



# Newsletter

Extension

## Fruit ICM News

Volume 7, No. 4  
February 6, 2003

### In This Issue:

#### [Calendar](#)

[Pasteurization Lends to Safer Fresh Grape Juice](#)

[Ground Covers May Benefit Grape Production](#)

[2003 Ohio Fruit & Vegetable Congress](#)

[Irrigating Brambles](#)

[Pruning Brambles & Blueberries](#)

[Workshop: Controlling Internal Fruit Feeders](#)

[Apple Growers Receive Market Loss Assistance](#)

[Preliminary Ohio January Climatological Data](#)

## Calendar

**February 4-6: Mid-Atlantic Fruit and Vegetable Convention.** Hersey Lodge and Convention Center, Hersey, PA. Contact Maureen Irvin (717)677-4184.

**Feb. 7-8, 2003: North American Bramble Growers' Association** will meet in Leesburg Virginia. The meeting will be held at the Holiday Inn at the Historic Carradoc Hall. Contact Jason Murray, Commercial Horticulture Agent, for further information, at [jamurray@vt.edu](mailto:jamurray@vt.edu) or 703-737-8978. You can view the program at <http://www.ento.vt.edu/Fruitfiles/NABGAProgram03.pdf>

**February 9-11, 2003: Ohio Grape-Wine Short Course** at Wyndham Dublin Hotel in Dublin. For registration information and other details call 800-227-6972 or go online to <http://www.ohiowines.org/>

**February 15-20: 46<sup>th</sup> Annual IDFA Conference** in Syracuse, NY. For more information, see the International Dwarf Tree Association website: <http://www.idfta.org>

**February 20-22: Viticulture 2003**, Buffalo Convention Center, Buffalo, NY. Contact by e-mail: [info@viticulture2003.org](mailto:info@viticulture2003.org) or web site at: <http://www.viticulture2003.org/> for more information.

**March 6-7: Ohio Fruit and Vegetable Food Safety Workshop**, Ohio Department of Agriculture Bromfield Building at Reynoldsburg. Contact John Wargowsky, 614-246-8286 or [labor@ofbf.org](mailto:labor@ofbf.org), or Mary Donnell, 419- 354-6916 or [donnell.8@osu.edu](mailto:donnell.8@osu.edu) or visit <http://www.midamservices.org> and click on 'projects.'

## Pasteurization Lends To Safer Fresh Grape Juice

*Source: Joe Scheerens, OSU Dept. of Horticulture and Crop Science, written by Candace Pollock, OSU Communications*

Pasteurization, a process that lends to the safe consumption of fruit juices and milk, has been shown to be effective in maintaining safety and quality of fresh grape juice. Ohio State University researchers Joe Scheerens, Diane Miller, and Aida Sanchez-Vela treated grape juice using this method, along with three other common food safety processes -- ozonation, UV treatment, and sulfiting agents -- as part of an ongoing investigation into ways to improve the safety and quality of Ohio fresh juice.

Scheerens will present the results of the two-year study at the 31st Ohio Grape Wine Short Course to be held February 9-11 at the Wyndham Dublin Hotel in Dublin, Ohio. The short course and trade show, sponsored by the Ohio Wine Producers Association, Ohio Grape Industries Program, and Ohio State University, is designed to provide research, production and marketing information on vineyards, grape growing, and wine making.

"As of January 1, 2004, those in the grape, cider and other fresh juice industries won't be able to wholesale their products without some indication that the juice underwent pasteurization or an equivalent food safety process," said Scheerens, an Ohio Agricultural Research and Development Center (OARDC) small fruit researcher.

Although the incidence of microbial contamination of fresh juice, especially grape juice, is very rare, the Food and Drug Administration regulations are being established to protect consumers against the possibility of exposure to harmful bacteria, especially *E. coli* O157:H7, which can result in serious food-borne illness. "Our research was conducted to determine the most effective way for those who wholesale fresh grape juices to comply with these pending state and federal regulations. The regulations will specifically affect the wholesale of fresh juice," said Scheerens. "Those producers who sell fresh juice directly to the public via farm markets or on-farm sales will still be able to do so without pasteurization or similar process as long as a warning label is clearly present on each sale unit."

