Citrus Health Response Plan (CHRP) State of Florida



Developed by the USDA/APHIS and FDACS/DPI in consultation with the Florida citrus industry and other stakeholders.

Revised 01/08/2016

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CITRUS HEALTH RESPONSE PROGRAM (CHRP)

Minimum Standards for Citrus Health in Florida

INTRODUCTION

Citrus production in the United States has been an important part of Florida's rich and abundant agricultural heritage dating back to the introduction of citrus into St. Augustine, Florida, in the 1500s and the planting of the first commercial grove in 1823 by French Count Odet Philippe. Citrus production spread across the southern tier states of the United States in the 1800s with Louisiana, Texas, Arizona, and California joining Florida as citrus-producing states.

Citrus production in the United States has a colorful history with many challenges over the years. Catastrophic weather events in the form of freezes, hurricanes, and drought have occurred periodically and temporarily reduced citrus production. Exotic citrus pest and disease incursions have affected and continue to affect citrus production in the United States with citrus canker, citrus tristeza virus and fruit flies of economic importance having significant impacts over the last 100 years.

It is noteworthy that citrus production in the United States coincides with geographic regions that are considered high-risk areas for the introduction and establishment for invasive pests and diseases. Key factors that are common to the high risk states of Florida, California, Texas, and Arizona are climate, crop diversity, geography, urban encroachment and international air and maritime ports which bring in international cargo and passengers. Other challenges in the form of foreign competition for foreign and domestic market shares and escalating agricultural land values are more recent problems, but have also contributed to instabilities in citrus production.

Despite past and current challenges placed on United States citrus production, it has survived and is recognized as an important part of our agricultural well being. In Florida alone, commercial citrus is a nine billion dollar a year industry, employing 60,000 people and with some 501,396 acres in production.

In recent years, commercial citrus production in Florida has been at the forefront of many of the issues facing United States citrus production. Weather events that occurred within the 2004 and 2005 hurricane seasons, coupled with the introduction and spread of citrus canker and huanglongbing (citrus greening), have resulted in a unique combination of impacts.

Despite a ten-year monumental effort to eliminate citrus canker, a combination of program delays from legal challenges to the Citrus Canker Eradication Program (CCEP) and unprecedented hurricane activity in 2004 and 2005, the disease spread to the point that eradication was considered no longer feasible. Huanglongbing, a serious citrus disease, was detected in late 2005 in South Florida. The biology of huanglongbing, coupled with its primary insect vector the Asian citrus psyllid, lends itself well to neither early detection nor eradication. Survey activities subsequent to huanglongbing detection in Florida revealed that the disease is well established in Florida. Although two other strains of this disease are known to attack citrus, they have yet to be detected in Florida or other citrus producing areas of the US.

The establishment of citrus canker, asian citrus psyllid (ACP), huanglongbing (HLB), sweet orange scab, and Citrus Black Spot in Florida, as well as other exotic citrus insect and diseases on the doorstep, dictated the need to look at approaches other than eradication to help protect citrus production and mitigate the impact of these unwanted pests. Scoping sessions in late 2005 and early 2006 by key stakeholders in citrus protection and production discussed various options from which came the concept of a Citrus Health Response Program. This approach

concentrated on the development and implementation of minimum standards for citrus inspection, regulatory oversight, disease management, clean nursery stock, bio-control, education, and training. It is in essence a holistic approach to the protection of citrus production. While Florida may have been the impetus for the development of a Citrus Health Response Program, the concept applies to United States citrus production in general. The United States Department of Agriculture's Animal and Plant Health Inspection Services assumed a leadership role in the development of a Citrus Health Response Program (CHRP). Key participants in its development included representatives from the Florida Department of Agriculture and Consumer Services' Division of Plant Industry, Florida Citrus Mutual, University of Florida's Institute of Food and Agricultural Sciences, United States Department of Agricultural Research Service, and the California Citrus Research Board.

The aforementioned parties formed an ad-hoc study group to develop the CHRP. The effort to develop minimum standards within the CHRP was divided between five sub-working groups:

Nursery and Budwood Working Group Production Practices Working Group Packing Working Group Processing Working Group Harvesting Working Group Residential Citrus Working Group

The findings of these working groups was documented and then incorporated into sections of the CHRP that corresponded to the titles of the groups. It is important to point out that the individual reports of the working groups were reviewed and revised by the CHRP Study Group.

