Restricted Use Pesticides

Howard M. Deer

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Both the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Utah Pesticide Control Act restrict some uses of certain pesticides to certified applicators or those working under their direct supervision. In Utah only private applicators can supervise the use of restricted use pesticides by noncertified applicators. Below is a list of restricted use pesticides that are likely to be used in Utah. Information on how to become a certified applicator or additional information about these restricted use pesticides may be obtained from your Utah Department of Agriculture and Food Agricultural Field Representative or Utah State University County Agent.

<table>
<thead>
<tr>
<th>Active Ingredient (Trade Name)</th>
<th>Type of Pesticide</th>
<th>Restricted Uses &amp; Formulations</th>
<th>Restriction Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>acrolein (Aqualin, Magnacide-H)</td>
<td>Herbicide Rodenticide</td>
<td>All formulations and uses.</td>
<td>Human inhalation hazard. Residue effects on avian species and aquatic organisms.</td>
</tr>
<tr>
<td>alachlor (Lasso)</td>
<td>Herbicide</td>
<td>All formulations and uses.</td>
<td>Potential oncogenicity.*</td>
</tr>
<tr>
<td>aldicarb (Temik)</td>
<td>Insecticide Acaricide Nematicide</td>
<td>All formulations and uses.</td>
<td>Accident history.</td>
</tr>
<tr>
<td>aluminum phosphide (Detia, Fumitoxin, Phostoxin)</td>
<td>Fumigant</td>
<td>All formulations and uses.</td>
<td>Inhalation hazard to humans.</td>
</tr>
<tr>
<td>aminopyridine (Avitrol)</td>
<td>Avicide</td>
<td>All formulations and uses.</td>
<td>Hazard to fish and non-target birds.</td>
</tr>
<tr>
<td>amitrole (Amitrol T)</td>
<td>Herbicide</td>
<td>All formulations except for home use.</td>
<td>Potential oncogenicity.*</td>
</tr>
<tr>
<td>Active Ingredient (Trade Name)</td>
<td>Type of Pesticide</td>
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<td>Restriction Criteria</td>
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</tr>
<tr>
<td>atrazine (Aatrex, Extrazine)</td>
<td>Herbicide</td>
<td>All formulations 2% and greater.</td>
<td>Potential ground water hazard. Worker exposure concerns.</td>
</tr>
<tr>
<td>avermectin (Agri-Mek)</td>
<td>Insecticide</td>
<td>Emulsifiable concentrate.</td>
<td>Fish, mammal and aquatic organism toxicity.</td>
</tr>
<tr>
<td>azinphos methyl (Guthion)</td>
<td>Insecticide</td>
<td>All liquids with a concentration &gt; 13.5%.</td>
<td>Human inhalation hazard. Acute toxicity hazard to avian, aquatic, and mammalian species.</td>
</tr>
<tr>
<td>bendiocarb (Turcam)</td>
<td>Insecticide</td>
<td>Granular and wettable powder.</td>
<td>Aquatic and avian toxicity.</td>
</tr>
<tr>
<td>bifenthrin (Capture)</td>
<td>Insecticide</td>
<td>Emulsifiable concentrate.</td>
<td>Aquatic organism and fish toxicity.</td>
</tr>
<tr>
<td>carbofuran (Furadan)</td>
<td>Insecticide</td>
<td>All formulations and uses except pellet/tablet.</td>
<td>Acute inhalation toxicity. Avian toxicity.</td>
</tr>
<tr>
<td>chlorophacinone (Rozol)</td>
<td>Rodenticide</td>
<td>Tracking powder, dust and ready-to-use formulations &gt; 0.2%.</td>
<td>Human hazard. Potential for food contamination. Possible inhalation hazard</td>
</tr>
<tr>
<td>chloropicrin (Brom-O-Gas, Terr-O-Gas)</td>
<td>Fumigant</td>
<td>All formulations and uses &gt; 2%. All formulations for rodent control.</td>
<td>Acute inhalation toxicity. Hazard to non-target organisms.</td>
</tr>
<tr>
<td>chromic acid (CCA)</td>
<td>Wood Preservative</td>
<td>All formulations except brush on.</td>
<td>Oncogenicity,* mutagenicity,* teratogenicity,* and fetotoxicity.*</td>
</tr>
<tr>
<td>clofentezine (Apollo SC)</td>
<td>Miticide</td>
<td>Soluble concentrate.</td>
<td>Environmental hazard.</td>
</tr>
<tr>
<td>coumaphos (CO-RAL)</td>
<td>Insecticide</td>
