

Hawai'i Cooperative Extension Service

College of Tropical Agriculture & Human Resources · University of Hawai'i at Manoa · U.S.D.A. Cooperating

VEGETABLE CROPS UPDATE

Volume 9

September 1999

No. 2

Contents

Index for Vols. 1-9	pgs. 1-11
Glossary	pg. 11-13
New Publications	pg. 13
Upcoming Events	pg. 14

Want to obtain the copy of an article??

•••••
For copies of any articles or issues listed in this index please contact your local county extension agent, as listed on pg. 12. Looking for a particular crop, pest, or topic? Search for key words in the glossary on pgs. 11-13.

Index of Contents for Volumes 1 to 9 (1991 to 1999)

May 1991 Vol. 1 No. 1

- 1.0 Resources
 - 1.1. Vegetable Production Training Manual
 - 1.2. American Journal of Alternative Agriculture
 - 1.3. 1991 Organic Supplier Directory
- 2.0 Upcoming Events
- 3.0 Research News
 - 3.1 Cultivar Releases: Tomato; Soybean; Day neutral Strawberries
 - 3.2 Bed spacing for strawberries
 - 3.3 Uniform plant stands to promote early growth, may provide an early competitive advantage to compete against weeds, and outgrow pest damage

June 1991 Vol 1. No. 2.

- 1.0 Research News
 - 1.1 Effect of cultural practices on plant, pests and diseases
 - 1.2 Crop rotation and monoculture affect the soil "receptivity" to take-all
 - 1.3 Effect of crop rotation with sorghum to control cyst and root-knot nematodes in soybean
 - 1.4 The use of Antitranspirants to increase yields in transplanted bell peppers
 - 1.5 New asparagus breeding line
- 2.0 News Updates
 - 2.1 Industry Associations in the mainland: Asparagus and Onions
 - 2.2 Sweetpotato white flies in Florida tomatoes
 - 2.3 Increase in air-shipment of speciality products
 - 2.4 Herbs in the News

•••••
July 1991 Vol 1. No. 3.

- 1.0 Research and Industry News
 - 1.1 Produce quality in Supermarket
 - 1.2 Vesicular-Arbuscular Mycorrhiza (VAM) helps control Pythium in greenhouse cucumbers.
 - 1.4 Drip Irrigation in California
 - 1.5 Thrips control update from Florida
 - 1.6 Watermelon Nutrition Tips
 - 1.7 Hydroponics Production Tips
 - 1.8 Florida Cultivar Trials; Spinach and Broccoli
- 2.0 Upcoming Events

September 1991 Vol. 1. No. 4.

- 1.0 Research and Industry News
 - 1.1 Organic Stores Target Upscale Markets.
 - 1.2 Hydroponics in Illinois
 - 1.3 Fresh Produce Promotion Campaigns in Mainland
 - 1.4 Women in Agriculture
 - 1.5 Smaller Packs demanded by Food Service Industry
 - 1.6 New Alternative Pest Controls
 - 1.8 No-till results in reduction of Nitrogen leaching
- 2.0 Upcoming Events

November 1991 Vol 1. No. 5.

- 1.0 Research and Industry News
 - 1.1 Terminator II: Poinsetta Whitefly Hits California, Texas
 - 1.2 Whitefly Chemical Control in greenhouse Tomatoes
 - 1.3 PetoSeed to Evaluate TSWV Resistant Lines
 - 1.4 Convention Fever Trivia
 - 1.5 Manure Treatment Efficiency Affected by Soil Type
 - 1.6 Pesticide Registration - Cal-EPA

**COOPERATIVE EXTENSION SERVICE · 3050 MAILE WAY · UNIVERSITY OF HAWAI'I
HONOLULU, HAWAI'I 96822**

The University of Hawai'i at Manoa, College of Tropical Agriculture and Human Resources, Cooperative Extension Service, U.S. Department of Agriculture cooperating in presenting to the people of Hawai'i programs and services without regard to race, color, national origin, sex or disability. It is an Equal Opportunity and Affirmative Action Employer.

- 1.7 Veggies and Health Pointers
- 1.8 Opportunities for Direct Marketing to Restaurants
- 1.9 Costs of Organics vs. Conventional Production
- 1.10 Nitrogen in Onion
- 1.11 Environmental Facts About Conventional Agriculture
- 2.0 Resources Available
- 3.0 Upcoming Events

January 1992 Vol. 2. No. 1

- 1.0 Research and Industry News
- 1.1 Sweetpotato whitefly control with detergents
- 1.2 SPW Control Strategies
- 1.3 Other SPW factoids
- 1.4 Tolerance in Pepper to Western Flower Thrips
- 1.5 Calcium Nutrition and Tipburn in Lettuce
- 1.6 Greenhouse Tomato Production costs
- 1.7 Herb Hydroponic Production
- 1.8 Population Explosion, myth or reality?
- 1.9 Green manure for root knot nematodes
- 1.10 Food Irradiation factoids
- 1.11 Starter fertilizers on bulb onions
- 1.12 Need for a Statewide Vegetable Crops Association
- 2.0 Resources

March 1992 Vol 2. No. 2

- 1.0 Research and Industry News
- 1.1 Nitrogen and Plastic Mulch on Greenhouse Lettuce
- 1.2 Food Service Factoids
- 1.3 Integrated Management Program for Sweetpotato whitefly and Melon Thrips in Cucumber, Melon, Tomato, Eggplant and Pepper.
- 1.4 Vacationing? Visit Farm in England!
- 1.5 Statistics on organic farm numbers
- 1.6 Baby corn Production
- 1.7 Organic Mulch on Drip-Irrigated Tomatoes
- 1.8 Mushroom Production in North America: Factoids
- 1.9 Biological control for sweetpotato Weevil
- 2.0 Horticulture Department News
- 3.0 Resources
- 4.0 Upcoming Events

