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1.0. Loans for Hawaii Farmers

Ka Leo Pono
With Rep. Michael Magaoay

This 21st Legislature found that agriculture in Hawaii is one of the fastest growing industries valued at $2.9 Billion and provides 5.6% of the State's total employment. Recent changes in state farm programs have helped part-time farmers and immigrant farmers, and
have increased production through value-added products that require processing and manufacturing. These changes are in keeping with the industry’s transition from large plantation industries such as the once then Waialua Sugar Company to smaller diversified agriculture farms such as the ones will see around our North Shore. The Legislature also found that the cost of farm ownership and related improvements as well as farm operations, while financially prohibitive at the onset, could be recovered as a farm business grows.

A bill concerning agriculture loans was introduced and I supported this measure throughout the legislative session. I firmly felt that this bill was of great importance especially to our farmers in the North Shore area. With the closure of Waialua Sugar Company, the agriculture in Hawaii has changed dramatically over the past few years from huge sugar-cane and pineapple plantations to smaller farms specializing in diversified agriculture. The Legislature has responded to this change with legislation and funds as warranted by the growing diversified agriculture sector requires further changes in the law.

This bill responds to the needs of today's farmer by increasing the loan ceiling from farm ownership and improvement loans and farm operating loans. This increase will provide greater flexibility to the State’s agriculture loan program and provide greater opportunities for agricultural growth and expansion. The increase elevated the ceiling for ownership, improvement and operating loans from $400,000 to $800,000. During the committee hearing we received favorable testimonies from the Department of Agriculture, Pineapple Growers Association of Hawaii, Meadow Gold Dairies, and Island Dairy. This increase in the loan amounts was necessary to reflect the increased costs of farming.

Listed below are the basic eligibility requirements for the three types of loans.

**FARMER LOANS** -
*Parttime Farmer, $25,000*
Is a citizen of the US who has resided in the State of Hawaii for three Years, or any permanent resident alien who has resided in the State for the preceding three years; and
Has been operating the person's own farm for at least two years on, and owned by the person in fee or on land rented or leased from other
It is presently devoting a portion of the person's time to farming; and
Derives between 25-50 percent of the person's net cash income from direct participation, in farming in its broadest sense; and
Is a sound credit risk with the ability to repay the money borrowed; and
Is willing to carry out recommended farm management practices.

**NEW FARMER LOANS**
$100,000
CITIZENSHIP (SAME AS PART-TIME)
Have successfully earned a degree in agriculture from an accredited university or community college; or
Displaced from employment in an agricultural production enterprise; or
Two years experience as a part-time farmer; or
Laborer or tenant, or a person who by reason of ability, experience and Vocational training in agriculture is likely to successfully operate a farm.
Certain restrictions may apply.

**QUALIFIED FARMER LOANS** -
*$800,000*
CITIZENSHIP (SAME AS PART-TIME)
Has proven farming ability who has operated their own farm for two or more years; and
Who devotes most of their time or derives most of their net income from the farming
operation.
For those who need this kind of financial assistance in the ownership, improvement as well
as for farm operations, I encourage farmers in our area to call my office at 808-586-6380
should you need assistance and more infoMation intothi6pporutirity. Should there be any
concerns in our community, my office is still open. We are here to serve you, please do not
hesitate to call my office or e’mail at repmagaoay@capitol.hawaii.gov , Aloha ke Akua.
(OAHU NORTH SHORE NEWS, August 22, 2001, Page 16)

2.0. Press Release: USDA-FSA, Oahu County Committee
Election
September 14, 2001
Press Release
ATTENTION FARMERS & RANCHERS

COUNTY COMMITTEE ELECTIONS
The USDA, Farm Service Agency (FSA) is seeking candidates and eligible voters for the
farmer elected County Committee. The FSA County Committee is an important link between
national USDA programs and local farmers. As part of the Committee, members will take
important decisions on the needs of local programs such as establishing yields, determining
conservation priorities, and disaster assistance.

This year Local Administrative Area I will be electing a representative to the Committee,
Local Administrative Area I consists of all ranches and farms on the eastern side of Oahu
between Pearl City and Waimanalo

If your farm is located in this area you may be an eligible candidate or voter- Please call the
Honolulu County FSA Office at (808) 483-8600, Extusion 2, if you want to be added to the
slate of candidates, confirm your voting eligibility, or be added to the eligible voter list. Any
eligible farmer or rancher may request a ballot from FSA if they don’t receive one in the
mail. If you would like to ran for election your nomination form must be received by
October 29.

