March 1, 2002

Southwest Florida growers breathed a sigh of relief on Thursday morning after their crops were spared any significant damage following an anxious night as they watched temperatures plummet to near freezing as a strong late season arctic air mass descended over south Florida. Although the National Weather Service in Miami had issued a freeze warning for Glades, Hendry, and interior portions of Charlotte, Collier and Lee counties with worst case scenarios of 4 - 6 hours below freezing, temperatures in most areas remained above freezing allowing growers to dodge the icy bullet once again this season. Some areas north of the Caloosahatchee did see temperatures drop below freezing and there have been reports of widespread frost although no estimate of crop damage has been received.

The past two weeks have brought mixed-bag weather wise. Over the weekend of February 23 –24, a weak cold front brought scattered rain and a few hard showers to most of South Florida. Total precipitation ranged from just over an inch and a half at east coast stations to around a 1/2 to an inch in southwest Florida.

The region has experienced more seasonable weather over the past few weeks with temperatures averaging near normal for this time of year. Daytime highs were mostly in the 60s, 70s and low 80’s while lows ranged from the 30’s to the 60s.

FAWN Weather Summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Air Temp (°F)</th>
<th>Rainfall (Inches)</th>
<th>Hours Below Certain Temperature (hours)</th>
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<tr>
<td></td>
<td>Min</td>
<td>Max</td>
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<td>Ft Lauderdale</td>
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COOPERATIVE EXTENSION WORK IN AGRICULTURE, FAMILY AND CONSUMER SCIENCES, SEA GRANT AND 4-H YOUTH, STATE OF FLORIDA, IFAS, UNIVERSITY OF FLORIDA, U.S. DEPARTMENT OF AGRICULTURE, AND BOARDS OF COUNTY COMMISSIONERS COOPERATING
Crops across the area are in mostly fair to good condition. High winds before and after the cold front caused some windburn and will undoubtedly result in some rough fruit. Planting is beginning to slow seasonally while growers continue to conduct cultural operations such as staking, pruning, tying and spraying as needed. Wet conditions in some growing areas and preparation for possible frost disrupted schedules in some places. Vegetables include tomatoes, peppers, cabbage, Chinese cabbage, celery, eggplant, endive, escarole, lettuce, parsley, potato, radishes, snap beans, squash, sweet corn, strawberries and specialty vegetables.

The short term forecast from the National Weather Service in Miami indicates that skies will remain partly cloudy today and tomorrow with a slight chance of showers. The threat of showers and possibly even thunderstorms will increase on Sunday ahead of a cold front. The cold front will pass through south Florida some time on Monday dropping temperatures into the 40’s on Tuesday morning. Tuesday will be clear with partly cloudy skies returning on Wednesday and Thursday as temperatures increase to more seasonable ranges. For additional information, visit the National Weather Service in Miami website at http://www.srh.noaa.gov/mia/newpage/cgi-bin/master.pl?suite=home

Reports from growers and scouts indicate that whitefly numbers appear to have dropped off following the high levels reported in the last edition of South Florida Pest and Disease Hotline. Scouts are currently reporting finding anywhere from 1 – 2 adults to as many as 10 adults per plant. Given the previous high numbers, some growers have questioned the efficacy of soil applied systemic insecticides but it appears that these materials are working given the numbers of dead adults that can be found on the plastic and the fact that very few to no whitefly nymphs are being detected on treated tomato plants. Continuous adult migration seems to be the main problem although where they are all coming from is something of a mystery.

Reports from Palm Beach County indicate that silver leaf whitefly populations are on the increase as is the incidence of TYLCV.

Reports from the Homestead area indicate that silver leaf whitefly and TYLCV are currently the most serious problem confronting tomato producers.

