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**Crop Conditions:** This past winter has been one of the warmest winters on record. However cold temperatures in early March have been a concern to most fruit growers. Minimum temperatures have not gone below zero anywhere in the state until recently. The extent of damage from these latest cold temperatures depends on the stage of development of the specific crop. It appears that apples, blueberries, and grapes are still fairly dormant across the state and were not damaged. Peaches and brambles will be the biggest concerns. Brambles, in particular, have been showing signs of bud development over the past few weeks with the warm temperatures. The recent cold snaps have likely caused considerable damage that will show up later this summer. Peaches were damaged in southern and northern areas, but there is likely still enough buds for a good crop.

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**E-Mail Subscriptions Up:** Over the past few years more and more Facts for Fancy Fruit subscribers have chosen the electronic version of the newsletter. Our hard copy mailing list has fallen steadily and is now less than 100. At the same time our email list has grown to well over 700 subscribers. If you have e-mail and would like a copy sent electronically, send us your e-mail address and we

will include you on the list. Or send a message to [fff@lists.hort.purdue.edu](mailto:fff@lists.hort.purdue.edu) with the subject or body "subscribe" (or "unsubscribe") to be automatically included. Another way is to visit our website at <http://www.hort.purdue.edu/fff/fff.html> and subscribe through the Mailing List link. Subscription to the email version is free.

**Winter Chilling:** With the mild winter, many are wondering if we will have achieved sufficient winter chilling to break dormancy. It seems strange, but this year we have had much more chilling than normal. Calculation of chilling hours is a tricky business and several mathematical models have been proposed to describe the accumulation of chilling by fruit trees. In a nutshell though, not all cold temperatures count towards the chilling requirement, and not all contribute equally. Some basic rules are:

- temperatures below 32F don't count towards the accumulation of chilling hours
- the best temperatures for chilling are

around 40-45F.

- temperatures 55-60F don't count
- above 60F chilling hours are lost

This winter we have had many days when the temperature has been 35-45F, so on these days plants will have accumulated chilling hours. In a more typical winter for us, we usually have more days below freezing when chilling is not accumulated. So the bottom line for this year is, lots of chilling hours, the plants are prepped and ready to go. (Hirst)

**2002 Peach Crop:** As usual, the peach crop across the state is patchy. For most areas in the state, the mild winter has been kind but some damage has occurred in the last couple of weeks. Temperatures in the cold snap 2 weeks ago ranged from close to 0F in southern areas to -7F in more northern areas of the state. Southern and central areas so far are looking ok, with 30-70% live buds, but more northern areas are looking somewhat tenuous. As we all know there's not too much we can do about it so I guess we'll just wait and see what we get. (Hirst)

**EPA Drift Proposal:** The EPA has proposed new labeling requirements for all pesticides to reduce problems associated with drift. Implementation of the proposed guidelines will certainly reduce drift, however, they will also have a direct effect on how pesticide applications are made to fruit and vegetable crops. This is an issue important to all Indiana fruit growers. We suggest you read more on this topic submit comments to EPA. The deadline for comments has been extended to March 31, 2002.

The proposal is available online at: [http://www.epa.gov/opppmsd1/PR\\_Notices/prdraft-spraydrift801.htm](http://www.epa.gov/opppmsd1/PR_Notices/prdraft-spraydrift801.htm) and the Federal Register information about the comment period is available at: <http://www.epa.gov/fedrgstr/EPA-PEST/2002/January/Day-23/p1758.htm>

Following are bits of the proposal:

Products Applied as Sprays—All Affected Products, Except Home and Garden Products: “Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland

areas, woodlands, pastures, rangelands, or animals.

For orchard/vineyard airblast applications, do not direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3 -10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

Other labeling statements may be appropriate for certain products depending on the potential risks from the labeled uses. EPA will consider the available information on a pesticide's incident history, current uses, and estimated exposures and risks, including estimates of deposition from available models, to determine the need for additional drift mitigation measures. Examples of such measures include limiting application height, spray quality (droplet size), use of no-spray zones, and prohibition of an application method.

EPA will begin immediately evaluating the use of these label statements in reviewing applications for registration, amendments, and reregistration of existing products subject to this Notice. The Agency's goal is to have the process of approving drift statements substantially complete by October 1, 2003.

