



Ka Lono Pua

"The Flower News"

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Cooperative Extension Service Oahu

County

Project Survey Coming Your Way

Recently CTAHR approved the project entitled "Integrated Pest Management (IPM) for Flower Production". The main objective of the project is to improve the overall profitability of flower growers by either reducing production costs or reducing the losses associated with pest problems.

IPM is the method of achieving this goal. The project will test and demonstrate various pest management strategies and show which are economically beneficial.

To make the results more meaningful to Oahu's flower growers, a survey will be sent out in about a week that will try to identify the most serious pest problems on various flower crops. If you receive a survey, please complete it and return it to our office. The greater response we get the better able we will be to address your most serious pest problems. If you have questions about the survey or don't receive one and would like to complete one, give me a call at 622-4185. Mahalo nui loa!

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- ◆ Light Manipulation for Flowering Orchids
- ◆ Hawaii Floriculture Conference
- ◆ Chrysanthemum White Rust
- ◆ More projects, other diseases.....and more

Future Happenings

February – **National Orchid Month!**

Feb 7 (Sat) Plant and Produce Sale, Pearl City Urban Garden Center, 8 am – 2 pm

Feb 12 Nevada Landscape Assoc. Trade Show and Conf. Reno NV contact: 800-645-9794 www.nevadanla.com

Feb 14 (Sat) Valentine's Day

Feb 16 Presidents' Day Holiday

Feb 20-22 Pan Pacific Orchid Exposition, San Francisco. Contact Loren Whitney (650) 548-6700 or lwhitney@prmagic.com

Feb 20-22 SAF Pest Management Conf. San Jose CA, www.safnow.org

Feb 22 Sun Native Plant Maintenance, LCC Rm. MS 108, 1 to 4 pm. 455-0477.

Feb 24-27 S. California Plant Tour Days (760) 431-2572 www.planttoursdays.org

Mar 1-4 Marine Ornamentals 04, Hawaii Convention Center, for info. see <http://www.hawaiiacquaculture.org/marineornamentals04.html>

Mar 12 Honohono Orchids. Lyon Arb. \$10, contact 988-0456.

Mar 17 St. Patrick's Day

Mar 24-25 Floriculture Conference and Field Day, Maui Beach Hotel, Maui

Mar 27 - Apr 9 California Pack Trials

Apr 3 (Sat) Lyon Arboretum Plant Sale, NBC

Apr 9 Good Friday Holiday

Apr 11 Easter Sunday

Apr 21 Administrative Professionals Day

Apr 24 Vanilla Culture, Lyon Arb. \$18, call 988-0456

May 9 Mother's Day

May 15 Armed Forces' Day

May 31 Memorial Day

Jun 11 Kuhio Day Holiday

Jun 14 Flag Day

Jun 17-19 Super Floral Show, Washington DC, (312) 332-4650
www.superfloralshow.com

Jun 20 Father's Day

Jun 23-26 Southeast Greenhouse Conf. Greenville S.C., www.sgcta.org

Jul 4 (Sun) Independence Day
Jul 5 Holiday

Jul 10-14 Ohio Assoc. of Floricultural Professionals, Columbus OH, www.ofa.org

Aug 12-14 SNA ... World's Showcase of Horticulture, Atlanta, GA
www.sna.org

Aug 20 Statehood Day Holiday

Aug 26-28 FarWest Show, Portland OR, www.farwestshow.com

Sep 6 Labor Day

Sept 30 – Oct 2 FL Nursery & Allied Trade Show, Orlando, FL, www.fnga.org

Ralstonia Confirmed in New York Greenhouse

USDA Plant Protection and Quarantine in Beltsville, MD, confirmed *Ralstonia solanacearum* race 3 biovar 2 has been found in geraniums from a New York greenhouse. The pathogen was found in rooted cuttings of 'Americana Coral' and 'Americana Bright Red'. These varieties originated from Goldsmith Plants in Guatemala.

Goldsmith has voluntarily quarantined its Guatemala greenhouses and suspended shipments. APHIS and state agriculture departments are notifying growers to ensure the appropriate actions are taken to destroy suspect material and to disinfect facilities. APHIS, SAF and ANLA are working to implement a plan to quickly find and eradicate any other diseased plants that have entered the U.S. Approximately 459 nurseries in 41 states have received the geraniums.

