



Berry/Vegetable Times

November 2006



UF UNIVERSITY of
FLORIDA
IFAS Extension




FLORIDA AG EXPO

2006 Calendar of Events

Dec. 8 & 9, 2006 Florida AG Expo. GCREC, Balm. Equipment displays and demonstrations, field variety trials for viewing, educational sessions, vendor displays and more. CEUs available. Watch more details.

Dec. 12, 2006 Pesticide License Testing. Hillsborough County Extension Office, Seffner. 9 am. For more information call Mary Beth Henry, 813-744-5519, ext 103.

Dec. 15, 2006 Last sign up day for Hillsborough County Ag Stewardship Program. See article in newsletter.

Don't miss the first Florida Ag Expo to be held on December 8-9 at the Gulf Coast Research & Education Center in Wimauma. The idea for the Expo was first proposed by growers in West Central Florida to provide a smorgasbord or one-stop-shopping event for growers. Presented by Florida Grower magazine, the University of Florida, the Florida Fruit and Vegetable Association, Florida Tomato Committee and Florida Strawberry Growers Association, this 2-day event will not only feature presentations but running equipment showcases, variety trials, field demonstrations and an expanded trade show. Over 62 vendors will be at the show. This year's educational sessions will focus on tomatoes, peppers and strawberries, but many of the displays and equipment demonstrations will be applicable to other vegetables. An agenda for the educational sessions is on Page 2. Pesticide license CEUs and CCA credits will be given at the educational session. Registration is free and can be done online at www.floridagrower.net/agexpo/. Please pre-register so they will have a headcount for free breakfast and lunch on Friday.

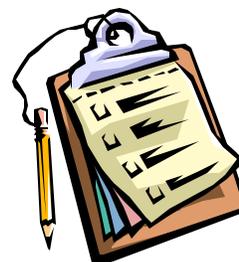
Alicia Whidden, Hillsborough County
Phyllis Gilreath, Manatee County

A monthly newsletter of the University of Florida IFAS

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From Your Agent... Pesticide Spray Recordkeeping and Central Posting Records

This month pesticide license holders should have received a packet of information from the Dept. of Agriculture and Consumer Service. The information included the 2006 Pesticide Applicator



(Continued on page 2)

Florida Ag Expo Presentations

Friday, Dec. 8	
8:45 a.m.	Welcome by Jack Rechoigl, Jimmy Cheek, and Jay Taylor
Session Theme:	Farming in Today's Regulatory Environment
9 a.m.	Food Safety and the Vegetable Industry — <i>Craig Mowry, Glades Crop Care</i>
9:20 a.m.	Methyl Bromide: What's in Store for 2007 and Beyond — <i>Mike Aerts, FFVA</i>
9:40 a.m.	Break
10 a.m.	Labor Costs and Their Impact on the Vegetable Industry — <i>John VanSickle, UF/IFAS</i>
10:20 a.m.	How to Survive a WPS audit — <i>Alicia Whidden, UF/IFAS</i>
12:00 p.m.	Lunch — Guest Speaker: Commissioner FDACS Charles H. Bronson
Session Theme:	Production and Pest Management
2 p.m.	Irrigation/Fertilizer Management for Mulched Crops — <i>Eric Simonne, UF/IFAS</i>
2:20 p.m.	Disease Update on Tomatoes and Peppers — <i>Pam Roberts, UF/IFAS</i>
2:40 p.m.	Disease Update on Strawberries — <i>Natalia Peres, UF/IFAS</i>
Saturday, Dec. 9	
8:45 a.m.	Welcome by Congressman Adam Putnam (Invited)
Session Theme:	Pest Management
9 a.m.	Whitefly and Other Vegetable Insects — <i>Dave Schuster, UF/IFAS</i>
9:20 a.m.	Insects on Strawberries — <i>Jim Price, UF/IFAS</i>
9:40 a.m.	Nematodes 101 — <i>Joe Noling, UF/IFAS</i>

**Register online at www.floridagrower.net. Or call 407-539-6552 for more information.
Reserve your spot for this first-ever event!**

(Continued from page 1)

News, a pamphlet on pesticide recordkeeping and a sample form for pesticide recordkeeping. The pamphlet explains what information you need to keep for your pesticide records and that you must retain the records for 2 years. This sample form is fine for spray recordkeeping but must be modified if you will be using it for posting your spray activities on your Central Posting location. To be in compliance for Worker Protection Standards the following items must be listed on the Central Posting location for pesticide spray activity for each farm.