Scheerens and his colleagues studied the effectiveness of the food safety procedures at reducing bacterial contamination in 'Concord', 'Catawba,' and 'Niagara' grape juices, three of the more commonly purchased fresh grape juices in Ohio. "We took bacteria-free juice and inoculated it with a surrogate *E. coli* bacterium (ATCC 25922) that behaves similarly to the more harmful *E. coli* O157:H7. We inoculated at very high levels of bacteria -- higher than would ever be present in a consumable product -- in order to be able to demonstrate that treatment would result in a 5-log kill of bacteria cells, a requirement of the new regulations," said Scheerens. He clarified that a 5-log kill is achieved when the survival rate of bacterial cells is one in 100,000.

Although determining bacterial survival rates was an important part of this study, Scheerens indicated that this portion of the work would benefit greatly from verification of the results by independent researchers, especially those who have capabilities to work with the pathogenic organism rather than its surrogate. "What made our study somewhat unique was that the greatest portion of our efforts was focused upon determining the effect of the four processes on the resulting product quality. And quality is of utmost importance to Ohio fresh juice producers, as their products are identified with the bounty of the autumn harvest season, good health, and enjoyable experiences with family and friends," said Scheerens.

In addition to the safety test, sensory evaluator Sanchez-Vela, Scheerens, and Miller conducted extensive sensory evaluations using both trained and untrained consumer panelists. Scheerens indicated that both

types of sensory evaluations are crucial to the understanding of how quality may change with processing. "Our trained panel has practiced extensively to be able to quantify 25-30 different quality attributes affecting appearance, mouth feel, aroma, flavor, and aftertaste. They base their responses to each attribute in accordance to how the sensation generated by the product compares to a standard they hold in their memory," said Scheerens. "Their function is to tell us how, and how much a product has changed with processing. By comparison, the function of consumer panels is not to quantify changes in quality, but rather to indicate how much they like a particular product, or which product among two or more is preferred."

Based on the bacterial and sensory evaluation test results available, pasteurization was the recommended process. "It was effective as a means of achieving a 5-log kill of bacterial cells and did not dramatically impact product quality," said Scheerens. "But there are some downsides to this method, though. It's expensive to buy, it's not portable, and it takes up a lot of space for something that is only used once a year. But it's a very well-known and widely accepted system to ensure safety of liquids and juice products."

Another method researchers studied was treating the juice with specific wavelengths of UV light. This process was accomplished using a CiderSure machine, an apparatus studied extensively at Cornell University for treatment of apple cider with little or no flavor degradation. "The UV treatment killed bacteria we inoculated in grape juice very easily, but there were some problems with the change in taste, especially with Concord," said Scheerens. "We suspect this change is stemming from the slow movement of the juice going through the machine. Also the slow flow rate may not make the process economically feasible for processors. We treated five to nine gallons an hour which was slow, so when you have to treat thousands of gallons, it's just not going to work very well."

"Ozonation, a method approved for use in treating apple cider, failed the grape juice test," said Scheerens. "We just could not get consistent results." The process changes oxygen molecules into the more highly reactive ozone gas, which then attacks bacteria cell walls and eventually kills the organisms.

"Ozonation so drastically alters the flavor components of grape juice that it makes it undrinkable. Panelists described the taste as being woody, resinous, and (like) turpentine," said Scheerens. "Such alterations are not true with apple cider. We think it's just that ozone may be excessively damaging to the high level of specific pigments and flavor constituents commonly present in grape juice that results in such drastic changes in flavor and appearance."