**DATES:** Comments, identified by the docket control number OPP-00730B, must be received on or before March 31, 2002.

**ADDRESSES:** Comments may be submitted by mail, electronically, or in person. To ensure proper receipt by EPA, it is imperative that you identify docket control number OPP-00730B in the subject line on the first page of your response.

1. By mail. Submit your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

2. In person or by courier. Deliver your comments to: Public Information and Records Integrity Branch (PIRIB), Information Resources and Services Division (7502C), Office of Pesticide Programs (OPP), Environmental Protection

Agency, Rm. 119, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA. The PIRIB is open from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The PIRIB telephone number is (703) 305-5805.

3. Electronically. You may submit your comments electronically by e-mail to: “opp-docket@epa.gov,” or you can submit a computer disk as described above. Do not submit any information electronically that you consider to be CBI. Avoid the use of special characters and any form of encryption. Electronic submissions will be accepted in Wordperfect 6.1/8.0 or ASCII file format. All comments in electronic form must be identified by docket control number OPP-00730. Electronic comments may also be filed online at many Federal Depository Libraries.

FOR FURTHER INFORMATION CONTACT:  
Jay Ellenberger, Field and External Affairs Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (703) 305-7099, fax number: (703) 305-6244; and e-mail address: ellenberger.jay@epa.gov.

***New Fungicides are Labeled for Use on Strawberry:*** Mike Ellis, Ohio State University. Switch 62.5% WG fungicide is a product of Syngenta Company and has full label registration for use on strawberry in Ohio. Switch is a package mix (combination) of two fungicides (Cyprodinil plus fludioxonil). It is registered for control of Botrytis fruit rot and has provided excellent disease control in Ohio fungicide evaluations. Research in Florida indicates that it provides some level of control for Anthracnose fruit rot. To use Switch most effectively for control of Botrytis, it should be applied at the rate of 11 to 14 oz per acre on a 7 to 10-day interval through bloom. It is important to maintain good coverage throughout bloom. Switch has a preharvest interval of 0 days. Do not apply more than 56 ounces of product per acre per year (4 applications at the maximum rate) and do not plant rotational crops other than onion or strawberry for 12 months following the last application of Switch.

Quadris 2.08F fungicide is a product of Zeneca Corporation and has received full label registration for use on strawberry in Ohio. The active ingredient in Quadris is azoxystrobin and is

the same product as Abound fungicide, which has been registered for use on grapes for several years. Quadris is registered for control of Anthracnose and powdery mildew on strawberry. Although Botrytis fruit rot is not on the label, research in New York has shown that Abound (azoxystrobin) provides good to fair control of Botrytis. In addition, azoxystrobin has good activity against Phytophthora fungi on several other crops. Therefore, it may provide some level of leather rot (a fruit rot caused by Phytophthora cactorum) control when applied for control of Anthracnose fruit rot on strawberry. To repeat this point, although Quadris is only registered for control of Anthracnose and powdery mildew, it may provide some level of control against Botrytis fruit rot (gray mold) and leather rot as well.

Quadris is the first fungicide that I am aware of that is registered for control of Anthracnose. This is very important because the incidence of Anthracnose fruit rot appears to be increasing in several Ohio strawberry plantings, and it can be a devastating disease.

Quadris is registered for use at the rate of 6.2 to 15.4 fl. oz. per acre and may be applied the day of harvest (0-day PHI). For fungicide resistance management, do not apply more than two sequential sprays of Quadris before alternating with a fungicide that has a different mode of action. Do not make more than four (4) applications per acre per crop year. Do not apply more than 1.92 quarts per acre per season. This is four applications at the maximum rate.

Special Note: The active ingredient in Quadris (azoxystrobin) is very phytotoxic to McIntosh apples and other varieties related to McIntosh. We recommend that Quadris not be used in the same sprayer or equipment that will be used on apples. It is also important to prevent any drift from strawberry to apple. Apple varieties related to McIntosh are: Bancroft, Bromley, Cortland, Cox, Discover, Empire, Gala, Janamac, Kent, McIntosh, Spartan and Summared. (Source: *Ohio Fruit ICM News, Volume 6, Issue 2, January 31, 2002*)

