Wet weather resulting from a sub-tropical depression in the Florida Straits generated abundant moisture, which fell over all of south Florida during the week of October 1 to 7. Most areas in southwest Florida experienced received between 4 and 6 inches of precipitation over several days. Some reports indicate that wet weather and heavy rains resulted in some blossom drop in tomatoes. The FAWN Weather Station in Immokalee recorded a total of 2.06 inches of rain from the storm and a total of 3.67 inches of rain for the period.

The exception was a narrow band running from southeastern Hendry County in the vicinity of the McDaniel Ranch southwestward to the Sunny Land area along SR 858 in Collier County west of the Hendry County Correctional Institute. Growers along this band report receiving between 12 and 20 inches of rain between October 3rd and 4th. A number of fields were flooded and over 350 acres of crops mainly peppers and tomatoes were lost. In addition it is estimated that an additional 250 acres of plantings were affected and will suffer losses ranging from 5 to 50%. Much of the loss resulted when beds went under water, which solublized the hot mix resulting in an extremely high concentration of soluble salts under the plastic, which either killed or severely damaged plantings. The full extent of the damage will become apparent over the next few weeks.

Daytime temperature for most of the period were in the high 80’s to low 90’s with nighttime temperatures in the mid to lower 70’s. Penman evapo-transpiration levels have fallen appreciable over the past two weeks with most readings running between 0.110 and 0.194 inches per day. Increases in daily rainfall across the area have improved soil moisture levels and yearly rainfall totals in most are now approaching near normal levels.

A strong cold front moved into the area on October 9 dropping daytime temperatures into the mid 70’s to lower 80’s and nighttime readings into the mid 50’s to low 60’s. The front bought dry air and was accompanied by strong winds, which have prevailed over the past few days. There have been scattered reports of wind damage and sand blasting particularly on young plantings and tender crops such as beans and cucurbits.
IMMOKALEE Weather Summary:

<table>
<thead>
<tr>
<th>Date</th>
<th>Air Temp °F</th>
<th>Rainfall (inches)</th>
<th>Hours Below Certain Temperature (hours)</th>
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</thead>
<tbody>
<tr>
<td>Sept 2000</td>
<td>Min 70.5</td>
<td>Max 95.3</td>
<td>40°F: 0.0, 45°F: 0.0, 50°F: 0.0, 55°F: 0.0, 60°F: 0.0, 65°F: 0.0, 70°F: 0.0, 75°F: 154.8</td>
</tr>
</tbody>
</table>

The National Weather Service forecast for the next few days is for dry weather and mostly sunny skies. Highs will be in the lower to mid 80’s with lows in the 60’s. Winds will be northeast 10 to 15 MPH.

Planting is going well throughout SW Florida. Tomato and pepper planting remains steady. However, wet weather and soggy fields did cause a few growers to miss one planting.

Plantings of, cucumbers, eggplants, snap beans, squash and other crops is gaining momentum and potato planting should begin in the next week or so. Growers are laying plastic, staking and tying, and spraying to control insects and disease. Most reports indicate crops in good condition with new plantings beginning to establish and grow rapidly. Picking of small quantities of early tomato and pepper has begun.

Reports indicate that armyworm pressure remains fairly high across SW Florida. Depending on the location, reports from scouts and growers differ widely on the level of worm pressure being experienced. Several reports have indicated that pressure has begun to abate or is lower than normal for this time of year, while others have reported constant pressure and difficulty in gaining control of the situation. Beet armyworms are more prevalent on pepper, while reports indicate that southern armyworms make up the majority of the worms identified in tomato.

Respondents are also seeing significant numbers of other worms species including loopers, hornworms, and tomato fruitworms.

Reports indicate fairly good levels of fall armyworm building up in sweet corn at this time.

High numbers of melonworms are being reported on squash from at least one location. The adult moths have velvety black wing margins with lighter, pearly-white areas. The larval stages are green with two dorsal white stripes running the length of the body and can grow to 1¼ inches long, otherwise they resemble pickleworm larvae.

Unlike the pickleworm, the melonworm is primarily a foliage feeder that prefers the foliage of muskmelon, squash, cucumber, and pumpkin. It very rarely attacks watermelon. The larvae are often abundant on squash and typically feed on foliage rather than blossoms before they tunnel into stems and fruits, similar to pickleworm.

