



Berry/Vegetable Times February 2007



From Your Agent...
A Question on Notifying Workers for WPS

Calendar of Events

March 6, 2007 Spring Florida Blueberry Growers' Association Meeting, GCREC. For more information see meeting schedule in newsletter.

March 13 and April 10, 2007 Pesticide License Testing, Hillsborough County Extension Office, Seffner. 9 am. For more information call Mary Beth Henry, 813-744-5519, ext 103.

March 17, 2007 Small Farms Livestock Production Conference. Manatee County Extension Office, Palmetto Fl. 8:00-4:00. \$20 by Feb. 16 & \$30 after Feb. 16. For more information, contact Pat Hogue, 863-763-6469.

April 28, 2007 Small Farms Conference. Sarasota County. For more information, contact Robert Kluson, 941-861-9808.

A question has been asked about notifying workers of a treated area- Can you post the treated area because you feel it better informs your workers of the area that has been treated even if the label does not call for posting- only for orally warning workers?

The answer is yes you can post signs around the treated area even if the label says only oral warnings need to be given. If the label requires oral and posted notification you will have to do both methods. It always is a good plan to tell your workers where the treated area is and to obey the signs that are posted. If you are going to post treated areas as the main method to communicate to workers what areas have been treated it is a good idea at the **beginning** of the season or when you start using posting to tell them which method of

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The Season in Review: Testing and Transition to Methyl Bromide Alternatives

Joe W. Noling, Alicia Whidden², and Phyllis Gilreath³
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In our last newsletter article, as we have in many previous, we talked about the phase-out of methyl bromide. We discussed Critical Use Exemptions (CUE) and how the amount of new production of methyl bromide is reduced each year and how the price and formulations with chloropicrin are changing to reflect scarcity. So again in this regard, there have been new developments. For example, the price of methyl bromide has increased again to \$3.75 lb for a formulation of 67/33 as of January 1, 2007. Assuming a 200 lb per acre rate, this now equates to a treatment cost of \$750 per acre. With an

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increase in price, the manufacturers and distributors also are promoting the sale of only a 50/50 formulation of methyl bromide and chloropicrin to growers. Clearly, things are not the same, and with the increased chloropicrin content, we can expect a loss of overall weed control, particularly of tough to kill weeds like nutsedge.

In addition to a cost increase from last year, there were instances of statewide shortages of CUE stocks of methyl bromide reported in November 2006. Growers who wanted to use methyl bromide to lay plastic in November were forced to wait to purchase 2007 CUE stocks of methyl bromide in January. This was the first evidence we are aware of where supply could not satisfy demand, and there is no reason not to expect similar scenarios to reoccur in the future. In some agricultural areas of the southeast, current methyl bromide pricing is finally exceeding what growers are willing to pay, and broader trialing and implementation of alternatives is finally beginning. In Georgia for example, vegetable growers are fairly widely trialing Telone, Chloropicrin, and Vapam. With new application equipment, Vapam is being shallowly applied through a series of minicoulters to the surface of a preformed bed (Figure 1). We think growers should consider the above fumigant combinations and application procedures in planning for the fall fumigation season, to not only purchase early but to seriously begin the trial of alternatives to replace methyl bromide. We hope to receive a federal grant which will allow us to field test and demonstrate the performance of various methyl bromide alternatives on 40 farms this coming year.

This past fall we also learned that methyl iodide, as a 50% formulation with chloropicrin, would be initially priced at \$10 per pound, using a corporate recommended rate of 150 to 175 pounds per treated acre under high barrier, gas impermeable plastic mulch. Arysta Life Science, the manufacturer

of Midas[®] received a nationwide experimental use permit (EUP) for field testing of the new fumigant without requirement for crop destruction. The EUP expires in August or September and the company is hoping for federal registration sometime in Fall 2007. To view the performance of Midas[®], using different rates and numbers of injection knives or shanks, growers are encouraged to view the research plots at the FSGA research farm in Dover before seasons end. Plots are identified by signs to facilitate self-guided tours. We also need to express our gratitude to John Stickles and George and Jaime Garcia for a separate but duplicate Midas test, and to Ronnie and Adam Young (Figure 2) for all their hard work in putting out the FSGA research trials. Industry support and community service like this should not go unnoticed or unrewarded.

