

AGRICULTURAL GUIDE

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Pest Control

Missouri restricted use list

James H. Jarman, Integrated Pest Management, June, 1988

This list is to be used for informational purposes only. These restricted use pesticides have been registered with the Missouri Department of Agriculture as of Spring 1988. Pesticides are frequently added or removed from the list. There are other "restricted use" pesticides that are not listed. The products containing these pesticides were not registered in the state of Missouri as of the spring of 1988. Our latest

restricted use information is available electronically over the Agricultural Economics Bullentin Board. Contact your local University Extension Office or the Pesticide Coordinator, 45 Agriculture Building, University of Missouri-Columbia, 65211, 314/882-7871, for instructions or information.

The label on a pesticide is the last word on its use.

Always read and understand the label before using any pesticide.

Insecticides, acaricides, nematocides and fumigants

Common name (Brand names)	Pesticide type* (See below)	Criteria influencing restriction
ALDICARB (Temik)	I, A, N	Registration standard (3/30/84). Other hazards (acute toxicity) — accident history.
ALUMINUM PHOSPHIDE (Phostoxin, Detia, Gastoxin, Phostex, Fumitoxin, Quick phos, "L" Fume)	Fg	Inhalation hazard to humans.
AMITRAZ (Taktic)	I, A	RPAR* decision; possible oncogenicity (tumor causing).
AZINPHOS METHYL (Guthion)	I, A	Human inhalation hazard. Acute toxicity. Hazard to avian (bird), aquatic (water) and mammalian (animal) species.
CALCIUM CYANIDE (Calcium Cyanide, A-Dust, G-Fumigant)	Fg	Human inhalation hazard.
CARBOFURAN (Furadan)	I, N	Acute inhalation toxicity (8/1/79).
CHLORDANE (Gold Crest C-100)	I	Registration standard (12/86). Probable human oncogenicity (tumor causing). Chronic liver effects, toxicity to avian (birds) and aquatic (water) organisms.

*Insecticide (kills insects) = I, Acaricide (kills mites, ticks) = A, Nematicide (kills nematodes) = N, Fumigants = Fg. Some or all uses and formulations of these pesticides are classified "restricted use." RPAR stands for "rebuttable presumption against re-registration."

Insecticides, acaricides, nematocides and fumigants — Continued

Common name (Brand names)	Pesticide type*	Criteria influencing restriction
CHLORDIMEFORM (Fundal, Galecron)	I, A	Causes cancer in laboratory animals. Insect ovicide (Kills insect eggs). No antidote known.
CHLOROPICRIN (Larvacide 100, Chlor-O-Pic, Bromo-O-Gas, Terr-O Gas, Timberfume, Telone C-17 Quasar)	Fg WP (Wood preservative)	Acute inhalation toxicity. Hazard to non-target organisms. Fungicide. (Kills fungus.) Nematicide (kills nematodes) when used with Dichloropropene.
CYFLUTHRIN (Baythroid)	I	Impact to fish and aquatic (water) organisms.
CYPERMETHRIN (Cymbush, Ammo)	I	Oncogenicity (causes tumors) and hazard to non-target organisms
DEMETON (Systox, Meta-Systox R)	I	Domestic uses: Acute oral and dermal toxicity. Non-domestic outdoor uses: Residue effects on mammalian (animal) and avian (bird) species.
DICROTOPHOS (Bidrin, Inject-A-Cide-B)	I, A	Acute dermal toxicity Residue effects of avian (bird) species
DIFLUBENZURON (Dimilin)	I	Lack of environmental hazard data.
DIOXATHION (Delnav, Conav, Deltic)	I	Acute dermal toxicity.
DISULFOTON (Di-Syston)	I, N	Acute dermal and inhalation toxicity.
ENDRIN (Endrin, Rid a Bird Control Liquid)	I (Avicide)	Acute dermal toxicity. Hazard to non-target organisms.
EPN (Tide Methyl, Veto, Milan)	I	Acute dermal and inhalation toxicity. Residue effects on avian (bird) species. Effects on aquatic organisms.
ESFENVALERATE (Asana)	I	Possible adverse effects on aquatic (water) organisms.
ETHOPROP (Mocap)	I, N	Acute dermal toxicity.
ETHYL PARATHION (Parathion, Ethyl Parathion Dithion 63)	I	Human inhalation hazard. Acute dermal toxicity. Residue effects on aquatic (water), avian (bird), and mammalian (animal) species. Other hazards — accident history.

