



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

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Flatwoods Citrus



Vol. 6, No. 4

April 2003

Dr. Mongi Zekri
Multi-County Citrus Agent, SW Florida



UPCOMING EVENTS

Seminars at the Hendry County Extension Office, LaBelle

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

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

Speaker: Dr. Phil Stansly

2 CEUs for Pesticide License Renewal and 2 CEUs for Certified Crop Advisors

Sponsor: Jay Hallaron, Uniroyal Chemical/Crompton Corporation

Following the seminar, we are planning a free lunch (Compliments of Citrus Maintenance & Service, Inc.) for only who call 863 674 4092 no later than 17 March.

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 and 2 CEUs for Certified Crop Advisors

Sponsor: Bobbitt Jenkins, BASF Corporation

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

Seminar at the Immokalee IFAS Center

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 Drs. Mark Ritenour and Richard Buker

Sponsor: Aglime Sales, Inc., Babson Park, FL

Florida Agricultural Conference and Trade Show

Date: April 29-30, 2003, Location: Lakeland Center, Lakeland

For more details, see enclosed brochure

AQUATIC WEED CONTROL SHORT COURSE

Date: May 19-22, 2003, registration form enclosed



FARM SAFETY DAY

Saturday, June 7, 2003, Immokalee IFAS Center

Coordinator: Mongi Zekri

CITRUS EXPO IN FORT MYERS



Wednesday, August 27 & Thursday, August 28, 2003

116th Annual Meeting of the Florida State Horticultural Society (FSHS)

June 8-10, 2003

Sheraton World Resort, Orlando, Florida

<http://www.lal.ufl.edu/fshs/>

49th Annual Meeting of the InterAmerican Society for Tropical Horticulture <http://www.isth.cjb.net/>

August 31- Sept 6, 2003

Fortaleza, Brazil

American Society for Horticultural Science <http://www.ashs.org/>

100th Annual International Conference

October 3-6, 2003

Rhode Island Convention Center, Providence, Rhode Island

International Society of Citriculture

10th International Citrus Congress http://www.lal.ufl.edu/ISC_Citrus_homepage.htm

February 15-20, 2004

Agadir, Morocco

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.

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FOLIAR POTASSIUM APPLICATIONS TO ENHANCE FRUIT SIZE

BRIEF SUMMARY FROM

Dr. Brian Boman's

POWERPOINT PRESENTATION

Potassium (K) in Citrus

- A primary component in cell walls
- K accounts for over 40% of ash from fruit
- 70% of fruit size is related to number of cells
- Cell division ceases by late April
 - Size changes after April is mainly from cell enlargement
 - Post-bloom K (applied in April) may increase cell numbers plus help cell enlargement
- Absorption of K into leaves after foliar application is very rapid

Grapefruit Summary

- Trials on Marsh, Star, Ruby Red, Flame
- Post bloom most important
- Late summer/fall applications successful in half of years
- 8 lb K₂O per acre per application
- Little change in acid, Brix, juice volume, ratio

- 1/2 to 1 size increase due to foliar K applications
- Smaller fruit increased more than larger fruit

Foliar K Advantages on Valencia

- 25% more fruit
- 28% more boxes/acre
- 33% more size 80 and larger fruit
- 28% higher gross returns for packed fruit
- 23% more TSS/acre

SUMMARY

Foliar K applications can increase fruit size and help return higher \$\$

- ! K source is not critical
- ! Salt index should be considered when using low gal/ac applications (MKP or DKP)
- ! Coverage is not as critical as for fungicides or insecticides
- ! At least 8 lb/ac K₂O per application recommended
- ! Foliar applications not a substitute for good nutrition program
- ! Potential results:
 - Grapefruit: 1/2 to 1 size increase
 - Valencia: Significantly more solids/acre
 - Sunburst: More larger-sized fruit



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RESEARCH UPDATE ON EARLYGOLD, ITABORAI, RUBY, AND WESTIN SWEET ORANGES

***Dr. Bill Castle, Lake Alfred Citrus
Research & Education Center***

Earlygold, Itaborai, Ruby, and Westin are new sweet orange selections with some combination of exceptional juice color, interesting flavor, or good soluble solids development early in the fruit season. Because of these characteristics, they have commercial potential as juice oranges.

The first trees of these early-maturing sweet oranges were evaluated during the late 1980s and early 1990s in field trials at St. Cloud. Descriptions of these selections (and Vernia, an early maturing Valencia type orange) along with some of their performance characteristics were published in the June 1999 issue of Citrus Industry magazine. Since then, Bureau of Citrus Budwood Registration records indicate that about 1.6 million trees of these selections (including Vernia) were propagated from 1999 through 2002. The most popular selection has been Earlygold (59% of the total) followed by Vernia (14%), Westin (13%), and Itaborai and Ruby (7% each).

Data are no longer being collected from the original trial, but additional trials have been established in commercial groves at a central Florida Ridge site, and in the Immokalee area. The trees for these trials were propagated using buds from the original trees and involve other rootstocks not used in the St. Cloud trial.

