June 2002

Note: The information provided on products/pesticide use below, is from other states and thus the products may have no current Hawaii registration. Always read the label before making any product/pesticide applications. Due to environmental effects the effectiveness of particular products may also vary across locations.

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1.0. HOFA receives accreditation for organic farming certification in Hawaii

On April 29, 2002, The U.S. Department of Agriculture (USDA) announced the names of the first accredited agencies that will certify organic production and handling operations to comply with National Organic Program (NOP) standards. Hawaii Organic Farmers Association (HOFA) is pleased to announce that it received federal accreditation and may continue to offer quality organic certification services to Hawaii’s organic farmers, ranchers and processors of organic products.

The passage of the Federal Organic Rule in December 2000 provides uniform organic standards, which all organic producers must meet. Any product sold, represented, or labeled “Organic” must be produced in compliance with those standards and certified by a third-party certifying agency that has been accredited by the USDA. After October 22, 2002, the date the Federal Organic Rule takes full effect, if a product is sold or labeled as “Organic” and the seller must be able to provide documentation that the product was certified by a USDA accredited organic certifying agency or risk receiving a $10,000 fine per occurrence.

HOFA has complied with the requirements of the USDA’s accreditation program. Only 42 certifiers out of a total of 97 applicants were announced as accredited in this first round. This is GOOD NEWS for Hawaii’s organic industry since HOFA is the only Hawaii-based certifying agency to become accredited and can offer certification services at a lower cost than mainland based agencies.
Becoming federally accredited has other benefits for Hawaii’s organic producers. The USDA accreditation program has developed reciprocity with the European Union, Japan and other developed countries in the global marketplace. This means that HOFA-certified products will be accepted as “organic” in the primary markets of the world. Additionally, as a federally accredited nonprofit organic certifying agency, HOFA can assist its certified members in attracting federal funding to lower the cost of certification for producers and spur research in sustainable and organic agricultural methods.

This is an important step in promoting and expanding a strong organic agriculture sector in Hawaii. HOFA believes that increasing acreage in organic and sustainable agriculture and developing quality value added organic products would help to revitalize our rural economies and is in keeping with the state’s mission to develop environmentally friendly industries.

HOFA’s receipt of accreditation is also an important event for Hawaii’s consumers who need to know that a product labeled “organic” is indeed produced in compliance with acceptable standards. The federal organic standards exclude such practices as irradiation, use of genetically engineered crops, and the use of sewage sludge. Also, the standards require that the use of manure be regulated in compliance with human health standards; a stipulation not placed on conventional farms. Organic farms must allow at least a three-year transition period from the last use of synthetic fertilizers or pesticides prohibited under the federal organic standards.

HOFA is organized as a 501c6 organization and membership is open to anyone interested in supporting organic agriculture in Hawaii. Currently, 300 individuals and businesses are active members and there are 66 HOFA-certified producers in the state of Hawaii. If you are interested in more information about the organization, membership, or certification, please contact our office situated in Hilo. The office is open Tuesday, Thursday and Friday from 8:00 a.m. to 4:00 p.m. (HOFA, Press Release May 14, 2002).
2.0. The Farm Bill and Organic Farming

On May 13, 2002, after much debate, President Bush signed a farm bill, known as The Farm Security and Rural Investment Act of 2002. The bill, which has been highly criticized for placing the interests of corporate agriculture over interests of family farmers, nonetheless has some real wins for the organic agricultural community.

Significant gains won by the organic agricultural industry include $15 million for research in organic agriculture, $5 million in organic certification cost-share, exemptions from federal marketing orders for growers of 100% organic products, and other initiatives facilitating research and public reports of organic marketing and production.

Business is not as usual, says Bob Scowcroft, Executive Director of the Organic Farming Research Foundation. This initiative has created a framework for organic farmers to receive their fair share of America's agricultural research dollar.

The Organic Research Initiative will provide $15 million of mandatory funding to be spent at $3 million a year for 5 years. It expands the organic agriculture research and extension initiative to include on-farm research and development for working organic farms, determination of desirable traits for organic commodities, and identification of marketing and policy constraints on the expansion of organic agriculture. The $15 million dollars is truly unprecedented for organic agriculture but pales in comparison to the $180 billion total estimated cost of the farm bill.

The $15 million isn't nearly enough money, but then again, it is more than what we have ever had before, says Ron Rosmann, an Iowa farmer and president of OFRF's board of directors.

Perhaps the most noteworthy aspect of the organic research initiative is the report language of the bill which OFRF and its colleagues helped draft. The language makes two significant points: that Congress's intent is that this not be considered the only funding vehicle for organic research, and that it is their intent that
organic be considered a legitimate priority of all USDA REE programs.

Other important wins are the exemption of the 100% organic farmers from federal marketing orders, an issue that has long been contentious. The Organic Certification Cost Share establishes and provides $5 million in funding, starting in 2002 and available until expended, to assist producers and handlers of agricultural products in obtaining certification under the National Organic Program established under the Organic Foods Production Act of 1990. The bill language allows a maximum federal cost share of 75% of certification costs up to a maximum of $500.

Other programs which are not directly aimed at organic farmers but which could benefit them are the Conservation Security Program, which will give $2 billion in financial incentives for conservation and increased environmental stewardship on working lands. Another is Initiative for Future Agricultural and Food Systems (IFAFS), which will increase in funding from $120 million per year to $200 million by the last year of this farm bill totaling $1.3 billion in new mandatory funding.