This past season, with product donations from Dennis Sutton of Pliant Corporation, and funds from a USDA CSREES grant, 80 rolls of a high barrier, methyl bromide impermeable plastic mulch film (Pliant *BLOCKADE*[®]) were distributed to 20 individual Plant City – Dover strawberry growers. Most growers received 2 to 4 rolls of the plastic mulch. In return and as a stipulation of the gift, growers were required to reduce their methyl bromide application rate by 25 to 75% with the high barrier *BLOCKADE*[®] mulch. Unfortunately, not all did. For those who did, we appreciate your participation in the demonstration trials. As we approach the end of the season, we will conduct formal exit surveys of these fields and ask growers to personally rate any differences in crop growth, strawberry yield, or pest control efficacy that occurred with the different mulch and fumigant rate treatments used in the field. We will report these findings in a future issue of the newsletter. Preliminary observations do seem to indicate no problems with installation, in fact many

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growers thought the *BLOCKADE*[®] looked and laid better than their standard. There was also no reduction of growth or pest control when methyl bromide rates were reduced by as much as 50 percent with use of the *BLOCKADE*[®] film. Currently the roll price of these high barrier plastic mulch films is about twice that of the standard 1 mil polyethylene mulch. But when you can't get all the gas you need or can't afford the price of gas, this is surely a way to resolve cost savings with methyl bromide rate reductions. Growers might also want to get used to the idea of the high barrier mulch because EPA reregistration of the alternative fumigants (chloropicrin, Vapam, Kpam), will ultimately demand use of these films to reduce buffer zone requirements to tolerable levels. More about this in the future as the EPA reregistration process continues. Be prepared: It is not likely to be pretty or painless.

(Continued from page 1)

notification will be used on your farm. Remember when using posting place the signs at all points that workers will be using to enter the area. Even though you are posting for a label that only requires an oral warning you will still need to observe the timing restrictions on having the signs up. Signs can be posted no earlier than 24 hours before the scheduled application and are to stay up during application and for the entire restricted-entry interval (REI). Signs are to stay up no longer than 3 days after the end of the REI and if there is no REI they are to stay up no longer than 3 days after the end of the application.

Workers are to stay out of the treated area while signs are posted unless they are trained and equipped with personal protection equipment for early-entry. Be sure your signs are in good condition and legible.

If you would like to read the rules on Notice about Applications in the official document on WPS you can download it from the internet. This section is pages 33-37. Go to <http://www.epa.gov/agriculture/htc.html>.

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Daylight Savings Time Returning Earlier!

This year Daylight Savings Time lasts 4 weeks longer. Instead of starting the first Sunday of April it will start the second Sunday of March which will be March 12. Instead of ending the last Sunday of October it will not end till the first Sunday in November.



Temperature pattern in west central Florida this winter has likely been a significant factor in the development of fruit quality problems

Steve MacKenzie and Craig Chandler

Although normal temperatures occurred in October and most of November, average daily temperatures from approximately November 26th to January 23rd were consistently 5 to 10 degrees Fahrenheit higher than what would be expected for this time of year (Figure 1). Also, unlike what normally occurs in December and January, the directional trend of the temperature over time was actually flat or rising as opposed to declining. One effect of the flattened or increasing temperature trend was higher than normal early season yields.

During much of December and early January, favorable temperatures (around 70 degrees) coupled with extended leaf wetness periods, created ideal conditions for grey mold infections to take place. Because the grey mold pathogen, *Botrytis cinerea*, infects fruit at flowering, infections in December and January were

responsible for considerably high levels of grey mold in late January and early February. Growers also reported high levels of misshapen fruit in late January and early February. High temperatures in late December and early January, when these fruit were flowers, may have contributed to the high incidence of misshapen fruit. However, the temperatures during this period were not outside of the range seen during flower and fruit development in late November and early December in typical years.

