



July 16, 2004

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Agricultural Research Service
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The following information is provided to you from the Western Integrated Pest Management Center regarding the use of malathion in the six-state Pacific Northwest (PNW) region comprised of Alaska, Idaho, Oregon, Montana, Utah, and Washington. This information is being sent in response to the request you sent to Rick Melnicoe, Western Integrated Pest Management Center Director, May 20, 2004.

Attached to this letter, please find Tables 1 through 6 listing the various malathion products currently registered for use in each of the PNW states and Table 7 listing PNW contact personnel (sorted by crop). Tables 4 and 6 for Oregon and Washington list only the commercial malathion products with homeowner products removed. This was not an option when generating the lists for the other states, thus they are comprehensive. While the specific information varies from state to state due to differences in database formats, each list contains, at a minimum, product name and EPA registration number. Finally, with the e-mail transmitting this letter, I am also attaching a file showing, by product, the labeled malathion usage sites for all the commercial malathion products registered in Oregon and Washington from Washington State University's (WSU's) PICOL Label Database (<http://wsprs.wsu.edu>). (Because this list is so large, I am only sending the electronic version and am not attaching a printed copy to this letter.)

As we discussed previously, malathion is also used for mosquito control. You had indicated that you were well aware of this use, therefore, additional information is not provided here.

In our region there are several important malathion uses. The information below is presented by crop with specific labels and use rates included when that information was provided by my contacts.

Blueberry, Blackberry, Red Raspberry, Strawberry: Malathion is extensively used in caneberries, blueberries, and strawberries. Malathion is used to control aphids, leafrollers and root weevils earlier in the growing season but the more important use is as a pre-harvest cleanup spray in machine-harvested blueberries, blackberries, and raspberries to eliminate arthropod

pests that might contaminate the harvested fruit. The berry crops are harvested multiple times in a season: 2 to 5 for blueberries, 5 to 7 for blackberries, 12 to 15 for raspberries, and 2 to 3 for strawberries. Malathion is typically applied once prior to the first harvest; however, if pests continue to be a problem in machine-harvested fruit, a second application may be made. The short PHI and the fact that malathion works well in warmer temperatures makes it the product of choice for use just prior to harvest. On average, caneberries and blueberries receive 1 to 2 malathion applications per growing season. In strawberries malathion is not used as a cleanup spray as this crop is hand harvested. Here growers might use malathion for aphid or spittlebug control earlier in the season or for adult root weevil control just prior to or following harvest. For cleanup use, growers prefer to use water-based malathion formulations such as Loveland's Malathion Aquamul (EPA # 34704-474). The other malathion product commonly used in berries is Gowan's Malathion 8 Flowable (EPA # 10163-21). On average growers apply 1 to 2 lbs malathion per application in PNW berries.

Cherry: Malathion is very important for cherry fruit fly control in both sweet and tart cherries. In Utah, use in sweet cherries varies throughout the region with some growers using it as their main cherry fruit fly control and making applications from May through July. Others use it just at the end of the control period in June and July. Thus, in sweet cherries, anywhere from one to four applications might be made during the season. In tart cherry production malathion is used just prior to harvest in June and July (one or two applications at about half the labeled use rate). The products used are Malathion 57EC (EPA # 34704-108), 5EC (EPA #s 1386-124, 51036-104, 9779-5), and 8EC (EPA #s 67760-4, 1812-408).

In Oregon and Washington most of the malathion used for cherry fruit fly control is the ULV formulation (EPA #s 1812-407, 67760-34-1381, 10163-44). It is applied by air, undiluted, at one pint per acre or 1.22 lb ai/A. If it is applied using ground equipment (rare) it is applied at 3 lb ai/A. Until this year, malathion was the only product that could be applied during harvest. (There is now GF-120 NF Bait but according to Tim Smith, Washington State University (WSU) Extension, this product has not yet been fully proven to be effective.) Malathion is applied weekly during harvest averaging two applications per season.