The Farm Security and Rural Investment Act of 2002 is a six year bill that will spend more than $180 billion over the next decade. The funding includes an additional $82.5 billion over the previous farm program budget baseline. Conservation spending will get $17.1 billion over the next decade (an 80% increase), and $1.03 billion will go for rural development, including incentives to expand ethanol production, $1.1444 billion go to trade, $405 million for energy programs, and $1.3 billion in total for research. Payment limitations have been capped at $360,000.

For more information on OFRF's policy program contact: Brise Tencer, Policy Program Assistant, Organic Farming Research Foundation, PO Box 440, Santa Cruz, CA, 95060. Phone: (831) 426-6606, brise@ofrf.org, http://ofrf.org. Organic Farming Research Foundation P.O. Box 440, Santa Cruz, CA 95061 ph: (831) 426-6606 fax: (831) 426-6670 www.ofrf.org (OFRF, Press Release, May 17, 2002).
3.0. Flint Receives approval for Hawaii

Memorandum
Date: May 2, 2002
To: Hawaii Vegetable Growers
From: Ed Ishida - Bayer Corporation

Subject: FLINT 50% WG Registration in Hawaii

FLINT 50%WG Fungicide Receives Approval for use in Hawaii

Hawaii Department of Agricultural approved FLINT 50%WG Fungicide for use in Hawaii on April 25, 2002. FLINT 50%WG is a strobilurin fungicide providing a broad spectrum of disease control on a variety of crops. Diseases controlled with FLINT 50%WG include powdery mildew and downy mildew on the cucurbit crop group; powdery mildew, early blight, gray leaf spot, late blight, and anthracnose on the fruiting vegetables. Rates range from 1.5 to 4.0 ounces per acre depending on disease and disease levels. Best protection is achieved by applying FLINT 50%WG in a preventive spray program. Be sure to use through coverage to provide effective disease control. FLINT 50%WG belongs to the strobilurin class of chemistry and should to be used in a management strategy program. Strategies may include rotating and/or tank mixing with products having different modes of action or limiting the total number of applications per season. To insure crop safety, be sure to test all tank mixtures, including additives and other pesticides, before applying to the target crop. Test on a small area with Flint, as directed on the label, to confirm the safety to the specific variety or target crop. Use of adjuvant, such as non-ionic surfactants, crops oils, spreaders, stickers, etc., or organosilicate surfactants are not recommended at any time or crop injury may occur. FLINT 50%WG is packaged in 6 jars of 20 ounce containers per case.

Cucurbit Vegetables: Chayote, Chinese Waxgourd, Citron Melon, Cucumber, Gherkin, Edible Gourds, Momordica spp., Muskmelon, Pumpkin, Summer Squash, Winter Squash, Watermelon. Restrictions: Do not apply more than 8 oz per acre per season. Flint may be
applied up to the day of harvest (0-day preharvest interval). Do not exceed more than four total applications of Flint or other strobilurin fungicides per season. To protect product efficacy, do not apply more than one application of Flint or other strobilurin fungicides before alternating with a non-strobilurin fungicide. See Flint Label

Fruiting Vegetables: Eggplant, Groundcherry, Pepino, Peppers, Tomatillo, and Tomatoes. To protect product efficacy, do not apply more than three sequential applications of Flint or other strobilurin fungicides (Flint must be tank mixed and alternated with a protectant fungicide for the control of late blight.) See Flint Label Please be sure to contact your supplier for a Flint label, MSDS sheet, or updates.

For label and MSDS sheets, visit Bayer’s website at: http://uscrop.bayer.com/r_labels.html Always Read and Follow Label Instructions Before Use Page 1 of 1 20502 401 R1 Hawaii Flint Registration.doc Please feel free to contact me if you have any questions. Thank you, Ed.

BAYER CORPORATION  Crop Protection Products 1773 Powell Drive Ventura, CA 93004 Ofc: 805-647-6623  Fax: 805-647-2447  Mob: 805-701-4994  E-mail: edishida@pacbell.net (Ed Ishida - Bayer Corporation, e-mail, May 5, 2002).

Update: an educational meeting is being planned for Oahu to update growers about the Flint local registration. Keep your eyes open for a notice in the mail.

4.0. USDA-FSA Loss Adjuster Position Open in Hawaii

Farm Service Agency

News Release

May 8, 2002 Vacancy Announcement

Loss Adjuster
The USDA, Farm Service Agency is accepting applications for a Loss Adjuster position. A Loss Adjuster is an independent contractor who will visit farms for the purpose of inspecting, measuring, and appraising
agricultural crops, A Loss Adjuster will also ensure compliance with acreage and production reporting requirements. Training will be provided, Pay begins at $8.00 per hour for orientation, formal classroom, and on the job training. Pay will increase to $13.50 per hour after successful completion and certification.

