



UNIVERSITY OF
FLORIDA

IFAS EXTENSION

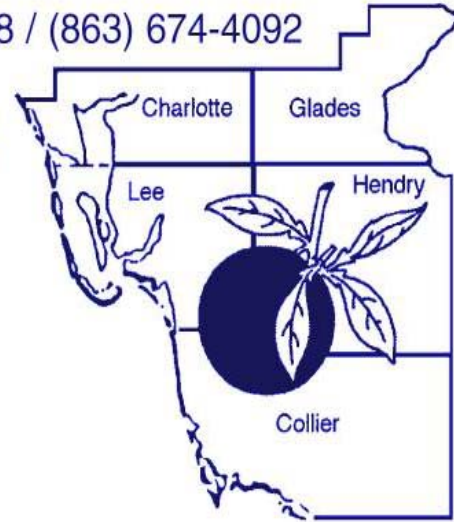
Hendry County Extension / P.O. Box 68 / LaBelle, Florida 33875-0068 / (863) 674-4092

Flatwoods Citrus

Vol. 9, No. 10

October 2006

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



U P C O M I N G E V E N T S

Observations on Citrus Disease Management in Brazil

Potential Opportunities for Florida Citrus Growers

Location: Southwest Florida Research and Education Center, Immokalee

Date: October 26, 2006, Time: 9:00 AM – 12:00 Noon

3 CEUs for Pesticide License Renewal, 3 CEUs for Certified Crop Advisors

Sponsor: Rachel Walters, Bayer CropScience

Free lunch will be served (Compliments of Bayer CropScience).

However, **RSVP is required**. To RSVP, call 863 674 4092 no later than Tuesday morning, 24 October 2006 or send an e-mail to maz@ifas.ufl.edu or fill out the registration form on page 21.

Dear “Flatwoods Citrus” newsletter subscriber:

Please find enclosed a survey form and an evaluation form on pages 19&20.

We would appreciate it if you Please fill them out and return them to me

as soon as you can in the enclosed postage-paid envelope. Thank you!

If you want to print a color copy of the Flatwoods Citrus Newsletter, get to the Florida Citrus Resources Site at <http://flcitrus.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

CANKER/GREENING CLASSES IN OCTOBER 2006

What we can learn from Brazil about managing exotic citrus diseases?

Time: 9 AM- 12 noon

9:00-9:20 Citrus canker and canker management

9:20-9:40 Citrus greening and greening management

9:40-10:00 Scouting program for the Asian citrus psyllid

10:00-10:20 Overview of Asian citrus psyllid control

10:20-10:40 Break

10:40-11:00 Other citrus diseases of importance in Brazil and their management

11:00-11:30 Compliance agreements

11:30-12 noon Canker and greening training as required under CHRP

Speakers: Brlansky, Chamberlain, England, Estes, Futch, Oswalt, Rogers, Rouse, Stansly, Zekri, and others.

6 locations in Florida

October 3, Polk County Extension Service Office, Bartow

October 4, Highlands County Extension Service Office, Sebring

October 5, Indian River REC, Ft. Pierce

October 11, Turner Exhibition Hall, Arcadia

October 26, SW Florida IFAS Research & Education Center, Immokalee

October 31, Lake County Extension Service Office, Tavares

There is no registration fee. RSVP is required. For reservation, please call your citrus extension agent.

For the Immokalee location, the program sponsor is **Rachel Walters** with **Bayer CropScience**. Free lunch will be served (Compliments of **Bayer CropScience**). However, **RSVP is required**. To RSVP, call 863 674 4092 no later than Tuesday morning, 24 October 2006 or send an e-mail to maz@ifas.ufl.edu or fill out the registration form on page 21. **RSVP is required**.

Getting information and knowledge about citrus greening is very important for growing citrus trees successfully in Florida. Knowing efficient management strategies to reduce the negative impact of citrus greening is crucial to citrus growers and production managers. It is important to know what to look for in the grove to identify citrus greening. The importance of scouting or surveys for citrus greening cannot be overemphasized. The sooner citrus greening is detected in a grove, the more successful its management and the less negative its impact can be.

To learn more about greening and to get help in identifying citrus greening, the University of Florida, IFAS, prepared DVDs, field identification cards, laminated ID sheets, articles, and reports in English and Spanish as well as other publications in EDIS (Electronic Data Information Source) at <http://edis.ifas.ufl.edu>, Citrus Industry magazine, Citrus & Vegetable magazine, Florida Grower magazine, and others. IFAS has also been offering educational programs including seminars, workshops, field days, and training sessions. For more information, call Holly Chamberlain at Lake Alfred CREC (863 956 1151) or your citrus extension agent.



Bart Hoopingarner
Cerexagri-Nisso, LLC
3605 162nd Ave East
Parrish, FL 34219
Phone: 941 737 7444
Ag Net: 158*17*9485

John Frieden – Manager
Abacus (abamectin)
Rotam USA LLC
4610 Ridgeview Circle
Valdosta, GA 31602
Phone: 229 253 1646
Johnfr@rotam.com

Nufarm Agriculture USA
Craig Noll
Office-239 549 2494
Mobile-239 691 8060
craig.noll@us.nufarm.com
Gary Simmons
Phone: 772 260 1058

Jay Hallaron
Chemtura Corporation
Phone: 407 256 4667
Fax: 407 523 1097
Cell: 321 231 2277
jay.hallaron@chemtura.com

MONSANTO
Mike Prescott
Phone: 863 773 5103
Nextel Agnet: 886
Thad G. Boatwright
Phone: 561 478 4970
Nextel Agnet: 10556

Ward Gunter

CitriBlen[®]
The Scotts Company
Phone: 772 473 3987
ward.gunter@scotts.com

Wayne Simmons
SIMMONS CITRUS NURSERY
1600 Hwy 29 South
LaBelle, FL 33935
Phone: 863 673 1370
Fax: 863 675 6766

FARM CREDIT
SOUTHWEST FLORIDA
330 N. Brevard Ave.
Arcadia, FL 34266
Phone: 800 307 5677
Fax: 863 494 6460

Rachel M. Walters
BAYER CropScience
Phone/Fax: 941 575 5149
Mobile: 239 707 1198
Nextel 158*17*41198
rachel.walters@bayercropscience.com

Gaylon D. Pfeiffer
BASF Corporation
11806 Marblehead Drive
Tampa, FL 33626
Phone: 813 967 0024
Fax: 813 818 8694
pfeiffg@basf-corp.com

Special Thanks to all the 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.

