



Newsletter

Extension

Fruit ICM News

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Calendar

Sept. 17-19: Farm Science Review, Molly Caren Agricultural Center, London, OH. Crops are ready to harvest and exhibitors are waiting in line for Ohio State University's 2002 Farm Science Review. The Review, an agricultural trade show, sold out of exhibitor space far in advance, with 574 commercial exhibitors featuring everything from machinery to seed to work clothes. The Review also showcases education experts and farm and conservation agencies.

Pre-Harvest Intervals (PHI) for Common Insecticides

Source: Fruit Times Volume 21, No. 14

With peach harvest already well underway and apple harvest fast approaching, it is very important to always check the legal pre-harvest intervals (PHI) before deciding which pesticide will be used for late season insect control.

Following are PHIs for commonly used insecticides:

Azinphos-methyl (Guthion): 14 day PHI on apples if applied less than 1 pound of active ingredient (AI) per acre; 21 days on apples if more than 1 pound AI per acre; 14 days on pears; 21 days on peaches. On apples no more than 4.5 pounds/acre of AI can be applied during a season.

Carbaryl (Sevin): 3 day PHI on apples; 3 days on pears; 3 days on peaches and nectarines. On apples no more than 15 pounds of AI is allowed per acre per season; on peaches and nectarines no more than 9 pounds per acre per growing season is allowed.

Esfenvalerate (Asana): 21 day PHI on apples; 28 days on pears; 14 days on stone fruit. On apples no more than 0.525 lb of AI per acre per season is allowed.

Fenpropathrin (Danitol): 14 day PHI on apples; 14 days on pears. On both crops no more than 0.8 pound of AI is allowed per acre per season.

Indoxacarb (Avaunt): 28 day PHI on apples; 28 days on pears. On both crops no more than 0.44 pound of AI is allowed per acre per season.

Methomyl (Lannate): 14 day PHI on apples; 7 days on pears; 4 days on peaches; 1 day on nectarines (PA only). On apples no more than 4.5 pounds of AI/acre is allowed, on peaches no more than 5.4 pounds of AI per acre/season; on pears no more than 1.8 pounds of AI per acre/season.

Methoxyfenozide (Intrepid): 14 day PHI on apples. No more than 1.0 pound of AI allowed per acre per season.

Phosmet (Imidan): 7 day PHI on apples; 14 days on peaches; 14 days on nectarines. On apples no more than 21 pounds of AI per acre per season is allowed, on peaches no more than 11.9 pound of AI per acre per season.

Spinosad (SpinTor): 7 day PHI on apples; 14 days on peaches; 1 day on nectarines (PA only). No more than 0.45 pound of AI is allowed per acre per season on registered fruit crops.

Tebufenozide (Confirm) 14 day PHI on apples. No more than 1.86 pounds of AI per acre per season.

Always read label before applying any pesticide.

Pest Phenology

Coming Events	Degree Day Accum. Base 50 F
Codling moth 2 nd flight subsides	1705-2635
Redbanded leafroller 3 rd flight begins	1728-2231
Lesser appleworm 2 nd flight peak	1844-2359
Apple maggot flight subsides	1904-2573
Redbanded leafroller 3 rd flight subsides	2013-2402
Oriental fruit moth 3 rd flight subsides	2018-2377
Spotted tentiform 3 rd flight subsides	2228-2472

Thanks to *Scaffolds Fruit Journal* (Art Agnello)

Ohio Drought Watch: August 24, 2002

Source: http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/regional_monitoring/palmer.gif

State District	Situation
Northwest	Near normal
North-central	Near normal
Northeast	Near normal
Central Hills	Moderate drought
Eastern Hills	Near normal
South	Near normal
Southwest	Near normal
Central	Near normal
Southeast	Near normal

The USDA Topsoil Moisture chart indicates that 86% of the state is experiencing short to very short topsoil moisture conditions as of August 25, 2002.