In many instances growers report applying multiple pesticide applications in an attempt to knock down adult whiteflies flying into new plantings. After the residual effects of soil-applied nicotinoids abate, growers may turn to a variety of materials to suppress whitefly populations. These include insecticidal soaps and oils, IGR’s such as Knack and Applaud and insecticides such as endosulfan – Thiodan, Phaser, Monitor, Neem based materials and some of the pyrethroids. With Knack® or Applaud, growers will need to work around the 14 and 7 day PHI’s where treatment is needed at harvest. In recent trials, pymetrozine – (Fulfill- Syngenta) has been demonstrated to be effective in preventing viral transmission by whiteflies.

Some reports indicate that some growers are resorting to foliar applications of nicotinoids (Actara, Provado) on top of soil-applied nicotinoids (Admire, Platinum). Growers should refrain from this practice and observe good resistance management techniques. If you think whiteflies are tough now – just think back to the days before Admire – I don’t think that anybody would want to the “good old days” of whiteflies.

Organic growers can use biocontrols like Mycotrol- Beauveria bassiana, insecticidal soaps, oils and Neem based materials for whitefly management. (Note: use of Neem products is provisionally allowed but regulated – check OMRI for status)

Growers are also reminded of the importance of sanitation and rapid destruction of crop residues once harvest is complete. If whitefly counts are high in abandoned fields prior to destruction, growers would do themselves and their neighbors a big favor by spraying the residue before crop destruction to prevent the migration of large numbers of whiteflies to new fields.
East Coast growers report that leafminer pressure remains low to moderate on eggplant and tomato with sprays mainly being directed toward young crops. Beneficial insect populations are present in older crops and are helping to keep leafminers under control.

Reports from around southwest Florida, indicate that leafminer numbers are low for this time of year although in some places populations remain above threshold levels and continue to require control. Leafminers are present in a range of crops including tomato, potato, pepper, cucurbits and beans.

Growers and scouts across south Florida indicate that there has been some increase in worm pressure as is often seen around the full moon.

Respondents from Palm Beach indicate they are finding mostly southern armyworms but that growers are finding some loopers and a few beet armyworms are also beginning to show up. Several growers report using B.t.’s with good effect.

In the Homestead area, scouts report increased worm pressure finding mainly loopers, fruit worms, and hornworms on tomatoes and mostly fall armyworm on sweet corn.

In southwest Florida, there have been scattered reports of problems with southern armyworm with a few fruitworms showing up in places.

Reports of low to moderate pinworm activity continue to come in from scattered locations across south Florida. Most reports from southwest Florida have been on tomato while in Palm Beach they are mainly on eggplant. Numbers remain low in most areas but populations have reached threshold levels in some hotspots with growers applying pheromone sprays.

As with all pests early detection of pinworms is important. Pheromone traps can help provide an early warning. At planting, place a minimum of one trap per 10 acres at least 25 paces inside of field. When 3 to 5 moths are caught per trap per night, then mating disruption should be initiated. If pinworms are present, increase trap numbers to ensure an accurate estimate of the population. Pinworms can be controlled with mating disruption techniques and pesticides. Mating disruption is most successful where fields are isolated or whole areas are treated.

If using insecticides, treatment must begin when populations reach economic thresholds. The UF/IFAS Florida Tomato Scouting Guide Tomato has recommends season-long action thresholds of 5 adults/trap/night to initiate the application of mating disruptants and an action threshold of 0.7 larva per plant for the initiation of control measures.

Once begun, treatments may be required until harvest. Treat again when populations return to damaging levels. If nearby infested tomato fields are terminated or abandoned, adults can immigrate into later planted fields in large numbers. If scouting detects a significant movement, consider border treatments.

Pheromone-based mating disruptants, such as No Mate TPW spirals or Checkmate TPW dispensers provide a very effective means of combating pinworm. These should be applied according to label instructions with good distribution throughout field.