Ballots will be mailed to eligible voters by November 21. Ballots must be returned by
December 3. Ballots will be counted at the FSA office in Wailuku by December 10.
Please vote for only one candidate and sign the signature label on the outside of your ballot.
Ballots that are not signed will not be counted.

If you need further information about the County Committee, nomination procedures, voting
eligibility, contact the Honolulu County FSA office at (808) 483-8600, Ext. 2, Please take the
time to cast your ballot and mail it back to the Honolulu County FSA Office. (Jason G.
Shitanishi, USDA Farm Service Agency, Press Release, FAX Sept. 13, 2001, telephone 408-
483-8600 x. 104, fax 808-483-8615.).

3.0. Switch Fungicide Registered by EPA

Strawberry and onion growers have a new product for control of botrytis cinerea. Switch
62.5 WG fungicide is now registered by the EPA for control of botrytis cinerea in
strawberries and onions, as well as alternaria purple blotch in onions. State registrations are
pending in California and Florida. Switch is a pre-pack mixture of two active ingredients,
cyprodinil and fludioxonil. Cyprodinil is the systemic component of the product, which is
taken up into the cuticle and waxy layers of leaves and fruits and is distributed to other
parts of the plant. Fludioxonil is the residual component of Switch, which stays on the leaf and fruit surfaces to provide contact activity. "Switch is an effective new tool for growers to use in the fight against botrytis," said John Goggin, Syngenta brand manager for Switch. "Because the product contains two active ingredients, it provides users with both contact and systemic activity for a robust level of Botrytis gray mold control," said Goggin. "This is the product growers have been looking for to prevent the significant losses incurred due to botrytis." In a recent California trial, Switch applied at the use rate of 11 to 14 ounces per acre resulted in better control of botrytis gray mold on strawberries under severe disease conditions than the current standard alternating program, according to the company. It also provided long-lasting residual control of seven to 10 days, the company reported. For more information on Switch fungicide, contact your local sales representative, or visit the Syngenta Web site at www.syngentacropprotection-us.com. (Vegetable Grower News Magazine, August 28, 2001).

4.0. Spider mite control (Ohio update)
Infestations of two-spotted spider mite are reported on several crops from several locations and the question has arisen of what pesticides are available to control mites. At some locations, organophosphates are still effective with dimethoate being the best bet and Metasystox-R (oxydemetonmethyl) as another choice. Where organophosphates are not effective, Kelthane (dicofol) is a good choice, but it is registered for use only on vine crops (the 50 WSP formulation) and on peppers, tomatoes, and beans (the MF [4 lb/gal] formulation). Three newer products available for mite control are Capture 2EC (bifenthrin), Danitol 2.4EC (fenpropathrin), and Agri-Mek 0.15EC (abamectin). Capture and Danitol are both pyrethroids but are different than older pyrethroids in that they have miticidal activity when used at the high end of their rate range. Danitol can be used on tomato, melons, cabbage, broccoli, cauliflower, and brussels sprouts. Capture can be used on cucurbits, beans, peas, eggplant, peppers, sweet corn, head and stem Brassicas, and head lettuce. Agri-Mek can be used on cucumbers, melons, pumpkins, squash, peppers, tomatoes, potato, head lettuce, and celery. (VegNet Vol. 8, No. 26. August 16, 2001 Ohio State University Extension Vegetable Crops)

5.0. Pumpkin Diseases (Illinois update)
During the past two weeks I have received many inquiries about pumpkin diseases. Also, I received several specimens from pumpkin fields and visited some pumpkin and squash fields in various parts of Illinois. The following information is provided to help to minimize the incidence of diseases in pumpkin and other cucurbit fields.

Overall, the insect population in pumpkin fields was high during July and August. This contributed to (1) damage and rot of fruit in some fields, (2) scattered leaf yellowing in some varieties, and (3) early appearance of mosaics in some fields. Because mosaics are caused by viruses, they cannot be controlled by chemical application. To prevent the occurrence of mosaics, control of aphids and other insects in the field is essential (note the entomologists comment on this in the next article). Mosaics will not kill the plants, but yield and quality of the crop will be affected, depending on the time of fruit set and severity of the disease.

