



Newsletter

Extension

Fruit ICM News

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Calendar

August 4-5: HACCP (Hazard Analysis Critical Control Point) Workshop for Apple Cider & Juice: will take place at the Berks County Ag Center in Leesport, PA. For more information please contact Dr. Luke LaBorde, Penn State University, at 814-863-2298 or e-mail at lf15@psu.edu.

Interim Reregistration Eligibility Decision for Carbaryl

Source: http://www.epa.gov/oppsrrd1/REDS/carbaryl_ired.pdf

Carbaryl is a carbamate insecticide used on a variety of crops. It was first registered in 1959 for use on cotton. Carbaryl is currently registered for use on over 400 sites, and there are more than 140 tolerances for carbaryl in the Code of Federal Regulations. At present, carbaryl is registered for domestic outdoor uses on lawns and gardens, and indoors in kennels and on pet sleeping quarters. It is also currently registered for direct application to cats and dogs (collar, powder, and dip) to control fleas and ticks. Based on available pesticide usage information from 1992 through 2001, approximately 1.9 million pounds of carbaryl active ingredient (lbs ai) are used in agriculture, and approximately 1.3 million acres are treated. In 1998, a total of 3.9 million lbs ai was sold, with about half of this used in nonagricultural settings. The most recent available data shows a decline in agricultural usage; only 1 to 1.5 million lbs ai were used in agriculture in 2001.

Overall Risk Summary: The Agency's human health risk assessment for carbaryl indicates some risk concerns. Both acute and chronic risks from food are below the Agency's level of concern. Drinking water risk estimates based on screening level models, from both ground and surface water exposures, suggest concern for potential surface water exposure. Dietary exposure from ground water sources of drinking water are not of concern. There are also risk concerns for occupational handlers who mix, load, and apply carbaryl; for homeowner users; and for occupational workers who are exposed to carbaryl residues after it is applied to agricultural crops.

Summary of Mitigation Measures: EPA believes that carbaryl is eligible for reregistration, provided the following actions are implemented:

Dietary Risk:

- No label changes are necessary; however, certain confirmatory data are required.

Residential Risk:

- For the garden/ornamental dust on vegetables/ornamentals scenario, all end-use products are to be packaged in ready-to-use (RTU) shaker can containers, with no more than 0.5 lb ai/container.
- For the lawn care hose-end sprayer for liquid lawn broadcast scenario, all liquid formulation end-use products for lawncare are to be packaged in pint-size RTU hose-end sprayers. Because of postapplication risk concerns, the technical registrants, Bayer CropScience and Burlington Scientific, have sent EPA amended labels with this use deleted from their technical products. The technical registrants have also submitted voluntary cancellation letters for this use, effective July 1, 2004. Use of liquid formulation products for turf/lawn applications (except for applications to sod farms, golf courses, commercial landscape areas, and cemeteries) is limited to spot treatments only (less than 1000 square feet), with the use of an RTU sprayer. Voluntary pharmacokinetics data are being generated to refine postapplication risks from broadcast applications to turf lawns with liquid formulations.
- The following uses are to be cancelled: all pet uses (dusts and liquids, except for collars); granular and baits lawn care; belly grinder for spot treatment; granular and baits by hand for ornamentals and gardens; and aerosol for various uses. Also, confirmatory data on pet collars are required.
- Confirmatory transferable turf residue (TTR) data on granular formulations applied to lawns are required.

Occupational Risk:

Handler Risks

- The following uses and application methods are to be cancelled: wheat use; broadcast applications using liquid formulations on residential lawns and turf, except for golf courses; pet uses (with the exception for pet collars); applications with hand, spoon, and bellygrinder.
- The following maximum application rates are to be reduced: mosquito control - from 1.0 to 0.2 lb ai/A; citrus (entire US except California) - from 7.5 to 5 lb ai/A; California citrus - from 16 to 12 lb ai/A; Florida Special Local Need (FIFRA Sec. 24c) for Diaprepes root weevil control on citrus use rate of 10 to 8 lb ai/A; and asparagus - preharvest rate from 2 to 1 lb ai/A; and postharvest rate from 4 to 2 lb ai/A.
- Aerial applications are prohibited for the following: wettable powder formulations; and granular and bait formulations applied to corn (field, pop, and sweet), grain sorghum, alfalfa, rice, and sunflowers.
- PPE and engineering controls for aerial/chemigation applications: closed systems designed to provide dry disconnect/dry break links with the product container for protection of mixers and loaders. Only formulations compatible with these closed systems may be used (e.g., emulsifiable concentrates and soluble concentrates); enclosed cockpits for aerial applicators; and mechanical flaggers or global positioning system (GPS) equipment that negates the need for human flaggers.
- PPE and engineering controls for ground airblast applications (applicators): enclosed cabs for applications to olives; enclosed cabs for applications to citrus trees in California; enclosed cabs for applications to citrus trees in Florida under Section 24(c) Special Local Need at 8 lb ai/A; and for all other ground airblast applications the following PPE must be worn: coveralls over long-sleeved shirt and long pants, chemical resistant gloves, protection factor 10 respirator (half-mask, air

