



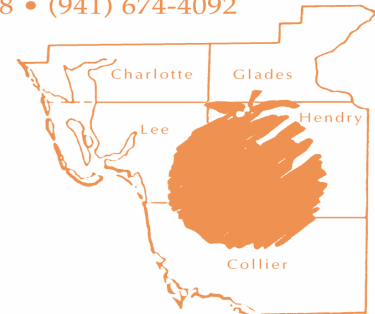
UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

Hendry County Extension • P.O. Box 68 • LaBelle, Florida 33975-0068 • (941) 674-4092

Flatwoods Citrus



Vol. 5, No. 8

August 2002

Dr. Mongi Zekri, Multi-County Citrus Agent

UPCOMING EVENTS

VERY IMPORTANT! Special seminar at Hendry County Extension Office, LaBelle

Date and time: Friday, 9 August 2002 starting at 10:00 AM.

Title: All you wanted to know about citrus in Brazil - culture, problems (Sudden Death, CVC), and nurseries. Speaker: *Eduardo Girardi*, Sao Paulo, *Brazil*

CITRUS EXPO (detailed information enclosed)

Wednesday, August 21 & Thursday, August 22, 2002

For any question, call Bob Rouse at 941 658 3400
or Mongi Zekri at 863 674 4092



41st ANNUAL CITRUS PACKINGHOUSE DAY

Date: August 29, 2002, **Location:** UF/IFAS Citrus Research and Education Center, Lake Alfred
For more information, contact Dr. Mark Ritenour at Tel. (561) 468-3922, Ext. 167. E-mail:

mritenour@mail.ifas.ufl.edu Postharvest information on the web: <http://postharvest.ifas.ufl.edu>

Attention citrus growers & production managers! Protect your fruit from Brown Rot!

With the heavy and frequent rains this summer, plan on spraying for Brown Rot on early maturing citrus cultivars, particularly in blocks with previous history of Brown Rot. Remember that the initial stages of infection are very difficult to detect. Read the enclosed information on **Brown Rot and greasy spot**. In addition, we are planning to have a seminar on Brown Rot on Sept. 17 at the Hendry County Extension Office.



The Institute of Food and Agricultural Sciences (IFAS) is an Equal Employment Opportunity – Affirmative Action Employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin.
U.S. DEPARTMENT OF AGRICULTURE, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF FLORIDA, IFAS, FLORIDA A. & M. UNIVERSITY COOPERATIVE EXTENSION PROGRAM, AND BOARDS OF COUNTY COMMISSIONERS COOPERATING.

FALL POSTHARVEST COURSE OFFERED AT A UF IFAS RESEARCH CENTER NEAR YOU

The University of Florida course, "Maintaining Fruit & Vegetable Quality After Harvest" (VEC 4932) will be offered this fall via videotape. During the course, participants will obtain a solid understanding of how harvested commodities respond to their postharvest environments and how to maintain maximum quality throughout the postharvest life of the commodity.

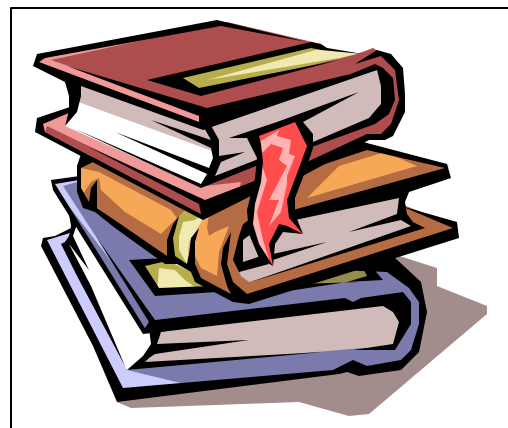
Students will meet weekly in Gainesville or at one of the UF IFAS Research and Education Centers. Instructors will deliver the course from Gainesville and the Indian River Research and Education Center (Ft. Pierce) to other locations via videotape. A coordinator will be available to assist students at each site and an instructor will visit students at each site. Classes begin Aug. 26, 2002 and end Dec. 11. Non-degree participants are encouraged to register. Participants completing the course will receive three UF credits and a "Certificate of Completion." Qualified students at Ft. Pierce and Gainesville may take an expanded course (HOS 5085C) for graduate credit (includes a laboratory project). Topics will include:

- Respiration & temperature - impacts on shelf life
- Role of plant hormones (especially ethylene & ripening/degreening)
- Food safety
- Decay prevention
- Reducing commodity water loss
- Maturity and quality standards
- Harvesting and handling systems
- Physiological disorders such as chilling injury
- Cooling & cold storage
- Modified & controlled atmospheres
- Transportation issues

And much, much more.