May 1992: Vol. 2 No. 3

- 1.0 Research and Industry News
- 1.1. Local Research Highlights: Cucurbits, Tomatoes, Celery
- 1.2. Decline of the Human Factor
- 1.3. Golden Snail wreaks havoc in Taro
- 1.4. Industry Analysis Projects for 1991-1992
- 1.5. Summary Statics for 1990 Hawaii grown Vegetables
- 2.0. Marketing Corner
- 2.1. Karen's Six Produce Marketing laws
- 2.2. In the Table: Healthy Factoids
- 2.3. Produce Value Added Alternatives
- 3.0. Biological Control Corner
- 3.1 Residue management for nematode control
- 3.2 Previous work with crop residues

July 1992, Vol. 2 No. 4

- 1.0. Research and Industry News
- 1.1. Crop Productivity and Biological Diversity
- 1.2. Nation-wide budget blues: Factoids
- 1.3. Insect populations in diversified soybean plots
- 1.4. Neem Tree Highlights
- 1.5 Research Directives in the continental US
- 1.5.1 Down South (Veggies)
- Cultural Aspects
- Pests and Diseases
- 1.5.2 Down West (Asparagus)
- Washington State Asparagus Commission, 1992
- Research Priorities
- 1.6. Growth Regulators Factoids
- 1.7. Soil Quality Review
- 1.7.1 Characteristics of a Productive Soil
- 1.7.2 What about Earthworms
- 1.7.3 Green manure in Germany
- 1.7.4 Rodent-Free Soils?
- 1.8. Sustainable Ag Coalition Forms
- 1.9. Pesticide Exposure Factoid
- 1.10. Resistance to Sweetpotato Weevil
- 1.11. Harvest Windows for Vegetables
- 2.0 The Marketing Corner
- 2.1 Value Added Packaging Innovations: Leafies, Berries, Onions, Carrots, Eat Smart Recipe Wrap and Microwave Verdelli Style.
- 2.2. Avocados: Welcoming the newest member of the Vegetable Family
- 2.3. Organizing Your Daily Activities : The Fluid Theory of Time Management.

September 1992, Vol. 2 No. 5

- 1.0 Research and Industry News
 - 1.1. The Vegetable Crops Library
 - 1.2. A Chili Summer: A review of chili peppers
 - 1.3. New Technique to control White Rot in Onions
 - 1.4. Requirements for a successful biological control program
 - 1.5. Pesticide Story : Statistics on Industry Pesticide Sales
 - 1.6. Benlate Update : Florida and Hawaii
- 2.0 The Marketing Corner
 - 2.1 Consumer Factoids
 - 2.2 Tips for increased sales
 - 2.3 Break that Trade Balance : US 1991 Produce Exports to Japan
 - 2.4. Melon Growers Cooperative forms in Imperial Valley.
 - 2.5. Trucking Costs Transportation Trivia.
- 3.0 Upcoming Events
- 4.0 Resources

November 1992, Vol. 2, No. 6

- 1.0. Research and Industry News
 - 1.1. Farmers Must Look After Themselves
 - 1.2. Letters From Mississippi
 - 1.2.1. Sweet Corn Insect Control
 - 1.2.2. Sweet Corn Caterpillar Control
 - 1.2.3. Stinkbugs in Sweet Corn
 - 1.2.4 Stinkbugs in other Vegetables
 - 1.2.5. Pinworms on Tomatoes
 - 1.2.6. Powdery Mildew of Pumpkins and Squash
 - 1.2.7. Botrytis Gray Mold on Greenhouse Tomatoes
 - 1.3. Allelopathy in Taro
 - 1.4. UH Horticulture Faculty Honored :
Dr. Jim Brewbaker

January 1993, Vol. 3, No. 1

Index of contents for volumes 1 and 2 (1991 and 1992)

March 1993, Vol. 3, No. 2

- 1.0 Beyond pesticides research objectives in California
 - 1.1 Insects Research needs at UC
 - 1.2 Weed research needs at UC
 - 1.3 Nematode Research at UC
 - 1.4 Disease Research at UC

2.0 Salinity Factoids

- 3.0 Florida Field Tomato Production Technology
 - 3.1 Marketing-background information
 - 3.2 Problems of Production for Tomatoes in Florida
 - 3.3 Production Factoids
 - 3.4 Management of Tomato mottle virus
 - 3.5 Infections result in greater growth reductions
 - 3.6 Sweetpotato whitefly management and tomato IPM
 - 3.7 Management of Fusarium crown and Root Rot for Tomato
 - 3.8 Early blight control with processed sludge treatments
 - 3.9 Packing house dump tank water treatments
 - 3.10 Florida Tomato Cultivars

4.0 Other Ag factoids

5.0 The effect of Alternative nematicides for the control of rootknot nematodes in edible ginger

6.0 The effect of Shur-Crop Kelp based algae solution on yields of leafy Lettuce

7.0 1991 Vegetable Crops Statistics for Hawaii

8.0 Hawaii Vegetable Statistics Factoids

9.0 Upcoming events

10.0 Resources

11.0 Table: Production Summary of Vegetable Production in Hawaii, 1991

May 1993, Vol. 3, No. 3

- 1.0 First tele Conference for Commercial Vegetable Growers
 - 1.1 Third Annual Living -Sod Field Day
 - 1.2 Methanol Seminar
 - 1.3 Vegetable Action Group Meeting
 - 1.4 Kamuela Workshop on Diamondback Moth Control

2.0 Research and Industry News

- 2.1 Table: Mean rates of nitrogen fixed per acre by several megume crops
- 2.2 Table: Effect of soil nutrient deficiency on yield of legumes, described as percent of maximum yields
- 2.3 Purslane as a vegetable (Ag Consultant Jan 93)
- 2.4 Principles of Appropriate Technology for U.S. Agriculture
- 2.5 Standards for Resourceful Agriculture
- 2.6 Popcorn Factoids
- 2.7 Potassium Silicate for Disease Control