Authorized travel expenses for training will be paid. Completed applications must be submitted by close of business May 24, 2002. Interested applicants may inquire with any of the Farm Service Agency Offices listed below:

Honolulu County FSA Office
99-193 Aiea Hts Dr, #114, Aiea, HI 96701
Phone: (808) 483-8600
Fax: (808) 483-8615

Kauai County FSA Office
4334 Rice St-, #103, Lihue, HI 96766
Phone: (808) 245-9014
Fax: (808) 246-4639

Hawaii State & Pacific Basin FSA Office
300 Ala Moana Blvd., 5-112, Honolulu, HI 96850
Phone: (808) 541-2600
Fax (808) 541-2648
Hawaii County FSA Office 154 Waianuenue Ave., #219, Hilo, HI 96720
Phone: (808) 933-8381 Fax: (808) 933-8345

Maui County FSA Office 210 Imi Kala St., #207, Wailuku, HI 96793 Phone: (808) 244-3 100 Fax: (808) 244-7005

USDA is an Equal Opportunity Employer

5.0. New Address for Kona UH-CES office

Please update your rolodexes/ PDAs. The new address for the Kona University of Hawaii Cooperative Extension Office is:

Kona Cooperative Extension Service
79-7381 Mamalahoa Hwy.
Kealakekua, Hawaii  96750
6.0. Oahu Corn Insect Survey

By Randy Hamasaki, UH-CES-Kaneohe, Oahu.

Editor's Note: The update below from UH County Extension Agent Randy Hamasaki brings a sight of relief to corn growers in the state. The survey found NO evidence of a new phytoplasma or spiroplasma disease on corn in Oahu, nor the presence of the corn leafhopper. The memo also illustrates the type of surveys conducted on a routine basis by CTAHR, the DOA, USDA, and other sister agencies, to monitor and detect the presence of new pests in Hawaii.

This is to report the results of the disease and insect surveys which were conducted on corn including seed corn fields, sweet corn plantings at farms, and a UH-CTAHR Research Station.

Background: In January 2002, Dr. John McHugh alerted us to a leafhopper in corn which resembled the aster leafhopper or corn leafhopper in appearance. In February 2002, I collected a sample from a sweet corn planting on Oahu and submitted that along with other samples for PCR analysis at our UH-CTAHR Virology Laboratory as part of our Aster Yellows survey. Interestingly, this single corn sample tested positive when subjected to PCR using a universal phytoplasma primer. This prompted Mr. Ron Heu (HDOA Survey Entomologist) and I to conduct a joint insect/disease survey in corn plantings on Oahu. Samples for PCR were submitted to the UH-CTAHR Virology Lab (Dr. John Hu/Dr. Wayne Borth). Insect samples were collected using a motorized vacuum.

Results: There was no evidence to show that there was a new phytoplasma or spiroplasma pathogen of corn in the samples tested. All samples tested negative for Aster Yellows, Corn Stunt, and Maize Bushy Stunt.

Mr. Bernarr Kumashiro, HDOA Insect Systematist, reported yesterday that the leafhopper which resembled the corn leafhopper in appearance has been identified as Ollarianus strictus. This determination was made by Ray Gill, California Department of Food and Agriculture. Ollarianus strictus is a new state record.
It is good news that there was no evidence to indicate the occurrence of a corn phytoplasma/spiroplasma disease on Oahu. Also, there was no evidence to show that the corn leafhopper is present on Oahu.

7.0. Efficacy of Snail and Slug products

EFFICACY OF NEW SNAIL AND SLUG PRODUCTS  Pesticides are referred to by Brand Name (common chemical name, Manufacturer name).

Molluscicides tested against the two-striped slug, Veronicella cubensis, included Mesurol Pro 2% bait (methiocarb, Gowan); Sluggo Bait 1% (iron phosphate, Monterey); and Deadline MPs (minipellets) 4% (metaldehyde, Pace). Tests were conducted at the University of Hawaii at Manoa, Waiakea Research Station, using standard 12" x 12" x 3.5" wooden test cages with plexiglass covers. Each cage contained a layer of 1:1 cinder and peat moss mixture and 10 slugs. All three products were applied at the rate of 1 lb per 1000 sq ft (per label recommendation). Eight days after treatment, Deadline MPs was the most effective with 75% mortality, followed by Sluggo and Mesurol Pro with 49% and 36% mortality, respectively. Mesurol Pro is a restricted use pesticide. (Ed Mersino, ed., Univ. Hawaii, Cooperative Extension Service Oahu County, Ka Lono Pua "The Flower News", Vol. IX No. 2 May 2002)

8.0. Hot Water Kills Caribbean Tree Frogs

Caribbean tree frogs were first noted in Hawaii as early as 1988 and are now firmly established on the Big Island and Maui. One species, the coqui frog, has an extremely loud call that is a noise nuisance at night. In collaboration with the University of Hawaii at Hilo, and Hawaii Dept. of Land and Natural Resources, Division of Forestry and Wildlife, a hot water drench treatment has been developed to disinfest forest seedlings prior to planting. Hot water drench at 113o F (45o C) for 3 minutes killed frogs placed in media of seedlings. The Division of Forestry & Wildlife has designed and built a hot water drench system to mass treat seedlings prior to

9.0. Vinegar as organic herbicide?

Some home gardeners already use vinegar as a herbicide, and some garden stores sell vinegar pesticides. But no one has tested it scientifically until now.

Agricultural Research Service scientists offer the first scientific evidence that it may be a potent weedkiller that is inexpensive and environmentally safe--perfect for organic farmers.

ARS researchers Jay Radhakrishnan, John R. Teasdale and Ben Coffman in Beltsville, Md., tested vinegar on major weeds--common lamb's-quarters, giant foxtail, velvetleaf, smooth pigweed and Canada thistle--in greenhouse and field studies.

They hand-sprayed the weeds with various solutions of vinegar, uniformly coating the leaves. The researchers found that 5- and 10-percent concentrations killed the weeds during their first two weeks of life. Older plants required higher concentrations of vinegar to kill them. At the higher concentrations, vinegar had an 85- to 100-percent kill rate at all growth stages. A bottle of household vinegar is about a 5-percent concentration.