For more information, call the Indian River Research and Education Center at (772) 468-3922 ext. 167, or e-mail Mark Ritenour at mritenour@mail.ifas.ufl.edu.

One can also visit the IFAS Distance Education website (<http://disted.ifas.ufl.edu>) for more information.



**If you want to print a color copy of the Flatwoods Citrus
Newsletter, get to the Florida Citrus Resources Site at**

<http://www.fcprac.ifas.ufl.edu/>

**You can also find all you need and all links to the University of Florida
Citrus Extension and the Florida Citrus Industry**

Special Thanks to the following sponsors of the Flatwoods Citrus Newsletter for their generous contribution and support. If you would like to be among them, please contact me at 863 674 4092.

Bart Hoopinger
Cerexagri, Inc.
11933 3rd Street East
Parrish, FL 34219
Phone: 941 737 7444
Fax: 941 776 8127

Shelby Hinrichs
Nufarm Agriculture USA
6943 Scarboro Drive
Fort Myers, FL 33919
Phone: 239 437 9970
Fax: 239 437 2646

Larry McCauley
Griffin LLC
5843 Deer Flag Drive
Lakeland, FL 33811
Mobile: 863 712 6487
Fax: 863 607 9403

Jerry Southwell
Hydro Agri
574 Green Ash Lane
Wauchula, FL 33873
Phone: 863 773 0154
Fax: 863 773 5088

Robert Murray
Florida Favorite Fertilizer
787 Overiver Drive
North Fort Myers, FL 33903
Phone: 800 457 0807
Fax: 239 995 0691

Robert M. Bancroft
Citrus Hedging, Inc.
P.O. Box 1366
LaBelle, FL 33975
Phone: 863 675 2190
Fax: 863 675 2104

FARM CREDIT
SOUTHWEST FLORIDA
330 N. Brevard Ave.
Arcadia, FL 34266
Phone: 800 307 5677
Fax: 941 494 6460

Rachel M. Walters
BAYER CropScience
Phone & Fax: 239 542 8831
Mobile: 239 707 1198
E-mail:
rachel.walters@bayercropscience.com

Bobbitt Jenkins
BASF Corporation
11100 Lakeland Circle
Fort Myers, FL 33913
Phone: 239 561 2812
Fax: 239 561 6985
Mobile: 239 707 1603 AGNET #6652

CITRUS EXPO

The 2002 Citrus Expo will be held on August 21 & 22 at Fort Myers Lee Civic Center. The Citrus Expo has become an outstanding agricultural event for the Florida citrus industry because of its trade show, seminar program, and banquet.

The success of the program has been the three-way partnership of the Florida citrus growers through the Gulf Citrus Growers

Association, the University of Florida Extension Service, and the trade show organized by the Citrus Industry Magazine. The Expo is the largest seminar and trade show event dedicated

exclusively to citrus. ***Enclosed, you will find a brochure for the Citrus Expo including a pre-registration form, which can be xeroxed if needed and mailed or faxed.***

Pre-register before August 9 and receive a free gift when you pick up your registration packet at Lee Civic Center. There is no registration fee. Admission and parking are free. The theme of this year's Expo seminar program is "Free trade in the Americas." Impacts of trade "Deals." will be addressed on Wednesday, Aug. 21st. Thursday program is entitled "Competing globally by fighting rising costs." The program is approved for CEUs for Certified Public Accountant, Certified Crop Advisors, and pesticide license renewal. The trade show opens at 8:00 AM on Wednesday and Thursday with a free continental breakfast and drawings for great prizes (\$1,000 cash on Wednesday and a grand prize on Thursday). Don't miss the Gulf Citrus Growers Association Reception and Banquet, which will be held on Wednesday evening (6:00 PM) at Harborside Convention Hall in downtown Ft. Myers. For reservation, call the association at 863 675 2180.



