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Crop Conditions: Temperatures in the low teens to low 20s that occurred across the state early this week could cause problems for some crops. Both apples and peaches are still pretty much dormant, even in the southern part of the state, and there doesn't seem to have been any damage. But some crops, like brambles are already showing signs of growth and will likely suffer significant cold injury from this event. Strawberries may also be damaged at these temperatures if the flower buds are emerging from the crown. Maybe *this* is the last blast of winter???

Dacthal Strawberry Herbicide Available:

Strawberry growers have a new "old" tool for weed control now that Dacthal (DCPA) is being manufactured again. This is good news for growers of matted row strawberries. Dacthal is one of the better herbicides because it can be used in new plantings and immediately after renovation in established plantings. The only other pre-emergent herbicides labeled for strawberries, Devrinol and Sinbar, both can cause crop damage if applied before adequate numbers of runners are set, or if plants are not completely dormant. Their use is restricted accordingly. Dacthal does not have those restrictions. Amvac of New Jersey is the product supplier. Your local specialty crop ag chemical provider should have it in stock. Price will be about the same as when it was last available, around \$15 per pound. For more information on strawberry weed management see the Commercial Small Fruit and Grape Spray Guide

(<http://www.hort.purdue.edu/hort/ext/sfg/>) and the Midwest Small Fruit Pest Management Handbook (<http://www.ag.ohio-state.edu/~sfgnet/>). *Bordelon*

Indar Receives Section 18 Exemption for Use

on Blueberries: EPA has granted a section 18 Specific Exemption for fenbuconazole (Indar) fungicide on blueberries in Indiana for the 2001 growing season effective April 1. INDAR 75WP (fenbuconazole) is used for the control of mummyberry disease. The supplemental label for the Section 18 exemption has been issued by Rohm and Haas. This supplemental label must be in the possession of the applicator at the time of application. Check with your agricultural chemical dealer, contact Rohm and Haas Company, 100 Independence Mall West, Philadelphia, PA 19106 215-592-3000, or the Indiana State Chemist at 765-494-1587.

According to the 2001 supplemental

label use recommendations are as follows: Apply one 2 ounce pouch (1.5 ounce a.i.) INDAR 75WSP per acre by ground or air. Begin applications at early green tip and make subsequent applications at 10 to 14 day intervals. RESTRICTIONS: Applications through any type of irrigation system are prohibited. Do not make applications within 30 days of harvest. Do not make more than 5 applications or apply more than 10 ounces (0.47 lb. active) per acre per year. Do not use any spray adjuvants with INDAR 75WSP. Do not graze livestock in treated areas or feed cover crops grown in treated areas to livestock. Do not make applications within 75 feet of streams, rivers, ponds, lakes, or reservoirs. *Bordelon*

Fire Blight: If fire blight has not been a problem in your orchard over the past few years there is *no need* to apply a copper based dormant spray. Dormant copper sprays are most beneficial in those years following severe fire blight. If you do feel copper sprays are needed, we suggest you apply copper to the entire orchard block, including non-susceptible cultivars. The reason for treating non-susceptible cultivars is that even normally fire blight 'resistant' trees like Red Delicious can be colonized by the bacteria and serve as a source of infection during bloom. If copper sulfate (4 pounds per 100 gallons) is used be sure to apply it when trees are dormant. If applied late it may burn leaf tissue. Also, **do not** apply copper sulfate with oil; apply copper sulfate and dormant oil as separate sprays spaced at least 10 days apart. If copper sulfate is applied under poor drying conditions or later than silver tip, plant injury can result. An alternative to copper sulfate are the fixed coppers such as Kocide and C-O-C-S; most fixed coppers do not have the compatibility problems of copper sulfate and can be tank mixed with early season oil sprays. Remember however that even fixed coppers, if applied after half-inch green, can cause fruit russetting in years when there is not enough rain to remove the copper residues before tight cluster. *Pecknold*

Collar Rot of Apple: Think back to late last summer, did trees in your orchard show premature leaf reddening, sparse, yellow foliage, and many small, highly colored fruit? Such symptoms, if accompanied by a canker (localized discolored tissue) at or just below ground level, are evidence of possible collar rot, caused by the soil-borne fungus, *Phytophthora*. If collar rot is suspected we advise the use of Ridomil 2E or Aliette. We especially recommend these fungicides in those problem wet areas having poor drainage and heavy, clay-type soil. Be sure to treat surrounding healthy appearing trees, not just trees already showing severe symptoms of collar rot. Both these fungicides are best used to prevent collar rot.... not cure it. Note: Ridomil Gold EC and Ridomil Gold WSP are new formulations of Ridomil that will eventually replace the Ridomil 2E formulation. See ID-168, "2001 Indiana Commercial Tree Fruit Spray Guide", for further information. *Pecknold*

