April 27, 2003

The warm dry weather, which persisted over the area much of the past two weeks ended this past weekend as the outflow boundary extending from a frontal system over central Florida bought thunderstorms and significant precipitation to all of south Florida. Total rainfall for the period has varied widely from around an inch in some areas to over four inches in parts of southwest and west central Florida. Thunderstorms in some places were accompanied by high winds and some wind damage has been reported.

Temperatures have been running about normal to a few degrees above, with daytime highs in the mid to upper 80’s and nighttime lows in the low to mid 60’s. Growers and scouts report that the effects of the abnormally cold winds at the beginning of the month have resulted in some lingering quality problems in some crops.

Vegetables coming to market include beans, cabbage, cantaloupe, celery, cilantro, cucumbers, eggplants, parsley, peppers, potatoes, radishes, specialty crops, squash, sweet corn, and tomatoes. Quality is fair to good and volumes are picking up on many items. Watermelon harvest is picking up across the area and will peak over the next few weeks. Season is rapidly coming to a close in the Homestead area and things are winding down with a few late corn, bean, pepper, squash, and tomato fields remaining to be harvested.

FAWN Weather Summary

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The short-term forecast from the National Weather Service in Miami calls for partly cloudy skies on Monday and a possibility of showers. Tuesday will be mostly clear with the possibility of afternoon showers and thunderstorms returning on Wednesday and remaining through the weekend. Daytime highs will be in the upper 80’s and nighttime lows in the mid to upper 60’s.

For additional information, visit the National Weather Service in Miami website at http://www.srh.noaa.gov/mia/newpage/cgi-bin/master.pl?suite=home

Insects

Growers and scouts report that insect pressure is variable depending on the crop, location and insect being considered. Longer day length and higher temperatures have accelerated the life cycle of many insects. In many instances, pests are making gains by simply showing up late on older crops where spray programs have been reduced at harvest and crops are less vigorous due to age.

Whiteflies

**Around Southwest Florida, whiteflies continue to be a problem on nearly all-remaining crops.** As the end of the season approaches older crops are being destroyed and this is adding to the pressure. Scouts report very high whitefly counts with counts in excess of 100 per plant not unusual in places. Some irregular ripening has been noted on tomato and some honeydew problems have been reported on pepper and melon.

Reports from the Manatee/Ruskin area indicate that silverleaf whitefly populations are increasing in some fields but remain low in others, depending on location. Immature whiteflies are reaching thresholds for Insect Growth Regulator (IGR) applications such as Knack or Courier in some older fields. Growers should keep in mind that the use of IGs should be based on the threshold levels of immatures found. This threshold is 5 per 10 leaflets (the terminal leaflet of the 7th to 8th leaf from the top of 10 plants/2 acres. Adult whiteflies have been noted coming out of other crops such as potatoes.

Growers are reminded that spraying foliar nicotine such as Actara and Assail for adult whitefly control may seem like an option in the short run but in the long run may likely cause problems for everyone due to resistance issues, since the majority of fields have received soil applications of either Admire or Platinum. Other insecticide materials such as Endosulfan, Fulfill, etc. still demonstrate efficacy on adults.

Reports from Palm Beach and Martin Counties indicate that higher than normal whitefly pressure with moderate to high whitefly counts being noted in tomato, pepper, eggplant, and squash. Heavy whitefly infestations on squash have resulted in the appearance of silverleaf symptoms on squash in some locations.

Respondents in Homestead report a big jump in whiteflies and resulting increases in tomato yellow leaf curl virus in tomato and bean golden mosaic in beans.

For more information on whiteflies, be sure to check out the UF/IFAS Whitefly Knowledgebase at http://whiteflies.ifas.ufl.edu/ as well as the UF/IFAS Featured Creatures website at http://creatures.ifas.ufl.edu/veg/leaf/silverleaf_whitefly.htm.

Pepper Weevil

Reports from the Manatee/Ruskin area not a seasonal rise in pepper weevils as pepper crops mature.

Dr. Dave Schuster reported on ongoing pepper weevil work at GCREC during the field day on April 10. Pepper weevil is the key pest of peppers in South Florida, but has been able to develop resistance to insecticides
used for its control. In addition to current evaluations of rotations of insecticides of different chemical classes for weevil control (results unpublished), Dr. Schuster is also evaluating the use of parasites. Releases of the native parasite, *Catolaccus hunteri*, on an alternative weevil host plant, nightshade, during the summer off-season has anecdotally resulted in reduced populations of the pepper weevil. In addition, releases of the parasite in pepper beginning before first budding has resulted in delayed infestation.