3.0 The Marketing Corner
3.1 The WIC Farmers' Market Nutrition Program

4.0 Research Updates on Biological Control
4.1 Natural Enemies in Cotton
4.2 Natural enemies for Lepidoptera
4.3 Natural Nematode Control
4.4 Natural control of soybean fungi
4.5 Biocontrol in rangelands
4.6 Cricket Control with Nematodes
4.7 Natural enemies of aphids: Aphidophagous hover flies (Diptera: Syrphidae)
4.8 List of flowering plants and associated aphid predator hover fly species

5.0 Upcoming events

6.0 Resources

July 1993, Vol. 3, No. 4

1.0 Cultivar Trials in Hawaii
2.0 Eggplant Cultivar Trials in Cooperation with Dr. Joe DeFrank
3.0 Cabbage Cultivar Trials in Cooperation with Dr. Ron Mau
4.0 Pepper Cultivar Trials
5.0 'Sweet Charlie' Florida Strawberry
6.0 Environmental Costs of Pesticide Use
7.0 Crop Extracts for Biocontrol
8.0 Upcoming events
9.0 Resources

September 1993, Vol. 3, No. 5

1.0 Veg Resource Notes
1.1 Transplanters
2.0 Research Highlights
2.1 Bird Watch: Local bird factoids
2.2 Phosphorus Watch: Assessing P needs in Florida Vegetables
2.3 Nitrogen Watch: Effect on snap beans and watermelons in Florida
3.0 Chemical Black Scale Control in Olives

4.0 Tips to Reduce Incidence of Tip-Burn in Chinese Cabbage

5.0. Use of Etephon or Ethrel (trade name)

6.0 Marketing corner
6.1 Pesticide Attitudes: Consumers' and Growers' surveys on pesticides use
6.2.1 Major California Terminal Markets
6.2.2. Produce Directories (published quarterly)
6.2.3 Produce Price Information
6.2.4 Produce Newsweeklies
6.2.5 General Vegetable Monthly Magazines
6.3 Top wholesaler's expectations
6.4 Typical Wholesaler's Expectations

7.0 Upcoming events

8.0 Farmer Worker/Safety Regulations

November 1993, Vol. 3; No. 6

1.0 Vegetable Industry Analysis
1.1 Production Management
1.1.1 Sweetpotato whitefly
1.1.2 Tomato Spotted Wilt Virus
1.1.3 Diamondback moth
1.1.4 Agri-chemical contamination - Benlate
1.1.5 Mosaic Virus in Cucurbits, Turnip Mosaic, and PVY
1.1.6 Leaf Miner
1.1.7 Quarantine Regulations
1.2 Marketing
1.3 Land and Water Resources
1.4 Information Transfer
1.5 Others
2.0 Research news/update
2.1 Fall Eggplant Living Mulch Field Day
2.2 K-Silicate for Disease Control, Follow-up
2.3 Other Research Notes

3.0 Upcoming events

January 1994, Vol. 4, No. 1

1.0 Research and Industry News
1.1 Effect of Composts on Leafy Lettuce Yields
1.2 Mites Control in Field Soybeans
1.3 Mites on California strawberries
1.4 Proper Irrigation for Nematode control in soybeans
1.5 Ag Factoids
1.6 Factoids on Ag-Consulting
1.7 Bird Damage in California Orchards
1.8 Petiole Sap Analysis in Watermelon

- 1.9 Watermelon Trials in Florida
- 1.10 Strawberry Drip Irrigation Fertility
- 1.11 Stink Bug control in Mississippi
- 1.12 Pumpkin Cultivar and Fungicide Trials in Tennessee
- 1.13 Weed Control in California Paddy Rice
- 1.14 New Insecticide for Sweetpotato Whitefly in California
- 1.15 Seedless watermelon in Florida
- 1.16 Weed control in Carrots
- 1.17 Squash variety trials in Florida

- 2.0 Specialty crops in Chicago
- 2.1 Asparagus Grading Standards in Canada
- 2.2 Specialty crops in Chicago

- 3.0 Biological Control
- 3.1 Biological Control with Encarsia Formosa
- 3.2 Lace Wing Factoids

- 4.0 Chinese Cabbage Cultivar Trial in Volcano

March 1994, Vol. 4, No. 2

- 1.0 Drip Irrigation
- 1.1 Is it adapted to the crops I grow?
- 1.2 Water sources
- 1.3 Installation and major system components
- 1.4 System Maintenance
- 1.5 How much to irrigate?
- 1.6 Calculation of water demand in Drip Systems Based on Known Irrigation Levels for Furrow Irrigation
- 1.7 How often to Irrigate
- 1.8 When to Irrigate?
- 1.9 Tensiometers
- 1.10 Fertilizers Management Considerations
- 1.11 Yields based on ET
- 1.12 Bed Width
- 1.13 Moisture/disease interactions
- 1.14 References

- 2.0 Upcoming Events

May 1994, Vol. 4; No. 3

- 1.0 Cultivar Selection: Recommendations in Hawaii
- 2.0 Thrips affect peppers in Florida
- 3.0 Armyworm Control in Florida
- 4.0 Update on Organic Certification in Hawaii

- 5.0 High elevation Chinese cabbage Cultivar Trials
- 5.1 Summer 1993 Trials
- 5.2 Winter 1993 Trials

- 6.0 Biological Control Corner
- 6.1 Leafminer biological control with nematodes
- 6.2 Cover crops and Compost Management for Root Knot nematode control in mung beans

- 7.0 Upcoming events

- 8.0 Resources

August 1994, Vol. 4, No. 4

- 1.0 Living Mulches: Eggplant growth and yields in living mulch and monocultures

- 1.1 Introduction
- 1.2 Preliminary on-farm trials
- 1.3 Experiment Station Trials
- 1.4 Results and Discussion
- 1.5 On-farm Trials
- 1.6 Experiment Station Trials
- 1.7 Relative Yields
- 1.8 Fruit Quality
- 1.9 Canopy Dimensions
- 1.10 Nematodes
- 1.11 Growth Observations

