



Berry/Vegetable Times

March 2005



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Calendar of Events

March 8/April 12/May 10
Pesticide Testing, Hills. Co. Extension Office. Seffner. 9 am. 813-744-5519.

April 1 Gulf Coast Research and Education Center Balm Dedication. 10:30 -1. RSVP to 813-633-4112. CR672 east of Balm.

April 13 Value-Added Producer Grant Workshop, Hills. Co. Extension Office, Seffner. 1:00 pm. Register by calling Traci Buck at 813-744-5519, ext. 104.

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From Your Extension Agent....Alicia Whidden

2005 Bird Damage Survey

The last page of the newsletter is a survey about the bird damage this year in the strawberry fields. It is very important that everyone complete the survey and return it to me. To effectively combat this problem in the future, the industry needs to be able to show government officials the economic impact this is having on individual growers and the industry as a whole. A large number of completed surveys also shows that this is an industry-wide problem and not just the problem of a few growers.

If you have a crop other than strawberries, and robins or other birds such as cedar waxwings have caused damage please fill out the survey and tell me what crop is being affected and the type of bird. This information helps provide a case for all farmers to be able to protect their crop.

Botrytis Blossom Blight on Southern Highbush Blueberry

Alicia Whidden

This article is based on a paper by Dr. Philip Harmon which is available at EDIS <http://edis.ifas.ufl.edu/PP119>.

Botrytis is an important disease of many fruits and vegetables. It is caused by the

fungus, *Botrytis cinerea*, which usually causes infection through wounds or by living on dying plant tissue. In strawberries and blueberries it can cause infection in the flower when the petals do not drop away after the flower has been pollinated. Frost or freeze damage can cause wounds on tender growth or delay petal drop and this gives the fungus an entry point to cause infection. Since Botrytis can survive very well as a saprophyte, meaning it can live on dead tissue, spores of the fungus can be present at bloom time to infect flowers.



Corollas of southern highbush blueberry infected with Botrytis cinerea and exhibiting typical symptoms of Botrytis blossom blight. Disease has progressed into the peduncle of the center flower.

Long periods of high relative humidity favor fruit becoming infected and the disease spreading. Overhead irrigation for freeze protection during bloom can increase Botrytis blossom blight. This fungus grows in a wide range of temperatures- from 32° to over 70°. When leaves are wet for more than 24 hours the chance of botrytis is significantly increased. The rain we had the last weekend in February

(Continued on page 2)

and the first of March could cause increased Botrytis Blossom blight in blueberries this year.

Botrytis blossom blight can infect one fruit in a cluster and if conditions are right can produce enough spores to infect other berries in the cluster making the whole cluster of fruit unmarketable. Sometimes the pathogen can lie dormant and after harvest while in storage it can begin growing and cause postharvest rot.

Common name	Trade name	Activity	Relative efficacy ¹	
			prevent	control
fen-hexamid ²	Elevate 50 WDG	contact	***	**
cyprodinil ² fludioxonil	Switch 62.5 WG	local systemic	***	**
boscalid ² , pyraclostrobin ²	Pristine	local systemic	***	**
captan	Captan 50 WP	contact	**	*
pyraclostrobin ²	Cabrio EG	local systemic	*	*
iprodione ²	Rovral	local systemic	*	*

¹*** provides greatest efficacy under disease-favorable conditions
 ** good management tool under moderate to low disease pressure
 * provides some control, best used in rotation or tank mix with other chemistries
² Risk of resistance. Resistance management required for these fungicides.

The table above lists of fungicides labeled for blueberries. You will see they are the same chemicals used for strawberries so they are readily available in our area. Please read the complete label before using and follow the label for resistance management strategies. It

is **very important** to follow the label so these chemicals will continue to be of use in controlling disease for a long time. Relative efficacy data in the table were taken from results of trials not conducted in Florida. No endorsement or criticism of any product listed or omitted is intended or implied.



Gray sporulation of Botrytis cinerea is observed on corolla and calyx of southern highbush blueberry flowers after an extended period of high relative humidity. Corollas do not typically senesce and turn brown on the plant but are usually dropped after pollination while still white. Brown corollas that remain on the bush and gray sporulation are good diagnostic symptoms of Botrytis blossom blight.

Good and Bad Thrips in Strawberries

S.I. Rondon and J.F. Price

Florida possesses two types of thrips that are very important to successful strawberry production. One is a good thrips and the other is a bad thrips. This article discusses the two groups of thrips and makes comments on their impact.

