Since its beginning in 1963, the IR-4 Project has cooperated with researchers, producers, the agrochemicals industry and federal agencies to secure clearances for pest control products on minor crops or for minor uses on major crops. During this time, IR-4 has assisted with over 5500 clearances including tolerances, exemptions, label expansions, crop groupings, crop definitions, and reregistrations.

There is often little public recognition of the contribution of IR-4 to the availability of minor use/crop pest control products because IR-4’s role in the clearance process ceases with the establishment of a tolerance or exemption. This report briefly summarizes some of the contributions IR-4 has made to establish tolerances and exemptions on a variety of minor crops since the program’s reorganization in 1976. Other accomplishments, such as data to support registrations and label expansions through crop groupings and crop definitions, are not included in this IR-4 Reports.

IR-4 Has Obtained or Supported Tolerances and Exemptions for the Following Crops Grown in Vermont:

<table>
<thead>
<tr>
<th>ALFALFA</th>
<th>ALL RAW AGRICULTURAL COMMODITIES</th>
<th>ALL RAC’S (Con’t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Phosphide</td>
<td>Bacillus thuringiensis</td>
<td>Combustion Product Gas</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>Carbon Dioxide</td>
<td>Gibberellic Acid</td>
</tr>
<tr>
<td>Magnesium Phosphide</td>
<td>Cinnamaldehyde</td>
<td>Kaolin</td>
</tr>
<tr>
<td>MCPA</td>
<td>Codling Moth Granulosis Virus</td>
<td>Methyl Eugenol + Malathion</td>
</tr>
<tr>
<td>Pronamide</td>
<td></td>
<td>Nitrogen</td>
</tr>
</tbody>
</table>
APPLE
2,4-D
Aluminum Phosphide
*Codling Moth Granulosis Virus*
Magnesium Phosphide

ARRUGULA
*Bacillus thuringiensis*
Sethoxydim

ASPARAGUS
2,4-D
*Bacillus thuringiensis*
Chlorpyrifos
Clopyralid
Dimethoate
Disulfoton
Fenamiphos
Fluazifop
Fosetyl Al
Glyphosate
Linuron
Malathion
Methyl Bromide
Myclobutanil
Norflurazon
Paraquat
Permethrin
Sethoxydim
Terbacil
Triforine

BASIL
Napropamide

BEAN (DRY)
*Bacillus thuringiensis*
Chlorothalonil
Sodium Chlorate

BEET (GARDEN)
*Bacillus thuringiensis*
Endothall
Fenamiphos
Sethoxydim

BELGIAN ENDIVE
Vinclozolin

BLACKBERRY
Bifenthrin
Captan
Chlorpyrifos
Esfenvalerate
Glyphosate
Malathion
Norflurazon
Oxyfluorfen
Sethoxydim

BLUEBERRY
2,4-D
Captan
Chlorothalonil
Chlorpyrifos
Esfenvalerate
Ethephon
Fenbuconazole (Sec. 18)
Fosetyl-Al
Glyphosate
Hexazinone
Imidacloprid (Sec. 18)
Methyl Anthranilate
Methyl Bromide
Norflurazon
Tebufenozide
Terbacil
Ziram

BOK CHOI
*Bacillus thuringiensis*
Benomyl
Chlorpyrifos
Cyromazine
DCPA
Diazinon
Methomyl

BOYSENBERRY
Chlorpyrifos
Glyphosate

BROCCOLI (Con’t)
Oxyfluorfen
Paraquat
Sodium Hypochlorite

BROCCOLI RAAB
*Bacillus thuringiensis*
Benomyl
Chlorpyrifos
Esfenvalerate
Glyphosate
Methomyl
Permethrin
Sodium Hypochlorite

BRUSSELS SPROUTS
*Bacillus thuringiensis*
Benomyl
Chlorpyrifos
Dimethoate
Endothall
Sodium Hypochlorite

CABBAGE
*Bacillus thuringiensis*
Benomyl
Chlorpyrifos
Clomazone
DCPA
Diazinon
Endothall
Glyphosate
Magnesium Phosphide
Malathion
Methomyl
Methyl Parathion
Metolachlor
Oxyfluorfen
Paraquat
Sodium Hypochlorite