- 2.0 Leafhopper control in grapes

- 3.0 Insecticides toxic to bees

- 4.0 Marine culture factoids

- 5.0 New vegetable Specialists at HSPA

- 6.0 Research priorities in SW Florida

- 7.0 Action thresholds in cotton: mites, whiteflies

- 8.0 Landfill factoids

- 9.0 Strawberry mite control

- 10.0 High Elevation Head Cabbage Cultivar Trial

- 11.0 Frozen Products Factoids

- 12.0 Tomato Greenhouse Cultivar Trials at High Elevation

November 1994, Vol. 4, No. 5

- 1.0 Insectaries
- 1.1 List of plants reported to be useful as insectaries for attraction of beneficials in agroecosystems
- 1.2 List of beneficial arthropods and plants used to attract them in agroecosystems
- 1.3 List of weedy or crop species which have been reported as hosts of beneficial populations in agroecosystems
- 1.4 List of insectary mixes sold in California
- 1.5 Resources
- 1.6 Insectary references

- 2.0 Local Extension Activities
- 2.1 Second annual teleConference for Commercial Vegetable Growers
- 2.2 Waimanalo Field Day
- 2.3 Poamoho Field Day
- 2.4 Action Group update

3.0 Upcoming Events

January 1995, vol. 5, No. 1

- 1.0. Index of Contents for Volumes 3 and 4 (1993-1994)
- 2.0. Graphs: Monthly import volumes to Hawaii of important commercial vegetables.

March 1995, Vol. 5, No. 2

- 1.0 Letters from Molokai
- 1.1 Overview
- 1.2 Cucumber Variety trials in Molokai
- 1.3 Spring 1987
- 1.4 Spring 1990
- 1.5 Table Cu-1 Cucumber varieties evaluated for production in Molokai, Spring, 1987
- 1.6 Table Cu-2 Trellised cucumber cultivar yields in Molokai, Spring 1987
- 1.7 Table Cu-3 Ground culture cucumber yields in Molokai, Spring 1987
- 1.8 Cu-4 Ground culture cucumber cultivar yields in Molokai, Spring 1990
- 1.9 Recommended Cultural Practices for Cucumber Production in Molokai

- 2.0 Broccoli Cultivar Trials in Molokai
- 2.1 Spring Experiment, 1986
- 2.2 Spring Experiment, 1991
- 2.3 Summer Experiment
- 2.4 Fall and Winter Trials
- 2.5 Table B.2 Broccoli cultivar yields in Molokai, Spring 1991
- 2.6 Table B.1 Broccoli cultivar yields in Molokai, Spring 1986
- 2.7 Table B.3 Broccoli cultivar yields in Molokai, Summer 1989

2.8 Table B.4 Broccoli cultivar yields in Molokai, Winter 1993

2.9 Results

3.0 Take a minute/ stop by and visit the several ongoing research activities around the state

4.0 Carrot Cultivar Trials in Molokai

4.1 Table C-1 Carrot cultivar yields in Molokai, seeded Sept, 15, 1986

4.2 Table C02 Carrot variety yields in Molokai, seeded Oct. 23, 1987

4.3 Biofumigation with Mustards

5.0 Head Cabbage Summer Cultivar Trial in Molokai

5.1 Table Cab-1 yield of Head Cabbage in Molokai, Summer 1990

6.0 Research highlights

6.1 Verticillium wilt affected by N source

6.2 Thrips chemical control in Citrus

6.3 Farmers, as an endangered species

6.4 Disease control with additives

6.5 Chinese cabbage trial in Molokai

7.0 Daikon cultivar trials in Poamoho

7.1 Daikon Cultivar descriptions

7.2 Table D-1 Yields and yield parameters of Daikon cultivars grown in Poamoho. Summer 1994

8.0 Upcoming events

9.0 Zucchini Cultivar Trials

9.1 Table Zu-1 Zucchini cultivar yields in Poamoho Station, Summer 1994

January 1996, Vol. 6, No. 1

1.0 Molokai Sweetpotato

1.1 Introduction

1.2 Spring

1.3 Fall

1.4 Table of Contents

1.5 Table 88-1 Yield data and taste index from 20 sweetpotato varieties grown in Molokai, Spring 1988

1.6 Table 88-2 Yield data from several sweetpotato varieties grown in Molokai, Fall 1998

1.7 Sweetpotato Variety Trial, Fall 1989

1.8 Sweetpotato variety trials in Molokai, Spring and Fall 1993

1.9 Table 89-1 Yield data from several sweetpotato varieties grown in Molokai, Fall 1989

- 1.10 Sweetpotato weevil damage on several sweetpotato cultivars, Spring 1992
- 1.11 Factoids: The Sweetpotato Industry in Hawaii (1993)
- 1.12 Table 92-1 Effect of sweetpotato varieties on damage from the sweetpotato weevil, Spring 1992
- 1.13 Recent Sustainable Ag. Extension Activities
- 1.14 Table 93-1 Yields quality and origin of several sweetpotato varieties grown in Molokai, Spring 1993
- 1.15 Table 93-2 Yields and grading of several sweetpotato varieties grown in Molokai, Fall 1993
- 1.16 Sweetpotato variety trial, Spring 1994
- 1.17 Table 94-1 Yields and grading of several sweetpotato varieties grown in Molokai Spring 1994

2.0 Results and Discussion

- 2.1 Spring 1998
- 2.2 Spring 1992
- 2.3 Spring 1993
- 2.4 Spring 1994

3.0 Fall 1998

- 3.1 Fall 1989

4.0 Summary

5.0 Standard Sweetpotato Varieties in Hawaii

6.0 Cultivars from the continental U.S.

7.0 Sweetpotato use as a calorie rich and nutrient rich food source

8.0 General Description of Hawaii grown Sweetpotato roots

8.1 Beta-carotene content of orange fleshed sweetpotato grown in Hawaii

9.0 Sweetpotato cultivar trials to evaluate orange and white fleshed sweetpotatoes at 70 and 800 foot elevation in Hawaii