APHIS officials have decided that cuttings (unrooted, callused and rooted) of Americana geranium Bright Red, Coral and Cherry Rose II that Goldsmith Plants shipped this year will be destroyed.

Goldsmith said that it has not received any additional reports of U.S. growers who have identified the disease on geranium cuttings. USDA posted an updated Action Plan on the Internet related to the handling and destruction of cuttings. USDA will destroy more than the 3 suspect cultivars if there is evidence that the pathogen may have spread. APHIS has not allowed Goldsmith to resume shipping of geranium cuttings from its Guatemalan production facility but will do so soon.

For more a copy of the Action Plan see: <http://www.aphis.usda.gov/ppq/ep/ralstonia/ralstoniaactionplanv4web.pdf>. A quick guide on what growers should do can be found at: <http://www.safnow.org/public/ralstoniaresource.htm> and www.anla.org.

Light Manipulation for Flowering of Orchids

One of the characteristics of most orchids is that there are periods of low production, especially in the winter. A new project developed by the College of Tropical Agriculture and Human Resources (CTAHR) will investigate the control of flowering of orchids by managing the light conditions. This project will address one of the main needs of orchid growers: winter production.

Two important factors when it comes to flowering are the spectral light quality and the amount of light received. Spectral quality refers to the amounts of the various wavelengths of light from blue light at 425 nanometers (nm) to far-red light at 740 nm. During the year, not only the amount of light but also the spectral quality changes. When orchids are grown under regular shade cloth, there is no attention paid to spectral quality.

In addition, shade cloth with adequate summer protection often provides too much shade in the winter. Orchid plants grown in too low intensity light will probably not flower.

Retractable shade has been used in greenhouses using motorized systems and solar radiation detectors. A similar system could be used in shade cloth structures. Using special photosensitive shade cloth and retractable shade cloth can help alter the spectral quality and the amount of light received by the plants during the year. In this way, it may be possible to increase flowering and help insure a more consistent year-round production.

In addition to the amount of light, light quality plays a role in flowering. The effect of short photoperiods is inhibited by red light and promoted by far-red light in flower initiation in some plants. In others, the ratio of red:far-red light affects the non-vernalized time to flower.

When grown under fluorescent plus incandescent lamps, the time to flower for these plants was half that required by plants grown under fluorescent

lamps alone. For example, the time to flower of geraniums is shortened by a high red/far-red high pressure sodium-pulse lighting.

Cover materials and shading influenced the spectral distribution of light in greenhouses with photosynthetic photon flux, red:far-red ratio, blue:red ratio, and blue:far-red ratio being affected. Colored shade nets and photosensitive plastic films have been used to modify the flowering and growth of ornamentals with these films having different blue:red ratios and red:far-red ratios.

CTAHR's Light Manipulation project will use these photosensitive films. The project is in cooperation with Dr. Blanche Dansereau, University of Laval, Quebec, Canada who has done extensive work with photosensitive shade cloth. The main objectives of the project are:

- To increase flowering of orchids by altering spectral quality of light using photosensitive shade cloths
- To increase winter flowering by devising a shade system that can be retracted to allow more light to enter the growing area

This study will be conducted with the help of cooperating commercial orchid growers with established shadehouses and potted orchid plants. The experiments will be conducted in the grower's shadehouses in small experimental plots. Sections of benches with the desired orchid types will be covered with three kinds of photosensitive shade cloths that differ in light quality. Cultural management practices, such as fertilization, and pest control, will be the grower's responsibility.

Environmental conditions will be monitored using data loggers with quantum light sensors and air temperature sensors. In addition, the spectral quality of light under the different shade cloths will be measured with a portable spectroradiometer.

If you are interested in cooperating in this project and learning firsthand about manipulating light, please call Ed Mersino at 622-4185.