Further studies are on going with an exotic parasite from Mexico, *Triaspis eugenii*, which attacks the egg of the pepper weevil, killing the hatching weevil larva. Establishment of the parasite in the field could contribute to natural control of the pepper weevil and this work is also ongoing in Bradenton.

Respondents in Palm Beach indicate that although pepper weevils remain a no-show in many places they are becoming more common in some older plantings.

Pepper weevil populations have started increasing in most locations around Southwest Florida but are still below normal for this time of the year.

Reports from Homestead indicate that pepper weevils are building in pepper and a few adults have been spotted feeding on eggplant blooms.

**Leafminers**

Growers and scouts in Manatee County report some increase in leafminer pressure in some locations.

Respondents indicate that leafminer pressure is declining in the Homestead area and most crops are past the stage where controls are being applied.

Around Southwest Florida, leafminers remain active in cantaloupe, squash, tomato, and watermelons. Pressure is variable with some hotspots being reported. In some locations growers have discontinued control behind the crown pick.

Around Palm Beach, leafminer pressure is variable but some reports indicate pressure is creeping upwards and growers are applying controls as needed.

**Worms**

Growers and scouts in Homestead report heavy looper, tomato fruitworm and southern armyworm pressure along with the occasional pinworm in tomato. In corn, silk flies, fall armyworm and corn earworm pressure remain constant at moderate to high levels as the season comes to an end. Melon worms are also widely present in cucurbit crops.

In the Palm Beach area, worm pressure remains low to moderate with a mix of southern armyworms and tomato fruitworms being reported. Diamondback moths are active in brassicas and an increase in armyworm egg masses being found by scouts has also been noted.

Around the Manatee/Ruskin area, pinworm pressure in tomatoes has increased in some locations. Beet armyworms and loopers being treated for in some fields, but in general worm numbers are low.

Around Southwest Florida, growers and scouts report worm pressure remains generally low but note that worms have become a little more common in recent days. Scouts are finding mostly southern armyworms but are also report finding some beet armyworms, loopers and a few fruitworms.
Tomato pinworms have also become more common but remain low overall. Populations in some older fields have reached moderate levels. Melonworms and pickleworms are being found in cucurbits and pressure is reported to be high in some places.

Strong diamond back moth pressure is present in the collards and other brassicas and the great white southern butterfly is showing up in increasing numbers in collards.

Thrips

Reports from Homestead indicate that thrips pressure remains high in beans, pepper, eggplant, and cucurbits. Respondents note that *Thrips palmi* are widely present.

Growers and scouts in Palm Beach report reduced thrips activity. Reports indicate these are mostly Florida flower thrips (*Frankliniella bispinosa*), although symptoms consistent with *Thrips palmi* damage have been noted in a few scattered locations on cucumber, pepper and eggplant.

Reports from the Ruskin area indicate that thrips numbers are lower but they are hanging around in some fields longer than usual.

Respondents around Southwest Florida note that thrips (*Frankliniella bispinosa*) populations are declining, with present counts of around 5 - 10 per bloom compared to the more than the 50 plus a few weeks ago. Scouts also note finding low levels of minute pirate bugs beneficial insects that feed on thrips. Melon thrips (*T. palmi*) remain low in a few isolated locations.

Mites

Reports from the Manatee/Ruskin area indicate that mite populations appear to be holding steady at low levels.

Respondents in Palm Beach report broad mites coming out of nowhere to cause some problems in eggplant and pepper. Some red and two spotted spider mites are also present at low levels on tomato and eggplant.

Around Immokalee, spidermites continue to be a problem in some locations but remain very low at others. Growers have been making spray applications in melons, eggplants and tomatoes for control of spidermites.

Broadmites have increased dramatically in a number of fields around southwest Florida with few pepper fields displaying severe leaf distortion.

Growers and scouts in Homestead report increasing levels of red and two spotted mites in cucumbers and squash. Broad mites are increasing in pepper and eggplant.

For further information on two-spotted spider mites, visit the UF/IFAS Featured Creatures website at [http://creatures.ifas.ufl.edu/orn/twospotted_mite.htm](http://creatures.ifas.ufl.edu/orn/twospotted_mite.htm).