purifying), WPS head protection, shoes and socks.

- PPE and engineering controls for granular and bait formulation (loaders and/or applicators): long-sleeved shirts and long pants, chemical resistant gloves, dust/mist respirator, shoes and socks, unless specified otherwise; and Ready-to-Disperse containers are stipulated for Ornamental and Garden uses to administer product without direct contact of the formulation to the applicator.
- PPE for liquid formulation (e.g., emulsifiable concentrates, soluble concentrates) (mixer/loaders and/or applicators): long-sleeved shirt and long pants, chemical resistant gloves, dust/mist respirator, shoes and socks, unless specified otherwise.
- PPE and packaging for wettable powder formulation: water soluble packaging (an engineering control) is stipulated for all wettable powder formulations; long-sleeved shirts and long pants, chemical resistant gloves, shoes and socks.

Postapplication Risks

- For brassica crops: use is restricted to applications only within 30 days of crop emergence/transplanting; REI = 5 days
- For bunch/bundle crops: REI = 8 days
- For cucurbit vegetables: REI = 3 days
- For roses: REI = 7 days
- For stone fruits: for a 3 lb ai/A rate, the REI = 12 hours for all activities; however, workers may not enter treated areas to hand thin until 7 days after application. For 4 lb ai/A rate in California only, the REI = 3 days for all activities; however, workers may not enter treated areas to hand thin until 7 days after application.
- For citrus crops: the maximum application rate is reduced to 5 lb ai/A rate with an REI = 24 hours; for FL Section 24(c) registration, the maximum rate is reduced to 8 lb ai/A with an REI = 5 days; and maximum application rate for California only is reduced to 12 lb ai/A with an REI = 5 days.
- For eggplant, bell/chili peppers, and tomatoes: REI = 2 days
- For leafy vegetables: use is restricted for applications only within 30 days of crop emergence/transplanting.
- For strawberries: REI = 4 days
- For stringbeans, dry beans/peas, chick peas and green peas: REI = 5 days
- For alfalfa, forage, flax, peanuts, rice, and sugarbeets: REI = 2 days
- For almonds, hazelnuts (filberts), macadamia, pistachios, and walnuts: REI = 10 days
- For olives: REI = 14 days
- For table beets and turnips when harvested for greens: use is restricted for applications only within 30 days of crop emergence/transplanting
- For table beets, carrots, potatoes, sweet potato, turnips when harvested for roots: REI = 4 days
- For asparagus: for pre-harvest applications, the maximum application rate is reduced to 1 lb ai/A with a REI = 24 hours; and for post-harvest applications, the maximum application rate is reduced to 2 lb ai/A with an REI = 24 hours
- For corn and sorghum: REI = 4 days
- For seed corn: REI = 4 days for all activities; however, workers may not enter treated areas to hand detassel until 30 days after application
- For sunflowers: REI = 24 hours
- For sweet corn: prohibition of hand harvesting and the REI = 3 days
- For sod farms: REI = 12 hours for all activities; however, workers may not reenter treated areas to harvest sod until 9 days after application
- For blackberries, raspberries, highbush blueberries and pole beans: REI = 2 days
- For grapes: east of the Rocky Mtns the REI = 48 hours; west of the Rocky Mtns the REI = 7 days

Ecological Risk: To address ecological risks, the following mitigation is required:

- To address toxicity concerns for honey bees, a bee protection statement must be added to the Environmental Hazards section of carbaryl product labels, as follows: "This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area."
- Several mitigation measures required to address residential and occupational risks, described above, will also address risks to terrestrial and aquatic organisms, including:

Reducing maximum application rates for mosquito control, citrus, and asparagus;

Canceling use on wheat;

Canceling liquid broadcast applications to home lawns; and

Prohibiting certain aerial applications.

