Upcoming Classes & CEU Workshops

- **Wednesday, September 24th** General Standards Training & Exam. **Location:** John D. Campbell Ag Center, Homestead. **Time:** 8:30-4. **CEUs:** 5.5 Gen Stds/Core.

- **Wednesday, October 15th** Right-of-Way Training & Exam. **Location:** John D. Campbell Ag Center, Homestead. **Time:** TBD. **CEUs:** TBD, Right-of-Way, Private Ag.

Registration & pre-payment are required for these classes/workshops. Please call Lize at (305) 248-3311 x242 for a form or visit our website at http://miami-dade.ifas.ufl.edu.

Vegetable Workshops Granting CEUs

- **Monday, September 15th** – Methyl Bromide Safety Training (English & Spanish) **Location:** John D. Campbell Ag Center, Homestead. **Time:** 10:00 – 10:50 a.m. – English; 11:00 – 11:50 – Spanish. **CEUs:** 1 Private Ag, Ag Row Crop, Ag Tree Crop, D & R = 1 total. **Note:** Thanks to Larry Caudle, this is your chance to do the yearly update for Methyl Bromide safety training for your farm.

- **Tuesday, September 16th** – 2003 Cerexagri Update. **Location:** John D. Campbell Ag Center, Homestead. **Time:** 6:00 p.m.; dinner sponsored by Cerexagri. **CEUs:** 0.5 Core + 0.5 Private Ag, Ag Row Crop, D & R = 1.0 total.

- **Thursday, September 25th** – 2003 Syngenta Update. **Location:** John D. Campbell Ag Center, Homestead. **Time:** 6:00 p.m.; dinner sponsored by Syngenta. **CEUs:** 1.0 Core + 1.0 Private Ag, Ag Row Crop, Ag Tree Crop, D & R = 2.0 total. **Note:** This meeting will start promptly at 12:10 so you’ll be able to get back to work at 1:00.

- **Tuesday, September 30th** – 2003 FMC & Gowan Updates. **Location:** John D. Campbell Ag Center, Homestead. **Time:** 12:00 noon; lunch sponsored by FMC & Gowan. **CEUs:** 1.0 Private Ag, Ag Row Crop, D & R = 1.0 total.

Renewing Your Subscription

Federal law requires us to update our mailing lists on a regular basis. If you would like to continue receiving this newsletter, please complete the enclosed form and return it to this office as soon as you can. Teresa and I will try to publish this newsletter on a more regular basis during this coming season. Thanks for your assistance in keeping our list up to date.

Prevent Vegetable Diseases with Good Cultural Practices

Often we rely on chemical methods to control vegetable diseases in the field. Many cultural steps can be practiced to reduce the incidence of diseases. These steps should be considered and utilized in combination.
with chemical controls. If you are diligent about practicing good cultural methods, reliance on chemicals may be reduced. Using the best cultural practices will promote healthy plant growth; thus, plants may overcome the threat of some diseases. The following methods are examples of general cultural practices that will aid in preventing vegetable diseases.

**Prevention of Foliar Diseases**
- Stake and prune plants to increase air movement and leaf drying
- To avoid spreading diseases manually, do not work in fields unless plants are dry
- Make sure to clean and disinfect stakes and stringing sticks before reuse
- Wider row spacing can sometimes be used to increase leaf drying and air movement, this can be especially helpful during the hurricane season when heavy rains are likely
- Use overhead irrigation early in the day so leaves dry quickly after irrigation
- Where possible, use drip irrigation to prevent excess leaf wetness and the spread of disease from water splash
- Where possible, use mulch to keep the soil from splashing up into plants

**Prevention of Root and Crown Rots**
- Use raised beds to improve water drainage in the root zone
- Use careful cultivation in planted crops to aerate the soil for healthy root growth
- Do not till fields when wet to prevent compaction
- Do not over irrigate fields, use soil moisture monitoring devices, like tensiometers, to apply correct amounts of water for crop needs
- Cultivate rows to the end of the field; if possible, contour fields ends for water runoff out of the field
- Increase organic matter levels in soil by intensive cover cropping, leaf application, or other methods

**Prevention of Viral Diseases**
- Practice good weed control since some weeds are hosts to plant diseases that are also diseases of vegetable crops
- Scout fields (or hire a professional scout) for insect vectors and use trapping methods like yellow sticky cards for aphids and whiteflies
- Reflective mulches can be used to repel some insect pests in the field
- When feasible, use floating row covers as a barrier to reduce insect vectors