Susan S. Thayer



8400 Lake Trask Rd.
P.O. Box 1849, Dundee, FL 33838
Phone: 800 881 6994

Brian Creel

brian@creeltractor.com

Creel Tractor Company

www.creeltractor.com

Phone: 239 694 2185 ext 223
Nextel: 158*24799*4

Dan Brunetti

The KeyPlex People

Morse Enterprises Limited, Inc.

Phone: 800 433 7017

Fax: 305 577 0692

keyplex@keyplex.com

Chip Giles

Dow AgroSciences

Nextel 158*17*15098

Phone: (239) 693-1351

Mobile: (239) 707-0197

imgiles@dow.com

FIRST BANK

P.O. Box 697

LaBelle, FL 33975

LaBelle Phone: 863 675 4242

Fax: 863 675 1099

Moore Haven: 863 946 1515

Ed Early

DuPont Ag. Products

5100 S. Cleveland Ave.,
Suite 318-368

Fort Myers, FL 33907

Phone: 239 994 8594

Robert F. Gregg

SYNGENTA

Office Phone: 239 561 8568

Cell Phone: 239 410 0084

robert.gregg@syngenta.com

Donald Allen

AGLIME SALES, INC.

1375 Thornburg Road

Babson Park, FL 33827-9549

Mobile: 863 287 2925

Agnet # 52925

GeoAg Solutions

David Summers (863) 441 1200

dsummers@geoagsolutions.com

Neal Horrom (239) 369 9806

nhorrom@geoagsolutions.com

www.geoagsolutions.com

HUANGLONGBING (CITRUS GREENING) MANAGEMENT

What are we waiting for to take citrus greening seriously?

What are we waiting for to scout for citrus greening?

What are we waiting for to remove positive infected trees?

Are we waiting for citrus greening to spread everywhere in Florida and destroy our citrus industry?

All citrus growers and production managers should take Huanglongbing (HLB) very seriously and be proactive in fighting this disease. The earlier we start combating citrus greening, the lower will be its negative impact, the faster it will be under control, and the more successful will be the reduction of the disease inoculum and reduction of its infection rate.

Surveying and inspecting trees for HLB symptoms is very critical. All personnel working in the grove should be familiar with the symptoms and should be trained to scout for this devastating disease. Without scouting for the disease and without timely removal of symptomatic trees, citrus greening will get worse and will ultimately destroy our citrus groves and our citrus industry.

Huanglongbing (HLB), commonly called citrus greening disease, is caused by a systemic bacterium. HLB is a serious and destructive citrus disease. The blotchy mottle symptom on leaves is the most diagnostic symptom of the disease. The

early symptoms of yellowing may appear on a single shoot or branch. Hence the Chinese name of yellow shoot.

Fruit are often few in numbers, small, and may be lopsided with a curved central core and fail to color properly remaining green at the styler end. The affected fruit often contain aborted seeds and have a salty bitter taste. Such affected fruit cannot be salvaged even for juice.

When psyllids are abundant and conditions are favorable, HLB can spread, causing tree decline and reducing fruit production and fruit quality.

HLB is difficult and expensive to manage in areas where it is widespread. HLB is transmitted by the citrus psyllid. The use of clean budwood and certified healthy trees is essential. Budwood sources and nursery stock should be protected from psyllid infestation by screened enclosures and the use of systemic insecticides.

The citrus psyllid populations should be suppressed through chemical, biological and cultural controls. Timely removal of infected trees is very important so that they will not serve as a source of the bacteria for psyllid acquisition and subsequent transmission. Prior to removal, infected trees should be treated with a foliar insecticide to kill all adult psyllids feeding on those trees.



Blotchy mottle



Lopsided fruit

WINDBREAKS FOR CITRUS

The on-line program “Windbreaks for Citrus,” now available at the CREC website (www.crec.ifas.ufl.edu/), was activated on August 28th. It is a comprehensive and friendly place to learn about windbreaks with a helpful section on design and management of living windbreaks. You can access all parts of the website in no more than three clicks. There are many practical and research publications available for those who want to plump the depth of the subject, information about Florida situations, and details about plants for living windbreaks. There are plenty of pictures including illustrations of other countries where windbreaks are used. All presentations from the April short course are included. Any and all constructive comments and other contributions (e.g., photos) to improve the site (<http://www.lal.ufl.edu/extension/windbreaks/index.htm>) are welcomed.



Purpose of windbreaks for canker control

- Reduce spread of canker
- Most importantly, reduce canker severity

Recommendations

- Plant windbreaks now for fresh market grapefruit and early oranges
- Plant windbreaks in available space along fence rows, ditches, wetlands for processed fruit

FRESH CITRUS FRUITS, Second Edition

**Edited by Wilfred F. Wardowski, William M. Miller,
David J. Hall and William Grierson**

FRESH CITRUS FRUITS, Second Edition, 21 Chapters, 602 pages, \$80.00.

It is a comprehensive treatise on citrus fruits destined for fresh markets. From grove-to-packinghouse-to-market may appear as a simple path of delivery of citrus fruits to consumers, but there are many obstacles and important problems, which are discussed here in depth. Fresh Citrus Fruits, Second Edition should be of considerable interest to growers, handlers, packinghouse workers, exporters, produce buyers, citrus scientists, students and consumers. To get your copy, contact:

FLORIDA SCIENCE SOURCE, INC
P.O. Box 8217, Longboat Key FL 34228-8217 U.S.A.
Telephone Voice/FAX (941) 383-4680
E-mail: fssource@aol.com
www.ultimatecitrus.com/fssource



Check this Website: <http://citrusmh.ifas.ufl.edu/index.asp>

Objectives of Mechanical Harvesting

- Decrease harvesting cost
- Increase “on tree” revenue
- Increase overall labor productivity
- Reduce the number of needed harvest workers

Recent History of Citrus Mechanical Harvesting

Due to several freezes that hit Florida during the 1980’s many years of little or no interest into mechanical harvesting of citrus was seen. However, increased harvesting costs and expected labor shortages rekindled the grower’s demand for more effective harvesting methods. By 1991, new citrus plantings in South Florida had also reached full production and a drop in fruit prices was beginning to emerge.

