and Physiology* In Press, Corrected Proof: 490.
   Rejection Code: NO SOURCE.

4. Arif, M., Chikuma, T., Ahmed, M. M., Yoshida, S., and Kato, T. (Suppressive Effect of Clozapine but Not Haloperidol on the Increases of Neuropeptide-Degrading Enzymes and Glial Cells in Mk-801-Treated Rat Brain Regions. *Neurosci res. 2007, feb; 57(2):248-58. [Neuroscience research]: Neurosci Res.*
   Rejection Code: HUMAN HEALTH.

5. Atkinson, B. (1976). Organophosphate Insecticide Poisoning. *J.Miss.Acad.Sci.* 17: 91-94.
   Rejection Code: HUMAN HEALTH.

6. Boldt, G. E., Kennedy, J. P., Hixon, M. S., Mcallister, L. A., Barbieri, J. T., Tzipori, S., and Janda, K. D. (Synthesis, Characterization and Development of a High-Throughput Methodology for the Discovery of Botulinum Neurotoxin a Inhibitors. *J comb chem. 2006 jul-aug; 8(4):513-21. [Journal of combinatorial chemistry]: J Comb Chem.*
Rejection Code: CHEM METHODS.

7. Burga, C. A., Frauenfelder, R., Ruffet, J., Hoelzle, M., and Ka(dieresis)a(dieresis)b, A. (2004). Vegetation on Alpine Rock Glacier Surfaces: a Contribution to Abundance and Dynamics on Extreme Plant Habitats. *Flora, 199 (6) pp. 505-515, 2004.*
Rejection Code: SURVEY.

8. Camel, V. (1997). The Determination of Pesticide Residues and Metabolites Using Supercritical Fluid Extraction. *Trends Anal.Chem.* 16: 351-369.
Rejection Code: REFS CHECKED/REVIEW.

9. Carre&Ntilde, O, F. R., Go&Ntilde, I, C. N., Castro, L. M., and Ferro, E. S. (14-3-3 Epsilon Modulates the Stimulated Secretion of Endopeptidase 24.15. *J neurochem. 2005, apr; 93(1):10-25. [Journal of neurochemistry]: J Neurochem.*
Rejection Code: HUMAN HEALTH.

10. Chen, Xiping , Zhang, Zhongyao, and Tao, Luyang (Determination of male age at death in Chinese Han population: Using quantitative variables statistical analysis from pubic bones. *Forensic Science International* In Press, Corrected Proof: 490.
Rejection Code: HUMAN HEALTH.

11. Childers, C. C., Easterbrook, M. A., and Solomon, M. G. (1996). Chemical Control of Eriophyoid Mites. *In: E.E.Lindquist, M.W.Sabelis, and J.Bruin (Eds.), World Crop Pests, Volume 6, Eriophyoid Mites: Their Biology, Natural Enemies and Control, Elsevier Sci.Publ., Amsterdam, Netherlands* 6: 695-726.
Rejection Code: REVIEW.

12. Comellas-Bigler, M., Lang, R., Bode, W., and Maskos, K. (2005). Crystal Structure of the E. coli Dipeptidyl Carboxypeptidase Dcp: Further Indication of a Ligand-dependant Hinge Movement Mechanism. *Journal of Molecular Biology* 349: 99-112.
Rejection Code: BACTERIA.

13. Cooper, J.-F., Wynn, N. R., Deuse, J. P. L., Coste, C. M., Zheng, S. Q., and Schiffers, B. C. (1997). Impact of Insecticides on Wild Fauna: A Proposed Toxicity Index. *Meded.Fac.Landbouwkd.Rijksuniv.Race* 62: 599-606.
Rejection Code: REFS CHECKED/REVIEW.

14. Curini, M., Lagana, A., Petronio, B. M., and Russo, M. V. (1980). Determination of Organophosphorus Pesticides by Thin-Layer Chromatography. *Talanta* 27: 45-48.
Rejection Code: METHODS.

15. Dalvi, R. R. and Salunkhe, D. K. (1975). Toxicological Implications of Pesticides: Their Toxic Effects on Seeds of Food Plants. *Toxicol.* 3: 269-285.
Rejection Code: REFS CHECKED/REVIEW.

16. Das, Amal Chandra, Chakravarty, Arunabha, Sen, Gargi, Sukul, Premasis, and Mukherjee, Debatosh (2005). A comparative study on the dissipation and microbial metabolism of organophosphate and carbamate insecticides in orchaqualf and fluvaquent soils of West Bengal. *Chemosphere* 58: 579-584.
Rejection Code: FATE.