McTeer Trial, Dundee

This site is located east of Lake Hamilton. The soil is Candler sand, typical of the Ridge. Earlygold, Itaborai, and Ruby trees on eight rootstocks were planted in 1995 at 12 feet x 22 feet and are irrigated with microsprinklers. This formal trial also includes normal mature-line commercial Hamlin trees on Swingle citrumelo for comparison. At this site, there are Westin trees on either Benton citrange or two size-

controlling rootstocks (C-35 citrange and K x R citrange), and Earlygold trees on the same two size-controlling rootstocks that were produced using buds from the formal trial. None of those trees are the part of the formal trial.

All trees have grown well in the first 7 years after planting. Those on Carrizo and Kuharske citranges are among the tallest although the differences among rootstocks are not very great. However, virtually all trees of the new selections, except those on C-35 citrange, are taller than the Hamlin trees on Swingle.

After 4 years of following seasonal changes in juice quality, it is very apparent that the new selections in this trial develop juice color superior to Hamlin. That advantage appears as soon as early September. The color numbers continue to improve to about 35 or 36 by late October-early November depending on the year. (Note that color *number* is the value measured by the colorimeter; color *score* is the legal 2-digit value derived from rounding off the color number, e.g., a color number of 35.6 = color score of 36.) Juice color also develops well ahead of peel color. Usually at harvest, peel color was beginning to change from green to yellow. However, if the fruit remain on the tree, or cool weather comes early, the peel can turn to an attractive orange with hints of red.

The average yield across all rootstocks for the 2002-03 season was 3.3 boxes/tree for Earlygold, 2.4 boxes for Itaborai, and 2.1 boxes for Ruby sweet orange. The Hamlin trees on Swingle produced about 2 boxes/tree. These yields are slightly down from last year probably reflecting the lower predicted sweet orange yield of the industry as a whole for this season.

Each year in the trial there have been only slight, but consistent differences in yield among the trees on the eight rootstocks. The cumulative performances regardless of the scion selection show that the trees on some rootstocks like Kuharske and C-35 citranges are producing well despite their differences in tree sizes, while others like Smooth Flat Seville are disappointing so far. The

Earlygold, Itaborai, and Ruby trees on Swingle have yielded as well as or better than the Hamlin trees on Swingle.

A more telling story is evident in the cumulative pounds-solids (PS) data. Again, the differences across rootstocks are not large, but exceed Hamlin on Swingle by 500 to 2,000 PS/acre after 4 seasons. This range in PS is mostly the result of yield differences by rootstock, but also because of differences in juice quality. Over the last two seasons, trees of each selection generally produced the best quality juice when grown on Swingle or C-35. Trees on Smooth Flat Seville produced fruit with relatively poor juice quality and were low-yielding which explains their low cumulative PS/acre.

Westin sweet orange trees on Benton citrange are part of the McTeer site although they are younger than the trees in the formal trial. The Westin trees have fruited since the 2000-01 season. The fruit tend to be somewhat prolate like a grapefruit with better PS than Earlygold and Itaborai, but are also early maturing. The Westin juice color is similar to Hamlin. In Brazil, Westin trees have a reputation for premature fruit drop. Last season the trees were particularly well cropped and dropped about 5 to 10% of their fruit; this season the trees were not as well cropped and dropped very little fruit.

Agtoprof Trial, Immokalee

The trees at this site were planted at essentially the same time from the same batch of nursery trees as those used to plant the McTeer trial. The trees were not planted in a formal trial, but in whole beds of each sweet orange selection with trees within a bed grouped by rootstock. There are only seasonal tracking data of juice quality from this site along with yield observations and tree height measurements.

All indications so far suggest that the trees at both sites are performing similarly. The trees at Immokalee have grown well, and their fruit show the same seasonal juice color and PS patterns as the fruit in the Dundee trial.

Grower Cautions

Growers are encouraged to plant these new sweet oranges, but should also be cautious about their expectations. As you examine and interpret the data presented, it may be tempting to draw comparative conclusions about the scion selections or the rootstocks, but that would be risky at the moment. It is safe to conclude that Earlygold, Itaborai, and Ruby have distinct juice color advantages over Hamlin, but it is not timely to conclude that any of the new scion selections will otherwise out-perform Hamlin on a yield or PS basis. The PS/box values of the new selections may strike some readers as low, but a quick check of Fla. Agricultural Statistical Service data shows that they are nearly identical to Hamlin for the time of year. Hamlin trees can produce fruit with nearly 6 pounds of solids/box, but not ordinarily in November.

The Dundee trial trees are now 7 years old and the best combinations are starting to produce 3 or 4 boxes/tree, depending on the rootstock. PS/box values are very similar to Hamlin values. However, growers should recognize that these three selections cannot be held on the tree into late December or January like Hamlin. Every year the Brix/Acid ratio has either approached or exceeded 20 by mid-November. These sweet orange selections are very much early maturing and must be harvested early. For this reason, the use of these selections as resets in a Hamlin grove, or to convert a Hamlin grove, should be carefully considered.