The Bad Thrips. Even though it can be a downer to bring up the bad item first, management of this bad item has a bigger impact on our strawberry production than the good item, so the bad shall be first.

Frankliniella bispinosa (Morgan), the flower thrips (Fig. 1), is the principal thrips of concern to strawberry producers in Florida. It is a small, very slender insect, less than 1/16 inch long or about the size of the most recent splinter tweezered from your finger. Usually we find flower thrips on Plant City area strawberries when oaks and citrus begin to bloom in February and March.

Thrips perform poorly at flying because their fringed and feathery wings are better suited for carrying

(Continued on page 3)

them with wind currents. Adults are usually yellow but can vary from light yellow to dark brown. Nymphs are white or pale yellow (Fig. 2). Immature stages are wingless but they can move very quickly around the strawberry flower or small fruit.

Damage and Biology. Thrips injure the plant by rasping and sucking the exuding sap of the strawberry bud, flower and leaf tissues. Thrips feeding on strawberry blossoms can cause the stigmas and anthers to turn brown and wilt prematurely (Fig. 3). As fruits develop, thrips feeding may cause a russetting of the fruit around the cap, however, this injury is seldom economic. Thrips also can scratch tissues around the achenes of very small, developing fruit. That damage later can look like the bronzing also caused by adverse weather and other factors.

Thrips develop through several generations a year in Florida. The egg to adult development period is approximately 2 weeks at our warm late-winter temperatures.

Monitoring. To avoid losses to thrips, growers should start checking strawberry flowers for thrips when the first flowers begin to open. These insects are small and a 14X hand lens is helpful. To sample thrips, randomly collect flower blossoms and strike flowers onto white paper or “huff” air at your lips onto the flowers. Then quickly look into the flower with the lens to see the thrips running about.

Control. The insidious flower bug, *Orius insidiosus* (Figs. 4 and 5), is an important naturally occurring enemy of flower thrips and helps to keep thrips populations in check. But when flowering is in progress and thrips suddenly increase to about eight or more per flower, it is time to consider an insecticide treatment. Low impact insecticides such as Spintor® can control thrips and spare beneficial parasites and predators.

Good Thrips. The sixspotted thrips, *Scolothrips exmaculatus* (Pergande), is a predator. Its shape and



Figure 1. Flower thrips adult (*Frankliniella bispinosa*). Credit S.I. Rondon, UF



Fig. 2. Flower thrips nymphs. Credit M. Hodle, Univ. Calif.



Fig. 3. Thrips damage to strawberry. Credit S.I. Rondon, UF

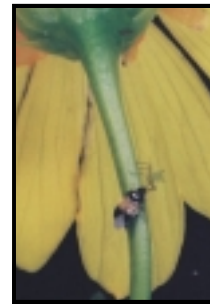


Fig. 4. Insidious flower bug adult (*Orius insidiosus*). Credit Entomos, Inc.

size

are similar



Fig. 5. Insidious flower bug nymph. Credit Entomos, Inc.



Fig. 6. Sixspotted thrips adult (*Scolothrips exmaculatus*). Credit J.K. Clark, Univ. Calif.

to the more common flower thrips and is usually tan, yellow or light brown. Most thrips at rest hold their wings extended straight down the top of their backs. Patterns in wings of resting sixspotted thrips form three pairs of dark spots along the distance of the wings, making the insect’s back appear as though it has six spots (Fig. 6).

We regularly see sixspotted thrips at work in Plant City area strawberries once spider mites appear. Sixspotted thrips routinely are major agents in cleaning up abandoned, spider mite-infested fields.

Biology. Sixspotted thrips eggs are laid in leaf tissue where they hatch in about 1 week. This species hunts for food, including small mites, their eggs, and small insects on strawberry leaf surfaces. Thrips nymphs (immatures) can eat about 100 spider mite eggs during

their development and an additional 60 spider mite eggs every day of their approximately month-long adult life. Broad spectrum insecticides such as Lannate® kill these beneficials and limit their usefulness to growers.

The management of the two groups of thrips is very important to successful strawberry growing. Weekly scouting with a 14X hand lens and informed choices of insecticides can help strawberry growers limit losses from the bad thrips and maximize benefits from the good thrips.

