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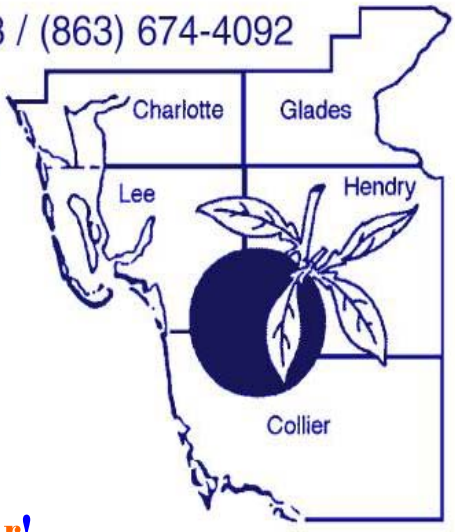
Flatwoods Citrus



Vol. 9, No. 1 **January 2006**

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

E-mail: maz@ifas.ufl.edu

Happy Holiday Season and Joyous and Productive New Year!

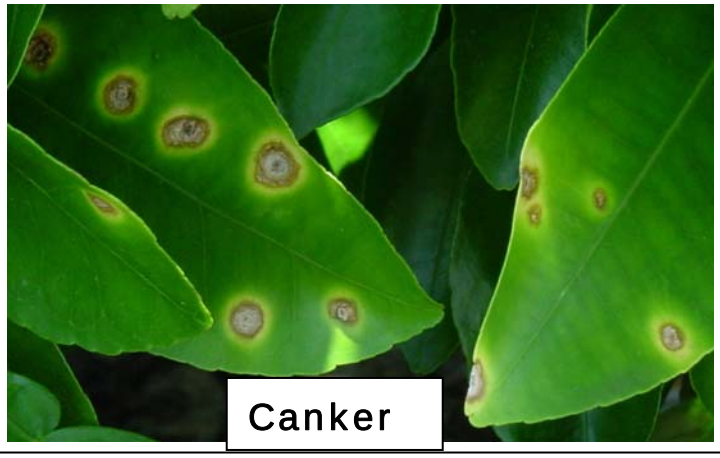
Hendry County Extension Office, LaBelle

Workshop on scouting for citrus insect pests and diseases. CEUs day!
Date: Tuesday, January 10, 2006, 9:00 AM – 3:00 PM
Speakers: **Drs. Pete Timmer, Steven Rogers, and Phil Stansly**
5 CEUs for Pesticide License Renewal
5 CEUs for Certified Crop Advisors
Sponsors: Craig Noll and Gary Simmons,
Nufarm Agriculture USA
Registration is required.
Registration form was enclosed in the previous issue.
Registration fee at the door is $15.00.

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

SCOUTING FOR PESTS AND DISEASES

Integrated pest management (IPM) depends on grove scouting and close observations to determine the need and timing for pesticide applications as well as modification of cultural practices to minimize damage. Scouting not only helps growers control pests more efficiently, but also lowers the use of pesticides and the chances of pesticide resistance. There are several techniques and procedures for scouting and there are many things to know before scouting. To learn more, you need to attend the workshop on scouting for citrus insect pests and diseases including **the citrus psyllid, citrus canker, and citrus greening** scheduled on Tuesday, 10 January 2006.


Canker


Greening

THE WEATHER, FLOWER BUD INDUCTION, AND CURRENT STATUS AFTER THE HURRICANES AND NEXT YEAR'S FLOWERING, FRUIT SET, AND FRUIT YIELD

Location: Immokalee IFAS Center
Date: **Tuesday, January 17, 2006**, 10:00 AM – 12:00 Noon
Speaker: **Dr. Gene Albrigo**

Indian River Citrus Seminar (See enclosed brochure)