COURSES OFFERED AT THE SOUTHWEST FLORIDA RESEARCH & EDUCATION CENTER, IMMOKALEE

For more information and registration, call Dr. Bob Rouse at 941 658 3400

CITRUS CULTURE I - HOS 1541. History, botany, physiology and environmental considerations of citrus. Nursery practices, rootstocks, scions, grove configuration and other considerations up to the time of orchard establishment. **COURSE TIME:** Tuesday 6:00 - 9:00pm, Aug. 27, Dec. 17, 2002

SOILS AND FERTILIZER - SOS 2104. A study of the physical, chemical, and biological properties of soils as related to citrus production; and the uses, types, and reactions of fertilizer materials in the soil. **COURSE TIME:** Thursday 6:00 - 9:00pm, Aug. 29, Dec. 19, 2002

CITRUS PATHOLOGY (PLP 5115C) COURSE

Citrus Pathology (PLP 5115C) will be offered the Fall 2002 semester at the Citrus Research and Education Center (CREC) in Lake Alfred. It is a 3-hour lecture graduate credit course that will cover the symptoms, disease cycles and control measures for the major citrus diseases with emphasis on diagnosis using biological, chemical and biochemical techniques. Plant pathologists from CREC and the USDA-ARS will present the various lectures. The course can be taken for credit or noncredit and will tentatively be offered on Tuesday afternoons, from August 27 – December 10. For more information, contact Dr. Ron Brlansky or Dr. K. R. Chung at Tel. (863) 956-1151 or E-mail: rhby@lal.ufl.edu. For registration assistance, contact Monica Lewandowski at Tel. (863) 956-1151 or E-mail: mmlew@lal.ufl.edu.

Special Thanks to the following sponsors of the Flatwoods Citrus Newsletter for their generous contribution and support. If you would like to be among them, please contact me at Phone: 863 674 4092, Fax: 863 674 4636 or E-mail: maz@mail.ifas.ufl.edu

Jay L. Hallaron
**UNIROYAL CHEMICAL/
CROMPTON CORPORATION**
4953 Hidden Springs Blvd
Orlando, FL 32819
Phone: 907 256 4667

Donna Muir Strickland
MONSANTO
P.O. Box 1723
LaBelle, FL 33975
Phone: 863 675 4250
Fax: 863 674 0282

John W. Coley
**Irrigation maintenance,
Spot herbiciding,
Young tree care,
& Tree planting services**
Phone: 863 673 2222

Wayne Simmons
**SIMMONS CITRUS
NURSERY**
1600 Hwy 29 South
LaBelle, FL 33935
Phone: 863 675 4319
Fax: 863 675 6963

Ed Early
DU PONT Ag. Products
5100 S. Cleveland Ave., Suite 318-368
Fort Myers, FL 33907
Phone: 239 332 1467
Fax: 239 332 1707

Robert F. Gregg
SYNGENTA
11051 Championship Drive
Fort Myers, FL 33913
Phone: 239 561 8568
Fax: 239 561 8569

FIRST BANK
P.O. Box 697
LaBelle, FL 33975
Phone: 863 675 4242
Fax: 863 675 1099
Moore Haven: 863 946 1515

AIRWORK
Aerial Spraying
Fixed Wing & Helicopter
P.O. Box 5100
Immokalee, FL 34143
Phone: 239 657 3217
Serving SW Fla. Since 1979

GREASY SPOT (second spray)

Two spray applications are needed to control greasy spot in southwest Florida. August is the month for the second spray to control greasy spot. Leaves are susceptible once they are fully expanded and remain susceptible throughout their life. Thorough coverage of the underside of leaves is very important and necessary for the control of greasy spot. High spray volumes (125-150 gal/acre) and slower tractor speeds may be needed for maximum control of this fungal disease. Use 8-10 gallons of petroleum oil per acre or a copper fungicide at the label rate plus 1-2 gallons of oil. Copper fungicides are effective for the control of greasy spot rind blotch, but if applied in July or August at full rates in hot weather with oil, they will cause fruit spotting.

The use of copper in mid-late August for the control of greasy spot on processed fruit trees can be beneficial and effective to protect fruit from Phytophthora Brown Rot.

Enable can only be applied on grapefruit for greasy spot rind blotch control on fruit and for greasy spot control on foliage. Abound can be applied at any time to all citrus and provides effective control of the disease on leaves and fruit. Abound should not be applied more than once a year for greasy spot control. Addition of petroleum oil increases the efficacy of Enable and Abound. There are other registered fungicides for the control of greasy spot, get your copy of the 2002 Florida citrus pest management guide.

Always read the product label prior to use.