One system that performed well, specifically when combined with pasteurization, was the addition of sulfiting agents. Sulfites are used in the food industry as clarifying agents in juices, including grape juice, as well as stabilizers to prevent browning of items, like lettuce and shrimp, when exposed to oxygen. Sulfites, however, are not an approved method of microbiological food safety. "Sulfites not only killed the bacteria, but did not alter the taste of the grape juice, and in some cases, they actually improved upon the flavor," said Scheerens. "Panelists perceived the flavor of the grape juice treated with sulfites as cleaner or fruitier."

The next step in the Ohio State research is to measure the nutritional values of fresh grape juice treated with various food safety methods. "If any of these methods are killing the antioxidants in the juice that make it healthful to drink, then we need to know that," said Scheerens. Fresh grape juice contains vitamin C and a variety of antioxidants, specifically resveratrol. The antioxidant, identified in grape juice and red wines, is thought to protect the heart and cardiovascular system from arterial plaque buildup.

## **Some Ground Covers May Benefit Grape Production**

*Source: Nathan Krohn, Ohio State University Research Assistant, written by Candace Pollock, OSU Communications*

Ohio grape growers interested in organically growing their fruit may find perennial ground covers useful in their vineyard production. Ohio State University viticulturists have found that some perennial ground covers provide an alternative to herbicide treatments by competing with weeds. The ground covers also decrease excessive growth vigor of grape vines, offering an alternative to chemical thinning of fruit clusters and grapevine leaves, as well as increase the flow rate of water into the soil as compared to herbicide strips.

"We found both positive and negative reasons to use ground covers as a means to reduce herbicide input into the vineyard ecosystem," said Nathan Krohn, an Ohio State research assistant who led the study. "But any grower who is interested in growing grapes organically would have an interest in this research."

Krohn will discuss the findings during the 31st Ohio Grape Wine Short Course to be held February 9-11 at the Wyndham Dublin Hotel in Dublin, Ohio. The short course and trade show, sponsored by the Ohio Wine Producers Association, Ohio Grape Industries Program, and Ohio State University, is designed to provide research, production, and marketing information on vineyards, grape growing, and wine making. Other Ohio State researchers will be presenting topics on everything from fungicide applications to controlling insects and diseases to grape juice safety.

Growing grapes in an "organic" fashion is a very difficult prospect in Ohio, as we are on the borderline of several climatic zones, and are under constant fungal, bacterial, insect, and animal pressures on the grapes and grapevines," explained Krohn. "Our focus here is not to try to grow grapevines organically, per se, but to examine the possibilities of reducing herbicide input into the vineyard."

Krohn and his colleagues chose several low-growing perennial ground covers, as opposed to annual cover crops (like rye, barely, and oats), as a means of reducing weeds in the vineyard. "Preliminary research that has been done at other universities has suggested that these very competitive crops (annual cover crops) might be too competitive for water and nutrients in such close proximity to the grapevines," said Krohn. "The rationale behind our experiment was that the shallow rooting systems of the ground covers would provide excellent early-season competition with weeds, but would not reach far enough into the soil to dramatically compete with the grapevines themselves."

Results showed that middle-of-the-road ground covers, like white-flowered Mazus, were most effective in controlling weeds while not competing with grapevine growth. Quicker-growing ground covers, such as English pennyroyal, overran grapevines, reducing growth by 80 percent in some cases. Slower-growing ground covers, such as creeping thyme, were not successful in preventing weed growth.

In addition, all of the ground covers used impacted grapevine growth in some capacity, whether it be stymying vine photosynthesis or reducing the number of fruit clusters and their average size. Krohn suggests this may be advantageous for growers who experience problems with excessive vigor of their vineyards. "Using perennial ground covers of any kind has the potential to reduce vine growth, depending on the competitive level of the ground cover used," he said.

Krohn and his colleagues also analyzed the water infiltration capacity of ground covers compared to herbicide strips and found that the ground covers allowed water to soak into the soil much faster than herbicide applications. "The herbicide treatment required from 20 to 50 times as long for water to enter into the soil. In any treatment where vegetation was present, water entered the soil much faster," said Krohn. "This is very important information, especially in light of some of the dry summers we can have in Ohio. Water that does not infiltrate the soil is left to run off the herbicide strip or evaporate back into

the air."