March 1996, Vol. 6, No. 2

1.0 Daikon Variety Trials

- 1.1 Introduction
- 1.2 Poamoho, Summer 1994 and Spring 1995
- 1.3 Contents
- 1.4 Waimea Winter 1994 Trials
- 1.5 Volcano Experiment Station, Spring 1995
- 1.6 Volcano Experiment Station, Summer 1989
- 1.7 Table D-3 Quality characteristics of Daikon cultivars grown in Kamuela, Winter 1994

- 1.8 Table D-1 Yields and yield parameters of Daikon cultivars grown in Poamoho, Summer 1994
- 1.9 Table D-2 Yields and yield parameters of daikon cultivars grown in Poamoho, Spring 1995

2.0 Low elevation Sweet Bulb Onion Trial at UH Waimanalo Experiment Station

1.10 Table D-4 Characteristics and Seed Source for Daikon Varieties grown in Volcano, Spring 1995

1.11 Volcano Field notes

1.12 Table D-5 yield grading and stand establishment of Daikon Varieties grown in Volcano, Spring 1995

1.13 Results and Discussion

1.14 Poamoho Summer 1994

1.15 Poamoho Spring 1995

1.16 Kamuela Winter 1994 Trials

1.17 Volcano Spring 1995

1.18 Volcano Summer 1989

1.19 Summary

1.20 Top Varieties across locations

1.21 Daikon Cultivar Descriptions and Sources

1.22 Seed companies

1.23 Daikon Marketing Stats chart

3.0 Bell pepper Cultivar Trials in Waimanalo

3.1 Table BP-1 Yield of 18 Bell Pepper varieties grown in Waimanalo, Fall 1995

3.2 Table BP-2 Yield of 8 bell pepper varieties from once over harvest Waimanalo, summer 1995

3.3 Cultivar Description

3.4 Seed sources for bell pepper

4.0 Marutane Leafy Green Variety Trial on Poamoho, Spring 1995

4.1 Table LE-1 Yield of leafy green varieties Poamoho spring 1995

4.2 Varietal Description for Marutane Greens

5.0 Notice to our readers

6.0 Mini report: Effect of organic Amendments on Winter Daikon Yields in Wahiawa, Oahu

May 1996, Vol. 6, No. 3

- 1.0 Zucchini Elite
- 1.1 Introduction
- 1.2 Experiment 1, Poamoho Summer 1994
- 1.3 Contents
- 1.4 Experiment 2, Poamoho Fall 1995
- 1.5 Experiment 3, Kunia Summer/Fall 1995
- 1.6 Experiment 4, Kamuela Fall 1995
- 1.7 Table Ten-1 Yield distribution and mean fruit size of zucchini squash west Tennessee Expt. Station 1993
- 1.8 Table Po-1 Zucchini cultivar yields in Poamoho Station, summer 1994
- 1.9 Table Po-2 Marketable yields of zucchini varieties grown in Poamoho Fall 1995
- 2.0 Resources
- 2.1 Table Po-3 Early Zucchini yields (first 3 harvests) in Poamoho Trials, 1st planting
- 2.2 Table Ku-1 Marketable yields of Zucchini varieties grown in Kunia, fall 1995
- 2.3 Table La-1 Zucchini cultivar trials at the UH Lalamilo Experiment Station, Kamuela, summer/fall 1995
- 3.0 Results
- 3.1 Poamoho Summer 1994
- 4.0 Poamoho fall 1995
- 4.1 Marketable yields
- 4.2 Early Yields
- 4.3 Silverleaf whitefly damage
- 5.0 Kunia fall 1995
- 5.1 Marketable yields
- 6.0 Kamuela Summer/Fall 1995
- 7.0 Work from other areas
- 7.1 Florida
- 7.2 Louisiana
- 7.3 Tennessee
- 8.0 Conclusions
- 8.1 Marketable yields
- 8.2 Grade A fruit
- 8.3 Early Yields
- 8.4 Variety Descriptions
- 8.5 Overall
- 9.0 Seed Companies
- 10.0 Methyl bromide phase-out: Critical Months Ahead

- 11.0 Lettuce Cultivar Evaluation in a Greenhouse Non-circulating Hydroponics system
- 11.1 Introduction
- 11.2 Materials and Methods
- 11.3 Grouping the seedlings in "forestry tubes"
- 11.4 Yields
- 11.5 Gourmet material?
- 11.6 Conclusions
- 11.7 Table Let-1 Description of lettuce cultivars evaluated for non circulating hydroponics
- 11.8 Table Let-2 Mean yield for lettuce cultivars grown in a non circulating hydroponic system (harvested 30 days after transplanting)
- 12.0 Survey of nematodes at Watershed, Waimanalo Reservoir, and Waimanalo Farms
- 13.0 Upcoming events
- 14.0 Summer yellow squash varieties for Mississippi
- 14.1 Notice to our readers

August 1996, Vol. 6; No. 4

- 1.0 Plasticulture
- 1.1 Considering the advantages and Disadvantages of plastic mulch
- 1.2 Contents
- 1.3 Crop culture: considering specific advantages of plastic mulch
- 1.4 More on Plastic Mulch: A Few Disadvantages
- 1.5 Chemical News
- 1.6 Plasticulture considerations: Bed Preparation
- 1.7 Plastic Mulch Application
- 1.8 Product News
- 1.9 Planting and Weed Control in Plasticulture
- 1.10 Irrigation and Fertility in Plasticulture
- 1.11 Double Cropping and Yield Estimated in Plasticulture
- 1.12 More Info?
- 1.13 Opportunities for plasticulture in Organic Farming systems
- 2.0 Hydroponics corner: Aluminum does not Accumulate in Lettuce Foliage
- 3.0 Agriculture Polyethylene mulch manufacturers
- 4.0 Ag Plastics and drip irrigation: is it for us?
- 5.0 A manufacturer's Experience with disposal of plastic mulch
- 5.1 Agricultural Plastics disposal
- 6.0 Verticillium Wilt Spreading in Coastal California Cauliflower
- 7.0 USDA Honolulu County FSA Office