Key issues that were identified by the CHRP development teams were:

I) Registration of producers, production units, citrus nurseries, budwood facilities, harvesters and packing or processing facilities.

2) Inspections and surveys to verify compliance as required for fruit harvest in production units and disease freedom in nurseries and budwood facilities.

3) Fresh fruit certification, maintaining grove identity and providing proper phytosanitary documentation, packing house post-harvest inspection and treatment monitoring.

4) Disease management strategies, such as best management practices (BMPs) for various fruit production systems.

Common themes or overarching issues within the CHRP are (I) the need for education and training, research, and a balance of regulatory oversight with industry due diligence, (2) flexibility in adjusting to new information, and (3) requirements that are based on sound science and the principles of plant quarantine.

This plan serves to provide general guidance to both regulatory officials and all sectors of the citrus industry on ways to minimize the incidence and build-up of citrus canker and early detection of other diseases and vectors of concern during a critical period of transition from canker eradication to disease management. Additional details and other specifics are present in the various compliance agreements and rule changes that have been made by both Federal and State agencies.

There are still a number of unknowns regarding the effective implementation of this plan which will require monitoring closely and a need to continually assess more effective ways to achieve the overall aim of protecting citrus health by adopting new technologies and procedures. For this reason, this plan is dynamic rather than static and will be revised and updated in the future to incorporate these improvements. Newer versions of the plan will be issued and identifiable by version number and date at the bottom of each page.

NURSERY AND BUDWOOD

A budwood facility or citrus nursery, as defined in Rule 5B-63.001, F.A.C., is a geographically distinct location where citrus nursery stock is produced for wholesale or retail sale, is held for movement to another location or is used within a citrus grove, or where citrus trees are maintained as sources of budwood or seed in order to propagate citrus nursery stock. Each facility must have biosecurity measures in place to prevent the movement of citrus pests and diseases between locations.

The following are minimum standards of the CHRP system for citrus nurseries or budwood facilities:

- I. Registration of all citrus nurseries and budwood facilities;
- 2. Approval of citrus nursery and budwood facility sites;
- 3. Geographic separation from concentrations of citrus trees;
- 4. Production of citrus nursery stock and budwood sources in approved structures;
- 5. Security and sanitation measures to prevent pest or disease introductions;
- 6. Training and education;
- 7. Inspections to verify the absence of pests and diseases in citrus nurseries and budwood facilities; and
- 8. Citrus nursery stock, budwood and seed certification.

Registration of Citrus Nurseries and Budwood Facilities

Any person who produces citrus nursery stock, citrus budwood or citrus seed for movement or sale must register as a citrus nursery or budwood facility and be in compliance with Chapter 581, F.S., and Rule 5B-63.001, F.A.C., governing nursery stock production and budwood certification. Producers must also be in compliance with the Citrus Nursery Stock Certification Manual (as adopted in Rule 5B-62.005, F.A.C.) which outlines the requirements for producing and moving citrus nursery stock, budwood, and seed.

Approval of Citrus Nursery and Budwood Sites

As specified in Rule 5B-63.001, F.A.C.: each citrus nursery or budwood facility must be located on an approved site that is a minimum of one *mile* distance from commercial citrus groves, other citrus trees or Rutaceous plants; and the site must meet existing requirements for freedom from certain nematode and soil borne pathogens.

Geographic Separation from Concentrations of Citrus Trees

Citrus nurseries and budwood facilities must be separated from concentrations of citrus trees to minimize pressure from diseases, their vectors and other pests. Citrus nurseries and budwood facilities established after 2007 must be located at least one mile away from concentrations of citrus trees.

Production of Citrus Nursery Stock and Budwood Sources in Approved Structures

Citrus nursery stock and bud wood sources must be grown in insect-resistant structures constructed at a minimum with poly/polycarbonate covering or screened with a maximum screen size of 266 X 818 µm, designed to exclude psyllids, melon aphid and other aphids, leaf miners or other pests. The structure should be sub-divided with additional interior walls and

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doors to further preclude or minimize internal insect/pathogen movement should insects be detected in one part of the structure.