Apparently, the hot and dry period during July and August affected fruit set in most of the pumpkin fields. However, in the past two weeks, considerable fruit set in pumpkin fields was observed. To support the growth of this late new fruit, the plants must be kept green. To keep plants green, diseases, particularly powdery mildew, must be kept under control. Powdery mildew has already been observed in most of fields, particularly in the fields which
were not sprayed or were not sprayed properly. Powdery mildew first appears on the vines and lower surfaces of the leaves. By the time that powdery mildew is seen on the upper surfaces of the leaves, it might be difficult to effectively control the disease. Therefore, vines and lower surfaces of the leaves must be examined, at least once a week, for development of powdery mildew. In our fungicide trial in Champaign, application of fungicides has been very effective in controlling powdery mildew; unsprayed plants are heavily infected. Application of Quadris, Flint, Nova, Benomyl, or Topsin should effectively control powdery mildew in pumpkin fields. Considering the fact that Microdochium blight and bacterial fruit spot and fruit rot in 2000 caused considerable yield losses in pumpkin fields, a spray schedule of alternating application of Quadris, Flint, Nova, Benomyl or Topsin with Chlorothalonil plus a copper compound, at 10-day intervals, is expected to provide satisfactory control of pumpkin diseases in Illinois. Please read the labels and follow the directions. This year I have not observed any Microdochium blight or bacterial fruit infection in pumpkin fields yet, but we should take the preventive actions to minimize the incidence of these diseases. I should point out that, this year, yield losses to Phytophthora diseases in cucumber, melon, pumpkin, squash, watermelon, and zucchini fields in some areas have been more than 50%.

An important fact on fungicide application in pumpkin fields is using the appropriate sprayers. Due to the thick foliage of pumpkin and squash plants, the aerial application of fungicides (using airplanes) has not been very successful in controlling the diseases. In contrast, ground application of fungicides, with high pressure, has been very effective in preventing the development and spread of the diseases in pumpkin and other cucurbit fields. Using 30 to 50 gallons of water per acre for application of fungicides provides good coverage of foliage and fruit. To prevent disease development in pumpkin fields, the foliage and fruit must be thoroughly covered with the spray, particularly with the contact fungicides.

M. Babadoost (Illinois Fruit & Vegetable News, Volume 7, No. 14, August 22, 2001)

6.0. Stinkbugs in tomato (Illinois)

Stink bug feeding on ripening tomatoes causes corky, white to yellow spots beneath the skin of the fruit, and now is the time of year that stink bugs can be most numerous. Florida's tomato scouting guide recommends a threshold of 1 per 6 plants. Insecticides that will give some control of stink bugs in tomatoes include Thiodan, Baythroid, and Warrior (not for cherry tomatoes). Rick Weinzierl (217-333-6651; weinzierl@uiuc.edu) (Illinois Fruit & Vegetable News, Volume 7, No. 14, August 22, 2001)

7.0. CUCURBITS: DOWNY MILDEW (Massachusetts)

Downy mildew was recently identified in butternut squash at the vegetable research farm in S. Deerfield. The pathogen, *Pseudoperonospora*, only affects cucurbits and only attacks the foliage. Defoliation may result in sun scald to the fruit. This disease usually occurs fairly late in the season because it cannot overwinter in the northern parts of the United States. It is earlier enough this year to be a concern. Bravo will control this disease when disease pressure is low but Ridomil Gold/Bravo would provide better results.

Often, the first symptoms one observes are yellow, angular or square looking spots on leaves. The underside of the leaves may be covered with a black fuzzy looking growth - this is the fungus that causes the disease. Leaves may eventually turn brown, crinkle and turn upwards as they dry. Severe outbreaks may result in the rapid death of vines, which in turn, may cause handles on pumpkins to become brown. Downy mildew requires a period of leaf wetness and high humidity for successful infection. Heavy dews can provide adequate
moisture to get this disease going. Although the fungal spores may land in your field, there has to be leaf wetness for the disease to cause problems. --Robert Wick & Purdue University Veg. Crops Hotline No. 396, 2001 (Ruth Hazzard, Vegetable IPM Newsletter, Agroecology Program, University of Massachusetts, AUGUST 23, 2001, VOLUME 12, NUMBER 15)

8.0. TOMATO FRUIT DISORDERS

There are several fruit disorders of tomato that are the result of infection of the plant or fruit by various fungi or bacteria. There are also fruit disorders that do not result from infection by an organism; they result from some condition which occurred during the season that changes the fruit quality. This article will focus on these types of physiological disorders. The disorders discussed here are catface, growth cracks and yellow shoulder.

