http://ipm.osu.edu/fruit/index.html

THE OHIO STATE UNIVERSITY Newsletter Extension

Fruit ICM News

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In This Issue

Calendar

November 3:OhioVegetable and Small Fruit Research and Development Program Board Meeting, Waterman Research Lab, Wittmeyer Conference Room. Contact Tom Sachs at 614-246-8292 or e-mail growohio@ofbf.org or click on <http://www.ohiovegetables.org>.

November 9: Ohio Ag and Hort Human Resource Managers' Forum, Hilliard, OH. Reservations are requested by November 1. Contact MAAHS at 614-246-8286, labor @ofbf.org, or <http://www.midamservices.org>.

November 11: Ohio Fruit Growers Society Board Meeting, Dutch Heritage, Bellville. Contact Tom Sachs at 614-246-8292 or e-mail growohio@ofbf.org or click on <http://www.ohiovegetables.org>.

November 18:Ohio Fruit Growers Society Research, Extension/Education, and Ohio Apple Operating Committee Meetings, Dutch Heritage, Bellville. Contact Tom Sachs at 614-246-8292 or e-mail growohio@ofbf.org.

January 19-21, 2005: Ohio Fruit and Vegetable Growers Congress / Ohio Direct Marketing Conference, Toledo SeaGate Centre. Contact Tom Sachs at 614-246-8292 or e-mail growohio@ofbf.org.

February 10-12, 2005: North American Farmers' Direct Marketing Conference and Trade Show, Boston Park Plaza Hotel, Boston, MA. Contact 413-529-0386, e-mail info@nafdma.com, or click on <http://www.nafdma.com>.

February 16-19, 2005: North American Berry Conference, Nashville, Tennessee. Conference of North American Bramble Growers and North American Strawberry Growers. See Issue 34 for more information <http://ipm.osu.edu/fruit/04icm34.pdf>.

Proposed Section 18 Reforms

Source: Cindy Folck, Communications Coordinator, Ohio State University Extension Pesticide Education Program, PEP-Talk, October 2004, <http://pested.osu.edu>

EPA has issued a proposed rule to streamline the application and review process for pesticide emergency exemptions. The proposed revisions would allow applicants for emergency exemptions to generally re-certify that emergency conditions continue in the second and third years for certain repeat requests. This way the requesting state or federal agency will not have to submit full renewal applications. Also, the revision would use a loss-based approach to substantiate the significance of economic losses and adjust the data requirements for documenting the loss.

public comment period that closes on November 2, 2004. For more information, visit <http://www.epa.gov/fedrgstr/EPA-PEST/2004/September/Day-03/p20038.htm>

(Original source: U.S. EPA website and AAPSE news)

Strawberry growers and all fruit growers using honey bees for pollination are affected by two current Ohio Section 18s. One involves Spartan 4F Herbicide for common groundsel control in strawberries. The other is for control of varroa mites and small hive beetles in honeybee colonies. Both labels and letters for these Section 18s can be found at <http://pested.osu.edu> (click on General Information).

Pesticide Industry Sales and Usage

Source: U.S. EPA website: <http://www.epa.gov/oppbead1/pestsales/index.htm>

EPA is responsible for regulating the production and use of pesticides in the U.S. under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Starting in 1979, EPA's Pesticide Program has issued reports that provide economic profile information on the pesticide producing and pesticide using sectors covered by the FIFRA mandated regulatory programs. The reports contain contemporary and historical data estimating the dollar values and quantities of active ingredients used and sold in the United States.

In addition, the reports include data on imports, exports, firms, employment, the number of certified applicators, and the number of pesticides in use. The reports use the best available information from the public domain and proprietary sources. However, the numbers in the reports represent approximate values rather than precise values with known statistical properties. Click on the web address above for the reports.

Highlights include:

- Conventional pesticide use was down slightly from recent years at about 888 million pounds of active ingredient in 2001, 926 in 2000, and approximately 912 million pounds in both 1999 and 1998.
- Other pesticides, including wood preservatives, chlorine and hypochlorites, and specialty

biocides, pushed total U.S. pesticide use to about 4,972 million pounds of active ingredient in 2001.

