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# Kentucky Fruit Facts

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February/March 2006 (2&3/2006)

Fruit Facts can be found on the web at: <http://www.ca.uky.edu/fruitfacts/>

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John Strang, Extension Fruit Specialist, Editor  
Karen Shahan, Administrative Assistant

## Fruit Crop News

by John Strang and Tom Priddy, U.K. Extension Fruit and Vegetable Specialist and U.K. Agricultural Meteorologist

All Kentucky fruit crops have received their required number of chilling hours and have completed their rest periods. Once the rest period is completed all that is needed to begin growth are warm temperatures. This year seems to be particularly warm and bud swelling and floral development are a week to 10 days earlier than average. It is still a long way to April 26, my date to reach to avoid late spring freeze damage. So far we have sustained little or no bud damage, but that could change on the evening of March 22. The national precipitation outlook for March and April calls for drier than normal conditions in the extreme southeast, southwest and central plains. This is a consistent response to a weak La Niña and is present, to some degree, among most seasonal forecast tools.

What does all of this mean for Kentucky? Kentucky is expected to experience normal temperatures for the latter part of March through August, according to the latest medium and long-range outlook. Precipitation is forecast to be below normal for the latter part of March and normal through August. However, beyond March, if La Niña conditions continue to develop similar to the strong La Niña



conditions as in 1998, Kentucky could suffer from a very wet spring and very dry June through October. La Niña's impact on Kentucky is difficult to predict as it depends on where the jet stream settles down.

I am saddened to report that Kentucky lost two of its premier fruit growers in February. William (Bill) True of Poplar Grove passed away on February 13 at the age of 71. Bill graduated from the University of Kentucky and taught vocational agriculture at Owen County High School for 27 years. He served in the U.S. Army from 1954 to 1956 and received the U.K. College of Agriculture Distinguished Alumni award in 1999. Bill was named Owen Countian of the year in 2004. Bill taught Sunday school for 45 years and served as a deacon for 42 years at the Poplar Grove Baptist Church. One of his real passions was growing fruit. Tim Hendrick, Carroll County Extension Agent for Agriculture and Natural Resources said, "you won't find a finer person than Bill".

John Creech of Cumberland passed away on February 25th at the age of 75. John was a native of Harlan and one of the first growers to plant and raise apples using the high density system on a large commercial basis in Kentucky. He started Turkey Hollow Nursery and actively grafted and sold trees to many growers over the years. Apples were sold at the Apple Tree, a retail market operated

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jointly with his wife Mary and son Terry on US 119. John had a quiet, easy, thoughtful demeanor and was an outstanding horticulturist with a keen eye for horticultural qualities. He evaluated and selected many apple cultivars for adaptation to the Cumberland area. He found the 'Scarlet Gala' apple mutation, which was patented and sold through C & O Nursery in Washington state. John and Terry planted the high density apple orchard on the top of Black Mountain, the highest point in the state.

Both of these outstanding fruit growers will be missed.

## Upcoming Meetings

**Mar. 23 Blueberry, Blackberry, and Strawberry Production with An Emphasis on Blueberries.** Caldwell County Extension Office, Princeton. Contact Shane Bogle 270-365-2787

**Mar. 24-25 Regional Farmers' Market Summit and Agrotourism Meeting,** Lake Barkley State Resort Park, Cadiz. Contact Janet Eaton 502-564-0260 x 235.

**Mar. 25 Floyd County Farm and Garden Expo.** - Fruit Production for Home Gardeners, Prestonsburg. Contact Anthony Tackett.

**Mar- 27-28 Organic Agriculture Training,** Lake Barkley State Resort Park, Cadiz. Meals and overnight charges will be covered by a grant. Contact Alisha Morris 502-564-4983 x 267 or Mac Stone 502-564-4983.

**Mar. 29-30 Organic Agriculture Training,** Kentucky State University Farm, Frankfort. Meals and overnight charges will be covered by a grant. Contact Alisha Morris 502-564-4983 x 267 or Mac Stone 502-564-4983.