Malathion use on cherries is critical for several reasons. Because cherry fruit fly is a quarantine issue, growers require the use of effective controls such as malathion. Because the control must be applied at harvest time, growers require something with both a short PHI and a short REI. (All the newer alternatives carry a 7-day PHI.) The ULV malathion formulations, with a 12-hour REI and a 1-day PHI, meet growers' needs for cherry fruit fly control.

Cottonwood/Poplar Tree Plantation: Malathion as Fyfanon ULV, EPA # 67760-34, is used under SLNs for grasshopper control in cottonwood/poplar tree plantations in Oregon (OR-000016) and Washington (WA-960004). The need to manage grasshoppers in the tree plantations is sporadic. While growers have not had to treat for the past several years, they wish to retain the use under the SLNs so that they will have malathion as a control measure for dealing with future outbreaks. Malathion is the product of choice because it is much less expensive than other alternatives.

Grain Storage: It is still relatively common for grain growers to treat grain bins with malathion when cleaning them out prior to harvest. Malathion is not commonly used in commercial grain elevators; this use is in on-farm storage bins.

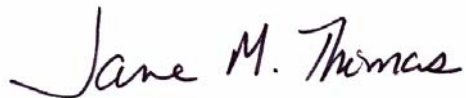
Mint: In mint, malathion is an infrequent but fairly important chemical for the control of grasshoppers. It is applied by air and is the product of choice because it is inexpensive and effective. According to Dr. Doug Walsh, WSU's IPM Coordinator, while other chemicals are available, they are not used because they are more disruptive to populations of predatory mites than malathion, or they need to be applied as a preventative treatment. Malathion is a good choice for controlling a pest where outbreaks are infrequent and treatment is not routine.

Parsnip/Rutabaga/Turnip: Malathion, used at 2 lb ai/A, is an important tool for aphid control on parsnip, rutabaga, and, to some extent, turnip. Imidacloprid (Admire/Provado) has recently been labeled for use on these crops. Prior to that, malathion was the only insecticide available for use to control aphids on parsnip and rutabaga. (Diazinon was labeled for use on turnips.) Retaining malathion use on these crops is important for aphid resistance management.

Pasture/Rangeland: Malathion is important for grasshopper control in many areas including pasture and rangeland. The two most common formulations used are Fyfanon ULV and Malathion ULV Concentrate. These are used at a rate of 1.0 to 1.25 lb ai/A. Usually only 1 application is made per season, but occasionally 2 applications are required. In Montana, under the Reduced Agent and Reduced Area Treatments (RAATs) program, Fyfanon ULV is used on rangeland at 4 ounces per acre or 0.31 lb ai/A.

I hope that you find this information helpful. Please refer to Table 7 for individuals with expertise on malathion use on specific crops in specific states.

Sincerely,



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Washington State Pest Management Resource Service
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Table 1: Alaska Malathion Registrations		
Name	EPA #	Registrant
Ace Dilutable Concentrate Malathion 50 Insect Spray	46515-19-9688	CHEMSICO, DIV. OF UNITED INDUSTRIES CORP
Basic Solutions Malathion Insect Killer RTS	239-739	THE ORTHO GROUP
Clean Crop Malathion 57 EC	34704-108	PLATTE CHEMICAL COMPANY
Clean Crop Malathion 8 Aquamul	34704-474	PLATTE CHEMICAL COMPANY
Do It Best Malathion Insect Spray Concentrate	46515-19-9688	CHEMSICO, DIV. OF UNITED INDUSTRIES CORP
Eliminator Malathion 50% Insect Spray	59144-1	GRO TEC, INC C/O KELLY PRODUCTS, INC
ferti-lome Liquid Fruit Tree Spray	7401-438	VOLUNTARY PURCHASING GROUPS
Fyfanon 8EC	67760-4	CHEMINOVA, INC
Fyfanon Technical	4787-5	CHEMINOVA AGRO A/S
Fyfanon ULV	67760-34	CHEMINOVA, INC
Green Light 50% Malathion Insect Spray	869-27	GREEN LIGHT COMPANY
Green Thumb Malathion Insect Killer Spray Concentrate	46515-48-9688	CHEMSICO, DIV. OF UNITED INDUSTRIES CORP
Hi-Yield Malathion Insect Spray	34911-2-AA	VOLUNTARY PURCHASING GROUPS
KGRO Malathion 50 Insect Spray	239-739-73327	SWISS FARMS PRODUCTS, INC
Lilly Miller Malathion Insect Spray	802-123	THE GARDEN GROW CO. C/O CENTRAL GARDEN & PET
Maxide Concentrate Malathion 50 Insect Spray	59144-1-71376	EXCEL MARKETING, INC. C/O KRS
Ortho Malathion 50 Plus Insect Spray	239-739	THE SOLARIS GROUP OF MONSANTO COMPANY
Ortho Malathion 50 Plus Insect Spray(2)	239-739	THE ORTHO GROUP
Ortho Malathion Plus Insect Spray Concentrate	239-739	THE ORTHO GROUP
Ortho Mosquito B Gon Tree & Shrub Spray	239-739	THE ORTHO GROUP
Schultz Malathion Concentrate	46515-19-39609	SCHULTZ COMPANY
Spectracide Malathion Insect Spray Concentrate	46515-19-8845	SPECTRUM GROUP, DIV OF UNITED INDUSTRIES
Stark Home Orchard Spray	4-122-842	BONIDE PRODUCTS