Any structure must include double entryways with positive pressure air displacement. If cooling pads and fans are used they must be enclosed with insect resistant screen as described above.

Adequate construction materials should be kept available on site in the event that the structure is damaged so that timely repairs can be made. Any damages that are detected must be immediately reported by writing to the Department's Certified Nursery Inspectors, located at 3027 Lake Alfred Road, Winter Haven, FL 33881.

Security and Sanitation Measures to Prevent Pest or Disease Introductions

The citrus nursery or budwood facility site must be fenced with a single entry gate that must remain secure at all times. Employee and visitor parking must be provided outside of the gated areas.

All visitors must be logged in, accompanied by a citrus nursery or budwood facility representative, and should not have visited other citrus groves or other nurseries that day.

All employees and visitors must decontaminate upon entering and exiting the citrus nursery or budwood facility with an approved material listed in Schedule 11, Approved Decontamination Products and Methods, Rev. 6/15, referenced in Rule 5B-63.001, F.A.C. This shall include foot baths and full body sprays, paying particular attention to hands. All entrants should be dressed in clean clothing.

No employee or visitor shall be permitted to work in the nursery or facility if they previously worked in a commercial citrus planting that day.

No one will be permitted to bring citrus and citrus relatives onto property with the exception of certified propagative material. All liners from certified sources must be segregated until disease-freedom status of the liners can be determined.

All tools must be sterilized upon entry to a nursery or budwood site, between designated areas within the facility, between individual budwood sources trees, nursery blocks and between increase block rows, using a solution of household bleach (sodium hypochlorite) 20% by volume.

All vehicles and other equipment shall be free of all plant material and soil before delivery to the site. Upon entering and leaving site, all equipment shall be disinfected with an approved material as listed in Schedule 11, Approved Decontamination Products and Methods, Rev. 6/15, referenced in Rule 5B-63.001, F.A.C. Spray will cover entire vehicle including undercarriage and tires to the point of runoff. This does not include vehicles parked outside of the gated site. Vehicle traffic into the citrus nursery/ budwood facility should be minimized. All personnel and visitors must park outside the facility or in an isolated designated secure parking area on the nursery site. Deliveries should be handled at the gated entrance to the site whenever feasible. All equipment, if possible, should remain within budwood facility site at all times.

Used pots and seedling trays must be cleaned of all soil matter and thoroughly disinfected using a bleach solution before entering growing area. Media must be stored on a concrete pad or in a soil bin designed for water to run off. Employees and equipment must not enter media storage area without receiving a treatment in an appropriate disinfectant treatment.

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Nursery floor should remain free of other vegetation. Ground cover cloth, rock, shell rock or other suitable material should be used as flooring for structure, as well as the perimeter surrounding the structures.

All citrus nursery stock and propagative plant parts shall remain within the approved structure at all times or moved within enclosed conveyances.

Training and education

Employees and inspectors will be trained to recognize exotic citrus diseases and arthropod vectors that may affect citrus production, especially citrus canker, HLB, and CBS at first, expanding to citrus variegated chlorosis, citrus leprosis, citrus tristeza and other diseases that are imminent threats to US citrus production. The arthropods of concern associated with disease movement include sharpshooters, psyllids, aphids, mites and whiteflies. The training materials will be provided primarily by the state extension service. They must also be trained on the proper decontamination and sanitation requirements.

Employers are required to maintain a log of all training that is provided to employees. Each employee will be required to complete training as part of new-worker orientation and yearly refresher courses, to include training in identification of any new emerging citrus disease threats.

Inspections to Verify Pest and Disease-Freedom In Citrus Nurseries and Budwood Facilities

Citrus plants must be inspected for pests and diseases every 30 days by state regulatory, inspectors and certified pathogen-free prior to transport. Any citrus nursery stock or budwood source tree found infected or exposed to citrus canker, citrus greening, citrus nematodes, Diaprepes root weevil, psyllids, aphids or other common plant pests shall be subject to immediate quarantine action and will not be eligible for certification until treated as prescribed by the department and released from quarantine.

Nursery environs shall be inspected in accordance with the Residential component of the CHRP.

The approved structure containing citrus nursery stock and budwood material shall be inspected by trained nursery personnel on a weekly basis for the presence of exotic diseases and for the presence of any insects. Findings must be reported to appropriate regulatory officials.