Source: http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/topsoil.html

Degree Day Accumulations for Ohio Sites August 28, 2002

Location	Degree Day Accumulations Base 50 F	
	Actual	Normal
Akron-Canton	2396	2246
Cincinnati	2939	2911
Cleveland	2456	2205
Columbus	2873	2517
Dayton	2778	2596
Kingsville Grape	2186	2022
Mansfield	2394	2224
Norwalk	2375	2207
Piketon	2852	2837

Toledo	2620	2195
Wooster	2494	2085
Youngstown	2271	2040

IR-4: Increasing Pest Control Options for Minor Crops and Minor Uses

Source: <http://pestdata.ncsu.edu/ir-4/>

Definitions

Minor Crops: A minor crop is defined as any crop grown on 300,000 acres or less. This includes most vegetables, fruit, nuts, herbs, spices, nursery and landscape plants and flowers. Almost all food crops are minor crops except for the large acreage crops like corn, soybeans, wheat, oats, rice and cotton. Minor crops account for over 40 billion dollars in annual sales, which is about forty percent of the total agricultural sales for the U.S.

Minor Uses: Minor uses involve limited pest control treatments to large acreage crops like corn, soybeans and small grains, due to localized, infrequent, or sporadic pest problems.

Why is There Limited Availability of Pest Control Products for Minor Crops and Minor Uses?

Development, testing, registration and personnel time are huge expenses for the registrant of a pest control product. To maximize the return on investment, most pest control products are targeted on major acreage crops where there is potential for large sales. Thus, minor crops and minor uses end up with fewer pest control options despite their high value in the marketplace.

What is the IR-4 Project?

Lack of available pest control products for minor food crops is not new. Directors of state agricultural experiment stations recognized the problem in 1963. Working with the U.S. Department of Agriculture (USDA), they organized the Interregional Research Project No. 4, commonly known as IR-4, to help minor crop producers obtain tolerances and registrations for pest control products. IR-4 is called the "minor use" program. It is a government and university sponsored program to develop the data necessary for submitting minor crop pest control options to the Environmental Protection Agency (EPA) for approval. Through the years IR-4's mission has expanded to include ornamentals and biopesticides (including microbials like bacteria and viruses, and biochemicals like pheromones and growth regulators), but the goal has remained the same. IR-4 works with farmers, agricultural scientists, commodity organizations and extension personnel to provide pest management solutions to growers of minor crops. IR-4 receives major funding from the USDA, from both the Cooperative State Research, Education and Extension Service (CSREES) and the Agricultural Research Service (ARS).

What Makes IR-4 So Successful?

IR-4's success can be measured by the large number of minor crop pest control clearances established or retained as a result of IR-4's efforts. Over 5000 food-use clearances, over 7000 ornamental clearances

and over 100 biopesticide clearances have been established since 1963. This quantity is over 40% of the total number of clearances granted by EPA. As the Food Quality Protection Act (FQPA) threatens to restrict or eliminate many long-standing pest control products, IR-4 is focusing on "reduced risk" and safer chemistry to ensure that producers of minor crops have an adequate toolbox of pest control products, both traditional pesticides and biopesticides.

Can IR-4 Help You?

IR-4 is a grass roots organization where pest management needs, in the form of clearance requests, are initiated by individual growers, grower organizations, nurserymen, agricultural scientists and extension personnel. In addition, there is a network of state and federal IR-4 liaison representatives throughout the United States and its Territories, available to help with your minor use needs. The IR-4 network also includes regional field and laboratory research centers staffed with scientists who carry out testing necessary to provide data for clearance petitions.

Dr. Doug Doohan, Dept. Of Horticulture & Crop Science, OSU, is the Ohio Coordinator for the IR-4 Program. He needs your input for the September IR-4 National Meeting as to your product needs. Priorities will be established for many new materials. Below is a list of some under consideration that would be useful to fruit growers. You may contact Dr. Doohan by phone at 330-202-3593, by fax at 330-263-3887, or e-mail at doohan.1@osu.edu.

Insecticides (TRADE)	Registrant	Chemistry	Pest Control Spectrum/Traits	Registration Status
Abamectin (AGRIMEK)	Syngenta	Macrocyclic lactone glucoside (Avermectin)	Broad-spectrum acaricide. Good IPM tool with short re-entry interval. Translaminar activity providing long residual activity.	Pending use on stone fruit group Potential use on blueberry
Acequinocly/TM 413 (KANEMITE), (PITON)	Arvesta & Agro- Kanesho	Quinoline	Broad spectrum mite control (no rust mite activity). Unique mode of action. Easy on beneficials, with long residual activity.	Candidate Reduced Risk Product. Pending on pome fruit group
Bifenthrin (BRIGADE)	FMC	Pyrethroid	Broad spectrum activity on mites.	Pending use on pears
Bistrifluron (DBI-3204)	Dongbu Hannong Chemical	Benzoylphenyl urea	Active against lepidopteran pests. It acts by inhibiting chitin synthesis. (Insect growth regulator)	Potential use on apple
Buprofezin (APPLAUD)	Nichino America	Thiadiazine - IGR, unique mode of action, inhibits chitin syntheses	Good activity for nymphal stages of leafhoppers, plant hoppers, scales, mealybugs, psylla, and	Reduced Risk and OP Alternative. Pending use on stone fruit