Strawberry Latent Ringspot Virus Found in North America

David Elstein

Strawberry latent ringspot virus, a problem for the past 30 to 40 years in Europe, has just been discovered in North America by Agricultural Research Service (ARS) scientists and cooperators. Scientists with ARS, Oregon State University, and Elmhirst Diagnostics and Research of British Columbia found the virus on 17 percent of the California strawberry samples and on four percent of British Columbia strawberries. The virus was also found in a variegated mint. The virus, which can dramatically decrease yields, is spread by nematodes, so the scientists were surprised to find the virus in California strawberries, as most are planted in pre-fumigated soil.

Plant pathologist Robert R. Martin of the ARS Horticultural Crops Research Unit in Corvallis, Ore., is leading the agency's efforts in studying and preventing the virus. The group discovered the virus by doing a broad-spectrum test to look for viruses that may be involved in strawberry decline and variegation of mint. They compared nucleic acid and protein sequences of the virus from strawberry and mint to those in databases. The scientists believe that the virus has been in this country for many years on an ornamental mint sold throughout the United States--popular because of its bright-yellow color--without anyone noticing. It turns out that the color partially comes from the ringspot virus.

Many of the chemicals that have been used to control this and other viruses transmitted by nematodes are being pulled from the market because of environmental concerns. Martin and ARS colleague Jack Pinkerton are studying alternative ways to control nematode-transmitted viruses, such as rotating a crop that is not a host for the virus so that the nematodes lose the virus and are no longer able to transmit it. While the virus has only been found on mint and strawberries in the United States, it can infect many broadleaf crops.



Left: Leaves and stems of a strawberry plant infected by five viruses including strawberry latent ringspot.

Right: A mint plant—sold widely as an ornamental—infected by the ringspot virus and two others.

UF Expected to Release New Strawberry Cultivar this Spring

Craig Chandler



The release of FL 97-39, tentatively named 'Winter Dawn', is expected by the University of Florida this spring. During the second half of February, this selection surged past other cultivars in total yield. The few growers trialing 'Winter Dawn' this season have been very pleased with its performance. It isn't going to be competitive with 'Festival', in terms of overall fruit quality, when berries are plentiful, but it can help growers increase their early season output. My recommendation is for growers to plant not more than 5 to 10% of their acreage in 'Winter Dawn' and to stop harvesting it by the end of February -- before we have much hot weather. This acreage can then be devoted to a double crop. Taking acreage out of production at the end of February will lower the amount of fruit on the market in March, which will hopefully help to extend the season.

'Winter Dawn' fruit are firmer and more resistant to abrasion than the fruit of 'Sweet Charlie', but they are not as firm as the fruit of 'Festival'. Also, this fruit is not as resistant to rain damage as the fruit of 'Festival'. On the positive side, 'Winter Dawn' is moderately resistant to Botrytis and anthracnose fruit rot. The recommended planting period for 'Winter Dawn' in west central Florida is September 25th to October 10th.

Highlights on Diagnostics and Late Season Disease Control

Natalia Peres and Jim Mertely

Strawberry diseases have been at very low levels this season. Amazingly, only one strawberry sample was received during the whole month of February at our Diagnostic Clinic. This sample had an abiotic problem, and wasn't even diseased. The dry weather from mid-January to February 24 may explain this low disease pressure.

Nearly two inches of rain fell from February 25 to 27, and with the weather remaining relatively cool, conditions have been ideal for the development of Botrytis fruit rot. Fields that were flowering during this period should have been protected by applications of fungicides with good activity against *Botrytis cinerea*, such as Pristine, Elevate, Switch, or Scala. In our experiments, Botrytis is controlled more effectively by early applications during peak bloom than by late applications during the main harvest period. Because Botrytis fruit rot is suppressed by hot weather, special applications of Botryticides are usually not needed after February. However, if the disease has caused losses in February, and the weather remains mild, alternating applications of a Botryticide and a protectant fungicide (captan or thiram) should be continued.

Very little anthracnose fruit rot, caused by the fungus *Colletotrichum acutatum*, has been observed this season. At this late date, it is unlikely that an epidemic will occur since the season is near the end and there is not enough time for the inoculum to build up. However, if symptoms are present, applications of a protectant fungicide such as captan, alone or tank mixed with Abound, Cabrio, or Switch should protect the crop until the end of the season.

Site Made Available for Strawberry Museum and Hall of Fame

On Tuesday, February 2, 2005 the Hillsborough Board of County Commissioners voted unanimously to transfer property to The Florida Strawberry Research and Education Foundation (FSREF) for the development of a Florida Strawberry Museum and Hall of Fame. The 21-acre parcel currently houses the Gulf Coast Research and Education Center at Dover. The University of Florida faculty at the Dover Center will be transferred to the newly constructed Gulf Coast Research Center in Balm.