<td>Flowable concentrate.</td>
<td>Acute oral toxicity.</td>
</tr>
<tr>
<td>creosote (Cresote, Coaltar)</td>
<td>Wood Preservative</td>
<td>All formulations and uses.</td>
<td>Oncogenicity,* mutagenicity.*</td>
</tr>
<tr>
<td>cyanazine (Bladex)</td>
<td>Herbicide</td>
<td>All formulations and uses.</td>
<td>Teratogenicity,* fetotoxicity.*</td>
</tr>
<tr>
<td>cypermethrin (Ammo, Cymbush)</td>
<td>Insecticide</td>
<td>All formulations and uses.</td>
<td>Oncogenicity.* Hazard to non-target organisms.</td>
</tr>
<tr>
<td>diazinon</td>
<td>Insecticide</td>
<td>Granules, emulsifiable concentrate and wettable powders.</td>
<td>Avian hazard.</td>
</tr>
<tr>
<td><strong>Active Ingredient (Trade Name)</strong></td>
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<td><strong>Restriction Criteria</strong></td>
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<tr>
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</tr>
<tr>
<td>dichloropropene (Telone)</td>
<td>Fumigant</td>
<td>All formulations and uses.</td>
<td>Probable human carcinogen. Oncogenicity.* Acute oral and inhalation toxicity.</td>
</tr>
<tr>
<td>diclofop methyl (Hoelon)</td>
<td>Herbicide</td>
<td>All formulations and uses.</td>
<td>Oncogenicity.*</td>
</tr>
<tr>
<td>dioxathion (Deltic, Delnav)</td>
<td>Insecticide</td>
<td>All emulsifiable and solution concentrates. All domestic uses for wettable powders &lt;30%.</td>
<td>Acute dermal toxicity.</td>
</tr>
<tr>
<td>dioxathion (Deltic, Delnav)</td>
<td>Acaricide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>diphacinone (Ditrac Tracking Powder)</td>
<td>Rodenticide</td>
<td>Tracking powders.</td>
<td>Inhalation toxicity.</td>
</tr>
<tr>
<td>disulfoton (Di-syston)</td>
<td>Insecticide</td>
<td>All granular formulations 10% and greater. All emulsifiable concentrates 65% and greater; all emulsifiable concentrates and concentrate solutions 21% and greater with fensulfothion 43% and greater in combinations with fensulfothion 32% and greater. In commercial seed treating, non-aqueous solution, 95% and greater. All end use formulations &gt; 2%.</td>
<td>Acute dermal and inhalation toxicity.</td>
</tr>
<tr>
<td>disulfoton (Di-syston)</td>
<td>Acaricide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ethoprop (Mocap)</td>
<td>Insecticide</td>
<td>All granular formulations except 10%. All fertilizer formulations. Emulsifiable concentrations 40% &amp; greater.</td>
<td>Environmental hazards. Acute dermal toxicity.</td>
</tr>
<tr>
<td>ethoprop (Mocap)</td>
<td>Nematicide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ethyl parathion (Parathion)</td>
<td>Insecticide</td>
<td>All formulations and uses.</td>
<td>Human inhalation hazard. Acute dermal toxicity. Residue effects on mammalian, aquatic, and avian species. Accident history.</td>
</tr>
<tr>
<td>ethyl parathion (Parathion)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fenamiphos (Nemacur)</td>
<td>Nematicide</td>
<td>Emulsifiable concentrates 35% and greater.</td>
<td>Acute dermal and inhalation toxicity. Avian toxicity.</td>
</tr>
<tr>
<td>fenthion (Rid-A-Bird 1100 Perch Solution)</td>
<td>Avicide</td>
<td>All uses.</td>
<td>Avian, fish, and aquatic invertebrate toxicity.</td>
</tr>
<tr>
<td>fenvalerate (Pydrin, Asana)</td>
<td>Insecticide</td>
<td>Emulsifiable concentrates &gt;30%.</td>
<td>Possible adverse effects on aquatic organisms.</td>
</tr>
<tr>
<td>Active Ingredient (Trade Name)</td>
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</tr>
<tr>
<td><strong>fonofos</strong></td>
<td>Insecticide</td>
<td>All granular formulations 20% and greater. Emulsifiable concentrates 44% and greater.</td>
<td>Environmental hazards. Acute dermal toxicity.</td>
</tr>
<tr>
<td><strong>inorganic arsenicals</strong> (CCA, ACA, FCAP)</td>
<td>Wood Preservative</td>
<td>All formulations.</td>
<td>Human and environmental hazards.</td>
</tr>
<tr>
