



Newsletter Extension

Fruit ICM News

Volume 4, No. 32
September 29, 2000

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Calendar

February 7-9, 2001: Ohio Fruit Growers Society Congress, in conjunction with the Ohio Vegetable and Potato Growers Association and Ohio Direct Marketing Association, in Toledo. Wednesday - general sessions, trade show opens, tree fruit marketing & cider sessions. Thursday - breakfast & society business meeting, tree fruit session, trade show, joint tree fruit and roadside marketing session, cider session, general sessions. Friday - tree fruit session, general sessions. More information will follow at a later date.

February 19 - March 4, 2001: New Zealand Fruit Tour, Dr. Peter Hirst, extension fruit specialist in Indiana, will be leading a 14-day tour to New Zealand from February 19 to March 4, 2001. For more information refer to past issues. For a brochure and registration form, or if you have any questions, call Peter Hirst at 765-494-1323 or e-mail him at hirst@hort.purdue.edu.

Herbicide Update From IR 4

Source: Doug Doohan, Extension Specialist, Horticulture and Crop Science, The Ohio State University

The annual IR4/ USDA Food Workshop was held in Orlando, Florida during the week of September 11. Ohio submitted three Pesticide Clearance Requests for herbicides for green onions; Goal, Prowl and

Dual Magnum. While there was a consensus that herbicides for green onions are a priority, no progress was made on these or other herbicides. The bigger issue is that Goal, Prowl, and Dual are all under review at EPA, and all projects for those products will be held up for at least 2 years and maybe longer. It appears to be political with no scientific reason for the delay. A particular irony is that just a few years ago Dual Magnum was given the status of a "reduced risk pesticide". Apparently that has all changed, with no apparent explanation. Three people from IR-4 addressed the Herbicides for Minor Use Committee, and they are as frustrated as we are.

Of course other projects on these herbicides are delayed as well. Ohio has a Section 18 for Goal on strawberries, and this was scheduled to receive a federal label soon. Now it also is on the back burner, since the Goal review won't be complete for several years. Rumors were also circulating that the EPA might not renew the Section 18 in 2001 and should be taken seriously. A potential positive is that the Stinger label for strawberries and sweet corn may be acted on in 2001. Keep your fingers crossed!

2000 is Vintage Year for Ohio Apples

Source: John Wargowsky, Promotions Coordinator, Ohio Apple Marketing Program

"Excellent flavor and large fruit size are characteristic of this year's vintage' Ohio apple crop," announced John Wargowsky, promotions coordinator for the Ohio Apple Marketing Program. "The apple color knocks your socks off," said Dano Simmons of Peace Valley Orchards in Columbiana County. "Harvest continues to run ahead of schedule according to reports from apple growers throughout the state," Wargowsky added.

October marks National Apple Month, which dates back to Halloween, October 31, 1905, when Captain James Handly of Quincy, Illinois started distributing gift apples to school children and extolling the fruit's virtues. The health benefits of apples and apple products were first recorded as early as medieval times, leading to the relatively recent saying, "An apple a day keeps the doctor away." Apples' healthy attributes received considerable renewed interest recently, following the publication of several studies linking nutrients found in apples and apple products to an impressive range of health benefits, such as the following:

Nature, June 2000: Researchers at Cornell University found that phytonutrients in apples inhibited the growth of colon cancer and liver cancer cells in vitro (in the laboratory).

European Journal of Clinical Nutrition, May 2000: Finnish researchers found that individuals who ate the most apples had the lowest risk of thrombotic stroke, possibly due to the phytonutrients found in the apples.

Thorax, January 2000: British researchers found that apple eaters had better lung function than non-apple eaters, as measured by forced expiratory volume.

Journal of the National Cancer Institute, January 2000. Researchers in Hawaii found that an increased consumption of quercetin (from apples and onions) was associated with a reduced risk of lung cancer.

Apple cider production is in full swing. Apples and apple cider are available at farm markets and grocery stores. "Some popular apple varieties are already sold out, so be alert for the harvest dates of your favorites," advised Mitch Lynd of Lynd Fruit Farm in Licking County. Apple recipes may be found

at <http://www.usapple.org> or <http://www.aboutproduce.com>. For more recipes call 1-800-IMPROUD (467-7683) and ask for a free copy of the *Ohio Farmers Market Directory and the OHIO Apples...Appealing in many ways* recipe booklet. This directory will help you locate farm markets that sell apples. Many Ohio apple growers with farm markets have recipes available upon request.

For more information contact John Wargowsky, Ohio Apple Marketing Program at (614) 249-2424 or e-mail jwargows@ofbf.org. More information on health research is available.

NC Ohio Apple Harvest Evaluation

Plum curculio continues to be a problem. A majority of fruit producers are finding apples marked with a characteristic crescent-shaped scar. Damage was the greatest near woods and, in one particular case, in an unsprayed row. It's been suggested that PC egg laying was extended due to the stretched out and delayed warming curve last spring.