Ribbon cutting for the Balm facility is slated for April 1, 2005 (no fooling). The strawberry community has long sought a means to display the unique archives of the century old Florida strawberry industry. The vacating of the Dover facility, itself rich in strawberry history, made the location for the Florida Strawberry Hall of Fame and Museum a natural. This is but the first step toward making the Florida Strawberry Hall of Fame and Museum a reality. FSREF is looking for artifacts and development resources within the community. If you have an interest in being a part of this endeavor, please contact the Florida Strawberry Growers Association at 813-752-6822.

The Florida Strawberry Growers Association and the Florida Strawberry Research and Education Foundation are non-profit organizations that serve the Florida strawberry industry as partners in research, promotion and member/community service.

Can't Live with 'em, Can't (Shouldn't) Shoot 'em.

John R. Duval

This has been a terrible season for avian pests. Robins arrived early and have severely worn out their welcome. The best we can hope for is warm weather to our north so that the little @#%\$^&#! will move on. Damage to the crop being grown at the GCREC-Dover has been monitored in our cultural management trials. During the first two weeks of the scourge, active efforts to deter the birds were performed. However, after February 10th minimal effort went in to scaring off the birds. The chart below shows how the damage has progressed in our field. Damage peaked on January 31st and again on Valentine's day then progressively decreased as birds have moved north (or have gotten full). The area of our field where this data was collected is near a heavy traffic area which probably lessened damage to those experimental plots. However, in more remote sections of our field, entire experiments were devastated.

Besides examining damage at our own field, we scouted four commercial fields. For each 10 acre block, data was collected from forty plants in a single row. Samples were taken between 100 and 500 feet of the tree line from a section that had not been harvested for at least 1 day. This was repeated 2-3 times across the fields. Robin control measures at these farms consisted of minimal efforts (reflective tape in field) to heavy use of shotgun shells and fireworks to scare the birds. We found an overall damage at 8.4%, with a range of 3.3% to 11.8%. What was surprising was that similar levels of control measures had very different

results. In addition, minimal efforts produced similar results to those obtained by farms using the heavy artillery. Damage seemed to be most heavy on farms that were situated in areas with the greatest acreage of berries, and where farms were more isolated, there was less damage.

This data, possibly combined with economic analysis, is a documented basis to request research funds and permits in the future for the control of robins.

contact Laura M. Miller at 813-744-5519 x 147 or Stephen Gran at 813-272-5506.

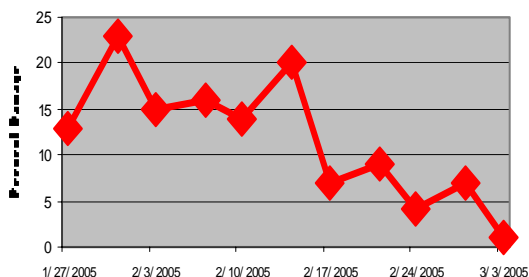
Date: Wednesday April 13, 2005

Time: 1:00 pm – 5:00 pm

Location: Hillsborough County

Cooperative Extension Service Office, Large Conference Room, 5339 County Road 579, Seffner

BIRD DAMAGE



Value-Added Producer Grant Workshop

Do you have an idea for a value-added agricultural product and need funding to get the project off the ground? The Hillsborough County Cooperative Extension Service, Hillsborough County Agriculture Industry Development Program, and the USDA are teaming up to provide a workshop on the USDA Value Added Producer Grant Program. For the past few years, the USDA has been awarding grants to farmers, cooperatives, producer groups, or producer-based business ventures for business planning activities, such as conducting a market analysis or developing a marketing plan, to establish a value-added marketing opportunity for an agricultural product, acquire capital to establish or improve a value-added agricultural enterprise, and capital for farm-based renewable energy. The maximum award per grant has been \$500,000 and matching funds are required.

This workshop will help participants learn more about value-added agriculture, opportunities that may exist locally, and how to apply for the USDA Value-Added Producer Grant. Some of the topics will include: a description of value-added agriculture, potential value-added strategies, and resources to assist value-added agriculture projects. This workshop is free but seating is limited. Please register by calling Traci Buck at 813 -744-5519 x 104. For more information

Asian Soybean Rust and Its Effect on Central Florida

Alicia Whidden

On March 1 it was announced that Asian Soybean Rust (ASR) was found near Dade City in Pasco County on kudzu. Even though we do not grow soybeans, ASR is still of great concern for us. This is the southern most finding of the disease and there are now 18 counties with confirmed rust. The problem for us in central Florida is that beans and peas are also hosts of ASR and we do grow those. Also we have several thousand acres of Iron Clay peas as a cover crop during the summer. On March 3 the first ever forecast of the potential of epidemic spread of this disease was made due to the Dade City find and the weather patterns. The North American Plant Disease Forecast Center issued a moderate threat outlook with a strongly moderate risk for susceptible plants in central and northern Florida except the panhandle.