In 1994, the Florida Department of Citrus established the Citrus Harvesting Research Advisory Council. A group of 16 selected leaders from the citrus industry were commissioned to initiate and support research and development of mechanical harvesting technologies. With an annual budget of close to \$2 million (in 1999-2000) the group sponsored a number of inventor proposals, provided equipment development loans, and funded equipment evaluations. Many of these machines have been fully developed and are now being used commercially. Some of the machines to come out of this research include the trunk shake & catch system, continuous canopy shake & catch system, tractor drawn canopy shake system, area canopy shake, monoboom, and the canopy penetrator. Only the trunk shake and catch, the continuous canopy shake and catch and the

tractor drawn canopy shake systems are currently being used.

Trunk Shakers

One TSC set includes a minimum of three machines—one shaker unit, one receiver unit, and one field truck (goat). Sometimes one goat can service two TSC units. The shaker unit attaches to the trunk of a tree and shakes the tree for between 5 and 10 seconds. Falling fruit is deflected into the receiver that conveys the fruit to a cart attached to the receiver. The cart can hold between 70 and 90 boxes (90-pounds/box), after which the fruit is dumped into the field truck for transport to the bulk trailer.

The TSC system is well suited for long rows and uniform sized trees. Trees need to have a clear trunk of at least 12 inches and should be “skirted” to allow optimal fruit collection.

Another trunk shaker system was called a monoboom. It did not have a catch frame, shaking the citrus fruit to the ground. It was capable of grabbing larger tree trunks. One such system was called a “Stackhouse.”

Continuous Canopy Shakers

One CCSC set includes a minimum of four machines--two harvesting units and two field trucks (goats) into which fruit is conveyed. Most systems engage 2 additional field trucks that allow transport of fruit to the bulk trailers without stopping the harvesting operation. Harvesters work in parallel on either side of the tree row. Good synchronization allows the two harvesters to minimize fruit drop to the ground. A CCSC system travels between 1 and 2 mph down the row. Shaker heads penetrate the canopy and vibrate up & down and side to side to

remove fruit. Fruit falls on to a catch frame and is conveyed to a trailing field truck. The CCSC system is well suited for long rows and uniform sized trees. Trees have to be “skirted” to allow optimal fruit collection.

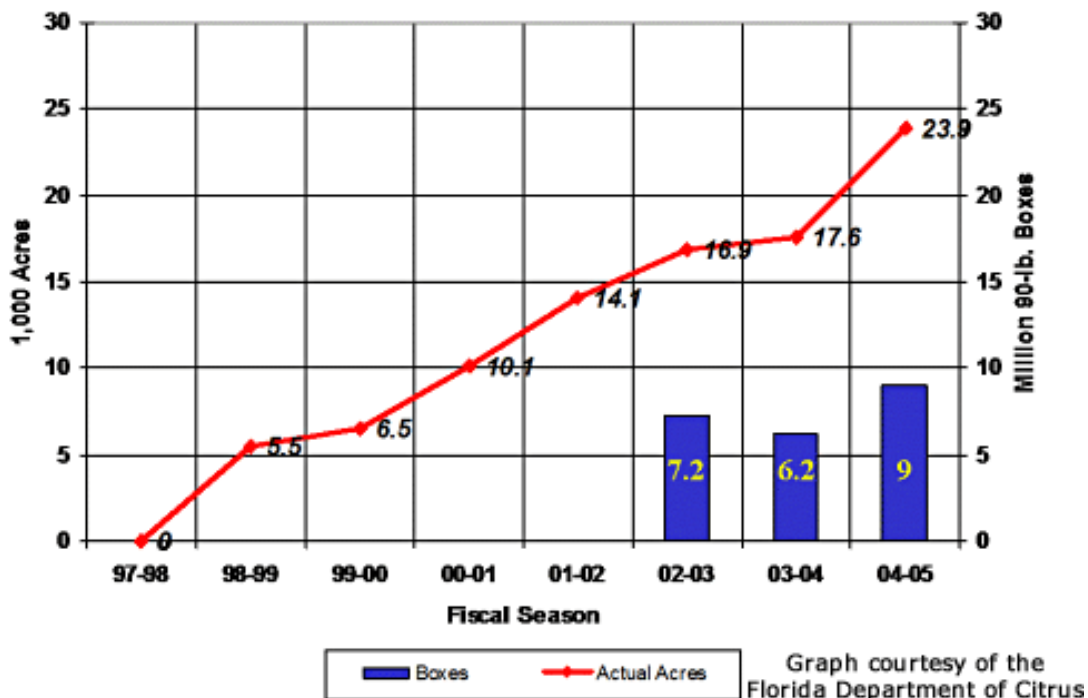
Tractor Drawn Canopy Shaker

The T-CS system, developed by OXBO, utilizes a shaking head identical to the shaking unit on the self propelled CCSC. Shaker heads penetrate the canopy and vibrate up & down and side to side to remove fruit and then utilize a hand crew to gather the fruit into traditional 10-box tubs. A field truck or goat then dumps the tubs and transports the fruit to the bulk trailers. A T-CS system travels between 1 and 2 mph down the row. Its daily use, however, is constrained by the availability of workers to pick-up the fruit. A pick-up machine is being developed to aid in the fruit recovery.

A research team from the University of Florida's Citrus Research and Education Center was funded to develop fruit

loosening (abscission) technologies to aid mechanical harvesting of processed fruit. Since 1994, a vigorous harvesting research and development program was also funded and administered by the Florida Department of Citrus to facilitate the development mechanical harvesting technologies for the purpose of reducing grower costs. As part of the 2005-2006 Fiscal Year budget, the State of Florida assessed \$2 million for “Emerging Citrus Industry Technologies.” This included money to be allocated for grower education and continued research of several components of citrus mechanical harvesting. An advisory group was formed of SW Florida growers to aid in the identification of the top topics that they would like to see researched in more depth. These included tree health, grove design, abscission, machine enhancements, robotics, and economics of citrus and mechanical harvesters.