17. Dieter, C. D. (1993). Effects of Phorate on Ducklings, Macroinvertebrates, and Microtox in Northern Prairie Wetlands (Anas platyrhynchos, South Dakota). *Ph.D.Thesis, South Dakota State Univ.* 130 p. (PUBL

AS #19989,40187).
Rejection Code: PUBL AS.

18. Dubois, V., Nieder, M., Collot, F., Negrouk, A., Nguyen, T. T., Gangwar, S., Reitz, B., Wattiez, R., Dasnois, L., and Trouet, A. (Thimet Oligopeptidase (Ec 3.4.24.15) Activates Cpi-0004na, an Extracellularly Tumour-Activated Prodrug of Doxorubicin. *Eur j cancer. 2006, nov; 42(17):3049-56. [European journal of cancer]: Eur J Cancer*.
Rejection Code: HUMAN HEALTH.

19. Epstein, S. S. and Legator, M. S. (1971). The Mutagenicity of Pesticides Concepts and Evaluation. *In: S.S.Epstein and M.S.Legator (Eds.), The Mutagenicity of Pesticides Concepts and Evaluation, MIT Press* 52-69, 185, 213.
Rejection Code: REFS CHECKED/REVIEW.

20. Felsot, A. S. and Pedersen, W. L. (1991). Pesticidal Activity of Degradation Products. *In: I.Somasundaram and J.R.Coats (Eds.), ACS (Am.Chem.Soc.) Symp.Ser., Volume 459, Pesticide Transformation Products: Fate and Significance in the Environment, 200th Natl.Meet., Aug.26-31, 1990, Washington, D.C., Am.Chem.Soc., Washington, DC* 172-187.
Rejection Code: REVIEW.

21. Ferhatoglu, Yurdagul, Avdiushko, Sergei, and Barrett, Michael (2005). The basis for the safening of clomazone by phorate insecticide in cotton and inhibitors of cytochrome P450s. *Pesticide Biochemistry and Physiology* 81: 59-70.
Rejection Code: MIXTURE.

22. Gan, Q. and Jans, U. (Nucleophilic Reactions of Phorate and Terbufos With Reduced Sulfur Species Under Anoxic Conditions. *J agric food chem. 2007, may 2; 55(9):3546-54. [Journal of agricultural and food chemistry]: J Agric Food Chem*.
Rejection Code: CHEM METHODS.

23. Grue, C. E., Fleming, W. J., Busby, D. G., and Hill, E. F. (1983). Assessing Hazards of Organophosphate Pesticides to Wildlife. *Wildlife Management Institute, Washington, DC* 200-220.
Rejection Code: REVIEW.

24. Holstege, D. M., Scharberg, D. L., Richardson, E. R., and Moller, G. (1991). Multiresidue Screen for Organophosphorus Insecticides Using Gel Permeation Chromatography - Silica Gel Cleanup. *J.Assoc.Off.Anal.Chem.* 74: 394-399.
Rejection Code: IN VITRO.

25. Hoppin, J. A., Umbach, D. M., London, S. J., Lynch, C. F., Alavanja, M. C., and Sandler, D. P. (Pesticides Associated With Wheeze Among Commercial Pesticide Applicators in the Agricultural Health Study. *Am j epidemiol. 2006, jun 15; 163(12):1129-37. [American journal of epidemiology]: Am J Epidemiol*.
Rejection Code: HUMAN HEALTH.

26. Hurt, Christie Anne (**Evaluation of cultural practices to reduce the incidence of tomato spotted wilt virus in North Carolina peanut (Arachis hypogaea)**.
Rejection Code: MIXTURE.

27. Jain, Rinku and Chan, Michael K. (2007). Support for a potential role of E. coli oligopeptidase A in protein degradation. *Biochemical and Biophysical Research Communications* 359: 486-490.
Rejection Code: BACTERIA.

28. Khan, M., Gassman, M., and Haque, R. (1976). Biodegradation of Pesticides. *Chem.Technol.* 6: 62-69.
Rejection Code: FATE.

29. Klopman, G., Contreras, R., Rosenkranz, H. S., and Waters, M. D. (1985). Structure-Genotoxic Activity Relationships of Pesticides: Comparison of the Results from Several Short-Term Assays. *Mutat.Res.* 147: 343-356.
Rejection Code: YEAST.