Asian Soybean Rust is caused by *Phakopsora pachyrhizi*. It was first detected in 1902 in Japan and since then it has slowly moved around the world. It went from Asia to Africa and then to South America where it has been an important disease in soybeans in Brazil. It has been a disease of major concern to watch for in the US and last November it was found in Louisiana and within a few weeks it was found in 9 southern states. It is believed that Hurricane Ivan brought the disease to the US. Besides soybeans it has been found on over 90 other bean species and we have many of those in the state.

ASR can be difficult to identify in the early stages since it can look like other foliar diseases. Usually lesions are seen on the lower part of the plant canopy. At first the leaves will have a yellow mottled appearance but as the disease progresses the leaves turn yellow then brown or red pustules will appear usually on the bottom of the leaf. There will not be a yellow halo around the lesion like with bacterial diseases. The lesions can be on any above ground part but are usually

seen on the leaves first when scouting. The only way to be sure it is ASR is to do a molecular test called PCR which is done at a state testing lab. Since we have about 850 acres of peas and beans as well as all the acres of cover crop peas, it is important if you see any leaf problems to call me so a sample can be collected and testing done to correctly identify the problem. The only control measure in soybeans at this time is fungicides labeled for ASR.

Contact information: Alicia Whidden, Hillsborough County Extension Service, 813-744-5519, ext.134, ajwhidden@ifas.ufl.edu.



Examples of soybean rust on leaves and pods.

Name	Extension	Room #
Christine Cooley Office Assistant	3101	Lobby
Teresa Seijo Sr. Bio. Scientist, Plant Pathology	3137	153a
James Sumler, Jr. Bio. Scientist, Strawberry Breeding	3145	167a
Elizabeth Golden Bio. Scientist, Plant Physiology	3149	170a
Jose Moreno Farm Manager/Program Coordinator	3203	112
Field Crew Staff, OPS Lab Technicians, and graduate students may be reached by dialing '0' for the operator.		

GCREC Balm Update

As of April 1st, the faculty and staff of the Dover research center will begin research at the new Gulf Coast Research and Education Center Balm. The 450-acre center is already home to the former Bradenton faculty and staff, and the arrival of the Dover staff will bring the total number of researchers and support staff for the center to nearly 70.

The following is a listing of the new telephone numbers for the Dover faculty and staff for your use and information:

Main Phone Line **813-634-0000**
Fax Line **813-634-0001**
Suncom **514-6890**

The official address for the center is:
14625 C.R. 672, Wimauma, FL 33598

Name	Extension	Direct Line	Room #
Jack Rechcigl	3103	813-633-4111	103
Craig Chandler	3148	813-633-4136	169
John Duval	3150	813-633-4137	171
Natalia Peres	3141	813-633-4133	161
James Mertely	3136	813-633-4131	151



Front entrance of GCREC Balm.



Dr. Jay Scott's lab is up and running. Dr. Yuanfu Ji, shown here, assists with the tomato breeding program.



And, here's Dr. James Price hard at work in his new office.