Specific comments about tree fruit:

Apples: Carbaryl use on pome fruit is unique when compared to its other uses as an insecticide; its use on pome fruit is almost entirely as a chemical fruit thinning agent and rarely as an insecticide. Under most conditions, apple trees will set more fruit than needed for a full crop. Most apple cultivars will retain this heavy set of fruit throughout the growing season resulting in small, poorly colored, low quality fruit. Fruit thinning is the removal of a portion of the crop before it matures on the tree to increase the marketability of the remaining fruit and to reduce the biennial bearing tendency of the tree. When carbaryl is applied to developing fruitlets (usually in the late Spring) it causes a percentage of them to be aborted, resulting in the desired fruit thinning affect. Hand thinning is the activity that has the most worker exposure under current Agency policy. Since carbaryl is applied as a chemical thinning agent, workers conducting hand thinning activities would not enter treated areas until at least 7 days following applications in order to take advantage of the chemical thinning treatment. The Margin of Exposure (MOE) at day 7 is 97 for hand thinning, close to the target MOE, and not of concern to the Agency. For this reason, the REI remains unchanged at 12 hours.

Stone Fruit: Carbaryl is generally not used during the period when hand thinning activities occur on these crops. Carbaryl is predominantly used late season near harvest time to control fruit damaging pests which can significantly impact fruit quality and marketability. Use rates are higher (up to 4 lb ai/A) in California because of more difficult to control pests. Carbaryl can also be applied at up to 5 lb ai/A as a dormant application throughout the U.S.; pruning is generally the only worker reentry activity occurring during this timing; however, since no foliage is present exposures would be expected to be minimal. The preharvest interval following applications of carbaryl is 3 days except in CA, where it is 1 day.

Changes to Use Pattern:

3 lb ai/A (rate):

REI = 12 hours for all activities; however, workers may not enter treated areas to hand thin until 7 days after application.

Degree Day Accumulations for Ohio Sites July 9, 2003

Ohio Location	Degree Day Accumulations			
	Base 45° F		Base 50° F	
	Actual	Normal	Actual	Normal
Akron/Canton	1599	1621	1105	1169
Cincinnati	1970	2152	1437	1611
Cleveland	1616	1571	1144	1133
Columbus	1915	1837	1390	1351
Dayton	1820	1888	1306	1400
Kingsville	1359	1445	921	1035
Mansfield	1514	1468	1027	1045
Norwalk	1555	1570	1083	1138
Piketon	2050	2124	1484	1576
Toledo	1547	1561	1070	1133
Wooster	1704	1521	1199	1121
Youngstown	1427	1478	952	1048

Pest Phenology

Coming Event	Degree Day Accum. Base 50° F
Lesser appleworm 1 st flight subsides	449 - 999
Apple maggot 1 st catch	629 - 1297
Redbanded leafroller 2 nd flight begins	656 - 1381
Codling moth 1 st flight subsides	673 - 1412
Spotted tentiform leafminer 2 nd flight peak	701 - 1355
Oriental fruit moth 2 nd flight begins	772 - 1215
Codling moth 2 nd flight begins	864 - 1549
San Jose scale 2 nd flight begins	893 - 1407

Fruit Observations & Trap Reports

Insect Key

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

Due to the early publication date last week, we included only the East and West District trap reports. The Waterman Lab and Medina, Wayne, and Holmes Counties' figures for two weeks are included in this issue.

Site: Waterman Lab, Columbus

Dr. Celeste Welty, OSU Extension Entomologist

Apple: 6/25 to 7/2/03

AM: 0.0 (same as last week)
CM: 6.7 (down from 17.0)
ESBM: 0 (same as last week)
LAW: 16 (up from 8)
OBLR: 0 (down from 1)
RBLR: 26 (up from 24)
SJS: 0 (same as last week)
STLM: 79 (down from 166)
TABM: 1 (up from 0)
VLR: 0 (same as last week)

Peach: 6/25 to 7/2/03

OFM: 0 (same as last week)
LPTB: 2 (down from 3)
PTB: 9 (up from 6)

Apple: 7/2 to 7/9/03

AM: 0.0 (same as last week)
CM: 2.0 (down from 6.7)
ESBM: 0 (same as last week)
LAW: 10 (down from 16)
OBLR: 0 (down from 1)
RBLR: 8 (down from 26)
SJS: 16 (up from 0)
STLM: 143 (up from 79)
TABM: 0 (down from 1)
VLR: 0 (same as last week)

Peach: 7/2 to 7/9/03

OFM: 0 (same as last week)
LPTB: 2 (same as last week)
PTB: 6 (down from 9)