**Prevention of Postharvest Diseases**
- Handle harvested produce gently to avoid cuts and bruises that act as entry points for bacteria and fungi
- If possible, use plastic containers rather than wooden ones that may contain wires, staples, or splinters that will injure the harvested crop
- Clean harvest containers to keep them free of plant debris and soil
- Use padded bulk bind and pad transfer points on packing/grading lines to reduce injury to produce
- When appropriate, cool the harvested product rapidly to slow the microbial activity that causes rot
- Use proper storage temperatures and humidity levels
- Frequently clean and disinfect trailers or containers that the produce is shipped in

**Other General Disease Prevention Methods**
- Incorporate residues from the previous crop or a cover crop into the soil to promote rapid breakdown of plant material
- Wash equipment and tractors frequently to reduce the spread of diseases from field to field
- Use recommended fertilizer rates to reduce plant stress and avoid excessive soft growth that is more susceptible to diseases
(M. Infante-Casella, Plant & Pest Advisory, 5/28/03, with adaptations by M. Lamberts; some information was derived from NRAES Pub. 104, Sustainable Veg. Prod. From Start-up to Market, by Vernon Grubinger)

**Pesticide Data Program Reports Virtually No Pesticide Exceedances for 2001**

The Pesticide Data Program (PDP) was initiated by USDA in May 1991 to collect data on pesticide residues in foods. These data are used by the EPA and USDA, as well as the private sector, to construct realistic pesticide dietary exposure assessments as part of the ongoing effort of the Food Quality Protection Act. In 2001, drinking water samples were also collected and analyzed. The foods sampled by the program tend to concentrate on those items typically consumed by infants and children. Samples are randomly collected close to the time and point of consumption. The monthly sampling rate is 62 samples per commodity, except for highly seasonal commodities. Of the 12,264 samples collected in 2001, 9,903 were fruit and vegetable commodities including canned sweet pea, canned sweet corn, tomato paste, fresh apple, banana, broccoli, carrot, celery, cherry, grape, green bean, lettuce, mushroom,
nectarine, orange, peach, pineapple, and potato. There were 689 rice samples analyzed, 911 beef samples, 464 poultry samples, and 297 drinking water samples. Approximately 82 percent of the samples were domestic and 17 percent were imported (mostly banana, pineapple, peach, grape, and green bean).

Approximately 64 percent of the fruit and vegetable samples (domestic and imported), 49 percent of the drinking water samples, and 19 percent of the beef tissue samples had detectable residues. Residues in beef were almost entirely from persistent chemicals which have been canceled for agricultural use for many years. There were no detectable residues in poultry samples.

Overall, approximately 44 percent of the food samples and 41 percent of the water samples contained no detectable residues. For food and water combined, twenty-four percent contained one residue and 32 percent contained more than one residue. No residues were found in processed peas and only two samples of canned corn contained residues (out of over 180 samples of both). Approximately 70 percent of tomato paste and rice samples contained no residues. For drinking water, none of the detections exceeded established EPA Maximum Contaminant Levels or Health Advisory levels. With regard to pesticide tolerances, PDP testing found residues exceeding an established tolerance in 0.1 percent (1 in 1,000) of the 12,264 samples analyzed (roughly 12 samples). Residues with no established tolerance were found in 1.8 percent of all samples, but were found in such minute quantities that exposure was probably due to spray drift or crop rotation. (PDP Annual Summary Calendar Year 2001 Report, USDA, 2/03, Chem. Speak, 4/03).

No Agreement on Biotech Food

An elaborate, secretive effort in Washington over the past two years to negotiate a truce between the agricultural biotechnology industry and its critics has ended in failure, with the parties unable to agree on a plan to strengthen biotech regulations in this country. The story says that the talks foundered in recent weeks amid a dispute over whether to seek legislation from Congress that would have given the Food and Drug Administration strong power to judge the safety of foods containing biotech ingredients. The Pew Initiative on Food and Biotechnology, a foundation-funded group in Washington that sponsored the attempt at compromise, is scheduled to issue a final report that describes the effort, but not the core dispute that killed it.