Krohn said more research needs to be conducted on the use of ground covers in vineyards to ensure the least expensive management practice, the success of ground covers in a particular vineyard environment, and the availability of seed supply.

## **2003 Ohio Fruit and Vegetable Growers Congress Also a Success With Christmas Tree Growers**

*Source: Tom Sachs, Executive Director, OFGS and OVPGA*

The 2003 Ohio Fruit and Vegetable Growers Congress and Direct Marketing Conference attracted many Christmas tree growers to their annual trade show and educational gathering. The Ohio Christmas Tree Association (OCTA) convened their winter meeting with vegetable and fruit growers and marketers at the Toledo Seagate Convention Centre and Radisson Hotel on January 15-17. Approximately 1,400 growers, marketers, exhibitors, and educators participated in over 140 educational sessions and interacted with 110 exhibitors. The Ohio Vegetable and Potato Growers Association (OVPGA), the Ohio Fruit Growers Society (OFGS), the Direct Agricultural Marketing Association (DAMA), OCTA, and The Ohio State University (OSU) co-sponsored the event.

The OFGS's Fred O. Hartman Endowed Scholarship Fund announced their 2002 scholarship to recipient Tonia Adae of Clinton County. Additionally, the OVPGA announced that their Gene Wittmeyer Vegetable Scholarship Fund will award their first vegetable scholarship in 2003. The DAMA also reported that the Dr. M. Eugene Cravens Scholarship Fund contained over \$6,500. Anyone wishing to contribute to any of these three scholarships should contact the OSU College of Food, Agricultural, & Environmental Sciences, Office of Development, 152 Howlett Hall, 2001 Fyffe Court, Columbus, Ohio 43210 or call 614-292-0473. Checks may be made payable to "OSU Foundation" with a note indicating the fund for which the check is intended. The Gene Wittmeyer Vegetable Endowment is fund #410395, the OFGS Fred O Hartman Endowment is fund #645320, and the Dr. M. Eugene Cravens Scholarship is fund #310267.

All three organizations presented awards to outstanding leaders. The OVPGA presented the Gene Wittmeyer Vegetable Industry Distinguished Service Award to Wayne Wickerham of Huntsville, Ohio. Wayne is a past president of the OVPGA and is a past recipient of the DAMA's Gene Cravens Distinguished Service Award. The OFGS honored Jim Patterson, Patterson Fruit Farm of Chesterland, Ohio with the OFGS Distinguished Service Award. Jim is a past president of the OFGS and is currently chair of the Ohio State University Board of Trustees. Steve Hirsch of Hirsch Fruit Farm in Chillicothe was honored with DAMA's Gene Cravens Distinguished Service Award. This award recognized Steve's direct marketing efforts on the farm and with DAMA. In addition to Steve's farming and marketing responsibilities, he is currently a member of the Ohio Farm Bureau Federation Board of Trustees.

Winners of the 2002-2003 OFGS Cider Competition were announced. The grand award winner was Gary Vogley of Vogley Enterprises, East Sparta, Ohio. Blue ribbon award winners were Brian Geig of Geig's Orchard, Seville; Robert Witt of Witt Orchards, Oak Harbor; and Tom Swank of Springhill Orchards and Farm Market of Geneva, Ohio.

OFGS selected next year's leaders during the event. Officers include George Lawrence of Marion, President; Joe Burnham IV of Berlin Heights, President Elect; Jeff MacQueen of Holland, Vice President; Gary Vogley of East Sparta, Secretary; Gregg Bachman of Carroll, Treasurer; and Tom Sachs of Columbus, Executive Director and Assistant Secretary/Treasurer. Other trustees elected include Betty

Eshleman of Clyde and Doug Bauman of Rittman.