30. Koontz, M., Price, P., Hamilton, J., Daggett, D., Sielken, R., Bretzlaff, R., and Tyler, T. (Modeling Aggregate Exposures to Glycol Ethers From Use of Commercial Floor Products. *Int j toxicol. 2006 mar-apr; 25(2):95-107. [International journal of toxicology]: Int J Toxicol.*
Rejection Code: MODELING.

31. Ku, Y., Lin, H. S., Wang, W., and Ma, C. M. (Decomposition of Phorate in Aqueous Solution by Ozonation. *J environ sci health b. 2007, feb; 42(2):143-9. [Journal of environmental science and health. Part. B, pesticides, food contaminants, and agricultural wastes]: J Environ Sci Health B.*
Rejection Code: CHEM METHODS, FATE.

32. Lowcock, L. A., Sharbel, T. F., Bonin, J., Ouellet, M., Rodrigue, J., and DesGranges, J. L. (1997). Flow Cytometric Assay for In Vivo Genotoxic Effects of Pesticides in Green Frogs (Rana clamitans). *Aquat.Toxicol.* 38: 241-255.
Rejection Code: MIXTURE.

33. Luttik, R. and Aldenberg, T. (1997). Extrapolation Factors for Small Samples of Pesticide Toxicity Data: Special Focus on LD50 Values for Birds and Mammals. *Environ.Toxicol.Chem.* 16: 1785-1788.
Rejection Code: MODELING.

34. Machado, M. F., Rioli, V., Dalio, F. M., Castro, L. M., Juliano, M. A., Tersariol, I. L., Ferro, E. S., Juliano, L., and Oliveira, V. (The Role of Tyr605 and Ala607 of Thimet Oligopeptidase and Tyr606 and Gly608 of Neurolysin in Substrate Hydrolysis and Inhibitor Binding. *Biochem j. 2007, jun 1; 404(2):279-88. [The biochemical journal]: Biochem J.*
Rejection Code: CHEM METHODS, FATE.

35. Machado, M. F. M., Cunha, F. M., Berti, D. A., Heimann, A. S., Klitzke, C. F., Rioli, V., Oliveira, V., and Ferro, E. S. (2006). Substrate phosphorylation affects degradation and interaction to endopeptidase 24.15, neurolysin, and angiotensin-converting enzyme. *Biochemical and Biophysical Research Communications* 339: 520-525.
Rejection Code: FATE.

36. Madhuri, R. J. and Rangaswamy, V. (2002). Influence of Selected Insecticides on Phosphatase Activity in Groundnut (Arachis hypogeae L.) Soils. *J.Environ.Biol.* 23: 393-397.
Rejection Code: NO SPECIES.

37. Mahajan, R., Bonner, M. R., Hoppin, J. A., and Alavanja, M. C. (Phorate Exposure and Incidence of Cancer in the Agricultural Health Study. *Environ health perspect. 2006, aug; 114(8):1205-9. [Environmental health perspectives]: Environ Health Perspect.*
Rejection Code: HUMAN HEALTH.

38. Mathew, S. B., Pillai, A. K., and Gupta, V. K. (A Rapid Spectrophotometric Assay of Some Organophosphorus Pesticide Residues in Vegetable Samples. *Spectrochim acta a mol biomol spectrosc. 2007, aug; 67(5):1430-2. [Spectrochimica acta. Part a, molecular and biomolecular spectroscopy]: Spectrochim Acta A Mol Biomol Spectrosc.*
Rejection Code: CHEM METHODS.

39. McCain, E. B., Zlotoff, J. I., and Ebersole, J. J. (2003). Effects of Elk Browsing on Aspen Stand Characteristics, Rampart Range, Colorado. *Western North American Naturalist, 63 (1) pp. 129-132, 2003.*
Rejection Code: SURVEY.

40. McCully, K. A. (1978). Report on Phosphated Pesticides. *J.Assoc.Off.Anal.Chem.* 61: 364-368.
Rejection Code: NO TOX DATA.

41. Mendoza, C. E. (1972). Analysis of Pesticides by the Thin-layer Chromatographic-Enzyme Inhibition Technique. *In: Gunther,F.A.and Gunther,J.D.(Eds), Residues Reviews, Springer Verlag, NY* 43: 105-142.
Rejection Code: REVIEW.