Site: Medina, Wayne, & Holmes Counties

Ron Becker, IPM Program Assistant

Apple: 6/25 to 7/02/03

STLM: Holmes: 1683 (down from 1790)

Medina: 315 (down from 1365)

Wayne: 0 (down from 240)

RBLR: Holmes: 55 (down from 16.7)

Medina: 14.5 (up from 6.5)

Wayne: 18 (up from 10.7)

CM: Holmes: 5.1 (up from 2.6)

Medina: 1.1 (up from 0.6)

Wayne: 22.8 (down from 27)

Peach: 6/25 to 7/02/03

LPTB: Holmes: 6 (down from 15)

Medina: 0 (same as last week)

Wayne: 8 (up from 0)

OFM: Holmes: 0 (down from 15)

Medina: 0 (same as last week)

Wayne: 1 (up from 0)

PTB: Holmes: 0 (same as last week)

Medina: 0 (same as last week)

Wayne: 0 (same as last week)

Apple: 7/03 to 7/09/03

STLM: Holmes: 1656 (down from 1683)
Medina: 455 (up from 315)
Wayne: 583 (up from 0)

RBLR: Holmes: 22.7 (down from 55)
Medina: 6.8 (down from 14.5)
Wayne: 24.3 (up from 18)

CM: Holmes: 3.1 (down from 5.1)
Medina: 1.0 (down from 1.1)
Wayne: 31.1 (up from 22.8)

Peach: 7/03 to 7/09/03

LPTB: Holmes: 9 (up from 6)
Medina: 0 (same as last week)
Wayne: 3 (down from 8)

OFM: Holmes: 0 (same as last week)
Medina: 0 (same as last week)
Wayne: 0 (down from 1)

PTB: Holmes: 1 (up from 0)
Medina: 0 (same as last week)
Wayne: 2 (up from 0)

Site: East District: Erie & Lorain Counties
Jim Mutchler, IPM Scout

Apple: 7/1 to 7/8/03
CM: 5.3 (down from 6.7)
LAW: 25.8 (down from 32.7)
OFM: 3.1 (up from 1.8)
RBLR: 52.3 (up from 27.3)
SJS: 28 (up from 0)
STLM: 580 (down from 713)

Other apple pests: green apple aphid, rosy apple aphid, wooly apple aphid, and white apple

leafhopper.

Beneficials: green lacewing, orange maggot, brown lacewing, and lady beetle

Peach: 7/1 to 7/8/03

LPTB: 6.3 (down from 13.3)

OFM: 2.0 (up from 0.7)

PTB: 5.0 (up from 3.7)

RBLR: 37.3 (up from 9.3)

Other peach pests: lilac borer

Site: West District: Huron, Ottawa, Richland, & Sandusky Counties - Gene Horner, IPM Scout

Apple: 7/1 to 7/8/03

CM: 0.9 (down from 3.4)

LAW: 1.1 (up from 2.8)

OFM: 0.4 (down from 1.4)

RBLR: 52.6 (down from 55.9)

SJS: 0.0 (same as last week)

STLM: 244 (down from 361)

Other apple pests: green apple aphid, apple rust mite, white apple leafhopper, potato leafhopper

Peach: 7/1 to 7/8/03

LPTB: 6.6 (up from 5.7)

OFM: 0.3 (down from 0.8)

PTB: 1.3 (up from 0.9)

RBLR: 32.8 (up from 28.2)

Other peach pests: lilac borer, two-spotted spider mite

Beneficials: lacewing

Obituary for Ralph Wallace McDowell

Source: Elyria Chronicle-Telegram

Ralph Wallace McDowell, 81, of Henrietta Township, a decorated World War II Army veteran, died on June 30 following complications from Parkinson's Disease. Born in Henrietta Township, he lived in the home he was born in his entire life. He was a 1940 graduate of Henrietta High School, where he played basketball.

Mr. McDowell was a third-generation fruit orchard farmer on his family farm, McDowell Orchards in Henrietta Township and a member of Ohio Fruit Growers Society.

Survivors include his wife of 35 years, Agnes Margaret (nee Willson) and a daughter, Lois Marie McDowell of Henrietta Township.

Memorials may be made to Henrietta United Methodist Church, 52148 State Route 113, Amherst, OH 44001 or to Michael J. Fox Foundation for Parkinson's Research, Grand Central Station, P.O. Box 4777, New York NY 10163, or visit <http://www.michaeljfox.org>.

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