Pesticide Registrations and Actions

- Three label revisions have been made on the Telone® products which currently have 24(c) registrations in the state of Florida (FL-990003, FL-990004, and FL-990005). In addition to the removal of the statement concerning no treatment within 100 feet of drinking wells (because this statement is already on the national label), the SLN labels now reflects that chisel injection is not the only means of application. Additionally, the statement regarding training has been modified to state that the material is available only to people who have a restricted use pesticide license. (FDACS letter of 12/22/04).
- The methyl bromide CEUs were signed in the final moments of 2004. In Florida for 2005, the fumigant may be used by growers of tomato, pepper (all varieties), strawberry, and eggplant, specified growers of flowers, trees, and turfgrass, as well as some golf courses. If you need methyl bromide, be prepared to deal with documentation and keep good records, as the penalties for misuse can be financially crippling. (FFVA Bulletin #68, 12/22/04).
- A recent *Plant Health Progress* bulletin reported widespread occurrence of strobilurin-resistant gummy stem blight in Georgia watermelon fields. Fields and transplant house were sampled in 2001 and 2002. Of the 272 isolates collected in 2001, 247 (91 percent) were resistant to azoxystrobin. In 2002, 82 percent of the isolates were resistant to azoxystrobin. Of the 40 isolates from watermelon transplants, 39 were positive for resistance. These results lead Georgia researchers to believe that resistant isolates in the field may have originated from seed or transplants and they are now advising their growers to avoid this class of fungicide (as well as strobilurins mixed with boscalid). (*Plant Health Progress*, 12/7/04).
- On January 6, the Florida Department of Agriculture and Consumer Services (FDACS) issued the Special Local Needs registration SLN FL-040011 to Bayer CropScience for a reduced plant back restriction (from four months to 30 days) with the use of Scala® (pyrimethanil) fungicide on “other crops” (crops not on the label). (FDACS PREC Agenda, 2/3/05).
- On January 6, the FDACS issued the Special Local Needs registration SLN FL-040012 to Nichino America, Inc., for use of Courier® (buprofezin) insecticide on field tomato to control whitefly nymphs. (FDACS PREC Agenda, 2/3/05).
- On January 6, the FDACS registered the fungicide Reason® (fenamidone) for use on potato, tomato, cucurbits, lettuce, and other crops to control diseases. Fenamidone is a respiratory inhibitor that has foliar protectant and curative activity against oomycete (downy mildew) and some ascomycete fungi, as well as *Alternaria*. The EPA registration number for the Bayer CropScience product is 264-695. (FDACS PREC Agenda, 2/3/05).
- On January 6, the FDACS registered the biofungicide Sonata® (*Bacillus pumilus* strain QSY 2808) for use on potato, tomato, strawberry, cucurbits, and many other crops to control diseases. The EPA registration number for the AgraQuest, Inc. product is 69592-13. (FDACS PREC Agenda, 2/3/05).
- Effective January 7, a quarantine exemption has been issued for the use of Stratego® (trifloxystrobin and propiconazole) on soybean to control soybean rust. The EPA registration number for the Bayer CropScience product is 264-779 and the expiration date is 12/1/2007. (FDACS letter of 1/19/05).
- Based on a request by Syngenta and IR-4, tolerances are approved for the insecticide thiamethoxam (Platinum®/Actara®). Tolerances of importance to Florida include blueberry, potato, strawberry, legume vegetable (group 6), and root vegetable (group 1B). (Federal Register, 1/5/05).
- In at least a temporary diversification away from genetically modified crops, Monsanto has agreed to pay about \$1 billion to acquire Seminis, the world’s largest producer of fruit and vegetable seeds. Executives were cited as saying that Monsanto would develop new vegetable varieties using conventional breeding, and that the fruit and vegetable seed business could grow without biotechnology, based on a consumer movement toward healthier diets. The new acquisition not only makes Monsanto the largest supplier of vegetable seeds in the world, but also, according to the company’s calculations, the largest seed and biotech company over all. It would surpass DuPont, which owns the corn seed giant Pioneer HiBred, in terms of revenues derived from seeds and biotech traits. Seminis, based in Oxnard, CA, had sales last year of \$526 million, with its leading products being tomato, cucumber, bean, and pepper seeds. Its main brands are Seminis, Asgrow, Petoseed and Royal Sluis and it sells mainly to farmers, not gardeners. But, with partners, it has recently started to develop some consumer items, like the Bambino miniature watermelon and Lettuce Jammers, lettuce in the shape of a taco shell. Its main rivals in fruit and vegetable seeds are Syngenta of Switzerland and Limagrain of France. Less than one percent of Seminis’s sales come from genetically modified seeds. (*New York Times*, 1/25/05).

2005 Strawberry Bird Damage Survey

Grower Name and/or Farm Name:

Number of acres?

Amount of bird damage:

Very Light_____ Light_____ Moderate_____ Severe_____ Very Severe_____

Did you see any preference by birds to a certain variety? Yes_____ No_____

If so, which varieties were most and least damaged?

How much have you spent on manpower for bird control?

How much have you spent on supplies?

How much income do you think you have lost due to bird damaged fruit?

Were there any methods you used that you felt worked better to keep the birds out?

Please return to Alicia Whidden, Hillsborough County Extension Service
5339 S. County Road 579, Seffner, Fl. 33584
Fax : 813-744-5776
E-mail: AJWhidden@ifas.ufl.edu