

**Reduced Risk/Organophosphate Alternative <sup>1</sup> Decisions for Conventional Pesticides**

last updated 10/26/04

Registrant	Pesticide Type <sup>2</sup>	Chemical	Site	Reduced Risk/OP Alt <sup>3</sup>	Decision Date
<b><i>FY 1994 Completions</i></b>					
Dow	I	<i>Hexaflumuron</i>	below-ground bait station (termites)	RR	03/10/1994
RJ Advantage	Re	<i>Methyl Anthranilate</i>	cherry, blueberry, grape, forestry	RR	09/16/1994
<b><i>FY 1995 Completions</i></b>					
Valent	H	<i>Flumiclorac-pentyl</i>	corn, soybean	RR	11/18/1994
Rohm & Haas	I	<i>Tebufenozide</i>	walnut	RR	05/15/1995
Sankyo	F	<i>Hymexazol</i>	sugar beet (seed treatment)	RR	08/04/1995
<b><i>FY 1996 Completions</i></b>					
Novartis	F	<i>Fludioxonil</i>	corn	RR	10/05/1995
American Cyanamid	H	<i>Imazapic</i>	peanut	RR	03/05/1996
Novartis	F	<i>Mefenoxam</i>	all metalaxyl uses	RR	03/05/1996
<b><i>FY 1997 Completions</i></b>					
Zeneca	F	<i>Azoxystrobin</i>	non-residential turf	RR	02/07/1997
Dow	I	<i>Spinosad</i>	cotton	RR	02/18/1997
Novartis	H	<i>Alpha-metolachlor</i>	all metolachlor uses	RR	03/14/1997
American Cyanamid	H	<i>Imazamox</i>	soybean	RR	05/23/1997
Dow	I	Hexaflumuron	above ground bait stations (termites)	RR	05/21/1997
Zeneca	F	Azoxystrobin	grape, banana, peach, tomato, pecan, peanut	RR	06/03/1997
<b><i>FY 1998 Completions</i></b>					
Novartis	F	Fludioxonil	potato	RR	10/10/1997

Novartis	F	Fludioxonil	seed treatments (brassica leafy veg., bulb veg., cereal grains, cotton, cucurbit veg., foliage of legume veg., fruiting veg., grass, herbs and spices, leafy veg., leaves and roots of tuber veg., legume veg., non-grass animal feeds, peanut, rape seed, root and tuber veg., sunflower)	RR	10/10/1997
Ensystem	I	Diflubenzuron	below ground bait station (termite)	RR	01/28/1998
Novartis	F	<i>Cyprodinil</i>	stone fruit	RR	04/10/1998
Dow AgroSciences	I	Spinosad	almond, apple, citrus, brassica leafy veg., fruiting veg., leafy veg.	RR	04/15/1998
Valent	I	Pyriproxyfen	cotton	RR	06/18/1998
Rohm & Haas	I	Tebufenozide	pecan	RR	06/01/1998
FMC	H	<i>Carfentrazone-ethyl</i>	wheat, corn	RR	09/23/1998

***FY 1999 Completions***

Zeneca	F	Azoxystrobin	turf (residential)	RR	10/01/1998
BASF	H	<i>Diflufenzopyr</i>	corn	RR	01/28/1999
Zeneca	F	Azoxystrobin	almond, cucurbit veg, rice, wheat	RR	03/17/1999
Zeneca	F	Azoxystrobin	canola, potato, stone fruit	RR	03/17/1999
Rohm & Haas	I	Tebufenozide	leafy veg., brassica leafy veg, fruiting veg.	RR/OP Alt.	04/14/1999
Valent	I	Pyriproxyfen	pome fruit, walnut	RR/OP Alt.	04/14/1999
Monsanto	H	Glyphosate	glyphosate-tolerant corn, canola, sugar beet	RR	04/14/1999
Rohm & Haas	I	Tebufenozide	cranberry	RR/OP Alt.	04/20/1999
BASF	H	<i>s-Dimethenamid</i>	corn, soybean, peanut	RR	05/10/1999
Dow AgroSciences	I	Spinosad	sweet corn	RR/OP Alt.	05/26/1999
Bayer/Tomen	F	<i>Fenhexamid</i>	grape, strawberry, ornamentals	RR	05/28/1999
Rohm & Haas	I	Tebufenozide	forestry, ornamentals	RR/OP Alt.	06/16/1999