January 24-25, 2006

Registration is free at **www.floridagrower.net/indian_river/index.html**

Special Thanks **to 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.**

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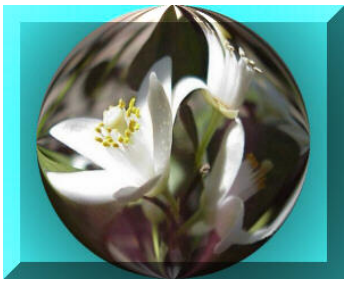
FLOWER BUD INDUCTION

Dr. Gene Albrigo,

Lake Alfred CREC



Go to http://www.crec.ifas.ufl.edu/ then click on Flower Bud Induction Advisory for 12/19/05 at the bottom of the screen, but just above **Spring 2006**

FLOWER BUD INDUCTION OVERVIEW and ADVISORY #1 for 2005-2006

Overview of flower bud induction in Florida – Citrus flower bud induction is progressing for the coming year's bloom. Low temperatures first stop growth and then promote induction of flower buds as more hours of low temperatures accumulate (below 68 degrees F). A period of high temperatures in winter can then initiate bud differentiation which after sufficient days of warm springtime temperatures leads to bloom. The meteorologists predict that this winter in Florida will be a neutral El Niño year, average temperature and rainfall. Usually under these average conditions, enough hours of low temperatures below 68 degrees F. should accumulate to induce a moderate to good level of flower buds. Conditions that can interfere with good flower bud induction include: 1) several warm periods interrupt the induction process or 2) the previous crop was exceptionally high or 3) leaf loss from hurricanes was excessive the previous year. Two or three lead to low carbohydrate levels for developing buds.

Under normal Florida weather conditions but with a moderate to heavy previous crop, sufficient flower bud induction should be achieved when total accumulated hours of low temperatures exceed 850 hours below 68 degrees F. If the crop load is light, sufficient flower bud induction can occur after 700 to 750 hours of accumulated low temperatures. A warm period of 7 to 12 days, with maximum temperatures > 75 to 80 degrees F., can trigger growth (bud swelling) after a minimum of low temperatures have accumulated (500 hours below 68 degrees F). Fewer days and lower daytime highs in a warm period are required to stimulate growth of buds later in the winter when the accumulated cool temperature induction hours are high. Current and previous year's weather information relative to Florida citrus flower bud development can be obtained from the Florida Automated Weather System (fawn.ifas.ufl.edu) for locations near you. The 8 day forecast from the National Weather Service predicts Florida weather for several sites around the citrus belt and is linked to http://www.crec.ifas.ufl.edu/crechome/crecweather.HTML

Some flower buds will be induced in the range of 300 to 600 accumulated hrs < 68 degrees F. Warm events after these levels of induction result in weak flowering intensity, and therefore many buds remain that can be induced by later cool periods, or these buds may sprout as vegetative shoots if warm weather continues and the trees are well watered. This situation

results in multiple cohorts of flower buds developing to different bloom dates. During the years from 1963 to 2004, multiple blooms occurred in over half of the years. Historically, the time period in which a early warm 7-12 day period can lead to some buds growing and then additional bud develop result in multiple blooms is roughly mid-November to mid-December. Presently, the only management tool available to eliminate or reduce the chance of multiple blooms is to promote water stress by stopping irrigation before these predicted warm periods occur. If the warm periods(s) are of the typical 7 to 10 day duration, a short period of drought stress will have little impact on current crop development or quality. Sufficient drought stress may be interpreted as leaf wilt observed by 10 or 11 am, but leaves recovering by early the next morning. If no rains interrupt a drought stress condition of citrus trees, buds will not grow in response to high temperatures. If a warm period has passed, trees again can be irrigated to minimize current crop stress. Although no weather prediction is guaranteed, rains in the winter usually come on the fronts of cool periods. The cool temperatures will prevent growth even though soil moisture is adequate for growth. Since winter rains usually occur just before cool temperatures, the chances that drought stress will prevent an early flower bud differentiation event are reasonably good for many warm periods. Even so, growers in some growing districts have often found it difficult to maintain winter drought stress in recent years.