The structure's integrity will also be inspected every 30 days by the regulatory inspector to ensure that there are no holes or other damages that would compromise insect or disease exclusion. The inspector will also conduct a complete audit of the nursery or facility every quarter to verify compliance with production requirements.

Citrus Nursery Stock, Budwood and Seed Certification

Propagative material including budwood, air-layers, cuttings and all top-working material shall be from state-registered budwood source trees. Budwood shall be taken under the direct supervision of a witness authorized by the department. Budwood from each source tree shall be wrapped separately. Each bundle shall be labeled showing variety, the tree identification number, and number of buds counted or estimated. Propagations from each source tree shall be maintained in nursery rows or on greenhouse benches so that each group can be traced back to an individual source tree. Nurserymen shall use permanent tags to label each separate group of propagations with the source tree registration number.

All citrus budwood source trees shall be tested and indexed on a regular basis to ensure the disease-free status of citrus material. All facility personnel shall be trained to recognize disease vectors and symptoms of all pertinent exotic citrus diseases on an annual basis. A log of personnel training shall be maintained for inspection.

All seed upon extraction must be hot-water treated at 125 degrees fahrenheit for 10 minutes followed by a dipping in 2% household bleach (sodium hypochlorite) by volume for 5 minutes and then treated with a prescribed seed fungicide before storage.

A vector control prophylaxis program must be in place to facilitate control of potential exotic vectors in the structures.

All citrus plants must remain free from arthropods and pathogens as listed in Rule 5B-62.003(3), F.A.C. to maintain certification. The integrity of the structure must also be intact and the nursery or facility must be in compliance with production requirements in order to maintain certification.

All citrus nursery stock and budwood moved from the facility must be accompanied by a Citrus Nursery Stock Movement Report, FDACS 08038, Rev. 5/12 and incorporated in Rule 5B-62.005, F.A.C., documenting that the plant material meets state phytosanitary standards or the phytosanitary standards of the receiving state or country. This documentation must identify the citrus nursery or budwood facility site.

All citrus nursery stock intended for interstate commerce must follow 7 CFR 301.76, Citrus Greening and Asian Citrus Psyllid; Restrictions on the interstate movement of regulated articles, Edition 1-1-15, as incorporated in Rule 5B-63.001, F.A.C.

PRODUCTION PRACTICES

This section is designed to provide minimum standards for commercial citrus production with emphasis on pest survey, sanitation, disease management strategies, and on-going training/ education on the latest tools and techniques to employ. It is essential that citrus production start with the planting of clean nursery stock followed by a transition to best management of the production unit to maximum productivity with the least amount of input/ cost. Key elements that will determine the production practices will be variety of fruit, fresh vs. processing goals, location of the production unit, and history of disease in the unit and surround area. The University of Florida Institute of Food & Agricultural Sciences (UF/IFAS) is developing management options for production managers to use that can be adjusted to meet the desired production goals. Management recommendations can be obtained by contacting one of the nearest UF/IFAS Research & Education Centers, County Cooperative Extension Service offices or via the internet at: http://edis.ifas.ufl.edu under "Publications".

The following are minimum standards of the CHRP system for Production Practices:

- 1. Registration of citrus production sites;
- 2. Decontamination;
- 3. Grove survey;
- 4. Disease management;
- 5. Training and education;
- 6. Citrus Health Management Areas;
- 7. Resetting commercial groves with certified citrus nursery stock; and
- 8. Abatement of abandoned or unmanaged citrus groves or feral citrus.

Registration of Citrus Production Sites

All commercial citrus producers and/or caretakers must file a Grower/ Caretaker Compliance Agreement, FDACS 08316, Rev. 7/15, referenced in Rule 5B-63.001 F.A.C., with the Department that will specify in detail the requirements for grove survey, disease management, decontamination and other issues.

Decontamination

Decontamination is essential to inhibit the spread of citrus canker as well as other citrus pests and diseases. Decontamination requirements should remain a key part of the production practices. Continued emphasis on training of personnel in the proper methods of decontamination, designating a manager who is responsible for decontamination oversight, and setting minimum standards for decontamination of equipment arc all considered important parts of this standard.