42. Mendoza, C. E. (1974). Analysis of Pesticides by the Thin-Layer Chromatographic-Enzyme Inhibition Technique, Part II. *In: Gunther,F.A and Gunther,J.D.(Eds), Residue Reviews, Springer Verlag,NY* 50: 43-72.
Rejection Code: REVIEW.

43. Mohssen, M. (2001). Biochemical and Histopathological Changes in Serum Creatinine and Kidney Induced by Inhalation of Thimet (Phorate) in Male Swiss Albino Mouse, Mus Musculus. *Environmental Research [Environ. Res.]. Vol. 87, no. 1, pp. 31-36. Sep 2001.*
Rejection Code: INHALE.

44. Mouginis-Mark, Peter J. and Garbeil, Harold (2005). Quality of TOPSAR topographic data for volcanology studies at Kilauea Volcano, Hawaii: An assessment using airborne lidar data. *Remote Sensing of Environment* 96: 149-164.
Rejection Code: SURVEY.

45. Noetzel, D. and Ricard, M. (1988). Wireworm and White Grub Control in Potato, 1987. *Insectic.Acaric.Tests* 13: 160-161 (No. 89E).
Rejection Code: NO DURATION.

46. Oehme, F. W. and Barrett, D. S. (1986). Veterinary Gastrointestinal Toxicology. *K.Rozman and O.Hanninen (Eds.), Gastrointestinal Toxicology, Elsevier Sci.Publ.B.V., Amsterdam, Netherlands, (Dist.In the USA and Canada) by Elsevier Sci.Publ.Co.Inc., New York, NY* 464-513.
Rejection Code: REFS CHECKED/REVIEW.

47. Ohkawa, H. (1976). Synthesis and Biological Action of Optical Isomers of Organophosphorus Esters. *J.Pestic.Sci.(Nihon Noyakugaku Kaishi)* 1: 325-334 (JPN).
Rejection Code: NON-ENGLISH .

48. Oliveira, V. , Garrido, P. A., Rodrigues, C. C., Colquhoun, A., Castro, L. M., Almeida, P. C., Shida, C. S., Juliano, M. A., Juliano, L., Camargo, A. C., Hyslop, S., Roberts, J. L., Grum-Tokars, V., Glucksman, M. J., and Ferro, E. S. (Calcium Modulates Endopeptidase 24.15 (Ec 3.4.24.15) Membrane Association, Secondary Structure and Substrate Specificity. *Febs j. 2005, jun; 272(12):2978-92. [The febs journal]: FEBS J.*
Rejection Code: IN VITRO.

49. Pagliuca, G. , Serraino, A., Gazzotti, T., Zironi, E., Borsari, A., and Rosmini, R. (Organophosphorus Pesticides Residues in Italian Raw Milk. *J dairy res. 2006, aug; 73(3):340-4. [The journal of dairy research]: J Dairy Res*.
Rejection Code: HUMAN HEALTH.

50. Paschoalin, Thaysa, Carmona, Adriana K., Oliveira, Vitor, Juliano, Luiz, and Travassos, Luiz R. (2005). Characterization of thimet- and neurolysin-like activities in Escherichia coli M3A peptidases and description of a specific substrate. *Archives of Biochemistry and Biophysics* 441: 25-34.
Rejection Code: BACTERIA.

51. Paske, N., Berry, B., Schmitz, J., and Sullivan, D. (Determination of Low-Level Agricultural Residues in Soft Drinks and Sports Drinks by Liquid Chromatography/Tandem Mass Spectrometry: Single-Laboratory

Validation. *J aoac int. 2007 mar-apr; 90(2):521-33. [Journal of aoac international]: J AOAC Int*.
Rejection Code: HUMAN HEALTH, CHEM METHODS.

52. Pauli, B. D., Perrault, J. A., and Money, S. L. (2000). RATL: A Database of Reptile and Amphibian Toxicology Literature. *Tech.Rep.Ser.No.357, National Wildlife Res.Centre* 494 p.
Rejection Code: REVIEW.

53. Peck, A. M. and Hornbuckle, K. C. (Gas-Phase Concentrations of Current-Use Pesticides in Iowa. *Environ sci technol. 2005, may 1; 39(9):2952-9. [Environmental science & technology]: Environ Sci Technol*.
Rejection Code: FATE.