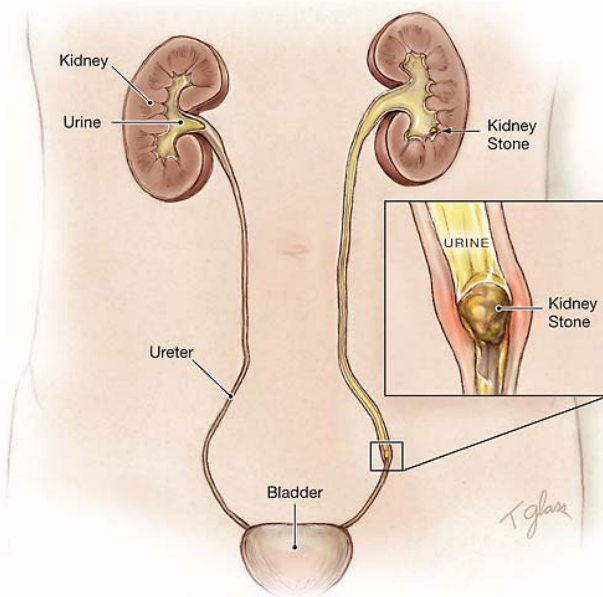
Mechanically Harvested Acreage



ORANGE JUICE BEST AT STOPPING KIDNEY STONES



Kidney stones result from the **precipitation** (crystallization of previously dissolved particles) of certain substances within the urine. These stones form in the kidney and subsequently travel through the **ureter** (the tube that conducts urine from the kidney to the bladder) and are eliminated through the urine if they are small. In some cases, the stone may not be able to travel through the ureter, causing pain and possibly causing an obstruction, blocking the flow of urine out of the kidney. Kidney stones can be caused by a large number of factors, such as infection, certain diets, medications, and conditions that result in an increased concentration of calcium or other substances, including oxalate and uric acid, in the urine.



An independent study finds that **orange juice** beats lemonade and other citrus fruit juices in helping to keep kidney stones at bay. Experts have long known that potassium citrate -- found in citrus juice -- can slow stone formation in people with a history of the condition.

But this study, by a team from the University of Texas Southwestern Medical Center at Dallas, found that other components can affect a juice's ability to prevent stones.

Thirteen volunteers (some with a history of kidney stones and some without) took part in the multi-phase trial, which was funded by the U.S. National Institutes of Health. For one week, participants drank distilled water, for another week orange juice, and then lemonade for another week. There was a three-week interval between each of these weeks.

During each phase, the participants drank 13 ounces of orange juice, lemonade or distilled water three times a day with meals. They were also put on a low-calcium, low-oxalate diet, which also helps cut stone formation.

The study found that orange juice increased levels of citrate in the urine and reduced the crystallization of uric acid and calcium oxalate, the most common components of kidney stones. Lemonade did not increase citrate levels.

"One reason might be the different constituents of various beverages," study lead author Dr. Clarita Odvina, assistant professor of internal medicine at the Charles and Jane Pak Center for Mineral Metabolism and Clinical Research, said in a prepared statement.

Odvina noted that the citrate in orange and grapefruit is accompanied by a potassium ion while the citrate in lemonade and cranberry juice is accompanied by a hydrogen ion. While hydrogen ions counteract the beneficial effects of high citrate content, potassium ions do not.

BENEFITS OF PLANT BIOTECHNOLOGY

Plant biotechnology (also commonly referred to as agricultural biotechnology, genetically modified organisms or GMOs) delivers a range of benefits for agriculture and society through increased yields, higher incomes, simplified crop management, and reductions in the use of pesticides. Farmers and consumers should be well informed about the benefits of biotech crops. Biotech crops benefit the environment. Through biotechnology, farmers are provided with efficient tools to combat pest problems by using biotech crops (insect- and disease-protected crops). Plant biotechnology **is already** delivering substantial benefits through increased yield (to keep food prices low), improved incomes (which benefits rural economies), reduced labor, and the conservation and preservation of the environment.

Plant biotechnology, a relatively new technology, has direct environmental benefits. For example, herbicide-tolerant crops facilitate the use of no-till agriculture, which reduces both soil erosion and energy inputs. Pest-resistance reduces the need for spraying, with consequent benefits to non-target organisms and overall biodiversity.

To date, there have been no scientifically-proven cases of biotechnology adversely impacting food safety or human health. Biotech foods are more stringently tested than any other food in history, and are tightly regulated both before they reach the marketplace and once they are on sale. This ensures that they are at least as safe as conventional foods.

Moreover, the potential benefits of biotechnology for human health and safety are significant. Products with healthier oil contents are already on the market.

Nutritional benefits under development include fortification of fruits and vegetables with higher levels of vitamins, such as C and E – with the potential to increase protection against the risk of chronic diseases such as cancer and heart disease.

The Future Benefits of Plant Biotechnology Through the Next Decade

Over the next decade, the industry's global plant biotechnology research and development pipeline will produce products that offer direct benefits to:

1. Consumers, such as enhanced nutrition, convenience and taste. Examples include:
 - Tomatoes that are enriched with lycopene, an antioxidant believed to help protect against heart disease and cancer.
 - Rice enriched with beta-carotene, which stimulates production of vitamin A. Yearly, vitamin A deficiency causes blindness in 500,000 children and up to two million deaths.
 - Cooking oils that contain higher levels of vitamin E and lower levels of trans-fatty acids, which raise cholesterol levels and contribute to heart disease. Vitamin E is believed to improve the body's immune system, lowering the risk of cardiovascular disease and some forms of cancer.
 - Lettuce fortified with resveratrol, the compound found in red grapes that acts to lower levels of "bad" cholesterol and raise levels of "good" cholesterol.
2. Farmers and the environment, such as reduced pesticide use, improved drought tolerance, salinity tolerance, and increased yields - facilitating the conservation of natural areas. Examples include:
 - Oranges resistant to citrus canker
 - Sweet potatoes--an important staple crop in Africa and Asia--resistant to the feathery mottle virus
 - Disease-resistant bananas
 - Drought-resistant varieties of corn, soybeans, wheat and other crops

SPRAY DRIFT OF PESTICIDES

What Is Pesticide Spray Drift?