Earlygold has been heavily favored in propagations so far. The McTeer data tend to support that decision, however, think like a scientist for a moment and look at the Hamlin/Swingle data. Those data vary among the trees included in each of the areas where a scion selection is being grown. For example, the Hamlin trees growing among the Ruby trees have a cumulative yield of 6.5 boxes/tree. The Hamlin trees in the Itaborai area yielded 9.1 boxes. What if the Ruby trees had been planted where the Itaborai trees are and vice versa? The results might be different and could lead to different conclusions.

Juvenility

Yield and fruit characters are also related to tree juvenility. The McTeer and understandable given that they were propagated with buds taken from trees only about 6 years beyond the seedling stage. In contrast, the Hamlin trees in the McTeer trial were propagated from mother trees many years away from the original Hamlin and, thus, have virtually no juvenile tree or fruit traits.

The loss of juvenile traits in the new sweet orange selections will require time and can be accelerated by serial propagations. Buds from seedlings (1st generation) were used to propagate the original trial trees (2nd generation) at St. Cloud. Buds from the trial trees were then used to produce the McTeer trees (3rd generation). Budwood source trees (4th generation) propagated from the McTeer trees will generally be less juvenile than ones produced from the St. Cloud trees. Therefore, as a practical matter, growers should always inquire about the origin of the bud-source trees used to produce nursery trees and buy trees propagated from trees as far removed as possible from the original trees at St. Cloud. Nursery managers should also consider this factor in sourcing buds for increase blocks or nursery trees, or propagating their own mother trees. Trees produced from the latest generation mother trees will be more “settled” and more like normal grove trees.

Growers will notice that Earlygold, Itaborai, and Ruby trees look and behave differently than normal trees. The trees at both locations have relatively dense canopies resulting in shading that leads to some fruit drop and shoot dieback especially when the trees produce good crops and the branches pull down. The fruit have a thicker, coarser peel unlike the smooth, thin peel of Hamlin fruit. Those juvenile traits may be particularly problematic for fresh fruit growers. Limited experience suggests that the “stiffness” of the peel may cause unexpected oil release during handling resulting in oleocellosis damage.

Rootstocks

Agtoprof trees are relatively juvenile. They are still vigorous, upright in growth habit, and thorny which is

Smooth Flat Seville appears to be unsuited for these orange selections on the Ridge because of low yield and relatively poor juice quality. Of the other rootstocks similar to Smooth Flat Seville (Gou tou and Kinkoji), trees on Kinkoji have performed the best so far.

Little information is available about Kuharske citrange, but the results from these trials are encouraging.

Tree size is smaller for C-35 citrange, but excellent juice quality, and yield for the size of tree, continue to encourage the use of this rootstock. Given the juvenile nature of the scion material generally available, the scion vigor and size-controlling aspects of this rootstock are a good match.

Anyone seeking more information is welcome to contact the author, or to visit one of the research trials.

The author gratefully acknowledges the continued support of Orië Lee on whose property the original trial was conducted, and the generosity of Harold McTeer who provides his wisdom and support for the current trial. Thanks also to Agtoprof and Kahn Grove Service, and the FCPRAC for funding through grant 0110-311. Castle is professor and horticulturist with the University of Florida, IFAS, Lake Alfred.

This research was supported by the Florida Agricultural Experiment Station, and grant 0110-03I from the Florida Citrus Production Research Advisory Council, Fla. Department of Agric. and Consumer Services.

The complete article with Tables and Figures was published in the February 2003 issue of the Citrus Industry magazine.

WEED CONTROL IN CITRUS GROVES

Weeds can reduce the growth, health and survival of young trees, or the time to come into bearing and ultimately fruit production. The more competitive the weeds, the more adversely they alter tree physiology, growth, fruit yield and quality. The attainment of early crop production requires controlling the growth of weeds. Weeds alter economic status by competing with trees, particularly young trees, for water, nutrients and even light in the case of climbing vines, which can easily cover trees if left uncontrolled.



Weeds also have various effects on tree performance including reduced efficacy of low volume irrigation systems, and interception of soil-applied pesticides.

Management Methods

Cultural & mechanical

Cultural methods include off-target irrigation and fertilizer applications. Mechanical methods include cultivation in row middles. However, **constant cultivation results in the destruction of citrus fibrous roots, which normally would grow in the undisturbed portion of the soil.**



Mowing is practiced between the tree rows and away from the trees in combination with herbicide applications in the tree row over the major root zone of trees. It is appropriate where a cover crop is desired in bedded groves to prevent soil erosion. Weeds can also be spread by seed and vegetatively during mowing operations, reinfesting tree rows where herbicides have been applied. **Mowing before seedhead formation is necessary to reduce seed dissemination and reinfestation.**

Chemical mowing

Chemical mowing, utilizing Low Rate Technology (LRT) postemergence herbicide spray applications and wiping in combination with mechanical mowing, is used for the suppression of vegetation in row middles. With the high frequency and cost of mechanical mowing required to maintain vegetation control in row middles, chemical mowing and wiping with low rates of glyphosate has increased. Middles management chemical applications result in the elimination of tall growing species and establishment of more manageable sod type species such as bermuda and bahia grasses.