Aphids

Respondents in Palm Beach report increasing numbers of aphids in scattered locations especially where soil applied nicotinoids have run out.
Around Southwest Florida, reports indicate that winged aphids have increased over the past few days and colony formation has been noted in pepper and other crops.

**Diseases**

Mostly drier weather over the past two weeks has helped moderate disease pressure but crop age and some foggy mornings are keeping things going. This weekends showers should result in increased disease pressure in the days ahead.

**Bacterial diseases**

Around Immokalee, some new bacterial spot activity has been noted in both tomato and pepper but pressure has abated somewhat compared to the previous report. Angular leaf spot (*Pseudomonas* sp.) has also been diagnosed in scattered locations on cantaloupe.

In the Ruskin area, bacterial spot increased in some crops following the typical incubation period after the last rains and some recent morning fogs, and is still active in many fields. Angular leafspot previously reported on cantaloupes has slowed down.

Reports from Homestead lots of new bacteria spot activity on pepper and tomatoes. Scouts in the Homestead continue to report finding bacterial blight in beans.

Respondents in Palm Beach note that incidence of bacterial spot remain constant at low levels in pepper and tomato.

Dr Ken Pernezny notes that after a few years absence, the bacterial leaf spot (*Xanthomonas campestris pv. vitians*) on lettuce has showed up in the Belle Glade area. He notes that if we should get into some rain, especially driving thunderstorms, this could be a nasty problem, especially on romaine.

Some bacterial wilt is also being reported on tomato in the Manatee/Ruskin area.

**Early Blight**

Reports from the East coast indicate that early blight is present on tomato but the incidence and severity remains low to moderate. The situation is similar around southwest Florida.

Growers and scouts around Immokalee report there has also been some recent increase in early blight on tomatoes and potatoes.

**Target spot**

Respondents in Southwest Florida indicate that target spot continues to be a problem on tomatoes and has moved into the upper foliage and onto maturing fruit in some locations.

Target spot is also present on tomato in the Homestead area.
Reports from Manatee County note some target spot flare-ups but mostly under control.

_Around Palm Beach County, there are scattered reports of target spot on tomato and eggplant._ In a few cases, post harvest problems have been noted.

**Downy Mildew**

_Downy mildew is widely present on cantaloupe, squash and watermelons in numerous locations around south Florida._ Incidence and severity is mostly low to moderate with some exceptions. Drier weather over the past few weeks has helped many growers gain control but active mycelium on lesions has been observed in some places during the morning hours when moisture is present.

**Gummy Stem Blight**

_Gummy stem blight is widely present on watermelon around south Florida._ Incidence and severity is mostly low to moderate, although scouts report that fields around southwest Florida have been nearly completely defoliated by the disease.

**Note:** a condition characterized by scorched leaves, defoliation and vine collapse is widely present in watermelon in scattered locations around southwest Florida. Dr Pam Roberts and myself have collected numerous samples and have been unable to isolate any pathogens from these samples. The cause of this condition appears to been non-pathogenic in nature. Although the exact cause remains hypothetical, it appears that it may be related to high water tables early in the season that restricted root system development to the extent that vines were unable to cope with rapidly changes in water table over the past month combined with recent warm weather and high evapotranspiration rates. The resulting water stress resulted in leaf scorch and vine collapse.

_Strobulurin fungicides such as Cabrio and Quadris should provide good control of several common cucurbit diseases including gummy stem and downy mildew, but growers are reminded of the need to practice resistance management as resistance to these materials has appeared in a number of places._ Strobulurins should be rotated with the white (chlorothalminil) and yellow (manzate/mancozeb) fungicides and applications should not exceed labeled amounts.

**Tomato Yellow Leaf Curl Virus**

_Around Southwest Florida, Tomato Yellow Leaf Curl virus incidence continues to increase although most local fields are approaching the age where yield reductions on newly infected plants will be minimal._ Most spring plantings are showing around 10% infection but there are some fields with over 100% infection.

_Reports from around Palm Beach indicate that the incidence of Tomato Yellow Leaf Curl is increasing in a number of areas._ Overall incidence remains low but a few hotspots have been noted.

_Respondents in Homestead report a big jump in TYLCV activity._ Incidence varies widely with a few fields approaching 50% infection.