EPA defines pesticide spray drift as the physical movement of a pesticide through air at the time of application or soon thereafter, to any site other than that intended for application (often referred to as off target).



How Does Spray Drift Occur?

When pesticide solutions are sprayed by ground spray equipment or aircraft, droplets are produced by the nozzles of the equipment. Many of these droplets can be so small that they stay suspended in air and are carried by air currents until they contact a surface or drop to the ground. A number of factors influence drift, including weather conditions, topography, the crop or area being sprayed, application equipment and methods, and decisions by the supervisor or applicator.

What Are the Impacts of Spray Drift?

Off-target spray can damage other crops and affect human health and the environment. Drift results in a waste of product and reduces the effectiveness of pesticide application.

How Pesticides Drift?

There are two basic ways in which pesticides move downwind:

Vapor drift. When pesticide molecules volatilize (evaporate into the air), they can move downwind as a vapor.

This form of drift is related to the product, not to the type of application method used.

Particle drift. This is the movement of spray particles, or droplets, formed during application. Several key factors determine if a spray droplet will hit its target or drift downwind: (1) the droplet size; (2) the equipment and method of application; (3) the wind speed and (4) other climatic conditions such as temperature and relative humidity.

1. Droplet Size. “Atomizing” the spray solution into very small droplets will increase coverage, but will also increase the potential for evaporation and drift. The potential for drift rapidly decreases when the diameter of droplets is increased to about 150 microns.

2. Equipment and Application Methods.

a. Lower spray height. You can reduce drift by mounting the spray boom closer to the ground (without sacrificing the uniformity of the spray pattern). That is because wind speed increases with height.

b. Use the lower end of the pressure range. Higher pressures generate many more small droplets (less than 100 microns). For this reason, refrain from using pressures that exceed 40 to 45 psi.

c. Spray volume and pressure for foliar herbicides. Many applicators are reducing the spray volume of foliar herbicides from the commonly used 10-20 GPA to 5-10 GPA. When you reduce spray volume while maintaining the same dose of active ingredient is reduced, the droplet size will decrease, and this means greater drift potential. To compensate for the reduced spray volume, some applicators will increase spray pressure from a normal 30-40 psi to 60-120 psi. Increasing pressure

should not be used as a substitute for spray volume. It is recommended to maintain pressure below 45 psi.

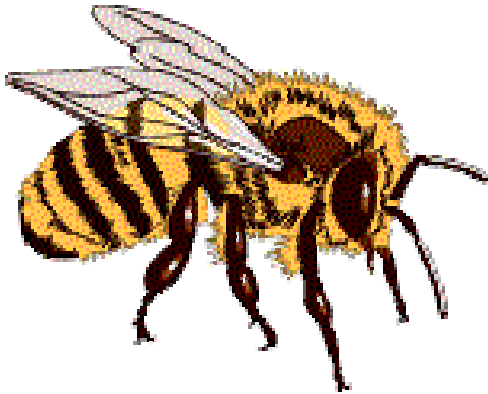
3. Wind speed. Wind speed and direction, temperature, relative humidity, and atmospheric stability all affect spray drift. Wind speed, however, is usually the most critical meteorological condition. Spray when the wind speed is less than 10 miles per hour. To minimize the damage done by drift, it is also important to determine the wind direction relative to sensitive crops. To greatly reduce damage to sensitive plants, leave a buffer zone at the downwind edge of the spray area. After the wind has died down or changed direction, you can then safely spray the buffer zone.

HOW TO REDUCE DRIFT?

- Avoid high spray pressure, which create finer droplets. Use as coarse a spray as possible and still obtain good coverage and control.
- Don't apply pesticides under windy or gusty conditions; don't apply at wind speeds over 10 mph. Read the label for specific instructions.
- Maintain adequate buffer zones to insure that drift does not occur off the target area.
- Be careful with all pesticides. Insecticides and fungicides usually require smaller droplet sizes for good coverage and control than herbicides; however, herbicides have a greater potential for non-target crop damage.
- Choose an application method and a formulation that is less likely to cause drift.
- Use drift reduction nozzles.
- Use wide-angle nozzles, lower spray boom heights, and keep spray boom stable.
- Use drift control/drift reduction agents. These materials are designed to minimize the formation of droplets smaller than 150 microns. They help produce a more consistent spray pattern and aid in deposition. Drift control additives do not eliminate drift. Therefore, common sense is still required.
- Apply pesticides early in the morning or late in the evening; the air is often more still than during the rest of the day.
- Don't spray during thermal inversions, when air closest to the ground is warmer than the air above it. When possible, avoid spraying at temperatures above 90°-95° F.
- Know your surroundings! You must determine the location of sensitive areas near the application site. Some crops are particularly sensitive to herbicides, which move off-site.
- Be sure you are getting the spray deposition pattern you think you are; service and calibrate your equipment regularly.
- Whenever possible, cut off the spray for missing trees in the row. Spray that does not enter the tree canopy is wasted and contributes significantly to drift problems.
- Keep good records and evaluate pesticide spray results.

**Remember,
ALWAYS read and follow
label directions.**

AFRICANIZED HONEYBEES



Africanized Honeybees (AHB) -- also called "Africanized bees" acquired the name "killer bees" because they will viciously attack people and animals who unwittingly stray into their territory, often resulting in serious injury or death.

It is not necessary to disturb the hive itself to initiate an AHB attack. In fact, Africanized bees have been known to

respond viciously to noises or even vibrations from vehicles, equipment and pedestrians.

Though their venom is no more potent than native honeybees, Africanized bees attack in far greater numbers and pursue perceived enemies for greater distances. Once disturbed, colonies may remain agitated for 24 hours, attacking people and animals within a range of a quarter mile from the hive.

Africanized bees are becoming a problem in Florida.

Bee Invasion

Africanized bees proliferate because they are less discriminating in their choice of nests than native bees, utilizing a variety of natural and man-made objects, including hollow trees, walls, porches, sheds, attics, utility boxes, garbage containers and abandoned vehicles. They also tend to swarm more often than other honeybees.