Low levels of leafminer activity are being widely reported on a number of crops including tomato, beans and cucurbits. Stippling as well as some mines are being seen. In general, numbers are well below action thresholds and in most cases substantial numbers of parasites are present.

There have also been some isolated reports of a few winged aphids around. In both instances, numbers have been too low to warrant control efforts.

Whiteflies remain at fairly low levels across SW Florida. Most respondents are now reporting counts below one per plant for the most part. There have been few reports of higher numbers around one per plant but nothing alarming at this time. This is in contrast to the situation in Ruskin where reports indicate counts as high as 10 per plant in some fields. There is some speculation that increased rainfall and higher humidity have
helped control numbers locally by favoring some of the naturally occurring entomophagous fungi which attack whitefly nymphs and larva.

A number of respondents have reported broad mites in pepper from several widely scattered locations. They have also been seen in eggplant in at least one location. Infestations are sporadic but seem to be gradually increasing by most reports. Pepper and eggplant producers are advised to be on the look out for this pest. As with most pests, scouting to detect early infestation is important.

Broad mites (*Polyphagotarsonemus latus*) are so small that they are may be hard to see even with a good hand lens. Broad mite adults are tiny, white, eight-legged mites and are usually most numerous on the underside of young, emergent foliage.

 Female broad mites lay 30 to 76 eggs on the leaf surface over an 8- to 13-day oviposition period. Unmated females lay male eggs; mated females usually lay four female eggs for every male egg. The larvae hatch in 2 or 3 days and emerge from the egg to feed. Larvae are slow moving and do not disperse far. In 2 or 3 days, the larvae develop into a quiescent larval stage. Quiescent female larvae become attractive to the males, which pick them up and carry them to the new foliage. Males and females are very active, but the males apparently account for much of the dispersal of a broad mite population in their frenzy to carry the quiescent female larvae to new leaves. When females emerge from the quiescent stage, males immediately mate with them. Males live 5 to 9 days; females live 8 to 13 days. Males can sometimes be seen carrying females "piggyback". Nymphs are similar though somewhat smaller than adults. Eggs are about ¼ the size of adults, round with white, opalescent spots and glued to the plant surface. Generation time may be as short as eight days, depending on temperature.

Symptoms of broad mite feeding include distortion of plants growth causing leaves to become thickened and narrow resulting in a “strappy” appearance. Leaves curl downward and may turn coppery or purplish. Internodes shorten and lateral buds break more than normal. Mites tend to crowd into crevices and buds and feed on the growing tips. This new growth may also be stunted or killed which forces out additional shoots. Flowers are distorted and fail to open normally.

Heavy feeding can cause flower abortion and russetting of fruit. Unless controlled, broad mites can destroy the commercial value of infested crops. Their toxic saliva causes twisted hardened and distorted growth in the terminal of the plant. The effects of their feeding may persist long after the mites have been eradicated.

Infestations are often spotty, but may become more generalized, especially in late fall. Chemical control is not difficult but should be timely. Kelthane or dicofol, micronized sulfur (i.e. Thiolux) and AgriMek have all given good results locally. It should be noted that none of these materials kills eggs or seems to have enough residual to kill all hatching larvae. Therefore, to achieve control it is necessary to make two applications about 5 days apart to allow time for eggs to hatch and target emerging larvae.

Heavy rainfall over the past few weeks beginning with Hurricane Gordon and extending through last week has lead to a widespread increase in reports of new bacterial leaf spot infections on tomato and pepper. For the most part, the incidence is scattered and severity is light to moderate. Several reports indicate higher levels of infection in some tomato fields where blowing wind and rain have carried bacteria high into the canopy. Some pepper fields are also showing high levels of infestation and are on the verge of serious defoliation. In some instances, bacterial spot lesions are being seen on fruit.

Wounds made by wind driven soil and heavy rains over the past few weeks has helped facilitate infection by assisting entry into the plantings through both the wounds and through natural plant openings (stomates and hydathodes).
During periods of wind-driven rains when conditions are particularly favorable, frequent sprayings may not be sufficient to maintain bacterial disease below damaging levels. While growers have been busy spraying tanks mixes of copper and maneb or mancozeb for bacterial spot control, the cool dry weather that followed the recent cold front will probably be at least as effective in assisting control efforts. The effectiveness of copper bactericides is limited, because of the widespread occurrence in Florida of copper tolerance among strains of *X. campestris* pv. *vesicatoria*.