_TYLCV incidence is also increasing in the Manatee Ruskin area._

_Phyllis Gilreath reports that this season has been a prime example of what can happen when TYLCV infected tomato crops are not destroyed in a timely manner or crops are picked longer than normal._ Planted earlier and often picked longer grape tomatoes are essentially bridging the gap between the fall and spring crops in west central Florida. What little crop or host free period we thought we had has been reduced or essentially lost by over wintering crops and the lack of a good killing freeze. Some thought this winter’s
temperatures were low enough to destroy the crop on their own, but this was not the case, as some growers found when they started seeing regrowth in plants that were “frozen” but never herbicided or burned. This year, “fall” grape tomatoes effectively served as a “winter nursery” for virus and whitefly, with the result being devastating for adjoining spring tomato fields with virus percentages approaching 100% in some blocks! Unfortunately, then you begin getting a domino effect, with the “circle of influence” widening as the season progresses.

Growers are urged to not let their guard down and at the same time, consider their neighbors. When picking crops such as cherries and grapes where the harvest interval is shortened and thus the choice of chemicals may be fewer, at least consider applications of something like an oil to help reduce adult populations, for the sake of your own surrounding fields as well as your neighbors. Although whitefly numbers this spring have not been as high as in some seasons in the past, apparently many were “dirty” coming in from virus infected fields, thus increasing primary infection or transmission in other fields.

Although chemical applications for control of adult SWF early in the season in fields treated with Admire or Platinum has typically not been recommended, growers who know they are close to old, virus laden fields may see a benefit from an adulticide. If you are in this situation, choose materials in different chemical classes from Admire and Platinum to minimize resistance problems.

Some growers have also been heard questioning the value of an IPM scouting program if they are having to spray for whitefly twice weekly anyway. Keep in mind that your scout is looking at other pests in addition to whiteflies. Remember that in the past as spraying for whitefly increased, problems with other pests increased and the pest spectrum changed as levels of beneficials and predators were reduced. One of the benefits of scouting is improvement of the timing of sprays and thus increased efficacy; another is being part of a network so that you know what’s going on in other parts of your production area.

Additional suggestions for breaking the cycle can be found in an article by Dr. Jane Polston in last years Tomato Institute Proceedings, available online at the SWFREC website at http://www.imok.ufl.edu/veghort/docs/tom_inst_2002_091202.pdf

Phytophthora

Growers in the Palm Beach reported some increase in Phytophthora capsici in squash and pepper but drier weather over the past few days has helped slow the spread.

Around Southwest Florida, Phytophthora capsici is present on eggplant, pepper and squash in several widely scattered sites. Drier weather in recent days has helped check the spread although this may change following this weeks rain.

Respondents indicate that Phytophthora is present in some summer and winter squash plantings in Manatee County.

Choanephora fruit rot

Choanephora fruit rot is widely present on squash in a number of areas around south Florida. Incidence and occurrence increases in relation to foggy mornings in many instances.

Anthracnose

Reports indicate a fair amount of fair amount of anthracnose on pepper in east coast production areas.
Anthracnose has also been reported in older peppers in the Manatee/Ruskin area.

**Powdery Mildew**

Respondents around Southwest Florida note that powdery mildew remains active especially in older squash. Incidence and severity is high in some fields.

Grower and scouts in Palm Beach report the occurrence of powdery mildew on a variety of crops including cucumber, pepper, and squash.

**Mosaic**

Growers and scouts continue to report finding mostly low levels of virus in squash in scattered locations across South Florida. Some locally heavy hotspots with a higher incidence of the disease have been reported. Incidence of mosaic has increased in watermelon and is widely present in many fields although most fields are currently being harvested or are close enough to harvest that little effect on yield is anticipated.

Reports from Homestead indicate that mosaic is increasing in older picked squash.

**Fusarium**

Both fusarium wilt and crown rot have been reported in the Manatee area but incidence varies widely between farms and is mostly low.

**Southern Blight**

Southern blight is also present in tomato and eggplant in scattered places around southwest and west central Florida.

**Bean Golden Mosaic**

Growers and scouts around Homestead are reporting some new occurrence of Bean Golden Mosaic Virus.

**Tomato Spotted Wilt Virus**

Tomato Spotted Wilt Virus is still present on tomato and pepper in low numbers in fields in Manatee and Martin Counties. Most cases appear to be related to infected transplants coming from areas where the virus is endemic.