			whiteflies. Very safe to bees.	group, pome fruit group.
Chromafenozide (MATRIC)	Nippon Kayaku & Sankyo	Insect Growth Regulator	Specific to lepidopteran pests.	Potential use on apple
Chrysoperla carnea (KAGETARO)	Arvesta	Bio-insecticide	Controls aphids	Biopesticide. Potential use on strawberry
Clofentezine (APOLLO)	Makhteshim-Agan	Tetrazine	Acaricide for eggs of <i>Panonychus ulmi</i> and <i>Tetranychus spp.</i>	Pending use on grape
Clothianidin (PONCHO), (CLUTCH)	Takada & Bayer CropScience	Neo-nicotinoid	Contact & stomach activity. It controls plum curculio, aphids, leafhoppers, apple maggot, leafminers, leafrollers, codling moth, & pear psylla.	Candidate Reduced Risk & OP replacement. Pending use on apple & pear. Potential use on grape.
Deltamethrin (DECIS)	Bayer CropScience	Pyrethroid	Beetles, bugs, Lepidoptera	OP Alternative. Pending use on stone fruit group, pome fruit group.
Diblubenzuron (DIMILIN)	Uniroyal	Substituted benzoylurea. Insect Growth Regulator	Wide range of leaf feeding insects.	Pending on stone fruit group.
Dinotofuran (STARKE)	Mitsui & Valent	Nitroguanidine. It is systemic by root uptake & translaminar via foliar applications. Different mode of action than nicotinoide.	Controls aphid, flea beetle	Reduced Risk Product & OP Alternative. Pending use on grape.
Emamectin Benzoate (PROCLAIM), (STRATEGY)	Syngenta	Synthetic Avermectin analogue	Effective on larval Lepidoptera.	OP Alternative. Potential use on peach, blueberry, grape, pome fruit.
Etoxazole (SECURE), (ZOOM)	Valent (Yaashima)	Oxazoline	Insecticide/acaricide for control of <i>Panonychus spp</i> and <i>Tetranychus spp</i> , including	Reduced Risk Product. Pending use on strawberry,

			hexythiazox resistant mite strains. Inhibition of molting, effective on eggs, larvae, & nymphs.	apple, pear.
Fenpyroximate (FUJIMITE)	Nichino America	Phenoxy pyrazole	Controls mites, including two-spotted, European, red, and citrus rust mite, & psylla.	Reduced Risk Product. Pending use on apple, pear, grape. Potential use on strawberry, peach, cherry.
Fipronil (REGENT), (ICON)	Bayer CropScience	Phenylpyrazole - A broad spectrum neurotoxin, unique mode of action.	Controls Coleoptera, Lepidoptera, Diptera, Homoptera, Isoptera, & Thysanoptera. Systemic activity, with long residual.	Potential use on apple, cherry, & blueberry.
Fonicamid (FI785/IKI220)	FMC & ISK	Cyanomethany trifluoromethyl nicotinamide. Different mode of action than other commercial available products.	Effective against aphids, thrips, leafhoppers, plant bug, & other sucking pests. Provides rapid anti-feeding activity. Non-toxic to beneficials.	Candidate Reduced Risk & OP Replacement Product. Pending use on pome fruit group, stone fruit group.
Fluacrypyrin (TITARON)	Nipon Soda	Methoxyacrylate	Acaricide	Potential use on pome fruit group.
Imidacloprid (ADMIRE), (PROVADO)	Bayer CropScience	Chloronicotinyl	Primarily effective against sucking insects (aphid, whitefly, scale, etc.) & as well as beetles & grubs. Controls numerous pests that are resistant to insecticides.	OP Alternative. Pending use on peach & other members of the stone fruit group, blueberry, strawberry, & caneberry.
Indoxacarb (AVAUNT)	DuPont	Oxadiazine - Unique mode of action that inhibits sodium ion entry into nerve cells.	Controls most major Lepidopteran pest species. Possibly controls plant bugs. Soft on beneficials so it is a good fit with IPM.	Reduced Risk Product. Pending use on grape, sour cherry. Potential use on blueberry, caneberry,