54. Perring, T. M. (1996). Damage and Control of Eriophyoid Mites in Crops Vegetables. *In: E.E.Lindquist, M.W.Sabelis, and J.Bruin (Eds.), World Crop Pests, Volume 6, Eriophyoid Mites: Their Biology, Natural Enemies and Control, Elsevier Sci.Publ., Amsterdam, Netherlands* 6: 593-610.
Rejection Code: REVIEW.

55. Pimentel, D. and Edwards, C. A. (1982). Pesticides and Ecosystems. *Bioscience* 32: 595-600.
Rejection Code: REFS CHECKED/REVIEW.

56. Ruzicka, J. H. (1973). Methods and Problems in Analysing for Pesticide Residues in the Environment; In: Edwards,C.A. (Ed) Environmental Pollution by Pesticides. *Plenum Press, London and NY* 11-56.
Rejection Code: METHODS.

57. Saldana, T. M., Basso, O., Hoppin, J. A., Baird, D. D., Knott, C., Blair, A., Alavanja, M. C., and Sandler, D. P. (Pesticide Exposure and Self-Reported Gestational Diabetes Mellitus in the Agricultural Health Study. *Diabetes care. 2007, mar; 30(3):529-34. [Diabetes care]: Diabetes Care*.
Rejection Code: HUMAN HEALTH.

58. Salyi, G., Fazekas, B., Gaalne, E. D., and Fazekas, G. (2005). [Pesticide Toxicoses of Wild Animals, Especially Protected Birds, With Special Regard to Carbofurane-Caused Damages]. *Magyar Allatorvosok Lapja [Magy. Allatorv. Lapja]. Vol. 127, no. 6, pp. 376-383. 2005.*
Rejection Code: NON-ENGLISH.

59. Sanders, H. J. (1975). New Weapons Against Insects. *Chem.Eng.News* 18-31.
Rejection Code: REFS CHECKED/REVIEW.

60. Sarnaik, S. S., Kanekar, P. P., Raut, V. M., Taware, S. P., Chavan, K. S., and Bhadbhade, B. J. (2006). Effect of Application of Different Pesticides to Soybean on the Soil Microflora. *J.Environ.Biol.* 27: 423-426.
Rejection Code: BACTERIA.

61. Sarnaik, S. S., Kanekar, P. P., Raut, V. M., Taware, S. P., Chavan, K. S., and Bhadbhade, B. J. (Effect of Application of Different Pesticides to Soybean on the Soil Microflora. *J environ biol. 2006, may; 27(2 suppl):423-6. [Journal of environmental biology / academy of environmental biology, india]: J Environ Biol*.
Rejection Code: BACTERIA.

62. Shafik, M. T., Bradway, D., and Enos, H. F. (1971). A Method for Confirmation of Organophosphorus Compounds at the Residue Level. *Bull.Environ.Contam.Toxicol.* 6: 55-66.
Rejection Code: METHODS.

63. Shock, C. C. , Feibert, E. B. G., Saunders, L. D., and James, S. R. (2003). 'umatilla Russet' and 'russet Legend' Potato Yield and Quality Response to Irrigation. *HortScience, 38 (6) pp. 1117-1121, 2003.*
Rejection Code: NO TOXICANT.

64. Singh, A., Singh, A., Misra, T. N., and Agarwal, R. A. (1996). Molluscicides of Plant Origin.

Biol.Agric.Hortic. 13: 205-252.
Rejection Code: REVIEW.

65. Singh, A. K., Hewetson, D. W., Jordon, K. C., and Ashraf, M. (1986). Analysis of Organophosphorus Insecticides in Biological Samples by Selective Ion Monitoring Gas Chromatography-Mass Spectrometry. *J.Chromatogr.* 369: 83-96.
Rejection Code: NO SPECIES.

66. Singh, M., Lal, K., and Singh, S. B. (2002). Effect of Calotropis (Calotropis Procera) Extract on Infestation of Termite (Odontotermes Obesus) in Sugarcane Hybrid. *Indian Journal of Agricultural Sciences, 72 (7) pp. 439-441, 2002.*
Rejection Code: BIOLOGICAL TOXICANT.

67. Singh, S., Chaudhry, D., Behera, D., Gupta, D., and Jindal, S. K. (2001). Aggressive Atropinisation and Continuous Pralidoxime (2-Pam) Infusion in Patients With Severe Organophosphate Poisoning: Experience of a Northwest Indian Hospital. *Human & Experimental Toxicology [Hum. Exp. Toxicol.]. Vol. 20, no. 1, pp. 15-18. Jan 2001.*
Rejection Code : HUMAN HEALTH.