**News You Can Use**

A producer in Southwest Florida recently sent a shipment of peppers to California only to have them held up at the California State line by agricultural inspectors requesting certification that the shipment was free of European corn borer. Although most growers do not make regular shipments to California, it is important to be aware of this requirement to avoid problems that could result in delays and worse. Although South Florida is considered to be free of European corn borer – North Florida is not – hence the certification requirement. Certification is available through your local Florida Department of Agriculture and Consumer Services, Department of Plant Industry (FLDAC’s DPI) inspector.

In addition to peppers, this requirement also applies to anybody planning to ship corn, or green beans from Florida to California. As a general rule, DPI inspectors will conduct a field or packinghouse inspection
and issue several "State of Origin" certificates (aka corn borer certificates) at a time for the shipper to fill out. Growers in Glades and Hendry Counties should call Lori Richards at 863-674-4010. Growers in Collier and Lee should call Walter Golden at 239-332-6913. Charlotte Co. growers need to contact Alan Gambill at 239-332-6912. In other areas, contact your local DPI inspector. There is a fee involved for the certificates, $50.00 plus mileage for the first certificate and $15.00 for each additional certificate.

The applicable section of the California regulation follows:

**XI. EUROPEAN CORN BORER - Section 3263**

**STATES REGULATED:** AL, AR, CO, CT, DE, GA, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NY, NC, ND, OH, OK, PA, RI, SC, SD, TN, VT, VA, WV, WI, WY, DC, and parts of FL, LA, NM, TX, and Canada.

**MATERIALS REGULATED:** All plant parts of corn, broom corn, sorghum and sudangrass; beans in pod, pepper fruits, aster, chrysanthemum, geranium, hollyhock, dahlia tubers with stems and gladiolus corns with stems.

**Note:** there are many other regulations concerning the movement of produce, transplants and other plant materials into California - too many to list here. For example, soil associated with a load can be a problem (Imported Fire Ant Quarantine) if the product has been field packed (ex. bins or boxes that have been stacked on the ground and are loaded on a truck with soil still attached) or even used farm equipment that has not been adequately cleaned. As they say a word to the wise- take some time to educate yourself on the requirements of the state you are planning to ship to - it will save you and the inspector a lot of time and possibly grief.

**Product Updates**

**OxiDate vs. Hydrogen Peroxide** – apparently a few growers have been trying hydrogen peroxide for disease control thinking that it is comparable to OxiDate. Here are some facts to consider.

The basic premise behind OxiDate (hydrogen dioxide) and peroxides when used, as anti-microbials is that bacteria and fungi are comprised of proteins and proteins are highly subject to oxidation. Disruption of the protein by oxidation results in loss of protein function and ultimately cell death. When using this category of oxidizers for disease control, there are a couple of important facts to consider.

First, OxiDate and the other peroxides have little or no residual activity due to the fact that they are rapidly degraded in the environment and are broken down to their constituent component— water (H₂O) and oxygen (O₂). Since they have no residual activity, coverage is essential because if the chemical doesn't contact the organism at the time of spraying and in the right concentration there is no effect. Secondly, in order to be effective, non-residual chemistry should be able to kill not only actively growing disease organisms but also spores. Lastly the oxidizing chemical must be stable enough to exist for some time in the environment and at the same time not harm the plant material.

**The first major problem with hydrogen peroxide is stability.** Hydrogen peroxide is highly unstable and breaks down very quickly when exposed to organic matter, UV light pressure changes, or in fact anytime energy is added to the system. The unstable nature of hydrogen peroxide can result in one of two possible outcomes when applied to crops. One possibility is that the peroxide will degrade through UV exposure, agitation in the tank and/or the rapid pressure changes associated with passage through the spray nozzles, into it’s constituent parts - oxygen and water - before ever reaching the plant pathogen or soil. The second possibility is that it is sprayed at sufficient strength to actually reach the foliage and then reacts very quickly on the surface of the plant foliage liberating heat and oxygen and causing burning, phytotoxicity and crop damage. Either result is undesirable.
The second major shortcoming of hydrogen peroxide is that it has no sporicidal activity. This is why it is not used in applications where sporicidal activity is required.

The last major problem with hydrogen peroxide is that it is not registered with the US EPA as a fungicide/bactericide and therefore is illegal to use on crops for such purposes.