Chemical controls include Agri-Mek (Abemectin) and Spintor which both have the advantage of being effective against leafminers as well as the additional benefit of being soft on beneficials. Lannate (Methomyl) and a variety of synthetic pyrethroids are also effective materials for the control of pinworm. Development of resistance to Lannate has been documented in pinworms in some parts of the country and excessive use of these broad-spectrum insecticides may result in outbreaks of leafminers and mites if they are present.
Organically acceptable biological and cultural control methods include the use of mating disruptants, field sanitation, and pyrethrin. Parasites can also be important in aiding in pinworm control.

Broadmites continue to hang on across south Florida in both pepper and eggplant. Populations are relatively low in most places with no reports of fruit damage coming in.

Chemical control is not difficult but should be timely and typically requires two to three consecutive applications for control. Kelthane or dicofol, micronized sulfur, (i.e., Thiolux), Neemix and AgriMek have all given good results locally. Sulfur is effective but may require two to three weeks to achieve control in some cases. It should be noted that none of these materials kills eggs or seems to have enough residual to kill all hatching larvae. Therefore to achieve control it is necessary to make two or more applications about five days apart to allow time for eggs to hatch and target emerging larvae to break the reproductive cycle.

Pyrellin, and insecticidal soaps and oils are also labeled for broad mites on pepper and eggplant. Oil has been known to cause phytotoxicity under certain conditions.

Specific acaricides are usually recommended over broad-spectrum acaricide/insecticides to better conserve beneficial insects. Chemicals should be carefully applied and care should be taken to not interfere with natural enemies that may contribute biological control of other insects in the crop pest complex.

Pepper weevils are still around at mostly low levels. Reports from the east coast indicate although weevils remain at low levels with a few scattered hotspots. Some reports indicate that although numbers remain low they appear to becoming more widespread in occurrence. Pod damage remains low - less than 1% in harvested fruit with most infected fruit being found on old plants and fruit that did not size up prior to crop destruction.

Respondents from southwest Florida indicate that pepper weevils pressure remains light in most places. Growers continue to spray for weevils but indicate that they seem to be under control with few new infestations reported.

Scouts in the Homestead area are reporting severe Thrips palmi pressure on potato, bean, pepper, eggplant, cucurbits, and occasionally tomato. Spintor appears to be working well on the adults but growers report that the immatures quickly return to cause problems.

Growers and scouts around southwest Florida are beginning to report seeing major flights of thrips in some areas. Low numbers of thrips are beginning to be seen in several crops including tomato, pepper, eggplant and cucurbits. While most appear to be Florida flower thrips (Frankliniella bispinosa) and appear to be causing few problems to date some respondents indicate detecting low levels of Thrips palmi on pepper. Damage has been minimal in most cases.

Reports from Palm Beach indicate that thrips populations are slowly increasing with low numbers of *T. palmi* being found among the other species. Thrips counts in young pepper blooms are low running around one thrips per 10 blooms. In a few cases higher numbers are being seen where there are older crops nearby. They are still not considered a problem.

Growers in southwest Florida are beginning to see a few red spider mites show up on tomato and cantaloupe.

Growers in Palm Beach are finding a few scattered colonies of aphids in older pepper fields. Some growers are spraying for control.
Around southwest Florida, aphid populations are beginning to build in some locations and have required some control. Colony formation has been noted in pepper and on oriental brassicas. Severe infestations have been observed in some pepper fields targeted for termination. A few infestations on melon aphids have been noted in cantaloupe in some places.

A second finding of late blight has been confirmed on tomato in the Devils Garden area of Hendry County. Incidence and severity is low to moderate. The late blight infection that had been reported in the last edition of the hotline appears to have spread only slightly to adjacent plants since last report. Growers are advised to be alert since this disease can easily devastate a tomato or potato field within a few weeks if it is not properly controlled.

Dr Pete Weingartner: Plant Pathologist with UF/IFAS advises that even if late blight appears to be "in check" this could simply be a short-term lull in the storm. He indicates that we have ideal conditions for the development after dark nearly every night in southwest Florida... nighttime temperatures in the 60's, high humidity, and heavy dews. He writes that in a sense, bacterial spot might be a salvation because spraying for it is probably inadvertently controlling late blight.