Total = 23 labels

Table 2: Idaho Malathion Registrations

Name	EPA #
ACE DILUTABLE CONC.MALATHION 50 INSECT SPRAY	46515-19-9688
BASIC SOLUTIONS MALATHION INSECT KILLER READY-TO-SPRAY	239-739
BIG 6 GRAIN PROTECTOR	34704-110-36208
BONIDE COMPLETE FRUIT TREE SPRAY	4-122
BONIDE ROSE & FLOWER SPRAY OR DUST	4-59
CLEAN CROP MALATHION ULV CONC. INSECTICIDE	34704-565
CLEAN CROP MALATION 8EC INSECTICIDE	34704-119
DO IT BEST MALATHION INSECT SPRAY CONCENTRATE	46515-19-9688
ELIMINATOR MALATHION 50% INSECT SPRAY	59144-1
FERTI-LOME LIQUID FRUIT TREE SPRAY	7401-438
FERTI-LOME MAL-A-CIDE MALATHION L&G	7401-257-10159
FYFANON	5905-196
FYFANON 8LB EMULSION	5905-250
FYFANON TECHNICAL	4787-5
FYFANON ULV	67760-34
GORDON'S LIQUID FRUIT TREE SPRAY	4-122-33955
GORDON'S MALATHION 50% SPRAY	33955-394
GREEN LIGHT 50% MALATHION	869-27
GREEN THUMB MALATHION INSECT KILLER SPRAY CONC.	46515-19-9688
HI-YIELD 5% MALATHION DUST	7401-267
HI-YIELD 55% MALATHION SPRAY	7401-10-34911
HI-YIELD MALATHION INSECT SPRAY	34911-2
IFA MALATHION 57% SPRAY	42057-47-46665
KGRO MALATHION 50 INSECT SPRAY CONCENTRATE	239-739-73327
MALATHION 5	9779-5
MALATHION 5 EC	51036-104
MALATHION 57 EC	34704-108
MALATHION 57 EC	34704-108
MALATHION 6% GRAIN DUST	1381-153
MALATHION 8 AQUAMUL	34704-474
MALATHION 8 AQUAMUL	34704-474
MALATHION 8 SPRAY	2935-83
MALATHION 8EC	51036-214
MALATHION ULV CONCENTRATE INSECTICIDE	34704-565
MAX KILL DUSTA-CIDE 6	1015-69
MAXIDE CONCENTRATE MALATHION 50 INSECT SPRAY	59144-1-71376
MORGRO MALATHION 57% SPRAY	42057-47
ORTHO MALATHION 50 PLUS INSECT SPRAY CONC.	239-739
ORTHO MALATHION PLUS INSECT SPRAY CONC.	239-739
PRENTOX 5 LB MALATHION SPRAY	655-777
REAL-KILL INSECT KILLER SPRAY CONCENTRATE	46515-19-478
SCHULTZ MALATHION CONCENTRATE	46515-19-39609
SPECTRACIDE MALATHION INSECT SPRAY CONC.	46515-19-8845