IR-4	I	Tebufenozide	berry crop group, mint	RR/OP Alt.	06/18/1999
Uniroyal	I	<i>Bifenazate</i>	ornamentals	RR/OP Alt.	06/24/1999
Rohm & Haas	I	Tebufenozide	pome fruit, cotton	RR/OP Alt.	07/21/1999
Rohm & Haas	I	Tebufenozide	sugarcane	RR/OP Alt.	09/22/1999
Dow AgroSciences	I	Spinosad	cucurbit veg., stone fruit, legume veg, cereal grains	RR/OP Alt.	09/23/1999
Novartis	F	<i>Trifloxystrobin</i>	pome fruit, grape, cucurbit veg., peanut, turf, banana, ornamentals	RR	09/27/1999
Rhone-Poulenc	I	Fipronil	outside home use (termite)	OP Alt.	09/28/1999
Novartis	I	<i>Pymetrozine</i>	tuberous and corm veg., ornamentals, tobacco	RR/OP Alt.	09/29/1999
IR-4	I	Tebufenozide	turnip, canola	RR	09/29/1999
<b><i>FY 2000 Completions</i></b>					
Valent	I	Pyriproxyfen	citrus, fruiting veg., tree nuts	RR/OP Alt.	10/21/1999
Rohm & Haas	I	Tebufenozide	ornamentals (residential)	RR/OP Alt.	11/12/1999
GMJA (Tropicana)	H/I/PGR	<i>Ecolyst</i>	orange	RR	12/30/1999
Elanco	I	Spinosad	non-grass animal feed crop group, grain amaranth, cilantro, grass, buckwheat, rye, pistachio, oat, barley, millet, apple, popcorn, ti leaves, watercress, tropical fruit, teosinte, turnip greens	RR/OP Alt.	01/12/2000
Bayer/Tomen	F	Fenhexamid	almond, stone fruit	RR	04/13/2000
BASF	H/PGR	<i>Prohexadione calcium</i>	apple	RR	05/03/2000
Rohm & Haas	F	Tebufenozide	tree nuts	RR/OP Alt.	05/10/2000
Rohm & Haas	I	<i>Methoxyfenozide</i>	cotton, pome fruit	RR/OP Alt.	06/12/2000
Novartis	F	Trifloxystrobin	almond, fruiting veg., hops, potato, sugar beet, wheat, ornamentals	RR	07/18/2000
FMC	H	Carfentrazone-ethyl	cereal grains	RR	08/09/2000
Novartis	I	Pymetrozine	cucurbit veg, fruiting veg.	RR/OP Alt.	08/09/2000
AgrEvo	I	<i>Buprofezin</i>	cucurbit veg., head lettuce	RR/OP Alt.	08/31/2000

Nihon Nohyaku America, Inc	I	<i>Fenpyroximate</i>	ornamentals (greenhouse)	RR/OP Alt.	09/29/2000
DuPont	I	<i>Indoxacarb</i>	cotton, fruiting veg., brassica leafy veg., lettuce, sweet corn, pome fruit	RR/OP Alt.	09/29/2000
Bayer	H	<i>Flucarbazone-sodium</i>	wheat	RR	09/29/2000
IR-4	H	Glyphosate	animal feed, non-grass group (exc. alfalfa); aloe vera; ambarella; artichoke, globe; bamboo shoots; betelnut; biriba; blimbe; borage, seed; buffalo gourd; chaya; crambe, seed; custard apple; dokudami; epazote; feijoa; flax; foliage of legume veg.; galangal root; ginger, white (flower); Governor's plum; gow kee leaves; grass, forage, fodder and hay group; herb and spices group; hops; ilama; imbe; imbu; jojoba (seed); juneberry; kava (root); kenaf; leafy veg.; leaves of root and tuber veg.; lesquerella (seed); leucaena; lingonberry; meadowform (seed); mioga (flower); mustard seed; okra; oregano, Mexican (leaves); palm heart; palm oil; papaya, Mountain papaya; pawpaw; pepper leaf; perilla (tops); pulasan; quinoa grain; root and tuber veg.; salal; sesame seed; Spanish lime; stevia (leaves); surinam cherry; teff, grain; ti leaves; wasabi (roots); water spinach (tops); watercress, upland; wax jambu; yacon tuber	RR	09/27/2000
Zeneca	F	Azoxystrobin	barley, onion, citrus, corn (field, sweet, pop), cotton, leafy veg, root and tuber veg., soybean	RR	09/29/2000
<b><i>FY 2001 Completions</i></b>					