Grove Survey

The mandatory reporting of exotic citrus diseases in new areas is an important component of the self-survey program to help determine the status of various regions of the state relative to disease establishment and inoculum pressure and is a mandatory requirement. This standard will be of particular importance if growers in a given geographic area are working cooperatively to manage citrus canker, ACP, HLB, and CBS incidence. As this is primarily an industry requirement, it will be included into the Grove Owner / Caretaker Compliance Agreement, FDACS 08316, Rev. 7/15, incorporated in Rule 5B-63.001, F.A.C.

A key component of any plant pest and disease eradication or control program is surveillance. It is important to know the distribution of citrus canker, HLB, and CBS in Florida's citrus production areas. At a minimum, annual survey data is essential on the location of citrus canker, HLB, ACP, and CBS to assist in managing these pests.

A general survey should be performed by regulatory authorities on a yearly basis with well timed self-surveys of groves by appropriately trained production personnel. In addition to general survey, it may be necessary to inspect commercial groves that contain fruit destined for the fresh fruit market on a more robust schedule. All survey results shall be made available to CHRP officials and industry within a week of production unit survey completion.

While survey for fresh fruit phytosanitary certification must be accomplished by state or federal officials, there will also be a role for self-survey activities carried out by grove owners or management companies. Grower surveys will enhance or augment state and federal surveys that are designed to determine disease presence, absence, or the level of infection in a given area. These additional surveys will help determine what management strategies to implement over time. If it is necessary to keep fresh fruit blocks disease-free or below some established disease threshold level to comply with import requirements, self-survey in advance of an official state or federal survey would be of value if measures need to be taken to meet certification standards. Self-survey will be encouraged to facilitate the implementation of effective disease management options.

Survey information is important for grove owners and caretakers to know the status of pests and diseases in the immediate vicinity of their groves. Also, management decisions will be made within well-grounded minimum standards. In summary, CHRP surveys to determine pest and disease distribution will help ensure management is based on pest disease incidence and UF/IFAS recommendations.

Any and all citrus plants reset or groves replanted must be certified disease-free and obtained from a citrus nursery registered with the state.

Production units with fruit destined for the European Union fresh fruit market must be inspected and certified free from citrus canker, CBS and other exotic diseases by CHRP regulatory inspectors in accordance with Rule 5B-63.001(11)(b), F.A.C. For requirements on the interstate movement of fresh citrus fruit, see 7 CFR Part 301.75-07, Citrus Canker; Interstate Movement of Regulated Fruit From A Quarantined Area, Edition 1-1-15, as adopted in Rule 5B-63.001, F.A.C.

Disease Management

Management strategies will be based upon the recommendations of the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS). Management strategies shall be outlined in the Grove Owner / Caretaker Compliance Agreement, FDACS 08316, Rev. 7/15, incorporated in Rule 5B-63.001. Citrus canker, HLB, ACP, and CBS management will be the responsibility of the grower/caretaker based on best management practice guidelines put forth by the appropriate Stale Extension personnel. See page 10 for UF/IFAS website information.

Citrus Health Management Areas

Citrus Health Management Areas (CHMAs) are a grouping of commercial citrus groves in close proximity where growers work cooperatively to manage the spread of HLB. Participants in a CHMA coordinate psyllid control sprays to provide long-lasting effective psyllid control to

minimize movement of psyllids between groves and reduce the time needed before additional sprays are required. Grower participation in a CHMA is voluntary; however, growers should encourage their neighboring growers to participate as the level of overall success of the program is dependent on participation of all groves in the area.

Training and Education

Employees and inspectors will be trained to recognize exotic citrus diseases and arthropod vectors that may affect citrus production, especially citrus canker, HLB, and CBS at first, expanding to citrus variegated chlorosis, citrus leprosis, citrus tristcza and other diseases posing imminent threats to US citrus production. The arthropods of concern associated with disease movement include sharpshooters, psyllids, aphids, mites and whiteflies. The training materials should be provided by the UF/IFAS service. They must also be trained on the proper decontamination and sanitation requirements.