Two other possibilities might explain the misshapen fruit. During January conditions were very conducive for development of powdery mildew, and disease symptoms were especially bad in the later half of the month and into early February. In GCREC trials it appeared that there was a higher proportion of fruit that were misshapen in plots that had a higher incidence of powdery mildew. Also, fruit harvested during this period tended to be tail end fruit, which precede the ripening of primary fruit from the main crop. Typically, tail end fruit are smaller and of poorer quality. The gap period between the early and main crops occurred simultaneously with a sudden drop in temperature, extending the period over which these poorer quality fruit were harvested. This period would coincide with the period from January 24th to February 11th shown in Figure 1.

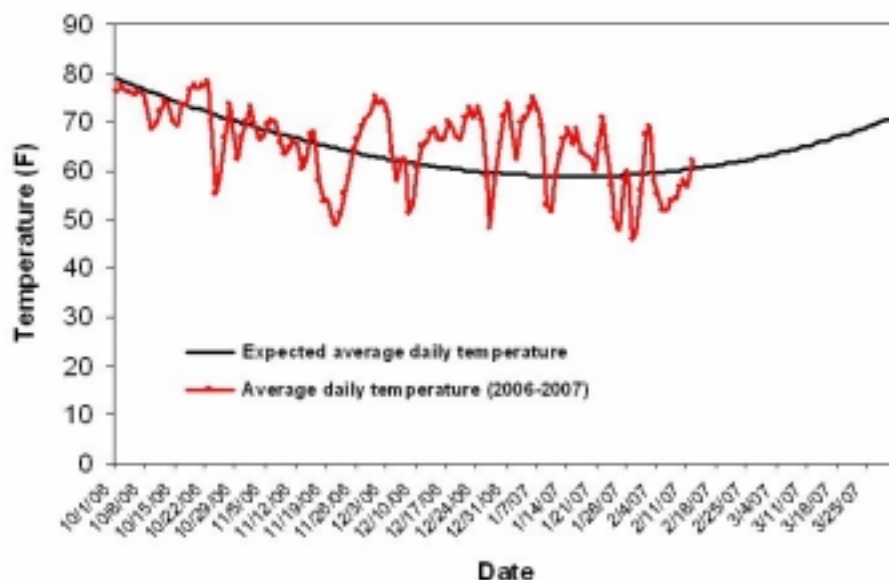


Figure 1. Average daily temperatures in Dover, FL from October 1st 2006 to February 12th 2007 plotted along with expected average daily temperatures from October 1st to March 31st. (Expected daily temperatures were estimated from a polynomial function using data from 1998-2005).

Optimum In-row Distance for Eggplant Production

Bielinski M. Santos, Horticulturist

Native to India, this solanaceous crop is in the same family as tomato and pepper. Many eggplant types abound with different shapes, sizes and colors. However, the preferred types are purple with either round or elongated fruits for consumption by both conventional and ethnic markets.

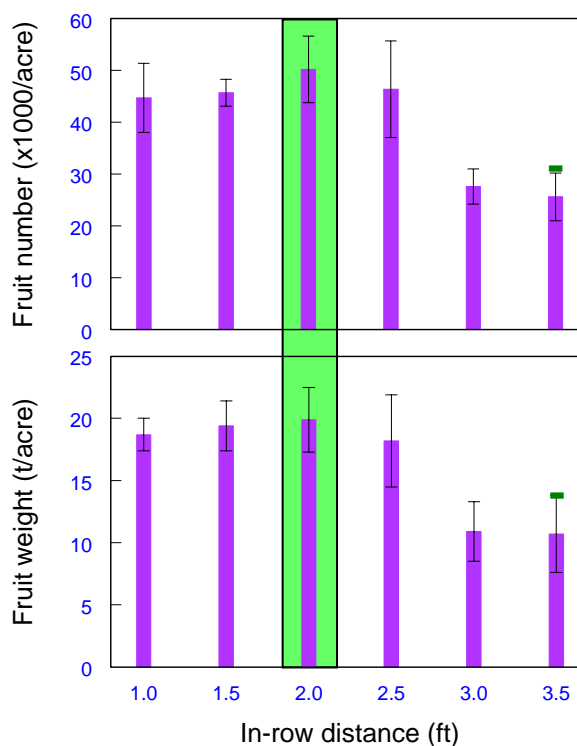
Eggplant is one of the handful of crops intercropped with strawberries. Although the exact eggplant planted area in West Central Florida is unknown, it is estimated over 200 acres of the crop are established beginning in late January of each year before the end of the strawberry season. Other production areas are located in Southwest and South Florida, where eggplant is transplanted as a “stand alone” crop in single or double rows per bed and 1,500 and 2,000 acres of eggplant are grown in the state.