Scab appeared to be a problem only where coverage or timing of spray applications were inadequate.

Evidence of fire blight ranges from none to severe, depending on orchard locations and varieties. Tree loss appears to be limited to younger, non-bearing trees.

Other fruit defects were attributed to crows that feasted in roosting areas in the upper portions of trees.

Fruit physiological disorders noted were water core and cork spot. Color photos of fruit physiological disorders can be seen at the following websites: <http://postharvest.ucdavis.edu/Produce/Disorders/apple/pdapwater.html>
<http://www.aes.ucdavis.edu/DOE/MReid/Class/PLB172/Postharvest%20disorders/sld033.htm>

Pear Recipes

Source: Lois McDowell, Lorain County Fruit Grower

Pear Pie

One 2 crust pie dough recipe
3-4 cups fresh pears, peeled, cored and sliced
1/2 cup sugar
1/8 tsp. salt
2 Tablespoons cornstarch
2 tsp. grated lemon rind
1 Tablespoon lemon juice
1/2 tsp. cinnamon
1/2 tsp. ginger
1/4 tsp. nutmeg

Mix ingredients together and put into double crust as you would an apple pie. Bake for 15 minutes at 425 degrees, then 30 minutes at 350 degrees. Makes one 9" pie.

Pear Sauce

Wash, peel (use old fashioned potato peeler), core, and quarter fresh pears. Put into pan with a small amount of water, just enough to prevent sticking. Cook pears into sauce similar to apple sauce. Add honey or sugar to sweeten. Add cinnamon and ginger to spice to taste.

Pear Nut Bread

1 cup chopped, peeled pears
1 cup sugar
1/4 cup sour cream
2 cups unbleached flour
1 tsp. baking soda
1/4 tsp. nutmeg
1/2 cup oil
2 eggs
1 tsp. vanilla
1/2 tsp. salt
1/4 tsp. cinnamon
1/2 cup chopped walnuts

Beat together oil and sugar. Add eggs one at a time. Stir in sour cream and vanilla. Add everything else except nuts and pears. Mix well, fold in nuts and pears. Pour into well-greased 9" x 5" loaf pan. Bake at 350 degrees for one hour. Test with toothpick for doneness. Let cool in pan about 5 minutes, then turn out onto cooling rack.

Pear Nut Crunch

2 cans (8 1/4 ounces) crushed pineapple
3 cups sliced & peeled pears
1/2 cup sugar, divided
2 Tablespoons lemon juice
1 box (18 1/4 ounces) yellow cake mix
1/2 cup melted margarine
1 cup chopped nuts

Spread pineapple over bottom of lightly greased 13"x9"x2" baking dish. Toss together pears, 1/4 cup sugar, and lemon juice. Layer over pineapple. Sprinkle dry cake mix on top of fruit. Dribble margarine over cake mix; sprinkle with nuts and remaining 1/4 cup of sugar. Bake 50 to 60 minutes in a 350 degree oven. After it has baked 20 minutes, cut through to the bottom to allow juice to rise to the top. Serves 12.

Pear Butter

20 medium pears
4 cups sugar
1/3 cup orange juice
1 tsp. grated orange rind
1/2 tsp. nutmeg

To prepare pulp: wash, core and quarter pears. Cook until soft, adding only enough water to prevent sticking (about 1/2 cup). Press through a sieve or food mill. This removes the skins. Measure 2 quarts pear pulp. To prepare butter: Combine pear pulp and sugar in a large saucepan, stirring to dissolve sugar. Add remaining ingredients. Cook until thick enough to round up on a spoon. As mixture thickens, stir frequently to prevent sticking. Ladle hot butter into hot jars, leaving 1/4" headspace. Put lid and ring on

jars. Process 10 minutes in a boiling water canner. Yield: About 4 pints or 8 half-pints.

For canning pears and other pear recipes, consult the *Complete Guide to Home Canning*, USDA Agricultural Information Bulletin #539.

FDA Research Priorities

The following information is from a recent memorandum from the Food and Drug Administration's (FDA) Senior Science Advisor, Dr. Robert L. Buchanan outlining FDA's top research priorities. Dr. Buchanan's list of 29 research priorities signals FDA's interest in pursuing oversight of agricultural production and promoting Hazard Analysis and Critical Control Points (HACCP) systems to prevent microbial contamination and adulteration.