Each employee is required to complete training as part of new worker orientation and yearly refresher courses, to include any training in identification of any new emerging citrus disease threats. Employers are required to maintain a log of all training that is provided to employees. The log must contain the following information:

- 1. Employee's name
- 2. Date of training
- 3. Type of training (CBS, SOS, etc),
- 4. Trainer's name
- 5. What organization the trainer is representing

Resetting Commercial Citrus Groves with Certified Citrus Nursery Stock

It is important to have the ability to remove and replace diseased and/or unproductive trees with certified disease-free nursery. The Citrus Budwood/ Nursery Working Group is responsible for the development of clean nursery stock standards. It is well justified to allow the resetting of commercial citrus groves as long as resetting with clean nursery stock is accomplished as part of a comprehensive CHRP management strategy for each grove involved. Resetting will need to be done using only certified nursery stock and management strategies.

Abatement of Abandoned or Unmanaged Citrus Groves or Feral Citrus

As comprehensive CHRP management strategies are developed and applied, it will be necessary to have the ability to address properties where citrus is being unmanaged to the point that they are considered a pest or agricultural nuisance. Legislation, as well as rulemaking, will be required to provide the necessary authority to address abandoned/unmanaged or feral citrus that are determined to be an agricultural nuisance. There may also need to be a period of time that a property may be allowed to keep its agricultural exemption if abatement action is taken to remove any agricultural crop considered to be a threat.

Landowners are encouraged to participate in the FDACS Abandoned Grove Initiative. Unmanaged properties are known to harbor citrus pests and considered agricultural nuisances. Information on this initiative is outlined further in Rule 5B-63.001, F.A.C.

HARVESTING

This is considered of key importance to continue to have minimum standards in place for harvesting with emphasis on decontamination and tarping to help retard the artificial spread of citrus pests and diseases. In addition it will be important to make sure there is a mechanism in place throughout the harvesting process to assure the production unit is eligible for harvest and the fruit identity is maintained from the grove to and through the packing/processing facility.

The following are minimum standards of the CHRP system for harvester minimum standards:

- I. Registration of harvesters;
- 2. Production unit certification for the European Union;
- 3. Decontamination;
- 4. Training and Education; and
- 5. Production unit identification.

Registration of Harvesters

All commercial citrus harvesters must file a Harvester / Handler Compliance Agreement, FDACS 08359, Rev. 7/15, incorporated in Rule 5B-63.001, F.A.C., with the Department that will specify the requirements for harvesting citrus.

Production Unit Certification

When harvesting fruit for the European Union fresh market, only those production units certified as meeting the destination phytosanitary standards under the export requirements for international shipment of fresh fruit shall be harvested. A Harvester / Handler Compliance Agreement, FDACS 08359, Rev. 7/15, as incorporated in Rule 5B-63.001, F.A.C. is required to verify that the production unit was inspected in accordance with international phytosanitary requirements. For requirements on European Union movement of fresh citrus fruit, see 7 CFR Part 301.75-07, Citrus Canker; Interstate Movement of Regulated Fruit From A Quarantined Area, Edition 1-1-15, as adopted in Rule 5B-63.001, F.A.C.

Decontamination

Harvesters are responsible for decontamination of personnel prior to entering and exiting a commercial citrus grove. If a different grove is to be entered on the same day, the harvester shall contact the manager of the next grove to verify the post-harvest decontamination procedure. If the grove manager or his designee verifies that the decontamination procedures of all equipment are carried out to his/her satisfaction, the pre-entry decontamination procedure at the next grove is not required, as long as no contact with other citrus plants is made prior to entering the grove.

All vehicles and other equipment shall be free of all plant material and soil before entering premises to harvest citrus fruit and prior to leaving harvesting area. All equipment shall be disinfected with an approved material upon entering and leaving the site, except as noted in the paragraph above. Spray will cover the entire vehicle including undercarriage and tires to the point of runoff. Trailers are required to be free of any plant debris prior to entering and before leaving a grove. Vehicle traffic into the harvesting area should be minimized.

Training and Education

Each employee is required to complete training as part of new worker orientation and yearly refresher courses. Employees will be trained on the decontamination and sanitation requirements. The training materials will be provided by the State extension service. Employees are required to maintain a log of employee training that includes the following information:

- 1. Employee's name
- 2. Date of training
- 3. Type of training (CBS, SOS, etc),
- 4. Trainer's name
- 5. What organization the trainer is representing

Production Unit Identification

Each load of fruit must be accompanied by a trip ticket that contains the name of the grove, the grove owner/agent, the name of the harvester, the license tag number of the conveyance containing the load, the number of field boxes contained in the load, and the destination. Field boxes must contain production unit identification if required by the receiving state or country.

