

# VEGETABLE CROPS UPDATE

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# Ag Resources

*Some Agricultural Resources for the Vegetable Crops Industry in Hawaii*

*Randall T. Hamasaki and Hector Valenzuela*

## Introduction

*Hector R. Valenzuela*

The picture for the vegetable crops industry in Hawaii is changing on a daily basis. For example, vegetable crops acreage under production in Oahu almost doubled from about 1,000 acres in 1994 to about 1,900 acres in 1995. Overall, vegetable growers in the state produced over 82 million pounds of produce in 1995, compared to 73 million pounds in 1994 (DOA, Sept. 12, 1996). Many small-scale production operations have sprouted in several areas of the state including Mililani, Waialua, and Ewa in Oahu, and Hamakua in Hawaii. As new ag lands continue to become available for diversified agriculture this trend is likely to continue. New and existing farm operations are facing many new challenges, particularly regarding the stability of the produce markets. Other concerns include the existence of complex marketing distribution channels, costly land, labor, water, and transportation, pests and diseases. At a time like this, it becomes increasingly important for new and established growers to make use of all of the resources available to them that may best prepare them to meet all of these important challenges.

More than ever, it is important that growers keep updated with new production information by reading ag trade magazines and extension publications, and by attending educational seminars.

It is important that growers continue to network and organize with fellow growers, by participating in commodity associations and in the Farm Bureau, to keep updated with local issues of interest to the farming community. It is also important that growers network and keep in touch with the CTAHR Cooperative Extension Service. While it is not possible for CTAHR to focus equally on the more than 150 vegetable crop commodities grown locally, the College does have a wealth of background research data and information which may be relevant to the crop you are interested in growing. Keep in touch with your local Vegetable Crops County Extension Agent and with the CTAHR Extension Specialists. We need to be updated with possible serious problems in the field (nutrient problems, new pests), which allows us to develop timely and pre-emptive action plans. An active communication link, and information networks between the Vegetable Crops Industry, CTAHR, and other sister state agencies will result in a smoother and timelier flow of information from the farm to the researcher, and from the research laboratory to the farm.

**Contents!!**

1. CTAHR	pg. 2-3
2. Ag Credit	pg. 3
3. USDA offices	pg. 3
4. DOA, etc.	pg. 4
5. Produce channels	pg. 4
6. Ag Groups	pg. 5
7. Videos-CTAHR	pg. 6-7
8. Transplanters	pg. 7
9. Publications-UH	pg. 3,4,7

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**1. College of Tropical Agriculture and Human Resources (CTAHR)**

*University of Hawaii at Manoa*

**Cooperative Extension Service  
Oahu County**

*Kaneohe Office*  
45-260 Waikalua Road  
Kaneohe, HI 96744  
Telephone: (808) 247-0421

*Wahiawa Office*  
910 California Avenue  
Wahiawa, HI 96786  
Telephone: (808) 622-4185

*Pearl City Office*  
962 Second Street  
Pearl City, HI  
Telephone: (808) 453-6055

**Agricultural Extension Agents-Oahu:**  
Commercial Vegetable-Windward Oahu  
*Randall Hamasaki:* (808) 247-0421

Commercial Vegetable-Leeward Oahu  
*Steven Fukuda:* (808) 622-4185

Commercial Flower Crops  
*Edwin Mersino:* (808) 622-4185

Commercial Landscape  
*Melvin Wong:* (808) 453-6058

Home Garden Information Line  
*Mark Takemoto:* (808) 453-6055

**The Educational Resource Library  
and the Urban Garden Center**

Cooperative Extension Service  
962 Second Street  
Pearl City, Hawaii  
Telephone: (808) 453-6050

- \* Agricultural Publications
- \* 30-Acre Display Garden
- \* Tours
- \* Classes

**Extension Specialists**

**Agriculture & Resource Economics**

Marketing Ag. Products  
*John Halloran:* (808) 956-7692  
*Stuart Nakamoto:* (808) 956-8125

**Agromony & Soil Science**

Soil Fertility  
*Position is Vacant* Hilo, (808) 935-2885  
Environmental Quality  
*Carl Evensen:* (808) 956-8825  
Crop Production  
*I. Scott Campbell,* (808) 956-6971  
Weed Science (Kona)  
*Philip Motooka:* Kona, (808) 324-0488

**Biosystems Engineering**

*Michael Williamson:* (808) 956-8806

**Environmental Biochemistry**

Pesticide Registration  
*Michael Kawate:* (808) 956-6008  
Pesticide Education/Safety/Training  
*Charles Nagamine:* (808) 956-6007