Make Your Presence Known Respond to USDA Survey

USDA's National Agricultural Statistics Service (NASS) has sent out its annual survey on commercial floriculture production to growers across the country. The information is used by legislators to determine the industry's economic impact and to allocate funds to the various segments of the agricultural industry. The larger the economic impact the more resources are used to help and promote that particular segment.

It doesn't take very long to complete the survey, but the information growers provide could have a major impact on the floral industry. One important aspect of the survey is that it documents floriculture's growth over the years. Each year more individual products are added to reflect the changing nature of the industry.

Nine floriculture organizations have signed on as supporters of the survey effort. NASS has cooperated with these organizations to ensure that the data collected meets the needs of the industry.

It is crucial that you be complete, accurate and timely in filling out the survey. Only you can ensure accurate industry statistics, which are critical to obtaining research funding and public support on various issues.

Information you supply is completely confidential by law. When NASS publishes state and U.S. data only, it ensures that no individual operation or grower will be identified. For more information, e-mail NASS@nass.usda.gov or call (800) 727-9540. Results of the survey will be available online on April 27.

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Fools need advice the most  
but wise men only

are the better for it.

- Benjamin Franklin

## **A New Concern for Hawaii - Sudden Oak Death**

Sudden Oak Death (SOD) is caused by Phytophthora ramorum and affects a large number of host plants including azaleas, rhododendrons, viburnum and other ornamentals that we grow in Hawaii. It is the cause of great concern on the west coast of the U.S. and anywhere where oaks and the other hosts grow. Because of the damage the pathogen causes to the native oaks and other forest trees, nurseries in counties with SOD have been quarantined to prevent the spread of the disease.

For more information check out last year's International Symposium on SOD at: <http://www.apsnet.org/online/SOD/default.htm>. One paper on detecting the disease in nurseries is particularly good and can be found at: [http://www.apsnet.org/online/SOD/Papers/Werres\\_S Schroeder/default.htm](http://www.apsnet.org/online/SOD/Papers/Werres_S Schroeder/default.htm). There are also many papers in the sections on controlling the disease in nurseries. One using IPM can be found at <http://www.apsnet.org/online/SOD/Papers/Benson/default.htm>.

Another concern for Hawaii's growers is that Canada has added Abies (fir) to its list of plants regulated under its sudden oak death quarantine. Canada regulates at the genus level and therefore all fir species are affected. It seems that only nurseries in the quarantine area will no longer be able to ship any plants in fir-bark potting media into Canada. For more information on sending orchids to Canada see: <http://www.inspection.gc.ca/english/plaveg/protect/dir/d-96-09e.shtml>

If you bring in host plants of SOD be sure you use reputable suppliers. Know the symptoms of SOD on the type of plants you are importing and check them often for any sign of the disease. If you see suspicious symptoms, contact the Cooperative Extension Service or the Hawaii DOA.

## Chrysanthemum White Rust Found in Hawaii

Chrysanthemum White Rust (CWR) was recently found in Hawaii as well as at least 3 other states. *Puccinia horiana*, the fungal pathogen that causes CWR causes conspicuous lesions on the leaves of florist chrysanthemum and some close relatives. The symptoms are light yellow chlorotic spots on the upper leaf surface. On the lower leaf surface buff-white raised pustules eventually appear.

Spores appear on the undersides of the leaves and germinate under very high humidity. Very moist conditions cause chrysanthemum white rust to spread quickly, and it only takes two hours of leaf wetness for successful infection. New pustules appear in about two to four weeks after infection.

In Hawaii approximately 56,000 plants were destroyed within 3 days of the discovery of CWR. This fast response was due in part to the willingness of the owner to allow the Hawaii DOA along with cooperators from UH's CTAHR and others to destroy the plants. USDA's protocol was used to eradicate the disease. It would have taken longer if the USDA had to first designate the CWR as a "Pest for Eradication" via board action before implementing the eradication effort.

The USDA-APHIS-PPQ policy is to eradicate white rust upon detection. Conscientious survey over several weeks, careful destruction of infected and exposed plants when discovered, and application of appropriate fungicides to nearby plants on a prescribed schedule can very successfully eradicate the disease. A federal state survey is underway to make sure CWR hasn't appeared at other locations around the state.