All fruit moving from a CBS quarantine area must be tarped and either a Limited Permit, FDACS 08156, Rev. 2/13, incorporated in Rule 5B-63.001, F.A.C., or the accompanying trip ticket must be marked with "TARP."

Citrus Black Spot Identification

Before harvesting and hauling quarantine citrus fruit, the grower must have a valid Grower / Caretaker Compliance Agreement, FDACS 08316, Rev. 7/15, incorporated in 5B-63.001, F.A.C., and the destination may only be a CHRP compliant packing house or a CHRP compliant processor for processing into a product other than fresh fruit. Fruit harvested from a CBS quarantine area must only be moved intrastate and only under the following conditions:

Vehicles used to transport fruit from CBS Quarantine Areas must meet the following minimum CHRP standards:

All conveyances, whether loose filled with bulk fruit or loaded in pallet boxes or field bins and stacked on trucks or trailers, must be completely covered with no openings greater than 1/2 inch, with the exception of side and rear walls constructed of expanded metal, which must not exceed $3/4 \times 1-11/16$ inches. Tarpaulins (tarps) used as fruit covers may be of any fabric with a weave of less than 1/2 inch.

Each load of fruit must be identified by issuing a clearly written serially numbered trip ticket or FDACS limited permit containing the following information:

Grove name, Land owner or agent, Lessee, Harvester; License tag number; Number of field boxes in load; Grove block of origin name, location; Grower compliance agreement ID Number; Destination processing plant or packinghouse; and Harvest date. The Citrus Fruit Harvesting Permit number, if issued, must also be included on the trip ticket. Loads from CBS quarantine areas must have "TARP" written near the bottom of the ticket.

Field boxes must contain production unit identification if required by the receiving state or country. (Reference the CHRP Plan)

Details of these regulations may be found in Federal Orders DA-2014-29, Expansion of Citrus Black Spot Regulated Area in Florida, June 3, 2014, and DA-2015-16, Expansion of Citrus Black Spot Regulated Area for Southern Florida, March 31, 2015. Both orders are incorporated in Rule 5B-63.001, F.A.C.

PACKING OF FRESH FRUIT

Packing houses pack citrus fruit for the fresh market. It is important that fresh fruit be inspected and certified free of pests and diseases and properly identified to meet export certification requirements.

The following are minimum standards of the CHRP system for packing fresh fruit:

- 1. Registration of all packing houses for interstate and export markets;
- 2. Receipt and identification of certified fruit for the European Union;
- 3. Inspection of fruit for pests or disease symptoms for the European Union;
- 4. Monitoring of fresh fruit decontaminants;
- 5. Training and education;
- 6. Security and sanitation; and
- 7. Fruit certification for interstate and export markets.

Registration of All Packing Houses

All citrus packing houses must operate under a USDA PPQ Form 519, Compliance Agreement Commercial Citrus Packing and/or Repacking, Rev. 5/07 as incorporated in Rule 5B-63.001, F.A.C.

Receipt and Identification of Certified Fruit for the European Union Market

All packing houses must verify that a harvesting permit was issued and that fruit is properly certified and identified prior to packing. Fruit identity must be maintained throughout the harvesting, packing, and shipping process as needed to meet the phytosanitary requirements of the European Union. The identification of the fruit must be sufficient to trace the origin of the fruit from the terminal market to the production unit.

Inspection of fruit for pests or disease symptoms

All citrus fruit must be inspected for any symptoms of exotic diseases, such as citrus canker, CBS or other pests, as required to meet phytosanitary requirements. The detection of disease symptoms or pests must be brought to the attention of the inspector.

Inspections will be conducted in the packinghouse facility by appropriate regulatory officials.

Training and Education

Employees and inspectors will be trained to recognize symptoms of citrus canker, HLB, CBS and other pests and diseases that would affect phytosanitary certification.

They must also be trained in decontamination and sanitation requirements. Employers are required to maintain a log of all training that is provided to employees. Each employee is required to complete training as part of new-worker orientation and yearly refresher courses, to include training in identification of any new emerging citrus disease threats.

Security and Sanitation

Packing house sites must be secure. All visitors must be accompanied by a packing house representative.

