



FACT SHEET

Groundwater Protection *Pesticide Uses and Leachability*

The Washington State Department of Agriculture developed this fact sheet to provide pesticide applicators with an easy-to-follow reference to pesticides having either label restrictions or advisories for protecting groundwater.

The table below summarizes the uses and leachability ratings for 32 pesticides that are listed by EPA as pesticides of national concern because they have been detected in groundwater in several regions of the United States.

Some of these pesticides have been detected in the groundwater of Washington State. Groundwater sources may be at risk if these pesticides leach into the ground. However, two of these pesticides are not currently registered for use in Washington State.

| Active Ingredient | Brand Name ¹ | Uses ² | Leachability Rating ³ | Groundwater Label Restrictions/ Advisories in Washington State |
|-----------------------------|------------------------------|--|----------------------------------|--|
| 2,4-D | several | apple, asparagus, canal/ditch, corn, forest land, non-crop area, pear, stone fruit, strawberry, turfgrass, wheat | High | Yes |
| Acetochlor | Degree, Harness | corn, soybean | High | Yes |
| Acifluorfen | Not registered in Washington | peanut, rice, soybean | High | N/A |
| Alachlor | Lasso | corn, dry bean, soybean | Medium | Yes |
| Aldicarb | Temik | dry bean, potato, sorghum, soybean, sugar beet | High | Yes |
| Atrazine | AAtrex | corn, conifer, right-of-way, turfgrass, wheat | High | Yes |
| Bentazon, sodium salt | Basagran | bean, corn, mint, pea, sorghum, soybean | High | Yes |
| Bromacil | Hyvar | industrial site, non-crop area, right-of-way | High | Yes |
| Carbaryl | Sevin | alfalfa, asparagus, berry, corn, pome fruit, stone fruit, vegetable, wheat | High | No |
| Carbofuran | Furadan | alfalfa, corn, grape, outdoor ornamental, potato, sugar beet | High | Yes |
| DCPA (Dacthal) ⁴ | Dacthal | bean, brassica vegetable, melon, outdoor ornamental, onion, seed potato treatment, strawberry, turfgrass | High | Yes |
| Diazinon | Diazinon | apple, bean, berry, cherry, corn, outdoor ornamental, onion, peach/nectarine, pear, pea, plum, vegetable | Medium | No |
| Dicamba | Banvel, Clarity, Vanquish | asparagus, corn, fallow land, non-crop area, sorghum, soybean, turfgrass, wheat | High | Yes |
| Disulfoton | Di-Syston | asparagus (24c), bean, Christmas tree (fir) | Medium | No |
| Diuron | Direx, Karmex | alfalfa, apple, asparagus, berry, canal/ditch, corn, grape, industrial site, mint, non-crop area, peach/nectarine, pear, right-of-way, wheat | High | No |

| Active Ingredient | Brand Name ¹ | Uses ² | Leachability Rating ³ | Groundwater Label Restrictions/Advisories in Washington State |
|--------------------|-------------------------------|---|----------------------------------|---|
| EPTC | Eptam, Eradicane | alfalfa, bean, clover, potato, sugarbeets | Low | No |
| Fenamiphos | Nemacur | apple, cherry, grape, peach/nectarine, raspberry, strawberry, turfgrass | High | Yes |
| Hexazinone | Hexazinone, Velpar | alfalfa, blueberry, canal/ditch, Christmas tree, forest land, industrial site, non-crop area, right-of-way, rangeland | High | Yes |
| Lindane | Lindane | pre-plant seed treatment for bean and corn | High | No |
| Linuron | Linex, Lorox | bulb, corn, fallow land, hybrid poplar, potato, wheat | High | Yes |
| Metalaxyl | Allegiance, MetaStar, Replica | alfalfa, apple, asparagus, berry, hops, onion, soybean, stone fruit, sugar beet, turfgrass seed treatment, vegetable | High | Yes |
| Methomyl | Lannate | alfalfa, apple, asparagus, beans, chickpea, corn, grapes, lentils, mint, onions, peas, potatoes, turfgrass, wheat | High | Yes |
| Metolachlor | Parallel, Stalwart | alfalfa, beans, chickpeas, corn, peach/nectarine, pear, peas, potatoes, timothy, turfgrass | High | Yes |
| Metribuzin | Sencor | alfalfa, chickpea, corn, lentil, pea, potato, soybean, turfgrass seed, wheat | High | Yes |
| Norflurazon | Solicam, Zorial | alfalfa, asparagus, caneberry, grape, hops, non-crop area, tree fruit | Medium | Yes |
| Picloram | OutPost, Tordon | barley, fallow land, forest land, industrial sites, non-crop areas, oats, pasture, rights-of-way, wheat | High | Yes |
| Prometon | Pramitol, Sonora | driveways, fences, industrial site, non-crop area, right-of-way | High | No |
| Propachlor | Not registered in Washington | corn, onions, rice | Medium | N/A |
| Simazine | Princep | apple, berry, cherry, Christmas tree, corn, cranberry, grape, ornamental conifer, peach, plum | High | Yes |
| Terbacil | Sinbar | alfalfa, apple, asparagus, berry, hybrid poplar, mint, peach | High | Yes |
| Terbufos | Counter | corn, sorghum, sugar beets | Low | No |
| Tebuthiuron | Spike, Sprakil | industrial sites, non-crop areas, pasture, rights-of-way | High | Yes |

¹ The brand name listed is the most commonly used active ingredient formulation(s) in Washington State. No discrimination or endorsement is intended.

² The uses listed represent the crops grown in Washington State most likely to be treated with the active ingredient formulation(s). The list is not all-inclusive.

³ Leachability rating was calculated using the U.S. Soil Conservation Service Soil Pesticide Interaction Screening Procedure (SPISP). The procedure uses factors — pesticide half-life, organic carbon partitioning coefficient, and solubility — that interplay with soil properties such as organic matter content, erosion potential, and hydraulic properties (Goss and Wauchope, 1992).

⁴ Includes DCPA (Dacthal) and its breakdown products

Pesticides highlighted in **red** are designated federally restricted use pesticides for the protection of groundwater.

Pesticides highlighted in **blue** are state restricted use pesticides for the protection of groundwater (Chapter 16-228-1231(3) WAC.)

Pesticides highlighted in **green** are designated both state & federally restricted use pesticides for the protection of groundwater.

For more information about groundwater protection activities in Washington State, contact Kirk Cook — Supervisor, WSDA Natural Resources Assessment Section at (360) 902-1936 or kcook@agr.wa.gov

Idaho State Department of Agriculture contributed to the concept and format of this fact sheet.

Inquiries regarding the availability of this publication in alternative formats should be directed to the WSDA Receptionist at (360) 902-1976 or Telecommunications Device for the Deaf at (360) 902-1996.