Catface generally appears as a misshaped fruit with scars and holes appearing in the blossom end of the fruit. It may also appear as an enlargement or perforation of the blossom scar, though the fruit shape is normal. Exposure of the blossoms to cold temperatures prior to anthesis has been linked to an increase in the appearance of catface. Pruning of plants and high nitrogen may also contribute to the appearance of the disorder. It is best to avoid the disorder by protecting plants from cold temperature or by planting less susceptible varieties.

Growth cracks appear as splitting of the outer layer or epidermis of the fruit in either concentric circles around the stem end or radial cracking from the stem end towards the blossom end of the fruit. Cracks usually appear towards fruit maturity at the mature green stage or in less susceptible varieties at the red ripe stage. The earlier the growth crack develops, the larger it is likely to be once the fruit is harvested. Rapidly growing fruit and fruit exposed to the sun tend to crack more readily. Also cracking is more severe under hot, dry conditions followed by rainfall. Selecting cracking resistant cultivars as well as careful management of water availability (through irrigation management and the use of plastic mulch) is the best defense against growth cracking.

Yellow shoulder disorder appears as areas under the skin of ripe fruit that range from internal white tissue to distinct yellow or green sections. The disorder involves abnormal fruit development and is not a delay in fruit ripening. The disorder appears to be related to potassium availability in the soil. Adequate potassium fertility early on in fruit development is important in controlling the appearance of the disorder. Also, selecting varieties that have reduced susceptibility to the disorder is also advised.

Proper water management, fertility, disease control and variety selection are key factors in reducing losses due to these physiological disorders of tomato fruit. By maintaining crop health prior to and during fruit development, the highest quality fruit can be produced. High quality fruit can be assured of commanding premium prices in the market place and are always in demand. --Chris Gunter, Purdue University Vegetable Crops Hotline, # 396, August 9 2001 (Ruth Hazzard, Vegetable IPM Newsletter, Agroecology Program, University of Massachusetts, AUGUST 23, 2001, VOLUME 12, NUMBER 15).

9.0. Gavel 75 for potato late blight

The U.S. Environmental Protection Agency recently registered Gavel 75 DF fungicide from Rohm and Haas Co. on potatoes. The fungicide is a protectant targeting potato late blight. The active ingredient, zoxamide, belongs to the benzamide class of chemistry and provides an entirely new mode of action.
It stops fungal growth by inhibiting cell division, preventing the late blight fungus from reproducing. The unique mode of action for late blight control makes the product a good choice for resistance management rotations. The fungicide also can penetrate the waxy cuticle of plant foliage, which gives it exceptional rainfastness.

According to the registrant, the product is best used starting at the first signs of disease or reports of disease in an area. Field trials indicate Gavel should be used in a five- to seven-day schedule when late blight is present and conditions favor disease. When disease pressure is low, it should be on a seven to 10-day schedule. (The Grower, June-July 2001).

Leverage broadspectrum insecticide in potatoes The Environmental Protection Agency recently registered Leverage 2.7 suspension emulsion for use on potatoes. The insecticide, from Bayer Crop Protection, already was registered for use on cotton. It is a combination of imidacloprid, the same active ingredient as Provado and Admire, and cyfluthrin, the same active ingredient as Baythroid. By combining the two active ingredients, it provides broad spectrum control of insects while reducing the risk of insecticide resistance developing, according to the company. Leverage controls many of the most damaging potato insects, including the Colorado potato beetle and green peach aphid - It can be applied by air, ground or through chemigation. (The Grower, June-July 2001).