In the shallow soils of bedded groves, it is relatively easy to create sufficient water stress to suppress growth by withholding irrigation for a few days if no rains occur. In deeper sandy soils, 2 or more weeks without irrigation or rainfall may be required. To minimize the time required for soil to dry sufficiently to initiate water stress, the soil should be allowed to dry out by mid-November so that trees show wilt by mid-day. For bedded groves, minimum irrigation can then be applied at low rates as needed until a weather prediction indicates a warm period is expected. At this time, irrigation should be shut down. For deep sands, the soil needs to be dried out and kept nearly dry below 6 to 8 inches of depth until at least Christmas so that no growth can occur. Minimum irrigations that re-wet perhaps the top 6 to 8 inches of the root zone may minimize excessive drought, while allowing quick return to a water stress condition if a high temperature period is forecast. This may be risky for ‘Hamlin' or other early maturing cultivars not yet harvested that tend to drop fruit near harvest. Much of what has been stated above has now been incorporated into a ‘Flowering Expert System for Florida Citrus'. Figure 1 represents the different aspects of flower induction as depicted by the software program. Some added information in color or bold lettering is intended to assist with interpretation. The level of potential flowering would be greater (orange line) with a light crop or less (green line) with a heavy crop for the same amount of hours of induction. Although this representation does not appear on the working screen, recommendations (bottom text box) do consider the current crop level in assessing when action should be taken to try to prevent or to promote initiation of the flower bud growth process. We are working to make the system available on-line shortly. In the meantime, the weekly advisories will update accumulating hours of related temperatures and other weather effects on flower bud induction. Methods

for enhancing or reducing flowering intensity as conditions and cultivars dictate will be discussed in later advisories. Read the archived advisories from previous years (link at top of this page) for more background.

Previous 4-year's results – In the winter of 2001-2002 cool temperature accumulation was very slow, warm temperatures persisted and most buds started to grow by 20 December, particularly in well irrigated blocks, leading to excessive vegetative buds. This resulted in few buds remaining for a second flowering wave and a small crop occurred. By late December in the winter of 2003-2003 we had 850 hours of uninterrupted cool inductive temperatures with a low current crop on the trees. The following warm period initiated almost all the buds on all of the spring and summer flush to differentiate and bloom in early March. We had a fairly leafy bloom of very short duration (slightly more than 2 weeks). In spite of the high temperatures during and following bloom, an excellent fruit set occurred in all round oranges resulting in the highest FASS October crop forecast for Florida ever. In 2003-2004, there was good flower bud induction and reasonably good fruit setting conditions, although the heavy previous crop probably reduced flowering levels and set. Even though fruit size was small, it looked like we were headed for a 220 million box orange yield before the hurricanes.

Last year citrus trees that were not in the path of the hurricanes had two years of good to heavy crops so a high level of induction was needed to produce adequate flower buds for the current year's crop. If the block was in the path of one to three hurricanes, and the trees lost fruit but not many leaves, the trees needed slightly less inductive temperatures since bud carbohydrate levels could improve some, but fruit losses were after most of the summer-early fall drain on carbohydrates had occurred. If many leaves were lost along with the crop, then trees were fairly low in carbohydrate and needed high levels of inductive temperatures to produce a good bloom.

If heavy fruit and leaf loss stimulated a strong fall flush, then more buds were available on last year's spring and summer flush for flowering if the fall flush came after Hurricane Charlie, but the fall flush did not mature adequately if flush was produced after Hurricane Jeanne. Generally, enough fall flush matured to provide flowering for a crop of about 210 million boxes of oranges and 30 million boxes of grapefruit, a significant recovery, before tree losses to canker and fruit losses to Hurricane Wilma reduced the crop potential again.

ADVISORY #4 for 2005-2006 -12/19/05

Accumulated cool weather has now reached 600 to nearly 1050 hr < 68 degrees F. from southern to northern citrus districts, respectively. Also, the National Weather Service (NOAA) predicts that there will be 110 to 140 additional hours below 68 degrees F. during the next 7 days. This means that all areas will be at least in the moderate-high range of flowering potential by next week. The cooler districts are in the high range, exceeding 900 hours. Some northern areas will reach the very high range by the end of this coming 8-day period. To view specific FAWN data for a location near you, use (www.crec.ifas.ufl.edu) and click on FAWN, or for NOAA's 8-day

forecast go to Weather Links on our CREC homepage and then 8-day forecast.