***New Fungicide Labeled for Use on Blueberry:*** Mike Ellis, Ohio State University. Abound 2.08F fungicide is now registered for use on blueberry, currant, elderberry, gooseberry, huckleberry, lingonberry and juneberry. Abound is the same fungicide as Quadris (azoxystrobin). At present, it

is not registered for use on brambles (raspberry and blackberry). It is registered on the above mentioned crops for control of mummy berry, Alternaria fruit rot, Phomopsis stem canker, and Anthracnose fruit rot. It is registered at the rate of 6.2 to 15.4 fl oz per acre. Do not apply more than two sequential sprays of Abound before alternating with a fungicide that has a different mode of action. Do not make more than three (3) applications of Abound per acre per crop year. Do not apply more than 1.44 quarts per acre per season. This is three applications at the highest label rate. Abound may be applied the day of harvest (0 day PHI). (Source: *Ohio Fruit ICM News, Volume 6, Issue 2, January 31, 2002*)

**Loss of Benlate 50WP Fungicide:** *Mike Ellis, Ohio State University.* Dupont has requested a voluntary registration cancellation for Benlate 50WP fungicide on all crops. The sale and distribution of Benlate will not be legal after December 31, 2002. Growers may use labeled product after this date; however, they will not be able to purchase additional material.

Topsin-M WSB fungicide is very similar in activity to Benlate and is an excellent alternative to Benlate on labeled crops. Topsin-M (Thiophomate-Methyl) is labeled on apples, pears, stone fruit, strawberries, and grapes. Therefore, the loss of Benlate on these crops is not serious. Topsin-M is not labeled for use on brambles (raspberry and blackberry) or blueberries.

Benlate was an important fungicide on brambles, and its loss is important. At present, Rovral is the only remaining fungicide on brambles that provides good control of Botrytis fruit rot (gray mold). We are hopeful that Abound and Switch will be registered on brambles in the near future.

Benlate was also important for use on blueberry. We are attempting to obtain a section-18 registration for the use of Topsin-M on blueberry in Ohio (and several other states) for 2002. (Source: *Ohio Fruit ICM News, Volume 6, Issue 2, January 31, 2002*)

**SpinTor Insecticide for Strawberries:** *Celeste Welty, Ohio State University.* A supplemental label for SpinTor 2SC that allows use on strawberries was issued in September 2001. Target pests are caterpillars, including armyworms and strawberry

leafroller, and thrips. In Ohio strawberries we do not normally have much trouble with caterpillars, but it will be helpful having a new alternative for thrips control. SpinTor should be applied at 4 to 6 fluid ounces per acre. It has a 1-day pre-harvest interval, a 4-hour re-entry interval, and a limit of 5 applications per year. SpinTor contains the active ingredient spinosad and is a general-use (not restricted-use) product. It is made by Dow AgroSciences. Source: *Ohio Fruit ICM News, Volume 6, Issue 4*

**Caregiving in the Heartland:** About one in four adults provide care for an elderly, disabled or chronically ill relative or friend. Finding the strength and financial means to continue can be a challenge for even the most dedicated caregiver. A Purdue University workshop series addresses the needs of those who give so much of themselves for others. The third annual Caregiving in the Heartland series takes place in five Indiana cities from March 5 to May 7. Both professional and family caregivers will benefit from the workshops, said Paul Jones, program manager of Purdue's Breaking New Ground Resource Center, a series sponsor. "A lot of people become caregivers without any preparation," Jones said. "These workshops will provide encouragement and practical information on stress management, dealing with guilt, financial management and the importance of maintaining a sense of humor." Based on a 2000 survey by the National Family Caregivers Association, the audience for such information is growing. The survey showed that 26.6 percent of 1,000 adults polled were caregivers in the past 12 months. Applied to the adult population as a whole, the data indicated there are more than 54 million caregivers nationwide. Earlier surveys estimated 25 million Americans were active caregivers. Caregiving in the Heartland speakers include family caregivers and representatives of the Indiana Department of Health, social services agencies, the Center for Independent Living and the Purdue Cooperative Extension Service. In addition, the Arthritis Foundation-Indiana Chapter will conduct a "brown bag pharmaceutical check" of prescription medications at each workshop. Attendees may bring prescription bottles with them for examination of possible drug interaction. Workshops are scheduled from 8 a.m. to 3:30 p.m. on the following dates and locations:

- March 5 — First Baptist Church, 505 S. 14th St., New Castle.
- March 19 — Providence Center at Saint Mary-of-the-Woods, Sisters of Providence, Terre Haute.
- April 9 — Huber Orchard-Winery, 19816 Huber Road, Starlight.
- April 23 — LSF Building-Purdue North Central, 1401 S. U.S. 421, Westville.
- May 7 — League for the Blind and Disabled, 5821 S. Anthony Blvd., Fort Wayne.