CANTALOUPE
*Bacillus thuringiensis*
Glyphosate

CANARYGRASS
Bromoxynil
MCPA
Triallate

CANTALOUPE
CANTALOUPE (Con't)
  Malathion
  Metalaxyl + Mancozeb
  Paraquat
  Permethrin

CARROT
  *Bacillus thuringiensis*
  Glyphosate
  Iprodione
  Malathion
  Metribuzin
  Paraquat
  Sethoxydim
  Thiabendazole

CAULIFLOWER
  *Bacillus thuringiensis*
  Benomyl
  Chlorpyrifos
  DCPA
  Diazinon
  Endothall
  Glyphosate
  Malathion
  Methomyl
  Methyl Parathion
  Oxyfluorfen
  Paraquat
  Sodium Hypochlorite

CHICK PEA
(GARBANZO BEAN)
  *Bacillus thuringiensis*
  Glyphosate
  Oxyfluorfen
  Paraquat
  Sodium Chlorate

CHINESE BROCCOLI
  *Bacillus thuringiensis*
  Benomyl
  Chlorpyrifos
  DCPA
  Diazinon
  Endothall
  Glyphosate
  Malathion
  Methomyl
  Methyl Parathion
  Oxyfluorfen

CHINESE BROCCOLI (Con't)
  Paraquat
  Sodium Hypochlorite

CHINESE CABBAGE (NAPA)
  *Bacillus thuringiensis*
  Benomyl
  Chlorothalonil
  Chlorpyrifos
  Clomazone
  Cyromazine
  DCPA
  Diazinon
  Fenamiphos
  Glyphosate
  Magnesium Phospide
  Malathion
  Methamidophos
  Methomyl
  Methyl Parathion
  Metolachlor
  Oxyfluorfen
  Paraquat
  Sodium Hypochlorite

CHINESE MUSTARD
  *Bacillus thuringiensis*
  Cyromazine
  DCPA
  Diazinon
  Iprodione
  Malathion
  Methomyl
  Methyl Parathion
  Sodium Hypochlorite

CHINESE MUSTARD (Con't)
  Sodium Hypochlorite

CHINESE MUSTARD
  *Bacillus thuringiensis*
  Cyromazine
  DCPA
  Diazinon
  Iprodione
  Malathion
  Methomyl
  Methyl Parathion
  Sodium Hypochlorite

CHINESE RADISH
  *Bacillus thuringiensis*
  Diazinon

CLOVER
  MCPA
  Pronamide

COLLARDS
  *Bacillus thuringiensis*
  Bensulide
  Chlorpyrifos
  Endothall

COLLARDS (Con't)
  Esfenvalerate
  Methomyl
  PCNB
  Sodium Hypochlorite

CRABAPPLE
  2,4-D
  Phosmet

CRENSHAW
  *Bacillus thuringiensis*
  Glyphosate
  Metalaxyl + Mancozeb
  Permethrin

CUCUMBER
  *Bacillus thuringiensis*
  Clomazone
  Glyphosate
  Paraquat
  Permethrin

CURRANT
  Benomyl
  Glyphosate
  Myclobutanil
  Napropamide

DANDELION
  Benomyl
  Sethoxydim

DEWBERRY
  Esfenvalerate
  Glyphosate
  Terbacil

DILL
  *Bacillus thuringiensis*
  Carbaryl
  Prometryn

EGGPLANT
  *Bacillus thuringiensis*
  Bifenthrin
  Fenamiphos
  Glyphosate
  Hexakis
  Magnesium Phospide
  Oxamyl
  Paraquat
  Permethrin
ELDERBERRY
Chlorpyrifos
Esfenvalerate
Glyphosate

ENDIVE (ESCAROLE)
Bacillus thuringiensis
DCNA
Fluazifop
Imazethapyr
Sethoxydim

FIELD CORN
Bacillus thuringiensis
Sodium Chlorate

FLORENCE FENNEL
Bacillus thuringiensis
Carbaryl
Glyphosate
Malathion
Methamidophos
Metolachlor

GARLIC
Bacillus thuringiensis
Bromoxynil
Glyphosate
Malathion
Metolachlor

GINSENG
Diazinon
Fosetyl-Al
Iprodione
Metalaxyl

GOOSEBERRY
Azinphos-methyl
Chlorpyrifos
Esfenvalerate
Glyphosate
Myclobutanil

GOURDS (EDIBLE)
Bacillus thuringiensis
Mancozeb
Oxamyl

GRAPE
Aluminum Phospide
Bifenthrin
Chlorpyrifos

GRAPE (Con't)
Fosetyl-Al
Glyphosate
Metalaxyl + Copper
Methyl Anthranilate
Zinc Phosphate