December 1996, Vol .6, No. 5

1.0 Ag Resources

1.1 Introduction

1.2 Contents

2.0 College of Tropical Agriculture and Human Resources (CTAHR)

2.1 Cooperative Extension Service Oahu County

2.2 Agricultural Extension Agents-Oahu

2.3 The Educational Resource Library and the Urban Garden Center

3.0 Extension Specialists

3.1 Agriculture & Resource Economics

3.2 Agronomy & Soil Science

3.3 Biosystems Engineering

3.4 Environmental Biochemistry

3.5 Entomology

3.6 Food Science & Human Nutrition

3.7 Horticulture

3.8 Plant Pathology

4.0 Other CTAHR Offices

4.1 Some Sources of Agricultural Credit

4.2 Other USDA offices

4.3 State department of Agriculture

4.4 Telephone numbers to other Hawaii Dept. of Agriculture Offices

4.5 Study Packets for pesticide certification

4.6 Hawaii Department of Health

4.7 Poison Center

4.8 National Weather service

4.9 Produce Wholesalers and retailers farm equipment Farm Chemicals Farm supplies, etc.

4.10 Leaflets available on request

4.11 Some Agricultural Organizations

5.0 Have your seen?

6.0 Chemical News

7.0 Videos available at Cooperative Extension Offices, UHM

8.0 Upcoming events

March 1997, Vol. 7, No. 1

1.0 Transplant Diseases

1.1 Vegetable seed health important to a good start

1.2 Contents

2.0 Planning ahead

2.1 Transplanters

2.2 Diseases of Vegetable Transplants

2.3 Part 2: Crucifers

2.4 Diseases of Vegetable Transplants, Part 3, Tomatoes and Peppers

2.5 Disease of vegetable transplants. Part 4: Vine Crops

2.6 Vegetable seedling Disorders

2.7 Transplant Diseases

2.8 Transplant Diseases

2.9 Treating Transplants Right

2.10 Tomato Transplant Diseases

2.11 Damping-Off of Cole Crops

2.12 Rain and Plant Disease

2.13 Seedling Diseases of Vegetable Crops

2.14 Snap Beans

2.15 Sweet Corn

2.16 Seedling Diseases of Vegetable Crops

2.17 Germination and Care of our Seedlings

2.18 Vegetable Culture and Management in a Wet year

2.19 Effect of Transplant tray type and Tomato Cultivar on the Incidence of Fusarium Crown and Root Rot in Tomato Transplants

2.19.1 Diseases that Affect Vegetables after Transplanting

2.19.2 Sterilization and Sanitation of Flats

3.0 Phomopsis on Eggplant

3.1 Phomopsis Blight of Eggplant

3.2 Seed (hot water) Treatments

4.0 Rhizoctonia

4.1 Rhizoctonia Seedling Blight

4.2 Vegetable Diseases to Watch for

4.3 Cool Weet Soils and Problems with Damping-Off Root Rots and Seed Decay

August 1997, Vol. 7, No. 2

1.0 Cucurbit Pest Control

1.1 Introduction

1.2 Seedling/ Transplant Diseases to watch for

1.3 Contents

1.4 Simple Media Mix for Growing Seedlings

2.0 Spraying Programs for Cucurbits

2.1 Anthracnose

2.2 Gummy Stem Blight (GSB)

2.3 Powdery Mildew

2.4 Downy Mildew

2.5 Fusarium and Verticillium Wilt

2.6 Alternaria Leaf Blight

2.7 Phytophthora Blight

2.8 Fruit Rots in Pumpkin

- 3.0 Poor Fruit Set?
- 3.1 Watermelon Fruit Disorder
- 3.2 Fungicide Application Programs
- 4.0 Using Systemic Fungicides
- 4.1 When to start the spraying program?
- 5.0 Watermelon Fruit Blotch (not yet detected in Hawaii, but potentially serious disease)
- 5.1 Crop rotation
- 5.2 Seed Borne Diseases
- 5.3 Cucumber varieties for Hawaii
- 6.0 Cucurbit varieties grown in Hawaii
- 7.0 Recommended Cultural Practices for Cucumber Production in Molokai
- 7.1 Curbit herbicide use guides
- 7.2 Aphid control in Curcurbits
- 7.3 Leafminer Control
- 8.0 Cutworms
- 9.0 Spider mites
- 10.0 Stinkbugs
- 10.1 Sevin label changes
- 10.2 Biocontrol notes
- 10.3 Thrips
- 11.0 Admire for Whitefly and Aphid Control
- 12.0 List of Arthropod Species found in Hawaii's Cucurbit crops
- 12.1 References
- 13.0 Resources

October 1998, Vol. 8, No. 1

- 1.0 Industry in Transition
- 2.0 CTAHR Also Adapts and Reorganizes
- 2.1 The CTAHR Vegetable Crops Extension Team
- 2.2 Vegetable CTAHR Staff Factoids
- 2.3 CTAHR Vegetable Program 1998-2003
- 3.0 Contents
- 4.0 Thrust Programs of the 5 year CTAHR Vegetable Extension Team
- 5.0 Who is Who