Canada thistle, one of the most tenacious weeds in the world, proved the most susceptible; the 5-percent concentration had a 100-percent kill rate of the perennial's top growth. The 20-percent concentration can do this in about 2 hours.

Spot spraying of cornfields with 20 percent vinegar killed 80 to 100 percent of weeds without harming the corn, but the scientists stress the need for more research. If the vinegar were sprayed over an entire field, it would cost about $65 per acre. If applied to local weed infestations only, such as may occur in the crop row after cultivation, it may only cost about $20 to $30.
The researchers use only vinegar made from fruits or grains, to conform to organic farming standards. (ARS News Service Agricultural Research Service, USDA, Don Comis, (301) 504-1625, comis@ars.usda.gov, May 15, 2002, ARS is the U.S. Department of Agriculture's chief scientific research agency)

10.0. Thrips Palmi (Florida)

Scouts in Palm Beach report that there has been a dramatic increase in populations of flower thrips along with some T. palmi in pepper blooms in various locations. One remarked, “They’re starting to go crazy!” Overall reports indicate that flower thrips have increased to moderate and high levels in pepper in many locations with some fruit damage. Respondents report an increase in populations of immatures and in egg laying on very small fruit where blooms have just fallen off. Growers are seeing some dimpling and minor scarring on young fruit.

An increase in T. palmi numbers has also been noted in pepper with some foliar distortion evident but no fruit damage seen yet. SpinTor for worm control has also provided thrips control.

Reports from Homestead indicate that Thrips palmi remain at damaging levels in several crops, especially beans, pepper, and eggplant.

Growers and scouts in southwest Florida report that thrips activity has been on the rise, especially in the past two or three days. Several farms have very high numbers of flower thrips blowing around and have reported counts 5 - 10 per bloom in both pepper and tomato. There have been few reports of crop damage so far but high numbers can cause bloom drop.

Around southwest Florida flower thrips are active. Scouts indicate that thrips are flying around and at times numbers have been very high, over 10 per bloom on some days. It should also be noted that good numbers of minute pirate bugs are also around. These valuable predators can provide significant levels of control.
when present and growers are advised to use caution when selecting and applying pesticides to preserve their numbers. **Thrips inflict damage on vegetable crops when feeding and laying eggs.** Damage from egg-laying is most common in species that infest blooms such as Florida flower thrips *Frankliniella bispinosa.* When the eggs are inserted into the pistil walls, scars develop when the fruit expands. In some fruiting vegetables dimple scars develop when the fruit are fully matured. In tomatoes, such scars may result in uneven color development at maturity. **Feeding injuries occur on both fruit and foliage.** Thrips infesting blooms typically lay their eggs in the pistil or other flower parts. By the time the larvae hatch, the petals and anther have often dried and fallen. Larvae in such circumstances seek shelter under the fruit's calyx. Several generations of thrips can feed and develop under the calyx of pepper fruit, damaging immature tissues that develop corky or leathery blemishes with maturity. **Melon thrips tend to utilize more of the host plant than other species that occur primarily in the blooms.** In peppers and eggplants, *Thrips palmi* affects both fruit and foliage. The greatest damage occurs when thrips become established in the blooms, and lay eggs around the calyx. Thrips feeding under the calyx of the expanding fruit cause the characteristic scars, which may affect a sizable part of the fruit wall. **In crops, such as snap beans and most of the vine crops, feeding on the foliage causes damage.** Foliar feeding often begins inside the tightly rolled leaves at the growing points of the plant. Larvae and adults soon appear on the undersides of the expanding leaves. The combined effect of feeding damage in the growing point and on young leaves can severely stunt and distort sensitive crops, such as peppers. (Gene McAvoy, Univ. Florida, SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE, April 1, 2002)

**11.0. Pepper weevil (Florida)**

Small numbers of pepper weevils are being found in several different east coast locations now. **Growers are treating pepper where populations have built up.** Some reports indicate several consecutive applications of Vydate may be needed to provide control; one or two applications may not do the
job. One grower reports good control following two applications of Actara at the 4-oz./A rate seven days apart on a moderate infestation of pepper weevils where young fruit were falling off the plants.

Around southwest Florida pepper weevils have been on the increase, with significant increases being noted on several farms in the past week or so. Adult weevils have been very active over the past few days. Scouts indicate that numbers have increased to a "normal springtime level" of weevils.

The adult pepper weevil, Anthonomus eugenii, is a small (1/6 inch) black or grey beetle with a long snout (proboscis) and elbowed antennae. Adults use the mandibles at the end of the proboscis to feed on leaf or flower buds. Females also use the mandibles to bore a small hole in developing fruit or flower buds. The hole is plugged with fecal matter (frass) after an egg is deposited. A tiny legless grub hatches from the egg and eats its way toward the seed core of the fruit where it feeds on seeds and pulp, passing through larval growth stages or instars. Damaged fruit become contaminated by insect parts, frass and rotted tissue, and will eventually fall from the plant. Pupation takes place inside the fruit within a small cell created by larval feeding. The emerging adult may feed within the fruit for awhile before escaping through a circular hole chewed in the wall of the fruit.

Black nightshade may serve as a secondary host to maintain small numbers of pepper weevil during fallow periods. Since development times decrease as temperature increases and since adults will migrate readily from old fields to new plantings, populations generally build up during the season so that populations are greatest in later spring plantings.