HONEY and BEESWAX
Bacillus thuringiensis
Benzaldehyde
Formic Acid
Menthol

HONEYDEW MELONS
Bacillus thuringiensis
Metalaxyl + Mancozeb
Paraquat

HORSERADISH
Bacillus thuringiensis
DCPA
Methomyl
Oxyfluorfen
Permethrin
Sethoxydim

KALE
Bacillus thuringiensis
Chlorpyrifos
Methomyl
PCNB
Sodium Hypochlorite

KOHLRABI
Bacillus thuringiensis
Chlorpyrifos
DCPA
Endothall
Esfenvalerate
Methomyl
Sodium Hypochlorite

LEEK
Bacillus thuringiensis
Chlorpyrifos
Glyphosate
Methomyl

LENTIL (Con't)
Methyl Parathion
Paraquat
Parathion
Sethoxydim
Sodium Chlorate

LETTUCE
Bacillus thuringiensis
Bifenthrin
Imazethapyr
Magnesium Phosphate
Methyl Bromide
Sethoxydim

LIMA BEAN
Bacillus thuringiensis
Sodium Chlorate

LOGANBERRY
Chlorpyrifos
Esfenvalerate
Ferbam
Glyphosate
Sethoxydim
Terbacil

MAPLE SAP
Carbaryl

MARIGOLD
Hexakis

MARJORAM
Napropamide

MINT
2,4-DB
Acephate
Bacillus thuringiensis
Bentazon
Bromoxynil
Chlorothalonil
Chlorpyrifos
Clopyralid
Glyphosate
Malathion
Oxamyl
Paraquat
Propiconazole
Pyridate
Quinclozef
Sethoxydim
Tebufenozide
Trifluralin
<table>
<thead>
<tr>
<th>Crop</th>
<th>Pest Management Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Grass</td>
<td>Bacillus popillae, Bacillus thuringiensis, Diflubenzuron, Lagenidium giganteum, Methomyl</td>
</tr>
<tr>
<td>PEA (Dry)</td>
<td>Bacillus thuringiensis, MCPB, Sethoxydim, Sodium Chlorate</td>
</tr>
<tr>
<td>PEA (Succulent)</td>
<td>Bacillus thuringiensis, Clomazone</td>
</tr>
<tr>
<td>Peach</td>
<td>2,4-D, Carbofuran, Chlorpyrifos, Clomazone, Glyphosate, Iprodione, Methomyl, Oxytetracycline, Pronamide</td>
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<tr>
<td>Pear</td>
<td>2,4-D, Codling Moth Granulosis Virus, Odore, Daphnia, Diphenylamine, Lignin Sulfonate, Malathion, Methomyl, Oxytetracycline, Pronamide</td>
</tr>
<tr>
<td>Pepper (Bell)</td>
<td>Bacillus thuringiensis, Clomazone, Glyphosate, Imidacloprid, Oxamyl</td>
</tr>
<tr>
<td>Pepper (Chili)</td>
<td>Bentazon, Fluazifop, Glyphosate, Metolachlor, Triadimefon</td>
</tr>
<tr>
<td>Pepper (Cubanelle)</td>
<td>Bacillus thuringiensis, Bifenthrin, Clomazone, Fenamiphos</td>
</tr>
<tr>
<td>Pepper (Non-Bell)</td>
<td>Bacillus thuringiensis, Bifenthrin, Clomazone, Fenamiphos, Glyphosate, Imidacloprid, Oxamyl</td>
</tr>
<tr>
<td>Pepper (Tabasco)</td>
<td>Fluazifop, Glyphosate, Metolachlor</td>
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<tr>
<td>Persimmon</td>
<td>Glyphosate, Magnesium Phosphide</td>
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<tr>
<td>Potato</td>
<td>2,4-D, Bacillus thuringiensis, Calcium Hypochlorite, Copper Complex, Sethoxydim, Sodium Chlorate, Spinosad, Sulfuric Acid</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Bacillus thuringiensis, Benomyl, Clomazone, Glyphosate, Imidacloprid, Metalaxyl + Mancozeb, Oxamyl, Paraquat</td>
</tr>
</tbody>
</table>

