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

WASHINGTON STATE
PHOSMET USE SUMMARY

- Phosmet is a non-systemic, organophosphate insecticide used on both plants and animals. Phosmet may also be found in combination with other pesticides.
- Phosmet is a General Use Pesticide (GUP).
- EPA revoked some tolerances for phosmet in processed foods in 1994.
- Phosmet is used mainly on apple tress for control of coddling moth. It is also used on a wide range of fruit crops, ornamentals and vines for the control of aphids, sucker, mites and fruit flies. The compound is also an active ingredient in some dog collars.
- In Washington State, phosmet is available in emulsifiable liquid and spray powder formulations.
- Products containing phosmet bear the signal word, "Warning" on the product label. Phosmet is toxicity category II – moderately toxic and belongs to the organophosphate 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
Apples	168,000	45	2.8	1.5	75600	317,520
Blueberries	2,000	Phosmet not used on this crop in WA State. See narrative.				
Cranberries**	1,600					
Peaches & Nectarines	4,200	10	0.5 – 0.7			
Pears	24,800	20	2.8	1	5,000	14,000
Potatoes, Irish***	15,000	Phosmet not used on this crop in Western WA State. See note & 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 (ranked by a.i. applied):

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

APPLES:

- Apples 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.
- Phosmet (Imidan 70W) may be used to control coddling moth but it is less effective than other control materials. Growers typically use azinphos-methyl.
- If growers wish to avoid the use of azinphos-methyl, they may use phosmet as a replacement. It has some use as a "softer material"
- Phosmet is used primarily to control coddling moth in high pressures blocks that are not managed well by other means.
- Phosmet use may be due to re-entry issues at thinning time.
- Phosmet may also be used as a replacement for methyl parathion. Phosmet may be used due to its cost relative to the newer chemistries.
- Phosmet (Imidian 70W) may be applied at a rate of 2.8 pounds a.i. per acre.
    - Growers may use three applications per generation of coddling moth.
    - Applications typically occur in:
        - ✓ Fruit set (early June) and
        - ✓ Late spring and summer (July through August)
- Phosmet may be applied up to 30 pounds (21 pounds a.i.) per acre per season.

BLUEBERRIES:

- Blueberries are grown primarily in Skagit (550 acres), Whatcom (450 acres), Lewis (170 acres), Clark (130 acres) and Thurston counties.
- Phosmet is not currently used for insect control in blueberries. Most growers use a combination of diazinon and B.t.
- If growers become limited to one application of diazinon per season, phosmet may again be used.
- If used, phosmet (Imidian 70W) would be ground applied post-bloom (June/July) at a rate of 0.7 pounds a.i. to control aphids, leaf rollers, Orange tortrix and others in larval stage.

CRANBERRIES:

- The primary location for cranberry production in Washington State is Grays Harbor County. The county hosts 80 growers on 900 acres in Grayland and 100 acres in North

Beach near Ocean Shores. Pacific County has 600 acres near Long Beach in cranberry production. Whatcom County has 100 acres of cranberries near Lynden. All cranberry acreage is contracted with Ocean Spray Cranberries Inc., a growers' cooperative.

- Most of the Grayland acres are grown for fresh market and dry harvested with a picker. The cranberries in Pacific County (Long Beach) are produced for juice and wet harvested by flooding.
- Phosmet (Imidian 70-W) may be applied in July at a rate of 0.9 – 2.8 pounds a.i. per acre to control black-headed fireworm.
  - Repeat applications may not be made in less than a 10-day interval.
  - Applications may not exceed 11 pounds a.i. per acre per season.

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.
- Phosmet is no longer a primary use insecticide. If used at all, it is used in conjunction with several other insecticides.
- If applied, phosmet (Imidian 70W) may be used mid-April at a rate of 0.75 to 1.0 pounds of product (0.5 – 0.7 pounds a.i.) per 100 gallons of water to control peach twig borers and western flower thrip outbreaks.
- Phosmet (Imidian 70-W) may also be used at a rate of 0.75 to 1.0 pounds of product (0.5 – 0.7 pounds a.i.) per 100 gallons of water during late May or early June to control peach twig borer and oriental fruit moth.
- Do not exceed 4.25 pounds of product (3 pounds a.i.) per acre.