Of the 29 priority research areas, seven have the potential to impact the apple industry. The memorandum outlines FDA's interest in:

- Developing more reliable and timely tools to evaluate the presence of microbial pathogens
- Developing data to provide Good Agricultural Practices (GAP) guidance
- Developing data to provide guidance on HACCP and the use of different technologies to reduce pathogenic microorganisms in juice
- Developing an understanding of the impact and significance of microbial antibiotic resistance in the areas of production, processing, and handling of produce
- Developing advanced analytical methods and sampling protocols to detect pesticide residues for Food Quality Protection Act enforcement
- Developing analytical methods to detect inulin (potential apple juice concentrate adulterant)
- Developing data on consumer food-safety knowledge impacting food-borne illness and label awareness.

Please contact J. C. Cranny by telephone at (703) 442-8850 or via e-mail at jcranney@usapple.org should you have any questions or require additional information.

Apple Maturity Revisited

See: Ohio Fruit ICM News Volume 4, Numbers 25 & 27, Testing for Apple Maturity and Storage Scald on Apples respectively

Scald Prediction for New England Delicious Apples

Source: Healthy Fruit, Volume 8, Number 26

To help determine scald susceptibility and the need for pre-storage DPA treatment of Delicious apples, UMass researchers developed a model to predict the incidence of scald development based on harvest date, the number of days when the temperature is less than 50 degrees F., and starch index at harvest. An on-line calculator to predict Delicious scald susceptibility has been added to the UMass Fruit Advisor and found online at this address: http://www.umass.edu/umext/programs/agro/tree_fruit/

To use the calculator, you need to input harvest date, number of days less than 50 F., and starch index (SI) at harvest. Then it will calculate a scald susceptibility INDEX, which is used to fine-tune the need for DPA treatment and rate when storing Delicious apples.

Number days less than 50 F. (from August 1 to September 28) for various Ohio locations:

| | |
|-----------------|---------------|
| Akron-Canton 16 | Cincinnati 10 |
| Cleveland 9 | Columbus 8 |
| Dayton 11 | Mansfield 13 |
| Norwalk 14 | Toledo 14 |
| Wooster 17 | Youngstown 21 |

The SI can be determined using the procedures and scales described in Cornell Information Bulletin 221. The mean reading from 10 apples should be used. This bulletin is available for \$5.50 from Cornell University by calling 606-255-2080 and using Mastercard or Visa.

Additional resources for using iodine solution to determine starch levels can be found in the Pennsylvania Tree Fruit Production Guide online: <http://tfpg.cas.psu.edu/part6/part61a.htm>

Other online resources: "Painless and Efficient Apple Maturity Testing"
<http://www.msue.msu.edu/berrien/hort/documents/sitest/starchindextest.html>

Factsheet No. 88-090 "Starch-iodine Test for Determining Maturity and Harvest Dates of Empire, Idared, and Spartan Apples"
<http://www.gov.on.ca:80/OMAFRA/english/crops/facts/88-090.htm>

Fire Blight Management in the Dormant Season

Source: Mark Longstroth, SW District Horticultural Agent, MSUE Fruit CAT, September 26, 2000

The fire blight epidemic in southwestern Michigan has done a lot of damage, but now the spread of the disease has slowed. The trees have walled-off most fire blight shoot strikes and cankers. There are few, if any oozing cankers in the orchards. The effects of the epidemic are still visible, and orchards on dwarfing rootstocks show trees with yellow- and red- colored leaves. These trees are dying, as the fire blight bacteria has infected the rootstock and killed it. Some water still moves up the trunk from the dead woody root, but the tree is dead. Trees that look healthy now may also grow poorly next spring and eventually die. Actually tree losses may be about 10 percent greater than your current estimates based on trees with discolored foliage.

Where more than 25 percent of the trees have been lost, remove the orchard. Orchards with that many missing trees are no longer productive economic units. I believe that it makes no sense to replant into an orchard that is older than four or five years old. The cultural needs of young and bearing trees differ, and few growers can give both to an orchard. I do believe that you can replant entire rows and then treat rows of different ages differently. You are better off replanting an entire orchard than trying to rehabilitate part of it. For orchards that you are going to save, my recommendation is that fire blight-affected branches be pruned out this winter. The main source of bacteria next year will be from overwintering cankers in the orchard. The bacteria overwinter in your orchard in the bark of cankers on the tree. Some bacteria will also come in with insects and wind, but that is a worry for spring.

In the winter, remove as much of the potential problem as possible in your own orchards. Good sanitation by removing the source of the bacteria is the first and most important aspect of fire blight control. Be aggressive and cut out all the fire blight strikes you see. Pay particular attention to strikes on larger limbs that are likely to ooze next year. Several trips through the orchard should be made to be sure that all fire blight-affected branches are removed. If you think that the limb is too large to cut out for a small strike, cut out the strike or burn it using a torch. If you try to burn out strikes, the affected section needs to be heated to 180 F to kill the bacteria. Most growers burn the bark to be sure it is hot enough. If the canker has walled-off and a raised ring of tissue is visible around the strike, then prune back to the next healthy limb. If you cannot see a visible canker margin, then the canker is probably still active. Prune these cankers aggressively. Cut back 12 inches or more to remove as much of the bacteria in the bark as possible. Some growers are very aggressive, and I have seen good control in their orchards even in this banner fire blight year. Older trees, more than 5 years old, will probably not be killed unless it affects the rootstock. Prune out the infection this winter and carry on. Since infections depend on bloom, weather there may or may not be a disease problem the next year. By reducing the amount of bacteria present in your orchards you make disease control much easier.