Since late blight symptoms may be confused with symptoms of other diseases, the following diagnostic pointers may help growers distinguish between the late blight and other diseases. Late blight symptoms on leaves appear as irregularly shaped brown to purplish lesions with indefinite border lesions can span veins. The lesions may be seen any time of day, on any stage of plant growth and on leaves of any age. Velvety, white fungal growth may appear on the lower surface of affected leaflets early in the morning before leaves dry and/or in the lower canopy.

On stems, purplish lesions may be seen any time of day and may be found any where on the stem. Cottony, white growth of fungus on stems with lesions can often be seen early in the morning and/or in the lower canopy. Stems with lesions are brittle and break easily. Lesions are confined to epidermis and cortex. Leaf rolling and wilting is often associated with stem lesions and purpling of leaflets may occur in some varieties.

Currently fungicides are the most effective means of controlling late blight and will remain the primary tool until cultivars with resistance to this disease become available. Fungicides slow the rate at which the disease develops in the field by creating a protective barrier on the foliage. Just applying a chemical, however, does not necessarily equate with effective disease control. The relative effectiveness of a product, coverage, and timing must be factored into the equation for maximum benefit.

Although growers have been able to effectively control late blight by sanitation, cultural methods and judicious use of fungicides. This situation became more complicated in recent years by the development of resistance to certain fungicides such as metalaxyl. Dr Weingartner notes that all the late blight isolates we have tested from Immokalee in the past couple of years have been resistant to Ridomil. Growers should be aware of this problem and be careful to incorporate fungicides with diverse modes of action into their spray programs.

Growers all across south Florida continue to report dramatic increases in the incidence of tomato yellow leaf curl virus.

Growers and scouts around southwest Florida continue to report an explosive increase in the incidence and occurrence of tomato yellow leaf curl virus from number of widely scattered areas. Infection rates in several fields have reached the 20 –30 percent range with a few fields at or above 50% infection. Many other growers are seeing reported 3 – 10% infection rates in spring plantings at first to second tie. In many instances, growers indicate that whitefly numbers are low in infected fields.
Reports from Homestead indicate that TYLCV remains the areas most serious disease problem on tomato.

Scouts in Palm Beach report SLWF populations are on the increase as is incidence of TYLCV. In a few fields, reports indicate 5-10% of plants have been infected with TYLCV prior to first pick. A number of these “hot spots” are near old tomatoes, which are being taken out of production. Growers should be prepared to use alternative whitefly control measures including IGR’s as Admire begins to wear off and whitefly populations increase or where large numbers of adults are migrating into new plantings. Growers should rogue out infected plants as identified. It is disturbing to see some fairly large infected plants in fields that have apparently been left in place for several weeks or more. A complete IPM approach including sanitation, eradication (roguing) and chemical control of the whitefly vector is essential in controlling this disease.

Around Homestead, bean golden mosaic virus is remains relatively low but growers are beginning to detect more infection plants in recent days.

Bacterial spot has become more active on pepper and tomato following recent rains. Severity remains low to moderate in most places.

Growers and scouts around Immokalee report that early blight (Alternaria solani) remains active in tomato and potato. Incidence and severity is low to moderate in most cases although several reports indicate that recent rains and foggy mornings have resulted in increased disease pressure and activity.

Reports from Palm Beach indicate that moderate levels of early blight lesions are being found on some pink and ripe tomato fruit in conjunction with low infections among lower leaves.

Reports from Palm Beach indicate that target spot is still out there but appears is slowing down and becoming less active in tomatoes and eggplant. Some respondents from southwest Florida have noted some increase in target spot with the disease moving higher in the plants and causing lesions on fruit in some instances.