Rhone Poulenc	I	Fipronil	home lawn, golf course, commercial and recreational turf and sod farms (fire ant)	OP Alt.	12/04/2000
Rhone Poulenc	I	Fipronil	potting medium mixtures (fire ant)	OP Alt.	12/08/2000
Novartis	I	<i>Thiamethoxam</i>	barley, canola, cotton, sorghum, wheat (all seed treatment)	OP Alt.	12/21/2000
Novartis	F	Fludioxonil	strawberry, bulb vegetables	RR	12/29/2000
MGK	I	Pyriproxyfen	food handling establishments	RR	03/14/2001
Novartis	N	Fludioxonil	turf	RR	03/30/2001
Bayer	I	Imidacloprid	leaf petioles, citrus	OP Alt.	04/10/2001
Rhone Poulenc	F	<i>Zoxamide</i>	grape	RR	04/11/2001
Novartis	I	Thiamethoxam	cotton (foliar), cucurbit veg., fruiting veg., pome fruit, tuberous and corm veg.	OP Alt.	05/23/2001
Rhone Poulenc	I	Fipronil	turf (homeowner, commercial; fire ant)	OP Alt.	05/25/2001
BASF	PGR	Prohexadione calcium	grass (grown for seed)	RR	06/01/2001
Valent/IR-4	I	Pyriproxyfen	pistachio	RR/OP Alt.	06/05/2001
Zeneca	H	<i>Mesotrione</i>	corn	RR	06/21/2001
Novartis	F	Cyprodinil	onion (dry bulb & green), strawberry	RR	06/22/2001
AgrEvo	I	Buprofezin	almond, citrus, cotton, grape, tomato	RR/OP Alt.	06/26/2001
FMC	H	Carfentrazone-ethyl	cotton (defoliant use)	OP Alt.	08/01/2001
ISK	F	<i>Fluazinam</i>	peanut, potato	RR	09/07/2001
FMC	I	zeta-Cypermethrin	alfalfa, corn (field, pop, sweet), head and stem brassica veg., leafy brassica greens, leafy veg., onion (green), sugar beet, sugarcane, rice	OP Alt.	09/17/2001

Novartis	F	Azoxystrobin	leafy brassica greens, bushberry, eggplant, grass (grown for seed), jackfruit, juneberry, lingonberry, loquat, mint (spearmint, peppermint), okra, pawpaw, pepper, persimmon, salal, strawberry, tamarind, tropical fruit, turnip (greens), watercress, wax jambu, white sapote	RR	09/21/2001
Makhteshim-Agan	I	<i>Novaluron</i>	ornamentals (indoors, non-food)	RR	09/24/2001
Dow Elanco	I	Spinosad	artichoke (globe), asparagus, bushberry, cranberry, foliage of legume veg., garden beet (root), juneberry, leaves of root and tuber veg., lingonberry, okra, pistachio, pome fruit, salal, strawberry, sugar beet (root), tree nuts	RR/OP Alt.	09/25/2001
Rohm & Haas	F	Zoxamide	cucurbit veg., tomato	RR	09/26/2001
PBI Gordon	H	Carfentrazone-ethyl	turf	RR	09/27/2001
<b><i>FY 2002 Completions</i></b>					
American Cyanamid	I	Chlorfenapyr	post construction control of termites	OP Alt.	12/21/2001
American Cyanamid	H	Imazamox	alfalfa, canola, legume veg., wheat	RR	12/27/2001
Novartis	I	Pymetrozine	cotton	RR/OP Alt.	12/27/2001
Novartis	I	Pymetrozine	leafy veg., head and stem brassica veg., leafy brassica veg., hops	RR/OP Alt.	12/27/2001
Novartis	I	Pymetrozine	pecans	OP Alt.	12/27/2001
Uniroyal	I	Bifenazate	cotton, grape, hops, nectarine, peach, plum, pome fruit, strawberry	RR/OP Alt.	02/01/2002
Aventis	I	<i>Acetamiprid</i>	cotton, pome fruit, citrus, grapes, brassica leafy veg., leafy veg. (excl. brassica), fruiting veg., ornamentals	RR/OP Alt.	03/15/2002
Novartis	F	Trifloxystrobin	citrus, corn (field, pop), pecan, rice, stone fruit	RR	05/23/2002