When intercropped, eggplant transplants at the four-true-leaf stage (between 6 and 10 inches) are placed in single rows between double rows of strawberries. Growers used various in-row distances to transplant eggplant, ranging between 12 and 36 inches, whereas the current IFAS-University of Florida recommendation is between 18 and 40 inches. Narrowing of this wide range would provide growers with more accurate information for eggplant production. Thus, research was conducted to determine appropriate in-row distances for eggplant.

These studies used ‘Classic’ eggplant, which were transplanted at 1, 1.5, 2, 2.5, 3, and 3.5 ft (between 12 and 42 inches) on polyethylene-mulched beds at the Gulf Coast Research and Education Center, IFAS, University of Florida. Plant height was measured at 6 weeks after transplanting (WAT) and fruits were harvested 5 times beginning at 8 WAT. Marginal return rates (MRR) were calculated to determine which

practice had the highest economic returns.

Increasing in-row distances steadily decreased plant height. However, fruit number and weight remained unchanged between 1 and 2.5 ft (12 and 30 inches) between plants, dropping sharply afterwards (see figure). Fruit number and weight decreased 47 and 45%, respectively, when distances changed from 2 to 3.5 ft between plants. The economic analysis suggested that a distance of 2 ft had 8% highest net profits than 2.5 ft. These results indicated that there is no relationship between plant height and yields, and growers could establish this crop between 1 and 2.5 ft, but the most appropriate spacing to maximize economic returns seems to be 2 ft between plants.



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.

Flumioxazin (Chateau Herbicide) Labeled for Strawberry Row Middles

William Stall, Professor, Horticultural Sciences

Chateau Herbicide WDG (Valent) has received a supplemental label for use in strawberry row middles. Chateau may be applied at 3 oz per acre with a shielded or hooded sprayer for the pre-emergence control of a large number of broadleaf weeds.

Apply prior to weed emergence. Do not apply after fruit set. Do not allow spray or spray drift to come in contact with the foliage.

American Black Nightshade Interference in Watermelon

William Stall, Professor, Horticultural Sciences

American black nightshade is a problematic weed in watermelon production, especially in south Florida. When watermelon production follows tomato or pepper, the 3 major weeds are nutsedge, nightshade, and pigweeds (Amaranths). In 1997, Terry et al. found that 6 smooth amaranth (pigweed) per meter, competing season-long in watermelon, reduced yield 100%. Buker et al. (2003) found that 2 yellow nutsedge plants per square meter reduced watermelon yield 10% while 25 plants/m² reduced yield 50%. Until this past year, there was no herbicide to control nightshade in watermelon beds other than methyl bromide.

Celeste Gilbert, a graduate student, has completed a 2-year study, at two locations looking at the competition of American black nightshade in watermelon. Nightshade was planted in watermelons at 2, 4, 6, and 8 plants/m². Reduction in yield was calculated against a nightshade-free check. She ran two experiments, one with open culture (non-mulched) produced melons, and another with watermelons grown on polyethylene mulch.

In both years, watermelon grown on

mulch had higher yields than those grown on open culture. Yields were also greater for melons grown in 2006 than 2005. 2005 was a cooler, wetter year and watermelons did not produce as well.

Percent yield loss of watermelon at 2 nightshade/m² was 100% in 2005 on non-mulched produced watermelons. In 2006, the yield loss was 68% at 2 nightshade/m² and up to 93% at 8 nightshade/m² competing with the watermelon.

When watermelon was produced on mulch, the yield loss in 2005 was 80 to 98% at 2 to 8 nightshade/m², and in 2006 the yield loss was 54 to 88% at 2 to 8 nightshade/m².