Up to now, cool temperature accumulation has been at a good, almost constant rate and is predicted to continue this week according to the NOAA 8-day forecast. One more week of cool weather after this week (until January 1 st) will place all districts in an excellent position for heavy flowering if trees are healthy and had a moderate crop up to or after Hurricane Wilma. Rainfall has prevented soil moisture from depleting to provide drought conditions which could inhibit flower buds growth, but no extended warm period has occurred to cause an early bud growth problem.

See earlier advisories about planning for and using urea or PO3 sprays to enhance flowering. The need for using one of these sprays is greatly diminished. Growers may still want to consider using these sprays on weak (poor root system) or heavily bearing blocks, particularly in southern areas. If used, these sprays should be applied as the weather warms up at the first warm period, and you can have effective results until 3 or 4 days into the warm period. Usually, this provides a 7 day spray window for these applications. If cool temperatures last through the first week of January, it is much less likely that these sprays will be beneficial since a very good level of natural flower bud induction will have been reached.

With the high levels of induction hours that will have accumulated by Christmas, it is now time to worry about excessive flowering. Too many flowers in seedless cultivars (navels), hybrid blocks with a moderate to light crop and some strains of Rhode Red Valencia that set poorly result either in too much flower competition and poor set (navels and some Rhode Reds) or in excessive set (mandarin hybrids) and poor fruit size. A GA 3 spray is advised towards the end of the first warm spell that has 4 to 5 days exceeding 73 to 75 degrees F, note that these temperatures are now lower than stated previously because the intensity level of induction is now higher. The above cultivars are likely to have excessive flowering with few leaves associated with the inflorescence. GA 3 sprays (20 oz per acre) should reduce the amount of flowering and increase the leaves in each inflorescence. Need for and best timing for a GA 3 spray in the various production zones will be assessed in coming advisories.

A new concern regarding winter management is the possibility of a freeze. Levels of cold hardiness are good now and should stay that way until a warm period occurs. This is an El Niño Neutral year, which increases the likelihood of a freeze. Generally, a hard freeze is most likely until we get pasted January 15 th to 20 th . If a warm period occurs before that date, some or all of cold hardiness will be lost if the buds start to swell and grow. Being able to apply drought stress is one way to prevent loss of cold hardiness. If winter rains stop and you keep soil moisture on the low side, you may benefit by shutting down irrigation if a warm period is predicted by a NOAA 8-day forecast.

The Web based Citrus Flowering Monitor System should be posted later this week. Check the CREC Homepage for an announcement and link to this tool perhaps by sometime tomorrow.

Please email or phone if you have any questions (albrigo@crec.ifas.ufl.edu or phone 863-956-1151).

PESTICIDE RESISTANCE

Sometimes when a pesticide is applied to a crop, it fails to control the pest. Control failure may be due to one or a combination of factors including inappropriate chemical, poor spray application, poor sprayer calibration, and unsuitable weather conditions. Control failure may be also due to pesticide resistance (the pest has become resistant to the pesticide).

Pesticide resistance has been recognized to be a problem for over five decades. Pesticide resistance is not limited to insecticides. Many fungal and bacterial diseases, as well as some weeds, have all shown resistance to one or more chemicals.

There are several ways we know how populations of organisms develop resistance to pesticides. Some of them contain proteins that bind up pesticides. Others use enzymes to detoxify them. Genetic variation within a population makes it possible that a few individuals in any given population may contain the needed attributes to start the process towards resistance. Whenever we treat a pest population with a pesticide, there is a chance that a few of the pests contain some ability to escape the given treatment. If they survive with a few others that have a similar ability to cope, we have the beginning of a breeding group that may lead to resistance over time.