Since adults tend to move to lower, more protected and less visible plant parts as temperatures increase, scouting efforts should concentrate on a search for adults in leaf whorls, flowers and fruit during morning hours. Commercially available pheromone traps may also aid in early
detection. Fruit and flower buds should be examined for damage and fallen fruit and buds examined for presence of larvae. Infested fruits can be recognized before they fall by the yellow calyx the presence of oviposition punctures that look like small dimples. Hot peppers like Jalapeno and Serrano’s are often the first peppers to be affected. Fruit and flower buds should be examined for damage and fallen fruit and buds examined for presence of larvae. If possible, all damaged and fallen fruit should be removed and destroyed.

**Chemical control is difficult because all stages but the adult are protected within the fruit, so that only the adult weevil is vulnerable to insecticides.** Frequent sprays may be necessary starting in the initial stages of infestation in order to avoid unacceptable levels of damage.

**Spraying needs to commence at the first sign of weevils or with flowering in fields with a history of problems.** Until recently Vydate has been the standard control and has given pretty good results even at 2 pts/acre when sprayed weekly in Dr. Phil Stansly’s trials at the Southwest Florida Research and Education Center. A total of 24 pts can be applied for the season.

Many growers have indicated disappointing results in obtaining satisfactory control with Vydate in the field. Some growers have terminated older plantings where weevils had become unmanageable. A number of growers have indicated obtaining good results in controlling weevils with either Capture - bifenithrin or cryolite. Actara – thiomethoxam, which was labeled this year, has demonstrated superior efficacy in trials conducted by Phil Stansly. Unfortunately applications are limited to two per season and growers are still trying to work out the timing of applications to achieve the best results.

Other materials that have been used with some success by growers include Neemix and fish oil both of which seem to be most effective when used preventatively before weevils become established. Some growers who have applied Admire – imidicloprid on pepper indicate that there may be some activity on weevils and report that Admire has delayed infestations and possibly reduced the overall level of pepper weevil infestation.
Many of the currently labeled materials are difficult to work into an IPM program once plantings begin to be harvested due to the 7 day PHI in force for all of them. This is particularly true for hot peppers which are often harvested multiple times during the course of a week.

In addition to chemical controls, a complete IPM approach is recommended for pepper weevil management. **Adjacent or nearby sequential plantings should be avoided.** Sanitation is important. Crops should be deep-plowed immediately following harvest and after treating with insecticide to reduce adult movement into nearby fields and to reduce survival over the summer. Nightshade in and around fields should be controlled to reduce population survival between crops. (Gene McAvoy, Univ. Florida, SOUTH FLORIDA VEGETABLE PEST AND DISEASE HOTLINE, April 1, 2002)

### 12.0. Fulfill insecticide label update (Ohio)

**Insecticide Update (C. Welty)**

The label for Fulfill insecticide has been expanded to include cole crops, greens, and leafy vegetables, all with a 7-day pre-harvest interval. Fulfill had been previously registered for use on potatoes, fruiting vegetables (tomatoes, peppers, etc.), and cucurbits. It controls aphids and whiteflies at 2.75 oz/A. It is not a restricted use product. The re-entry interval is 12 hours. Fulfill contains the active ingredient pymetrozine, formulated as a 50% water dispersible granule. It is made by Syngenta. (Robert Precheur, ed, Ohio State University Extension Vegetable Crops, VegNet, Vol. 9, No. 4. April 11, 2002)

### 13.0. TRANSPLANTING VS DIRECT SEEDING PUMPKINS

(summary of articles by Stephen Reiners, Ted Blomgren and Chuck Bornt; Cornell University.)
It costs more to transplant pumpkins, and rooting depth will be shallower than with direct-seeded plants, but there are several advantages. Spotty emergence is eliminated and a more uniform stand can be established. More importantly, yields may be increased. A trial at 2 sites in NY using Magic Lantern® compared direct seeding to transplants started in 24-cell or 38-cell flats. Transplants were started 3 to 4 weeks early, then set out on the same day as direct seeding was done (June 14 upstate, June 25 on Long Island). Single plants were spaced 4 feet apart in rows on 6 foot centers. Transplants flowered, set fruit, and were harvested earlier. Transplanting increased yield (by 1 to 2 tons/acre), resulted in more fruit per acre and larger average fruit size. The larger transplant size was not significantly better than the smaller size.

Another trial in the Hudson Valley of NY compared 'Howden' transplants grown in 48-cell or 72-cell plug trays to direct seeding. Transplants were set out at 18 days old, and direct seeding was done at that time. Three different planting dates were compared: June 5, June 15 or June 15. Transplants were set with a water wheel transplanter. Raised beds, black plastic and drip irrigation were used. Single plants were spaced 3 feet apart in rows on 6 foot centers. Transplanting was far superior to direct seeding with respect to both number and weight of fruit with the first two planting dates. Marketable yields were increased by about 70%, but on the latest planting date there was no difference among the planting methods and yields were poor in all the treatments. Plug size did not matter with the earliest planting date, but on the second planting date the larger plug size produced slightly better yields, probably due to less transplanting stress and faster growth. (Vern Grubinger, ed. VERMONT VEGETABLE AND BERRY NEWS, April 1, 2002)