				stone fruit group.
Jojoba Oil (DETUR/E-RASE)	IJO Products	Natural Product	Controls whitefly & powdery mildew	Biopesticide. Registered on grape.
Metarhizium anisopliae (TAERAIN)	Taensa	Metarhizium anisopliae	Controls whitefly, thrips, & mites.	Biopesticide. Potential use on fruit trees.
Methoxyfenozide (INTREPID)	DowAgroSciences	Diacylhydrazine - (Molt accelerating compound)	Similar to tebufenozide in that it only controls Lepidoptera larvae. Excellent fit with IPM programs.	Reduced Risk Product & OP Alternative. Potential use on blueberry
Milbemectin (KOROMITE), (MESA)	Sankyo & Gowan	Macrocyclic lactone	Excellent miticide, also controls aphids, leafminers, thrips, leafhoppers	Reduced Risk Product & OP Alternative. Pending use on pome fruit group, strawberry, stone fruit group.
Novaluron (RIMON 10 EC), Rimon 7.5% WDG)	Makhteshim-Agan & Uniroyal	Insect Growth Regulator (chitin synthesis inhibitor)	Effective against Lepidoptera and some mites. Strictly a contact material, no systemic activity.	Reduced Risk Product. Pending on pome fruit group. Potential use on stone fruit group, caneberry.
Pyridaben (PYRAMITE)	BASF	Pyridazinone	Activity on mite, aphids. A new class of insecticide offering long-term residual control. Good for IPM/resistance management.	Pending use on stone fruit group, strawberry.
Pyriproxyfen (ESTEEM)	Valent	Pyridine (IGR-selective juvenile hormone analog)	Controls scales. It is a juvenile hormone mimic that is slow acting with a long residual, safe to beneficial insects, non-toxic to man & wildlife. Effective on eggs & immature stages, not effective on adults. Excellent for IPM	Reduced Risk Product & OP Alternative. Pending use on stone fruit, blueberry & bushberry subgroup, grape, strawberry.

			programs.	
Spinosad (SPINTOR)	Dow AgroScience	Macrocyclic lactone	Controls Coleoptera, Diptera, Hymenoptera, Isoptera, Lepidoptera, Thysanoptera, Siphonoptera, & mites. Has low environmental impact, good residual activity, & is safe to many beneficial insects making it ideal for use in IPM programs.	Reduced Risk Product & OP Alternative. Pending on caneberry, grape.
Spridiclofen (BAJ 2740), (ENVIDOR)	Bayer CropScience	Tetronic acid	Acaricide that is very active on eggs, larvae, & quiescent stage of <i>Panonychus</i> , <i>Phyllocoptruta</i> , <i>Brevipalpus</i> , <i>Tetranychus</i> species.	Potential use on pome fruit, stone fruit, grape.

Fruit Observations & Trap Reports

<p>Insect Key</p> <p>AM: apple maggot CM: codling moth ESBM: eye-spotted budmoth LAW: lesser apple worm LPTB: lesser peachtree borer OBLR: obliquebanded leafroller OFM: oriental fruit moth PTB: peachtree borer RBLR: redbanded leafroller SJS: San Jose scale STLM: spotted tentiform leafminer TABM: tufted apple budmoth VLR: variegated leafroller</p>

Site: Waterman Lab, Columbus
Dr. Celeste Welty, OSU Extension Entomologist

Apple: 8/21 to 8/28/02

RBLR: 36 (down from 37)
STLM: 115 (up from 72)
CM (mean of 3 traps): 12.0 (up from 9.3)
TABM: 11 (unchanged)
SJS: 9 (up from 5)

VLR: 7 (down from 8)
OBLR: 4 (up from 0)
AM (sum of 3 traps): 11 (down from 13)
LAW (mean of 3 traps): 14.7

Peach: 8/21 to 8/28/02

OFM: 5 (down from 13)
LPTB: 9 (up from 1)
PTB: 8 (unchanged)

Site: Wayne County Source: Ron Becker, IPM Program Assistant

Apple: 8/21 to 8/28/02

STLM: 218 (up from 217)
CM (mean of 3 traps): 7.8 (down from 9.9)
RBLR: 16.8 (up from 11.7)
AM (sum of 3 traps): 22.5 (up from 18.1)

Peach: 8/21 to 8/28/02

OFM: 0.5 (up from 0)
LPTB: 0.5 (down from 0.8)
PTB: 1 (up from 0.8)

Notes: Individual orchards are varying widely in codling moth and apple maggot counts. Where one orchard had only one AM adult in nine traps (southern part of the county) one in the northern part of the county had 95 AM adults in nine traps. All blocks are having higher numbers of codling moths for a longer period of time than they have had in past years.