Do not apply nitrogen fertilizers to fire blight affected blocks this winter. The loss of wood from the disease this year has resulted in lots of new growth, and severe pruning will induce more growth. Check to make sure that you have adequate potash and calcium in the soil. Good levels of these nutrients will help maintain the health of the tree without increasing the vigor.

During the winter meeting season there will be many recommendations on what to do during the 2001 growing season to control fire blight. During the winter you need to make sure that the amount of bacteria in your orchards will be at a minimum by removing as much as possible. The trees may not look pretty, but you will have saved your orchard and given yourself a good chance to maintain it into a healthy future.

Terminal Market Wholesale Fruit Prices September 29, 2000

| Chicago http://www.ams.usda.gov/mnreports/HX_FV010.txt | |
|---|---------------------------------------|
| Apples: market about steady | Peaches |
| Cartons cellpack New York | US One various yellow flesh varieties |
| US Fancy McIntosh 80's 23.00 | 2 1/2" up 15.00 |
| 96's 22.00 | 2 3/8" min 14.50 |
| | 2 1/4" up 12.00 |

| | |
|---|--|
| <p><u>Cartons 12 3-lb filmbags Illinois</u> US Fancy Jonathan 2 1/4" up 11.00-11.50</p> <p><u>Bushel cartons loose Michigan</u> No grade marks Red Delicious 2 1/2" min 11.00- 12.00 Golden Delicious 2 1/2" up 11.00-13.00 Illinois US Fancy Red Del. 2 1/4" up 12.00 Jonathan 2 1/4" up 11.00-12.00 No grade marks Golden Delicious 2 1/4" up 12.00</p> | |
| Detroit http://www.ams.usda.gov/mnreports/DU_FV010.txt | |
| Apples: market about steady | Peaches |
| <p><u>Cartons 12 3-lb filmbags Michigan</u> US Fancy Red Del. 2 1/2" min 10.00-11.50 Golden Delicious 2 1/2" min 10.00 Gala 2 1/2" min 12.00 Rome 2 1/2" min 10.00 McIntosh 2 1/2" min 10.00-12.00 Jonathan 2 1/2" min 12.00-13.00 Empire 2 1/2" min 10.00-12.00 Paula Red 2 1/2" min 10.50-11.00</p> <p><u>Bushel cartons loose Michigan</u> US Fancy Red Del. 3" min 11.50-12.00 Golden Delicious 2 3/4" up 11.50-12.00 3" min 11.50-12.00 Gala 2 3/4" up 11.50-12.00 McIntosh 2 3/4" up 11.50-12.00 3" min 12.00 Jonathan 2 3/4" up 11.50-12.00 Empire 2 3/4" up 11.50-12.00 Jonagold 3" min 14.50-15.00 2 1/2" up 11.50-12.00</p> | <p><u>25 lb. Cartons</u> New Jersey No grade marks Various yellow flesh varieties 2 3/4" up 11-12.00</p> |
| Pittsburgh http://www.ams.usda.gov/mnreports/PS_FV010.txt | |
| Apples | Prune Plums |
| <p><u>Cartons cellpack New York</u> US ExFancy McIntosh 100's 19.00 120's 16.00</p> <p><u>Bushel cartons loose Michigan</u> No grade marks Red Delicious 2 1/2" min 12.75 Golden Delicious 2 1/2" min 12.75 Gala 2 1/2" min 15.00-16.00 McIntosh 2 1/2" min 12.75-14.75</p> | <p><u>30 lb cartons</u> Michigan US One Stanley 1 1/4" min 8.50-9.50 Fair cond. 1.00-2.00</p> |

| | |
|--|--|
| Jonathan 2 1/2" min 13.75-14.75 Jonagold 2 1/2" min 11.00-13.00 Paula Red 2 1/2" min 11.00-11.75 | |
|--|--|

| | |
|---|--|
| <u>Pennsylvania</u> No grade marks Red Delicious 2 1/2" min 9.00-10.00 Golden Delicious 2 1/2" min 11.00-13.00 Gala 2 1/2" min 11.00-13.00 Rome 2 1/2" min 12.00-13.00 McIntosh 2 1/2" min 9.00-10.50 Jonagold 2 1/2" min 11.00-13.00 | |
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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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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Keith L. Smith, Director, Ohio State University Extension.

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