About 20 people and organizations took part in the initiative, ranging from Monsanto, which controls most of the world market for agricultural biotech products, to Washington consumer and public interest groups that have long complained of what they consider to be poor federal regulation of the industry. The failure to agree means, in the near term, that the groups won't be able to go to Capitol Hill or to regulatory agencies to present a united front in favor of tighter rules, as they had hoped to do. That will leave intact a status quo widely perceived as favoring the biotech industry. Longer term, the collapse of talks raises serious new issues for the American food industry, which has lately grown nervous about agricultural biotechnology. Food companies could respond to the breakdown by lobbying Congress for tighter regulations without Monsanto's consent, essentially trying to out-politic the biotech industry. And, absent a regulatory scheme that suits them, the food companies will have to decide whether to try to kill particular biotech crops, such as genetically altered wheat, that they fear could cost them sales in foreign markets resistant to the idea of genetic engineering. They might do that by refusing to buy biotech crops, something a few food companies have already done on a small scale.

The Pew Initiative spent some $2 million on the effort to reach compromise, sponsoring 60 meetings and conference calls of agricultural biotech "stakeholders," and commissioning reports, polls, and studies. It is by far the most elaborate attempt anyone has made at a master compromise on the issues around the genetic manipulation of plants and animals. Several participants in the discussions said they were deeply disappointed at the failure to reach a deal, but they also emphasized that they had accomplished some important goals nonetheless. Warring parties built new relationships with one another that may yet lead to compromise agreements on piecemeal issues, they said. And the group has agreed to reconvene in a year or 18 months to see if positions have shifted enough that a compromise might be possible then.

The Pew effort is a window into a central but little-known aspect of how Washington works. It is common for the factions in a dispute, often with prodding from Capitol Hill, to meet privately to see if they can reach a consensus. When they do, legislation will often sail through Congress as if by magic, with lawmakers relieved of the burden of having to mediate the conflict. When the parties can't agree, Congress is often paralyzed. Participants in the Pew discussion would not say publicly what issues foiled their attempt at compromise. But speaking on condition of anonymity, several people knowledgeable about the talks said the core issue was whether to go to Capitol Hill to get legislation to prohibit the introduction of new biotech foods without detailed FDA certification that they are safe. Additionally, actions such as these would not support the World Trade Organization case over biotech foods. (Washington Post, 5/30/03 via Agnet; Chem Speak, 6/03).
California Advocates Renew Fight To Limit Hand Weeding

Hand weeding would be banned if farm worker advocates are successful in their campaign to convince the California Division of Occupational Safety and Health that it’s so harmful to workers’ backs that it should be eliminated from most fields. California would be the first state in the nation to restrict the hand weeding of crops. Growers, including many organic farmers, argue there are no reasonable alternatives to hand weeding because long-handled tools are too imprecise and would damage the crop. They say hand weeding reduces the use of often-criticized herbicides. Vanessa Bogenholm, chairwoman of the board of California Certified Organic Farmers and owner of V.B. Farms in Watsonville, was quoted as saying, "This isn’t something we are doing to circumvent the law. It is something we have to do to harvest a marketable crop."

Hand weeding is widely used on several major crops, such as strawberry, lettuce, nursery plants, and broccoli. Nearly all the state’s 228,000 acres of lettuce, for example, are hand weeded at some point each growing season, as are the state’s 26,000 acres of strawberries. After failed attempts to persuade the legislature to restrict hand weeding in 1995 and 2002, farm worker advocates are pressing the safety board to impose stiff restrictions. Growers say they also fear that hand weeding restrictions are a Trojan horse for a ban on hand harvesting, which requires stooped labor similar to hand weeding. "One of the things that is really disturbing about this whole (proposed rule) is they are banning something that is essentially the same task as hand harvest," said one organic farmer. "If what you are really trying to do is say that this form of motion is damaging to the human body, it seems like a slippery slope." The Farm Bureau and others are pushing hard to prevent the loss of hand weeding as growers prepare for the end of the widely used fumigant methyl bromide, one of the most effective chemical tools against weeds in strawberry and lettuce. (Knight-Ridder Trib, 4/30/03, Chem Speak, 5/03).