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Insecticides, acaricides, nematicides and fumigants — Continued

Common name (Brand names)	Pesticide type*	Criteria influencing restriction
FENAMIPHOS (Nemacur)	N	Acute dermal toxicity. Avian (bird) acute oral and inhalation toxicity.
FENSULFOTHION (Dasanit)	I, N	Acute dermal and inhalation toxicity.
FENVALERATE (Pydrin)	I	Possible adverse effects on aquatic (water) organisms.
FLUCYTHRINATE (Payoff, Aastar)	I	Possible adverse effects on aquatic (water) organisms.
FLUVALINATE (Mavrik)	I	Registration standard (3/88). Moderate to low mammalian (animal) toxicity. Slight avian (bird) toxicity. High toxicity to some aquatic (water) organisms.
FONOFOS (Dyfonate)	I	Acute dermal toxicity.
ISAZOPHOS (Triumph)	I, N	Avian (bird), fish and aquatic (water) organism toxicity.
ISOFENFOS (Pryfon)	I	Acute toxicity (11/6/87).
LINDANE (Lice and Mange Spray, Conav, Cooper Tox, Super Sweet Mange and Lice Control, Borer and Beetle Killer, Borer Spray, Dyna Fog, Prentox, Flea Shampoo)	I	Possible oncogenicity (tumor causing).
MAGNESIUM PHOSPHIDE (Magtoxin, Fumi-Cel, Fumi-Strip)	Fg	Inhalation hazard.
METHAMIDOPHOS (Monitor)	I, Fg	Acute dermal toxicity. Residue effects on avian (bird) species.
METHIDATHION (Supracide)	I	Residue effects on avian (bird) species.
METHOMYL (Lannate, Nudrin)	I	Residue effects on mammalian (animal) species. Other hazards — accident history.
METHYL BROMIDE (Brom-O-Gas, Metho-O-Gas Methyl Fume, Bro-Mean, Terr-O-Gas)	Fg	Acute dermal and inhalation toxicity. Accident history.

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Insecticides, acaricides, nematocides and fumigants — Continued

Common name (Brand names)	Pesticide type*	Criteria influencing restriction
METHYL PARATHION (Penn Cap M, Dithio, Phoskill, Raider, Veto, Milan, Dithion 63)	I	Hazard to bees. Acute dermal toxicity. Residue effects on avian (bird) and mammalian (animal) species. Other hazards — accident history.
MEVINPHOS (Phosdrin, Filter Fly Concentrate)	I	Acute dermal toxicity. Residue effects on avian (bird) and mammalian (animal) species.
MONOCROTOPHOS (Azodrin)	I	Residue effects on mammalian (animal) and avian (bird) species. Acute dermal toxicity.
NICOTINE (Nicotine)	I	Acute inhalation toxicity. Effects on aquatic (water) organisms.
OXAMYL (Vydate)	I, N	Acute oral and inhalation toxicity. Avian (bird) oral toxicity.
PERMETHRIN (Ambush, Pounce Torpedo, Demon, Dragnet, M-Gard W320)	I	Possible adverse effects on aquatic (water) organisms.
PHORATE (Thimet, Aastar)	I	Acute dermal toxicity. Residue effects on avian (bird) and mammalian (animal) species.
PHOSPHAMIDON (Dimecron, Swat)	I, A	Acute dermal toxicity. Residue effects on avian (bird) and mammalian (animal) species.
PROFENOFOS (Curacron)	I, A	Registration action — corrosive to eyes.
PROPETAMPHOS (Safrotin)	I	Product for indoor, domestic use. Voluntarily restricted.
SULFOTEPP (Blade Fume, Plant Fume 103, Telone C17, Tedion Dithio, Dithio)	I, A	Acute inhalation hazard. Possible acute toxicity hazard in humans.
SULFURYL FLUORIDE (Vikane)	Fg	Possible acute toxicity. Acute inhalation hazard. Hazard in humans.
SULPROFOS (Bolstar)	I	Wildlife hazard.
TERBUFOS (Counter)	I	Highly toxic to humans, fish and wildlife.
TOXAPHENE (Duotox)	I	Potential human oncogenicity (tumor causing). Acute toxicity to aquatic (water) organisms. Hazard to non-target organisms. Chronic wildlife effects.
TRALOMETHRIN (Scout)	I	Toxicity to aquatic (water) organisms.