Brown Rot

Management of brown rot, caused by *Phytophthora nicotianae* or *P. palmivora*, is needed on both processing and fresh market fruit. While the disease can affect all citrus types, it is usually most severe on Hamlin and other early maturing sweet orange cultivars. Phytophthora brown rot is a localized problem usually associated with restricted air and/or water drainage. It commonly appears from mid-August through October following periods of extended high rainfall. It can be confused with fruit drop due to other causes at that time of the year. If caused by *P. nicotianae*, brown rot is limited to the lower third of the canopy because the fungus is splashed onto fruit from the soil. *P. palmivora* produces airborne sporangia and can affect fruit throughout the canopy. Early season inoculum production and spread of *Phytophthora* spp. are minimized with key modifications in cultural practices. Skirting of the trees reduces the opportunity for soil-borne inoculum to contact fruit in the canopy. The edge of the herbicide strip should be maintained just inside of the dripline of the tree to minimize the exposure of bare soil to direct impact by rain. This will limit rain splash of soil onto the lower canopy. Boom application of herbicides and other operations dislodge low-hanging fruit. Fruit on the ground becomes infected and produces inoculum of *P. palmivora*, which can result in brown rot infection in the canopy as early as July while fruit are still green. The decay initially occurs as a light brown discoloration of the rind at any location on the fruit surface. The affected area is firm and leathery, and it retains the same degree of firmness and elevation as the adjacent healthy rind. At a later stage, a delicate white mycelium will form on the

lesion surface. Fruit with brown rot have a characteristic pungent, rancid odor, which distinguishes the disease from the stem-end rots.



The beginning stages of the epidemic are very difficult to detect before the fruit are colored and showing typical symptoms. Application of residual herbicides earlier in the summer may reduce the need for post-emergence materials later and minimize fruit drop throughout this early stage of inoculum production from fallen fruit. Usually a single application of a copper fungicide or Aliette in mid-late August is sufficient to protect fruit through most of the normal infection period. No more than 20 lb/acre/year of Aliette should be applied for the control of all *Phytophthora* diseases. Aliette, a systemic fungicide at the rate of 5 lbs/acre protects against postharvest infection and provides 60-90 days control. Copper fungicides are only protective but are capable of killing sporangia on the fruit surface and thus reducing inoculum. They provide protection for 45-60 days. Use the label rate. With average quality copper products, usually 3-4 lb of metallic copper per acre are needed for the control of brown rot. Precautions should be taken during harvesting not to include brown rot-affected fruit in the field containers as this could result in rejection at the processing or packing facility.

Mg & K NUTRITION ON CALCREOUS SOILS

Calcium carbonate (CaCO_3) can occur naturally in soils or can be added through irrigation with water from the aquifer. Calcareous soils are alkaline (have pH values greater than 7) because of the presence of CaCO_3 . The pH of these soils range from 7.6 to 8.3 regardless of CaCO_3 concentration, unless a significant quantity of sodium (Na) is present. Special nutritional management is required to grow citrus successfully on calcareous soils. However, planting

citrus trees on these soils may not be economically feasible.



The presence of CaCO_3 affects the availability of almost all nutrients.

MAGNESIUM (Mg) AND POTASSIUM (K)

It is often difficult to increase Mg and K uptake with fertilizer applied to calcareous soils. High Ca levels suppress Mg and K uptake by citrus trees through the competition of Ca, Mg, and K. In cases where soil-applied fertilizer is ineffective, the only means of increasing leaf Mg or K concentration is through foliar application of water-soluble fertilizers, such as magnesium nitrate, potassium nitrate (KNO_3), or monopotassium

phosphate. A solution of 20 lbs KNO_3 per 100 gallons of water has been shown to raise leaf K, especially if applied several times during the year. For citrus on noncalcareous soils, nitrogen and potassium fertilizer applications with a 1:1 ratio of N to K_2O are recommended. If leaf testing on calcareous soils reveals that high levels of soil Ca may be limiting K uptake, the K_2O rate should be increased by about 25% to have a N: K_2O ratio of 1:1.25.

Elemental S is the most effective soil acidulant. It can lower temporarily the soil pH on calcareous soils. Although not an acidic material itself, finely ground elemental S is converted quickly to sulfuric acid in the soil through microbial action. At one time, the rate of 2 lbs of S per 100 square feet should not be exceeded. Sulfuric acid reacts more quickly than any other material, but it is hazardous to

work with and can damage plants if too much is applied at one time. Dilute concentrations of sulfuric acid can be applied safely with irrigation water and used to prevent Ca and Mg precipitates from forming in microirrigation lines. Repeated applications of sulfuric acid with irrigation water will tend to lower soil pH within the wetted pattern of the emitter.