- ?? Date and time you finished spraying
- ?? Treated area- use designation workers will know, such as Block 1, 2, etc.
- ?? Pesticide Brand Name for every product

used in spraying

- ?? Active Ingredient of each product
- ?? EPA registration number for each pesticide
- ?? Restricted Entry Interval- in hours such as 0, 12, 24, etc. date and time REI expires

Be sure to leave your Central Posting records up for at least 30 days after the REI has expired. If you are spraying several chemicals together in the tank and there are different REIs the longest REI is the one to be used for allowing workers back in the field.

Make sure you have the correct information recorded for each type of pesticide record.

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Hillsborough County Approves Agriculture Stewardship Program

Stephen Gran, Manager – Agriculture Industry Development Hillsborough County Economic Development Department

In an effort to encourage economic viability for the future of agriculture in our community, Hillsborough County Commissioners unanimously approved the Agriculture Stewardship Program at their September 7th regular meeting.

This voluntary program, proposed by the Agriculture Industry Development Program, recognizes the benefits and services that agricultural land provides to the community through monetary grants for farmers.

Any landowner that has current Agriculture Use Classification (Greenbelt) as determined by the Hillsborough County Property Appraiser's Office is eligible to participate in the program. The landowner must first complete an application to determine eligibility. Once eligibility is determined,

the landowner enters into an Agriculture Stewardship Agreement with Hillsborough County, which prohibits the landowner from converting to non-agricultural use for the length of the 10-year contract. In return, the landowner receives an annual Agriculture Stewardship Grant for 10 years.

The amount of the Agriculture Stewardship Grant is based on a formula that takes in account the taxable value of Agriculture Use Classified (Greenbelt) land and agriculture production related structures on the farm.

With an annual impact of \$1.4 billion, agricultural lands not only provide important economic benefits to the local community, but also provide numerous other benefits, including wildlife habitat, wetlands, stormwater retention, aquifer recharge; connects environmentally sensitive areas; and serve as a buffer between urban and

undeveloped areas. However, historically the cost of providing these benefits has been borne by the farmers while the community benefits. The Agriculture Stewardship Program recognizes the benefits or services that agricultural land provides to the community and rewards the farmer for providing them.

This new program will assist the agriculture industry in remaining both productive and profitable and will ensure that the aesthetic and environmental benefits provided by agricultural open space will be maintained.

The sign-up period for this program is from November 1st – December 15th for the 2007 program year. For more information regarding the Agriculture Stewardship Program, please contact Stephen Gran, Manager-Agriculture Industry Development, at (813) 272-5506.

Addition to Switch label

Syngenta has included powdery mildew on the Switch label. Now for strawberry disease control Switch is labeled for anthracnose, botrytis and powdery mildew.

Southern Blight in West Central Florida

P. Gilreath, Manatee Co., A. Whidden, Hillsborough Co., K. Pernezny, Belle Glade

Southern Blight (*Sclerotium rolfsii*) has been more prevalent in West Central Florida tomato fields this fall than in the past, and has shown up not only on wet row ends as is often the case, but also in drier areas of the field and on older plants than we usually see it. The culprit was likely the prolonged rain earlier this season that some farms saw daily for 2-3 weeks straight. This disease prefers wet and warm (80-95°F) conditions and like