For more information about CWR see:  
<http://www.aphis.usda.gov/ppq/ispm/cwr/index.html>  
<http://www.aphis.usda.gov/ppq/ispm/cwr/cwrplan>

[.pdf](#) and  
<http://www.ceris.purdue.edu/napis/pests/cwr>

## Hawaii Floriculture Conference

March 25, 2004, Thursday - Conference –  
Maui Beach Hotel

March 24, 2004, Wednesday - Industry and U.H.  
Research Station tours

Theme: International marketing & advances in cultivar development, improved crop quality, crop protection and production technology

Debbie Hamrick, editor of FloraCulture International, will discuss the current status of the international floral trade and address many other topics of concern to the floral industry.

### Program Highlights:

Branding and Other Market Strategies

New Cultivars of Proteas, Orchids, Anthuriums,  
Gingers, Heliconias

Advances in Postharvest Handling and Packaging  
Management of Pests, Diseases, Weeds, Nutrition  
Business Management Practices for the Flower  
Grower

Registration fee is a bargain at \$35!

Registration deadline is March 17, 2004

For more information, contact Clark Hashimoto at  
808-244-3242 or email

[hashimotoc@ctahr.hawaii.edu](mailto:hashimotoc@ctahr.hawaii.edu).

Hotel reservation, registration information and on-line registration form can be found at

[www.ctahr.hawaii.edu/hfc/](http://www.ctahr.hawaii.edu/hfc/).

### Sponsors:

College of Tropical Agriculture & Human

Resources, University of Hawaii at Manoa

Maui Flower Growers Association

Maui County Farm Bureau

Hawaii Tourism Authority & County of Maui

See the next page for the Thursday's Schedule.

**March 25, 2004, Thursday - Conference**

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|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------|
| 7:30                                              | Registration, Continental breakfast                                                                                                             | 2:15                                                | Bacterial disease management strategies for tropical floral crops<br>Anne Alvarez, CTAHR   |
| 8:30                                              | Opening remarks Mayor Alan Arakawa,                                                                                                             | 2:30                                                | Fungal disease management strategies for tropical floral crops<br>Janice Uchida, CTAHR     |
| 8:45                                              | Keynote address: Current perspectives on the international floral trade, Debbie Hamrick, editor, FloraCulture International                     | 2:45                                                | Break                                                                                      |
| 9:15                                              | Advances in postharvest handling, packaging and shipping technology<br>Robert Paull, CTAHR                                                      | 3:15                                                | TBA                                                                                        |
| 9:45                                              | Panel discussion on transportation issues<br>Representatives from FedEx & UPS                                                                   | 3:30                                                | Chemical weed control in potted orchids<br>Joe DeFrank, CTAHR                              |
| 10:15                                             | Break                                                                                                                                           | 3:45                                                | Chemical weed control in potted anthuriums<br>Joe DeFrank, CTAHR                           |
| 10:45                                             | Opportunities for expanded exports of Hawaii grown floral products to international markets, Debbie Hamrick                                     | 4:00                                                | TBA                                                                                        |
| 11:15                                             | Disinfestation of insect pests on tropical cut flowers and potted ornamentals<br>Arnold Hara, CTAHR                                             | Concurrent session B, Cultivar Development and Uses |                                                                                            |
| 11:45                                             | Panel discussion on marketing and promotion strategies<br>Debbie Hamrick, Carver Wilson & Robert Paull                                          | 1:30                                                | New anthurium cultivars and update on current anthurium research<br>Heidi Kuehnle, CTAHR   |
| 12:15                                             | Lunch                                                                                                                                           | 1:45                                                | Yield and performance of 15 Heliconia cultivars, Rich Criley, CTAHR                        |
| 1:30 to 4:15                                      | Concurrent sessions (2), see schedule below                                                                                                     | 2:00                                                | New dendrobium cultivars and update on current dendrobium research<br>Heidi Kuehnle, CTAHR |
| 4:15                                              | Reconvene for a closing general session<br>Wrap-up, overview & closing remarks<br>Debbie Hamrick & Robert Paull                                 | 2:15                                                | Advances in lei flower production for Hawaii producers<br>Glenn Teves, CTAHR               |
| 4:45                                              | Pau                                                                                                                                             | 2:30                                                | Southeast Asian gingers as flowering potted plants<br>Rich Criley, CTAHR                   |
| Concurrent session A, Crop Protection and Culture |                                                                                                                                                 | 2:45                                                | Break                                                                                      |
| 1:30                                              | Usefulness of growth regulators on annuals grown in large hanging baskets: spray or drench? Blanche Dansereau, Laval University, Quebec, Canada | 3:15                                                | Dendrobium flowering responses to lighting manipulation<br>Rich Criley, CTAHR              |
| 1:45                                              | Disease management strategies for protea growers, Norman Nagata, CTAHR                                                                          | 3:30                                                | New ornamental ginger cultivars for cutflower growers<br>Chantill Caines, CTAHR            |
| 2:00                                              | Nematode management strategies for tropical floral crops, Brent Sipes, CTAHR                                                                    |                                                     |                                                                                            |