*Crop abbreviations: PEA (DRY) = PEA (Dry); PEA (SUCCULENT) = PEA (Succulent); PEA (BELL) = PEA (Bell)*
<table>
<thead>
<tr>
<th>Plant</th>
<th>Insecticides/Herbicides</th>
</tr>
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<tbody>
<tr>
<td>RADISH</td>
<td>Bacillus thuringiensis, DCPA, Methomyl, Sodium Hypochlorite</td>
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<tr>
<td>RAPE GREENS</td>
<td>Bacillus thuringiensis, Methomyl, Sodium Hypochlorite</td>
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<tr>
<td>RASPBERRY</td>
<td>2,4-D, Captan, Chlorpyrifos, Endosulfan, Fenamiphos, Glyphosate, Hexakis, Malathion, Norflurazon, Oxyfluorfen, Sethoxydim, Sulfur, Triadimefon</td>
</tr>
<tr>
<td>RHUBARB</td>
<td>Bacillus thuringiensis, Fluazifop, Gibberellic Acid, Napropamide, Paraquat, Pronamide, Sethoxydim</td>
</tr>
<tr>
<td>RUTABAGA</td>
<td>Bacillus thuringiensis, Benomyl, Diazinon</td>
</tr>
<tr>
<td>SHALLOT</td>
<td>Bacillus thuringiensis, Glyphosate</td>
</tr>
<tr>
<td>SNAP BEAN</td>
<td>Clomazone, Lactofen, Myclobutanil</td>
</tr>
<tr>
<td>SOYBEAN</td>
<td>2,4-D, Aluminum Phoshide, Azoxystrobin, Glyphosate</td>
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<tr>
<td>SOYBEAN (Con't)</td>
<td>Lagenidium giganteum, Magnesium Phosphate, Sodium Chlorate</td>
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<tr>
<td>SPINACH</td>
<td>Azoxystrobin, Bacillus thuringiensis, Benomyl, Glyphosate, Malathion, Metolachlor (Sec. 18), Phenmedipham, Sethoxydim</td>
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<tr>
<td>SQUASH (WINTER/SUMMER)</td>
<td>Bacillus thuringiensis, Clomazone, Glyphosate, Imidacloprid, Metalaxyl + Mancozeb, Paraquat, Permethrin</td>
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<td>STRAWBERRY</td>
<td>2,4-D, Acifluorfen, Captan, Chlorpyrifos, Fenamiphos, Glyphosate, Malathion, Methyl Bromide, Myclobutanil</td>
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<tr>
<td>SUGAR PEA</td>
<td>Bacillus thuringiensis</td>
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<tr>
<td>SUNFLOWER</td>
<td>Carbarly, Glyphosate, Malathion</td>
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<td>SWEET CORN</td>
<td>2,4-D, Bacillus thuringiensis, Propargite</td>
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<td>SWEET POTATO</td>
<td>Bacillus thuringiensis</td>
</tr>
<tr>
<td>SWISS CHARD</td>
<td>Endothall, Sethoxydim</td>
</tr>
<tr>
<td>TOMATO</td>
<td>Bacillus thuringiensis, Glyphosate, Imidacloprid, Magnesium Phosphate, Paraquat</td>
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<tr>
<td>TREFOIL</td>
<td>Azinphos-methyl, Carbaryl, Diazinon, Malathion, Methyl Parathion, Pronamide, Trichlorfon</td>
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<tr>
<td>TURNIP (ROOT/GREENS)</td>
<td>Bacillus thuringiensis, Benomyl, Chlorpyrifos, Esfenvalerate, Malathion, Methomyl, Paraquat, Permethrin, Spinosad</td>
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<tr>
<td>Crop</td>
<td>Insecticides/Cultural Methods</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------</td>
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<tr>
<td>VETCH</td>
<td>Pronamide</td>
</tr>
<tr>
<td>WATERCRESS</td>
<td><em>Bacillus thuringiensis</em></td>
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<tr>
<td></td>
<td>Gibberellic Acid</td>
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<tr>
<td></td>
<td>Glyphosate</td>
</tr>
<tr>
<td></td>
<td>Malathion</td>
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<td></td>
<td>Spinosad</td>
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<tr>
<td>WATERMELON</td>
<td><em>Bacillus thuringiensis</em></td>
</tr>
<tr>
<td></td>
<td>Bifenthrin</td>
</tr>
<tr>
<td></td>
<td>Glyphosate</td>
</tr>
<tr>
<td></td>
<td>Imidacloprid</td>
</tr>
<tr>
<td></td>
<td>Metalaxyl + Mancozeb</td>
</tr>
<tr>
<td></td>
<td>Paraquat</td>
</tr>
<tr>
<td></td>
<td>Permethrin</td>
</tr>
<tr>
<td>WINTER PEA</td>
<td><em>Bacillus thuringiensis</em></td>
</tr>
<tr>
<td></td>
<td>Pronamide</td>
</tr>
</tbody>
</table>
Crop Group and Subgroup Successes