Chemical

Generally speaking, all weed species listed as susceptible on the herbicide product label will be controlled by that herbicide at the appropriate rate, time of application and stage of growth. Environmental and plant conditions before, during and following the application are also important including moisture in the form of rainfall and/or irrigation.

Poor control can sometimes be expected from postemergence applications to weeds under stress conditions due to poor uptake and translocation of applied herbicides.

Assuming that the appropriate herbicide or herbicide mixtures are selected for the weed species present, failures in the program will usually be due to one of the above factors or to the actual application including calibration and/or equipment design and operation.

Herbicides may be classified as foliar or soil-applied. Foliar applied materials may have systemic or contact activity. Soil applied preemergence herbicides are absorbed

through weed root systems, being most effective during germination and early seedling growth stages. Systemic herbicides are those that are absorbed by either roots or above-ground plant parts and are translocated throughout the plant. Contact herbicides act as desiccants, damaging or killing all plant parts actually sprayed with little if any translocation.

For the control of well-established perennial weeds, a postemergence herbicide with systemic metabolic activity should be used with preemergence soil residual products.

Timing and frequency of application are the keys to good vegetation management. **Increased application frequency of lower rates of soil residual herbicides is more effective in young groves where vegetation presence is greater due to more exposure of the grove floor to sunlight and where a greater herbicide safety factor is required.**

Application Technology

Rapid advances in herbicide application technology have resulted in the development of sophisticated equipment. Application equipment is now capable of selective delivery of multiple herbicide products, each directly injected into booms. In a single application, tree rows and row middles may be treated with soil residual and postemergence products with selectivity for tree age, soil type and vegetation species.



Well-maintained, accurately calibrated equipment with good filtration and agitation systems capable of uniform distribution of prescribed spray volumes and droplet size is essential for efficiency, cost-effective vegetation management. Worn nozzle tips result in increased spray delivery rates and distortion of distribution patterns and should

be checked regularly. Improved herbicide boom design to reduce tree skirt contact, spray drift and interference of heavy weed cover with nozzle output will reduce tree damage and fruit drop while improving control of target vegetation. Tree skirt pruning and timing of postemergence applications will also reduce boom and spray contact with low hanging limbs and fruit.



Environmental Considerations

In determining management options, herbicide selection should be based not only on species and stage of vegetation development, but product solubility and leaching potential, soil type and rainfall distribution. Objectives are to reduce weed competition and interference through measured vegetation control/suppression with inputs having reduced potential for leaching through over-irrigation, runoff and erosion, chemical drift, or other off-target impacts.

CAUTION: Herbicides may move through the soil to groundwater. Several factors influence the rate of this movement. Lower rates applied more frequently combined with sound irrigation management practices will reduce herbicide movement.

The use of bromacil-containing herbicides is prohibited on deep, sandy Ridge-type soils.

Here is a list of several herbicides that are registered for citrus.

Preemergence soil residual herbicides:

Karmex, Krovar, Princep, Simazine, Solicam,

Non-selective postemergence systemic herbicides: Roudup, Touchdown

Non-selective postemergence contact herbicides: Gramoxone

DIAPREPES

Notching along the margins of the most recent leaf flush is the best way to determine the presence of root weevils.



It is best to look for a sign, such as the pest doing the damage.

Weevils are found on the outer portion of the tree in the early morning or late evening hours.

Adults generally hide within the tree canopy during the heat of the day. When the adults are disturbed or the tree is shaken, the weevils will fall to the ground faking death.



Tedder's traps placed under the tree canopy have been used to capture adults and determine time and intensity of seasonal adult emergence from the soil. The larvae channel on the outer bark tissue into the cambium layer to the woody portion of the root and often girdle

the taproot causing its death and impeding the ability of the tree to take up water and nutrients resulting in tree mortality. In addition, this type of injury provides an avenue for pathogen invasion such as *Phytophthora*. Although adults can emerge year round, their primary emergence period in SW Florida was found to be mid April to mid May. Larval entry into the soil begins about 20 days after adult emergence begins. Two applications of parasitic nematodes at 4 and 12 weeks after adult emergence begins may give satisfactory root protection. In SW Florida, nematode applications are generally recommended with first summer rains. Diaprepes long distance dispersal is through the movement of contaminated soil and nursery plants and trees containing potentially all life stages of the weevil. In addition, soil residues on vehicles and grove equipment may be contaminated with larvae and can move this pest from one grove to another.