The bottom line is that watermelon is a poor competitor with weeds. In these studies as with the others, the number of melons produced followed the same trend as the yield. The size and quality of the melons were not affected by the weed competition. Weeds seem to impact fruit set more than fruit quality.

Sinbar now (2006) has received labeling for use in watermelon. Sinbar does control both nightshade and amaranth. If nightshade is a problem in the fields to be planted to watermelon, it would be advisable to consider its use.

Chemically Speaking

The Florida Dept. of Agriculture and Consumer Services (FDACS) registered the fungicide cyazofamid (Ranman®) for control of diseases on cucurbits, potato and tomato. The EPA Registration number for the ISK Biosciences product is 71512-3. (FDACS PREC Agenda, 1/12/06).

On December 28, the EPA published an exemption from the requirement of a tolerance for residues of the bacteriophages that specifically target the bacterial pathogens *Xanthomonas campestris* pv. *vesicatoria* and *Pseudomonas syringae* pv. *tomato* when used

As bactericides on tomato and pepper. The EPA registration number for the Omnilytics product (AgriPhage®) is 67986-1. (Federal Reigster, 12/28/05).

On January 12, the FDACS conditionally registered the insecticide flonicamid for use on pome and stone fruit, potato, cucurbit/fruited/leafy vegetables (Beleaf®), and cotton (Carbine®). The EPA registration number for the ISK Biosciences Crop. Product is 71512-9. This is a cyanomethoxy triluroromethyl nicotinamide insecticide with a different mode of action than other products. It is effective against aphids, thrips, leafhoppers, plant bugs, and other sucking pests. It provides rapid anti-feeding behavior and is non-toxic to beneficial insects. (FDACS PREC Agenda 2/2/06).

Other Actions

In a new and historically interesting move, the EPA has classified the soon-to-be registered soil fumigant iodomet as “Not likely to be carcinogenic to humans at doses that do not alter rat thyroid hormone homeostasis.” There is compelling evidence indicating that iodomethane induces thyroid follicular cell tumors through an antithyroidal mode of action (MOA). Although the fumigant has been shown to be mutagenic *in vitro*, the weight of evidence supports the antithyroidal MOA, as evidence by the observation that only male rodents exhibit increases in thyroid tumors, a common response for this MOA. In addition, the increases in cell growth (hyperplasia) progressing to follicular cell tumors were only seen in the presence of thyroid/pituitary hormone changes, thus exhibiting a pattern of both dose and temporal concordance. Do to this classification, and the fact that the material is quickly degraded or metabolized into non-toxic degradates, the EPA has granted an exemption from the requirement of a tolerance for iodomethane when applied as a pre-plant fumigant for pepper, strawberry, and tomato.

Pesticide Potpourri

Odors from foods ranging from garlic and onions to ginger and strawberries may be nutritional signals that the human nose has learned to recognize. Researchers Stephen A. Goff and Harry J. Klee reported in *Science* that, "Studies of flavor preferences and aversions suggest that flavor perception may be linked to the nutritional or health value" of foods. Flavor is complex and uniquely challenging to plant breeders, they note, and as a result has not been a high priority. The story explains that Klee and Goff analyzed two types of tomato, the wild cerasiforme and the commercially grown Flora-Duke. Except for one chemical that also affects color, the sugars, organic acids and volatile compounds associated with tomato flavor were reduced in the commercial product. For example, one of the volatile compounds associated with the "tomato" or "grassy" flavor is called cis-3-hexenal, which is also an indicator of fatty acids that are essential to the human diet. They found that the wild tomato contained more than three times the amount of that chemical than the cultivated version. Two other contributors to tomato flavor, 2- and 3-methylbutanal, are indicators of the presence of essential amino acids and are also three times more common in the wild tomato. In addition to tomatoes, those chemicals are also important constituents of the flavors of apple, strawberry, bread, cheese, wine and beer. Goff and Klee also noted that the scent compounds produced in many spices are associated with health properties. (AP, 2/9/06).