- Pesticide use occurs on more than 941,000 farms and in more than 78 million households in the United States.
- Herbicides were the leading type of pesticides used, in terms of both user expenditures and volume.
- With 85 to 90 million pounds used in 2001, the herbicide glyphosate replaced atrazine as the most widely used pesticide in the agricultural market sector -- up from number 2 in 1999, 5 in 1997, and 17 in 1987.
- 2,4-D was the most widely used pesticide in both the home and garden and the industry/commercial/government sectors with 8-11 and 16-18 million pounds used in each sector, respectively.
- Annual U. S. pesticide user expenditures totaled approximately $11,090 million in 2001, accounting for about 34% of the total world market.

Orchard Monitoring Manual for Pests, Natural Enemies, and Diseases of Apple, Pear, and Cherry

Source: Washington State University Extension via the Center for Agricultural Partnerships, <*http://www.agcenter.org/progpest.html*>

(Thanks to John Wargowsky, ExecutiveDirector, Mid American Ag & Hort Services, Inc.)

The Center for Agricultural Partnership has made available, for a free download from the above address, a manual for monitoring tree fruit pests and diseases. Included in both English and Spanish languages are 51 pages of text and 22 sheets of color photos. The manual is compiled by Naná Simone, pest management consultant and director of CAP's Hispanic Orchardist IPM Education Program. The manual is available in on-line (PDF) format.

Berry Farming: Key Questions to Consider Before You Begin

Source: Lori Bushway, Senior Extension Associate in Berry Crops, Department of Horticultural Sciences, Cornell University, Ithaca, NY, New York Berry News
http://www.nysaes.cornell.edu/pp/extension/tfabp/newslett/nybn40a.pdf

Perhaps you are considering diversifying your current operation or starting a new venture and are considering small fruits as a possibility. How can you determine if small fruit farming may be right for you or if a new crop will be a profitable addition to your existing venture? The following checklist, developed by Lori Bushway, will assist you in your decision-making process. Get the ball rolling by asking yourself the following questions:

What is your market?

- What berry products are produced already in adequate supply in your area?
- Would the market support additional suppliers of the same products?
- Are there unique market opportunities available that your berry products might fill?

- How will you market your crop?
- Pick your own (PYO). What's the population within a 20-mile radius?
- Direct Market. Location, Location, Location!
- Wholesale. Do you have a cooler? Sell all before a single berry is picked.

- How much can you reasonably expect to sell to this market?
- 4,000 pints of raspberries?
- 3,000-7,000 quarts of strawberries?
- 6,000 pounds of blueberries?

- How much will it cost to transport your product to this market?

What is your budget?

- Consider the costs of site preparation, establishing planting, irrigation, managing planting, labor¼
- Your plant material cost per acre might run:
- Blueberries - 870 to 1,090 plants/acre about $5200 to $6500
- Raspberries - 1,452 plants/acre about $1,900
- Strawberries - 5,000 to 14,000 plants /acre about $1,250 to $3,500

- You might expect positive cash flow:
- Blueberries - 10th-13th fruiting year, life of planting could be > 40 years
- Raspberries - 2nd or 3rd fruiting year, life of planting is about 10 fruiting years
- Strawberries - 1st fruiting year, life of planting is about 3-5 fruiting years

Will these new crop(s) fit your growing schedule without serious conflicts?

- What else are you growing? When do you not want to be busy with berry crops?
- Blueberries - early spring pruning, then harvest peak mid-August
- Summer Raspberries - early spring pruning & trellising, then harvest July
- Strawberries - early winter mulching, early spring mulch removal, frost protection, harvest June peak, then renovation
- For all -- planting late spring, worrying about late spring frost during bloom, irrigation, weed control, spring peak in disease management, insect management, late summer leaf analysis . . .

What is your proposed planting location like?