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many diseases, is just waiting for the right host and environmental conditions. The initial symptom that most will notice is wilting of the plant. Under moist conditions, white mycelium develops on the stem (Figure 1) and after a few days the sclerotia, mustard seed size tan to reddish-brown overwintering structures, may appear. The fungus also readily goes to the fruit, causing a massive soft rot. Southern blight has many hosts and other than removing diseased plants, little can be done during the season. Even removing plants is not completely effective as often masses of sclerotia are on the soil as well as on the plant stem. What about next fall for those who are going back with tomatoes on this same ground? Rotation to corn, sorghum, other grasses (including pasture) or resistant plants can help as can eradicating weeds. This pathogen also favors acidic soils but liming to levels that are very effective results in soil too alkaline for growth of many crops. Deep plowing to bury plant residue may help. Sclerotia do not survive as well when buried at least 6 inches deep. Also, organic debris remaining on the soil surface offers a food base for this fungus. In smaller fields at first sign of disease, another alternative mentioned in the literature is using a propane torch for roguing, aiming the flame at the soil surface and lower 10 inches of the stem. Growers should make note of fields that are particularly affected this season, and ensure good fumigation next fall. If trying new alternatives, these fields would be good choices for those alternatives with higher levels of chloropicrin. Southern Blight can also infect strawberry plants. Years ago a field that was set early and the temperature was very hot had a high incidence of Southern Blight in the wetter parts of the field. It has also been found in one field this year that was not fumigated.



Figure 1. Mycelial growth on tomato stem.

Restricted Pesticide License Study Books Now Available At Extension Office

Study books for state pesticide licenses are now available for sale at the Hillsborough County Extension office in Seffner. Please contact Mary Beth Henry at 813-744-5519, ext. 103 to be sure the books you need are in stock and for prices.

2006-07 Winter Weather Watch Begins November 15, 2006

Chris Oswalt, Hillsborough and Polk Co. Extension

Why spend your precious time chasing down the latest winter weather forecasts on the Internet, television or other sources. Let the "Winter Weather Watch" work for you. Get accurate and up to date freeze forecast information from a source you can trust.

The Winter Weather Watch program provides a toll-free number that subscribers can call and get their local forecasts of interest on a daily basis. This year we will be using the same menu type phone forecast system that allows you to get the information you need without listening to all the forecast

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products at one time. We also provide 6-10 and 8-14 day outlooks, a weekly outlook from Fred Crosby, citrus leaf freezing temperatures and special weather narratives from Fred Crosby during critical freeze events. In addition to the forecasts you will also receive an updated “Winter Weather Watch” manual.

The service is totally funded by subscribers and has been provided to Florida growers for over 40 years. The cost is \$100. So don't be left out in the cold sign up today by calling 863-519-8677 ext. 111 and ask Gail for a registration form.

National Weather Service Predicts El Nino Conditions

Chris Oswalt, Hillsborough and Polk Co. Extension

The National Weather Service El Nino outlook update issued on October 5, 2006 indicated a steady increase in sea surface temperatures in the equatorial Pacific. The sea surface temperature has exceeded the + 0.5 °C threshold necessary to be considered an El Nino year/winter. There are 4 zones of interest in the equatorial Pacific (Fig. 1) from which these predictions are made. In all zones the sea surface temperature has exceeded 0.5°C with zones 1+2 and 3 approaching 1.0°C (Fig. 2). The presence of El Nino should be considered favorable for Florida in large part to the stronger than normal Pacific jet stream that will provide for a more zonal upper airflow (west to east) over the peninsular. Implications of this pattern generally result in a decrease in hurricane activity. The recent hurricane forecast update predicts fewer hurricanes reflect the incorporation of this new information. This also translates into an above average winter rainfall pattern. The increases in clouds associated with this rainfall will result in a prediction for a cooler than average winter. This is not an absolute prediction for a freeze, but a reduction in overall average

winter air temperature. Other crop seasons that have had similar sea surface temperatures leading up to this winter were 1951-52, 1963-64, 1976-77 and 2002-03. Minimum temperature records for Tampa, Lakeland and Ft. Myers indicated the following results on the number of nights when temperatures dipped below 32°F (table 1). Looking back on winters that are considered El Nino, the rainfall patterns indicate that above average rainfall started in December and continued through March (Tampa, Lakeland and Ft. Myers). Average monthly air temperatures for these same locations during the winter were lowest during January and February compared to the historical average.