**Apr. 19 Commercial Fruit Grower Meeting,** Bennett's Orchard, Buffalo, KY. See Program Below.

**Apr. 10 Fruit Tree Grafting,** SunRay Orchard on Alpar Lane, Shepherdsville. 6:00 p.m. Contact Darold Akridge 502-543-2257.

**Apr. 20 Fruit Tree Pruning, SunRay Orchard on Alpar Lane,** Shepherdsville. 6:00 p.m. Contact Darold Akridge 502-543-2257.

**Apr. 22 Kentucky Nut Growers' Association Spring Meeting,** Elizabethtown Extension office, Elizabethtown. Contact: Kirk Pomper 502-597-5942, e-mail: kpomper@dcr.net

**Apr. 26 From Kitchen to Market Workshop,** Clark County Extension Office, Winchester. This is for the food entrepreneur. Registration information is located at [http://ces.ca.uky.edu/extension\\_regions/CenRegUpEv/prodtabtomar.doc](http://ces.ca.uky.edu/extension_regions/CenRegUpEv/prodtabtomar.doc)

**Jul. 9-11 American Society for Enology and Viticulture Eastern Section (ASEV-ES) 2006 Annual Meeting,** Rochester, NY

**Aug. 1 UK Horticultural Research Farm Twilight Tour,** Horticultural Research Farm, Lexington, KY. Contact John Strang 859-257-5685; e-mail: jstrang@uky.edu

**Aug. 30-Sept.1 North American Fruit Explorers (NAFEX) and SFF Annual Meeting,** Holiday Inn North, Lexington, KY. Contact John Strang 859-257-5685; e-mail: jstrang@uky.edu

**Sept. 18 Harvesting the Fruits of Your Labor,** SunRay Orchard on Alpar Lane, Shepherdsville. 6:00 p.m. Contact Darold Akridge 502-543-2257.

**Sept. 28 Robinson Horticultural Tour and Farmers' Market Workshop,** Robinson Station, Quicksand. Contact Terry Jones 606-666-2438 x 234..

**Jan. 8-9 Kentucky Fruit and Vegetable Conference and Trade Show,** Holiday Inn North, Lexington, KY. Contact John Strang 859-257-5685; e-mail jstrang@uky.edu

## Looking for A Source of Winegrapes, Posts or Trellis Wire for This Spring?

A misunderstanding over the availability of county cost share funds for planting grapes has caused a drastic over ordering of Traminette, Chambourcin, Frantenac Gris (hybrid) and Sangiovese (vinifera) wine grapes, posts and trellis wire by several Kentucky growers. If you are in the market for any of these items, please contact Jerry Holder at Lovers Leap Vineyard and Winery, Lawrenceburg, KY. Mobile phone: 502-319-2333.

## Sinbar Cleared for Kentucky Strawberry Growers

*by Joe Masabni, UK Extension Fruit and Vegetable Specialist*

Due to some misinformation the 2006 Midwest Grape and Small Fruit Spray Guide notes that sinbar is not cleared for Kentucky grower use. Following several phone calls by Joe Masabni it has been found that sinbar is cleared for use by Kentucky growers.

## Commercial Fruit Grower Meeting

Wednesday, April 19

Bennett Orchard

591 Bennett Rd., Buffalo, KY 42716

James Bennett, Owner

### Program:

All times EST

- 10:00 a.m. Registration
- 10:15 Apple Grower Round Table Discussion  
- Maurice Fegenbush, moderator
- 11:00 Spring Fruit Disease Update  
- John Hartman
- 11:30 Integrated Oriental Fruit Moth Management on Apples and Peaches  
- Ric Bessin
- 12:00 Lunch (available at cost)  
(apx.\$6.00 range) for those that preregister.