DowAgro	H	<i>Cyhalofop-butyl</i>	rice	RR	05/23/2002
Dow	I	Indoxacarb	alfalfa, peanut, potato, soybean	RR/OP Alt.	07/10/2002
Novartis	F	Fludioxonil	caneberry, pistachio, stone fruit, watercress	RR	08/02/2002
Valent	I	Pyriproxyfen	stone fruit	RR/OP Alt.	08/28/2002
IR-4		Pyriproxyfen	blueberry, lychee, guava	RR/OP Alt.	08/28/2002
BASF/American Cyanamid	H	Imazethapyr	rice	RR	08/29/2002
BASF/IR-4	H	Diflufenzopyr (Distinct)	corn (pop, sweet), grass (forage, hay)	RR	08/29/2002
Camas Tech.	F	<i>Macalaya extract</i>	greenhouse ornamentals	RR	09/19/2002
Syngenta	F	Azoxystrobin	legume vegetables	RR	09/20/2002
Rohm & Haas	I	Methoxyfenozide	fruiting vegetables, grapes	RR/OP Alt.	09/20/2002
Rohm & Haas	I	Methoxyfenozide	brassica leafy vegetables, leafy vegetables	RR/OP Alt.	09/20/2002
Rohm & Haas	I	Methoxyfenozide	corn (field, sweet)	RR/OP Alt.	09/20/2002
Rohm & Haas	I	Methoxyfenozide	stone fruit	RR/OP Alt.	09/20/2002
Rohm & Haas	I	Methoxyfenozide	tree nuts	RR/OP Alt.	09/20/2002
Aventis	F	<i>Fenamidone</i>	lettuce	RR	09/27/2002
Zeneca	I	Lambda-cyhalothrin	legume vegetables, fruiting vegetables, sugarcane	RR (sugarcane); OP Alt. (all uses)	09/27/2002
IR-4	I	Spinosad	berry group, fig, grape, herbs, peanut, root and tuber vegetables	RR/OP Alt.	09/27/2002

***FY 2003 Completions***

Syngenta	I	Lambda-cyhalothrin	termite barrier	RR	10/10/2002
Valent	I	Pyriproxyfen	Brassica leafy vegetables, cucurbit vegetables, olive	RR/OP Alt.	03/07/2003
IR-4	F	Cyprodinil	bushberry, caneberry, pistachio, watercress	RR	03/13/2003
Exit Holdings	Ro	<i>EH-2001 Rodenticide</i>	Richardson/Wyoming ground squirrel	RR	03/24/2003
IR-4	H	Mesotrione	pop corn	RR	03/25/2003

Dow	I	<i>Noviflumuron</i>	above ground bait station	RR/OP Alt.	05/13/2003
IR-4	I	Pyriproxyfen	avocado fruits, fig, okra, sugar apple fruits	RR/OP Alt.	05/30/2003
Bayer	I	<i>Clothianidin</i>	canola, corn (seed treatments)	OP Alt.	05/30/2003
IR-4	I	Methoxyfenozide	cranberry, cucurbits, okra, pea (blackeyed, southern), turnip (greens)	RR/OP Alt.	05/30/2003
IR-4	F	Azoxystrobin	artichoke (globe), asparagus, head & stem Brassica subgroup, herbs	RR	06/18/2003
Novartis	I	Emamectin benzoate	cotton, fruiting vegetables, tobacco	OP Alt.	07/01/2003
IR-4	I	Buprofezin	bean (succ.), lychee fruits, pistachio	RR/OP Alt.	07/15/2003
BASF	F	<i>Boscalid (BAS 510)</i>	berries, bulb vegetables, canola, fruiting vegetables, grape, legume vegetables, lettuce (head, leaf), peanut, root vegetables (except sugar beet, garden beet, radish, turnip), stone fruit, strawberry, tree nuts, tuberous & corm vegetables, turf	RR	07/21/2003
Novartis	I	Thiamethoxam	ornamentals	OP Alt.	07/30/2003
IR-4	F	Trifloxystrobin	leaf petioles; root vegetables (except sugar beet) subgroup, except radish	RR	09/10/2003
IR-4	I	Thiamethoxam	beans, succulent (seed); stone fruit; sunflower (seed)	OP Alt.	09/17/2003
Syngenta	H	<i>Butafenacil</i>	cotton	OP Alt.	09/19/2003
IR-4	F	Cyprodinil	Brassica leafy vegetables, carrot, herbs, lychee fruits	RR	09/19/2003
FMC/ISK Biosciences	I	<i>Flonicamid</i>	ornamentals (greenhouse)	OP Alt.	09/26/2003
Tomen Agro	I	<i>Acequinocyl</i>	ornamentals (greenhouse)	RR	09/26/2003
IR-4	I	Bifenazate	cucurbits, fruiting vegetables, mint, pistachio, tomato (greenhouse), tree nuts	RR	09/26/2003