**Growers should be sure to positively identify foliar diseases.** Foliar symptoms of some diseases such as target spot may be difficult to differentiate from other foliar diseases including bacterial spot in early infection stages. Tank mixes of copper and maneb or mancozeb while effective against bacteria is less effective against several fungal pathogens. This fact poses some particular problems when other diseases such as late blight or target spot is a threat at the same time as bacterial spot. In such cases separate trips over the field with copper/mancozeb or chlorothalonil alone may have to be made. Alternatively, sprays of chlorothalonil and copper may be used, because copper apparently has no effect on the fungicidal efficacy of chlorothalonil. Early blight is one foliar fungal disease that is quite adequately controlled by applications of copper/mancozeb tank mixes.

*“Tomato little leaf“ has been observed in at least two fields in the area.* Tomato little leaf is a non-parasitic disease of tomatoes that causes virus-like symptoms in tomato. Early symptoms of this condition are characterized by unusual growth consisting of interveinal chlorosis in young leaves. Subsequent growth becomes severely distorted with leaflets along the mid-rib failing to expand properly resulting in a “little leaf” appearance. In addition, leaflets are twisted and distorted. Overall the appearance is reminiscent of viral or phenoxy herbicide symptoms.

It occurs on wet soils and is apparently caused by the release of amino acid analogs by soil microorganisms under wet conditions. These compounds are taken up by plant causing the expression of virus-like symptoms. Control consists largely of managing soil moisture to avoid water logging. Maintaining soil pH below 6.3 or less can also reduce development of the problem. Affected plants generally resume normal growth once soil moisture levels become more favorable.

**Pythium root rot is being widely reported in tomato and pepper.** There has been some increase in the number of wilted plants following recent rains but the incidence remains low with most of the affected plants occurring at the end of rows and next to shovel ditches where water accumulates.

**Chemical control of rot roots and damping-off caused by Pythium spp. consists of mefanoxam applied pre-plant broadcast or in a banded application.** Apply Ridomil Gold WSP at the rate of 2 lbs. per treated acre or Ridomil Gold EC at 2 pt. per treated acre.

**Fusarium wilt has been reported in several tomato fields that were flooded in recent rains.** Most of the affected plants are located at the end of rows and next to shovel ditches where water accumulates unless the field went entirely under water in which case infected plants can be found through out the field. Root damage from fertilizer salts and flooding has opened these plants up to infection and we are certain to see some increase in the incidence of fusarium in affected fields over the next few weeks. A good diagnostic symptom of fusarium is the vascular discoloration that can be observed upon cutting the lower stem diagonally.

**Several of scattered reports of southern blight on tomato have been received.** Symptoms of this disease include a sudden collapse and permanent wilt of all aboveground parts. Lesions develop rapidly on or near the soil line completely girdling the stem. Under moist conditions, matted white mycelia may develop on the lesions and extend up the lower stem. Small tan to reddish brown sclerotia (hard resistant resting structures) averaging 1 – 2 mm may form in this fungal growth as it matures. The sclerotia serve as the primary inoculum and the fungi can survive for several years as sclerotia in the soil or in plant debris.
Tomato yellow leaf curl virus is widely present at low levels across the area. In most cases, only an occasional infected plant every few of acres is present. In the worst cases, a plant or two every couple of acres can be spotted. Growers are universal in their use of Admire and whiteflies remain at low levels in most fields limiting the potential for spread. Growers should rogue out infected plants as identified. It is disturbing to see some fairly large infected plants in fields that have apparently been left in place for several weeks or more.

The plants with in the rows of many early plantings are beginning to or have recently “closed,” meaning that adjacent plants have begun to touch. This means that the microclimate within the plant canopy is about to change dramatically. From a disease management standpoint, this event can have some serious ramifications.

Plant pathologists often refer to the “disease triangle” to illustrate the three elements that must be present for plant disease to develop. These three elements are a susceptible host - your crop, a virulent pathogen, and the right environment. With out all three of these elements, you won’t get disease development.