14.0. Japanese millet cover crop for control of rhizoctonia in potatoes

JAPANESE MILLET FOR SUPPRESSION OF RHIZOC ON SPUDS
At the recent potato school in W. Lebanon, Dr. Steve Johnson of UMaine recommended the use of Japanese millet as a cover crop prior to planting potatoes in order to suppress Rhizoctonia (known as black scurf - or those spots that won't wash off'). This crop releases cyanide-type compounds that are disease suppressive, and Dr. Johnson has conducted field trials and replicated research showing that Rhizoctonia is significantly suppressed in the year following Japanese millet. In northern Maine Japanese millet is planted the third week of June and then fall plowed prior to potatoes. We can probably plant a little earlier in most Vermont locations, but it is critical to wait until all risk of frost has past. It may be possible to delay planting until July if there sufficient moisture to get the crops to grow, and still get the disease suppression effect, but waiting too long will reduce biomass production and root growth and may reduce disease suppression. The growth of this crop will also be significantly suppressed by drought or lack of nutrients. Irrigation and/or a light application of nitrogen may be advisable to get optimal growth. A seeding rates of about 30 pounds acres is sufficient if grain drilled, use slightly higher rates if broadcast or if fields have a lot of weed pressure. The crop can be allowed to frost kill and remain in place over winter, or it can be turned under. Disease suppression has been observed in the field with either fall or spring plowing. (Vern Grubinger, ed. VERMONT VEGETABLE AND BERRY NEWS, April 1, 2002)

15.0. RED STEELE RESISTANT STRAWBERRIES (Vermont)

To avoid the destructive root disease called red steele, avoid planting in wet fields and select resistant varieties. According to the NY Berry News, resistant varieties in the northeast are: Allstar, Annapolis, Cavendish, DelMarvel, Earliglow, Idea, Guardian, Lateglow, Midway, Mohawk, Northeaster, Primetime, Redchief, Scott, Sunrise, Tribute, Tristar, and Winoma. (Vern Grubinger, ed., University of Vermont Extension, VERMONT VEGETABLE AND BERRY NEWS, April 15, 2002)
16.0. RESISTANCE MANAGEMENT ESSENTIAL WITH STROBILURIN FUNGICIDES (New York)

(adapted from an article by Meg McGrath, Cornell)

Strobilurin fungicides can be a valuable tool for managing diseases. They are effective against many plant pathogens, and they can move through treated leaves to provide control on both leaf surfaces. They have been designated 'reduced risk' pesticides by EPA. Azoxystrobin, formulated as Quadris and Abound, was the first fungicide in this group to be registered. Trifloxystrobin, formulated as Flint, Stratego, and Compass, was the next. Pyraclostrobin, formulated as Cabrio EG and Headline, is expected to be registered soon. Quadris is now registered for use on almost all vegetable crops against a wide variety of diseases. However, resistance risk with strobilurins has proved to be higher than expected and more difficult to predict. For example, resistant strains of the cucurbit powdery mildew fungus were found in 1999 after just two years of commercial use. To manage resistance to strobilurins, limit their use and use them as a component of an integrated program with other fungicides and non-chemical management practices, such as resistant varieties and rotation. This is the standard approach for managing fungicide resistance.

The goal is not to manage resistance once it has developed, but rather to prevent or delay development of resistance. Apply strobilurins in alternation with other systemic fungicides registered for the target disease that have a different mode of action. Do not alternate among strobilurins because they all have the same mode of action. The fungicide program should also include fungicides with a low risk of resistance, such as chlorothalonil and copper hydroxide. No more than a third to half of the applications in a season should include strobilurins. Since they have outstanding ability to inhibit spore germination, strobilurins should be most useful early in disease development. Use a disease threshold or a disease forecasting system such as TOM-CAST, when available for the target disease, so that the first application is made at the most critical time. Consider using contact fungicides alone at the end of the season.
17.0. Mites control in Strawberry (No. Carolina)

Mite problems: We seem to be having unusual difficulty in controlling two-spotted spider mites in a number of areas and states this week. This evening I was able to speak with Dr. Donn Johnson, Extension Entomologist, Univ. Arkansas (6:15 pm) and Clyde Gorsuch, Entomology Dept. Clemson, also sent some very helpful information.

Here are the several concerns of growers and agents today: -1. Agri-Mek is being applied, but doesn't appear to be having much effect - 2. We've been using Brigade, but now it doesn't seem to be working either -3. What do we do?

Response of Donn Johnson: -1. Agri-Mek takes about one full week to take effect. It is also a product that needs to go on early in the season, and has its greatest activity in newest leaves. It is somewhat systemic and is a trans-laminar. It was Dr. Johnson's view that the main problem may be related to the grower's desire for a rapid knockdown, but Agri-mek may take up to one week to really take effect and is a good pre-harvest material. This is why Dr. Johnson is inclined to recommend an alternative (no. 3) that may have more immediate effect at this later stage in the season (harvest). -2. Most miticides are effective for 2 applications/season, but then lose effectiveness on the third and fourth applications (resistance builds). This may be happening in some instances where growers have used more than 2 applications of Brigade this season. -3. What to do? It was Dr. Johnson's view that growers should consider the use of hexakis (Vendex) 50 W. Many growers have stopped using Vendex in favor of newer miticides (e.g. Brigade), but a resistance management strategy calls for alternating materials, and this may be a very opportune time to use Vendex. In a handout from the North American Strawberry Growers Assn. Program Feb 4-6, 2002, it
is worth noting that Vendex is rated Excellent as a two-spotted mite management tool. The NC Ag Chem Manual (2002) indicates that the amount of formulation to apply per acre is 1 lb (1/2 lb active ingredient). The minimum interval between last application and harvest is 1 day (p. 301).