Some growers have reported good results managing target spot on older tomatoes using maneb without copper and an increased use of Quadris. Recently harvested fruit under this spray program are cleaner and have less damage than under the previous program of reduced Quadris and maneb with copper.

Several respondents have reported outbreaks of Phytophthora capsici in scattered locations on both coasts. Scouts report some increases in phytophthora mostly on squash and in older pepper where initial infections have continued to spread.

Powdery mildew remains active on squash. Powdery mildew is widespread in older cucurbits especially squash. Incidence and severity is generally low to moderate although some severe infections have been noted in older plantings.

Reports from Palm Beach indicate powdery mildew continues to have a significant presence in pepper, especially in jalapenos and older bell peppers. It’s also being found in eggplant and has been found in tomato leaves on plants approaching maturity, but before first pick. The disease in pepper is caused by the fungi Leveillula taurica.

Powdery mildew primarily affects leaves, but is occasionally seen on other parts of the pepper plant. Although the disease commonly occurs on older leaves just before or at fruit set, it can develop at any stage of crop development. Symptoms include patchy, white, powdery growth that enlarges and coalesces to cover the entire lower leaf surface. At times the powdery growth is present on the upper leaf surface as well. Leaves with
mildew growing on the undersurface may show a patchy yellowish or brownish discoloration on the upper surface. The edges of infected leaves may roll upwards exposing the white, powdery fungal growth. Diseased leaves drop from the plants and leave the fruit exposed to the sun, which may result in sunburning.

**Powdery mildew can be severe and can cause heavy yield losses.** The pathogen has a very wide host range and inoculum from one host plant species can cross infect other host plants. Infection of plants can occur over a wide temperature range (64 to 91° F) under both high and low humidity. Under favorable conditions, secondary infections occur every 7 to 10 days and disease can spread rapidly.

**The fungus survives between crop seasons on other crops and on weed species.** The degree of survival depends on environmental conditions. Because of the wide host range of the fungus, it is difficult to control the amount of inoculum that survives from one season to the next. Thus, simple sanitation methods in and around pepper fields may not provide a sufficient reduction in the primary inoculum to provide disease control. Most pepper cultivars do not possess acceptable levels of resistance to powdery mildew.

**Fungicides can provide satisfactory control and prevent economic loss if applied during the early stages of the epidemic.** Effective control requires spraying with high pressure and high volume for optimum penetration of the crop canopy by the fungicide. Good coverage is necessary for satisfactory control.

**Dr Ken Pernezny reports diagnosing powdery mildew on snap bean.** Ken indicates that the pod symptoms are hard to properly identify. You get a purplish to black netting appearance with little, if any, actual sign of the fungus (the talcum powder-like growth) that most people associate with powdery mildew on most crops.

**Dr Pernezny also reports finding downy mildew on mustard greens.** This was discovered in the Indian River/St. Lucie County area of the state. It is characterized by the appearance of the white growth of the fungus on the lower leaf surface. Confirmation is greatly enhanced by observing the nearly circular sporangia (spores) under a compound microscope.

**Downy mildew is widely present in older squash plantings around Immokalee and has been found on watermelon in the Devil’s Garden area.**

**Downy mildew has also been diagnosed on onions in southwest Florida.**

**Fusarium crown rot in tomato remains widely present around southwest Florida.** Reports from Palm Beach County indicate that Fusarium crown rot is present but spread appears to be slowing somewhat.

**Fusarium wilt is beginning to show up widely on watermelon across southwest Florida as vines begin to run.** Incidence and severity is mostly low.

**Rust is widely present on snap beans in the Devil's Garden area and around Homestead.** Prompt crop destruction after harvest is very important in the control of rust. If fields are abandoned after picking and not destroyed, rust can continue to develop and serve as a major source of inoculum for fields in production. Brown clouds made of literally millions of rust spores have been observed above abandoned fields on gusts of wind. Such inoculum loads can make it difficult to control rust even with the most intensive spray schedule.