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For most serious fungal diseases, a moist even wet environment is just what is needed. Most fungal pathogens require droplets of water, often termed “free moisture” for their spores to germinate, penetrate and infect plant tissues. Bacteria also require free moisture for their cells to multiply. Once the plant canopy within a field begins to close or grow together, favorable conditions for disease development are more likely to occur and persist for longer times than they are when plants are small and the canopy is open. A full lush canopy can trap and hold moisture long enough for many pathogens to get a foothold. In addition, closure of the plant canopy makes it harder for a grower to achieve adequate coverage of the foliage especially deep within the canopy with protectant chemicals.

When it comes to the initiation and development of plant diseases, the proper environment is a major contributing factor. As plants begin to close up, the conditions are getting a whole lot more favorable for diseases to get started. It might be a good time to step up scouting efforts and to ensure that application equipment is functioning properly and providing good coverage.

Publications available

If you missed this years Tomato Institute or FACTS 2000, you can still keep abreast of what happened. The Hendry County Extension Office has copies of the following publications:

2000 Florida Tomato Institute Proceedings
FACTS 2000 Proceedings

We also have available:

UF/IFAS Vegetable Variety Trial Results in Florida for 1999
Best Management Practices for Agrichemical Handling and Farm Equipment Maintenance
Methyl Bromide: Progress and Problems Identifying Alternatives
Worker Protection Standard Train the Trainer Manual
Worker Protection Standard Summary
WPS Checklist
WPS Inspection Forms

WPS Update

Although there have been few changes to the Worker Protection Standard in recent years, farm worker advocacy groups are pushing the EPA to adopt more stringent regulations. While is not certain what actions that the EPA will take to change the WPS, several changes are likely. One of the most likely changes is
that worker training will require more than simply watching a training video to comply with training requirements. It is also quite likely to that handler training will become more stringent.

At the recent WPS Train the Trainer meeting, at the Hendry County Extension Office in LaBelle, several of the speakers presented informative information regarding the WPS.

Dr Norm Nesheim, of the University of Florida Pesticide Information Office, indicated that another likely change that might be imposed under the WPS would be to extend REI’s for many of the organophosphate and carbamate insecticides. At present many of the REIs are interim REI’s, that EPA may change as a way of restricting the use of certain pesticides. Growers can expect to see much longer REIs. It is clear that doubling or tripling an REI will have significant effects on how certain pesticides are used and even if they are used at all.

Kathleen Osgood, field supervisor with the Bureau of Compliance Monitoring commended those who were present on the general high level of compliance with WPS in southwest Florida. Kathleen went over the most frequent violations commonly reported by here inspectors as a way of helping growers conduct a self-audit of their operation with regard to WPS compliance.

The number one violation reported concerned central posting of information. Most frequent violations in this area were failure to replace faded posters, failure to include the required EPA registration number for pesticides applied, and failure to fill in the emergency medical information on the required WPS safety poster.

The second most common violation revolved around worker training. The biggest training violation was the failure to use properly qualified trainers. Trainers must be certified applicators or must have attended an approved Train the Trainer course and have been awarded a Train the Trainer Certificate. In addition employers must be able to prove that workers have been trained. While the WPS does not require growers to keep documentation of worker training, the burden of proof is on the employer. Ms. Osgood explained while not required some documentation would greatly assist employers in proving to inspectors that workers had been trained.

The third most common violation revolved around decontamination sites. While almost every employer provides the mandated decontamination site, many failed to replenish exhausted supplies as needed. In addition, many sites failed to include a change of clothing for handlers or neglected to supply required eyewash where it would be immediately available (within a ¼ mile is not considered to be immediately available) when using chemical s whose label required handlers to use protective eyewear.

Several other common violations were discussed. A common mistake involves confusion between the PHI and REI. Some materials have a pre-harvest interval (PHI) which may be shorter than the reentry interval for workers. In such cases, workers must still wait until the REI has elapsed.

In other instances, warning signs are left in place all the time. Written warning signs are not required unless specified by the label but if employed they must be taken down within 3 days of the expiration of the REI.

For a pesticide to be applied either the crop or the site must be listed on the label. If a supplemental label applies the supplemental label must be in possession of the applicator.

In closing, Ms Osgood suggested that if an accident should happen that employers decontaminate workers or handlers before sending them for emergency assistance to avoid delays and eliminate prolonged exposure. She also advised employers to send copies of the pesticide label with the affected individual to the emergency care facility.
WPS CHECKLIST

Information at central location - Provide access. Keep legible and current.