Other comments on Vendex: this product controls about 70% of the mites in the first application. This means that a follow-up application of Vendex is needed (about 10-14 days). Dr Johnson also suggested five days after the application of Vendex, the possible application of hexythiazox (Savey) 50 W. Savey is an ovicide. Savey is applied at 6 oz formulation per acre per year (this is also the total allowed per acre per year). The minimum interval between last application and harvest is 3 days (this could represent a serious problem for growers in full harvest). (Dr. Barclay Poling, Strawberry Extension Specialist, Strawberry Plasticulture Short Note on Mites - April 23, 2002 (7:30 pm- Tue), Vol. 3. No. 38).

18.0. Mo' Mites on strawberries (No. Carolina)

Further updates to strawberry plasticulture growers/agents on Thur. Apr. 25: Mite control (Notes 2, and 3)

Note 2: Here is the second note on mites from Powell Smith: Barclay, I don’t want to promote this as a cure all. It has provided what appear to be good results under limited trials and field applications. The growers should not overdo it, as I have seen some evidence of phytotoxicity. Especially if mixed with captan or God forbid ...sulfur. The labelled rate is 0.33% which is equivalent to about 1 1/2 qts per 100 gallons. DyneNamic is made by Helena. Phase is an equivalent product from UAP. Both are mixtures of methylated seed oil + Silwet L77 (an organosilicone wetting agent of the trisiloxane type). They are super wetting agents that almost totally destroy the surface tension of the spray solution actually allowing the material to enter the tiny breathing pores on the sides of the mites. The citation for the original research work is: Cowles, R.S, E. A. Cowles, A. M. McDermott, and D. Ramoutar. 2000. "Inert" Formulation Ingredients with Activity: Toxicity of Trisiloxane Surfactant Solutions to Twospotted Spider Mites (Acari: Tetranychidae), J.
Our topics for next years' strawberry meetings should be the "Four things that will put you out of the strawberry business...mites, anthracnose, gray mold, and NOT SCOUTING!!" Strawberry production is a proactive business...not a reactive one. Let me know if I can be of more help. I just talked to Howard McAdams near Greensboro.

Powell
Here is what Powell sent yesterday (Apr 24): I have had several growers from the Savannah River through the Sand Hills down into Orangeburg and Colleton counties with mite problems. I have reservations about the use of Brigade due its toxicity to beneficials including honeybees. In the cases that I have investigated, the mite populations had been allowed to get 'out of hand' prior to application and substandard application techniques and equipment had been used. Mike Keisler had used several applications of Brigade with reoccurrence of mites each time. This was with 60+ gals per acre coverage rate and around 150 psi. Early in the picking season, we switched to Agrimek with Dyne-Namic (a novel spreading agent) at 0.33% (per label) and got complete control. This was my experience in trials last year. The Dyne-Namic was written up in Jour. of Econ. Entomol. recently as having physical activity against mites. Good scouting, action at low levels of mites, and though coverage (especially the lower leaves) is the key. Remind the growers about Jim Price's observation about the build up of non-hatching eggs when Savey is used. Caution: growers to not use the Dyne-Namic only (as) their miticide (preferably with Agrimek). There may be phytotoxicity problems if used with Captan. I haven't investigated the full range of tank mixes and effects.

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Note 3. Dr. Sterling Southern, Extension Leader, Dept. Entomology, NC State, comments on Acramite

Re: Acramite-50WS a new product from Uniroyal Chemical (Crompton) and has had outstanding control for Weldon & Melissa Boerger, Texas, who said, "We used 1 lb. of Acramite in 100 gallons
of water per acre, along with an organosilicone adjuvant (Silkin) with 180 psi. Within 30 hours we saw complete knockdown and 7 days later can find no live mites. " (Note No. 1, Apr. 25, 2002)

Comments from Dr. Southern (just in): I just checked with NCDA and it has been licensed for sale in NC. Actually this is the material I mentioned a day or so ago that Christine Casey told me was very good on mites in greenhouses. Until now, I had not found a product with this active ingredient (bifenazate) that was labeled on strawberry. The federal label says that it comes in 0.5 lb. water soluble packages with a use rate of 0.75 - 1.0 lb/acre. On strawberry, the preharvest interval is 1 day and the re-entry interval is 12 hours. The label also specifies a minimum spray volume of 100 gal/acre. The label claims ovicidal activity against spider mites (as well as activity against other stages). The material is narrow spectrum and claims to be easy on beneficial insects and mites. Finally, the label states that an adjuvant may be helpful with hard-to-wet plants and specifically mentions Sylgard 309 and Kinetic. I don't know if there has been any testing on strawberry under N.C. conditions. (Barclay Poling, Small Fruit Specialist, North Carolina State Univ., e-mail, April 25, 2002).