Some materials are so effective that growers are attempted to consider them as the only choice in their pest control program. Growers also prefer systemic pesticides with long residual control. The longer the period of control the less they need to spray. However, as the amount of chemical slowly decreases in the plant tissue, it eventually falls to a level that is not lethal to the target pest. The end result is an extended period of time when pests are subject to less than a full dose of the pesticide. Pests with some degree of "built in" genetic resistance may survive contact with the reduced level of pesticide and breed with others that have the same. This is another reason for growers not to use a rate lower than the label rate. Doing so subjects more pests to non-lethal doses and contributes to pesticide resistance. Many products now contain resistance management language on their labels, which must be taken into consideration.

Chemical companies are reformulating some of their products and releasing materials that are mixtures of two materials with different modes of action. This is an effort by the manufacturer not only to increase the efficiency of their products, but also to extend their useful life. Combination sprays have the advantage of assaulting the pest in two different ways at the same time. It is much harder to develop resistance to two different materials at the same time than it is to develop resistance to one.

Understanding chemical classes represented by the products available to control a certain pest is very important, but not sufficient. Cross-resistance to a certain chemical mode of action is common. Two different classes of chemistry can share a similar mode of action, as is the case with several organo-phosphates and carbamates. All of this makes proper pesticide selection a complicated process.

Once resistance gets started it can move through the entire region. It is essential to adopt strategies that delay resistance even if it means increasing the cost of pest management in the short run to save alternatives for future use. It takes more than ten years and over fifty million dollars to bring a new pesticide to market.

Anyone involved in pesticides and pest management should be concerned about pesticide resistance and should incorporate strategies to delay the development of resistance.

What can a grower do to prevent or delay pesticide resistance?

- **Identify correctly the pest problem**
- **Monitor the pest population. Scouting provides valuable information when making the decision whether or not to apply pesticides. Spraying when pest levels are below reasonable thresholds wastes money and may contribute to pesticide resistance.**
- **Use control methods that enhance biological control**
- **Only apply pesticides when their use can be justified**
- **Use each pesticide (or one member of a pesticide group) no more than the specified maximum number of times per year or growing season**
- **Rotate pesticides and chemical classes and use materials with different modes of action**
- **Mix at-risk materials with materials that have different modes of action**
- **Time pesticide applications appropriately**
- **Avoid using low rates with marginal control of the pest**
- **Get complete coverage so that all parts of the plant receive an effective pesticide dose**

CITRUS CANKER WINDBREAK SURVEY

As chairman of the Citrus Windbreak Committee, I'd like to announce that we have good information available at the moment regarding plant species and designs for natural windbreaks, a summary of local research and experience, other resources, and literature. We are working toward placing this information on the CREC website http://www.crec.ifas.ufl.edu/. We encourage you to visit the CREC website http://www.crec.ifas.ufl.edu/ and complete the windbreak survey. It's simple and can be completed online. Click on Citrus Canker Windbreak Survey. When finished, a visitor just clicks on the **Submit Information** button and the survey is automatically emailed to me. THANKS and Happy Holidays!

Bill Castle, Professor
Citrus REC – Lake Alfred

HURRICANES HAVE MADE THE ERADICATION OF CITRUS CANKER DIFFICULT AND COMPLICATED

Since last year's hurricanes (Hurricanes Charley, Frances and Jeanne), more than 80 thousand acres of citrus have been destroyed. However, canker spread in 2005 could be twice as large as that caused in 2004. With this year's storms (Hurricane Wilma), the Florida citrus industry is predicted to lose a quarter (169,000 to 183,000 acres) of its acreage if the state's eradication program remains in effect.

Although state and federal agriculture workers had been optimistic and close to eliminating citrus canker, the hurricanes of 2004 spread the disease to new areas and made it difficult to contain. Once canker is found in a grove, the state requires that citrus trees within a 1,900-foot radius (up to 260 acres) be destroyed. For the last several months, many citrus production managers, growers and industry leaders have been concerned and very nervous. They are not sure if it is wise to continue on the same track.