68. Stephenson, S. A., Burrows, J. A., and Babaluk, J. A. (2005). Long-Distance Migrations by Inconnu (Stenodus Leucichthys) in the Mackenzie River System. *Arctic [Arctic]. Vol. 58, no. 1, pp. 21-25. Mar 2005.*
Rejection Code: SURVEY.

69. Stimmann, M. W. and Ferguson, M. P. (1990). Potential Pesticide Use Cancellations in California. *Calif.Agric.* 44: 12-16.
Rejection Code: NO TOX DATA.

70. Struger, J., L'Italien, S., and Sverko, E. (2004). In-Use Pesticide Concentrations in Surface Waters of the Laurentian Great Lakes, 1994-2000. *Journal of Great Lakes Research [J. Great Lakes Res.]. Vol. 30, no. 3, pp. 435-450. 2004.*
Rejection Code: FATE.

71. Suett, D. L., Fournier, J.-C., Papadopoulou-Mourkidou, E., Pussemier, L., and Smelt, J. (1996). Accelerated Degradation: The European Dimension. *Soil Biol.Biochem.* 28: 1741-1748.
Rejection Code: NO TOX DATA.

72. Tang, B., Zhang, J. E., Zang, L. G., Zhang, Y. Z., Li, X. Y., and Zhou, L. (2005). Determination of Nine Organophosphorus Pesticides in Cereals and Kidney Beans by Capillary Gas Chromatography with Flame Photometric Detection. *J.Chromatogr.Sci.* 43: 337-341.
Rejection Code: METHODS.

73. Tang, B., Zhang, J. E., Zang, L. G., Zhang, Y. Z., Li, X. Y., and Zhou, L. (2005-). Determination of Nine Organophosphorus Pesticides in Cereals and Kidney Beans by Capillary Gas Chromatography With Flame Photometric Detection. *J.Chromatogr.Sci.* 43: 337-341.
Rejection Code: CHEM METHODS.

74. Thomas, R. E., Cohen, J. M., and Bendixen, T. W. (1964). Pesticides in Soil and Water an Annotated Bibliography. *Environ.Health Series, Water Supply and Pollut.Control, U.S.Dep.Health, Education, and Welfare, Public Health Service, September 1964, Cincinnati, OH* 90 p.
Rejection Code: REVIEW.

75. Thompson, H. M., Langton, S. D., and Hart, A. D. M. (1995). Prediction of Inter-Species Differences in the Toxicity of Organophosphorus Pesticides to Wildlife - A Biochemical Approach. *Comp.Biochem.Physiol.C* 111: 1-12.
Rejection Code: IN VITRO.

76. Tynes, R. E. and Hodgson, E. (1985). Magnitude of Involvement of the Mammalian Flavin-Containing Monooxygenase in the Microsomal Oxidation of Pesticides. *J.Agric.Food Chem.* 33: 471-479.
Rejection Code: IN VITRO.

77. Visalakshy, A., Santhakumari, K., Koshy, G., and Nair, M. R. G. K. (1978). Effect of Granular Insecticides on Nodulation, Rhizosphere microflora and Growth Characteristics of Cowpea. *Agric.Res.J.Kerala* 16: 171-175.
Rejection Code: NO DURATION.

78. Walker, C. H. (1983). Pesticides and Birds - Mechanisms of Selective Toxicity. *Agric.Ecos.Environ.* 9: 211-226.
Rejection Code: REFS CHECKED/REVIEW.

79. Wilson, L. K., Elliott, J. E., Vernon, R. S., Smith, B. D., and Szeto, S. Y. (2002). Persistence and Retention of Active Ingredients in Four Granular Cholinesterase-Inhibiting Insecticides in Agricultural Soils of the Lower Fraser River Valley, British Columbia, Canada, With Implications for Wildlife Poisoning. *Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 21, no. 2, pp. 260-268. Feb 2002.*
Rejection Code: FATE.

80. Xue, W., Liu, Z., and Ke, C. ([Determination of Phorate and Tebuconazole in Their Mixture by Rp-Hplc]. *Se pu. 2005, may; 23(3):320. [Se pu = chinese journal of chromatography / zhongguo hua xue hui]: Se Pu.*
Rejection Code: CHEM METHODS.

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.