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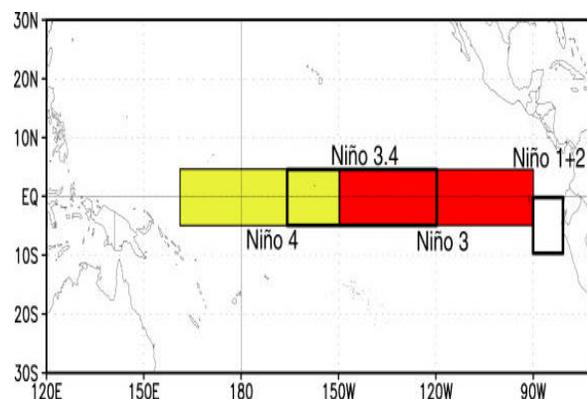


Fig. 1. Map of El Niño zone along the equatorial Pacific.

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products names and does not signify that they are approved to the exclusion of others of suitable composition. Use pesticides safely. Read and follow directions on the manufacturer's label.

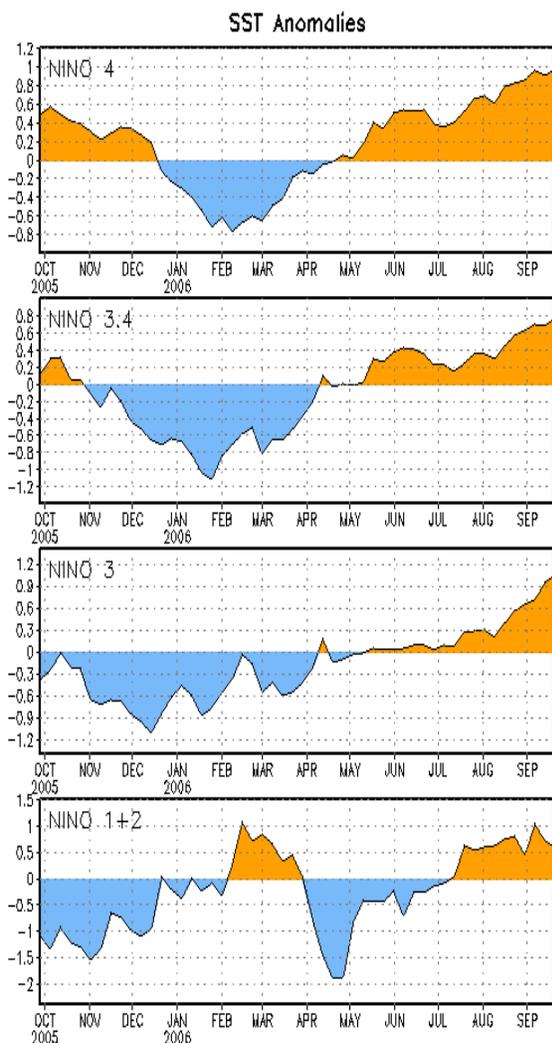


Fig. 2. Degrees Celsius from average of sea surface temperature for the equatorial Pacific.

Berry specialist from Canada to spend 2006-07 season at GCREC

Craig Chandler

Dr. Adam Dale, a leading strawberry and raspberry researcher for over 20 years, is on sabbatical leave from the University of Guelph in Ontario where he is a professor of horticulture. Adam was born and raised in England and obtained B.Sc. and Ph.D. degrees in Botany from the University of Sheffield. He then worked for eight years at the Scottish

Crop Research Institute, breeding raspberries and black currants with the renowned plant breeder Dr. Derek Jennings. In 1983, Adam became head of the berry program for the Horticulture Research Institute of Ontario. His research and development program is based at the Simcoe Research Station, which is about 80 miles southwest of Toronto. Dr. Dale has released 11 strawberry cultivars during his career. His 'Governor Simcoe' was the standard fresh market strawberry cultivar in Ontario for a number of years, and currently his 'Sapphire' and 'Serenity' releases are enjoying moderate success. A major emphasis of Adam's strawberry breeding program over the last six years has been development of glyphosate resistant strawberries (using traditional hybridization and selection techniques). The matted row, perennial cultural system is the dominant method of growing strawberries in Canada and the northern U.S. Weeds tend to be big problem in this system, and glyphosate resistant cultivars, if available, could be a boon to northern latitude strawberry production. In addition to his research and development work on strawberries, Adam coordinates a program for the Ontario Berry Growers Association that produces high quality foundation stock for Ontario strawberry nurseries, including the nurseries that supply transplants to Florida growers. As for raspberries, Dr. Dale conducts cultural management studies, emphasizing year round production, and is a leading expert on the greenhouse culture of this high value crop.

