

STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE P.O. Box 42560 • Olympia, Washington 98504-2560 • (360) 902-1800

# WASHINGTON STATE IPRODIONE USE SUMMARY

- The products containing iprodione registered for use in Washington State are general use pesticides (GUP).
- Iprodione is used in formulations with numerous other fungicides such as thiabenzadole and carbendazim. It is compatible with most other pesticides.
- Iprophione is a contact fungicide used to control a wide variety of crop diseases. It is used to control fungal pests on vegetables, ornamental, pome and stone fruits and root crops. It may also be used as a post-harvest fungicide and as a seed treatment. Iprodione inhibits the germinations of spores and the growth of the mycelium (fungal mat).
- Iprodione is available in liquid, flowable and spray powder formulations.
- Iprodione is a slightly toxic compound. Products containing iprodione bear the signal word, "Caution." Iprodione belongs to the dicarboximide chemical class.
- Major crop uses in Washington State, listed alphabetically, are as follows:

CROP	WASS* 2001 EST. ACRES PLANTED	EST. % ACRES TREATED	EST. LBS. A.I./ACRE	# OF APPS	EST. ACRES TREATED	EST. LBS. A.I. APPLIED
Carrots**	7,000					
Cherries	22,000	Iprodione is r	not used on this	s crop in V	VA State. See i	narrative.
Onions	16,000		0.75			
Peaches & Nectarines	4,200		0.5 – 1.0			
Plums/Prunes	1,000					
Potatoes, Irish***	15,000	7.3	1.0	1	1,100	1,100
Raspberries (& cane)	9,500	Iprodione is r	not used on thi	s crop in V	VA State. See i	narrative.
Strawberries	1,600	Iprodione is r	not used on thi	s crop in V	VA State. See i	narrative

- \* Washington Agricultural Statistics Service
- \*\* Commodities noted in **BLUE** have not had peer review input.

\*\*\* Data in the above table for potatoes is provided for only potatoes grown in western Washington State. Information provided in the narrative reflects pesticide use practices for both western and eastern Washington State. However, only the data for western Washington State has been peer reviewed.

## MAJOR USES (listed alphabetically):

The major use listing supplies the most commonly used formulations of the active ingredient. No discrimination or endorsement is intended.

The pesticide labels take precedence over any information contained herein. It is the responsibility of the user to comply with the label directions provided.

The following pesticide use summary reflects the general pesticide practices for the listed commodities. The use information is not intended to reflect the pesticide application practices of any individual.

### **CARROTS:**

- Carrots are grown commercially in both eastern and western Washington. The top producing counties in eastern Washington are Benton, Franklin, Grant and Klickitat counties. The top producing counties in western Washington are Cowlitz, Skagit, Thurston and Whatcom counties.
- Iprodione may be applied to control Alternaria leaf spot and leaf blight.
  - Iprodione (Rovral 4F) may be applied at a rate of 1 2 pints (0.5 1.0 pounds a.i.) per acre in a minimum of 10 gallons of water in 7- to 14-day intervals.
  - Formulations for timing sprays have been developed to control Alternaria leaf spot and leaf blight. Rovral may be applied once in the fall and once or twice in the spring for seed-to-seed crops. For steckling production, Rovral may be applied once in the fall and once or twice after transplanting in the spring.
  - Only 4 applications of Rovral 4F are allowed per season. However, 10 applications per season are allowed if Rovral 4F is tank mixed with another fungicide labeled to control Alternaria.
- Rovral may also be used as a seed treatment to control Alternaria at a rate of 16 ounces per 100 pounds of seed. (Washington SLN# WA-94006).

### **CHERRIES:**

- Cherries are grown primarily in Yakima (75,264 acres), Grant (33,615 acres), Okanogan (24,164 acres), Benton (18,425 acres), Chelan (17,096 acres), Douglas (14,383 acres), Franklin and Walla Walla counties.
- Iprodione use has been all but eliminated for prevention of brown rot and fruit rot because of fungal resistance and newer, more effective chemistries.

#### **ONIONS (DRY BULB):**

- The county with the largest production of onions is Grant County (6,100 acres). The remaining top onion producing counties are Franklin (4,300 acres), Benton (3,500 acres), Adams, Walla Walla and Yakima counties.
- Iprodione may be applied to control botrytis leaf blight
  - Iprodione (Rovral 4F) may be used applied to dry bulb onions at a rate of 1.5 pints (0.75 pounds a.i.) per acre in 50 gallons of water. Rovral 4F may not be applied more than 5 times per season and may not be applied within 7 days of harvest.
  - Repeated applications of protective fungicides provide some control for botrytis leaf blight but iprodione use is noted for building up resistant fungi.