OVPGA selected leaders to serve their organization for the next year. New officers include Daryl Knipp of Oak Harbor, President; Don Ramseyer of Smithville, First Vice President; Loren Buurma of Willard, Vice President Muck Crops; Jeff Gosche of Tiffin, Vice President Greenhouse; John Brown of Hamilton, Vice President Truck Crops; Bob Jones, Jr. of Huron, Vice President Marketing; Don Bench of Elmore, Vice President Processing Crops; Jeff Huddle of Napoleon, Vice President Potatoes; and Tom Sachs of Columbus, Executive Director.

OFGS and OVPGA voted to adopt policies that will guide the associations' educational, research, legislative, and regulatory agendas for Ohio's fruit and vegetable industries during 2003. Next year's combined conference will be held January 21-23, 2004 in Toledo. Anyone wishing more information about OFGS, OVPGA, or the Ohio Fruit and Vegetable Growers Congress/Ohio Direct Marketing Conference should contact the Ohio Fruit and Vegetable Growers office at 614-246-8292, [growohio@ofbf.org](mailto:growohio@ofbf.org) or P.O. Box 182383 Columbus, OH 43218-2383. For more information concerning both organizations, refer to the OVPGA web site at <http://ohiovegetables.org> or the OFGS web site at <http://www.ohiofruit.org>.

## **A Trickle Is Better Than a Deluge In Bramble Irrigation**

*Source: Dick Funt, OSU Extension Horticulturist, written by Candace Pollock, OSU News & Media Relations*

Less is more when it comes to irrigating brambles during the growing season, especially in times of high heat and drought conditions. Dick Funt, an Ohio State University Extension small fruit specialist, said that micro-irrigation, also known as drip or trickle irrigation, provides more plant health benefits than overhead irrigation techniques.

"Growers have not gotten the concept that during a dry season, putting on a small amount of water every day can be more effective than a large amount of water at one time," said Funt. "Overhead irrigation tends to flush out oxygen and nutrients. But with micro-irrigation you don't get that flushing. You get a more consistent application of water that reduces the problems associated with a mass amount of water."

Funt is discussing irrigation techniques at the North American Bramble Growers' Association Mid-Atlantic Region and Virginia Cooperative Extension Bramble Meeting in Leesburg, Virginia on February 7-8. The meeting brings together researchers and industry professionals to present information on bramble production, marketing, and insect and disease control.

Funt said that with micro-irrigation, bramble production is maintained within the upper 12 inches of the soil by watering only half of the root zone over a period of several days. Such a technique helps create a more uniform water flow to the roots and eliminates excess run-off. "Growers need to recognize that 90 percent of the needs of the plant will be taken up in 50 percent of the root zone," said Funt. But to take advantage of such a system, growers need to begin irrigating early in the season. "In most cases, growers should be prepared to start in mid-May. And when we go five to seven days without rain or when the soil loses 50 percent of its moisture-holding capacity, growers should turn the system on," said Funt. "Don't wait until we've gone 18 days without rain before watering the plants. By then, it's too late. The plants and fruit are already under a lot of stress. Trickle irrigation is not a catch-up system."

Getting an early jump means establishing a wetting pattern that can be followed throughout the growing season. The wetting pattern, according to Funt, is the path water takes as it flows away from the root



zone, and can be dependent on such factors as soil type. In sandy soils, for example, water flow is much greater than in clay soils, yet the lateral movement of water is much narrower.

"To determine the wetting pattern, growers should water for two to three days, then dig down about 12 inches or until the wet-dry edge of the soil meets, and look to see how the water flows away from the plant," said Funt. Growers can then determine where they need to place pressure-compensating emitters (equipment that regulates even water flow), which should be 12 to 18 inches away from the root zone.

"Once growers establish that wetting pattern, other production techniques like fertilization become more effective," said Funt. "So there's more to micro-irrigation than just the water. It's also good for the nutrients of the plant, which in turn is good for the consumer."