Because of the strawberry connection between Ontario and Florida, Adam and I have been cooperating on research and development projects of mutual interest almost since I started working at GCREC in 1987. Currently we are working together on the development of day neutral cultivars that will have high early season yields in west central Florida, and also be adapted to

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commercial production in Ontario.

Adam is living in the Brandon-Riverview area with his wife, Diana, who is a special education teacher in the primary grades. The Dales have three grown children. Adam is an active member of Rotary International, and is a certified soccer referee in Ontario.

Insecticides for Early Season Armyworms in Strawberries

Jim Price and Curtis Nagle

Armyworms are particularly important pests during the early strawberry season and their episodes usually require insecticides for remediation. Fortunately there are several good insecticides that are practical under the common strawberry culture of Florida, but their most effective use requires careful planning.

One insecticide, relatively new to strawberries, is methoxyfenozide formulated as Intrepid[®]. This insecticide can be used up to an ample five times per season, but the label specifies that the applications be made only to young crops and small plants in the early season. The rotational crop restrictions are a fairly accommodating 7 days for crops not on the product label and no restrictions for those that do appear on the label. Methoxyfenozide is very compatible with the use of *Phytoseiulus persimilis* predatory mites.

Formulations of *Bacillus thuringiensis* (*B.t.*) for armyworms are effective, are very compatible with strawberry culture including the use of *P. persimilis* predators, and do not restrict numbers of applications. *B.t.* should be applied to armyworms when they are small.

Spinosad formulated as SpinTor[®] may be applied up to five times per season. This product is effective for armyworms, but also is a very effective for thrips. Growers who

anticipate thrips problems in the late winter and early spring should consider withholding some uses of spinosad on armyworms in favor of thrips later. Spinosad should not be applied to fields where *P. persimilis* predators have been released, but its use up to 1 week of predator release is acceptable.

Methomyl formulated as Lannate[®] is one of the most widely used insecticides for armyworms. It is quick acting and effective and up to 10 doses can be used. *P. persimilis* predators should not be released within 4 weeks of the last use of methomyl. Methomyl is very harsh on naturally occurring beneficial parasites and predators of pest insects.

Two pyrethroids, bifenthrin formulated as Brigade[®] and fenpropathrin formulated as Danitol[®], are available for armyworm control. These products are effective but numbers of applications are restricted. Pyrethroids also are very harsh on naturally occurring beneficial parasites and predators of pest insects and *P. persimilis* should not be released within 2 months of the use of a pyrethroid.

Other products are available but are not widely used in Florida strawberry production. Each of the products mentioned, with the exceptions of the two pyrethroids, are from different mode of action classes (http://www.irac-online.org/documents/moa/MoAv5_1.doc). To reduce the chances for insecticide resistance to develop in armyworm populations, growers should apply products of an identical mode of action for no longer than one life cycle of the armyworm (about 1 month) before rotating to another mode of action. All practical modes of action should be used before returning to one previously used.

Weekly scouting of strawberry fields and the informed use of insecticides should protect Florida strawberries from the armyworms that can cause serious losses. Without this attention to armyworms, yields, particularly the most valuable early and mid-season yields, can be significantly reduced.



AGRICULTURE PESTICIDE COLLECTION DAY

This agriculture pesticide collection program is a safe way to dispose of cancelled, suspended, and unusable pesticides at no cost to the farmer.

FREE PESTICIDE DISPOSAL

**HILLSBOROUGH COUNTY AGRICULTURE
OPERATIONS ONLY**

**Tuesday, December 12, 2006
8:00 a.m. – 2:00 p.m.**

**Location: EQ Florida
7202 East 8th Ave., Tampa, Florida
Enter at the Corner of 8th Ave. and Orient Rd.**

Partners and Sponsors

Hillsborough County Agriculture Industry Development
Economic Development Department
Hillsborough County Solid Waste Management Department
Hillsborough County Cooperative Extension Service
Environmental Protection Commission of Hillsborough County
EQ Florida

For more information contact:

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