OxiDate is an EPA registered, stabilized and activated peroxygen/peroxyacetic acid compound. As per EPA requirements and to avoid confusion, the label refers to the active ingredient as hydrogen dioxide. Whichever way it is referred to, OxiDate is a stabilized, engineered hydrogen peroxide formulation in combination with peroxyacetic acid. This combination gives OxiDate sporicidal properties while the stabilizers allow OxiDate to be applied as a spray or drench without the rapid loss of the active ingredient or phytotoxicity. OxiDate is labeled for use on the following crops: beans, broccoli, cauliflower, cabbage, cucurbits, onions, peppers, potatoes, and tomatoes. For more information on OxiDate, go to the BioSafeSystems website at http://www.biosafesystems.com.

Sanitation, Sanitation, Sanitation...

As we near the end of the season growers are reminded of the importance of sanitation in an integrated pest management program. Disease and insects do not magically materialize to plague growers. Many require a living host to carry them from one season to another.

Field sanitation is one of the most important tactics in vegetable pest and disease management. One of the best things that growers can do for themselves and their neighbors is to clean up crop residues promptly after harvest. Sanitation is an important IPM technique that should not be over looked as an effective, preventative tool against many vegetable pest and disease problems. Sanitation includes any practice that eradicate/s or reduces the amount of pathogen inoculum, pests, or weed seeds present and thus helps reduce or eliminate subsequent pest and disease problems.

Prompt crop destruction at the end of the season will immediately end the production of disease inoculum and insects and eliminate the spread of diseases and pests to any other host plants in the vicinity. Downy and powdery mildew on melons can spread via wind from older, diseased plants to plants in surrounding fields that are still maturing. These diseases are obligate parasites. This means that they can only grow and multiply on living host tissue. Some plant pathogens, such as the bacterium that causes bacterial spot of tomato and pepper, are unable to survive for extended periods of time outside of the host tissue. Plowing or disk under infected plant debris helps not only by covering up the inoculum but also speeds up the disintegration of plant tissue and kills the pathogen. Good sanitation will help control a number of important vegetable pathogens.

Soil tillage can destroy insects and expose them to birds and other predators. It can also speed the breakdown of plant residues that harbor insects and plant pathogens. By either allowing the organic matter in a field to decompose completely before you plant the next crop and /or allowing a fallow period between crops, you can enhance the control of a number of insects and diseases.

Destruction of tomato vines will kill off white fly populations and eliminate transmission of the tomato yellow leaf curl virus to subsequent crops and also eliminate inoculum from late blight and other fungal diseases. This is particularly important in the case of TYLCV, as sanitation and whitefly control are the only tools currently available for the management of this disease. A crop-free period is also considered a necessity for the control of a number of other important vegetable pests such as pepper weevil, tomato pinworm, and Thrips palmi and is recommended for management of all vegetable pests.

A little extra effort spent in cleaning up old fields at the end of the season may well prevent or reduce a number of potential problems next fall!
Summer weed management can be a challenge. Growers should check field margins to make sure that pest species are not building up there and migrating out into cropping areas. Many insects over summer on weeds, so efforts to control them can be profitable by reducing their movement into the crops next growing season.

Weeds are also known reservoirs of nematodes as well as a number of viral, fungal and bacterial pathogens. Weeds and volunteers should be removed to prevent the survival and over-summering of pathogens that could serve as inoculum reservoirs for the next crop. Techniques such as mowing off pepper should not be relied upon as this often results in re-sprouts, which can harbor pests and disease problems over summer.

The use of cover crops and summer fallowing of fields are also effective tools in reducing weed populations that can cause problems in the subsequent crop. The role of summer fallow in weed management is often overlooked. Summer fallow keeps new weed seeds from being added to the soil seed-bank. It also reduces the increases in asexual propagated plants such as nutsedges. Yellow nutsedge can put out 70 new tubers (nuts) every two months. Keeping the weeds from propagating will reduce the weed problems encountered during the next cropping season and help reduce insects and diseases that may over summer in weedy fields.

Chemical fallowing is a twist on the traditional method of fallowing that depends on diskng fields through out the summer period to reduce weed pressure in subsequent crops. One approach uses Roundup to kill weeds during the crop free period.

Cover crops planted prior to the main cash crop can also improve soil fertility and provide a valuable source of organic matter.