CITRUS GROWERS AND PRODUCTION MANAGERS ARE ADVISED TO PAY A SPECIAL ATTENTION TO Mg

Magnesium (Mg) deficiency is a problem in Florida. Right now, it is very widespread in SW Florida. Trees with inadequate Mg supply have no symptoms in the new spring flush, but leaf symptoms will develop as the leaves age and the fruit expand and mature in the summer and fall. Leaves that have lost most of their green color due to Mg deficiency drop freely under unfavorable conditions. Defoliated twigs become weak and usually die by the following spring. Severe defoliation will reduce the average size of individual fruit and cause a general decline in fruit production. In Florida, Mg deficiency in citrus is caused primarily by low levels of Mg on acid light sandy soils and on calcareous soils. Leaching of added Mg is particularly serious and substantially rapid when the soil pH is 4.5 to 5.0. Under such conditions, the use of dolomite to bring the pH to 6.5 will furnish Mg at the same time.



Soil application of Mg sulfate or oxide to provide 50-60 lbs of Mg per acre can be successful in correcting Mg deficiency when the soil pH is adjusted. Under calcareous soils, the amounts of Mg applied must be greater than those applied on soils low in calcium or potassium. Foliar spray applications of Mg nitrate (3-5 gallons/acre) can be very effective when applied on the spring and heavy summer flush leaves when they are about fully expanded. Remember that Magnesium should be applied regularly at 1/5 (or 20%) of the N rate unless leaf analysis shows more than 0.50% Mg. If leaf Mg deficiency symptoms occur, Mg should be applied in the fertilizer, and the rate should be increased up to 30% of the N rate until symptoms are no longer present in mature leaves of subsequent flushes. If both potassium (K) and Mg status are low, sulfate of potash-magnesia (SPM), which contains both K and Mg in the sulfate form is a very good option.

ONLY ONE MONTH LEFT FOR LEAF AND SOIL SAMPLING

A successful citrus fertilizer program should be based on leaf analysis, knowledge of soil nutrient status through soil analysis combined with university recommendations on optimum crop and fertilizer management practices.

Tissue analysis is very useful in confirming nutritional deficiencies, toxicities or imbalances, identifying “hidden” toxicities and deficiencies where visible symptoms are not manifested, evaluating the effectiveness of fertilizer programs, determining the availability of elements not tested for by other methods, and studying interactions among nutrients.

Leaf Sampling

For mature tree blocks, the best time would be in July and August to collect four- to six-month-old spring flush leaves. If taken later in the season, the early summer flush would probably be confused with the spring flush. Each leaf sample should consist of about 100 leaves taken from non-fruiting twigs of 15- 20 uniform trees of the same variety and rootstock, and under the same fertilizer program.



Soil sampling

Each soil sample should consist of 15-20 soil cores taken at the dripline of 15-20 trees within the area wetted by the irrigation system to a depth of 6 inches. The area sampled should be uniform in terms of soil and tree characteristics and correspond to the area from which the leaf sample was taken. Soil samples should be air-dried but not oven-dried before shipping to the testing laboratory for analysis.

**LUNCH SPONSORS ARE NEEDED.
CALL TO SPONSOR ONE OF THE FOLLOWING
EDUCATIONAL PROGRAMS.**

Preliminary Schedule for SW Florida seminars and workshops (2002-2003)

Location: Hendry County Extension Office, LaBelle

Coordinator: Dr. Mongi Zekri, Multi-County Citrus Agent, Phone: 863 674 4092,

E-mail: maz@mail.ifas.ufl.edu

Tuesday, September 17, 2002, 10:00 AM – 12:00 Noon

Brown Rot

Speaker: Drs. Pam Roberts, Pete Timmer, and/or Jim Graham

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: Larry McCauley, Griffin LLC

Tuesday, October 22, 2002, 10:00 AM – 12:00 Noon

Cultural practices that influence fruit quality

Speaker: Dr. Gene Albrigo

2 CEUs for Certified Crop Advisors

Sponsor: ?

Tuesday, November 19, 2002, 10:00 AM – 12:00 Noon

Hedging, topping, skirting and tree size management

Speakers: Drs. Jodie Whitney, Adair Wheaton, and Bill Castle

2 CEUs for Certified Crop Advisors

Sponsor: ?

Tuesday, December 17, 2002, 10:00 AM – 12:00 Noon

Foliar nutrition (potassium, urea and phosphite), nitrogen rates and micronutrients vs. fruit production

Speakers: Drs. Brian Boman, Gene Albrigo, and Tom Obreza

2 CEUs for Certified Crop Advisors

Sponsor: Robert Murray, Florida Favorite Fertilizer

Tuesday, January 21, 2003, 10:00 AM – 12:00 Noon

Update on herbicide program options

Speakers: Dwight Meeker, Mike Prescott and Dr. Steve Futch

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: ?