Powdery Mildew of Apple: The Pathologist's Almanac states: after a very cold winter there will be very little powdery mildew on apple; however, after a very mild winter powdery mildew may be severe. If this prediction holds true, we could be in for a bad mildew year. It might be wise to use a fungicide that will also control mildew in your early scab sprays. Nova and Rubigan are excellent for scab, powdery mildew and rust control. *Pecknold*

Early Grape Sprays: Bud swell to bud break is the perfect time to apply liquid lime sulfur for control of grape anthracnose. Anthracnose is not a widespread problem on all grapes, but when it occurs on susceptible varieties it can be very damaging. Lime sulfur has also been shown to reduce overwintering inoculum of black rot and powdery mildew. It is likely that it helps reduce inoculum of Phomopsis, but I know of no research proof. It is important to get thorough coverage of all plant parts, especially the trunks and cordons where bark

crevices harbor fungal spores. Other important pests to control this time of year are flea beetles and climbing cutworms. These pests feed on swollen buds, destroying the primary shoot. The main damage is done when buds are in full swell. Once the shoots reach 1/2 inch long the damage caused by these pests is minor. Flea beetles seem to be the more common of the two pests in Indiana. Scout vineyards for these insects or signs of feeding beginning at early swell and continuing until shoots are about 1/2 inch long. The adult beetles are dark metallic greenish-blue or steel blue and about 1/8 inch long. They damage buds by eating a hole in the side or tip, and hollowing out the center. Scout perimeter rows, especially those adjacent to woods or brushy areas where adult beetles overwinter. If bud damage averages 4% or more, an insecticide application may be warranted. Refer to the Commercial Small Fruit and Grape Spray Guide (www.hort.purdue.edu/hort/ext/sfg) and the Midwest Small Fruit Pest Management Handbook (www.ag.ohio-state.edu/~sfgnet/) for complete discussions of grape IPM.

Bordelon

Federal Assistance for Apple Growers: A reminder to apple growers. Federal assistance is available to growers to compensate for low prices due to unfair foreign competition (apple juice concentrate from China) and severe, adverse weather conditions. To be eligible for assistance, **applications must be received by your county FSA office by the close of business on April 13.** The total funds available for assistance is \$100 million. Payments will be made on up to 1,600,000 lbs of production per operation. One bushel is 42 lbs so this is equal to 38,095 bushels. Assistance is available for one years crop only, either 1998 or 1999 (whichever is the larger). To be eligible, apples must have been produced and harvested, therefore drops don't count. Apples that should be included are those:

1. sold wholesale
2. sold retail
3. those made into cider. Include the number of lbs of apples used in cider, or divide the number of gallons of cider produced by 3.59 to give the number of bushel equivalents, and then multiply this by 42 to get the number of lbs.
4. those used in school tours
5. any other apples that you produced and harvested and that you can account for

The per pound amount of the assistance payments is not yet known. A national payment rate will be determined at the close of the sign-up period by dividing the total funds available by the amount of production for which claims are made. If every apple producer nationwide makes a claim, then the payment would be around 1 cent/pound or 42 cents/bushel. However this doesn't factor in that there is a limit of 38,000 bushels per operation, and there are a number of very large operations that produce significantly more than 38,000 bushels. Therefore the payment amount is likely to be significantly higher than 40 cents/bushel.

FSA will be conducting spot checks on applications, and if you are selected you will have 10 days to produce the necessary documentation to verify your production. Any discrepancy may result in you having to refund part or all of the payment received, plus interest.

Remember, applications need to be received by your local FSA office by April 13, so you only have a week or so to get these in. Contact your county FSA office or the state FSA office (phone 317-290-3030) for more details. *Hirst*

Trees Being Planted at Purdue University: Like many of you, we are busy planting apple trees this time of year. We are planting at the new Meigs farm, just south of Lafayette near 231 South. This year's plantings include 500 trees as part of an organics study (in conjunc-

tion with Rick Foster and Paul Pecknold), 220 trees of Gala, Fuji, McIntosh and Jonathan as part of a tree establishment and general use planting, over 200 trees of Co-op and numbered selections, and 130 Redhaven peach trees on 14 new rootstocks. Many of these plantings would not be possible without your support through the Return Bloom Fund, and we would like to thank those of you that have supported our research efforts through this fund. *Hirst*

Return Bloom Fund: I mentioned above several new plantings we have established at Purdue this year, and over the next several issues of Facts for Fancy Fruit, we will give you more details on these plantings and what they're all about. Last spring, Rick Foster, Paul Pecknold and I began a long-term project to investigate the feasibility of growing apples organically. Rather than converting an existing orchard to organic production, we wanted to start from scratch, with the experiment designed specifically to compare organic and conventional production systems. The study consists of about 500 trees planted at each of two locations, the Meigs Farm near Lafayette and the Southwest Purdue Ag Center near Vincennes. At each location, half the trees will be grown organically and the other half grown conventionally. We planted GoldRush trees last year and are planting 500 Pristine trees across the 2 locations this year. OK, so why are we investigating organic apple production when most of our growers have little interest in trying to grow apples organically? There are several answers to this question:

1. If we can demonstrate that apples can be successfully grown organically, more conventional growers may decide to devote a limited portion of their orchard to satisfy the demand for organic production.
2. Whether or not the overall organic system is successful, we believe that techniques that we try in the organic system will be applicable for conventional growers as well. Given the uncertain future of various

pesticides, such as the organophosphates, we believe that it is prudent to constantly be looking for alternative methods of controlling pests.