Pesticide Labeling Issues and Food Safety- Phyllis Gilreath, Manatee Co. Extension

A situation came up recently where a tomato grower underwent a third party audit and he was questioned and threatened with crop rejection because he did not have the correct label. In this case, it happened to be Monitor. The primary Monitor label does not have tomatoes on the label! The label which does include Monitor for tomatoes is a Section 24C label which is issued as a supplemental label based on a special local needs registration. You **MUST** have this supplemental label in your possession to be legal! This may also be pertinent for other materials. Make sure your pesticide distributor provides you with any supplemental labeling that you will need. Sometimes if you buy jugs that come in a carton, look in the bottom of the carton before you discard it. The supplemental label may be there. In today's world of extreme scrutiny, especially in food safety issues, you can't overlook anything. This is one requirement that is not hard to meet. **Growers – make sure you ask for supplemental labeling. Suppliers – make sure you give your customers supplemental labeling when required.**

Highlights on Diagnostics and Late Season Disease Control

Natalia Peres and Jim Mertely

This season has been a good one for crown rot diseases. In November, December and January, our Diagnostic Lab received 21 samples with *Colletotrichum* crown rot, caused by *C. gloeosporioides*, 22 samples with *Phytophthora* crown rot, caused by *P. cactorum*, and 4 samples with charcoal rot, caused by *Macrophomina phaseolina*. All of these diseases are favored by warm temperatures and prolonged periods of wetness, conditions that often occur shortly after transplanting, but that have been unusually extended this season. These diseases are difficult to distinguish based on symptoms alone. It is necessary to make isolations from infected plants to identify the pathogen. Once the pathogen is identified, specific recommendations for its control can be made. The warm weather during December-January was very favorable to diseases and, in addition to crown rots, samples have been diagnosed with fruit rots caused by *Botrytis cinerea* or *Colletotrichum acutatum*, powdery mildew, leaf scorch, southern blight, cyclamen mites, and sting nematodes.

With the recent hard freezes in California, the spring market looks very favorable for Florida strawberry growers. Therefore, it may pay to take measures now which will prolong the strawberry plant health into March. Although some plants may be looking ragged due to previous damage by powdery mildew or angular leaf spot, take heart. Plants with some leaf damage caused by these diseases can still produce a good crop. Fruit rot pathogens are the greater threat this time of the season. These include *Botrytis cinerea* which causes Botrytis fruit rot, *Colletotrichum acutatum* (causes anthracnose fruit rot), and *Rhizopus* /*Mucor* spp. (the cause of leak disease). All three pathogens are favored by rainy, wet weather for spore production, spore dispersal, and infection. However, they

are also strongly influenced by temperature. The optimum temperature for Botrytis is 62 - 77° F, while temperatures from 75 - 85° F are more favorable for anthracnose and leak disease. This explains why Botrytis fruit rot typically causes losses in February, while anthracnose and leak disease are more serious in March.

Thankfully, very little anthracnose fruit rot has been observed up to now. However, if the season continues into March, inoculum levels will build up and, chances for an epidemic of anthracnose fruit rot will increase. If symptoms are already present in the field, care should be taken to remove infected fruit from the canopy and from the field if possible. Applications of the protectant fungicide captan should continue on a regular basis. Tank-mixing captan with a strobiluran fungicide (Abound or Cabrio) or Switch may be helpful. These measures are especially recommended if susceptible varieties (Camarosa, Camino Real, and Treasure) are being grown, and may also be necessary to protect 'Strawberry Festival', which is moderately susceptible. If no symptoms are present in the field, applying captan or thiram alone is a viable low-cost alternative which should be coupled with a strong scouting program. Anthracnose fruit rot is a particularly dangerous disease, since epidemics develop rapidly, and are difficult to control even with our best fungicides once underway.

Little information is available concerning leak disease. If some of your fruit seem to melt on the vine and splatter when tossed into the alleys, fungi such as *Rhizopus* or *Mucor* are the likely culprits. These fungi are primarily wound pathogens, so any measures which reduce fruit injury or insect damage should help. Timely harvesting is essential since ripe fruit are particularly susceptible and also increase fruit fly numbers, which spread the disease. Captan and Thiram may suppress these fungi somewhat, but no fungicides specifically labeled for the control of leak disease.