10.0 Select herbicide, expanded label by EPA

The Environmental Protection Agency recently approved an expanded label for Select 2 EC herbicide for use on vegetables and potatoes. The new label includes beets, carrots, celery, cucurbits, eggplant, potatoes, sweet potatoes, peppers and radishes. The product already was registered for sugar beets and soybeans. It controls a broad array of annual and perennial grasses including quackgrass, yellow foxtail, crabgrass, wild oats, wild proso millet and volunteer cereals. Registrations are pending in New York and California (The Grower, June-July 2001).

11.0 Fulfill new insecticide for aphid control in California

The California Department of Pesticide Regulation recently registered Fulfill insecticide from Syngenta for use on fruiting vegetables and cucurbits. The active ingredient in Fulfill, pymetrozine, works with a unique mode of action and targets aphids. It stops aphids from feeding after they come in contact with or ingest it. The insects halt feeding and plant damage with the first two hours after application, although they may be visible on treated plants for several days (The Grower, June-July 2001).

12.0 Serenade, fungicide for organic growers

The Eugene, Ore-based Organic Materials Review Institute (OMRI) recently added Serenade to its list of materials allowed for use in production, processing and handling of organic food and fiber after the new formulation received its federal registration. The fungicide is manufactured and marketed by AgraQuest Inc. of Davis, Calif. The California Department of Pesticide Registration and the Washington State Department of Agriculture's Organic Food Program also have approved the new formulation. Serenade is based on AgraQuest's patented strain of Bacillits sublilis, a microorganism that is effective against several crop-damaging pathogens, including powdery mildew, walnut blight, Botrytis bunch rot and fire blight. The original wettable powder and the newly registered organic formulation are approved for use on vines, fruits, hops, peanuts, vegetables and walnuts. Three new crops-carrots, broccoli and onions-have been added to the label. (The Grower, June-July 2001). PyGanic: Pyrethrin-based Insecticide for organic farmers For information on PyGanic, an organic pyrethrin-based insecticide, contact: W.T. Thomson, Monterey
Chemical Company, www.montereychemical.com, tel. 559-499-2100. Sulfur Fertilizer for Organic Farmers Tiger Organic Sulphur, a new product from Tiger industries, has been approved and registered as a true organic fertilizer by the Organic Materials Review Institute (OMRI). Tiger Organic Sulphur can now be used to supply sulphur nutrition to organically grown crops, or as a soil amendment to release soft nutrients that have been fled up due to high phosphate or high soil pH levels. For more information, contact Tiger Industries by phone at (800) 661-2287 or by email at tiger@tigerind.com. (CROP PRODUCTION MAGAZINE Feb. 2001)

13.0. Downy mildew on pumpkin (Ohio)
Symptoms of the disease are yellow lesions on the upper leaf surface and a downy, white to slightly purple fungal growth on the lower surface. The disease does not directly affect fruit but it will destroy foliage quickly. If growers need to keep foliage either to size the fruit or to protect fruit from sun burn, fungicides will have to be used. Quadris or Flint will control the disease. Chlorothalonil (Bravo, Echo) will not without the addition of a material such as Ridomil Gold. (Ohio State University Extension Vegetable Crops, VegNet Newsletter, Vol. 8, No. 28. September 5, 2001).

14.0. Messenger, a Vaccine for plants?
The EPA has granted registration for Messenger, a new type of crop production product from EDEN Bioscience. Registration was granted in 2000 for use on all food commodities, and the product has been approved for use in Florida. In addition to greenhouse and university studies, Messenger has been extensively tested in field trials in four countries and on more than 40 crops, including citrus, cotton, strawberries, tomatoes, peppers, melons, wheat, rice, peanuts, tobacco and grapes. The EPA has classified Messenger as having low toxicity, and the product degrades rapidly once applied and leaves no detectable residue. it does not harm beneficial insects or microorganisms.

Messenger is different from traditional chemical pesticides because it is based on the natural trigger to plant defense and growth systems that exists in nearly all plants. Through its active ingredient, harpin Ea, Messenger simultaneously enhances a plant's own growth systems and natural defense mechanisms to help ward off attacks by common diseases, insects and environmental stresses. Harpin Ea is a naturally occurring protein produced by the plant pathogen Envinia amylovora, or fire blight. When Messenger is applied to a plant, the plant foliar receptors recognize the presence of harpin Ea, sending a signal that triggers the activation of the innate plant systems responsible for the enhancement of plant growth and insect and disease resistance.