Crop Group 1 - Root and Tuber Vegetables/Glyphosate
Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; beet, garden; beet, sugar; burdock, edible; canna, edible; carrot; cassava, bitter and sweet; celeriac; chayote (root); celandine; chicory; chufa; dasheen (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; sweet potato; tanier; turmeric; turnip; yam bean; yam, true

Crop Subgroup 1B - Root Vegetables (except sugar beet)/Glyphosate
Beet, garden; burdock, edible; carrot; celeriac; celandine; chicory; ginseng; horseradish; parsley, turnip-rooted; parsnip; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; turnip

Crop Subgroup 1C - Tuberous and Corm Vegetables/Imidacloprid, Spinosad
Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; yam, true

Crop Group 2 - Leaves of Root and Tuber Vegetables/Glyphosate
Garlic; garlic, great-headed; leek; onion, dry bulb and green; onion, Welsh; shallot

Crop Group 4 - Leafy Vegetables (except Brassica Vegetables)/Glyphosate
Amaranth (Chinese spinach); arugula (roquette); cardoon; celery; celeriac; chervil; chrysanthemum, edible-leaved; chrysanthemum, garland; common salat; cress, garden; cress, upland; dandelion; dock (sorrel); endive (escarole); fenel, Florence; lettuce, head and leaf; orach; parsley; purslane, garden; purslane, winter; radicchio (red chicory); rhubarb; spinach; spinach, New Zealand; spinach, vine; Swiss chard

Crop Group 5 - Brassica (Cole) Leafy Vegetables/Glyphosate
Broccoli; broccoli, Chinese (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; Chinese (bok choy); cabbage, Chinese (napa); cabbage, Chinese mustard (gai choy); cauliflower; cavalo broccoli; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens

Crop Subgroup 5A - Head and Stem Brassica/Bifenthrin
Broccoli; broccoli, Chinese; brussels sprouts; cabbage; Chinese (napa); cabbage, Chinese mustard; cauliflower; cavalo broccoli; kohlrabi

Crop Group 6 - Legume Vegetables (Succulent or Dried)/Glyphosate
Bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (Vigna) (includes adzuki bean, asparagus bean, black-eyed pea, carot; Chinese longbean, cowpea, crowder pea, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); guaj; jackbean; lablab bean; lentil; pea (Pisum) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean

Crop Subgroup 6A - Edible-podded Legume Vegetables/Bifenthrin
Bean (Phaseolus) (includes runner bean, snap bean, wax bean); bean (Vigna) (includes asparagus bean, Chinese longbean, moth bean, yardlong bean); jackbean; pea (Pisum) (includes dwarf pea, edible-podded pea, snow pea, sugar snap pea); pigeon pea; soybean (immature seed); sword bean

Crop Subgroup 6B - Succulent Shelled Peas and Beans/Bifenthrin
Bean (Phaseolus) (includes lima bean, green; broad bean, succulent); bean (Vigna) (includes black-eyed pea, cowpea, southern pea); pea (Pisum) (includes English pea, garden pea, green pea); pigeon pea

Crop Group 7 - Foliage of Legume Vegetables/Glyphosate
Plant parts of any legume vegetable included in the legume vegetables that will be used as animal feed.