Total = 43 labels

Table 3: Montana Malathion Registrations		
Name	EPA #	Registrant
Malathion Insect Control	4-99	Bonide Products Inc
Complete Fruit Tree Spray	4-122	Bonide Products Inc
Basic Solutions Malathion Insect Killer	239-739	The Ortho Group
Ortho Malathion 50 Plus Insect Spray	239-739	The Ortho Group
Ortho Malathion Plus Insect Spray Concentrate	239-739	The Ortho Group
Ortho Mosquito B Gon Tree & Shrub Spray	239-739	The Ortho Group
Prentox 5 lb Malathion Spray	655-777	Prentiss Inc
Max Kill Dusta-Cide 6	1015-69	Douglas Products & Packaging Co
Malathion 6% Grain Dust	1381-153	Agriliance, LLC
Atrapa 5E	1812-406	Griffin LLC
Atrapa ULV	1812-407	Griffin LLC
Atrapa VCP	1812-407	Griffin LLC
Atrapa 8E	1812-408	Griffin LLC
Fyfanon Technical	4787-5	Cheminova Agro A/S
Ferti-Lome Fruit Tree Spray	7401-438	Voluntary Purchasing Groups Inc
Malathion 5	9779-5	Agriliance, LLC
Gordon's Malathion 50% Spray	33955-394	PBI Gordon Corporation
Clean Crop Malathion 57 EC	34704-108	Loveland Products Inc
Clean Crop Malathion ULV Concentrate Insecticide	34704-565	Loveland Products Inc
Malathion 5 EC	51036-104	Micro-Flo Company
Malathion 8 EC	51036-214	Micro-Flo Company
Eliminator Malathion 50% Insect Spray	59144-1	Gro Tec Inc
Fyfanon ULV	67760-34	Cheminova Agro A/S

Total = 23 labels

Table 4: Oregon Commercial Malathion Registrations

Name	EPA #	SLN #	Registrant
6% MALATHION GRAIN DUST	1381-153		AGRILIANCE, LLC
ATRAPA 5E INSECTICIDE	1812-406		GRIFFIN LLC
ATRAPA 8E INSECTICIDE	1812-408		GRIFFIN LLC
ATRAPA ULV INSECTICIDE	1812-407		GRIFFIN LLC
ATRAPA VCP INSECTICIDE	1812-407		GRIFFIN LLC
BIG 6 GRAIN PROTECTOR	34704-110-36208		LOVELAND INDUSTRIES, INC.
CLEAN CROP MALATHION 8 AQUAMUL	34704-474		PLATTE CHEMICAL COMPANY
DREXEL MALATHION 5EC INSECTICIDE/MITICIDE	19713-217		DREXEL CHEMICAL COMPANY
FYFANON	5905-196		HELENA CHEMICAL COMPANY
FYFANON 8 LB EMULSION	5905-250		HELENA CHEMICAL COMPANY
FYFANON ULV (COTTONWOOD&HYBRID POPLAR PLANTATION)	67760-34	OR- 000016	CHEMINOVA INC.
FYFANON ULV INSECTICIDE CONC.	67760-34		CHEMINOVA INC.
FYFANON ULV INSECTICIDE/MOSQUITO CONTROL	67760-34		CHEMINOVA INC.
MALATHION 5	9779-5		AGRILIANCE, LLC
MALATHION 5 EC	51036-104		MICRO-FLO COMPANY LLC
MALATHION 55 INSECTICIDE PREMIUM GRADE	34704-3		PLATTE CHEMICAL COMPANY
MALATHION 57 EC	34704-108		PLATTE CHEMICAL COMPANY
MALATHION 8 SPRAY	2935-83		WILBUR-ELLIS COMPANY
MALATHION 8EC	51036-214		MICRO-FLO COMPANY LLC
MALATHION 8EC INSECTICIDE	34704-119		PLATTE CHEMICAL COMPANY
MAX KILL DUSTA-CIDE 6	1015-69		DOUGLAS PRODUCTS & PKG
PREMIUM GRADE MALATHION GRAIN PROTECTANT	2935-139		WILBUR-ELLIS COMPANY
PRENTOX 5LB MALATHION SPRAY	655-777		PRENTISS INC
PRENTOX MALATHION 50% EMULSIFIABLE INSECTICIDE	655-598		PRENTISS INC
PROKIL MALATHION ULV	10163-44		GOWAN CO.