Tuesday, January 28, 2003?, 8:30 AM – 4:00 PM

Workshop on scouting for pests and diseases

Speakers: Drs. Pam Roberts, Stephen Rogers and Phil Stansly

6 CEUs for Pesticide License Renewal

6 CEUs for Certified Crop Advisors

Sponsor: Robert Gregg, Syngenta

Tuesday, February 18, 2003, 10:00 AM – 12:00 Noon

Citrus scab, alternaria, melanose, and fungicide update

Speakers: Dr. Pete Timmer

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: Shelby Hinrichs, Nufarm Agriculture USA

Tuesday, March 18, 2003, 10:00 AM – 12:00 Noon

Irrigation scheduling, maintenance, plugging problems and solutions

Speakers: Drs. Larry Parsons, Brian Boman, Tom Obreza and Sanjay Shukla

1 CEU for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: ?

Tuesday, April 15, 2003, 10:00 AM – 12:00 Noon

Citrus leafminer and citrus psyllid management for resets and non-bearing trees

Speaker: Drs Phil Stansly and JP Michaud

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: ?

Tuesday, May 20, 2003, 10:00 AM – 12:00 Noon

Greasy spot and possible contaminants from pesticides and fertilizers

Speaker: Cathleen Osgood and Drs. Tom Obreza, Pete Timmer and Pam Roberts

2 CEUs for Pesticide License Renewal

2 CEUs for Certified Crop Advisors

Sponsor: ?

Saturday, June 7, 2003, 7:45 AM – 2:45 PM

Farm Safety Day

2 CEUs for Pesticide License Renewal

Tuesday, June 17, 2003, 10:00 AM – 12:00 Noon

Record keeping software for grove practices and how to find citrus information
(Pest Management Guide, Fact Sheets, Labels, etc.) on the Internet

Speakers: Rick Montney, Diana Hagan and Dr. Mark Ritenour

2 CEUs for Certified Crop Advisors

Sponsor: ?

PESTICIDE LICENSE RULE CHANGES



Rule Changes - Rule changes affecting licensed pesticide applicators went into effect on Feb. 21, 2002. Changes are as follows:

License fees increased to \$60 for private and public applicators and \$160 for commercial applicators for a 4-year license.



Licensed applicators must be available by voice communication at all times restricted use pesticides are being used by unlicensed individuals working under their supervision.

The aerial category changed from a secondary category to a primary category.

Effective 1/1/2005, all applicators will be required to earn 4 core CEUs if renewing by CEUs, in addition to the current number of category CEUs required.

A Summary of Rule Changes to 5E-9, which describes the rule changes in more detail, is in the back of this sheet.



Pesticide applicators are encouraged to review their plans for security of pesticide, fertilizer, and other chemicals and make modifications as necessary to prevent theft and ensure inventory control.

A Security Aware Questionnaire is available (in the following website) as a self-review procedure to assist with this process.

For more detailed information log on to:

www.safepesticideuse.com

Summary of Rule Changes to 5E-9 - Pesticide Certification and Licensing Effective February 21, 2002 / March 21, 2002 / January 1, 2005



1. Fee Increases. License fees increased for pesticide applicators and dealers licensed under the Florida Pesticide Law, Chapter 487, Florida Statutes, effective February 21, 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

2. Aerial Category. The aerial category changed from a secondary to a primary category for commercial, public, and private applicators, effective February 21, 2002. This means aerial applicators are now able to get licensed with only the aerial category on their license. No additional category is required. However, an individual licensed with only the aerial category is 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.).

3. Aerial CEUs. The number of CEUs required to renew the aerial category has increased from 8 to 16 CEUs, effective February 21, 2002. Like other applicators, until January 1, 2005, 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.

4. 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 who 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.

5. Educational Modules. The CEU program approval rule has been revised so Department-approved educational modules can be approved for CEU credit in addition to professional training meetings and seminars. This part became effective February 21, 2002.

6. Pesticide Dealer Records. The record keeping requirements for pesticide dealers have been 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 became effective March 21, 2002.

7. Direct Supervision. Effective February 21, 2002, licensed applicators who supervise unlicensed individuals who mix, load, or apply restricted use pesticides are 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.

8. Forms. Updated versions of the following Department forms were adopted, effective February 21, 2002:

--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.