#### **PEACHES & NECTARINES:**

- Peaches & nectarines are produced in central Washington State with approximately 2,700 acres of peaches and 1,500 acres of nectarines 1,500 planted in 2001.
- Yakima is the top peach-producing county with an estimated 1,438 acres in production.
- Fungicides are rotated for resistance management, alternating or tank-mixing fungicides that have a different mode of action. Iprodione is not a primary use fungicide. Use is decreasing due to resistance issues and newer, more effective chemistries.
- If used, iprodione may be applied at a rate of 1 2 pints (0.5 1.0 pounds a.i.) per acre to control brown rot and mildew.
  - Applications occur during blooming period (early to mid-April):
    - ✓ Pre-bloom (early April)
    - ✓ Blossom (second week of April), only if conditions are wet and/or
    - ✓ Petal fall (mid-April), if needed
  - o Rovral 50WP is not used after petal fall or more than twice per season.

### **POTATOES, IRISH (WHITE):**

- Potatoes are grown in Grant (36,000 acres), Franklin (33,000 acres), Benton (32,000 acres), Adams (24,000 acres), Walla Walla (12,000 acres), Skagit (8,000 acres), Lincoln (7,000 acres), Yakima (2,200 acres), Whatcom (3,000 acres), Klickitat (2,300 acres) and Kittitas (500 acres) counties. Most of the acreage grown in eastern Washington is under contract for processing (fries, etc.) Western Washington produces potatoes (approximately 11,000 acres) for fresh market and seed.
- Potatoes are usually grown in a four-year rotation (one year in four planted to potatoes) typically with wheat, alfalfa, field and/or sweet corn.
- Iprodione may be applied to control the following fungi:
  - Timing and type of application is geographically specific:
    - ✓ Columbia Basin: March to September applied by ground, air or chemigation
    - $\checkmark$  Western Washington: May to September applied by ground or air

Early blight

- o Iprodione (Rovral 4F) may be used applied at a rate of 1 2 pints (0.5 1.0 pounds a.i.) per acre at a 10- to 14-day interval. Treatment should begin when conditions are favorable for disease.
- Rovral 4F may not be applied more than 4 times per season and may not be applied within 14 days of harvest. Do not irrigate for 24 hours after application.

White mold (sclerotinia stem rot)

- Although widespread, and at times appearing very damaging, the effects of sclerotina on yield is marginal, particularly in the Columbia Basin.
- Iprodione (Rovral 4F) may be applied from emergence to harvest to control white mold.
- o Rovral 4F is used at a rate of 1 2 pints (0.5 1.0 pounds a.i.) per acre in a minimum of 10 gallons of water. Rovral 4F is applied at the first signs of disease or just before row closure and again 14 21 days later.
- o See also iprodione (Rorval) + PCNB (Blocker).
- o These applications may also control early blight. (See above.)
- Rovral 4F may not be applied more than 4 times per season and may not be applied within 14 days of harvest. Do not irrigate for 24 hours after application.

#### **PRUNES & PLUMS:**

- Prunes & plums are produced in central Washington State with an estimated 1,000 acres planted in 2001.
- Fungicides are rotated for resistance management, alternating or tank-mixing fungicides that have a different mode of action. Iprodione is not a primary use fungicide. Use is decreasing due to resistance issues and newer, more effective chemistries.
- If used, iprodione may be applied at a rate of 1 2 pints (0.5 1.0 pounds a.i.) per acre to control brown rot and mildew.
  - o Applications occur during blooming period (early to mid-April):
    - ✓ Pre-bloom (early April)
    - ✓ Blossom (second week of April), only if conditions are wet and/or
    - ✓ Petal fall (mid-April), if needed
  - o Rovral 50WP is not used after petal fall or more than twice per season.

### **RASPBERRIES AND CANEFRUIT:**

- Seventy-seven percent (77%) of all raspberries grown in Washington State are grown in Whatcom County (6,400 acres). The remaining raspberry acreage is found in Skagit (1,330 acres), Clark (860 acres), Cowlitz (600 acres) and Pierce (110 acres) counties.
- Fungal pathogens are showing resistance to iprodione.
- Spur blight control is a side benefit of a Switch 62.5WG/Elevate 50WDG fungal pathogen control program and has for all purposes eliminated the use of iprodione.