**Gummy stem blight is widely present on watermelon southwest Florida.** In most cases incidence and severity remains relatively low but has been increasing in a number of areas following recent rains and foggy nights. In some places, the disease has reached moderate to severe levels and has reduced stands causing growers to have to reset plants.

**Because other plant disorders can cause exudation of a gummy substance, “gummy-ness” should not be relied upon for diagnosis of gummy stem blight.** Gummy stem blight typically progresses from the central
stem of the plant to growing tips. Leaf spots are variable in shape, red-brown in color and initial infections are generally seen on leaf margins and veinal areas. (Note: lesions caused by downy mildew typically start in interior sections of the leaf away from the leaf margins.) Use of a hand lens will reveal small, clear white (when young) to black (when old), pimple-like pycnidia embedded in older diseased tissue.

Growers often comment on this disease occurring “overnight.” What they are actually seeing are the results of secondary spread, which is more difficult to control than primary spread simply because of increased spore numbers with increased diseased tissue.

Multiple applications of fungicides are necessary to control gummy stem blight. It is important to begin a fungicide program prior to the first sign of gummy stem blight. In south Florida, the spray program should be initiated soon after emergence.

Nighttime temperatures and moisture conditions are ideal during much of the crop-growing season in south Florida. Gummy stem blight is most severe in wet years since moisture is necessary for spore germination. The optimum temperature for infection is 61 to 75°F. After a spore germinates on a susceptible host, the fungus penetrates the plant tissue and symptoms can appear in 7 to 12 days. Wounds assist in promoting infection.

Gummy stem blight can be successfully managed if the grower utilizes a combination of control strategies. Control of primary sources of inoculum is important. Growers should purchase clean seed from reputable companies and avoid transplants that have gummy stem blight or other diseases. Infected transplants have been recently diagnosed here in southwest Florida.

Multiple applications of fungicides are necessary to control gummy stem blight. It is important to begin a fungicide program prior to the first sign of gummy stem blight. Manzate, Bravo and Benlate have given good results locally. In south Florida, the spray program should be initiated soon after emergence. When vines are small, band applications of fungicide over the crown area are effective and help reduce application costs.

Growers and scouts continue to report finding sclerotina in pepper, eggplant and tomato, although infections appear to be somewhat decreased in recent days.

Reports from Palm Beach indicate that gray mold (Botrytis cinerea) continues to be active in pepper. Incidence and severity is low.

ATTENTION ALL FARMERS, NURSERIES, PEST CONTROL OPERATORS, and GOLF COURSES, bring your cancelled, suspended, and unusable PESTICIDES for FREE DISPOSAL, no questions asked!

Dr Norm Nesheim has passed on the following information from Burt McKee, the coordinator for the Cleansweep pesticide collection program for canceled/suspended or otherwise unusable pesticides.

This program, funded by the State, has been collecting these pesticides disposing of them at no cost to the people who bring them in. The program has been focusing on N. Florida this year, but finds that it will have some funds to be able to come to SW Florida later this spring. It may be sometime before this program is available in your area again.

Cleansweep is NOT FOR RESIDENTS. If homeowners show up, they will be directed to their county Household Hazardous Waste Program or to the Solid Waste Department. Participants, who bring other hazardous waste, i.e. auto batteries or used oil, will also be directed to their county HHW or Solid Waste Department.
A web site with details on the Cleansweep program can be found at:

http://www.dep.state.fl.us/waste/categories/cleansweep-pesticides/

The following SW Florida Collection Events have been added to the schedule:

**Collier/Lee/Hendry - April 23, 2002**  
Location: Immokalee Landfill  
700 Stockade Road (off Hwy 846)  
Immokalee, Fl  
Contact: Gary Morocco, Collier County Solid Waste (941) 732-2508

**Charlotte/Sarasota (Glades?) - April 24, 2002**  
Location: Charlotte Zemel Road Landfill,  
Zemel Road  
Punta Gorda  
Contact - Barbara Kula (941) 764-4380

For more information about Florida’s Operation Cleansweep, you may contact Jack Price at (850) 488-0300.

