



April 2, 2003

Paul Whatling
Senior Product Manager
Cheminova, Inc.

Dear Mr. Whatling,

Following is the information you requested in your March 24 e-mail regarding methyl parathion use in onion production in Alaska, Idaho, Oregon, Utah, and Washington. As we discussed earlier, Dr. Alan Schreiber will be providing you with the information you requested on potato production.

Onions are grown in four of the five states in our Pacific Northwest region: Idaho, Oregon, Utah, and Washington. The vast majority of the acreage is planted to yellow storage-type onions; however, there are approximately 800 acres of dry bulb non-storage onions (Walla Walla Sweet Onions) and 300 to 500 acres of bunching onions grown here as well. A small amount, perhaps 2%, of the acreage is planted to specialty storage-type onions, either white or red.

While Washington and Idaho reported little or no use of methyl parathion, it is being used currently in Oregon and Utah in rotation with pyrethroids for thrips control.

In addition to dry bulb and bunching onions, onion seed (hybrid, open pollinated, and bunching) is also produced in Washington, Oregon, and Idaho. However, no one I spoke to reported using methyl parathion on the seed crop. To give an idea of the seed-crop acreage, in Washington, onion seed acreage is variable and ranges from 300 to 1000 acres per year.

➤ **Hand Weeding**

Dry bulb onions are hand weeded by crews using long-handled hoes. Hand weeding in onions is very common; most acres are hand weeded. As would be expected, because of the labor expense, hand weeding is kept to a minimum. Most onion fields are weeded once; some receive a second weeding. Contact with foliage during weeding is characterized as light due to the use of long-handled hoes. In much of the onion acreage weeding is completed in June before applications for thrips control become necessary. However, because weeding can go on into July, this is not always the case and the potential does exist for overlap between the application of chemicals and the weeding. Methyl parathion is used in rotation with pyrethroids in an effort to minimize resistance development in thrips. Most often when methyl parathion is used in rotation, it is used as the second spray. When used in this manner, weeding crews are not exposed to methyl parathion because the second application for thrips is made well after weeding has completed.

Bunching onions, grown in Oregon and Washington on 300 to 500 acres, are also weeded by hand. Here the initial weeding is done by hand on hands and knees. A second weeding is typically done

using a long-handled hoe. Bunching onions, maturing over a relatively short period of 45 to 65 days, are grown in staggered plantings with early crops taking longer to mature than summer plantings. Here all weeding is complete before it becomes necessary to control thrips so weeding crews are not exposed to methyl parathion residues. In bunching onions, thrips become a problem close to maturity and methyl parathion, if it is used, is applied late in the season, close to the PHI.

➤ **Hand Thinning**

None of the onion types grown in the Pacific Northwest are thinned. All onions are precision planted, planted as transplants, or, in the case of bunching onions, planted in a band that does not require thinning.

➤ **Irrigation**

In Idaho, Oregon, Utah, and Washington all onions are grown under irrigation. The table below provides information on the different types of irrigation that are being used in the region and the percentage of onion acreage covered by each.

	Furrow	Sprinkler	Drip
Idaho	70%	0%	30%
Oregon	90%	0%	10%
Utah	85%	10%	5%
Washington	10%	70%	20%

Typically onions are irrigated weekly. With both furrow and drip irrigation, there is no routine crop contact when starting or stopping irrigation. With sprinkler irrigation, growers access the fields to move hand lines or to perform routine maintenance on sprinkler systems. (Note that in Washington, the state with the highest percentage of onion acres under sprinkler irrigation, no methyl parathion is used.)

Typically growers need to begin irrigation again within three days of making a methyl parathion application. In Utah conditions differ slightly because growers are on set watering schedules and water is only available on a six or seven day rotation. Here growers do one of two things. They might irrigate one day, then apply methyl parathion by air the next, then water again six days later. If aerial application is not used growers irrigate, wait three days for fields to dry to allow access with ground equipment, spray, then irrigate again in three days.

➤ **Scouting**

Most people queried stated that growers needed access to treated fields for scouting following a methyl parathion application within two or three days. Because the thrips live in down in the center whorl of the onion leaves, scouting for thrips always involves foliar contact.