<td><strong>isazofos</strong> (Triumph)</td>
<td>Insecticide</td>
<td>All formulations and uses.</td>
<td>Bird, fish and aquatic organism toxicity.</td>
</tr>
<tr>
<td><strong>isofenphos</strong> (Pryfon)</td>
<td>Insecticide</td>
<td>65% liquid formulation for termite use.</td>
<td>Acute toxicity.</td>
</tr>
<tr>
<td><strong>lindane</strong> (Lindane)</td>
<td>Insecticide</td>
<td>All formulations for various uses.</td>
<td>Possible oncogenicity.*</td>
</tr>
<tr>
<td><strong>magnesium phosphide</strong> (Degesch, Detia)</td>
<td>Fumigant</td>
<td>All formulations and uses.</td>
<td>Inhalation hazard.</td>
</tr>
<tr>
<td><strong>metam sodium</strong> (Vapam)</td>
<td>Herbicide</td>
<td>Sewer root control.</td>
<td>Human, domestic animal &amp; environmental hazards.</td>
</tr>
<tr>
<td><strong>methamidophos</strong> (Monitor)</td>
<td>Insecticide</td>
<td>Liquid formulations 40% and greater. Dust formulations 2.5% and greater.</td>
<td>Acute dermal toxicity. Residue effects on avian species.</td>
</tr>
<tr>
<td><strong>methidathion</strong> (Supracide)</td>
<td>Insecticide</td>
<td>All formulations and all uses except nursery stock, safflower and sunflower.</td>
<td>Residue effects on avian species.</td>
</tr>
<tr>
<td><strong>methiocarb</strong> (Mesuroo, Metaldehyde/ Methiocarb Granules)</td>
<td>Avicide Molluscicide</td>
<td>All formulations and outdoor commercial and agricultural uses.</td>
<td>Possible hazard to avian, fish and aquatic organisms.</td>
</tr>
<tr>
<td><strong>methomyl</strong> (Lannate Nudrin)</td>
<td>Insecticide</td>
<td>As sole active ingredient in 1% to 2.5% baits (except 1% fly bait). All concentrated solution formulations 90% wettable powder not in water soluble bags.</td>
<td>Residue effects on mammalian species. Accident history.</td>
</tr>
<tr>
<td><strong>methyl bromide</strong> (Brom-O-Gas, Meth-O-Gas, Terr-O-Gas)</td>
<td>Fumigant</td>
<td>All formulations and uses.</td>
<td>Accident history. Acute toxicity.</td>
</tr>
<tr>
<td><strong>methyl isothiocyanate</strong> (Vorlex Soil Fumigant)</td>
<td>Fumigant</td>
<td>Solution-ready to use.</td>
<td>Human hazard.</td>
</tr>
<tr>
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</tr>
<tr>
<td>methyl parathion (Penncap-M)</td>
<td>Insecticide</td>
<td>All formulations and uses.</td>
<td>Residue effects on mammalian and avian species. Hazard to bees. Acute dermal toxicity.</td>
</tr>
<tr>
<td>mevinphos (Phosdrin)</td>
<td>Insecticide</td>
<td>All emulsifiable concentrates, liquid concentrates and 2% dusts.</td>
<td>Acute dermal toxicity. Residue effects on mammalian and avian species.</td>
</tr>
<tr>
<td>nicotine (Fulex, Nico-Fume)</td>
<td>Insecticide</td>
<td>Liquid and dry formulations 14% and greater for greenhouse use.</td>
<td>Acute inhalation toxicity. Effects on aquatic organisms.</td>
</tr>
<tr>
<td>oxamyl (Vydate)</td>
<td>Insecticide</td>
<td>All liquid formulations and uses.</td>
<td>Acute oral and inhalation toxicity. Avian toxicity.</td>
</tr>
<tr>
<td>oxydemeton methyl (Meta Systox R)</td>
<td>Insecticide</td>
<td>All formulations and uses.</td>
<td>Reproductive effects.</td>
</tr>
<tr>
<td>paraquat (Gramoxone)</td>
<td>Herbicide</td>
<td>All formulations and concentrates EXCEPT as listed: pressurized. Spray formulations containing 0.44% paraquat bis (methyl sulfate) &amp; 15% petroleum distillates as actives liquid fertilizers containing 0.025% paraquat dichloride and 0.03% atrazine; 0.03% paraquat dichloride &amp; 0.37% atrazine; 0.04% paraquat dichloride &amp; 0.49% atrazine.</td>
<td>Human toxicological data. Use and accident history.</td>
</tr>
<tr>
<td>pentachlorophenol (Penta, PCP)</td>
<td>Wood Preservative</td>
<td>All formulations and uses.</td>
<td>Oncogenicity.<em>, teratogenicity,</em> and fetotoxicity.*</td>
</tr>
<tr>
<td>permethrin (Ambush, Pounce)</td>
<td>Insecticide</td>