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**Preregister for lunch by calling Mary Ann Kelley at 270/365-7541 Ext. 216 between 8:00 a.m. and 4:30 p.m. CST weekdays by Monday April 17 and give her a count for the Commercial Fruit Grower Meeting at the Bennett Orchard.**

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- 1:00 p.m. Tour of Bennett Orchard  
- James and Mike Bennett
- 1:30 2005 Fruit Weed Control Trials Results  
- Joe Masabni
- 2:00 Flowering, Pollination, and Fruit Set  
- John Strang

**Directions From Elizabethtown** (intersection of US 31-W and WK Parkway):

Follow KY 61 (bypassing Hodgenville and going toward Greensburg) for approximately 17 miles to KY 584. (KY 61 will go right at intersection where Hardee's and McDonald's are located, and go left just past Lincoln Birthplace National Historic Site). Turn left onto KY 584. Follow KY 584 for 1.2 miles and turn right onto Bennett Road (across from Mt. Tabor Baptist Church). Bennett Road will fork to left after about 0.2 miles, follow left fork. Bennett Orchard is on right another 0.2 mile.

**Directions From Bardstown** (US 31-E and Bluegrass Parkway exit #21):

Exit onto US 31-E and go approximately 23 miles to downtown Hodgenville. Turn left at stop sign

in downtown Hodgenville and follow US 31-E which junctions with KY 61 at Hardee's –McDonald's intersection. Continue as described above.

### Directions From Campbellsville:

Follow KY 210 from Campbellsville toward Hodgenville, cross LaRue County line and continue 4.8 miles to KY 584. Turn left onto KY 584 and go 2.2 miles to Bennett Road and turn left. Continue as indicated above.

(**Note:** Bennett Orchard and Tommy Bennett Orchard, which are adjacent to each other are not the same orchard.)

## Warm Winter Weather and Primary Bud Survival in Grapevines

by S. Kaan Kurtural, Extension Viticulturist

This winter has been relatively mild in Kentucky and many grape growers (and researchers!) are concerned about the impact of mild winter weather on vine hardiness. In 2005, Kentucky growers had a long growing season and a relatively slow cooling before the fall killing frost and the vines acclimated well. As a result they were ready for the damaging temperatures in winter when they were dormant. In central Kentucky the killing frost occurred on 21 November. The colder it is during the winter the harder the vines are. Thus, with the mild winter we saw this year, the vines did not reach their maximum hardiness. However, it did not get cold enough to cause damage, either. Percent primary bud survival of 19 cultivars was measured in mid-March at the University of Kentucky (Table 1). The mean bud survival rate for the tenderest vinifera varieties were 90%, and 95% percent for the hybrid cultivars, respectively (Table 1).

Temperate zone fruits such as grapevines have to satisfy a certain number of hours of chilling (temperature between 32°F and 50°F) called chilling hours in order to deacclimate and grow again. Chilling hour requirements for grapevines are in between 100 (most vinifera) to 600 (most hybrids) hours and are considered low compared to fruit trees such as peaches that may require 1000 chilling hours with similar cold hardiness to vinifera grapes. Grapevines satisfy their chilling requirements quickly with mild winters such as the one we witnessed this year. Between 21 November 2005 and 10 March 2006, we have accumulated over 1200 chilling hours in central Kentucky (Fig.1). The warming and fluctuations of temperature referred to as