- Very few sites are naturally ideal. When evaluating a site consider:
- Where will you access water for irrigation?
- What are winter temperatures? Frost pocket? Microclimate?
- Diseases & insects? Wildlife & weeds?
- Is there adequate sun? Is the soil well drained?
- What did your soil test say? pH? Organic matter? Phosphorus? . . .
- What the history of that site? The past & future crop rotation?
- Adequate parking for PYO?

What will you face in the way of weeds, diseases, and pests?

- Control measures are not plentiful in berry crops. Minimize potential problems at the outset:
- Plant resistant or tolerant cultivars (varieties).
- Plant only healthy nursery material.
- Thoroughly consider your site choices and promote healthy soil.
- Plant to provide adequate room for growth.

- Properly manage water & nutrients.
- Develop regular scouting routines to monitor pest presence and development.
- Deal with pest problems proactively whenever possible and appropriate.

Where can I find more information? <http://www.fruit.cornell.edu/berry.html>

Cold Acclimation in Strawberries

Source: Pam Fisher, Berry Crops Specialist / Ontario Ministry of Agriculture and Food

The process of developing tolerance to cold temperatures is called acclimation. Cold acclimation in strawberries begins when days get shorter in late summer. Short days alone will trigger strawberries to develop tolerance to -2° or -3°C. For further acclimation, plants must be subjected to cold temperatures, i.e. days of about 10°C and nights around 0°C. Photosynthesis is also required for cold acclimation to occur, so plants which are mulched before these conditions have been met will not be as winter-hardy.

Even when fully acclimated, or "hardened-off for winter," strawberry plants are not as tolerant of cold temperatures as other perennial fruit crops. Cold injury to crowns appears as browning of crown tissue. Crowns will be killed at temperatures of -12°C to -14°C in the crown, but even tissue temperatures of -6°C to -9°C can lead to fewer leaves, leaf distortion, and fewer flowers and fruit. The extent of cold-temperature injury in strawberries is determined by many factors. These include the extent of cold acclimation, the cultivar, the part of the plant affected, the rate and duration of freezing, and cultural practices. Rapid freezes, when tissue temperatures drop 2 to 3 degrees per hour, are fatal. Although the duration of freeze also affects how much injury occurs, most injury occurs in the first 24 hours of damaging temperatures. Freeze / thaw freeze cycles will also cause more injury than consistently cold temperatures, if the thaw lasted more than 2 to 3 days.

Nutrient and water status of strawberry plants also affects cold acclimation. Excess or deficient nitrogen will inhibit acclimation. Optimum levels of

phosphorous promote acclimation. Plants acclimated under dry conditions fare better than plants which are not slightly water-stressed.

Mulching is important to prevent cold-temperature injury. Snow is the best insulator against the cold, but snow is not consistently present throughout the winter in much of Ontario. Straw mulch, applied from mid-November to mid-December, provides good winter protection. Straw mulch also moderates soil temperatures and prevents freeze-thaw cycles which can damage plant roots and lift crowns out of the soil. Wheat straw or oat straw are good mulching materials, applied at 2.5 to 3.5 tons per acre. This mulch should be applied after two or three good hard frosts, but before temperatures reach -7°C to -9°C for extended periods. Most growers apply mulch between mid-November and mid-December. The settled straw mulch should be about 2 to 3" thick. A light rain or snow after the straw is applied will

help settle the straw so it doesn't blow away.

Be sure the straw is clean, or free from weed seeds. However, do not use straw that was treated with glyphosate before harvest. We have observed glyphosate injury in the spring on several occasions, where the straw mulch was treated with glyphosate before harvest.

More straw is needed when raised beds are used. Raised beds can be 4 to 6°C colder than flat beds, but mulching overcomes most of this negative effect. Growers who grow strawberries on raised beds covered in black plastic often use a heavy-weight floating row cover, such as Typar 518, instead of straw. It is reported that the combination of black plastic lined beds, with a floating row cover, provides adequate winter protection, even in colder regions of the northeastern USA.