**Entomology**

*Ronald Mau:* (808) 956-7063  
Urban Entomology  
*Julian Yates III,* (808) 956-6747

**Food Science & Human Nutrition**

*Aurora Hodgson:* (808) 956-6564

**Horticulture**

Vegetable Crops  
*Hector Valenzuela:* (808) 956-7903  
Banana, Papaya, Exotic Fruits  
*Chian-Leng Chia:* (808) 956-7899  
Coffee, Macadamia, Guava  
*H.C. Bittenbender:* (808) 956-8389  
Weed Science  
*Joseph DeFrank:* (808) 956-8050  
Ornamental Floriculture  
*Kenneth Leonhardt:* (808) 956-8909  
Landscaping  
*David Henlsey:* (808) 956-2150

**Plant Pathology**

*Stephen Ferreira:* (808) 956-2840

## **Other CTAHR Offices:**

### Publications and Information Office

\* Publication Request Line: (808) 956-7046

### Horticulture Seed Lab

Department of Horticulture  
3190 Maile Way, Room 112  
Honolulu, HI 96822  
Phone: (808) 956-7890

\* Certain seeds available for sale

### Agricultural Diagnostic Service Center

1910 East West Road  
Sherman Lab 134  
Honolulu, HI 96822  
Phone: (808) 956-6706

- \* Chemical Analyses of Soils
- \* Insect Identification
- \* Plant Disease Identification
- \* Chemical Analyses of Plant Tissue
- \* Chemical Analyses of Irrigation Water and Nutrient Solutions

## **2. Some Sources of Agricultural Credit**

State of Hawaii  
Hawaii Department of Agriculture  
*Agricultural Loan Program*  
Agricultural Loan Division  
1428 S. King Street  
P.O. Box 22159  
Honolulu, HI 96823-2159  
Phone: (808) 973-9460

- \* New Farmer Loans
- \* Farm Ownership and Improvements
- \* Soil and Water Conservation Loans
- \* Farm Operating Loans
- \* Emergency Loans
- \* Loans to Cooperatives and Corporations
- \* Insured Loans

*USDA, Rural Development*  
99-193 Aiea Heights Drive, Suite 156  
Aiea, Hawaii 96701  
Telephone: (808) 483-8600  
Fax: (808) 483-8605

Formerly Farmers Home Administration (FmHA). Assists rural individuals and families with various credit programs (guaranteed Rural Housing Loan, Home Ownership Loan, etc.).

Commercial Banks, Savings & Loans, Credit Unions, etc.

## **3. Other USDA Offices**

*USDA, Natural Resource Conservation Service*  
Honolulu Field Office  
99-193 Aiea Hts. Drive, Suite 207  
Aiea, Hawaii 96701  
Telephone: (808) 483-8620  
Fax: (808) 483-8615

Formerly Soil Conservation Service (SCS). Agency responsible for providing technical planning assistance for natural resource conservation measures. Assists with Conservation Plans for individuals and group landowners or users. Works with FSA in establishing natural resource conservation measures.

*USDA Animal Damage Control*  
3375 Koapaka St, Suite H420  
300 Ala Moana Blvd.  
Honolulu, HI 96850  
Telephone: (808) 861-8575  
\* Wild pigs, birds, etc.

*USDA Agricultural Cooperative Service*  
154 Waiianuenue Avenue, Room 305  
Hilo, HI 96720  
Telephone: (808) 935-3701  
\* Assist with forming Agricultural Cooperatives

## **Have You Seen?**

*The 1996 Hawaii Farmer Chef Wholesaler Source Book*: A guide to locating buyers and sellers of local products. Prepared by the State of Hawaii Dept. of Ag. in collaboration with the University of Hawaii, College of Tropical Ag. and Human Resources. To obtain a copy or to be included in future editions contact: Hawaii's Farmer-Chef-Wholesaler Source Book Project, Market Development Branch, Hawaii Dept. of Agriculture, 1428 So. King St., Honolulu, HI 96813, fax 808-973-9590, e-mail: caolive@elele.peacesat.hawaii.edu.

#### 4. State Department of Agriculture

*Hawaii Agricultural Statistics Service*

P.O. Box 22159

Honolulu, HI 96823-2159

Office: 1428 S. King St.

Telephone: (808) 973-9588

\* Statistics of Hawaiian Agriculture

\* Crop Production Reports

\* Floriculture & Nursery Product Reports

\* Weekly Crop Weather Information

\* Agricultural Labor & Wage Rates

*Market News Service Branch*

P.O. Box 22159

Honolulu, HI 96823-2159

Phone: (808) 973-9578

\* Honolulu Wholesale Market Report

\* Fresh Fruit & Vegetable Market News

\* Weekly Honolulu Arrivals

\* Ornamental Crops Market News

\* Egg, Poultry, Pork and Beef Market News

24 hr. Ag. Market Recording (Honolulu

Wholesale Market): (808) 973-9581

*Marketing Division, Commodities Branch:*

\* For produce grading standards, etc.