Site: East District: Erie & Lorain Counties

Source: Jim Mutchler, IPM Scout

Apple: 8/20 to 8/27/02

CM (mean of 3 traps): 5.9 (down from 6.7)
STLM: 835 (down from 840)
SJS: 40 (down from 76)
AM (sum of 3 traps): 7.8 (down from 10.2)
OFM: 25.3 (up from 0.5)
RBLR: 26.8 (down from 34.6)
OBLR: 3.5 (down from 4.0)
LAW (mean of 3 traps): 19.7 (first report)
ERM (infested leaves per 25 leaf sample): 2.3 (up from 1.1)

Peach: 8/20 to 8/27/02

OFM: 3.7 (up from 1.3)
RBLR: 22.0 (up from 17.7)
LPTB: 16.7 (up from 10.0)
PTB: 4.3 (down from 5.7)

Beneficials present - *Stethorus punctum*, native lady beetles, lacewings, multi-colored Asian lady beetles

Site: West District: Huron, Ottawa, Sandusky Co.

Source: Gene Horner, IPM Scout

Apple: 8/20 to 8/27/02

- CM (mean of 3 traps): 3.0 (down from 4.6)
- STLM: 24.0 (down from 36.0)
- SJS: 1.8 (up from 0.6)
- AM (sum of 3 traps): 8.0 (up from 6.8)
- OFM: 2.8 (up from 2.0)
- RBLR: 16.4 (down from 32.8)
- OBLR: 1.8 (down from 3.0)
- LAW (mean of 3 traps): 2.3 (first report)
- ERM (infested leaves per 25 leaf sample): 1.6 (up from 0.6)

Peach: 8/20 to 8/27/02

- OFM: 11.8 (down from 23.6)
- RBLR: 40.8 (down from 43.8)
- LPTB: 4.8 (down from 5.5)
- PTB: 3.4 (down from 7.8)

Beneficials present - lacewings, banded thrips

Terminal Market Wholesale Fruit Prices August 28, 2001

Source: Chicago http://www.ams.usda.gov/mnreports/HX_FV010.txt

Detroit http://www.ams.usda.gov/mnreports/DU_FV010.txt

Pittsburgh http://www.ams.usda.gov/mnreports/PS_FV010.txt

	Chicago	Detroit	Pittsburgh
Apples , cartons, 12 3-lb filmbags, U.S. Fancy Earligold		MI 2 ½" min 14.00-14.50	
U.S. Fancy Paula Red		MI 2 ½" min 12.00	
U.S. ExFancy Jersey Mac			NY 2 ½" up 18.00
U.S. Fancy Fuji		MI 2 ½" min 13.00	
Apples , celpk, U.S. ExFcy Jersey Mac			NY 100s 21.00
Apples , bu cartons, loose U.S. Fancy Red Free		MI 2 ¾" up 14.00	
Blueberries , 12 1-pt cups	MI 14.00-16.00	MI 15.50-16.00	
Peaches , 25 lb cartons, loose U.S. ExOne, various yellow flesh varieties	NC 2 ¼" min 11.00 2 ¾" up 14 - 15.00		

	NJ 2 ½" min 12-13.00		
Peaches , ½ bu ctns, U.S. One, Crest Haven		MI 2 ¾" up 14.00	
Peaches , ½ bu ctns, U.S. One, various yellow flesh varieties		MI 2 ¾" up 16-18.00 2 ¾" min 20.00	
Peaches , ½ bu ctns, U.S. Fancy various white flesh		PA 2 ½" up 15.00-15.50	
Peaches , ½ bu ctns, U.S. ExOne various yellow flesh varieties		NJ 2 ¾" up 19.00 SC 2 ¾" to 3" 15.50-16.00 2 ½" up 12.50-13.50	NJ 2 ½" up 14.50 WV 3" up 16.50 2 ½" up 12.50

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Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

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