Continuing with the same strategy (current eradication program rules and regulations) could devastate the Florida citrus industry and negatively impact all citrus-related businesses and rural communities that rely heavily on the citrus industry for economic sustainability. Furthermore, canker compensation money may not continue to flow.

Because of these concerns, citrus associations have requested that experts with the USDA, the Florida Department of Agriculture and the University of Florida review the hurricane-spread study and review the eradication program.

Therefore, several meetings will be organized to discuss possible improvements and modifications of the canker eradication program with the industry during the next few weeks. Other canker-related issues that could be discussed are: development of a Citrus Plant Health Management Program (BMPs for all sectors of the industry), protection of the citrus budwood source, continued funding of the program both for eradication and compensation, and research priorities for both canker and greening.

CITRUS TREE PRUNING

A pruning program should begin before any heavy cutting is necessary and should be conducted every year so that desired tree size and shape can be maintained at low cost and with minimum loss of canopy and maximum consistency in fruit production.

- Severe pruning and training of young, nonbearing trees, tends to delay fruit production and should be avoided.
- Mature trees should be pruned when approaching containment size and before crowding becomes a problem so that only small branches are cut and yield reduction is minimized.
- Crowding results in inadequate light conditions, dieback of small branches in the interior and base of the canopy, loss of foliage and fruit production particularly in the lower portion of the tree.
- Middles between tree rows should have a width of 7 to 8 feet to accommodate grove equipment and provide adequate light to the trees.
- **Hedging** consists of cutting back the sides of trees to prevent crowding.
- Hedging should be done at 10 to 15 degrees from vertical. Hedging at wider angle is better for spray coverage, but may result in severe yield reduction.

- **Topping** should be done before trees have become excessively tall.
- Yield reduction due to light topping is usually not significant if trees still have their lower skirt areas.
- Topping increases light penetration into the trees, stimulates vegetative growth and results in thicker canopies.
- Topping can increase fruit size and packout.
- Retopping should be done just above the old cut.
- Moderate, consistently timed hedging and topping does not reduce yield, but may improve fruit quality.
- The best time to top and hedge early maturing cultivars is after removal of the crop. For Valencia, it is recommended that the first cut is done after harvest and then annually during the winter.
- **Skirting**, which is the pruning to raise tree skirts, has become a more widely accepted practice.
- Skirting facilitates the movement of herbicide booms and other equipment, improves weed control, fertilizer distribution and air circulation under the tree canopy, reduces brown rot and Phytophthora problems, and makes less difficult the inspection of irrigation systems.

CITRUS GREENING

Citrus greening was first detected in Florida in late August 2005. It is caused by systemic phloem-inhabiting bacterium, *Candidatus* liberobacter. There are three forms of citrus greening. Each form has a similar host range but they differ in the temperature under which they express strongest symptoms. The African form, *Candidatus* L. africanus causes symptoms under cool conditions while the Asian form, *Candidatus* L. asiaticus causes symptoms under warm conditions. The third form (*Candidatus* Liberibacter americanus) was found in Brazil in March 2004. The bacterium infects all citrus species, cultivars and hybrids and some citrus relatives.

Symptoms of Asian form are leaf chlorosis. The early symptoms usually appear on one sector or branch of the tree. The chlorosis spreads, often resembling a zinc deficiency symptom.

Twig dieback occurs, and the affected trees decline to a non-productive state. Fruit is small, lopsided, with the basal end often remaining green, and the seeds are usually aborted. The fruit has a bitter taste. Citrus greening is graft transmissible. The distribution of the bacterium within an infected tree can be irregular so not all buds contain the bacterium or transmit the disease. Citrus greening bacteria are transmitted by the citrus psyllid. The Asian citrus psyllids, *Diaphorina citri*, is adapted to warm humid climates and occurs in many areas including Florida. The bacterium is transmitted in a persistent manner with a latent period occurring after the psyllid acquires the bacterium. The bacterium multiplies in the psyllid. Because of the latent period, most psyllids capable of transmitting citrus greening are either late-stage nymphs or adults. The psyllids remain capable of transmitting the disease for the duration of their life once the bacterium has been acquired. Citrus species is the primary host for feeding of the psyllids. The psyllids prefer to feed on young flush tissue. Hosts, which are vigorous and always flushing, such as lemon and lime, are ideal hosts for the psyllid.