PEARS:

- Pears are grown in Yakima (10,190 acres), Chelan (8,298 acres), Okanogan (3,280 acres), Douglas (1,104 acres), Grant (998 acres) and Klickitat (923 acres) counties.
- Pears are grown for fresh market (packing) or for cannery. All of the pears grown in the Wenatchee area are fresh market since there are no canneries left in the Wenatchee area. The cannery pears are grown primarily in the Yakima area.
- Phosmet (Imidan 70W) may be used to control coddling moth but it is less effective than other control materials. Growers typically use azinphos-methyl.
- If growers wish to avoid the use of azinphos-methyl, they may use phosmet as a replacement. It has some use as a "softer material"
- Phosmet is used primarily to control coddling moth in high pressures blocks that are not managed well by other means.
- Phosmet use may be due to re-entry issues at thinning time.
- Phosmet may also be used as a replacement for methyl parathion. Phosmet may be used due to its cost relative to the newer chemistries.
- Phosmet (Imidian 70W) may be applied at a rate of 2.8 pounds a.i. per acre.
  - Growers may use three applications per generation of coddling moth.
  - Applications typically occur in:
    - ✓ Fruit set (early June) and

- ✓ Late spring and summer (July through August)
- Phosmet may be applied up to 30 pounds (21 pounds a.i.) per acre per season.
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POTATOES:

- The majority of potato acreage is located in eastern Washington in the following counties: Grant (36,000 acres), Franklin (33,000 acres), Benton (32,000 acres), Adams (24,000 acres), Walla Walla (12,000 acres), Lincoln (7,000 acres), Yakima (2,200 acres), Klickitat (2,300 acres) and Kittitas (500 acres). Most of the eastern Washington potato production contracted for processing (chipping, fries, etc.)
- The principal potato producing counties in western Washington are Skagit (8,000 acres) and Whatcom (3,000 acres). Potatoes production in western Washington (approximately 11,000 acres) is for the fresh market.
- Potatoes are usually grown in a four-year rotation (one in four) with wheat, alfalfa, and corn.
- Insecticides used to control pests in potatoes are rotated for resistance management. Some fields may not have any insecticides applied, for example, potatoes grown for the fresh pack market. Other fields may receive only at-plant applications while fields producing long-season storage potatoes will get 6-8 foliar applications during a 4.5-month growing season.
- Phosmet (Imidian 70WSB) may be applied as a foliar spray to control potato beetles and lepidoptera.
  - Used after aldicarb (Temik) residual runs out.
  - Applied as a foliar treatment at a rate of 1.33 pounds of product (0.9 pounds a.i.) per acre.
  - Timing and type of application is geographically specific:
    - ✓ Columbia Basin: March to September – applied by ground, air or chemigation
    - ✓ Western Washington: not used

PRODUCTS NAMES & LABELED CROPS:

A complete list of all products currently registered for use in Washington State and their respective labeled crops is attached.

PRODUCT NAME	LABELED CROP
DEL-PHOS EMULSIFIABLE LIQUID (SP)	CATTLE (BEEF)
DEL-PHOS EMULSIFIABLE LIQUID (SP)	CATTLE (DAIRY)
DEL-PHOS EMULSIFIABLE LIQUID (SP)	SWINE
IMIDIAN 2.5-EC	ALFALFA
IMIDIAN 2.5-EC	GRASS HAY
IMIDIAN 2.5-EC	NON-CROP, NON-AGRICULTURAL AREA
IMIDIAN 2.5-EC	POTATO
IMIDIAN 70-W	ALFALFA
IMIDIAN 70-W	APPLE
IMIDIAN 70-W	APPLE (NON-BEARING)
IMIDIAN 70-W	APRICOT
IMIDIAN 70-W	APRICOT (NON-BEARING)