IR-4	F	Fenhexamid	cucumber (greenhouse), fruiting vegetables (except non-bell pepper), kiwifruit, leafy green subgroup (except spinach), stone fruit	RR	09/26/2003
Valent	I	Etoxazole	cotton, pome fruit, strawberry	RR	09/26/2003
Dow	F	<i>Quinoxifen</i>	grape, hops	RR	09/29/2003
IR-4	F	<i>Quinoxifen</i>	cherry	RR	09/29/2003
Bayer	H	Glufosinate-ammonium	rice	RR	09/30/2003

***FY2004 Completions***

Dow Agro	H	Fluroxypyr	corn (field, sweet)	RR	12/31/2003
Bayer	H	<i>Mesosulfuron-methyl</i>	wheat	RR	03/31/2004
Syngenta	I	Gamma-cyhalothrin  (Isomer of lambda-cyhalothrin)	alfalfa, Brassica head & stem subgroup, canola, corn (field, sweet), cotton, fruiting vegetables, garlic, legume vegetables (edible-podded) subgroup, lettuce (head, leaf), tree nuts, onion (dry bulb), pea and bean dry shelled (except soybean) subgroup, pea and bean succulent shelled subgroup, peanut, pome fruit, rice, sorghum, soybean, stone fruit, sugarcane, sunflower, wheat	OP Alt.	04/14/2004
Makhteshim-Agan	I	Novaluron	cotton, pome fruit	OP Alt	06/02/2004
Nichino	I	Fenpyroximate	cotton, grape, pome fruit	RR	06/10/2004
Exponent/Agro Kanesho	I	Acequinocyl	strawberry	RR	07/21/2004
Arvesta	I	Acequinocyl	almond, citrus, pome fruit, field ornamentals	RR	07/21/2004
Syngenta	I	<i>Lufenuron</i>	termite bait station	RR	08/05/2004
DuPont	I	Indoxacarb	fire ant bait	RR/OP Alt.	08/18/2004

Janssen/Bayer	F	Pyrimethanil	almond, grape, onion (dry bulb, green), pome fruit, stone fruit, strawberry, tomato, tuberous & corm vegetables	RR	08/26/2004
Mitsui	I	<i>Dinotefuran</i>	leafy vegetables	RR/OP Alt.	09/17/2004
Dow Agro	H	<i>Penoxsulam</i>	rice	RR	09/24/2004
Dow Agro	I	Tebufenozide	citrus	RR	09/24/2004
IR-4	I	Tebufenozide	grape, tuberous & corm vegetables	RR	09/24/2004
Bayer	F	Fenamidone	cucurbit vegetables, onion (dry bulb, green), potato, tomato	RR	09/29/2004
ISK Biosciences	F	<i>Cyazofamid</i>	cucurbit vegetables, potato, tomato	RR	09/30/2004
Valent	H	Bispyribac-sodium	turf	RR	09/30/2004
Bayer	I	Deltamethrin	corn (field), cucurbit vegetables, fruiting vegetables, onion (dry bulb, green), pome fruit, root & tuber vegetables, sorghum, tree nuts	OP Alt.	09/30/2004
<b><i>FY2005 Completions</i></b>					
Bayer	F	Fenamidone	ornamentals	RR	10/19/2004

1 A definition of “reduced risk” and a description of the Conventional Reduced Risk Pesticide Program can be found in PR Notice 97-3; OP alternative status is described in PR Notice 98-7.

2 Pesticide Type: F= fungicide, H= herbicide, I= insecticide, PGR= plant growth regulator, Re= repellent, Ro= rodenticide

3 Reduced Risk/OP alternative: RR= reduced risk, OP Alt.= organophosphate alternative

Note: OP alternative status was not considered by the Reduced Risk Program for conventional pesticides until FY 1999.

New active ingredient reduced risk/OP alternative actions are indicated by italics in the “Chemical” column.