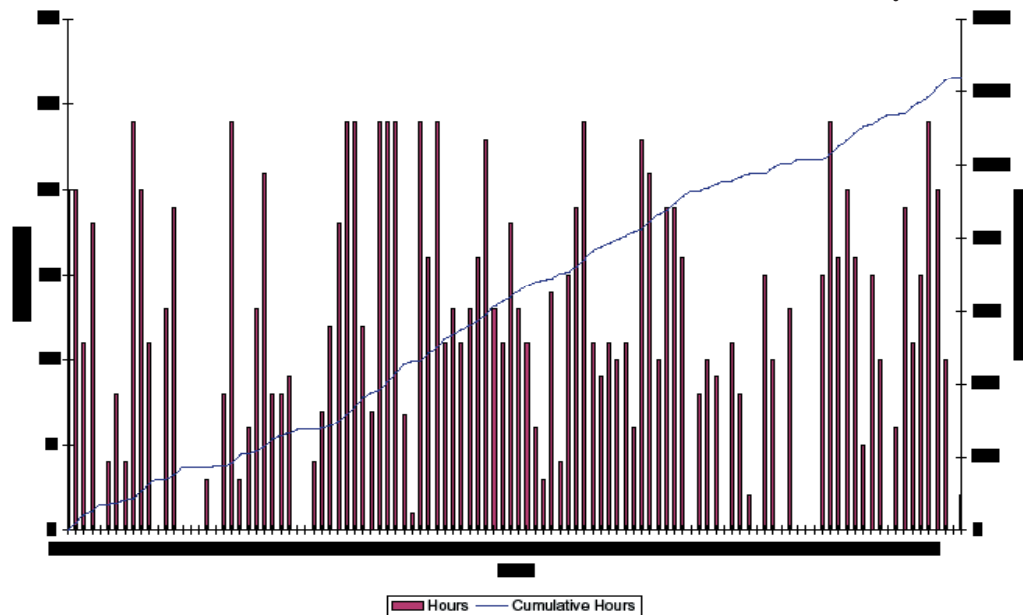
“January thaw” is the limiting factor to the success of our industry in the state as grapevines deacclimate quicker under those conditions (at a deacclimation rate of 1°F chilling hour per HOUR vs. acclimation rate of 1°F chilling hour per DAY) thus sustain more bud damage. A top-down freeze event occurred on 17 February 2006, where the temperature warmed up to 58°F then dropped to 30°F in less than 12 hours in central Kentucky. However, this warming fluctuation did not last long enough to result in excessive damage to the grapevine primary bud tissue as reported in Table 1.

The growers should delay pruning of the tenderest varieties (vinifera) or use double pruning as discussed during the 3 pruning workshops we had in January, February and March. As a rule of thumb, if growers see primary bud damage they should adhere to the following balanced pruning practice to bring their vines back into productivity within the same season:

**If you see between:**

- 0 to 20% primary bud damage: DO NOT ADJUST PRUNING FORMULA
- 25% primary bud damage: LEAVE 50% MORE BUDS than required by the pruning formula.
- 50% primary bud damage: LEAVE 100% MORE BUDS than required by the pruning formula.
- 75% primary bud damage: LEAVE 150% MORE BUDS than required by the pruning formula.

**Figure 1. Chilling hours and chilling hours accumulation (32F to 50F) between 21 November 2005 and 10 March 2006 in central Kentucky.**



**Table 1. Percent primary bud survival of various grapevine cultivars in Clark and Fayette counties in Kentucky.**

Cultivar	Type	Percent primary bud survival <sup>1</sup>
Cabernet franc/3309	Vinifera/Wine	97%
Cabernet sauvignon/3309	Vinifera/Wine	90%
Cayuga	Hybrid/Wine	100%
Chambourcin	Hybrid/Wine	90%
GR7	Hybrid/Wine	94%
Jupiter	Hybrid/Seedless table	100%
La Crosse	Hybrid/Wine	92%
Mars	Hybrid/Seedless table	85%
Neptune	Hybrid/Seedless table	100%
NY 62	Hybrid/Wine	91%
NY 70.0809.10	Hybrid/Wine	95%
NY 73	Hybrid/Wine	80%
NY 81.0315.17	Hybrid/Wine	100%
NY 81.0315.19	Hybrid/Wine	100%
Seneca	Hybrid/Juice/Wine	100%
Seedless Concord	Hybrid/Juice	94%
St. Vincent	Hybrid/Wine	96%
Shiraz	Vinifera/101-14	81%
Vidal blanc	Hybird/Wine	100%

<sup>1</sup> Percent primary bud survival measured on 30 buds on positions 2 to 4 per cultivar on 9 March 2006 by sectioning them free-hand with a razor blade and examining them for oxidative browning.