<td>All formulations labeled for agricultural crop use.</td>
<td>Aquatic organism toxicity. Oncogenicity.*</td>
</tr>
<tr>
<td>phorate (Thimet)</td>
<td>Insecticide</td>
<td>All granular formulations. Liquid formulations 65% and greater.</td>
<td>Acute dermal and oral toxicity. Residue effects on avian and mammalian species. Aquatic organism effects.</td>
</tr>
<tr>
<td>picloram (Tordon)</td>
<td>Herbicide</td>
<td>All formulations except Tordon 101R and RTU.</td>
<td>Hazard to non-target plants.</td>
</tr>
<tr>
<td>pronamide (Kerb)</td>
<td>Herbicide</td>
<td>All uses of 50% wettable powders.</td>
<td>Oncogenicity.*</td>
</tr>
<tr>
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</tr>
<tr>
<td>propetamphos (Safrotin)</td>
<td>Insecticide</td>
<td>50% emulsifiable concentrates for indoor domestic use.</td>
<td>Indoor uses restricted.</td>
</tr>
<tr>
<td>rotenone (Prentox)</td>
<td>Pisicide</td>
<td>2.5-5% emulsifiable concentrate and 5% and 20% wettable powder.</td>
<td>Aquatic organism toxicity.</td>
</tr>
<tr>
<td>sodium cyanide (M-44)</td>
<td>Predacide</td>
<td>All capsules and ball formulations and uses.</td>
<td>Human inhalation hazard. Hazard to non-target species.</td>
</tr>
<tr>
<td>sodium fluroacetate (Compound 1080)</td>
<td>Predacide</td>
<td>All solutions and dry bait formulations and uses.</td>
<td>Acute oral toxicity. Hazard to non-target organisms. Use and accident history.</td>
</tr>
<tr>
<td>starlicide (Starlicide, DRC 1399)</td>
<td>Avicide</td>
<td>98% concentrate bird repellents.</td>
<td>Hazard to non-target organisms.</td>
</tr>
<tr>
<td>strychnine (Strychnine)</td>
<td>Rodenticide</td>
<td>All formulations except hand application below ground.</td>
<td>Acute oral toxicity. Hazard to non-target organisms. Use and accident history.</td>
</tr>
<tr>
<td>sulfotepp (Fulex Dithio, Plantfume 103)</td>
<td>Insecticide</td>
<td>Smoke generators.</td>
<td>Human inhalation hazard.</td>
</tr>
<tr>
<td>sulfuric acid (ASARCO)</td>
<td>Desiccant</td>
<td>Potato vine desiccant.</td>
<td>Acute toxicity to humans. Extremely corrosive.</td>
</tr>
<tr>
<td>sulfuryl fluoride (Vikane)</td>
<td>Fumigant</td>
<td>All formulations and uses.</td>
<td>Acute inhalation hazard. Human acute toxicity.</td>
</tr>
<tr>
<td>tefluthrin</td>
<td>Insecticide</td>
<td>Granular product used on corn grown for seed.</td>
<td>Environmental hazard.</td>
</tr>
<tr>
<td>terbufos (Counter)</td>
<td>Insecticide</td>
<td>All granular formulations 15% and greater.</td>
<td>Acute oral and dermal toxicity. Residue effects to avian species.</td>
</tr>
<tr>
<td>tributyltin methacrylate (Classic Yacht #625)</td>
<td>Biocide</td>
<td>Solution-ready to use.</td>
<td>Aquatic organism toxicity.</td>
</tr>
<tr>
<td>tripheyltin hydroxide (DUTER)</td>
<td>Fungicide</td>
<td>All formulations and uses.</td>
<td>Possible mutagenicity.*</td>
</tr>
<tr>
<td>zinc phosphide (Gopha-Rid) ZP)</td>
<td>Rodenticide</td>
<td>All 10% and greater dry formulations. All bait formulations. All uses.</td>
<td>Acute inhalation and oral toxicity. Hazard to non-target organisms.</td>
</tr>
</tbody>
</table>

*Definitions:
- Fetotoxicity—Ability to be toxic to the developing fetus.
- Mutagenicity—Ability to generate or cause mutations.
- Oncogenicity—Ability to generate or cause tumors.
- Teratogenicity—Ability to generate or cause birth defects.
PRECAUTIONARY STATEMENT

All pesticides have both benefits and risks. Benefits can be maximized and risks minimized by reading and following the labeling. Pay close attention to the directions for use and the precautionary statements. The information on pesticide labels contains both instructions and limitations. Pesticide labels are legal documents and it is a violation of both federal and state laws to use a pesticide inconsistent with its labeling. The pesticide applicator is legally responsible for proper use. Always read and follow the label.