### **STRAWBERRIES:**

- Strawberries are grown in western Washington: Whatcom (390 acres), Skagit (360 acres), Clark (190 acres), Pierce (160 acres) and Thurston counties.
- Iprodione (Rovral various formulations) is registered but cannot be used past first flower, which make it useless for controlling fruit rot.
- Iprodione is registered as a pre-plant soak for transplants to control crown rot. Use at a rate of 2 pounds per 100 gallons of water, soak for 5 minutes and plant immediately.

**PRODUCT NAMES & LABELED CROP:** A complete list of all products currently registered for use in Washington State and their respective labeled crops is attached.

PRODUCT NAME	CROP
26 GT FUNGICIDE (BES)	BULB
26 GT FUNGICIDE (BES)	BULB (GREENHOUSE)
26 GT FUNGICIDE (BES)	CONIFER
26 GT FUNGICIDE (BES)	CONIFER NURSERY
26 GT FUNGICIDE (BES)	EVERGREEN TREE
26 GT FUNGICIDE (BES)	FLOWER
26 GT FUNGICIDE (BES)	FLOWER (GREENHOUSE)
26 GT FUNGICIDE (BES)	GOLF COURSE
26 GT FUNGICIDE (BES)	NURSERY
26 GT FUNGICIDE (BES)	ORNAMENTAL
26 GT FUNGICIDE (BES)	ORNAMENTAL (GREENHOUSE)
26 GT FUNGICIDE (BES)	ORNAMENTAL TREE
26 GT FUNGICIDE (BES)	ROSE
26 GT FUNGICIDE (BES)	ROSE (GREENHOUSE)
26 GT FUNGICIDE (BES)	SHRUB
26 GT FUNGICIDE (BES)	SHRUB (GREENHOUSE)
26 GT FUNGICIDE (BES)	TURF
26019 FLO BRAND FUNGICIDE (BES)	GOLF COURSE
26019 FLO BRAND FUNGICIDE (BES)	TURF
CHIPCO 26019 BRAND FUNGICIDE (BES)	BULB
CHIPCO 26019 BRAND FUNGICIDE (BES)	CONIFER
CHIPCO 26019 BRAND FUNGICIDE (BES)	DECIDUOUS/SHADE TREE
CHIPCO 26019 BRAND FUNGICIDE (BES)	EVERGREEN TREE
CHIPCO 26019 BRAND FUNGICIDE (BES)	FLOWER
CHIPCO 26019 BRAND FUNGICIDE (BES)	GOLF COURSE
CHIPCO 26019 BRAND FUNGICIDE (BES)	NURSERY
CHIPCO 26019 BRAND FUNGICIDE (BES)	ORNAMENTAL
CHIPCO 26019 BRAND FUNGICIDE (BES)	ORNAMENTAL TREE
CHIPCO 26019 BRAND FUNGICIDE (BES)	OUTDOOR RESIDENTIAL AREA
CHIPCO 26019 BRAND FUNGICIDE (BES)	ROSE
CHIPCO 26019 BRAND FUNGICIDE (BES)	SHRUB
CHIPCO 26019 BRAND FUNGICIDE (BES)	TURF
IPRODIONE 4L AG	APRICOT
IPRODIONE 4L AG	BEAN (DRY)
IPRODIONE 4L AG	BEAN (GREEN)
IPRODIONE 4L AG	BEAN (LIMA)
IPRODIONE 4L AG	BLACKBERRY
IPRODIONE 4L AG	BLUEBERRY
IPRODIONE 4L AG	BROCCOLI
IPRODIONE 4L AG	CARROT