This is a great opportunity – don’t miss it, as it may be several years before it comes around again.

**Up Coming Meetings**

**March 6, 2002**  
Composting Tour and Hands-On Training - 9 AM – 4 PM  
Palm Beach County Solid Waste Authority and Green Cay Farms  
Contact Dr Monica Ozores-Hampton at 941-658-3400 for details.

**March 19, 2002**  
Restricted Use Pesticide License CORE Training (Spanish)  
Hendry County Extension Office  
1085 Pratt Boulevard  
LaBelle, Florida  
(Note: test will be in English)  
Contact 863-674-4092 for more information.

**March 20, 2002**  
Restricted Use Pesticide License Private Applicator Training (Spanish)  
Hendry County Extension Office  
1085 Pratt Boulevard  
LaBelle, Florida  
(Note: test will be in English)  
Contact 863-674-4092 for more information.

**March 28, 2002**  
**WPS – Train the Trainer**  
Hendry County Extension Office  
1085 Pratt Boulevard  
LaBelle, Florida  
Contact 863-674-4092 for more information.

**April 9, 2002**  
Restricted Use Pesticide License Training and Testing
Summary of Rule Changes to 5E-9 - Pesticide Certification and Licensing - Effective March 1, 2002

Fee Increases. License fees will increase for pesticide applicators and dealers licensed under the Florida Pesticide Law, Chapter 487, Florida Statutes, effective March 1, 2002. The new fees are as follows:

Private Applicator $60 for a 4-year license
Public Applicator $60 for a 4-year license
Commercial Applicator $160 for a 4-year license
Pesticide Dealer $175 for a 1-year license

Aerial Category. The aerial category will change from a secondary to a primary category for commercial, public, and private applicators. This means aerial applicators will be able to get licensed with only the aerial category on their license. No additional category will be required. However, an individual licensed with only the aerial category will only be authorized to make aerial applications and no ground applications. If licensed with only the aerial category, aerial applications can be made to any type of treatment area (agricultural row crop, agricultural tree crop, aquatic, etc.) as long as the treatment area is within the scope of the license type the individual has. To make ground applications, the individual must be licensed in each appropriate category based on the type of area to be treated (agricultural row crop, agricultural tree crop, forestry, etc.).

Aerial CEUs. The number of CEUs required to renew the aerial category is being increased from 8 to 16 CEUs. Like other applicators, aerial applicators will be required to have a minimum of 2 core CEUs for each primary category, including the aerial category. So of the 16 CEUs required to renew the aerial category, at least 2 must be core CEUs, and at least half must be aerial CEUs. The remainder of the required CEUs for the aerial category can be either core or aerial CEUs.

Core CEUs. Effective January 1, 2005, all applicators licensed under Chapter 487, F.S., who renew their licenses using Continuing Education Units (CEUs) will be required to have 4 core CEUs in addition to the number of category CEUs now required. At that time, all category CEUs must be approved for the specific category. There will no longer be a requirement for having 2 core CEUs per primary category, and core CEUs will no longer apply to the required number of category CEUs. Applicators will have the option of retaking the core and/or category exams if they do not have enough CEUs for renewal. Example: Effective January 1, 2005, private applicators will be required to have 4 core CEUs plus 8 CEUs approved for the private applicator.
agriculture pest control category. A private applicator that has 8 private applicator CEUs and only 2 core CEUs may choose to take the core exam instead of earning 2 additional core CEUs, if desired.

Educational Modules. The CEU program approval rule is being revised so Department-approved educational modules can be approved for CEU credit in addition to professional training meetings and seminars.