It's a beautiful fall. With cool sunny days, cool nights, and some hard frosts, strawberry plants will be going through the process of acquiring winter hardiness. If cool weather continues, you can say good night to your strawberry plants and tuck them in with a nice warm blanket in mid-November to mid-December. If October and November are unseasonably warm, beware of applying mulch too early. For more information call toll free: 1-877-424-1300.

Terminal Market Wholesale Fruit Prices - October 20, 2004

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 film bags U.S. ExFcy (unless noted)	**IL** U.S. ExFancy Jonathan 2¼" up 14.00 U.S. Fancy Jonathan 2¼" up 14.00 **MI** Gala 2¼" min 12.00 Golden	**MI** Empire 2½" min 12-13.50 Gala 2½" min 12.00-16.50 G. Delic 2½" min 12-14.50 Jonamac 2½" min 13-13.50 Jonathan 2½" min 12-14.50 McIntosh 2½" min 12-14.50 Rome 2½" min 12-13.50	**MI** G. Delic 2½" min 14 R. Delic 2½" min 14.00 **NY** Comb U.S. ExFcy-Fcy Rome 2½" up 14.00 R. Delic 2½" min 15.00 **PA** U.S. ExFcy Golden Delicious

	Delicious 2¼" min 12.00 Jonamac 2¼" min 12.00 Jonathan 2¼" min 12.00 Red Delicious 2¼" min 12.00	R. Delic 2½" min 11-14.50 **NY** Empire 2½" min 15.5-16.50 McIntosh 2½"min 14.5-15.50 R. Delic 2½" min 14.5-15.50 **MI** U.S. Fancy Empire 2½"min 11.50-12.00 McIntosh 2½" min 13.5-14.00 R. Delic 2¼" min 10.50-11.00	2½" min 14.00-15.00 Red Delicious 2½" min 14.00-15.00
Apples, cartons tray pack, U.S. ExFcy (unless noted)	***The intent of listing terminal market prices is to provide information available in the public domain. It is not intended for price setting, only to assist growers in evaluating the value of their crops. Producers need to remember that the prices listed are gross; consideration must be given to other***		**NY** Rome 56s 18.00 88s 16.00 **MI** G. Delic 88s 13.75 125s 16.25-17.50 138s 16.25-17.50 R. Delic 88s 13.75 125s 16.25-17.50 138s 16.25-17.50

	marketing costs, i.e. commission, handling charge, gate fees, and possible lumper fees.		
Apples, cartons cell pack U.S. ExFcy (unless noted)	**NY** McIntosh 80s 24.00 96s 22.00 100s 13-13.50 120s 12.00	**NY** U.S. ExFcy Cortland 80s 20.00 Empire 80s 19.00-19.50 McIntosh 80s 19.50-20.00 100s 21.00	**NY**Fancy Mcintosh 80s 18.00 100s 17.00
Apples, bushel cartons loose U.S. ExFcy (unless noted)	**IL** U.S. Fancy Red Delic 14.00	**MI** Gala 2¾" up 15.00 Empire 3" min 13.00-14.00 G. Delic 2¾" up 13.00-15.00 3" min 13.00 Idared 3" min 12.00 Jonagold 3" min 14.00 Jonathan 2¾" up 13.00 McIntosh 2¾" up 12-13.00 3" min 12.00 R. Delic 2¾" up 15.00 3"	**PA** bins per 5 lb bag U.S. ExFcy Red Delic 2½" min 2.00

		min 13.00-14.50 Rome 3" min 12.00-13.00	
	Chicago	**Detroit**	**Pittsburgh**
Blueberries, 12 4.4-oz cups/lids	**MI** 32.00 (CA storage)		**MI** medium 25.00
Grapes, cartons 12 1-pt cont/lids	**MI Concord med** **16-19.00**	**MI** U.S. One Concord med 18.00	**NY** Concord 14.00

The Ohio Fruit ICM News is edited by:

Ted W. Gastier
Extension Agent, Agriculture
Tree Fruit Team Coordinator
Ohio State University Extension Huron County
180 Milan Avenue
Norwalk, OH 44857
Phone: (419)668-8210
FAX: (419)663-4233
E-mail: gastier.1@osu.edu

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