When devising a crop rotation strategy, a grower should also be aware of which crops and cover crops might increase disease problems. Sunn hemp can increase soil populations of *Pythium* and *Rhizoctonia* damping-off fungi. Some varieties of cowpea may host of root-knot nematode. These factors should be considered before selecting a cover crop.

Soil solarization is the use of plastic tarps placed on the soil surface to increase soil temperatures to a level that kills soilborne pathogens, weeds, and other crop pests. Soil solarization works best when summer temperatures are uniformly high. These conditions don't always occur in Florida. Soil solarization will not eradicate a pathogen from a field, but it may lower pathogen populations.

Soil flooding is a related means of creating conditions—in this case, saturated soil over an extended period—that might result in a decline of soil-borne pathogens.

Integrated pest and disease management is a year round commitment that should incorporate a combination of cultural, biological and chemical pest management techniques. Be a good neighbor and clean up!

Up Coming Meetings

Hillsborough County

May 5, 2003     Vapam/K-Pam Certification Program     6 PM

Hillsborough County Extension Office
5339 S CR 579
Seffner, Florida

Contact Alicia Whidden at 813-744-5519
May 5, 2003  Pesticide License Testing

Hillsborough County Extension Office
5339 S CR 579
Seffner, Florida

No pre-registration required

Manatee County

May 6, 2003  Vapam/K-Pam Certification Program  6 PM

Gulfcoast Research and Education Center
5007 60th Street E
Bradenton, Florida

Contact 941-722-452 for more information

Miami-Dade County


Miami-Dade County Extension Office
18710 SW 288 Street
Homestead, Florida

Contact Teresa Olczyk at 305-248-3311 for information and cost

Palm Beach County

May 8, 2003  Vapam/K-Pam Certification Program  6 PM

Delray Fire Station
Boynton Beach, Florida

Contact 561-233-1725 for more information.

May 14, 2003  General Standards/Core Test Review  8 AM - 10 AM
Private Applicator Test Review  1 PM - 3 PM
Testing - Any Category  8 AM - 4 PM

Belle Glade Extension Office
2976 State Road 15
Belle Glade, Florida

Contact Laura Powell at 561-996-1655.

May 20, 2003  Compost Tour And Hands-On Training  9AM – 4 PM

Various locations including Amerigrow Recycling and Green Cay Farms

Contact Dr. Monica Ozores Hampton at 239-658-3400 or email Ozores@mail.ifas.ufl.edu
Southwest Florida

May 7, 2003  Vapam/K-Pam Certification Program  6 PM
UF/IFAS SW Florida Research and Education Center
SR 29 N
Immokalee, Florida

Contact Gene McAvoy at 674-4092

May 13, 2003  Spring Vegetable Field Day  10 AM
UF/IFAS SW Florida Research and Education Center
SR 29 N
Immokalee, Florida

Contact Gene McAvoy at 674-4092

St Lucie County

May 9, 2003  Vapam/K-Pam Certification Program  12 Noon
USDA Agricultural Research Station
Rock Road
Fort Pierce, Florida

Contact Ed Skavarch 772-462-1660.

Other Meetings

April 29-30, 2003  FACTs - Florida Agricultural Conference and Trade Show
Lakeland Center, Lakeland, Florida

Websites

Office of Agricultural Water Policy website - The Office of Agricultural Water Policy (OAWP), within the Florida Department of Agriculture and Consumer Services was established in 1995 by the Florida Legislature to facilitate and improve communications between federal, state, local agencies, and the agricultural industry on water quantity and water quality issues involving agriculture. The primary mission of the Office of Agricultural Water Policy is to formulate and establish water policies that will provide assurances that agriculture will have access to sufficient water supplies in the future. The OAWP is actively involved in the development of Best Management Practices (BMPs) on a site specific, regional, and watershed basis. This website provides a great deal of info on Florida’s agricultural water policy and issues. Set your browser to http://www.floridaagwaterpolicy.com/main.html.