Pesticide Dealer Records. The record keeping requirements for pesticide dealers are being revised to require records to be kept for product exchanges as well as sale of restricted use pesticides. Also, the information to be kept in the records was modified to require both the name of the licensed applicator and the name of the authorized purchasing agent making the purchase, if applicable. This change will be effective about April 1, 2002.

Direct Supervision. Licensed applicators who supervise unlicensed individuals who mix, load, or apply restricted use pesticides will now be required to be immediately available by voice communication to the unlicensed individuals to provide direction and instruction during all times restricted use pesticides are being used.

Forms. Updated versions of the following Department forms were adopted:

- Application of Pesticide Dealer License (DACS-13337), Rev. 1/02
- Request for Granting Continuing Education Units (CEUs) for Renewal of Pesticide Applicator Licenses (DACS-13326), Rev. 1/02
- Record of Attendance for Continuing Education Units (CEUs) (DACS-13325), Rev. 1/02

Websites

- Organic Farming Systems – website of the Center for Environmental Farming Systems in North Carolina is one of the largest research/demonstration sites affiliated with a land-grant University in the country – this website provides a searchable compilation of research on organic farming systems and other searchable databases as well as news and research data about organic production
  http://www.ncsu.edu/organic_farming_systems/index.htm

- Cucurbit Downy Mildew Forecasts – this site provides computer-generated forecasts on Tuesday and Thursday each week from mid-March through the end of the season. Additional forecasts can be provided during peak epidemic periods. http://www.ces.ncsu.edu/depts/pp/cucurbit/ Site will begin operation for the 2002 season next week.

Quotable Quotes

“Is it better to sit in church on Sunday and think about fishing or it is better to go fishing on Sunday and think about God?” -- F Parker Oswald

"Before a diamond shows its brilliancy and prismatic colors it has to stand a good deal of cutting and smoothing." -- Author Unknown

"Some people are born on third base and go through life thinking they hit a triple." -- Barry Switzer

The Lighter Side
Double Take

A woman has twins, and gives them up for adoption. One of them goes to a Family in Egypt and is named "Amal." The other goes to a family in Spain; they name him "Juan." Many years later, Juan sends a picture of himself to his mom. Upon receiving the picture, she tells her husband that she wishes she also had a picture of Amal. Her husband responds, "But they are twins - if you've seen Juan, you've seen Amal."

Outta Here

Two young photographers were shooting photos in a famous Kenyan safari park. They had spent the day snapping giraffes, leopards, and gazelles - anything that came into view.

Walking back to their jeep they spotted a pride of lions. They were clicking away like crazy, when a large male lion stood up and gave out a loud roar.

One of the photographers slipped off his boots and put on a pair of running shoes. The other photographer looked at him and said: "You'll never outrun a lion!"

The other replied: "I don't care about the lion as long as I can outrun you!"

Contributors include: Joel Allingham/AgriCare, Inc, Karen Armbrester/SWFREC, Jim Connor/SWFREC, Bruce Corbitt/West Coast Tomato Growers, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/H&R Farm, Loren Horsman/Glades Crop Care, Bruce Johnson/General Crop Management, Leon Lucas/Glades Crop Care, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Jimmy Morales/Pro Source One, Tim Nychk/Nychk Bros. Farm, Chuck Obern/C+B Farm, Dr Ken Pernezny/EREC, Dr. Pam Roberts/SWFREC, Dr Nancy Roe/Farming Systems Research, Wes Roan/6 L's, Kevin Seitzinger/Gargiulo, Jay Shively/ F& F Farm, Ken Shuler/Palm Beach County Extension, Ben Stanaland/Pacific Tomato Growers, John Stanford/LNA Farm, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Red Star Farms, Dr.Charlie Vavrina/SWFREC, Donna Verbeck/GulfCoast Ag. and Mark Verbeck/Bayer Crop Protection.

The South Florida Pest and Disease Hotline is compiled by Gene McAvoy and is issued on a biweekly basis by the Hendry County Cooperative Extension Office as a service to the vegetable industry.

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