Total = 25 labels

Table 5: Utah Malathion Registrations

Name	EPA #
50% MALATHION	869-27
ACE DILUTABLE CONCENTRATE MALATHION 50 INSECT SPRAY	46515-19-9688
ATRAPA 5E	1812-406
ATRAPA 8E	1812-408
ATRAPA ULV	1812-407
ATRAPA VCP	1812-407
BASIC SOLUTIONS MALATHION INSECT KILLER READY-TO-SPRAY	239-739
BIG 6 GRAIN PROTECTOR	34704-110-36208
DO IT BEST MALATHION INSECT SPRAY CONCENTRATE	46515-19-9688
DO-IT BEST MALATHION 50	34704-302-9688
ELIMINATOR MALATHION 50% INSECT SPRAY	59144-1
FERTI-LOME LIQUID FRUIT TREE SPRAY	7401-438
FERTI-LOME MAL-A-CIDE MALATHION LAWN & GARDEN SPRAY	7401-257-10159
FRED MEYER MALATHION INSECT KILLER	192-96
FYFANON ULV	67760-34
FYFANON 8EC	67760-4
FYFANON TECHNICAL	4787-5
GORDON'S LIQUID FRUIT TREE SPRAY	4-122-33955
GORDON'S MALATHION 50% SPRAY	33955-394
GREEN THUMB MALATHION INSECT KILLER SPRAY CONCENTRATE	46515-19-9688
GRIFFIN MALATHION TECHNICAL	1812-398
HI-YIELD 5% MALATHION DUST	7401-267
HI-YIELD 55% MALATHION SPRAY	7401-10-34911
HOME ORCHARD SPRAY	4-122-842
IFA MALATHION 57% SPRAY	42057-47-46665
KGRO MALATHION 50 INSECT SPRAY CONCENTRATE	239-739-73327
MALATHION 5	9779-5
MALATHION 57 EC	34704-108
MALATHION 57% SPRAY	42057-47
MALATHION 5EC	51036-104
MALATHION 6% GRAIN DUST	1381-153

Table 5: Utah Malathion Registrations	
Name	EPA #
MALATHION ULV CONCENTRATE INSECTICIDE	34704-565
MALATHION-5 EMULSIFIABLE CONCENTRATE	1386-124-72693
MALTHION-5 EMULSIFIABLE CONCENTRATE	1386-124
MAX KILLER DUST-CIE 6	1015-69
MAXIDE CONCENTRATE MALATHION 50 INSECT SPRAY	59144-1-71376
NO-PEST MALATHION 50 INSECT SPRAY CONCENTRATE	46515-19-9688
ORTHO MALATHION 50 PLUS INSECT SPRAY CONCENTRATE	239-739
ORTHO MALATHION PLUS INSECT SPRAY CONCENTRATE	239-739
ORTHO MOSQUITO B GON TREE AND SHRUB SPRAY CONCENTRATE	239-739
PRENTOX MALATHION 50% EMUL. INS.	655-598
PRENTOX MALATHION SPRAY	655-777
REAL-KILL MALATHION INSECT KILLER SPRAY CONCENTRATE	46515-19-478
SCHULTZ MALATHION CONCENTRATE	46515-19-39609
SPECTRACIDE MALATHION INSECT SPRAY CONCENTRATE	46515-19-8845