- WPS Safety Poster
- Nearest medical facility (name/phone/location)
- Applications (post before application until 30 days after REI expires)
  - Product (name/EPA reg.no./active ingredient)
  - Location/description of treated area
  - Date/Time/REI for each application

Training - Valid for 5 years if records (or EPA card) are available.

- Workers: Basic training before work. Complete training within 5 days.
- Early entry Workers: Complete training before work.
- Handlers: Complete training before work.
- People with pesticide license (for RUP) do not need WPS training.
- People with pesticide license can perform WPS training.

Decontamination - Must be within ¼ mile of workers/handlers. Water must be clean/not too hot. Must be maintained for 7-30 days after REI expires; consult pesticide label.

- Workers: Water to wash hands, soap, and single use towels
  - Decontamination must not be in area being treated or under REI
- Handlers: Water to wash entire body, soap, single use towels, clean clothes
  - Also provide decontamination where PPE is removed.
  - Also provide decontamination in mix/load area.
  - In areas being treated, supplies must be enclosed.

Emergency Assistance - Act promptly if any worker/handler may be poisoned.

- Provide transport to medical facility.
- Supply information to medical personnel.
  - Product name/EPA reg.no./active ingredients
  - Description of pesticide use,
  - Details about exposure.

Information Exchange - Between agricultural establishments and commercial applicators.

- Commercial applicator to agricultural establishment (before application)
  - Area to be sprayed.
  - Date/time of application
  - Product name/EPA registration number/active ingredient/REI
  - Does product require oral warning and posting?
  - All labeling safety requirements.

- Agricultural establishment to operator.
  - All areas that will be treated or where REI is in effect.
  - Restrictions on areas being treated or where REI is in effect.
During applications and REI (restricted entry interval)

No one allowed in area being treated except trained/equipped pesticide handlers.
Nursery workers 100 feet (or more) away from area being treated.
Handlers only in greenhouse during treatment or until air concentration levels on labeling are met (or 2 hr. ventilation with fans).
No workers allowed to enter during REI and contact anything that may have pesticide residues.

Notification

Some labels require both oral warnings and posting of treated areas.
If label does not specify, you may notify workers orally or by posting.
With oral notification, inform workers of areas that are treated and REI. Tell workers not to enter during REI.
Oral notification must be done before application or before workers begin work.
Post all greenhouse applications.
Posting must be done before application and remain until 3 days after REI expires.
Signs must be visible from all entrances into treated areas.

Early entry by agricultural-workers

No hand labor.
No early entry into areas treated with pesticides that require oral and written warning.
Workers must be ‘no-contact’ or equipped with PPE required by label.
Workers must receive full WPS worker training before early entry tasks.
No early entry within 4 hours of pesticide application.
Early entry tasks may be performed for 8 hours out of 24 hour period.

ADDITIONAL RESPONSIBILITIES REGARDING PESTICIDE HANDLERS

Handlers must never allow pesticide to contact anyone except trained/equipped pesticide handlers.
Be sure handlers understand all labeling information for the pesticide(s) they are using.
Handlers have access to labeling throughout handling task(s).
Handlers must be trained in use of all equipment used to handle/apply pesticides.

Equipment

Inspect pesticide equipment before use.
Cleaning, repair, adjustment of equipment by trained/equipped handlers only.

PPE (Personal Protective Equipment)

Provide PPE required by label.
Maintain/clean PPE. Clean before each day it will be used.
Store away from possible pesticide contamination.
Be sure respirators and other PPE are used properly.
Replace respirator filters/cartridges at appropriate intervals.
Provide pesticide-free area to store personal clothes and for putting on/taking off PPE.
PPE may not be taken home.
Dispose of PPE that is heavily contaminated as hazardous wastes.
Inform people who clean PPE of potential hazards and how to protect themselves. Avoid heat stress.

**Crop consultants**

To be exempt from any WPS regulations, consultants must be certified through National Alliance of Independent Crop Consultants or the America Society of Agronomy. Employers do not need to monitor crop advisors when they enter fields before REI expires. Employers do not need to provide decontamination site or emergency assistance after application ends. A person is only a crop consultant when they are doing crop consultant tasks. It does not include anyone doing hand-labor like weeding, planting, cultivating, or harvesting. Crop advisors can choose appropriate PPE for themselves and their employees. They can ignore the WPS PPE instructions on the label. They must follow all other instructions on the labeling.