19.0. Sandea herbicide Sec. 24C on cucurbits (Ohio)

SANDEA - Last week (VegNet Vol. 9, No. 4, April 11, 2002) you learned about the Section 24C label for Sandea use on a variety of cucurbit crops. The current label (available on the Internet at http://www.oardc.ohio-state.edu/weedworkshop/) provides for application of Sandea to cucumbers, winter squash, pumpkins, cantaloupes, honeydew melons and crenshaw melons. Other crops may be added in future years. Sandea may be applied pre-emergence (PRE) or post-emergence (POST). PRE treatments control fewer weed species than do POST treatments; however, common lambsquarters and purslane are controlled with PRE treatments but not with POST. PRE and POST treatments of Sandea will control pigweeds, but nutsedge control is best with POST treatments. POST treatments always require inclusion of a nonionic surfactant at 0.25% V/V - 1 Qt/100 Gal). Because 2 applications can be made per growing season, a strategy of interest to many growers might be
to use a PRE application to control lambsquarters and purslane followed by a POST application to improve control of nutsedge and late emerging pigweeds. Sandea works slowly. It may take 1 to 3 weeks for sensitive weeds to die. PRE applications may cause severe injury if 1 inch or more rainfall occurs between Sandea application and crop emergence. As with POST treatments, the grower assumes all liability for crop damage. POST a treatment when the crop has 2-5 true leaves is safest for the crop. Chlorosis (yellowing) during the first several days after application is common with POST Sandea. However, chlorosis is temporary and yield is not affected. Ohio research has focused on cucumbers and pumpkins. We have found that pumpkins are more sensitive to Sandea than are cucumbers and slight stunting may occur in addition to chlorosis.

It has taken the support of Gowan Company, the IR-4 Program and many years of research at universities across the country to achieve a new herbicide registration for cucurbits. Using unlabelled herbicides on these crops will jeopardize the future of this new Sandea registration and discourage future research. It is now up to growers to show that there is deep grassroots support for the research and minor use registration programs that have made this possible. (Robert Precheur, ed., Ohio State University Extension Vegetable Crops, VegNet Vol. 9, No. 5. April 18, 2002)

20.0. Harvesting Indian Corn

Harvesting and handling of Indian corn

This information is from a University of Kentucky Cooperative Extension Publication, Ornamental Corn Production in Kentucky by Terry Jones, John Strang, Brent Rowell, Rick Bessin, Bill Nesmith, Steve Isaacs, Extension Specialists; and William Witt, Professor of Agronomy, University of Kentucky. Ornamental corn must be harvested by hand when the husk is dry. When ears of ornamental corn have lost their green color and begin to dry down, they have reached full maturity. If warm, dry weather is expected, the ears may be left on the plants until sales are expected. To harvest,
break off ears with a quick downward motion. Be careful not to damage the ear or husk attached to it. Pick ears carefully so that the kernels are not damaged. Spread the ears out to dry in a shallow pile where there is good air circulation and under cover if the weather has been damp. Pull the husk back if it is not completely dry at harvest. Be careful not to tear the husks because they contribute to the value of the ears. The husk and ear may become moldy if they are not handled properly. Pulling the husk back allows slightly damp husks and ears to dry quickly. When husks and ears are dry, tie the ears together with twine or rubber bands in bunches of two or three around the base of the ears and allow them to dry in a warm, dark, airy place. If husks are too dry, they tend to pull off or break easily from the ears, decreasing their value. Should this occur, wait for a humid or rainy day to prepare the ears for sale. DO NOT box or bag ears when they are first harvested or they may mold. Mold may occur on both the husk and ear if proper handling and storage techniques are not used. Ears can be used for ornamental purposes after a week of drying.

During and after drying, ornamental corn may be stored in open wooden apple or cabbage bins. Growers with small quantities often suspend the ears in cabbage or onion sacks in a dry location until time for marketing.

The ears are usually sold in groups of three. The three ears are held together with rubber bands or with a plastic sleeve similar to that used for dried flower arrangements. (NYS Vegetable Growers Assoc. Calendar & News, Dec. 2001).


The National Council of Farmer Cooperatives (NCFC) (website: www.ncfc.org) will be holding their convention at the Hilton Waikoloa Village Resort from January 13-17, 2003. The NCFC maintains a Washington, DC office and they assist farmer-owned cooperative businesses in serving the economic interests of their farmer-owners. They anticipate about 600 delegates plus many will
be accompanied by their families. They should have a conference website set up in June. They have extended an invitation to all commodity groups, CTAHR, Farm Bureau, and everyone else interested to join them on Wednesday, January 15 for their Opening Reception from 6:00 - 7:30 pm. In conjunction with that, they invite all groups to educate the delegates on agriculture and the different products you produce in Hawaii with posters, displays, samples, and so forth. Posters, displays, etc. should be "manned" during this period and can either be left up for the duration of the convention or taken down after the reception. Local coordinators for the reception displays are the Big Island Farm Bureau (Diane Ley 969-4876 - bifb@aloha.net), County of Hawaii (DayDay Hopkins 961-8369 - dayday@interpac.net) and UH-CES (Wayne Nishijima 959-9155 - waynen@hawaii.edu). Associations may opt to set up their own display or contribute product for a larger group display. Samples are welcomed. We need to let them know by May 15 how many tables would be required for this activity. Please contact organizations you deal with and see if they would like to participate and let us know of the approximate table space needed (Wayne Nishijima, May 2, 2002).

22.0. Specialty Cut Flower Meeting/Tour, in Missouri July 2002

Association of Specialty Cut Flower Growers 2002 Midwest Regional Meeting and Farm Tour Monday July 1, 2002

WildThang Farms, Ashland MO From cotton to toad lily, from water lily to sweet pea, from pennycross to aconitum, WildThang Farms has tried many cut flower crops and is eager to share which ones worked and which ones didn’t!

New growers and experienced hands alike are apt to find a new idea or two.

See some of the newest varieties to be released by cut flower breeders.

This will be a very full meeting day, with much flower conversation everywhere, great food and amazing guests. Join the flower
gathering by registering today, $50 ASCFG members or $65 for nonmembers. For more information or to register call Mimo Davis at 573-657-7019.