Total = 45 labels

Table 6: Washington Commercial Malathion Registrations

Name	EPA #	SLN #	Registrant
6% MALATHION GRAIN DUST	1381-153		AGRILIANCE, LLC
ATRAPA 5E INSECTICIDE	1812-406		GRIFFIN LLC
ATRAPA 8E INSECTICIDE	1812-408		GRIFFIN LLC
ATRAPA ULV INSECTICIDE	1812-407		GRIFFIN LLC
ATRAPA VCP INSECTICIDE	1812-407		GRIFFIN LLC
BIG 6 GRAIN PROTECTOR	34704-110-36208		LOVELAND INDUSTRIES, INC.
CLEAN CROP MALATHION 8 AQUAMUL	34704-474		PLATTE CHEMICAL COMPANY
DREXEL MALATHION 5EC INSECTICIDE/MITICIDE	19713-217		DREXEL CHEMICAL COMPANY
FYFANON	5905-196		HELENA CHEMICAL COMPANY
FYFANON 8 LB EMULSION	5905-250		HELENA CHEMICAL COMPANY
FYFANON 8EC INSECTICIDE	67760-4		CHEMINOVA INC.
FYFANON TECHNICAL	4787-5		CHEMINOVA INC.
FYFANON ULV (COTTONWOOD & HYBRID POPLAR PRODUCTION)	67760-34	WA-960004	CHEMINOVA INC.
FYFANON ULV INSECTICIDE CONC.	67760-34		CHEMINOVA INC.
GOWAN MALATHION 8 FLOWABLE	10163-21		GOWAN CO.
MALATHION 5	9779-5		AGRILIANCE, LLC
MALATHION 5 EC	51036-104		MICRO-FLO COMPANY LLC
MALATHION 57 EC	34704-108		PLATTE CHEMICAL COMPANY
MALATHION 57 EC (APPL THRU IRRIGATION SYSTEMS)	34704-108	F-1	PLATTE CHEMICAL COMPANY
MALATHION 8 SPRAY	2935-83		WILBUR-ELLIS COMPANY
MALATHION 8EC	51036-214		MICRO-FLO COMPANY LLC
MALATHION 8EC INSECT (APPL THRU IRRIGATION SYSTEMS)	34704-119	F-1	PLATTE CHEMICAL COMPANY
MALATHION 8EC INSECTICIDE	34704-119		PLATTE CHEMICAL COMPANY
MALATHION METHOXYCHLOR SPRAY	34704-205		PLATTE CHEMICAL COMPANY
MALATHION ULV	67760-34-1381		AGRILIANCE, LLC

Table 6: Washington Commercial Malathion Registrations			
Name	EPA #	SLN #	Registrant
MALATHION ULV CONC	34704-565		PLATTE CHEMICAL COMPANY
MAX KILL DUSTA-CIDE 6	1015-69		DOUGLAS PRODUCTS & PKG
PRENTOX 5LB MALATHION SPRAY	655-777		PRENTISS INC
PRENTOX MALATHION 50% EMULSIFIABLE INSECTICIDE	655-598		PRENTISS INC
PRENTOX MOSQUITO YARD SPRAY CONC	655-615		PRENTISS INC
PROKIL MALATHION ULV	10163-44		GOWAN CO.