3. It is likely that we will identify orchard practices that will reduce our dependence on pesticides, which have the potential to lower orchard costs.

The organic feasibility study has received some funding from the Purdue Ag Research Program, with the stipulation that costs associated with the maintenance of this study come from other sources. The Return Bloom Fund has supported this research, and has enabled us to leverage other funds. This means that we have been able to embark on a fairly large research project for a relatively small investment from the Return Bloom Fund. We appreciate the support of growers through the Return Bloom Fund and we hope you keep us in mind when the federal assistance to growers comes through. *Hirst*

HACCP and GAP Workshops: A little advance notice on two workshops being offered free to growers. A one-day workshop on Good Agricultural Practices (GAP) will be held at the Kellogg Agricultural Center in Michigan on Monday, July 23. From Tuesday to Thursday that same week (July 24-26) a 3-day HACCP workshop will be held for cider makers. These workshops are a collaborative effort between Michigan State University and Purdue. A grant has been obtained to cover the costs of these workshops therefore they are being offered free to growers. Other similar workshop will not be held for another year, so write these dates on your calendar if you're interested. More information will follow closer to the time. *Hirst*

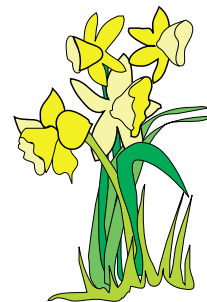
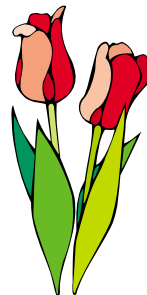
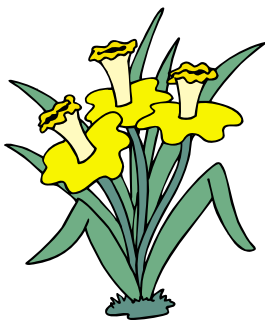
New Zealand Fruit Tour Is a Hit: Thirty fruitgrowers from Indiana, Ohio, Illinois, Missouri, Mississippi, Pennsylvania, Virginia and Nova Scotia, Canada enjoyed a two-week tour of the fruit industry of New Zealand

recently. The group returned on March 4 having gotten used to 80 degree days, which of course are easy to take in February and March. Among the crops we saw were citrus, avocado, apple, peach, kiwifruit, and feijoa. We also saw a number of new varieties of apples being produced such as Pacific Rose, Southern Snap, Southern Rose, and obviously many acres of Gala, Braeburn and Fuji. It wasn't all work and no play however, and the group got to experience some of the local customs, culture, cuisine, architecture and shopping (apparently the New Zealand economy is back on track following our visit). My thanks go to all the participants on the tour for being such a cooperative and fun group to travel with. I think everyone found the tour informative, entertaining and enjoyable, and the most commonly asked question at the end of it was "so, where are we going next year?" We're still thinking about that one... *Hirst*

Memorial: Many of you know Burk Thompson, Horticulture Research Farm Manager. Burk's father, William Thompson, passed away recently at age 81. William had a degree in aeronautical engineering from Purdue and was an accomplished pilot and engineer. He was a test pilot and engineer for Cessna for 28 years, later founded his own company that consulted on aeronautical design, and wrote four books including an autobiography, *A Test Pilot's Life*. Please join us in expressing our sympathy to Burk and his family.

Upcoming Meetings:

- April 5 -** Twilight fruit meeting, Minnetrista Cultural Center, Muncie. 6.00 pm. Contact Harold Brown (phone 765-747-7732).
- April 10 -** Martinsville Orchard School. Contact Jim Barbour (phone 317-253-0871 ext 111).
- April 26 -** Twilight fruit meeting, Kercher's Sunrise Orchards. Goshen, 6.30 pm. Contact Jeff Burbrink (219-533-0554).
- May 2 -** Twilight fruit meeting, Minnetrista Cultural Center, Muncie. 6.00 pm. Contact Harold Brown (phone 765-747-7732).
- May 10 -** Northeast fruitgrowers meeting. Location to be announced. 6.00 pm. Contact Ricky Kemery (phone 219-481-6826).



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