Commodities Branch Manager Telephone: 973-9563

Fresh Fruit & Vegetables Telephone: 973-9566

#### Telephone numbers to other Hawaii Dept. of Agriculture Offices

*Waimanalo Irrigation System* 259-7193

*Agricultural Parks Branch* 973-9476

*Market Development Branch* 973-9595

*Measurement Standards Inspectors* 548-7154

*Plant Pest Control Section* 973-9522

*Biological Control Section* 973-9524

*Survey/Exploratory Entomologist* 973-9529

*Plant Pathology Lab* 973-9546

*Chemical/Mechanical Control* 973-9538

*Plant Quarantine Branch* 548-7175

*Airport Plant Quarantine Office* 836-3827

*Pesticides Program Manager* 973-9401

*Pesticides Inspectors, Registration* 973-9401

*Pesticides Inspectors, Enforcement* 973-9401

#### \* Study Packets for Pesticide Certification

These packets can be obtained through the HDOA, Cost is \$20 per set (You need to specify "Private" or the specific commercial category):

*Hawaii Department of Agriculture*

Pesticides Branch

POB 22159

Honolulu, HI 96823-2159

For more information call:

Oahu, 808-973-9401

Hawaii, 808-933-4447

Maui, 808-871-5656

Kauai, 808-241-3414

#### 5. Hawaii Department of Health

Mosquitoes & Rodents 548-8484

Sanitation Branch 548-3225

#### 6. Poison Center 941-4411

#### 7. National Weather Service

Recorded Forecasts

Honolulu, 973-4380

Oahu, 973-4381

Marine, 973-4382

#### 8. Produce Wholesalers and Retailers, Farm Equipment, Farm chemicals, Farm supplies, etc.

SEE Telephone Directory under these and other listings:

Agricultural Chemicals Irrigation Systems and Equipment

Agricultural Consultants Mushrooms

Agricultural Marketing Produce, Retail

Farm Equipment Produce, Wholesale

Farm Equipment Repairing and Parts Spraying, Equipment

Farms Garden & Lawn Equipment

Fertilizer Applicators Seeds & Bulbs, Retail

Fruit & Vegetable Brokers Seeds & Bulbs, Wholesale

Fruit & Vegetable, Growers and Shippers Soil Conditioners

Fruit & Vegetable, Retail Top Soil

Fruit & Vegetable, Whsle

Greenhouse Builders

Greenhouse Equipment & Supplies

*UH-CTAHR Guides for Commercial Vegetable Growers available from your local County Extension Office for production of:*

1. Tomato

2. Cucumber

3. Sweetpotato

4. Basil

5. Ginger

6. Lettuce (in Press)

## 9. Leaflets available on request

University of Hawaii, CTAHR, Seed Order Request Form  
Agricultural Diagnostic Service Center Fee Schedule  
CES Soil Testing Service Form Soil Record Sheet  
Agricultural Diagnostic Service Center Form 357  
How To Take A Soil Sample  
Hawaii Cooperative Extension Service Publications:  
Beans  
Tomatoes  
Winged Beans  
Watermelon Production  
Bell Pepper  
Hydroponics  
Broccoli  
Care For Your Garden-Use Windbreaks  
Mustard Cabbage  
Windbreaks, Green Manure, Cover  
Carrots  
Crops  
Cauliflower  
Soil Reaction (pH)  
Sweet Corn  
The pH Preference of Plants  
Cucumber  
Eggplant  
Edible Ginger Culture  
Lettuce  
Onions  
Edible-Podded Pea  
Irish Potatoes  
Vegetable Soybeans  
Summer Squash  
Sweet Potatoes  
Upland Taro  
Dryland Taro Production Under Mulch  
Vegetable Growers Newsletter  
List of Available Publications  
Celebrating the Past, Cooperative Extension Service  
Farm Bureau has these pluses for you

The University of Hawaii at Manoa, College of Tropical Agriculture and Human Resources, Cooperative Extension Service is an Equal Opportunity/Affirmative Action Institution providing programs and services to the people of Hawaii without regard to race, sex, age, religion, color, national origin, ancestry, disability, marital status, arrest and court record, sexual orientation, or veteran status.