Bee Safety

The best safety advice is to avoid an encounter with unfriendly Africanized Bees. Be alert for danger. Remember that AHB sting to defend their colony, so be on the look out for honeybee swarms and colonies.

- Be alert for bees coming in and out of an opening such as a crack in a wall, or the hole in a utility box.
- Listen for the hum of an active bee colony.
- Look for bees in holes in the ground, holes in trees or cacti, and in sheds.
- Be extra careful when moving junk that has been lying around.
- Be alert for bees that are acting strangely. Quite often bees will display some preliminary defensive behavior before going into a full-fledged attack.
- When you are outdoors, in a rural area, a park or wilderness reserve, be aware of your surroundings and keep an eye out for bees the way you would watch out for snakes and other natural dangers.
- Don't panic at the sight of a few bees foraging in the flowers. Bees are generally very docile as they go about their normal activities.

Be Prepared

- Wear light-colored clothing. Bees tend to attack dark things. Dark clothing, dark hair, any thing dark in color could draw the animus of AHB.
- Bees are sensitive to odors, both pleasant and unpleasant. The smell of newly cut grass has been shown to disturb honeybees. Avoid wearing floral or citrus aftershaves or perfume.
- Check your house and yard at least once a month to see if there are any signs of bees taking up residence. If you do find a swarm or colony, leave it and keep family and pets away. Find a pest control company or a local beekeeper to solve the problem.
- To help prevent honeybees from building a colony in your house or yard, fill all cracks and crevices in walls with steel wool and caulk. Remove piles of refuse, honeybees will nest in an old soda can or an overturned flowerpot. Fill holes in the ground.

Bee Attack

Bees target the head, and nearly all those who suffer serious stinging incidents with Africanized Bees are overcome by stings to the head and face.

The best method of escaping a bee attack is to cover your head and run for shelter.

Any covering for your body, especially for your head and face, will help you escape. A small handkerchief or mosquito net device that fits over the head could easily be carried in a pocket. If you do not have these, grab a blanket, coat, towel, anything that will give you momentary relief while you look for an avenue of escape. If you have nothing else, pull your shirt up over your face. The stings you may get on your chest and abdomen are far less serious than those to the facial area.

- Try to find shelter as soon as possible. Take refuge in a house, tent or a car with the windows and doors closed.
- **DO NOT JUMP INTO WATER! Bees will wait for you to come up for air.**
- Once you are away from the bees, evaluate the situation. If you have been stung more than 15 times, or if you are having any symptoms other than local pain and swelling, seek medical attention immediately.
- If you see someone else being stung or think others are in danger, call 911 immediately.
- Remove stingers as soon as possible to lessen the amount of venom entering the body. Scrape stingers off the skin with a blunt instrument or plastic card. Do not remove bee stingers with fingers or tweezers – this only forces toxins into the victim's body.

AHB Facts

- Are slightly smaller than the European honeybee, but only an expert can tell them apart
- Defend their hive more rapidly than the European honey bee
- Usually sting in greater numbers
- Are less selective about where they nest
- Swarm more often than European honey bees
- Do not have stronger venom than the European honey bee
- Each bee can only sting one time – females die after stinging
- Are not native to the U.S.; they came from Africa

EQIP application deadline December 15th

A U.S. Department of Agriculture program can help farmers and ranchers pay for conservation practices that prevent erosion, improve water quality, and provide habitat for wildlife.

The 2007 Environmental Quality Incentive Program (EQIP) application period will remain open until December 15, 2006 according to Jeffrey Woods, Assistant State Conservationist for the USDA-Natural Resources Conservation Service (NRCS) in Florida.

EQIP is a key program under the 2002 Farm Bill that provides federal cost-share funds to working farms and ranches for conservation improvements. Like all NRCS programs, participation is voluntary.

Woods said for the last two years, the deadline for the program has been in December. "I want to make sure those ranchers and farmers who wish to participate don't get busy with fall work and miss the deadline.

"EQIP provides incentive payments and cost-share funds to private agricultural and livestock producers to implement conservation practices," said Woods. "It promotes agricultural production and environmental quality as compatible goals. And, it is extremely important for producers to note that the application deadline for the 2007 Program Year is December 15th."

According to Woods, the early deadline is a continuing effort to improve the funding process. Cost share reimbursements are typically provided at 50% of allowed expenses but can range up to 75%. 90% cost-share can be provided to qualified "limited income" farmers.

The accelerated program cut-off dates will allow producers time to complete practices during the first years of their contracts.

The earlier application deadline date will help accommodate field work in preparation for a project to be done in the fall as soon after they finish with crop harvest, in most cases.

"The accelerated process makes coming in to our field offices early to meet with the NRCS staff more important than ever," said Woods. "I would encourage our farmers and ranchers to come in and visit with our staff now. We know that producers that get in early have more time to resolve certain program or land eligibility issues.

EQIP, like all NRCS programs, is a voluntary program that is intended to yield high quality, productive soils; clean and abundant water; healthy plant and animal communities; clean air; an adequate energy supply; and working farms and ranchlands. Some examples of cost-shared practices include: replacement irrigation systems, water control structures, reservoir construction, invasive plant eradication, interior cross-fence construction, troughs & cattle ponds, roller-chopping and other brush management, prescribed burns, moisture measuring devices, wildlife habitat development, etc.

For more information on the 2007 EQIP program, contact your local NRCS Field Office at **(239) 995-5678 Ext. 3** and speak with the District Conservationist, **Kendal Hicks**, or visit the Florida NRCS web page at <http://www.fl.nrcs.usda.gov/programs/eqip/flequip.html>

ALL CITRUS ACREAGE DECREASED TO 621,373

The highest acreage recorded was 941,471 acres in 1970. Following the 1980s freezes, Florida's citrus acreage peaked again at 857,687 in 1996 but has been declining ever since. The 2006 total is 621,373, down 17.0 percent in a two-year period noted for hurricanes, diseases, and urban development. The net change, a loss of 127,182 acres, is the greatest in any non-freeze period and 2nd overall. The Indian River District bore one-third of this loss. Removals out-numbered new plantings by a ratio of more than 5:1. Citrus trees total 81,909,000 and are down 16.4 percent from the 2004 census and 23.5 percent from the 1998 high of 107,110,200. Nonbearing trees number only 5,437,700, or 6.6 percent of the total.