➤ **Harvest**

The vast majority of onions grown in this four-state region are mechanically harvested. The yellow storage varieties of bulb onions (the majority of the acreage) are mechanically harvested with the following exception: in Utah some yellow onions (approximately 200 acres) are grown from transplants in order to access markets earlier than can be done with a crop grown from seed. These onions have a thinner skin than yellow onions grown from seed and, while they are mechanically lifted, they are hand topped. The dry bulb non-storage onions grown in Washington (Walla Walla Sweet Onions) are also mechanically lifted but hand topped. Walla Walla Sweets are grown on approximately 800 acres in Washington. Washington and Utah both reported growing a small

amount of white and red onions. These are also mechanically lifted from the soil at harvest but are hand topped. In Washington white onions are grown on about 300 acres.

The 300 to 500 acres of bunching onions grown in Oregon and Washington are pulled from the ground by hand. Hand labor is also required for bunching onions when banding, cutting off roots and tops, and washing.

➤ **Use Pattern**

In bulb onions, methyl parathion is used in Oregon and Utah to control both Western flower thrips and onion thrips with the predominant species (95%) being onion thrips. In the field, when treating, no distinction is made between the two species; growers are spraying to control thrips in general. As previously stated, methyl parathion is used in rotation with pyrethroids such as Warrior. Typically growers make four to six applications for thrips control in a growing season. Methyl parathion is used no more than twice a season and is used at the maximum labeled rate of 1 pint per acre or 0.5#ai/A. The first methyl parathion application is made in late June or early July. The latest a methyl parathion application would be made is a month to a month and a half before harvest.

In bunching onions grown in Oregon (10 growers in the Willamette Valley), thrips appear late in the season when the crop is close to maturity. Methyl parathion is applied at the labeled use rate close to the 15-day PHI.

➤ **Climate**

Onions are planted in March and April when temperatures are still quite cool and are harvested in August and September. Thus the normal temperature range for onion production in this four-state region is 30°F to 105°F. Because methyl parathion is used for thrips control and thrips only become a problem during warmer weather, methyl parathion is never used during periods of cool temperatures.

I hope that you find this information useful. Feel free to contact me if I can be of further assistance.

Sincerely,



Jane M. Thomas
Pacific Northwest Coalition Comment Coordinator
Washington State Pest Management Resource Service
Washington State University Tri-Cities
2710 University Drive
Richland, WA 99352
phone: 509-372-7493; fax: 509-372-7491
e-mail: jmthomas@tricity.wsu.edu

Methyl Parathion Onion Production Information: Contact List

Crop	Last Name	First Name	Organization	State	Work Phone
onion, dry bulb	Alston	Diane	Utah State University	Utah	(435) 797-2516
onion, bunching	Dreisow	Albert	Grower	Washington	(253) 872-8670
onion, dry bulb	Drost	Dan	Utah State University	Utah	(435) 797-2258
onion seed	Flannagan	Kevin	Kappa Seed Services	Washington	(509) 787-1561
onion, dry bulb	Geary	Brad	University of Idaho	Idaho	(208) 722-6701
onion, dry bulb	Holmgren	Lyle	Utah State University	Utah	(435) 587-3239
onion, dry bulb	Jensen	Lynn	Oregon State University	Oregon	(541) 881-1417
onion, dry bulb	Klicker	Mike	Walla Walla Sweet Onion Grower's Association	Washington	(509) 522-4994
onion, dry bulb	Locati	Buddy	Grower	Washington	(509) 525-1705
onion, dry bulb	Mc Grath	Dan	Oregon State University	Oregon	(541) 967-3871
onion, bunching	McReynolds	Bob	Oregon State University	Oregon	(503) 678-1264
onion, dry bulb	Mio	Ron	Grower	Idaho	(208) 230-3859
onion seed	Pelter	Gary	Washington State University	Washington	(509) 754-2011
onion, dry bulb					
onion, bunching	Porter	Frankie	Wilbur-Ellis	Washington	(800) 275-6920
onion, dry bulb	Sorensen	Erik	Washington State University	Washington	(509) 545-3511