## Pruning Brambles and Blueberries

*Source: Elsa Sánchez, Department of Horticulture, Penn State University*

It's time for dormant pruning brambles and blueberries. Actually, dormant pruning of brambles and blueberries can occur anytime during the dormant season (winter through early spring). However, in Pennsylvania March is an ideal time because any winter injury the plants may have sustained will be evident and can easily be removed.

Two main types of cuts are used in pruning brambles and blueberries: heading cuts and thinning cuts. To make a thinning cut, the branch is cut back to a side branch or to its point of origin. Thinning cuts result in a more open plant habit. To make a heading cut, the branch is cut back to a bud or stub. Heading cuts are also commonly called tipping. They result in vigorous and dense new growth.

**Summer-Bearing Red Raspberries:** Pruning summer-bearing red raspberries consists of dormant pruning and floricanes removal. For dormant pruning, thin damaged, diseased, and weak canes. Remove canes to maintain a 1' wide hedgerow. Next, thin the remaining canes for 4 to 6 inch spacing between canes, which should result in 3 - 4 canes per linear foot of row remaining. Then head canes with winter injury back to living tissues and head the remaining canes to 48 to 60 inches in height, removing about 20% of the cane that had been there.

The timing of floricanes removal depends on the cold hardiness of the cultivar. For cold hardy cultivars, like 'Latham', spent floricanes are removed immediately after harvest. In plantings with disease problems thinning floricanes immediately after harvest can help with disease suppression because spent canes can be possible sources of disease-causing inoculum. It also results in increased air circulation and sunlight penetration into the planting. This will promote drying and help manage diseases that are favored by high moisture conditions. Research has shown that less cold hardy cultivars could suffer from increased winter injury if spent floricanes are removed immediately after harvest. For less cold hardy cultivars, like 'Titan,' floricanes removal should take place in the fall.

**Ever-bearing Raspberries:** Ever-bearing raspberries can be pruned to produce two crops or, more commonly, one crop. When pruning for two crops employ the same methods as used for summer-bearing red raspberries.

For one crop, mow the canes as close as possible to the ground during the dormant season. As with summer-bearing red raspberries, maintain a 1 foot wide hedgerow. This pruning strategy will eliminate the summer crop.

**Black and Purple Raspberries:** Pruning of black and purple raspberries consists of dormant pruning, floricanes removal, and summer tipping. For dormant pruning, thin diseased, damaged, and weak canes. Then thin to 5 to 10 canes per clump. Tip the canes to 36 to 48 inches in height if they hadn't been tipped during the previous summer. Lastly, head lateral branches to 4 to 7 inches long for black raspberries and to 6 to 10 inches long for purple raspberries.

During the summer remove spent floricanes immediately after harvest. Summer tipping will begin in June and ends at the start of harvest. Summer tip the canes to 36 to 48 inches high when 3 to 4 inches of the cane needs to be removed. If more than 3 to 4 inches are removed at a time the risk of the canes becoming diseased with cane blights increases. The canes will vary in length and will not need to be summer tipped at the same time. For this reason it will be necessary to check the planting several times, generally every 2 weeks.

**Blackberries:** Blackberry pruning is dependent on the habit of the cultivar. Erect cultivars are pruned similarly to black and purple raspberries and consists of dormant pruning, floricanes removal, and summer tipping. Erect cultivars can be further grouped based on the presence or absence of thorns. Erect thorny cultivars include 'Chesapeake,' 'Chickasaw,' 'Choctaw,' 'Darrow,' 'Illini Hardy,' 'Kiowa,' and 'Shawnee.' Erect thornless cultivars include 'Apache,' 'Arapaho,' and 'Navaho.' When dormant pruning erect blackberries, thin the canes to 10 inch spacing in the hedgerow. Then head lateral branches to 12 to 18 inches long. In the summer remove spent floricanes immediately after harvest. For summer tipping employ the same methods as used for black and purple raspberries. Trailing blackberry cultivars include 'Chester,' 'Dirksen,' 'Hull,' and 'Triple Crown.' These cultivars are tied to trellises during the summer. To dormant prune trailing blackberries, thin to 4 to 6 canes per clump. Next, remove the lateral branches on the lower 3 feet of the cane. Then head the remaining lateral branches to 12 to 18 inches in length.