IPRODIONE 4L AG	CHERRY
IPRODIONE 4L AG	CURRANT
IPRODIONE 4L AG	ELDERBERRY
IPRODIONE 4L AG	GARLIC
IPRODIONE 4L AG	GINSENG
IPRODIONE 4L AG	GOOSEBERRY
	GRAPE
	ONION (DRY BULB)
	PEACH
IPRODIONE 4L AG	PLUM
IPRODIONE 4L AG	ΡΟΤΑΤΟ
IPRODIONE 4L AG	PRUNE
IPRODIONE 4L AG	RASPBERRY
IPRODIONE 4L AG	STRAWBERRY
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	BROCCOLI SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	BRUSSELS SPROUT SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	CABBAGE SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	CAULIFLOWER SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	CHINESE CABBAGE SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	COLLARD SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	KALE SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	KOHLRABI SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	MUSTARD SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	RADISH SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	RUTABAGA SEED CROP
IPRODIONE 4L AG (SLN: CRUCIFER CROPS GROWN FOR SEED)	TURNIP SEED CROP
IPRODIONE 50WP AG	APRICOT
IPRODIONE 50WP AG	BEAN (DRY)
IPRODIONE 50WP AG	BEAN (GREEN)
IPRODIONE 50WP AG	BEAN (LIMA)
IPRODIONE 50WP AG	BLACKBERRY
IPRODIONE 50WP AG	BLUEBERRY
IPRODIONE 50WP AG	BROCCOLI
IPRODIONE 50WP AG	CARROT
IPRODIONE 50WP AG	CHERRY
IPRODIONE 50WP AG	CURRANT
IPRODIONE 50WP AG	ELDERBERRY
IPRODIONE 50WP AG	GARLIC
IPRODIONE 50WP AG	GINSENG
IPRODIONE 50WP AG	GOOSEBERRY
IPRODIONE 50WP AG	GRAPE
IPRODIONE 50WP AG	LETTUCE

Washington State Department of Agriculture/Endangered Species Program <u>http://agr.wa.gov/PestFert/EnvResources/EndangSpecies.htm</u>

IPRODIONE 50WP AG	LOGANBERRY
IPRODIONE 50WP AG	NECTARINE
IPRODIONE 50WP AG	ONION (DRY BULB)
IPRODIONE 50WP AG	PEACH
IPRODIONE 50WP AG	PLUM
IPRODIONE 50WP AG	ΡΟΤΑΤΟ
IPRODIONE 50WP AG	RASPBERRY
IPRODIONE 50WP AG	STRAWBERRY
IPRODIONE PRO 2SE	BULB
IPRODIONE PRO 2SE	BULB (GREENHOUSE)
IPRODIONE PRO 2SE	CONIFER
IPRODIONE PRO 2SE	CONIFER NURSERY
IPRODIONE PRO 2SE	EVERGREEN TREE
IPRODIONE PRO 2SE	FLOWER
IPRODIONE PRO 2SE	FLOWER (GREENHOUSE)
IPRODIONE PRO 2SE	GOLF COURSE
IPRODIONE PRO 2SE	ORNAMENTAL
IPRODIONE PRO 2SE	ORNAMENTAL (GREENHOUSE)
IPRODIONE PRO 2SE	ORNAMENTAL GROUND COVER
IPRODIONE PRO 2SE	ORNAMENTAL TREE
IPRODIONE PRO 2SE	ROSE
IPRODIONE PRO 2SE	ROSE (GREENHOUSE)
IPRODIONE PRO 2SE	SHRUB
IPRODIONE PRO 2SE	SHRUB (GREENHOUSE)
IPRODIONE PRO 2SE	TURF
LESCO 18-PLUS	BULB
LESCO 18-PLUS	BULB (GREENHOUSE)
LESCO 18-PLUS	CONIFER
LESCO 18-PLUS	CONIFER NURSERY
LESCO 18-PLUS	EVERGREEN TREE
LESCO 18-PLUS	FLOWER
LESCO 18-PLUS	FLOWER (GREENHOUSE)
LESCO 18-PLUS	GOLF COURSE
LESCO 18-PLUS	NURSERY
LESCO 18-PLUS	ORNAMENTAL
LESCO 18-PLUS	ORNAMENTAL (GREENHOUSE)
LESCO 18-PLUS	ORNAMENTAL GROUND COVER
LESCO 18-PLUS	ORNAMENTAL TREE
LESCO 18-PLUS	ROSE
LESCO 18-PLUS	ROSE (GREENHOUSE)
LESCO 18-PLUS	SHRUB
LESCO 18-PLUS	SHRUB (GREENHOUSE)
LESCO 18-PLUS	TURF
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	BROCCOLI SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	BRUSSELS SPROUT SEED CROP

ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	CABBAGE SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	CAULIFLOWER SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	KALE SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	KOHLRABI SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	RADISH SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	RAPE SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	RUTABAGA SEED CROP
ROVRAL 4 FL FUNGICIDE (SLN: CRUCIFER SEED CROPS)	
ROVRAL 4 FLOW FUNGICIDE (SLN: PEA SEEDS-EXPORT-SWEDEN)	PEA SEED CROP
ROVRAL 4 FLOW FUNGICIDE (SLN: FEA SEEDS-EXFORT-SWEDEN)	
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B) ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	
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ROVRAL BRAND 4 FLOWABLE FUNCICIDE (B)	BEAN (GREEN)
ROVRAL BRAND 4 FLOWABLE FUNCIONE (B)	BEAN (LIMA)
ROVRAL BRAND 4 FLOWABLE FUNCIONE (B)	BLACKBERRY
ROVRAL BRAND 4 FLOWABLE FUNCIONE (B)	BLUEBERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	BROCCOLI
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	CARROT
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	CHERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	ELDERBERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	GARLIC
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	GINSENG
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	GOOSEBERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	GRAPE
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	LOGANBERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	ONION (DRY BULB)
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	PEACH
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	PLUM
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	ΡΟΤΑΤΟ
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	PRUNE
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	RASPBERRY
ROVRAL BRAND 4 FLOWABLE FUNGICIDE (B)	STRAWBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	APRICOT
ROVRAL BRAND 75WG FUNGICIDE (B)	BEAN (DRY)
ROVRAL BRAND 75WG FUNGICIDE (B)	BEAN (GREEN)
ROVRAL BRAND 75WG FUNGICIDE (B)	BEAN (LIMA)
ROVRAL BRAND 75WG FUNGICIDE (B)	BLACKBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	BLUEBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	BROCCOLI
ROVRAL BRAND 75WG FUNGICIDE (B)	CARROT
ROVRAL BRAND 75WG FUNGICIDE (B)	CHERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	CURRANT

ROVRAL BRAND 75WG FUNGICIDE (B)	ELDERBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	GARLIC
ROVRAL BRAND 75WG FUNGICIDE (B)	GINSENG
ROVRAL BRAND 75WG FUNGICIDE (B)	GOOSEBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	GRAPE
ROVRAL BRAND 75WG FUNGICIDE (B)	LETTUCE
ROVRAL BRAND 75WG FUNGICIDE (B)	LOGANBERRY
ROVRAL BRAND 75WG FUNGICIDE (B)	NECTARINE
ROVRAL BRAND 75WG FUNGICIDE (B)	ONION (DRY BULB)
ROVRAL BRAND 75WG FUNGICIDE (B)	PEACH
ROVRAL BRAND 75WG FUNGICIDE (B)	PLUM
	ΡΟΤΑΤΟ
ROVRAL BRAND 75WG FUNGICIDE (B)	PRUNE
ROVRAL BRAND 75WG FUNGICIDE (B)	
ROVRAL BRAND 75WG FUNGICIDE (B)	RASPBERRY
	BEAN (DRY)
	BEAN (GREEN)
	BEAN (LIMA)
	BLACKBERRY
	BLUEBERRY
	BROCCOLI
	CARROT
	ELDERBERRY
	GARLIC
	GINSENG
	GOOSEBERRY
	GRAPE
ROVRAL FUNGICIDE (B)	
ROVRAL FUNGICIDE (B)	LOGANBERRY
ROVRAL FUNGICIDE (B)	NECTARINE
ROVRAL FUNGICIDE (B)	ONION (DRY BULB)
ROVRAL FUNGICIDE (B)	PEACH
ROVRAL FUNGICIDE (B)	PLUM
ROVRAL FUNGICIDE (B)	ΡΟΤΑΤΟ
ROVRAL FUNGICIDE (B)	PRUNE
ROVRAL FUNGICIDE (B)	RASPBERRY
ROVRAL FUNGICIDE (B)	STRAWBERRY
ROVRAL FUNGICIDE (SLN: CARROT SEED)	CARROT SEED CROP
SEXTANT	BULB
SEXTANT	BULB (GREENHOUSE)
SEXTANT	CONIFER
SEXTANT	CONIFER NURSERY

Washington State Department of Agriculture/Endangered Species Program <u>http://agr.wa.gov/PestFert/EnvResources/EndangSpecies.htm</u>

SEXTANT	DECIDUOUS/SHADE TREE
SEXTANT	EVERGREEN TREE
SEXTANT	FLOWER
SEXTANT	FLOWER (GREENHOUSE)
SEXTANT	ORNAMENTAL
SEXTANT	ORNAMENTAL (GREENHOUSE)
SEXTANT	ORNAMENTAL GROUND COVER
SEXTANT	ORNAMENTAL TREE
SEXTANT	ROSE
SEXTANT	ROSE (GREENHOUSE)
SEXTANT	SHRUB
SEXTANT	SHRUB (GREENHOUSE)