The best control for citrus greening is exclusion. Because of the similarity of the symptoms of citrus greening and other decline disorders and diseases such as citrus blight and citrus tristeza, it may take awhile before citrus greening infections are noticed, thus making establishment of this exotic disease more likely. In areas where citrus greening has been established, management to reduce losses includes propagation of citrus greening-free trees for planting, reduction of the psyllid populations, and by removing infected trees. The use of parasites to control the psyllids population has been successful in many areas.

Management of citrus greening to achieve continued production of citrus is difficult and expensive. Citrus greening can rapidly destroy productive citrus plantings. If trees are infected while young, they often have no fruit production.

Replanting with healthy plants, introducing parasites and spraying against psylla showed that citrus production is still feasible in areas with citrus greening.

THE CITRUS PSYLLID

The Asian citrus psylla or psyllid, ***Diaphorina citri*** can be a serious pest of citrus. The citrus psyllid is similar to aphids and the citrus leafminer in requiring young leaves for reproduction. However, unlike aphids and the citrus leafminer, adult psyllids can survive on hardened leaves and move to new flush as it becomes available. Young trees should be monitored early in flush cycles to detect aggregations of adults on expanding terminals. High populations of adults should be treated before they reproduce.

Immature psyllid feeding on growing citrus terminals cause permanent damage to young leaves and shoots. They cause leaf distortion and curling of tender growth (flush).

Badly-damaged leaves will die and fall off. Control of the citrus psyllid should be taken seriously. The citrus psyllid breeds exclusively on young flush and has a very high reproductive rate. Multiple, overlapping generations can lead to very high populations. Eggs are laid in the late winter and spring on young leaves in the buds or in leaf axils. The egg stalk is forced into the leaf tissue by the ovipositor of the female. Each female may lay up to 800 eggs during her two-month lifespan. The life cycle takes about 20 days and there may be up to 30 overlapping generations per year. Adults are about the size of aphids (2.5 mm).

The citrus psyllid is an efficient vector of greening disease, which is considered the most serious citrus disease. Infected trees or branches with the greening disease will have reduced yield and dieback. Fruit on infected trees will be small in size and low in juice quality. Many fruit will fall prematurely, while those that remain on the tree will not color properly, but will remain green on the shaded side, hence the name of the disease “greening”. Root systems including feeder roots will poorly develop. The psyllid also attacks landscape plants (jasmine orange, *Murraya paniculata*). Generalist predators such as lacewings, syrphid flies, lady beetles, and spiders attack psyllids. These native natural enemies are not expected to suppress the pest populations to a non-economic level. Two parasitoids, *Diaphorencyrtus aligarhensis* and *Tamarixia radiata* of the pest have been imported in Florida and are being released in a classical biological control program. The use of oil is less disruptive and should be used. Petroleum oil at the concentration of 5% should provide adequate control.

Tests with petroleum oil sprays against citrus psylla indicated that oil was most toxic to first and second instar nymphs and provided good control if applied frequently. Insects do not develop resistance to oil, oil has a low toxicity to vertebrates, and oil breaks down readily in the environment. For young citrus trees, use of systemic pesticides, such as imidacloprid (Admire), are effective for suppressing psyllid populations. Foliar sprays can also be used for psyllid control. Some of the products that can be used are Lorsban, Danitol, Provado, and Malathion. Read the label and use the label rate. For a complete list of pesticides, get to the 2006 Florida Citrus Pest Management Guide: Soft-Bodied Insects Attacking Foliage and Fruit at http://edis.ifas.ufl.edu/CG004

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☐ 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