Acreage decreases were recorded for each of the 30 counties included in the survey. Polk County continues to lead with 86,398 acres of citrus, followed by Hendry, Highlands, and DeSoto. St. Lucie has lost 31,600 since the 2004 census and fell to 5th place. For total trees, Hendry remains the leader with 12.3 million. Polk, Highlands, DeSoto, and St. Lucie round out the top five which account for nearly 56 percent of the State's citrus trees and 55 percent of the acreage. Average density is 132 trees per acre statewide but the Gulf Marketing District counties exceed this by 14 percent with an average of 151 trees per acre.

ORANGE ACREAGE DECREASED TO 529,241

All orange acreage at 529,241 is down 15.0 percent from the previous census. Second lowest in the series, it is only 13.5 percent more than the record low of

466,252 in 1986. Orange trees peaked at 87.2 million in 2000 and now stand at 70.8 million, down 18.8 percent in the six-year period. The majority of that loss, over 12.1 million trees, occurred since the 2004 census. Declines in acreage and trees since 2004 were noted for each of the orange categories. Navel and pineapple orange acreages decreased 25 percent and Ambersweet is down 35 percent.

Unidentified oranges trees, primarily of non-bearing age, are down nearly 50 percent. Valencia trees comprise 55 percent of the new total, the greatest portion in the series dating to 1966.

GRAPEFRUIT ACREAGE DECREASED TO 63,419

Grapefruit acreage reached a high in 1994 at 146,915. In 2006, the total is less than half of the record at 63,419. This reflects a decline of 28.8 percent since the previous census and is the lowest total acreage in a series which began in 1966.

Colored seedless lost the most acres (13,387) but the loss of white seedless (11,272) represented a larger percentage of the total. Only 833 acres of seedy grapefruit remain. Only 6.1 percent of the total trees fall into the non-bearing category.

SPECIALTY ACREAGE DECREASED TO 28,713

Specialty fruit acreage has declined steadily in the past decade. The current 28,713 acres contrast sharply with the 56,673 in 1996 and the high of 101,615 in 1970. Honey tangerines fared best with a loss of 13.5 percent since 2004. Losses of other varieties include: Fallglo tangerines (25.5 percent), Sunburst tangerines (23.2), Temples (29.0), Orlando tangelos (23.5), Minneola tangelos (27.4), and true lemons (20.6).

Download the Whole Report at:

http://www.nass.usda.gov/Statistics_by_State/Florida/Publications/Citrus/ccipre/ccipr06.pdf



From the Florida Agricultural Statistics Service

Florida Citrus Production (Million Boxes)

Cultivar	Production					
	1997-98	1999-00	2002-03	2003-04	2004-05	2005-06
Early/Mid orange	140.0	134.0	112.0	126.0	79.1	75.0
Valencia orange	104.0	99.0	91.0	116.0	70.5	72.9
All oranges	244.0	233.0	203.0	242.0	149.6	147.9
All grapefruit	49.55	53.4	38.7	40.9	12.8	19.3
Temples	2.25	1.95	1.30	1.40	0.65	0.70
Tangelos	2.85	2.2	2.35	1.00	1.55	1.40
All tangerines	5.2	7.0	5.5	6.5	4.45	5.5
Limes	0.44	0.60				
Lemons	0.12					
<i>Total</i>	304.450	298.15	250.850	291.800	169.05	174.8

Production of Florida citrus in the 2005-06 season was 174.8 million boxes, up three percent from the 2004-05 season, and down 40 percent from the 291.8 million boxes in the 2003-04 season. The primary reason for the reduced crop is fruit loss due to Hurricane Wilma. Production is five percent lower for early-midseason-Navel oranges and three percent higher for Valencia oranges. The all orange crop production, at 147.9 million boxes, is the lowest since the 139.8 million boxes in 1991-92. Navel production, at 3.8 million boxes, is 52 percent higher than in 2004-05. Navels, primarily a fresh use crop, comprised 58 percent of the total early midseason-Navel fresh shipments. Other than 2004-05, all grapefruit production at 19.3 million boxes is the lowest since the 1941-42 season's 19.2 million boxes. Increases in production of specialty fruit were recorded for all types except tangelos. The \$1,043.3 million preliminary value of the 2005-06 citrus crop is up 38 percent from the 2004-05 season's revised value of \$754.2 million, and the highest since the 1999-00 season value of \$1,108.5 million. On-tree values are higher for all varieties of citrus except colored grapefruit and Honey tangerines. Price-per-box is higher for all varieties except white and colored grapefruit and Honey tangerines.

Southwest Florida Citrus Production (Boxes)

SEASON	Charlotte	Collier	Glades	Hendry	Lee	Total
2002-2003	6,066,000	10,159,000	3,398,000	29,290,000	3,238,000	52,151,000
2003-2004	7,214,000	11,413,000	3,806,000	33,852,000	3,511,000	59,796,000
2004-2005	6,119,000	10,478,000	3,517,000	29,607,000	2,861,000	52,582,000
2005-2006	2,246,000	6,134,000	1,740,000	15,752,000	1,806,000	27,678,000
% Reduction from 2005-06 compared with 2004-05	63.3	41.5	50.5	46.8	36.9	47.4

Production of SW Florida citrus in the 2005-06 season was 27.678 million boxes, down 47.4 percent from the 52.582 million boxes in the previous season (2004-05). The primary reason for the reduced crop is acreage loss due to citrus canker and urbanization and fruit loss due to Hurricane Wilma.



Southwest Florida Citrus Acreage and Tree Numbers

	<u>1970</u>	<u>1990</u>	<u>2000</u>		<u>2004</u>		<u>2006</u>	
	Acres	Acres	Acres	Trees (million)	Acres	Trees (million)	Acres	Trees (million)
Charlotte	6,734	11,718	21,756	3.201	20,183	2.999	11,883	1.709
Collier	5,052	23,565	35,302	5.209	34,878	5.101	33,394	4.882
Glades	1,572	7,523	10,506	1.692	10,103	1.641	8,555	1.390
Hendry	22,447	73,754	99,437	15.325	93,155	14.298	79,726	12.281
Lee	7,439	9,692	11,594	1.626	11,067	1.549	10,658	1.489
SW FL Total	43,244	126,252	178,595	27.053	169,386	25.588	144,216	21,751
State of Florida	941,471	732,767	832,275	106.679	748,555	97.945	621,373	81,909
SW FL (%)	4.6	17.2	21.5	25.4	22.6	26.1	23.2	26.6

In **1970**, the Southwest Florida Citrus Acreage was 43,244 (**less than 5%** of the State of Florida Total Citrus Acreage '941,471').