Studies have found increased root mass, leaf area, fruiting and early maturation to be some of the beneficial effects of harpin Ea-induced gene expression. Harpin Ea-based products have no direct effect on pests and pathogens but simply "send a message" to the plant to activate its own growth and defense systems to protect itself. The result is healthier plants and higher and better quality yields in a wide variety of crops.
While this natural process occurs nearly every day in almost all plants, Messenger allows growers to harness and utilize the process to enhance the health and growth of plants and protect crops naturally from a broad array of insects and diseases. Once a plant is treated, activation is generally initiated within five to ten minutes, and full response generally occurs within three to five days. The effects may continue for several weeks or throughout the growing season, depending on the crop. For more information about Messenger, call (888) 879-2420 or visit the EDEN Bioscience Web site at www.edenbio.com. (CROP PRODUCTION MAGAZINE Feb. 2001)

Messenger II
Pesticides, a necessary evil for protecting crops, have toxic consequences, and genetically modified foods are as welcome in some quarters as the plague. It's not easy being an ecologically conscious farmer these days. But a relatively new product appears to be making inroads in the agricultural industry. Last summer Eden Bioscience of Bothell, Washington, released Messenger, a non-toxic pesticide, which like a vaccine in humans, tricks plants into defending themselves against intruders. Messenger uses the very agents that cause disease to protect against disease. It isn't a synthetic chemical or a genetic modification; it's based on harpin, the protein by-product of a bacterial pathogen. Applying harpin technology to a plant's surface activates its immune system. The plant erects defenses because it thinks it is under attack, even though it isn't. Because the harpin protein is naturally occurring, and because organisms already have experience with this protein, Messenger is virtually non-toxic. The plant never absorbs the protein; instead it sits on the surface, eliciting a hypersensitive response in the plant and triggering its defense mechanisms. So far Eden claims it has not found anything that Messenger actually hurts. It doesn't destroy the pests and disease; it simply boosts the immune system. Messenger degrades in sunlight and rain and can be applied as seldom as one or two times a year. Eden claims that Messenger helps produce bigger, better fruits, and that crops tend to mature earlier. In tests performed by the Agriculture Development Group, an independent agricultural research and information service, Messenger-treated artichokes were triple the size of untreated ones, and the biomass of zucchini, cantaloupe and watermelon plants was more than double. Though Messenger appears, so far, to be safe for the environment and for human consumption, it still may not replace traditional pesticides. It works as a supplement to existing toxic pesticides, not as a substitution. In addition, it doesn't work on all crops. Messenger has performed well on cucurbits, potatoes, strawberries and tobacco, but not as well on cherries, apples and grapes. Preliminary data from one trial on cherries indicates decreased incidence of post-harvest disease and increased sugar content, but other tests indicate Messenger isn't effective against cherry mildew. Research done on fire blight, a highly destructive bacterial disease, on apples at the New York State Agricultural Experiment Station at Geneva was even more tenuous. While in the past Messenger was effective in controlling the infection of fire blight on apple blossoms and shoots, this year it wasn't. "We still think Messenger will be good at controlling fire blight, but we have to understand why we didn't get such good results in our tests this year," said Geneva plant pathologist Herb Adwinckle. According to Adwinckle, who is also researching the use of Messenger in genetic engineering, the poor performance could be a based on how the product was produced this year, or on an effect of the weather. Another year of research will be required to understand why Messenger didn't work this season. "We think all the research that went into finding this chemical, and then its use as a spray, and then its use as a gene in plants is really very exciting," Adwinckle said. "So we're hoping we can get to the bottom of why it didn't perform as well, and we can use it because we like the idea of this technology." The consumer market may be opening up. Eden recently signed a deal with the MiracleGro manufacturer, The Scotts Company. Messenger will also be available to small-scale farmers in Ethiopia and Kenya later this year. Eden CEO Jerry Butler sees Africa and the Mediterranean countries as emerging markets (Source: By Julie H. Case, Sep. 4, 2001. A Vaccine for Plants,
15.0. HERBICIDES FOR MINOR CROPS (Arizona).