Registration is \$20 and includes lunch, refreshments and caregiving materials. The registration deadline is one week prior to workshop dates. For registration or additional workshop information, contact Breaking New Ground toll-free at (800) 825-4264 or by e-mail at [bng@ecn.purdue.edu](mailto:bng@ecn.purdue.edu). The Indiana Office of Rural Health and Clarian Health also sponsor the workshop series. Breaking New Ground is an outreach program within Purdue's Department of Agricultural and Biological Engineering. The program offers services and resources for persons with disabilities working in agriculture.

Related Web site:

Purdue University Breaking New Ground Resource Center: <http://abe.www.ecn.purdue.edu/ABE/Extension/BNG/Resource%20Center/resourcecenter.html>

**Congratulations to Dave Ferree:** Congratulations to Dr. Dave Ferree, Ohio State University apple and grape researcher who received the Outstanding Graduate Educator Award at the 2001 Annual Meeting of the American Society for Horticultural Science in Sacramento, California. The ASHS Career Award, made by the Awards Committee of the Society, is for distinguished contributions to graduate education in horticultural science. Recommendations included notes that Dave's students are the 'backbone of US pomology today' with former students at Cornell, University of Arkansas, Penn State, University of Florida, Purdue, Ohio State, and Southern Illinois University. (Our own Peter Hirst and Steve Weller are graduates of Dr. Ferree's program.) The Award was presented to Dave by ASHS Awards Committee Chair Don Maynard.

### *Upcoming Meetings:*

- March 19 -** Martinsville Orchard School. Cooperative Extension Office. Martinsville. Contact Jim Barbour. 317-275-9305
- April 1 -** Spring Grape and Wine Workshop. Oliver Winery, St. Rd. 37 N, Bloomington, IN. Contact Bruce Bordelon 765-494-8212 or Oliver Winery 812-876-5800.
- April 9 -** Alternatives in Agriculture Series. Tree Fruit and Grape Production. Huber Orchard and Winery, Starlight. Contact Roy Ballard 812-948-5470
- April 27 -** Grape Planting Day. Madison Vineyards. Contact Steve Palmer 812-273-6500



**FACTS FOR FANCY FRUIT  
SUBSCRIPTION NOTICE FOR 2002**

Facts for Fancy Fruit is a newsletter for commercial and/or advanced amateur fruit growers. It provides timely information on pest control and production practices that should be of interest to all growers. The information is not intended for home fruit growers unless those growers wish to follow commercial practices. All growers or interested persons are welcome to subscribe, however.

At least 14 issues will be published during 2002, bi-weekly during the growing season and monthly otherwise. The subscription price of \$15.00 includes only the basic costs of printing and mailing at first class rates. The newsletter is also available free of charge electronically through the world wide web at <http://www.hort.purdue.edu/fff/fff.html> or by email. If you have e-mail and would like a copy sent electronically, send your e-mail address to [bordelon@hort.purdue.edu](mailto:bordelon@hort.purdue.edu) and we will include you on the list, or subscribe through the web at <http://www.hort.purdue.edu/fff/fff.html>.

If you wish to receive the printed version of the newsletter in 2002, please fill out the form below and send it to the Department of Horticulture, along with a check for \$15.00 (tax included) **made out to Purdue University**.

We hope that you will benefit from the information contained in the newsletter. We welcome your comments and suggestions.

Bruce Bordelon

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Please send me "Facts for Fancy Fruit" for the 2002 season. Enclosed is my check for \$15.00 (tax included). Make checks payable to PURDUE UNIVERSITY.

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I would like to see information on the following fruit crops:

Apple \_\_\_\_\_  
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Pears \_\_\_\_\_  
Blueberries \_\_\_\_\_  
Strawberries \_\_\_\_\_  
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Raspberries \_\_\_\_\_  
Cider \_\_\_\_\_  
Other \_\_\_\_\_

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