Breaking the TYLCV Cycle -Lessons Learned

This season has been a prime example of what can happen when Tomato Yellow Leaf Curl Virus (TYLCV), (Fig. 1) infected tomato crops are not destroyed in a timely manner or crops are picked longer than normal. In the past, this issue has often focused on U-picks and/or poor end-of-season management, but these are not the only problems. Planted earlier and often picked later, grape tomatoes are essentially bridging the gap between the fall and spring crops in west central Florida. The little crop or host-free period we thought we had been reduced or essentially lost by overwintering crops and the lack of a good killing freeze. Some growers thought this winter’s temperatures were low enough to destroy the crop on their own but this was not always the case. These growers realized this when they started seeing regrowth in plants that were “frozen” but never herbicided or burned. This year, some "fall" grape tomatoes effectively served as a "winter nursery" for virus and silverleaf whitefly (SWF) (Fig. 2). The result was devastating for adjoining spring tomato fields, with virus percentages between 50 and almost 100% in some blocks! Unfortunately, the domino effect begins, 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 cherry and grape tomatoes where the harvest interval is shortened and thus the choice of chemicals may be fewer, at least consider applications of an oil. Especially, if virus is present 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. 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, at least choose materials in different chemical classes from Admire and Platinum to minimize resistance problems. 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 SWF. Remember in the past when spraying for SWF increased, problems with other pests sometimes increased and the pest spectrum changed as levels of beneficials and predators were reduced. One of the benefits of scouting is improvement in the timing of sprays and thus increased efficacy. Another benefit is being part of a network so that you know what’s going on in other parts of your production area. Additional information on breaking the cycle can be found in the 2002 Tomato Institute Proceedings available online at the SWFREC website at http://www.imok.ufl.edu/veghort/docs/tom_inst_2002_0912-02.pdf .(P. Gilreath, Vegetarian, 5-03)
Pesticides Registrations and Actions

T On March 18, the Florida Department of Agriculture and Consumer Services (FDACS) sent a letter to Syngenta Crop Protection to inform them that the Department had accepted the Section 24(c) application for the use of **Fulfill® ( pymetrozine)** insecticide (EPA Reg. # 100-912) for control of green peach aphid and potato aphid, and suppression of whitefly in **tomato grown for transplant.** The Special Local Needs (SLN) number is FL-030004. (FDACS letter of 3/18/03).

T On March 26, the FDACS sent a letter to American Vanguard Corp. (AMVAC) to inform them that the Department had accepted the Section 24(c) application for the use of **Ambush® (permethrin)** insecticide (EPA Reg. # 5481-502) on **watercress** to control diamondback moth larvae. The SLN number is FL-030005. (FDACS letter of 3/26/03).

T Based on work by IR-4, tolerances have been established for residues of the insecticide **methoxyfenozide (Intrepid®)** in or on **lettuce** 50 WP (dimethomorph) to control diseases in Florida. (CropLife Amer Spotlight, 3/14/03).

T On April 30, EPA announced the granting of tolerances for the insecticide **bifenthrin** in the **herb subgroup 19A** (0.05 ppm) and **tomato** (0.15 ppm). (Fed Reg, 4/30/03).

T On May 2, the FDACS registered the fungicide Acrobat 50 WP (dimethomorph) to control diseases in Florida **bulb vegetables, cucurbit vegetables, and lettuce.** The EPA registration number for the BASF product is 241-410. (FDACS PREC June Agenda).

T Based on work by IR-4, a tolerance has been established for residues of the insecticide **methoxyfenozide (Intrepid®)** in or on **cucurbit vegetables** (Group 9) at 0.3 ppm; **okra** at 2.0 ppm, **southern/blackeye pea** at 4.0 ppm; and **turnip greens** at 30 ppm. The regulation became effective May 30, 2003. (Fed Reg, 5/30/03).

T Based on work by IR-4, a tolerance has been established for residues of the insecticide **clothianidin (Poncho®)** in or on **field/sweet corn** (0.01/0.10/0.10 ppm). The regulation became effective May 30, 2003. (Fed. Reg., 5/30/03).

T On July 15, the FDACS issued a letter stating that the EPA had issued a specific exemption under the provisions of Section 18 of FIFRA, for the use of **Topsin® fungicide (thiophanate-methyl)** for control of white mold on **fruiting vegetables (tomato, pepper, and eggplant).** The exemption will expire on March 31, 2004. The products acceptable for use carry the EPA registration numbers 4581-408, 73545-8, or 4581-377. The material can only be applied by ground application at a rate of 0.7 lb ai/A (1 lb/A of product) and a maximum of four applications per crop may be made at 7 to 14 day intervals. The crop limit is 2.8 lb ai/A. The REI is 12 hours and PHI is 2 days. Up to 43,800 acres of tomato, 21,600 acres of pepper, and 1,600 acres of eggplant may be treated. (FDACS letter of 7/15/03).

T Based on issued Section 18’s, a tolerance has been established for residues of the fungicide **thiophanate-methyl (Topsin®)** in or on **fruitng vegetables - group 8** (0.5 ppm). The tolerance expires on 12/31/05. (Fed Reg, 7/23/03).