In 1998, the EPA registered six new herbicides for corn, soybeans, and small grains, five new products in 1999, three in 2000, and four so far in 2001. For vegetable crops which are minor, IR-4 projects are addressing some needs across the country. Clethodim (Select*), a grass herbicide with good activity on annual bluegrass has new labels for vegetables and additional projects are planned. Halosulfuron (Sandea*) is being labeled for various cucurbit crops and use in cantaloupes and watermelons for nutseed control is anticipated. Pendimethalin (Prowl*) has several pending labels in EPA but FQPA review of its profile will delay any new registrations until the fall of 2002, if issued at all. Projects will be investigating several products in cole crops, lettuce, melons, and onions during the coming year to determine if there is efficacy and safety when used in the desert compared to other parts of the U.S (Kai Umeda, ed. Arizona Maricopa County Vegetable News, vol. 8, issue 9, September 14, 2001)

16.0. Organic Farming will continue to grow according to USDA study

Strong market signals for organic agricultural products, along with increasing public and private support for organic farming systems, "make it likely that organic farming will remain a fast-growing segment of U.S. agriculture," according to a report released last month by the USDA's Economic Research Service. Certified organic farming systems were used on 1.35 million acres of cropland and pasture in 49 states in 1997, representing a doubling of organic acreage since 1992; the egg and dairy sectors grew even faster, according to the report. Obstacles to organic farming include "large managerial costs and risks of shifting to a new way of farming, limited awareness of organic farming systems, lack of marketing and technical infrastructure, and inability to capture marketing economies," the report concluded. "U.S. Organic Farming Emerges in the 1990s: Adoption of Certified Systems" is available on the Internet at www.ers.usda.gov/publications/aib770/aib770.pdf. (Henry A. Wallace Center, Alternative Agriculture News, Volume 19, Number 9 (September 2001))

17.0. Off-Beat Corner: Toxicity of Avocado Leaves to Animals

by Gary Bender, Tree Crops Farm Advisor, San Diego County. Fallbrook is the capital of avocado production in California. It is also home to one of the largest youth 4H agricultural programs in California. And sometimes the two just don't mix very well. Recently two baby
goats escaped from their pen and died after ingesting avocado leaves. It is important to remember that if leaf-eating animals are to be kept on the property, they must be kept away from the avocado trees at all times. Dr. Robert Miller, retired veterinarian in Falibrook, was the first to report the toxicity of avocado leaves to horses. He reported that even one mouth-full of leaves could cause swelling of the face, neck and tongue to the point that the affected horse had difficulty with breathing and swallowing. He thought it was an allergic reaction, because other horses that had eaten leaves did not appear to be affected. Research by Dr. Art Craigmill, University of California toxicologist, has indicated that avocado leaves from the Guatemalan race, such as Reed and Nabal, are toxic to animals such as goats and horses. He did not work with the Guatemalan -Mexican hybrids, such as Hass, but they may be toxic. Pure Mexican varieties stick as Bacon, Mexicola, Topa Topa and Zutano do not appear to be toxic. Fuerte, a Mexican variety with some Guatemalan, has been reported to be toxic to rabbits. Although fruit has not been studied, we do not believe that the flesh of fruit is toxic to animals, only the leaves. However, there is one report in the literature that indicates avocado fruit is highly toxic when fed to canaries and budgerigars. Avocado seeds are also toxic and chopped seeds are sometimes used as rat and mouse bait. Dr. Miller indicated that he had seen pigs die after eating wind dropped avocados and seeds. According to Craigmill, the worst symptom shown by the ingestion of avocado leaves in horses and goats is a full cardiac arrest within 48 hours. Lactating animals that do not cat enough to show cardiac arrest will often show a drying-up of the milk along with severe necrosis of the milk-producing cells. Essentially, if the lactating animal is allowed to eat Guatemalan avocado Leaves, the udder will be severely injured animal may not be able to provide milk for future offspring. It is important that owners of livestock be diligent in keeping their animals away from Guatemalan avocado trees at all times. Make sure that trees hanging over into pens are pruned back, or removed entirely, When pruning, do not allow your animals to consume the leaves that fall on the ground. (Source: Univ. California Cooperative Extension, Sand Diego County Farm Advisors Agricultural News (12/97)).