Crop Subgroup 7A - Foliage of Legume Vegetables (except soybeans)/Glyphosate
Plant parts of any legume vegetable (except soybeans) included in the legume vegetables group that will be used as animal feed.
Crop Group 8 - Fruiting Vegetables (except Cucurbits)/Glyphosate
Eggplant; groundcherry (Physalis spp); pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper);
tomatillo; tomato

Crop Group 9 - Cucurbit Vegetables/Bifenthrin, Glyphosate, Imidacloprid
Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourd, edible (includes hyotan,
cucuzza, hechima, Chinese okra); Momordica spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber);
musk melon (includes cantaloupe); pumpkin; squash, summer; squash, winter (includes butternut squash, calabaza, hubbard
squash, acorn squash, spaghetti squash); watermelon

Crop Group 9B - Squash/Cucumber/Fenpropatrin, Halosulfuron
Chayote (fruits); Chinese waxgourd; cucumber; gherkin; gourd, edible; Momordica spp; pumpkin; squash, summer; squash, winter

Crop Group 11 - Pome Fruits/Glyphosate
Apple; crabapple; loquat; mayhaw; pear; pear, oriental; quince

Crop Group 12 - Stone Fruits/Glyphosate, Imidacloprid (Sec. 18)
Apricot; cherry, sweet; cherry, tart; nectarine; peach; plum; plum, Chickasaw; plum, Damson; plum, Japanese; plumcot; prune (fresh)

Crop Group 13 - Berries/Glyphosate
Blackberry (including bingleberry, boysenberry; dewberry; lowberry, marionberry, olallieberry, youngberry);
blueberry; currant; elderberry; gooseberry; huckleberry; loganberry; raspberry, black and red

Crop Subgroup 13A - Caneberries/Tebufenozide
Blackberry; loganberry; red and black raspberry; cultivars and/or hybrids of these

Crop Group 14 - Tree Nuts/Glyphosate
Almond; beech nut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut;
amadu nut; pecan; walnut, black and English

Crop Group 15 - Cereal Grains/Glyphosate
Barley; buckwheat; corn; millet, pearl; millet, proso; oats; popcorn; rice; rye; sorghum (milo); teosinte; triticale; wheat; wild rice

Crop Group 17 - Grass, Forage, Fodder and Hay/Glyphosate, Spinosad
Any grass, Gramineae family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to
or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage

Crop Group 18 - Nongrass Animal Feeds (Forage, Fodder, Straw and Hay)/Glyphosate, Spinosad
Alfalfa; bean, velvet; clover (Trifolium, Melilotus); kudzu; lespedeza; lupin; sainfoin; trefoil; vetch; vetch, crown; vetch, milk

Crop Subgroup 19A - Herbs/Glyphosate
Angelica; balm; basil; borage; burnet; camomile; catnip; chervil (dried); chive; chive, Chinese; clary; coriander (leaf); costmary; culantro
(leaf); curry (leaf); dillweed; hoherhound; hyssop; lavender; lemongrass; lovage (leaf); marigold; marjoram; nasturtium; parsley (dried);
pennyroyal; rosemary; rue; sage; savory, summer and winter; sweet bay; tansy; tarragon; thyme; wintergreen; woodruff; and wormwood

Crop Subgroup 19B - Spices/Glyphosate
Allspice; anise (seed); anise, star; anatto (seed); caper (buds); caraway; caraway, black; cardamom; cassia (bark); cassia (buds); celery
(seed); cinnamon; clove (buds); coriander (seed); culantro (seed); cumin; dill (seed); fennel, common; fennel, Florence (seed); fenugreek;
grains of paradise; juniper (berry); lovage (seed); mace; mustard (seed); nutmeg; pepper, black; pepper, white; poppy (seed); saffron;
and vanilla
Please keep the following in mind as you review this information:

- IR-4’s role is to petition the U.S. EPA to establish tolerances or exemptions for pest control products on a crop. Some of these tolerances are regionally restricted. Other tolerances have been established as a result of crop groupings. The fact that each tolerance or exemption is published in the 40 Code of Federal Regulations 180 for the raw agricultural commodity does not necessarily mean that the pesticide is registered for use. Registration of a specific use is the responsibility of the chemical manufacturer, who is the seller of the product.

- (Sec. 18), which are state(s) specific, makes reference to the time-limited tolerance established for a Section 18 Emergency Exemption use which is supported by IR-4 data.

- (EUP), which can be regionally restricted, makes reference to the Temporary Tolerance or Exemption for the Experimental Use Permit which is supported by IR-4.

- This compilation does not constitute a recommendation for use. The pesticide registrant or Cooperative Extension should be consulted for specific use information.

- IR-4 thanks the Vermont State Liaison Representative for assistance in preparing this report.

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