The floricanes of trailing blackberries are removed after harvest. In the summer, tip canes to 6 inches above the highest trellis wire when 3 to 4 inches of the cane needs to be removed. As with black and purple raspberries, the planting will need to be checked several times in the growing season for summer tipping.

**Blueberries:** After planting, the only pruning blueberries need is dormant pruning. For a newly established planting (2 years or less in the ground) thin weak and low branches. Then head the vigorous branches back 4 to 6 inches. Lastly, remove all of the flower buds. Flower buds are typically located on the terminal 3 inches of the canes and are plumper than leaf buds. Leaf buds are located on the lower parts of the branches and are more pointed than flower buds. By removing the flower buds the plant will direct more energy to establishment. A well-established planting can be fruitful for up to 50 years.

For a planting that has been in the ground for 2 years or more, aim for 15 to 20 percent of young canes (less than 1" diameter at the base) and 15 to 20 percent of old canes (2" diameter at the base). The remaining canes will fall somewhere in the middle. A mature plant (after about 6 years in the ground) will have 10 to 15 canes. Pruning consists of thinning damaged and diseased canes and thinning spindly fruiting branches. Then remove 1 to 3 more canes so the plant has 10 to 15 canes. Canes will generally not need to be removed until the plants are 6 years in the ground unless they are damaged, diseased, or the planting is extremely vigorous.

Prune cultivars with an open or spreading habit to be more erect than their tendency and those with erect or upright habits to be more open. Open or spreading cultivars include 'Berkeley,' 'Bluetta,' 'Coville,' 'Weymouth,' and 'Patriot.' Erect or upright cultivars include 'Bluecrop,' 'Blueray,' 'Collins,' 'Darrow,' 'Elliot,' 'Jersey,' and 'Lateblue.'



## Winter Workshop: New Approaches to Control Internal Fruit Feeders

*Source: Fruit Times, Penn State, February 4, 2003, Vol. 22, No. 2*

Please mark your calendar for the Pennsylvania State University workshop on monitoring and managing of internal fruit feeders complex (Oriental fruit moth and codling moth) to be held on March 13, 2003 in Gettysburg, PA. The PSU fruit entomology specialists, together with a guest speaker from Rutgers University, will discuss the newest aspects of managing internal fruit feeders, including the most current research conducted during last few seasons (i.e., mating disruption, pesticide resistance, new pesticides).

The meeting will also provide participants with hands-on experience with pest monitoring and identification. The workshop will be open to growers, consultants, and industry representatives from Pennsylvania and other Mid-Atlantic States. The program and registration forms will be distributed during the 2003 Mid-Atlantic Fruit and Vegetable Convention in Hershey, PA, during winter meetings, and through the fruit industry media (i.e., *Pennsylvania Fruit News*, *Fruit Times Newsletter*). The registration form is also available at the PSU FREC web site at: <http://frec.cas.psu.edu>.

The workshop agenda will include:

1. Newest options for managing the internal fruit feeders complex
2. Oriental fruit moth and codling moth resistance to commonly used insecticides
3. Practical aspects of commercial pheromone mating disruption
4. Fruit loads rejections and problems associated with bin piles
5. Pest identification including hands-on experience with larval and adult specimens
6. Insect monitoring with pheromone traps, trap maintenance, and interpretation
7. Utilization of egg hatch models, degree days, and thresholds for proper timing of control activities
8. Biology and behavior of Oriental fruit moth, codling moth, and lesser apple worm.

The workshop will be held at:

Adams County  
Agricultural and Natural Resources Center  
670 Old Harrisburg Road  
Gettysburg, PA 17325  
Phone: 717-334-6271

The workshop registration deadline is Friday, February 28, 2003.