The New Farm Organic Price Index – thinking about growing organic? This Rodale Institute sponsored website provides a comparison of conventional and organic prices for 40 products, from grains to vegetables. Go to http://www.newfarm.org/opx/fruit.html

Terrafly - this website will change the way you view your world. Terrafly allows you to virtually fly anywhere in the United States. Go to http://www.terrafly.com/ and enter an address or zip code to get started.
Quotable Quotes

No one gossips about other people's secret virtues. -- Bertrand Russell

Never explain--your friends do not need it and your enemies will not believe you anyway. -- Elbert Hubbard

I am not in this world to live up to other people's expectations, nor do I feel that the world must live up to mine. -- Fritz Perls

Only two things are infinite, the universe and human stupidity, and I'm not sure about the former. -- Albert Einstein

To die for an idea; it is unquestionably noble. But how much nobler it would be if men died for ideas that were true! – H. L. Mencken

On the Lighter Side

True Southerner

- Only a true Southerner knows the difference between a hissie fit and a conniption, and that you don't "HAVE" them, -- you "PITCH" them.

- Only a true Southerner knows how many fish, collard greens, turnip greens, peas, beans, etc. make up "a mess."

- Only a true Southerner can show or point out to you the general direction of "yonder."

- Only a true Southerner knows exactly how long "directly" is - as in: "Going to town, be back directly."

- All true Southerners, even babies, know that "Gimme some sugar" is not a request for the white, granular sweet substance that sits in the pretty little bowl on the middle of the table.

Visit to the Big City

An Amish boy and his father were in a mall. They were amazed by almost everything they saw, but especially by two shiny, silver walls that could move apart and then slide back together again.

The boy asked, "What is this Father?" The father (never having seen an elevator) responded, "Son, I have never seen anything like this in my life, I don't know what it is."

While the boy and his father were watching with amazement, an old lady in a wheel chair moved up to the moving walls and pressed a button. The walls opened and the lady rolled between them into a small room.

The walls closed and the boy and his father watched the small circular numbers above the walls light up sequentially. They continued to watch until it reached the last number and then the numbers began to light up in the reverse order. Finally the walls opened up again and a gorgeous young blonde stepped out. The father, not taking his eyes off the young woman, said quietly to his son ..........

"GO GET YOUR MOTHER."
You Are…

- You are strong...when you take your grief and teach it to smile.
- You are brave...when you overcome your fear and help others to do the same.
- You are happy...when you see a flower and are thankful for the blessing.
- You are loving...when your own pain does not blind you to the pain of others.
- You are wise...when you know the limits of your wisdom.
- You are true...when you admit there are times you fool yourself.
- You are alive...when tomorrows hope means more to you than yesterday's mistake.
- You are growing...when you know what you are but not what you will become.
- You are free...when you are in control of yourself and do not wish to control others.
- You are honorable...when you find your honor is to honor others.
- You are generous...when you can take as sweetly as you can give.
- You are humble...when you do not know how humble you are.
- You are thoughtful...when you see me just as I am and treat me just as you are.
- You are merciful...when you forgive in others the faults you condemn in yourself.
- You are beautiful...when you don't need a mirror to tell you.
- You are rich...when you never need more than what you have.
- You are you...when you are at peace with who you are not.

--Author Unknown--

Contributors include: Joel Allingham/AgriCare, Inc, Karen Armbrester/SWFREC, Kathy Carbiener/Agricultural Pest Management, Jim Connor/SWFREC, Bruce Corbitt/West Coast Tomato Growers, Dr. Phyllis Gilreath/Manatee County Extension, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/H&R Farm, Loren Horsman/Glades Crop Care, Bruce Johnson/General Crop Management, Dr. Mary Lamberts/Miami-Dade County Extension, Leon Lucas/Glades Crop Care, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Jimmy Morales/Pro Source One, Tim Nychk/Nychk Bros. Farm, Chuck Obern/C+B Farm, Teresa Olczyk/ Miami-Dade County Extension, Dr. Ken Pernezny/EREC, Dr. Pam Roberts/SWFREC, Dr Nancy Roe/Farming Systems Research, Wes Roan/6 L's, Kevin Seitzinger/Gargiulo, Jay Shivler/ F & F Farm, Ken Shuler/Stephen’s Produce, Ed Skvarch/St Lucie County Extension, John Stanford/LNA Farm, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Red Star Farms, Dr. Charles Vavrina/SWFREC, Mark Verbeck and Donna Verbeck/GulfCoast Ag, and Alicia Whidden/Hillsborough County Extension.

The South Florida Pest and Disease Hotline is compiled by Gene McAvoy and is issued on a biweekly basis by the Hendry County Cooperative Extension Office as a service to the vegetable industry.

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