This summary is intended as a checklist for agricultural employers, it does not contain all details of WPS compliance. Agricultural employers should be familiar with ‘The Worker Protection Standard for Agricultural Pesticides-How to Comply’ developed by the EPA.

**Up Coming Meetings:**

**October 18, 2000**

New Tools and Approaches for the Management of Tomato Yellow Leaf Curl Virus in Plant Houses – Dr Jane Polston – 1:30 PM

SW Florida Research and Education Center
Hwy 29 N
Immokalee, Florida

**RSVP to Mickey Pena at 941-658-3405 by October 16, 2000**

**October 26, 2000**

SW Florida Vegetable Research Investment Fund – 6 PM
Members Meeting

SW Florida Research and Education Center
Hwy 29 N
Immokalee, Florida

**Contact Gene McAvoy at 863-674-4092 for more information.**

**October 31, 2000**

Weather Seminar 2000

SW Florida Research and Education Center
Hwy 29 N
Immokalee, Florida

**Registration fee and application to Florida Farm Bureau required. See notice below for application and further information.**
**Business Opportunity**

**Gielow Pickle is a food processor from Michigan.** Gielow is seeking additional growers in southwest Florida to grow pickling cucumbers in the spring and fall time period. Interested parties can contact Craig Gielow at Gielow Pickle - (810) 359-7680 ext. 104.

**Web Sites:**

**Gemplers Alert** – is a monthly newsletter of agricultural safety and employment law compliance. It has provides tips and ideas for compliance with the plethora of agricultural safety and employment that confound growers and provides valuable links to a number of useful resources. [http://www.gemplers.com/alert.htm](http://www.gemplers.com/alert.htm)

**Weed Quiz** – test your skill in weed identification. This is an interactive on-line weed quiz maintained by the Ontario Ministry of Agriculture, Food and Rural Affairs. Many weeds are cosmopolitan in occurrence, you should be familiar with many of these. [http://www.gov.on.ca/OMAFRA/english/crops/weedquiz/index.html](http://www.gov.on.ca/OMAFRA/english/crops/weedquiz/index.html)

**Council for Biotechnology Information** - Discoveries in biotechnology can significantly enhance our quality of life in many areas, from the food we eat, to the medicines we use, to the environment in which we live. The Council for Biotechnology Information has been founded by leading biotechnology companies to create a public dialogue and share information about biotechnology that is based on objective scientific research, independent expert opinion and peer-reviewed published reports. Educate yourself about this controversial and promising new technology. [http://www.whybiotech.com/us/main.html](http://www.whybiotech.com/us/main.html)

**Update on the Southwest Florida Vegetable Research Investment Fund**

The "SW Florida Vegetable Research Investment Fund." advisory committee recently received the final draft of “Solutions for Southwest Florida Vegetable Growers for the Post-Methyl Bromide Era.” This document was produced by Glades Crop Care as the result of a grant awarded by the SW Florida Vegetable Research Investment Fund Advisory Committee.

“Solutions for Southwest Florida Vegetable Growers for the Post-Methyl Bromide Era” is intended as a summary of the methyl bromide alternatives available to vegetable growers at this time. The document was prepared by researching more than 100 websites (including the USDA, EPA, and specific information sites dealing with MBr alternatives from the Universities of Florida, Georgia, Arizona, Texas A&M, and Univ. of California and industry), grower and industry trade magazines, examination of four years of the proceedings of the Annual International Research Conference on MBr alternatives, as well as interviews with 70 growers from seven states (60 from Florida).

“Solutions for Southwest Florida Vegetable Growers for the Post-Methyl Bromide Era” is currently being distributed to members. It is hoped that this document will help growers to identify the most likely methyl bromide alternatives available to them at this time, as well as identify areas of methyl bromide alternative research that warrant further research investment.

The committee is planning a members meetings on October 26, 2000 at the UF/IFAS SW Florida Research Education Center, in Immokalee at 6 P.M.. The purpose of this meeting will be to discuss this report and identify future research projects that the membership may be interested in pursuing.
The fund is envisioned as a strategic partnership of growers and others in the vegetable industry that pool their resources to address research needs of common concern. To date, over 35 individuals and companies have contributed over $34,000 to the research fund.