Since **1998**, in Southwest Florida, Citrus Acreage has been **over 20%** of the State of Florida Total Citrus Acreage and the Number of Citrus Trees is **over 25%** of all Citrus Trees in the State.

EXTENSION EDUCATIONAL PROGRAM QUESTIONNAIRE

Dear “Flatwoods Citrus” newsletter subscriber:

We would appreciate it if you fill out this survey and return it to: **Mongi Zekri,**
P.O. Box 68, LaBelle, FL 33975 **E-mail: maz@ifas.ufl.edu** **Fax: 863 674 4636**

Why do growers attend IFAS Extension Seminars & Workshops?

Please identify the level of importance for each of the following factors that influence you to participate in an Extension Educational Program.

	Not Important ▼	Slightly Important ▼	Somewhat Important ▼	Moderately Important ▼	Very Important ▼
CEUs & CCAs are offered					
Topics are relevant to your needs . .					
Includes a field day or a site visit . .					
Hands on activities are included . . .					
Production topics are emphasized . .					
Business and marketing topics are emphasized					
Regulatory topics are emphasized. .					
Day of the week and time of the day for the workshop					
Limited to 2-4 hours (1/2 day)					
Workshop occupies a full day (5-8 hours)					
Finding information on workshop in local media outlets					
Learning about workshop from other growers					
The Extension Agent who organizes the workshop					
Providing a brief description of the intended workshop speakers					
The workshop is free					
Refreshment and meals are provided free at the workshop					

FLATWOODS CITRUS NEWSLETTER EVALUATION FORM

Please take a moment to rate the quality and usefulness of the information presented in the Flatwoods Citrus newsletter. Then return this form with the filled-out questionnaire on the other side as soon as you can in the enclosed postage-paid envelope. Thank you for your input!!!

Please circle your answer

- | | | | | |
|---|---|------------------------------------|----|--------------|
| 1 | Did the information seem up to date and accurate? | Yes | No | Uncertain |
| 2 | Was the information delivered on time to be useful? | Yes | No | Uncertain |
| 3 | Was the information relevant to your situation? | Yes | No | Uncertain |
| 4 | Was the information easy to understand? | Yes | No | Uncertain |
| 5 | Have you had an opportunity to use the information? | Yes | No | Uncertain |
| 6 | Have you shared the information with someone else? | Yes | No | Uncertain |
| 7 | Overall, how do you feel about the Flatwoods Citrus Newsletter? | | | |
| | Satisfied | Neither Satisfied Nor Dissatisfied | | Dissatisfied |
| 8 | <u>Do you have any suggestions that might improve the newsletter?</u> | | | |

(Please write in any comments)

Finally, we would like to ask some questions about you to help us interpret the results.

9. How many years have you been using the Extension Service? _____ Years
10. Where do you live?
 A Farm Rural area, not on a farm Town or city under 50,000 persons
 City over 50,000 people
11. What is your employment status?
 Grower Chemical Industry Service Provider
 Production Manager Regulator University
 Consultant Association Other _____
12. What is your racial-ethnic background?
 White, non-Hispanic
 Black, non-Hispanic
 Hispanic
 Asian American
 American Indian or native Alaskan
13. What is your Gender? Male Female

We appreciate your reactions and the time you have given us. Thank you, and please contact us when we may be of service to you.

Observations on Citrus Disease Management in Brazil
Potential Opportunities for Florida Citrus Growers

Southwest Florida Research and Education Center
2686 SR 29 N, Immokalee
October 26, 2006

This program will also be held at the following 5 locations –

- October 3, Polk County Extension Service Office, Bartow – (863) 519-8677
- October 4, Highlands County Extension Service Office, Sebring – (863) 402-6540
- October 5, Indian River REC, Ft. Pierce – (772) 462-1660
- October 11, Turner Exhibition Hall, Arcadia – (863) 993-4846 or (863) 956-1151
- October 31, Lake County Extension Service Office, Tavares – (352) 343-4101

- 9:00-9:20 AM Citrus Canker Management (Dr. Mongi Zekri)
- 9:20-9:40 AM Citrus Greening Management (Dr. K-R. Chung)
- 9:40-10:00 AM Scouting Programs for the Asian Citrus Psyllid (Dr. Bob Rouse)
- 10:00-10:20 AM Overview of Asian Citrus Psyllid Control (Dr. Phil Stansly)
- 10:20-10:40 AM Break
- 10:40-11:00 AM Other Citrus Diseases of Importance in Brazil and Their Management (Dr. Steve Futch)
- 11:00-11:30 AM Citrus Health Response Program (CHRP) Compliance Agreements (FDACS, Mark Estes)
- 11:30 AM-12:00 N Canker and Greening Training as Required Under CHRP (Holly Chamberlain)

----- Registration for **October 26, 2006 - Immokalee** -----

Name(s) _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Please mail or fax completed Registration Form to:

Dr. Mongi Zekri
Hendry County Extension Office
P. O. Box 68
LaBelle, FL 33975-0068
Phone: (863) 674-4092
Fax: (863) 674-4636

Registration Deadline –
October 19, 2006

Flatwoods Citrus

If you did not receive the *Flatwoods Citrus* newsletter and would like to be on our mailing list, please check this box and complete the information requested below.

If you wish to be removed from our mailing list, please check this box and complete the information requested below.

Please send: Dr. Mongi Zekri
Multi-County Citrus Agent
Hendry County Extension Office
P.O. Box 68
LaBelle, FL 33975

Subscriber's Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Fax: _____

E-mail: _____

Racial-Ethnic Background

__ American Indian or native Alaskan

__ Asian American

__ Hispanic

__ White, non-Hispanic

__ Black, non-Hispanic

Gender

__ Female

__ Male