## Prepare to Manage Apple Scab in 2006

by John Hartman, U.K. Extension Plant Pathologist

Apple scab, caused by the fungus *Venturia inaequalis*, has the potential to be the most common and destructive disease of Kentucky apple orchards. Fortunately, most commercial growers have the tools and expertise to manage this disease well. Apple scab affects several different hosts including: apples and flowering crabapples (*Malus* spp.), hawthorn (*Crataegus* spp.), mountain ash (*Sorbus* spp.), firethorn (*Pyracantha* spp.), and loquat (*Eriobotrya japonica*). Pear (*Pyrus* spp.) is infected by a related fungus, *Venturia pirina*, which causes nearly identical symptoms.

Infections occur on leaves, fruits, blossoms, and leaf petioles and first appear a velvety brown to olive colored spore-filled lesions that turn black with age. Fruit scab lesions develop a corky appearance, and fruits infected early in their development may become cracked and deformed. When apple leaves become infected, they turn yellow and drop.

Overwintering apple leaves provide the spores that initiate primary infections on new growth in early spring. For newly emerging leaves to become infected, spores on the leaf surface must be bathed in a film of moisture for enough time as is necessary for the spores to germinate and penetrate the leaf. The length of time needed depends on the temperature. The temperature and leaf wetness relationship to infection levels is presented in the following table, sometimes referred to as Mills table.

Approximate minimum number of hours of leaf wetting required for primary apple scab infection at various temperatures (Mills table, modified).

Average Temperature (F): 78  
Light infection: 13  
Moderate infection: 17  
Heavy infection: 26  
Lesions visible (days) --

Average Temperature (F): 63-75  
Light infection: 9  
Moderate infection: 12  
Heavy infection: 18  
Lesions visible (days) 9

Average Temperature (F): 60  
Light infection: 9.5  
Moderate infection: 13  
Heavy infection: 20  
Lesions visible (days) 11

Average Temperature (F): 57  
Light infection: 10  
Moderate infection: 14  
Heavy infection: 22  
Lesions visible (days) 13

Average Temperature (F): 54  
Light infection: 11.5  
Moderate infection: 16  
Heavy infection: 24  
Lesions visible (days) 14

Average Temperature (F): 51  
Light infection: 13  
Moderate infection: 18  
Heavy infection: 27  
Lesions visible (days): 16

Average Temperature (F): 48  
Light infection: 15  
Moderate infection: 20  
Heavy infection: 30  
Lesions visible (days): 17

Average Temperature (F): 45  
Light infection: 20  
Moderate infection: 27  
Heavy infection: 41  
Lesions visible (days): 17

Average Temperature (F): 42  
Light infection: 30  
Moderate infection: 40  
Heavy infection: 60  
Lesions visible (days): 17

After primary infections occur in early spring scab lesions develop and conidia are produced in the lesions, providing secondary inoculum for continued infections of new leaves. Leaf wetness and temperature relationships for secondary scab infection are similar to the primary infection values presented in Mills table.

Apple scab management. Apple scab can be managed by doing the following:

- Use scab-resistant varieties where possible.
- Apples considered to be very resistant (scab immune) include: Britegold, Dayton, Enterprise, Freedom, Goldrush, Jonafree, Liberty, Macfree, Moira, Murray, Nova Easygro, Novamac, Prima, Priscilla, Pristine, Redfree, Richelieu, Sir Prize, Trent, Williams Pride.