The use of horticultural oils to separate leaves that have been stuck together to protect eggs may reduce Diaprepes population. When leaves are separated, eggs desiccate or are more subject to parasitism. Oils also prevent females from gluing eggs to leaves. Just after peak trap captures, foliar sprays of Danitol, Kryocide or Orthene, or Guthion, Micromite or Sevin plus at least one gallon of petroleum oil. Capture 2EC can be applied as a soil barrier treatment to control young (neonate) larvae. There are some restrictions and disadvantages for applying some chemicals. **Always READ CAREFULLY THE LABEL before using any chemical.** It should be kept in mind that frequent use of insecticides against adults could affect non-target organisms including biological controls.

For more detailed information on this pest and other citrus pests, **GET YOUR COPY OF THE 2003 FLORIDA CITRUS PEST MANAGEMENT GUIDE.**

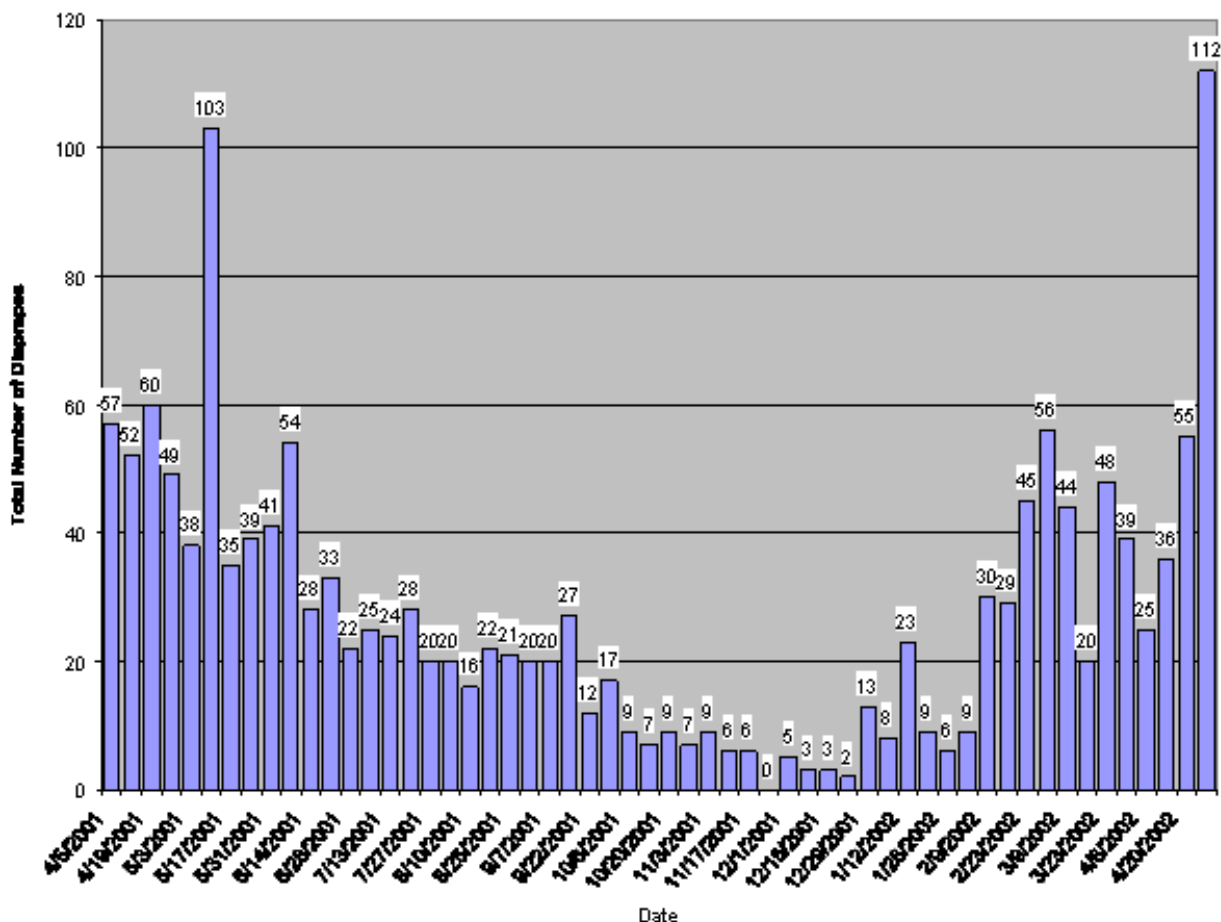
DIAPREPES ROOT WEEVIL EMERGENCE

The University of Florida and seven grower/cooperators are conducting a year-long survey to determine the weekly emergence patterns for Diaprepes root weevils. At each location, 100 Tedder's traps are surveyed weekly to determine the number of weevils collected in the traps. From this data, graphs are being developed to provide growers with average number of weevils per traps as well as total weevils collected during the weekly intervals. From the collected data, growers can get a feel for the emergence patterns over time which have occurred at each of the seven locations. With knowledge of emergence patterns, growers can then determine when the best time to apply sprays to reduce Diaprepes injuries. The locations for the surveyed groves are in the following six counties: Lake, Polk, DeSoto, Hendry, Indian River, and Dade.