Total = 31 labels

Table 7: Malathion Contact List

Crop:	Last Name:	First Name:	Organization:	Title:	Phone:	Email:	Responsible State:
blackberry	DeFrancesco	Joe	Oregon State University	Senior Faculty Research Assistant	(541) 737-0718	defrancj@science.oregonstate.edu	Oregon
blueberry	Cieslar	Brian	Whatcom Farmers Co-Op	Agronomist	(360) 354-2418	BrianC@wcoop.com	Washington
blueberry	DeFrancesco	Joe	Oregon State University	Senior Faculty Research Assistant	(541) 737-0718	defrancj@science.oregonstate.edu	Oregon
cherry	Alston	Diane	Utah State University	Entomology Specialist	(435) 797-2516	dianea@biology.usu.edu	Utah
cherry	Burton	Del	UAP Northwest	Sales and Distribution	(509) 545-1865		Washington
cherry	Smith	Tim	Washington State University	Tree Fruit IPM Specialist	(509) 667-6540	smithtj@wsu.edu	Washington
mint	Walsh	Doug	Washington State University	IPM Coordinator	(509) 786-6927	dwalsh@wsu.edu	Washington
parsnip	McReynolds	Bob	Oregon State University	Extension Horticulturist	(503) 678-1264	bob.mcreynolds@oregonstate.edu	Oregon
pasture	Kitchen	Boyd	Utah State University	Unitah County Extension Agent	(435) 781-5452	boydk@ext.usu.edu	Utah
rangeland	Blodgett	Sue	Montana State University	IPM Coordinator	(406) 994-2402	blodgett@montana.edu	Montana
rangeland	Burton	Del	UAP Northwest	Sales and Distribution	(509) 545-1865		Washington
rangeland	Kitchen	Boyd	Utah State University	Unitah County Extension Agent	(435) 781-5452	boydk@ext.usu.edu	Utah
raspberry	Cieslar	Brian	Whatcom Farmers Co-Op	Agronomist	(360) 354-2418	BrianC@wcoop.com	Washington
raspberry	DeFrancesco	Joe	Oregon State University	Senior Faculty Research Assistant	(541) 737-0718	defrancj@science.oregonstate.edu	Oregon
rutabaga	McReynolds	Bob	Oregon State University	Extension Horticulturist	(503) 678-1264	bob.mcreynolds@oregonstate.edu	Oregon

Table 7: Malathion Contact List

Crop:	Last Name:	First Name:	Organization:	Title:	Phone:	Email:	Responsible State:
stored grain	Bragg	Dave	Washington State University	Director, Garfield County	(509) 843-3701	braggd@wsu.edu	Washington
strawberry	Cieslar	Brian	Whatcom Farmers Co-Op	Agronomist	(360) 354-2418	BrianC@wcoop.com	Washington
strawberry	DeFrancesco	Joe	Oregon State University	Senior Faculty Research Assistant	(541) 737-0718	defrancj@science.oregonstate.edu	Oregon
tree pulp production	Kottwitz	Allan	Boise Cascade	Irrigation Supervisor	(509) 544-6537	AlanKottwitz@BC.com	Washington
turnip	McReynolds	Bob	Oregon State University	Extension Horticulturist	(503) 678-1264	bob.mcreynolds@oregonstate.edu	Oregon
wheat	Bragg	Dave	Washington State University	Director, Garfield County	(509) 843-3701	braggd@wsu.edu	Washington
wheat	Brune	Monte	Plant Foods	Fieldman	(208) 733-4072		Idaho
wheat	Bunch	Larry	Pomeroy Grain Growers	Grain Elevator	(509) 843-1694		Washington
wheat	Burns	John	Washington State University	Extensioin Agronomist	(509) 335-5831	burnsjw@wsu.edu	Washington
wheat	Carpenter	Kirk	AgriSource	Grain Elevator	(208) 678-2286	kcarpenter@agrisource.com	Idaho
wheat	Cline	Verle	Grower	Grower	(509) 236-2381		Washington
wheat	Corp	Mary	Oregon State University	Extension Horticulturist	(541) 278-5403	mary.corp@oregonstate.edu	Oregon
wheat	Knop	Perry	General Mills	Grain Elevator	(208) 352-4411		Idaho
wheat	Pike	Keith	Washington State University	Entomologist	(509) 786-9269	kpike@wsu.edu	Washington
wheat	Windes	Juliet	University of Idaho	Extension Agronomist	(208) 529-8376	jwindes@uidaho.edu	Idaho

Table 7: Malathion Contact List

Crop:	Last Name:	First Name:	Organization:	Title:	Phone:	Email:	Responsible State:
All	Blodgett	Sue	Montana State University	Western IPM Center State Liaisons/ Representatives	(406) 994-2402	blodgett@montana.edu	Montana
	Daniels	Catherine	Washington State University		(509) 372-7495	cdaniels@tricity.wsu.edu	Washington
	Deer	Howard	Utah State University		(435) 797-1602	howardd@ext.usu.edu	Utah
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