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Herbicides, fungicides, wood preservatives

Common name (Brand names)	Pesticide type*	Criteria influencing restriction
AMITROLE (Amitrol, Amitrol-T Amizol, Amizine)	H *(See below)	Registration standard. (Could not be re-registered unless restricted.) Oncogenic (tumor causing) potential.
ARSENIC ACID (Dessicant L-10)	D, H	Registration standard (9/86). Effective (9/30/87) (production), 9/30/88 (channels of trade). Oral toxicity. Oncogenicity (tumor causing).
ARSENIC PENTOXIDE (CCA, Hollow Heart, Osmose K-33-C Concentrate, Mitrol, Wood Treating CCA, Wolmanac Concentrate)	WP	Possible oncogenic (tumor causing), mutagenic (causes mutations), reproductive, and/or fetotoxic (toxic to fetus in womb) effects.
CYANAZINE (Bladex, Conquest, Extrazine)	H	Ground water contamination. Teratogenicity (causes abnormal (monstrous) development). Fetotoxicity (toxic to fetus).
CREOSOTE (Creosote, Pole Life, Timpreg, Osmoplastic, Osmoband, Creepen, Coal Tar, Kolineum, Timberlife, Special Oil, Tritox, Pole-Hugger, Osmotox, Patox)	WP	Possible oncogenic (tumor causing) and mutagenic (causes mutations) effects.
DICHLOROPROPENE (Telone C-17, Osmose Mitc-Fume)	WP, F, N	Oncogenicity (tumor causing).
DICLOFOP METHYL (Hoelon)	H	Voluntarily restricted — oncogenicity (tumor causing).
DODEMORPH ACETATE (Milban)	F	Corrosive to eye tissue. Voluntarily restricted.
PARAQUAT (Gramoxone, Industrial Weed and Grass Killer)	H	Human toxicological data. Other hazards — use & accident history.
PENTACHLOROPHENOL (Penta, Chemtox PWP-40, PCP, Napclor-G, Permattox, Pol Nu, Void-fill, Osmoband, Deep Treat, Seal Treat, Patox, Dura-Treat, Osmotox, 24-12 Wood Preservative, Pattox Type I Pole Treating Wrap, Glazd Penta)	WP	Voluntary restriction — possible oncogenicity, (tumor causing), teratogenic (causes abnormal (monstrous) development) and fetotoxic (toxic to fetus) effects.
PHENYL MERCURY ACETATE (PMAS)	F	No information available at press time. Contact Jim Jarman, Pesticide Coordinator, 45 Agriculture Building, UMC 65211, 314/882-7871.

* Herbicides (kills weeds) = H, fungicides (kills fungus) = F, Wood Preservatives = WP, Dessicant = D. Some or all uses and formulations of these pesticides are classified "restricted use."

Herbicides, fungicides, wood preservatives-Continued

Common name (Brand names)	Pesticide type* *(See below)	Criteria influencing restriction
PICLORAM (Tordon, Access)	H	Hazard to non-target organisms (Specifically non-target plants, both crop and non-crop)
PRONAMIDE (Kerb)	H	RPAR decision, oncogenicity (cause tumors). (RPAR: "rebuttable presumption against re-registration.")
TRIPHENYLTIN HYDROXIDE (Du-Ter)	F	Possible mutagenic (causes mutations) effects.

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Rodenticides and avicides

Common name (Brand names)	Pesticide type* *(See below)	Criteria influencing restriction
AVITROL (Avitrol)	Av	Hazard to fish and non-target birds.
CHLOROPHACINONE (Rozol)	R	Human hazard, potential for food contamination. Possible inhalation hazard.
ENDRIN (Endrin, Rid-A-bird Control Liquid)	Av (Insecticide)	Acute dermal toxicity. Effects on non-target organisms.
SODIUM FLUOROACETATE (1080)	R	Acute oral toxicity and hazard to non-target organisms. Use and accident history.
STRYCHNINE (Mouse Maise, Elscop, Gopher Getter, 2-100 Field Mouse Bait)	R	Acute oral toxicity. Hazard to non-target avian (bird) species.
TERGITOL (Compound PA-14, avian [bird] stressing agent)	Av	Limited to situations approved by U.S. Fish and Wildlife Service and must be supervised by government agency personnel trained in bird control.
ZINC PHOSPHIDE (Z.P. Rodent Bait, Z. P. Tracking Powder, Forces Mouse Con No. 2, Ridall-Zinc, 2-100 and 1-100 Field Mouse Bait)	R	Acute inhalation and oral toxicity. Hazard to non-target organisms.

*Rodenticides (kills rats, mice, etc.) = R, Avicides (kills birds) = Av. Some or all uses and formulations of these pesticides are classified "restricted use."



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