In an effort to provide the growers with the data in a timely manner, the information is posted to a web site maintained at the Citrus Research & Education Center in Lake Alfred at: <http://www.lal.ufl.edu> Once at the web site, click on the "Extension" Section and then click on "Diaprepes Survey" or try to go directly to it at:

<http://www.lal.ufl.edu/Diaprepes/diaprepesemergence.htm>. At this site, you can choose the county location closest to your grove to estimate the emergence pattern that represents your area. At this site, you can also find other information related to Diaprepes control.

**Total Number of Diaprepes Found in 100 Tedders Traps
Hendry County, Florida -- 2001-2002**



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



<http://www.safepesticideuse.com>

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.

RENEWAL OF PESTICIDE LICENSE

Applicators must become recertified in order to renew their pesticide applicator licenses. To become recertified, individuals have the option of either retaking the certification exams or earning Continuing Education Units (CEUs).

*CEU credits are earned by attending professional meetings or seminars or completing online or correspondence courses, which have been approved in advance by FDACS to award CEUs.

*In rare situations, reexamination may be required for recertification, with no option of using CEUs. The Florida Department of Agriculture and Consumer Services will notify all applicators affected by this requirement.

CEUs REQUIRED

Before January 1, 2005

All applicators who renew their licenses with CEUs before January 1, 2005, must earn the number of CEUs shown in the table below for each category being renewed. If licensed in more than one category, the applicator must earn the total number of CEUs required for all categories being renewed. Of the number of CEUs required for each primary category, at least 2 of those CEUs must be Core CEUs, and at least half of the CEUs required must be approved for that specific category. The remaining CEUs required must be approved for either Core or the specific category. The same Core CEUs cannot be applied to more than one category. If you are licensed in more than one primary category, you must earn 2

core CEUs per category. For example, applicators licensed in Aquatic and Right-of-Way are required to accumulate 16 CEUs for Aquatic and 8 CEUs for Right-of-Way. To renew the Aquatic category, the applicator must have at least 2 Core CEUs, plus at least 8 Aquatic CEUs, plus 6 additional CEUs that are approved for either Core or Aquatic. To renew the Right-of-Way category, the applicator must have an additional 2 Core CEUs (not the same Core CEUs used for Aquatic category), plus at least 4 Right-of-Way CEUs, plus 2 additional CEUs approved for either Core or Right of Way.

After January 1, 2005

Applicators who renew their licenses with CEUs after January 1, 2005, must have 4 Core CEUs plus the number of category CEUs shown in the table below. Only 4 Core CEUs are required per license - not 4 Core CEUs per category.

Beginning in 2005, 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 can no longer be used to meet the required number of category CEUs. Example: After January 1, 2005, private applicators must earn 4 Core CEUs plus 8 CEUs approved for the Private Applicator Agriculture category. No substitutions of other types of CEUs will be allowed.

If an individual has more than one license (such as private and public), the same CEUs can be used to renew both licenses, provided the CEUs were earned during the license period for each license (from the day the license was issued until it expires) or within one year after expiration.

Table of CEU Requirements - The table below gives the number of CEUs required for applicators who choose to recertify with CEUs. Effective January 1, 2005, all applicators must earn 4 Core CEUs in addition to the category CEUs listed below.

<u>Primary Categories</u>	<u>Number of CEUs Required</u>
Aerial	16
Agricultural Animal Pest Control	4
Agricultural Row Crop Pest Control	8
Agricultural Tree Crop Pest Control	8
Antifouling Boat Paint Application	4
Aquatic Pest Control	16
Forest Pest Control	8
Chlorine Gas Infusion	4
Natural Areas Weed Management	16
Ornamental & Turf Pest Control	12
Private Applicator Agricultural Pest Control	8
Raw Agricultural Commodity Fumigation	4
Regulatory Inspection & Sampling	4
Regulatory Pest Control	12
Right-of-Way Pest Control	8
Seed Treatment	4
Sewer Root Control	4
Soil & Greenhouse Fumigation	4
Wood Treatment	4
<u>Secondary Category</u>	<u>Number of CEUs Required</u>
Demonstration & Research	4

CEU PROGRAMS

Training programs that provide CEU credits are offered by the County Agricultural Extension Offices as well as many other education providers. Most of the programs are offered within Florida; however, many out-of-state programs are also approved. To locate training programs offering CEUs, go to <http://www.safepesticideuse.com> and click on CEU classes. Use the searchable CEU Classes database. After locating classes of interest, call the contact person listed for more information or to register for a class. Or, you may want to contact local County Extension Offices in your area to find out their training schedules. You may also call the FDACS Pesticide Certification Office at (850) 488-3314 for information about upcoming CEU classes.



The Gulf Citrus Growers Association (GCGA) was established in 1985 as a non-profit trade association representing the citrus growers of the "Gulf" production region of southwest Florida. Some of the world's finest citrus is produced by GCGA members on over 90,000 acres in Charlotte, Collier, Glades, Hendry, and Lee Counties. Gulf Citrus addresses key issues of economic importance to the sustainable growth and development of the citrus industry in our area, including:

- *land and water use*
- *environmental regulation*
- *farmworker relations*
- *transportation*
- *domestic and international trade*
- *marketing programs*

The association also serves as the Gulf citrus industry voice on other important issues impacting the area's agricultural industry.