Debris on or in equipment shall be removed from and disposed of on a daily basis as described in Rule 5B-63.001(6), F.A.C. All equipment returning to commercial citrus production sites must be free of debris and decontaminated with approved products as described in the compliance agreement.

Fruit Certification

Inspectors will verify that the fruit meets the phytosanitary requirements of the receiving state or country and document this on the manifest.

PROCESSING FACILITIES

Processing facilities receive fresh citrus fruit to be processed for juice or other purposes. Fruit that is destined to a processor poses no significant risk of spreading citrus diseases; therefore, it is proposed that fruit from positive groves or production units be allowed to move intrastate to processing facilities.

The following are minimum standards of the CHRP system for packing and processing:

- 1. Registration of Processors; and
- 2. Sanitation.

Registration of All Processors

All citrus processing facilities must have a signed Processor Compliance Agreement, FDACS 08356, Rev. 7/15, incorporated in Rule 5B-63.001, F.A.C., which will specify the requirements for processing citrus.

Sanitation

Debris on or in equipment shall be removed from and disposed on a daily basis as outlined in Rule 5B-63.001(6), F.A.C. All equipment returning to commercial citrus production sites must be free of debris and decontaminated with products as described in Schedule 11, Approved Decontamination Products and Methods, Rev. 6/15, referenced in Rule 5B-63.001, F.A.C.

RESIDENTIAL CITRUS

Residential areas as part of the Citrus Health Response Program need to be inspected in order to detect new exotic citrus pests and diseases, prevent citrus pest or disease incursion into citrus nursery or budwood facility environs and to further delineate the distribution of citrus greening. It is also necessary to assist home gardeners in managing citrus pests.

The following are the minimum standards for the CHRP system for residential areas:

- 1. Inspections to detect new exotic citrus pests and diseases;
- 2. Surveys of citrus nursery/budwood facility environs;
- 3. Surveys to delimit citrus greening; and
- 4. Information on citrus pest and disease management.

Inspections to Detect New Exotic Citrus Pests and Diseases

Residential surveys should be routinely conducted and documented by CHRP officials or through the Cooperative Agricultural Pest Survey (CAPS). Fruit fly detection trapping sites are located throughout residential and rural areas on over 160,000 properties statewide and almost all contain citrus. These sites should be inspected for other citrus pests or diseases when traps are serviced.

Master Gardeners and other groups should also be kept informed about new citrus pests of concern. Existing community organizations (e.g. neighborhood associations) should be used to assist in voluntary survey activities. Many times new pests are reported by concerned residents.

Surveys of Citrus Nursery/Budwood Facility Environs

Residential inspections will be needed to detect citrus canker or CBS that may jeopardize the production of disease-free citrus nursery stock. Nursery environs surveys would be conducted within a minimum one square mile area surrounding certified citrus nursery sites at least every six months.

Information on Citrus Pest and Disease Management

The UF/IFAS and available resources from DPI and the USDA will work together to enhance current public outreach efforts on pest and disease prevention and management, as well as to educate on the importance of protecting agricultural resources. This outreach is needed to encourage residents to manage citrus canker, HLB, ACP, CBS and other citrus pests in their home gardens, and to help promote a better understanding of how their decisions may affect commercial producers, and, ultimately, the Florida economy. It is critically important that residents understand the need to only purchase citrus trees produced in state certified nurseries as required by law. Residents must be made aware that they should not accept citrus plants from other sources or give citrus plants from their yard or garden to others.

DISEASES AND ARTHROPODS OF CONCERN FOR CHRP

Citrus psorosis virus Concave gum/blind pocket Citrus viroids Severe strains of Citrus tristcza virus Citrus tatter leaf virus (Apple stem grooving virus) Citrus canker Huanglongbing disease (citrus greening) Citrus leaf blotch virus Citrus variegated chlorosis Citrus stubborn disease Witches' broom disease of lime Australian citrus dieback Satsuma dwarf virus Indian citrus ringspot virus Citrus yellow mosaic virus Citrus vein-enation virus Sudden death of citrus Citrus Leprosis virus Citrus chlorotic dwarf Sweet orange scab Citrus black spot Asian citrus psyllid African citrus psyllid Asian citrus Leafminer Brown citrus aphid Lime swallowtail