18.0. Comprehensive nutrient management plans for animal operations

In July, NRCS hosted six public meetings to gather comments on the role of private sector vendors in helping owners and operators of animal feeding operations develop and implement comprehensive nutrient management plans. Topics included manure and wastewater handling and storage; land treatment practices; nutrient management; record keeping; and feed management. Meeting transcripts are now web-posted. See http://www.nhq.nrcs.usda.gov/CCS/nutmgtmtgs.html

19.0. Plasticulture and High Tunnels Short Course.

October 24 & 25, 2001 Gloucester County Office Building Clayton, New Jersey Co-Sponsored by the American Society for Plasticulture. For information contact ASP at tel. 717-238-9762, or www.plasticulture.org
20.0. Papaya Conference
The 37th Hawaii Papaya Industry Association Annual Conference will be held September 21-22, 2001 at Nani Mau Gardens, Hilo. The registration form and tentative program are in attached files. For more information, contact: C.L. Chia Telephone: 808-956-7899, Fax: 808-956-3894, e-mail: chian@hawaii.edu

21.0. TV Shows on Organic Farming in Hawaii
ORGANICS HAWAII: The Body and Soil Conference on Maui showcases how and why one should grow and eat organic food products. HOFA(The Hawaii Organic Farmers Association) and the Maui Aloha Aina Association sponsored this educational forum with numerous speakers, which included Dr. Elaine Ingham and Dr. Michael Klapper. Learn about organic foods and how they protect the soil and build healthy bodies without dangerous pesticides, genetic engineering, irradiation, sludge, preservatives, and other pollutants that enter our food, our bodies, and our environment.

Shown on Olelo, the Community Television Station on:
September 17  Channel 54 at 6PM
September 22  Channel 54 at 9PM
September 25  Channel 52 at 9:30PM
September 27  Channel 52 at 9:30AM

Additional Information call TCR PRODUCTIONS at tel 808-523-7779

22.0. Organic Farming Trade Show in Europe Feb. 2002
Sales of organic produce have grown in Europe at an annual rate of 25% for the past 10 years. The US is the main importer of organic produce to Europe. Organic growers have the opportunity to participate in BIO FACH (pronounced bee-oh-fuck), the world’s largest trade show for organic food and agricultural products. It will be held in Nuremberg, Germany from Feb. 14-17, 2002. US growers may participate in the US pavilion to showcase their products to over 25,000 trade visitors. For additional information contact: Tim Larsen, Colorado Dept. of Agr., tim.larsen@ag.state.co.us.

23.0. NATIONAL SPINACH CONFERENCE
The University of Arkansas-Texas A&M Spinach program will be hosting the National Spinach Conference in Fayetteville, AR, on November 14 & 15, 2001. A full day program on spinach production and marketing will be held on Wednesday, November 14th, followed on the 15th by a tour of research plots at the Vegetable Substation, Kibler, Arkansas. Accommodations - Clarion Hotel, Fayetteville, AR, 1-800-223-7275. For more information contact Dr. Teddy Morelock at UA, morelock@uark.edu, or Fax 501-575-8619, http://comp.uark.edu/~morelock/2001NSC/.

24.0. WEB Sites, machinery, supplies, chemicals
www.machinery.com. A site dedicated to ag equipment. Online marketplace for farmers who want to buy, sell, trade, or share machinery.

Syngenta Growers seeking specimen labels or other information on products previously produced by Novartis or AstraZeneca should now visit Syngenta on the Web at www.syngenta.com, Dow AgroSciences at www.dowagro.com, or Bayer Crop Protection at uscrop.bayercom (Crop Prod. Magazine, March 2001).

25.0. The Food Safety Training and Education Alliance (FSTEA)

The Food Safety Training and Education Alliance is an alliance of government, industry, consumer and academic institutions dedicated to improving food safety training and education at the retail level. The Alliance coordinates efforts of its members to remove barriers to communication by facilitating information exchange, strengthening communications networks and alliances, and coordinating collaborative projects. FSTEA has just launched a new Web site. Highlights of the site include success stories and interviews with those involved with food safety training and education, training tips and techniques, quotes for training and learning and links to various food safety training and education resources. http://www.fstea.org/.

26.0. "Irradiation Q and A's"

New from USDA's Food Safety and Inspection Service's (FSIS) Office of Policy, Program Development and Evaluation: Irradiation Q and A's geared toward industry and covering issues such as labeling and packaging materials.
http://www.fsis.usda.gov/OPPDE/larc/Irradiation_Q&A.htm