□ ***WATER MANAGEMENT ISSUES***

Water is of major concern to everyone, whether they are a citrus grower or an urban homeowner. In a time when the state's resources are decreasing and the state's population is increasing, it's important to implement water management and consumption programs.

Gulf Citrus has worked diligently to ensure that the irrigation water supply needs of area growers are considered by the South Florida Water Management District and other agencies as water management and consumption programs are implemented. The association has also been particularly

active in monitoring the Everglades Restoration Project, working to achieve a balance between environmental requirements and the needs of the industry. Gulf Citrus Growers Association is involved on various committees and peer reviews at the SFWMD, including the Agriculture Advisory Committee. The Association also monitors the U. S. Army Corps of Engineers and its jurisdictions and projects as related to the Central and Southern Flood Control Project and the regulation of lake levels in Lake Okeechobee.

Through this participation, the association has improved the representation of citrus growers on matters concerning their use of water. The issue of water quality is also being addressed through the water committee's activities with the IFAS, Southwest Florida Research and Education Center in Immokalee.

□ ***LABOR RELATIONS, HOUSING & TRANSPORTATION***

Over the past several years, the Labor Relations Committee has initiated a series of problem solving meetings and seminars for growers and crewleaders. Through the committee's continual work, growers are receiving excellent representation before state and federal agencies on farmworker issues. Representatives of the Federal and State Departments of Labor have expressed their desire to work with area growers through the association.

The association is also working with groups such as the Southwest Florida Housing Coalition to establish better working relationships between industry and governmental representatives in advancing collective solutions to area problems concerning housing and health.

The Gulf Citrus Growers Association is informing governmental representatives that citrus growers are concerned about the housing, health and transportation of farmworkers and is working to address these issues.

In an effort to improve housing conditions for farmworkers, Gulf Citrus Growers Association coordinated a study to determine the infrastructure needs for farmworkers in Southwest Florida. This study was a combined effort between growers, government officials and farmworker advocacy organizations and was completed in 1998.

❑ **TAXES**

The Gulf Citrus Growers Association's Tax Committee develops data from area growers on production, caretaking costs and fruit prices. They also work with county property appraisers to provide accurate information for their review in establishing equitable property values.

"Gulf" growers continue to communicate the message that taxes should be based on and paid in the current year. Our committee lets growers know what the caretaking costs and pick, load and haul are, and informs the counties when these costs are higher in Southwest Florida than in other areas of the state, if that fact can be documented.

Citrus growers want equity in property taxation and the committee works diligently to achieve that goal.

❑ **COUNTY ISSUES**

Working to develop better communications with county commissioners and county administrative staffs has been a top priority for the association. Through our Governmental Affairs Committee and staff activities, hours have been spent presenting the "Gulf" growers perspective before county boards of commissioners on comprehensive growth management plans and county ordinances.

In urban coastal counties, citrus growers have an extra communications challenge because the majority of area citizens and elected officials do not understand agriculture.

The Gulf Citrus Growers Association continues to present the perspectives of "Gulf" citrus growers to county commissioners, county officials and staff, with the intent being to keep local

government from passing rules and regulations which can be damaging to area growers.

❑ **STATE AND FEDERAL ISSUES**

Although "Gulf Citrus" has focused on local issues, the association works with other state and national agricultural organizations to represent growers on broad-based issues. The Gulf Citrus Growers Association is a member of the Florida Ag Coalition which monitors state issues that affect agriculture. The coalition has banded together to provide a unified voice for Florida organizations in addressing statewide issues.

❑ **ENVIRONMENTAL REGULATION**

Gulf Citrus Growers Association actively works in conjunction with local growers in monitoring the plans of the U.S Fish & Wildlife Service and the Florida Game and Fresh Water Fish Commission.

These governmental agencies have passed rules that directly affect how growers can manage threatened or endangered species on their property. The association's landholders have been active in addressing grower concerns in the Florida Panther Habitat Protection Plan, along with other species-specific plans. Our goal is to make the plans more "landowner" friendly! Wildlife habitat management can be compatible with successful farming activities. The association is working to help area growers in addressing these land use issues.

❑ **PUBLIC AND MEDIA RELATIONS**

Since its formation, the Gulf Citrus Growers Association has worked to develop positive working relationships with a wide range of media, from the citrus trade press to local newspapers and television. The association and its members have become a primary source of information for local newspapers and television any time a citrus-related story appears.

When citrus-related stories appear in the local papers, chances are that a board or staff member of the Gulf Citrus Growers Association has been consulted or quoted.

Through the association, citrus growers in Southwest Florida are actively working to present a positive image of the citrus industry to the public.

The association's Community Relations Committee is actively working on a public relations campaign for urban areas in order to positively position citrus and agriculture in the minds of decision-makers and the voting public.