IMIDIAN 70-W	CHERRY
IMIDIAN 70-W	CHERRY (NON-BEARING)
IMIDIAN 70-W	CHESTNUT
IMIDIAN 70-W	CHESTNUT (NON-BEARING)
IMIDIAN 70-W	CHRISTMAS TREE PLANTATION
IMIDIAN 70-W	CONIFER
IMIDIAN 70-W	CRABAPPLE (NON-BEARING)
IMIDIAN 70-W	CRANBERRY
IMIDIAN 70-W	DECIDUOUS/SHADE TREE
IMIDIAN 70-W	EVERGREEN TREE
IMIDIAN 70-W	FILBERT
IMIDIAN 70-W	FILBERT (NON-BEARING)
IMIDIAN 70-W	FOREST NURSERY/SEED ORCHARD
IMIDIAN 70-W	GRAPE
IMIDIAN 70-W	GRAPE (NON-BEARING)
IMIDIAN 70-W	KIWI FRUIT (NON-BEARING)
IMIDIAN 70-W	NECTARINE
IMIDIAN 70-W	NECTARINE (NON-BEARING)
IMIDIAN 70-W	ORNAMENTAL
IMIDIAN 70-W	ORNAMENTAL TREE
IMIDIAN 70-W	PEA (DRY)
IMIDIAN 70-W	PEA (GREEN)
IMIDIAN 70-W	PEACH
IMIDIAN 70-W	PEACH (NON-BEARING)
IMIDIAN 70-W	PEAR
IMIDIAN 70-W	PEAR (NON-BEARING)
IMIDIAN 70-W	PLUM
IMIDIAN 70-W	PLUM (NON-BEARING)
IMIDIAN 70-W	POTATO
IMIDIAN 70-W	PRUNE
IMIDIAN 70-W	PRUNE (NON-BEARING)
IMIDIAN 70-W	QUINCE (NON-BEARING)
IMIDIAN 70-W	SHRUB
IMIDIAN 70-W	SWEET POTATO
IMIDIAN 70-W	WALNUT
IMIDIAN 70-W	WALNUT (NON-BEARING)
IMIDIAN 70-W (SLN: APPLES, PEARS, PLUMS, PRUNES – APPLE MAGGOT)	APPLE
IMIDIAN 70-W (SLN: APPLES, PEARS, PLUMS, PRUNES – APPLE MAGGOT)	PEAR
IMIDIAN 70-W (SLN: APPLES, PEARS, PLUMS, PRUNES – APPLE MAGGOT)	PLUM
IMIDIAN 70-W (SLN: APPLES, PEARS, PLUMS, PRUNES – APPLE MAGGOT)	PRUNE
IMIDIAN 70-W (SLN: BLUEBERRY)	BLUEBERRY
IMIDIAN 70-W (SLN: GRAPES/PRE-BLOOM APPLICATION	GRAPE
IMIDIAN 70-W (SLN: SWEET CHERRIES)	CHERRY
PARAMITE SPONGE-ON/DOGS	DOGS

STARBAR PROLATE/LINTOX-HD INSECTICIDAL SPRAY	CATTLE (BEEF)
STARBAR PROLATE/LINTOX-HD INSECTICIDAL SPRAY	CATTLE (DAIRY)
STARBAR PROLATE/LINTOX-HD INSECTICIDAL SPRAY	SWINE
VET-CHEM SPONGE-ON/DOGS PARAMITE	DOGS

References:

2002 Crop Protection Guide for Tree Fruit, WSU EB 0419, WSU Extension Service
2002 Cranberry Pest Management Guide, WSU EB 0845, WSU Extension Service
2002 Washington Agricultural Statistics, Washington Agricultural Statistics Service
2003 Farm Chemicals Handbook, Meister Pro Information Resources
2003 Pacific Northwest Insect 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 (blueberries)
Personal communication – Glen Dahman, GS Long Dealership, Yakima (tree fruit)
Personal communication – John Dunley, WSU Tree Fruit Research Entomologist, Wenatchee (tree fruit)
Personal communication – R & M Erickson, April 10, 2002, Cranberry Growers-Cranberry Alliance, Grayland (cranberries)
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 (apples, potatoes)
Personal communication – Doug Merriman, Orchardist, Orondo (apples)
Personal communication – Dr. Kim Patten, April 10 & 12, 2002, WSU Research Station, Long Beach WA (cranberries)
Personal communication and e-mail correspondence – Tom Peerbolt, November 17, 2003, Peerbolt Crop Management (blueberries)
Personal communication – Chris Peters, Fieldman, CM Holtzinger Fruit Co., Yakima (tree fruit)
Personal communication – James Ramer, Orchardist/Fieldman, Mattawa (apples)
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 and e-mail correspondence with Tom Waliser, Orchardist (apples)
Personal Communication – James Zahand, CCA, Sales Representative, Dow Agro Sciences (tree fruit)