Spring Blueberry Meeting and Field Day

Tuesday, March 6, 2007

Gulf Coast Research and Education Center – Balm
14625 CR 672, Wimauma, FL



- 8:00 a.m. Late Registration** - late registration at the door is \$25 per person and does not guarantee a meal.
- 8:00 a.m. Visit Trade Show**
- 9:00 a.m. Annual Business Meeting** – Ms. Donna Miller, FBGA president, presiding.
- 9:15 a.m. USHBC update** – Mr. Ken Patterson, grower, Island Grove Ag. Products, Island Grove, FL
- 9:25 a.m. Food safety issues facing the Florida blueberry industry** – Mr. Dan Botts, director, Environmental and Pest Management Division, Florida Fruit and Vegetable Association, Orlando, FL
- 9:55 a.m. Blueberry irrigation research**- Dr. Jeff Williamson, horticulturist, Horticultural Sciences Dept., IFAS, University of Florida, Gainesville, FL
- 10:15 a.m. Research update on Dormex and chemical defoliation of blueberries** - Dr. Jeff Williamson, horticulturist, Horticultural Sciences Dept., IFAS, University of Florida, Gainesville, FL
- 10:30 a.m. Break – visit trade show**
- 10:50 a.m. Field identification of blueberry diseases** – Ms. Amada Watson, graduate student, Department of Plant Pathology, IFAS, University of Florida, Gainesville, FL
- 11:10 a.m. Blueberry entomology research update**- Dr. Oscar Liburd, Dept. of Entomology and Nematology, IFAS, University of Florida, Gainesville, FL
- 11:30 a.m. UF blueberry cultivars: Licensing and protection**, – Mr. Berry J. Treat, Germplasm Manager, Florida Foundation Seed Producers, Inc. Gainesville, FL
- 11:50 a.m. Spanish high tunnels for early fruit maturation** – Mr. Jerry Mixon, grower, SunnyRidge Farm, Inc., Haines City, FL
- 12:05 p.m. Breakout group discussions on FBGA activities**
- 12:30 p.m. Lunch and Trade Show**
- 1:45 p.m. Depart for tour of Clear Springs Blueberry Farm** – Details will be provided at the meeting.

Registration on Page 10 in this issue.

2007 Spring Blueberry Meeting and Field Day Pre-registration

Where: Gulf Coast Research and Education Center – Balm
14625 CR 672, Wimauma, FL

When: Tuesday, March 6, 2007.

Pre-register now for the Annual FBGA Spring Field Day. Pre-registrations must be postmarked by February 26, 2007 to guarantee a meal. Pre-registration is \$12.00/person for FBGA members and \$25.00/person for non-members. If you're not a member, and you would like to join, contact Sheri Brothers, Secretary/Treasurer, at (352) 481-5558.

About the Field Day - On-site registration (meal not included) will begin at 8:00 a.m. The trade show will open at 8:00 a.m. and the FBGA Business meeting will begin about 9:00 a.m. Research and educational presentations will be followed by lunch and an afternoon tour of an area farm. We are planning to offer Florida CEU credits for this meeting.

Location of the Field Day – The 2007 Spring Meeting and Field Day will be held at the Gulf Coast Research and Education Center – Balm. The address is 14625 CR 672, Wimauma, FL.

Directions to the Field Day –

From I-75 north or south - take Exit 246 merge onto Big Bend Road/CR 672 East towards US 301. Turn right onto US301/CR672 and travel approximately 1.4 miles. Turn left onto Balm Road/CR 672 and travel 7 miles. The center is located on the south side of Balm Road.

**Florida Blueberry Growers' Association
P.O. Box 163
Island Grove, FL 32654**

Thank you for your continued support of the Florida Blueberry Growers' Association!

Please cut here and return to above address



Name(s) attending the Short Course _____

Pre-registration fee.....no. attending @ \$12.00/person \$ _____
(note: FBGA members pay \$12.00 per person. Non-members pay \$25.00 per person)

Total \$ _____