3:45 Seasonal production of Some Tropical Cut Flowers, Rich Criley, CTAHR

4:00 New protea cultivars for Hawaii growers  
Ken Leonhardt, CTAHR

## California Expands Plant Tour Days

Southern California Plant Tour Days, Feb. 24-27, is expanding to include starter plant material, cut flowers, outdoor ornamentals and hard goods. As with previous Tour Days, plant buyers can view indoor/outdoor foliage plants and florist-quality specialty/patio plants. On the 1st day, more than 30 nurseries will participate in an expanded Plant Showcase at the San Diego County Fairgrounds in Del Mar. Buyers can take self-guided tours of the nurseries. <http://www.planttourdays.org>

GMPro Jan 12, 2004

## USDA Establishes Biotech Environmental Unit

The USDA's Animal and Plant Health Inspection Service (APHIS) announced the creation of an environmental and ecological analysis unit within its Biotechnology Regulatory Services program. APHIS has had a strong focus on analyzing the environmental and ecological effects of genetically engineered (GE) plants. This new unit will provide additional resources to address anticipated increases in permit applications to field test GE plants and petitions to deregulate these products.

The unit will conduct analysis of the environmental and ecological effects of field-testing genetically engineered plants to assist in the development of Biotechnology Regulatory Services (BRS) regulations and permit conditions.

BRS is responsible for regulating the introduction of genetically engineered organisms such as plants, insects, microorganisms and any other organism that is known to, or could be, a plant pest. Through a strong regulatory framework,

BRS works to ensure the safe and confined introduction of new genetically engineered plants with significant safeguards to prevent the accidental release of any such material.

## Coqui Frog Website

The UH's College of Trop Ag and Human Resources announces the launch of its new coqui frog website: <http://www.ctahr.hawaii.edu/coqui>.

The website is a comprehensive resource for information about the invasive coqui frog in Hawaii. Visitors to the site will learn how to identify and catch coqui, as well as how to control the frogs on their property and in their community. The site also includes summaries of original scientific research, photos, and links to other web sites and articles.

The website documents the efforts of CTAHR's Dr. Arnold Hara, and the Hilo-based Coqui Frog Working Group. Contributors to the web site include Ruth Niino-DuPonte and web designer Kathy Lu.

### "Ka Lono Pua" Goes Electronic

If you would like to receive "Ka Lono Pua" by e-mail, contact us so we can add your address to our listings. If you don't have e-mail or we don't know what it is, you will continue to receive a regular copy of "Ka Lono Pua."

If you have any questions or suggestions, give me a call at 622-4185, Tuesdays and Thursdays or e-mail me at [mersino@hawaii.edu](mailto:mersino@hawaii.edu).

Mahalo!

Edwin F. Mersino  
County Extension Agent  
Agriculture Program

"A good leader is a person who takes a little more than his share of the blame and a little less of his share of the credit."-John C. Maxwell

- Where can I go to find more about Chrysanthemum White Rust?
- What can I do about the coqui frogs?
- What can I learn from the Light Manipulation Project?
- What is happening at the next Hawaii Floriculture Conference?
- What are the two problems for Hawaii with Sudden Oak Death?

The answer to these and many other questions can be found inside.