## 10. Some Agricultural Organizations

### *Hawaii Farm Bureau Federation*

2343 Rose Street  
Honolulu, HI 96819  
Telephone: (808) 848-2074

- \* A non-profit, non-governmental, voluntary organization
- \* Analyzing problems and formulating action to ensure the future of agriculture
- \* Pesticide Awareness, Taxes, Land use, Water, Marketing Issues
- \* Discount Programs
- \* Newsletter
- \* Hawaii Pesticide Registrations Database
- \* Etc.

### *Hawaii Organic Farmers Association (HOFA)*

P.O. Box 984  
Haiku, Hawaii 96708  
(808) 573-0995 (Phone and Fax)

- \* Organic Certification
- \* HOFA Organic Guidelines Certification Handbook (for \$20 at above address.
- \* Field Days, Workshops
- \* Data-base for Members

### *Oahu Banana Growers' Association*

Mr. Scott Chun, President  
c/o CTAHR-CES  
45-260 Waikalua Road  
Kaneohe, HI 96744  
Tel: (808) 247-0421  
Fax: (808) 247-1912

### **Chemical News**

Gramoxone Extra (Zeneca) supplemental label, special local need (24(c)) registration EPA SLN No. HI-960003 in Hawaii now allows precision directed spray on cucumber, melon squash, and pumpkin for control of spiny amaranth, morninglory, purslane, and seedling guinea grass. Contact J. DeFrank at 808-956-5698, fax 808-956-3894, defrenk@hawaii.edu for a copy of the supplemental label.

## Videos available at Cooperative Extension Offices, UHM

For information on availability call:

Oahu, Kaneohe 808-247-0421

Maui, 808-244-3242

Hawaii, 808-959-9155

Kauai, 808-274-3471

### Title

### Availability by Island

(KA=Kaneohe, KI= Kauai, HA= Hawaii)

- 1993 Vegetable TeleConference*, CTAHR, sweetpotato whitefly, diamondback moth, marketing (all islands)
- 1994 Vegetable TeleConference*, CTAHR, 2 tapes, weed control, alternative pest control, fertilizer recommendations, virus/nematode control (all islands)
- The Agricultural Research Reports- New Markets, New Uses, and New Crops* (Kaneohe)
- Alive & Well: Sustainable Soil Management*, Univ. Calif. (Kaneohe)
- Asparagus Production Seminar*, 3/15/96, CTAHR (All islands)
- Azolla for Weed Control in Wetland Taro* (Kaneohe, Kauai)
- Benlate: A million dollar mistake?* (Kaneohe, Kauai)
- The Coastal Non-point Pollution Program and Hawaii's Farmers*, CTAHR (Kaneohe, Kauai)
- Disease Resistant Basil*, CTAHR (Kaneohe)
- The Dutch Auction System for Marketing Cut Flowers*, CTAHR 1995 (Kaneohe, Kauai)
- Endangered species and pesticides: Balancing Protection and Production*, OSU (Kaneohe, Kauai)
- Farm Chemical Safety is in your hands*, 12/86 (NACA), (Kaneohe)
- Focus in Ag: Environmentally friendly: Vegetable Crops Production/Weed Control* (All islands)
- Hawaii State Farm Fair*, 1990, 50 min (Kauai)
- Ho'olaulima for Hawaii Sustainable Agriculture* (Kaneohe, Kauai)
- How to Conduct Worker Protection Training* (Kauai)
- LISA for Hawaii 1993, Sustainable Agriculture*, CTAHR (Kaneohe, Kauai)
- Mechanical Weed Control* (all islands)
- Molokai Taro Conference*, Tapes 1-3 (1990), (Kaneohe, Kauai, Hawaii)
- Nalo/Soukaseum/Shiraki Farm Tours* (5th Annual WSSA Conference) (Kaneohe, KI)
- Nature Farming for Sustainable Agriculture*, (Kauai)
- New Crops, Agricultural Research Reports* (Kaneohe)
- Non-Circulating Hydroponics*, B. Kratky, CTAHR (all islands)
- Nourish the Roots, gather the leaves-Sustainable Taro Culture in the Pacific*, ADAP, CTAHR (Kauai)
- Organic Weed Control*, DeFrank, CTAHR (Kaneohe, Hawaii)
- Taking Taro into the 1990s*, Tapes 1-3, CTAHR (Kaneohe, Kauai, Hawaii)
- Taro Planter-Big Island/Taro harvester*, Molokai (Kauai)
- Taro Festival*, 1994 (Hawaii)
- Pesticide Handlers and the Worker Protection Standard*, 8/94, MSU (Kaneohe, Kauai)
- Papaya Ringspot Virus*, CTAHR 3/94 (Kaneohe, Kauai)
- The Science of Biological Decomposition: Effective Composting Methods* (Kauai)
- Solar Fruit Drying Project* (Kauai)
- Tulare Farm Equipment Show*, Feb. 1996 (Hawaii)
- Understanding Cooperative Extension Service*, 3 modules (Kauai)
- Vegetable Crops Field Day* 6/6/96 (Kaneohe)
- Wetland Taro Fertilization*, Honolulu-Poi, 1996 (Hawaii)
- WSAA Sustainable Agriculture Conference*, 1994, Hilo (Hawaii)