- Apples said to be resistant, but not immune: Gala Supreme, Sansa.
- Be aware that new and emerging strains of the apple scab fungus have the ability to overcome host tree resistance.
- Use weather instruments and scab infection tables to know when infection occurs.
- Apply fungicides in a timely way. For application timing, refer to U.K. Cooperative Extension Service publication ID-92, Commercial Tree Fruit Spray Guide 2006. Early control of primary infections is essential and will reduce the need for late season disease control.
- According to the fungicide efficacy table listed in ID-92, fungicides such as Captan, Flint, Nova, Pristine, Procure, Rubigan, Sovran, Syllit, and Topsin-M provide excellent scab control while mancozeb, Polyram, Scala, and Vanguard provide good control and Bayleton, Ferbam, Sulfur, Thiram, and Ziram provide only fair control.
- Use a combination of eradicant fungicides such as Nova, Procure, or Rubigan and protectant fungicides such as Captan or Mancozeb.
- Prune to thin out foliage for good ventilation and sunlight penetration.
- Chop up fallen leaves in autumn.
- Be sure sprayer is properly calibrated. Water-sensitive paper hung in the tree can provide useful information on sprayer coverage.

Growers have several apple scab management tasks that need to be done now, before buds swell and new growth begins to emerge. Chop up fallen leaves in the orchard, prune trees to provide better air movement, purchase new trees, acquire needed fungicides, and calibrate the sprayer.

## **Advertise Your Fruit Accurately**

*By Matt Ernst, U.K. Agricultural Economics Extension Associate*

We all know that eating a diet filled with fresh fruits and vegetables is good for you. But a Food and Drug Administration (FDA) action last year demonstrates that fruit marketers must take care when telling their customers just how good produce may be.

Last October, the FDA issued warning letters to 29 companies marketing dried cherries and cherry products. The letters concerned labeling and

promotional violations for health claims advertised on cherry products. The companies cited represented a virtual “Who’s Who” of the value-added cherry industry. They included Eden Foods, Traverse Bay Farms, Payson Fruit Growers, and Chukar Cherries.

The warning letters are available for viewing on the FDA website. The letter to Chukar Cherries, a Washington company that has been profiled in UK’s ag entrepreneurship case study series, shows the kind of claims that the FDA found unacceptable:

“Cherries prevent cancer growth, relieve arthritis and gout pain ...”

“Cherries May Help Fight Diabetes. Cherries may one day be part of diabetes treatment. The sweet and tart versions of the fruit contain chemicals that boost insulin, which helps control blood sugar levels.”

“Cherries may well be an effective remedy for many gout sufferers!”

Most of the producers were cited for claims such as these. According to FDA, these claims make a product fall into the category of a drug. USA TODAY reported that this action surprised many in the cherry industry because the claims used ambivalent terms like “may” and “could”.

This action would obviously impact companies that had printed such health claims on product packaging, for changing packaging is an expensive process. All the companies cited were sellers of dried cherries, candy, and other cherry products.

So how is a grower to get the word out about possible health benefits for their produce? Here are three strategies to consider.

### 1. Only put it in writing if you’re sure that you can put it in writing.

We all know that “get it in writing” is a rule for making final business deals. But putting health claims for your crops in writing—or on your website—may take you into murky territory.

If you’re in doubt about whether you can legally say what you want to say, keep your claims to word of mouth. “We can still talk about it and we hear from people it works,” said one cherry exec quoted in the AP wire story about these letters. “Word of mouth is more important than any website.”

And remember: if you’re launching a value-added product, it never hurts to have a qualified industry consultant and/or attorney review your packaging and advertising. Never cut these costs upfront—changing a packaging design is too expensive, and

an experienced eye that you pay upfront could save you a bundle in the long run.

## 2. Point people to third-party sources

Industry groups for most crops provide plenty of educational resources about health benefits of different crops. Make this educational material available to your customers, rather than risking putting health claims on your website, packaging, or farm advertising. Not only does it protect you from possibly making an illegal claim about your fruit, it saves you the extra work of making your own promotional materials.

The Department of Agricultural Economics maintains a Horticulture and New Crops Marketing website ([www.uky.edu/ag/hortbiz](http://www.uky.edu/ag/hortbiz)). It includes an extensive listing of over 40 fruit and vegetable industry groups. Many of these groups provide health information that can be downloaded from their website, or brochures available at very reasonable prices. You can link directly to this list at: [http://www.uky.edu/Ag/HortBiz/gen\\_groups.html](http://www.uky.edu/Ag/HortBiz/gen_groups.html)

Industry sources like [www.thepacker.com](http://www.thepacker.com) can also keep you apprised of emerging research and general nutritional education campaigns related to produce. Another source of general nutritional information is the USDA's [www.mypyramid.gov](http://www.mypyramid.gov) website.