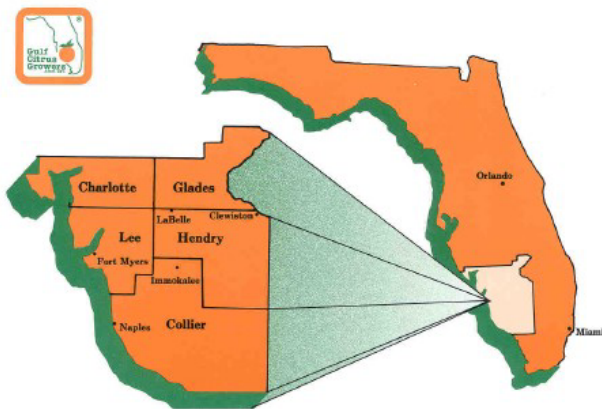
□ **CITRUS EXPO**

Showcasing southwest Florida citrus growers was the reason Gulf Citrus Growers Association, Citrus Industry Magazine, and the Southwest Florida Citrus Extension Service sponsored the first Florida Citrus Expo in August, 1992. The Expo has since become a premiere industry event, drawing attendees and exhibitors from throughout the state, as well as from national and international markets.

The Citrus Expo has proved to be tremendously successful, selling out exhibit space and experiencing record grower attendance. Two days of informational seminars, tackling a wide range of issues affecting growers, are offered in conjunction with the trade show.

Citrus growers in SW Florida are encouraged to join GCGA and get all advantages and benefits for being a member.

Florida's Gulf Citrus Production Region



A great way to support the industry and your business!

Gulf Citrus is a trade organization representing the citrus growers of southwest Florida's "Gulf" production region, an area that contributes about 25% of the state's total citrus crop! Our members currently produce some of the world's finest citrus on nearly 90,000 acres in Charlotte, Collier, Glades, Hendry and Lee Counties.

Businesses and individuals that provide goods and services to citrus growers in SW Florida are encouraged to join Gulf Citrus as Associate Members. Your support as a member of Gulf Citrus is an investment both in your business and in the future of the citrus industry in SW Florida.

Benefits include:

- A listing in the annual **GCGA Membership Directory** which includes your business name and location, a contact name and number, and a brief description of the services or products you offer (you may also purchase larger advertising space in the directory);
- A **complimentary copy** of the Membership Directory;
- Invitations to **association meetings and seminars**;
- A subscription to two **newsletters**, *Florida Gulf Citrus News* and *Gulf Citrus Update*;
- **Sponsorship opportunities** which enable your business to market its services directly to Gulf growers and other associate members (newsletters, luncheons, and the Gulf Classic Golf Tournament, etc...)

For more information on GCGA and on how to become a member or associate member, contact

**Ron Hamel or Joanne Stein
Gulf Citrus Growers Association
P. O. Box 1319
LaBelle, FL 33975**

Phone: (863) 675-2180

From:

**Dr. Jonathan H. Crane,
President, FSHS**

The Florida State Horticultural Society (FSHS) will hold its 116th Annual Meeting June 8 to 10, 2003 at the Sheraton World Resort in Orlando. This will not be an ordinary meeting, as we will offer several special programs, have two exciting additional speakers, and educational-informational displays from various horticultural industry organizations. All in addition to our usual oral presentations

Come join us on Sunday (June 8th, 2003) afternoon for registration and meeting old and making new friends. Our Awards Ceremony and Welcoming Reception will follow registration. On Monday morning, June 9th, we will feature two special programs for two special groups: CEU-CCA Landscape Management Workshop aimed at Florida's landscape industry and the Master Gardener Training Workshop aimed at Florida's numerous and dedicated Master Gardeners. Simultaneously, we will have our opening ceremony and feature our principle address on farmland preservation, conversion, stewardship, and planning by Mr. Craig Evans, president of Stewardship America, Inc., a charitable, nonprofit

organization founded in 1995. Stewardship America (<http://privatelands.org>) is dedicated to advancing initiatives that will engender a thriving rural economy, with an economically robust agriculture, a healthy natural environment, viable rural communities and safe, abundant supplies of food and fiber. Following Mr. Evans are the short oral presentations in six sections: Ornamentals, Garden and Landscape, Vegetables, Citrus, Processing and Handling, and Krome Memorial. All six sessions will offer new and up to date information in specific areas of Florida's horticulture. Monday evening come join us for our Industry Reception.

Tuesday morning, June 10th, join us at our Horticultural Breakfast meeting and listen to Mr. Mike Taylor speak about his experience and development of an agricultural growth management plan. We'll end the meeting with the last oral presentations in each of our six-commodity areas at noon.

The Sheraton World Resort is located on 10100 International Drive; room rates are excellent at \$89/night (call 1-800-327-0363 for reservations, mention FSHS). To learn more about FSHS and this year's Annual Meeting, visit our web site (<http://www.lal.ufl.edu/fshs/>) or better yet come to our meeting!