#### **References:**

2002 Crop Protection Guide for Tree Fruit, WSU EB 0419, WSU Extension Service
2002 Washington Agricultural Statistics, Washington Agricultural Statistics Service
2003 Farm Chemicals Handbook, Meister Pro Information Resources
2003 Pacific Northwest Plant Disease Management Handbook, Extension Services of OSU, WSU, and UI
2002 Pest Management Guide for Commercial Small Fruits, WSU EB 1491, WSU Extension Service

2003 Washington State registered pesticide labels

CDMS Label Database: http://www.cdms.net/manuf/manuf.aspwebsite Crop Profile for Potatoes in Oregon: http://pestdata.ncsu.edu/cropprofiles/docs/orpotatoes.html ExToxNet Pesticide Information Profiles: http://ace.orst.edu/info/extoxnet/pips/pips.html Greenbook, Chemical & Pharmaceutical Press Inc.: http://www.greenbook.net/ National Agricultural Statistics Service - Agricultural Chemical Use Database: http://www.pestmanagement.info/nass/ National Center for Food & Agricultural Policy: http://www.ncfap.org/database/ingredient/default.asp National Pesticide Use Database: http://www.ncfap.org/database/ingredient/default.asp NW Berry and Grape Information Network: http://berrygrape.orst.edu/ Pesticide Action Network Pesticide Database: http://www.pesticideinfo.org/index.html Tree Fruit Extension Team References: http://fruit.wsu.edu/ U.S. Department of Agriculture National Agricultural Statistics Service: http://www.usda.gov/nass/ U.S. Department of Agriculture Crop Profiles: http://pestdata.ncsu.edu/cropprofiles/ (apples) Washington State Pesticide Management Practices: http://www.tricity.wsu.edu/~cdaniels/wapiap.html Washington State Tree Fruit IPM Project (1997-2001) - Integrated Pest Management for Washington Pears: http://www.agcenter.org/wa\_pears/pears.htm WSU PICOL Label/Crop Profile Database: http://picol.cahe.wsu.edu/LabelTolerance.html Smith, T.J et al 2001. 2003 Crop Protection Guide for Tree Fruits in Washington. Washington State University Extension Bulletin EB0419 Pest Management Strategic Plan, Summary of workshop held February 19-20, 2002 in Boise, Idaho (potatoes) Personal communication and e-mail correspondence - Tom Auvil, October 17, 2003, Washington Tree Fruit Research Commission Personal communication - Pete Bristow, WSU Cooperative Extension, Puyallup (raspberries & caneberries)

Personal communication and e-mail - Brian Cieslar, November 17, 2003, Maberry Farms (raspberries & caneberries)

Personal communication – Glen Dahman, GS Long Dealership, Yakima (tree fruit)

Personal communication - John Dunley, WSU Tree Fruit Research Entomologist, Wenatchee (tree fruit)

Personal communication – Gary Hertel, August 4, 2003, Fieldman, Elenbaas Company, Lynden (potatoes)

Personal communication - Andrew Jenson, September 3, 2002, Washington State Potato Commission (potatoes)

Personal communication - Richard Leitz, Fieldman, Wilbur-Ellis Company, Mattawa (tree fruit, potatoes)

Personal communication and e-mail correspondence – Tom Peerbolt, November 17, 2003, Peerbolt Crop Management (raspberries & caneberries)

Personal communication - Chris Peters, Fieldman, CM Holtzinger Fruit Co., Yakima (tree fruit)

Personal communication - James Ramer, Orchardist/Fieldman, Mattawa (tree fruit)

Washington State Department of Agriculture/Endangered Species Program <u>http://agr.wa.gov/PestFert/EnvResources/EndangSpecies.htm</u>

Personal communication – Edsel Reeves, Orchardist, Baker Flat, East Wenatchee (peaches & nectarines)

Personal communication and e-mail correspondence – Alan Schreiber, January 31, 2002 & March 24, 2003, Ag Development Group (potatoes)

Personal communication – Tim Smith, WSU Cooperative Extension, Wenatchee (tree fruit)

Personal communication – Herb Teas, WSCPR Commissioner, Wenatchee (tree fruit)

Personal Communication - James Zahand, CCA, Sales Representative, Dow Agro Sciences (tree fruit)