T Based on request by BASF Corporation, tolerances have been established for residues of the fungicide **boscalid** in or on **cucumber** (0.20 ppm), **mint** (30 ppm), **strawberry** (1.2 ppm), **brassica vegetables - subgroup 5A** (3.0 ppm), **brassica vegetable - subgroup 5B** (18 ppm), **bulb vegetables - group 3** (3.0 ppm), **cucurbits except cucumber** (1.6 ppm), **fruiting vegetables - group 8** (1.2 ppm), **legume vegetables - subgroups 6A/6B/6C** (1.6/0.6/2.5 ppm), **root vegetables - subgroup 1A** (0.7 ppm), and **tuberos and corn vegetables - subgroup 1C** (0.05 ppm). (Fed Reg, 7/30/03).

T Based on request by DuPont Crop Protection, tolerances have been established for residues of the fungicide **famoxadone** in or on **potato** (0.02 ppm), **tomato** (1.0 ppm), **fruitng vegetables except tomato** - **group 8** (4.0 ppm), and **cucurbit vegetables - group 9** (0.30 ppm). (Fed Reg, 7/2/03).
Based on request by IR-4, tolerances have been established for residues of the fungicide cymoxanil (Curzate®) in or on cucurbit vegetables - group 9 (0.05 ppm), and fruiting vegetables - group 8 (0.2 ppm). (Fed Reg, 7/16/03).

Based on request by Syngenta, tolerances have been established for residues of the insecticide/miticide emamectin benzoate (Denim®) in or on turnip greens (0.05 ppm), leafy brassica vegetables - group 5 (0.05 ppm), fruiting vegetable - group 8 (0.02 ppm), and leafy vegetable, except brassica - group 4 (0.1 ppm). (Fed Reg, 7/9/03).

Potential changes to the federal label for the insecticide Monitor® (methamidophos) have been approved to include a crop maximum of four (4) applications. The material will also begin a phaseout period of between two and four years if the decision is approved by the EPA's Office of Management and Budget. (FDACS email of 7/21/03).

The News in Brief

- The federal government has announced a website aimed at allowing greater public participation in the federal regulatory process by consolidating all government rules open for public comment into a single site. All such rules will be available for both review and comments. The e-rulemaking site can be found at: www.regulations.gov (from H. Jones, 4/2/03).

- The Florida House Commerce Committee unanimously approved the Florida Agricultural Worker Safety Act, and it now heads to the House Agricultural Committee for consideration. The act would require that employers provide written copies of agricultural pesticide information within two days of a request by a worker, his doctor, or a designated representative. The employer would have to detail the product name, EPA registration number, active ingredients, known acute and chronic health effects, as well as those recognized as aggravating existing conditions. The Florida Department of Agriculture and Consumer Services has requested and additional $1.43 million over the next three years to implement the standards and hire six more field inspectors. (Pest & Toxic Chem News, 4/21/03).

- A comparison of pesticide use during 1978 and 1998 for 15 vegetable crops grown in the State of New York found a 65 percent decrease in insecticide use, a 24 percent decline for herbicide use, but a sharply elevated (76 percent) use of fungicides. Declines in pesticide use generally were associated with substitution of low-use rate for high-use rate insecticides or herbicides. ("Pesticide Use Changes in New York Vegetables: 1978 to 1998," Jnl. of Extension, 41(2), 4/03 via IPM net).

- According to researchers at Ohio State University, consumers could not tell the difference between organically grown and conventionally grown strawberries. Researchers grew the berries under matted row conditions, and consumers were asked to judge the produce based on taste, looks, and smell. The judges were able to differentiate between varieties. (The Grower, May 2003).

- CropLife America and the European Crop Protection Association released results of a study which shows that the average discovery, development, and registration costs to bring a crop protection product to market have increased from $152 million in 1995 to $184 million in 2000, a cost eight times higher than 20 years ago. The consulting firm conducting the study attributed the increase primarily to the adoption of new technology, stricter regulatory standards instituted to ensure environmental and consumer protection, and a rise in the amount of data required by regulatory authorities. Also, the development period for a new product (from first synthesis to commercialization) has increased from 8.3 years in 1995 to 9.1 years in 2000 and the average number of molecules screened leading to the introduction of each new product increased from 52,500 to >139,000 for these same respective years. (CropLife America Spotlight, 5/16/03).