## Apple Growers Receive \$94 Million in Assistance

*Source: USApple, via Tom Sachs, Executive Director, OFGS and OFPGA*

The U.S. Department of Agriculture has begun releasing funds totaling \$94 million for apple market loss assistance payments for losses sustained during the 2000 apple crop year. The \$94 million was awarded to the U.S. apple industry as a part of the farm bill passed in May 2002. The funds are specifically designed to offset a portion of the devastating losses suffered during the 2000 apple crop due to low market prices caused by economic losses and foreign competition.

"We are extremely pleased to bring this reprieve to apple growers who suffered serious economic stress in the 2000 crop year. Congress recognized the deep crisis facing the apple industry and provided this temporary assistance to growers who operate without traditional farm program support," said U.S. Apple Association (USApple) President and CEO Nancy E. Foster, whose group spearheaded efforts to include the apple assistance provision. "This economic relief comes none too soon for America's apple growers, many of whom have struggled over the past few years."

This \$94 million is in addition to two other market loss assistance payments advocated successfully by USApple, approved by Congress, and signed into law by the President. A total of \$175 million was approved as part of the 2001 and 2002 agricultural appropriations acts, with \$75 million in FY 2002 and \$100 million in FY 2001. Thus, USApple's efforts generated a total of \$269 million in direct assistance for apple growers over the past three years.

America's apple growers are experiencing the worst economic losses in more than 70 years, having lost nearly \$1.7 billion since 1996, including an estimated \$700 million over the past two years, according to U.S. Department of Agriculture statistics.

USApple works to build profitable opportunities for all segments of the U.S. apple industry through its public affairs, public relations, and industry information programs.

## Preliminary Monthly Climatological Data for Selected Ohio Locations, January, 2003

Weather Station Location	Monthly Precip	Normal Monthly Precip	Avg High	Normal High	Avg Low	Normal Low	Mean Temp.	Normal Mean
Akron-Canton	1.80	2.49	25.3	32.8	13.0	17.4	19.1	25.1
Cincinnati	1.66	2.92	31.0	38.0	16.9	21.3	24.0	29.6
Cleveland	1.98	2.48	27.0	32.6	15.4	18.8	21.4	25.7
Columbus	1.65	2.53	28.8	36.2	16.5	20.3	22.6	28.2
Dayton	1.07	2.60	27.6	33.6	13.8	19.0	20.7	26.3
Fremont	0.76	1.79	27.7	32.0	10.0	16.2	18.9	24.1
Kingsville	1.12	2.00	26.8	31.8	15.2	17.1	21.0	24.5
Mansfield	1.32	2.63	25.0	32.4	12.4	16.2	18.7	24.3
Norwalk	1.52	1.90	25.9	32.5	13.6	16.7	19.8	24.6
Piketon	1.31	3.40	32.4	39.5	18.0	20.8	25.2	30.1
Toledo	1.29	1.93	27.5	31.4	13.6	16.4	20.6	23.9
Wooster	1.84	1.95	27.5	34.9	13.2	18.6	20.3	26.7
Youngstown	1.63	2.34	25.0	32.4	13.5	17.4	19.3	24.9

Temperatures in degrees F, Precipitation in inches

**Records set:** Fremont, 27<sup>th</sup> -14F, 30<sup>th</sup> F; Mansfield, 27<sup>th</sup> -10; Youngstown, 27<sup>th</sup> -5F

**Record tied:** Cincinnati, 27<sup>th</sup> -11F; Kingsville, 30<sup>th</sup> -4F;

*Table Created by Ted W. Gastier, OSU Extension from National Weather Service, OARDC and local*

*data*

---

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](mailto:gastier.1@osu.edu)

---

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.

Copyright © The Ohio State University 2003

All educational programs conducted by Ohio State University Extension are available to clientele on a nondiscriminatory basis without regard to race, color, creed, religion, sexual orientation, national origin, gender, age, disability or Vietnam-era veteran status.

Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension.

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

---

| [Back](#) |