## Other videos available from UH-Manoa

(Horticulture Dept. at 808-956-7903)

*WSAA Sustainable Ag Conference, 1992*

*No-Tillage Taro*

*1992 Organic Farming Agriculture Policies Conference*

**For beginning farmers:** *Production of leafy vegetables, Production of Root Vegetables, Production of fruit vegetables, Introduction to Irrigation, Introduction to Fertilizer Management, Introduction to Postharvest management.*

## FOR SALE PUBLICATIONS

Handbook: Non-circulating Hydroponic Methods by Dr. B. Kratky, \$12.95 from: DPL Hawaii, POB 6961, Hilo, HI 96720, tel/fax 808-935-8785.

This Hawaii Product went to market: The Basics of Produce, floral, seafood, livestock, and Processed-Product Businesses in Hawaii, by J.R. Hollyer, J.L. Sullivan, and L.J. Cox. CTAHR, Univ. Hawaii. 168 pp. For purchasing contact: Hawaii Farm Bureau Federation, 2343 Rose St., Honolulu, HI 96819, tel. 808-848-2074, fax 808-848-1921. Cost for Farm Bureau members and Educational Institutions is \$11 plus \$4 for shipping and handling. For non-Farm Bureau members cost is \$16 plus \$4 for shipping and handling.

Corn Production in Hawaii, 1996, by Dr. J.L. Brewbaker. Make check for \$10 payable to University of Hawaii, send to Corn Seed Trust Fund, Dept. of Horticulture, Univ. Hawaii, 3190 Maile Way, Honolulu, HI 96822-2279.

## UPCOMING EVENTS

Hawaii Organic Farmers Association, HOFA, General Membership Meeting, 11 January, 1996, Sunset Grill, Oahu. For more information on time and location contact Diana Dahl (in Maui) at 808-573-0995.

## Planter/Transplanter Companies

Bra-Mar Machines Co.

King St.

RR 2 Newmarket

Ontario, Canada L3Y 4V9

905-775-7249

The Ferguson Manufacturing Co., Inc.

POB 1098

Suffolk, VA 23439-1098

804-539-3409

Ferris Farm

83 Ferris Rd.

New Wilmington, PA 16142

412-946-2973

## Planter/Transplanter Companies, cont.

Keneco Manufacturing, Inc.

1105 3rd Street N.E.

POB 1158

Ruskin, FL 33570

813-645-2591

Monosem

17135 W. 116th St.

Lenexa, KS 66219

913-438-1700

Powell Manufacturing Co., Inc.

P.O. Drawer 707

Bennettsville, SC 29512-0707

800-845-9087

Renaldo Sales & Service, Inc.

1770 Mile Strip Rd.

North Collins, NY 14111

800-424-5564

Unverferth Manufacturing Co., Inc.

POB 357

Kalida, OH 45853

419-532-3121

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Dwight Sato, CES Hilo

Tel. 808-959-9155, Fax. 808-959-3101, dwights@hawaii.edu

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Randy Hamasaki, CES Oahu

Tel. 808-247-0421, Fax 808-247-1912

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Alton Arakaki, CES Molokai

Tel. 808-567-6833, Fax. 808-567-6818

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Robin Shimabuku, CES Maui

Tel. 808-244-3242, Fax 808-244-7089,

shimabukur@AVAX.CTAHR.HAWAII.EDU

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Hector Valenzuela

Vegetable Crops Assoc. Extension Specialist

Tel. 808-956-7903, Fax. 808-956-3894, hector@hawaii.edu

## DISCLAIMER

Reference to a company or product name does not imply approval or recommendation of the product by the Cooperative Extension Service, College of Tropical Agriculture and Human Resources, the University of Hawaii and its employees, or the United States Department of Agriculture, to the exclusion of others which may be suitable.

The pesticide information provided here should be used only as a guide. This is not a recommendation; consult an expert. Before purchasing a pesticide, the user should carefully read the entire label to determine if the pesticide is appropriate (legal) for the particular use. Labels frequently change without notice.

**COOPERATIVE EXTENSION SERVICE  
U.S. DEPARTMENT OF AGRICULTURE  
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Honolulu, Hawaii 96822**

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