By participating in the SW Florida Vegetable Research Investment Fund, you will be helping to ensure the future of practical research that addresses the needs of the local vegetable grower. The strength and ultimately the future survival of not only the vegetable industry in southwest Florida, but also every vegetable grower will depend on cooperation and unity within the industry.

For more information on becoming a member of the SW Florida Vegetable Research Investment Fund, please contact any of the advisory committee members or Gene McAvoy at the Hendry County Extension Office.

Don't hesitate - join the fund today – every grower and industry partner is invited to help make the fund a success!

The Story of the Lion and the Gazelle

Every morning in Africa, a gazelle wakes up. It knows it must run faster than the fastest lion or it will be killed.

Every morning a lion wakes up. It knows it must outrun the slowest gazelle or it will starve to death.

It doesn't matter if you are a lion or a gazelle. When the sun comes up, you better be running.

Contributors include: Karen Armbrester/SWFREC, Jim Connor/SWFREC, Bruce Corbitt/West Coast Tomato Growers, Fred Heald/Farmers Supply, Sarah Hornsby/AgCropCon, Cecil Howell/H&R Farm, Leon Lucas/Glades Crop Care, Gene McAvoy/Hendry County Extension, Alice McGhee/Thomas Produce, Tim Nychk/Nychk Bros. Farm, Chuck Obern/C+B Farm, Dr. Pam Roberts/SWFREC, Wes Roan/6 L's, Kevin Seitzinger/Gargiulo, Jay Shivler/ F& F Farm, Ben Stanaland/Pacific Tomato Growers, John Stanford/LNA Farm, Mike Stanford/MED Farms, Dr. Phil Stansly/SWFREC, Eugene Tolar/Red Star Farms, and Dr. Charlie Vavrina/SWFREC, Donna Verbeck/GulfCoast Ag.

The SW 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.

Gene McAvoy
Extension Agent II
Vegetable/Ornamental Horticulture 863-674-4092 phone
Hendry County Extension Office 941-860-8811 mobile
PO Box 68 863-674-4097 fax
LaBelle, FL 33975 gmcavoy@gnv.ifas.ufl.edu

http://www.ifas.ufl.edu/~gmcavoy/index.htm

Weather Seminar 2000

Weather impacts virtually every agricultural decision made in the management of crops. This series of seminars is designed to introduce the attendees to weather resources available on the Internet. IFAS experts in a variety of fields will explain how to access and use this information. See the seminar program or agenda for more detail on the topics covered. Registration is required.
Weather Seminar 2000 Program

10 am - Welcome and Opening Comments

Morning Session: Weather Forecasting and Data Sources
30 min - Long Range (UF/FSU/UM) Climate studies and information
15 min - Short Term - Private sector to discuss services available for agriculture
15 min - General - Rep from local NWS office to discuss their products
15 min - Special Needs (fire, warnings, hurricane, etc.) - Emergency Services
45 min - Data (NWS/IFAS/Other) - What is available and how to obtain
15 min each for NWS, IFAS, and local grower

12 noon Lunch - catered with registration fee of $15 to cover meal and written materials

Afternoon Session: Using Weather Forecasts and Data
30 min - Plant/animal models
30 min - Irrigation/water management
30 min - Freeze/frost protection
30 min - Fire/emergency - fires, hurricanes
30 min - Future plans for FAWN - decision aids, additional sites, report generator
30 min - Grower comments - needs, questions, suggestions

3:30 PM Adjourn

Weather Seminar 2000 Registration Form

Fill in the blanks and send the registration form for each attendee along with a check for $15 per attendee. The cost for multiple attendees may be combined on one check but each attendee will need a separate printed registration form. Make checks payable to Florida Farm Bureau.

Mail registration forms and checks to:
Florida Farm Bureau
Attention: Pat Cockrell/Weather School
P.O. Box 147030,
Gainesville, FL 32614-7030.

Name______________________________________________________

Email Address________________________________________________

Street______________________________________________________

City, State Zip________________________________________________

Indicate which session you will attend by placing a checkmark on the row.

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<td>Lake Alfred</td>
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<td>Immokalee</td>
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<tr>
<td>Thursday, November 9</td>
<td>Homestead</td>
<td></td>
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<tr>
<td>Tuesday, November 21</td>
<td>Ft. Pierce</td>
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