- 5.7 Roy Yamakawa, CES Kauai
- 5.8 John Cho, UH Manoa, Based in Kula
- 5.9 Bernie Kratky, UH Manoa-based in Hilo
- 5.10 Ron Mau, UH Manoa
- 5.11 Stuart Nakamoto, UH Manoa
- 5.12 Jim Silva - UH Manoa
- 5.13 Ray Uchida- UH Manoa
- 5.14 Hector Valenzuela - UH Manoa
- 5.15 Other Vegetable Researchers
- 6.0 Summary of Recent Vegetable Research conducted by CTAHR Faculty
- 6.1 Root Knot Nematode control in Basil
- 6.2 Fusarium control in Sweet Basil
- 6.3 Patent for simple container vegetable transplanter
- 6.4 Promising/existing chemicals for diamondback moth control in head cabbage
- 6.5 Promising chemicals for caterpillar management on Leafy Brassicas
- 6.6 Insecticide trials for Pea Leafminer control in Bulb Onions
- 6.7 Fertilizer Calibration Trials
- 6.8 Manganese Toxicity on Watermelon in former Sugar Cane Lands
- 6.9 Overcoming Taro Disease and Cultural Problems
- 6.10 Promoting the Bulb Onion Industry in the State
- 6.11 Hydroponic/Nutrition Experiments
- 6.12 Variety Trials Conducted
- 6.13 Organic farming Experiments
- 6.14 The Vegetable Industry in Hawaii: Recent Trends
- 6.15 Top Veggies, farm gate value (\$ millions) of Production
- 7.0 Perimeter screen reduces Fruit Fly damage in Zucchini Squash
- 8.0 Fruit Fly Control with "Samurai Tent"
- 8.1 Samurai Tent - Row Cover Barrier
- 8.2 No Samurai Tent Barrier
- 9.0 Miscellaneous Corner
- 9.1 Vegetarian Shoppers
- 9.2 UH Seed Program: Seed for Sale
- 9.3 US Industry Factors

April 1999, Vol, 9, No. 1

- 1.0 Organic Farming: An Overview of the Organic Farming Industry in Hawaii
 - 1.1 Contents
 - 1.2 Introduction
 - 1.3 What is Organic Farming?
 - 1.4 What is Organic Certification?
 - 1.5 Principles of Organic Farming
 - 1.6 The Certification process
- 2.0 Organic Standards for Certification
 - 2.1 Prohibited Substances
 - 2.2 Record Keeping
 - 2.3 Management Plan
 - 2.4 The Organic Market
 - 2.5 The Japan Market
 - 2.6 Barriers to Organic Farming According to a Grower Survey in the Continental U.S. Survey of Organic Farmers in the USA, 1993
 - 2.7 Organic Market Factoids
- 3.0 Organic Farming Research in Hawaii
- 4.0 Resources
 - 4.1 Certification Guidelines
 - 4.2 Resources and Educational Materials
 - 4.3 Videos Available
 - 4.4 Selected Web Sites
 - 4.5 Retail Markets in Hawaii
 - 4.51 Oahu
 - 4.52 Hawaii
 - 5.53 Maui
 - 4.54 Kauai
- 5.0 Research belief: Effect of Seaweed Organic Farming and Sustainable Agriculture
 - 5.1 Methods
 - 5.2 Results and Discussion
 - 5.3 Conclusion
 - 5.4 Literature Cited
 - 5.5 Product description provided by Distributor
- 6.0 Additional Resources
 - 6.1 Farmer References for Organic and Sustainable Agriculture
 - 6.2 Weed Control
 - 6.3 Pests, Insects, and Diseases
 - 6.4 Soil Fertility Management
 - 6.5 Managing Cover Crops Profitably
 - 6.6 General References - Organic Farming and Sustainable Agriculture
 - 6.7 Acknowledgments and Sources of Information

Glossary

- Action thresholds, 5
- Admire insecticide, 10
- Agricultural Credit, 9
- agroecosystems, 6
- air-shipment, 1
- Allelopathy, 3
- Alternaria Leaf Blight, 9
- Aluminum, 8
- Anthracnose, 9
- Antitranspirants, 1
- Aphids, 4, 10
- Appropriate Technology, 3
- Arakaki, Alton, 10
- Armyworm, 5
- arthropods, 6, 10, see insects
- Asparagus, 1, 2, 5
- Avocado, 2
- Basil, 10
- Beans, 4, 9
- Bed Preparation, 8
- Bees, 5
- Benlate, 3, 4
- beta carotene, 7
- Biofumigation, 6
- Biological control, 2, 3, 4, 5, 10. *See*
- Biological Diversity, 2
- birds as pests, 4
- Botrytis, 3
- Broccoli, 1, 6
- Cabbage, Chinese, 4, 5
- Cabbage, head, 5, 6, 10
- Calcium, 2
- Carrots, 2, 5, 6
- caterpillars, 3, 10 see lepidoptera
- Cauliflower, 8
- Celery, 2
- Composts, 4, 5, 7
- Conventional Agriculture, 2
- corn, baby, 2
- Cotton, 4
- Cover crops, 5, 11
- Cricket, 4
- Crops Statistics, 3
- CTAHR Extension Programs, 9, 10, see Extension
- Cucumber, 1, 2, 6, 10
- Cucurbits, 2, 4, 9
- Cultivar Selection, 5
- Cultivar Trials, 4
- Cutworms, 10 see caterpillars
- Daikon, 6, 7
- Damping-Off, 9
- Diamondback Moth, 3, 4, 10
- Diseases, 11
- Double Cropping, 8
- Downy Mildew, 9