## 3. Let your fruit sell itself

Truth is, the people who are going to show up at your farm because they believe that your fruit will "cure all" probably already have that idea before they arrive. The beauty of Kentucky fresh fruit and fruit products is that they are already delicious. Any health benefits are likely just a bonus to a product people are already demanding.

Let your fruit sell itself by providing the highest quality, safest produce possible. Then your customers can reap all the rewards of eating your crops, including their health benefits.

Editorial Note: This article is not intended to provide or replace legal advice.

## **EPA Publishes 2006 Critical Use Exemptions for Methyl Bromide**

The 2006 Critical Use Exemption (CUE) Final Rule was signed by the EPA Administrator on January 30, 2006. These exemptions include the Quarantine and Preshipment (QPS) exemption, to eliminate quarantine pests, and the Critical Use Exemption (CUE), designed for agricultural users with no technically or economi-

cally feasible alternatives. Exemptions cover 15 crops or uses, including tomatoes, strawberries, peppers, cucurbits, orchard replants, and post-harvest uses. The request represents a continued reduction from earlier years, due to the introduction of alternatives into the marketplace and other factors.

The Final Rule, which becomes effective on February 1, authorizes about 17.6 million pounds of methyl bromide for critical uses during 2006, about 25 percent of 1991 baseline levels. The text of the rule is available at [www.epa.gov/ozone/mbr](http://www.epa.gov/ozone/mbr)

[http://www.fda.gov/foi/warning\\_letters/g5533d.htm](http://www.fda.gov/foi/warning_letters/g5533d.htm)  
<http://www.cbsnews.com/stories/2005/10/28/health/main990706.shtml>

## **GARDENDATA.ORG has The Answers**

*by Rick Durham, Extension Consumer Horticulturist*

Got a question that needs a gardening expert? Then GardenData.org may be just the answer.

The new virtual garden adviser was developed by the University of Kentucky Cooperative Extension Service to provide gardeners and consumers with a reliable source of updated horticultural information via the Internet.

The Web site has a database of frequently asked gardening questions that have answers from Extension professionals. The site allows you to search the database of some 1,200 questions already on the site or to ask a question if you can't find the answer you're looking for.

Information on flowers, fruits, trees and shrubs, houseplants, vegetables, turfgrass, watergardening and more is at your fingertips. Many of the answers also list publications available for further information on the topic.

If questions are asked that do not already have answers on the site, they are forwarded to the appropriate specialist and consumers can expect an answer within 72 hours.

Web users are also reminded that they can visit their local Cooperative Extension Service office if they need to have plants tested for diseases or if they need an immediate answer.

Browse through the site and ask those questions about what may have plagued your tomatoes or roses this past year. Then you will be ready to head off those problems before they can get a foothold in your garden.

For more information, contact your local Cooperative Extension Service office.

## **Insecticide Formulation Changes**

*by Ric Bessin, UK Extension Entomologist*

Two insecticides are in the process of changing formulations, these are Admire and Assail. Admire 2 F, a vegetable insecticide is changing from a 2 F to a 4.6 Pro formulation. It will be very important for growers to note that this is a major change in concentration between the two formulations. The 2 F has 2 pounds of imidacloprid per gallon while the 4.6 Pro has 4.6 pounds of imidacloprid per gallon. The result is that it will take significantly less formulated material to mix an equivalent solution.

The other product, Assail, is changing from a 70 WP to a 30 WDG. This is also a change in concentration, but with a dry formulation. The 70 WP is a 70% wettable powder, while the 30 WDG is a 30% water dispersible granule. In this case it will take more of the new formulation to mix a solution equivalent to that made from the old formulation. As always, read to the label carefully to understand any differences between the old and new formulations.



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