Drip Irrigation, 1, 5
 Early blight, 3
 Earthworms, 2
 Eggplant, 2, 4, 5, 9
 Encarsia Formosa, 5
 Etephon, 4
 Ethrel, 4
 evapotranspiration, 5
 Extension programs, 4, 9, 10, see CTAHR
 Farm Service Agency, USDA, 8
 Farmer, endangered species, 6
 Farmers' Market, 4
 fertilizers, starter, 2
 Frozen Products, 5
 Fruit Blotch, watermelon, 10
 Fruit Fly, 10, see melon fly
 Fruit Rots, 9
 Fruit Set, 10
 Fukuda, Steven, 10
 Fungicide Application, 10
 Fungicides, pumpkin, 5
 Fusarium, 3, 10
 Fusarium Crown, 9
 ginger, 3
 grapes, 5
 Gray Mold, 3
 Greenhouse, 2, 3, 5, 8
 Growth Regulators, 2
 Gummy Stem Blight, 9
 Hamasaki, Randy, 10
 Harvest Windows, 2
 Health & veggies, 2
 Herbs, 1, 2
 hover flies, beneficial 4
 Hydroponics, 1, 2, 8, 10
 Industry Analysis, 2, 4
 Industry statistics, 10
 Insectaries, 5, 6
 Insects, 11, see arthropods
 Integrated Pest Management, 2
 Irradiation, 2
 irrigation, 5, see drip irrigation
 Japan Market, 11
 jicama, chop sue yam, 11
 Kamuela, HI, 7
 Kelp fertilizer 3
 Lace Wing beneficials, 5 see insectaries
 Landfills, 5
 Leafhopper, 5
 Leafy green vegetables, 2, 7, 10
 Leafminer, 4, 5, 10
 Leafy Brassicas, 10
 legume, 3
 Lepidoptera, 4 see caterpillars
 Lettuce, 2, 3, 4, 8
 Living Mulch, 4, 5
 Manganese Toxicity, 10
 Manure, 1, 2
 manure, green, 2 see legume
 Marketing, 2, 3, 4
 Marketing, direct, 2
 Mau, Ron, 10
 Media Mix for Seedlings, 9
 Melon, 2, 3 see cucurbits
 Melon Fly, 10, see fruit fly
 Methanol, 3
 Methyl bromide, 8
 Mites, 4, 5, 10
 Molokai, HI, 6
 monocultures, 5
 Mosaic Virus in Cucurbits, 4
 Mulch, organic, 2
 mulch, plastic, 8 see plasticulture
 Mung beans, 5
 Mushroom, 2
 Mycorrhiza, 1
 Neem Tree, 2
 Nematode control, 1- 5, 8
 nitrogen, 1-4, 6
 No-till, 1
 Olives, 4
 Onions, 1, 2, 3, 7, 10
 Organic Certification, 5, 11
 organic farming, 2, 8, 10, 11
 Organic Stores, 1
 Paddy Rice, 5
 Pepper, 1, 2, 4, 5, 7, 9
 peppers chili 3, see pepper
 Pest Controls, alternative, 1
 pesticide certification, 9
 Pesticide Exposure, 2
 Pesticide Industry, 3
 Pesticide Registration, 1
 Pesticide, consumer survey, 4
 Pests, 11
 Petiole Sap analysis, 4
 Phomopsis, 9
 Phosphorus, 4
 Phytophthora, 9
 Pinworms, 3
 plant stands, 1 see stand establishment
 Plastic Mulch, 8 see mulch
 Plastics disposal, 8
 Plasticulture, 8
 Polyethylene, 8, see mulch
 Popcorn, 3
 Potassium Silicate & disease control, 3, 4
 Powdery Mildew, 3, 9
 Pumpkin, 3, 5
 Purslane, 3
 Pythium, 1

Quarantine Regulations, 4
 Research priorities, 5, see extension & CTAHR
 Residue management, 2
 Rhizoctonia, 9
 Rodent, 2
 Root Knot Nematode, 3, 9, 10 see nematodes
 rotation, crop, 1, 10
 Salinity, 3
 Sato, Dwight, 10
 Scale Control, 4
 Seaweed fertilizer, 11
 Seed Borne Diseases, 10
 Seed Treatments, 9
 Sevin, 10
 sewage sludge, 3
 Shimabuku, Robin, 10
 Snail, golden, 2
 Soil Fertility, 11
 Soil Quality, 2
 Sorghum, 1
 Soybeans, 1, 4
 speciality products, 1
 Spinach, 1
 Spotted Wilt Virus (TSWV), 1, 4
 Squash, 3, 5, 8 see zucchini
 Squash, yellow, 8
 stand establishment, 1, 7
 Stink bugs, 3, 5, 10
 Strawberry, 1, 4, 5
 Sugar Cane, 10
 Sustainable Agriculture, 2, 7
 Sweet Corn, 3, 9
 Sweetpotato, 2, 3, 4, 5, 6, 7
 sweetpotato Weevil, 2, 7
 Taro, 2, 3, 10
 Tensiometers, 5
 Terminal Markets, 4
 Thrips, 1, 2, 5, 6, 10
 Time Management, 2
 Tipburn, 2, 4
 Tomato, 1, 2, 3, 4, 5, 9
 Tomato mottle virus, 3
 Transplants, see vegetable transplants
 Transplant Diseases, 9
 Transplanters, 4, 9, 10
 Transportation, 3
 Turnip Mosaic virus, 4
 Value Added, 2
 Variety Trials, 10 see individual crops
 Vegetable Transplants, 9
 Vegetarian Shoppers, 10
 Verticillium wilt, 6, 9
 Videos available at UH, 9
 Volcano, HI, 5, 7
 Watermelon, 1, 4, 5, 10
 Weed Control, 1, 8, 11

Weed Control, wetlands, 5
 White Rot, 3
 whitefly, 1-5, 8, 10
 wholesaler's expectations, 4
 Wholesalers, 9
 Women in Agriculture, 1
 Yamakawa, Roy, 10
 Zucchini, 6, 8, 10, see squash

Resources

CTAHR For Charge Publications

Bulb Onion Production in Hawaii (1999).
 (R. Hamasaki, H.R. Valenzuela, and R. Shimabuku, editors).
 52 pp. Cost, \$10, plus \$3 for shipping/handling.

Growing Dendrobriums in Hawaii
 Production and Pest Management Guide
 96 pp., Cost, \$19 plus \$3 for shipping.

Taro, Mauka to Makai
 \$14, plus \$4 for shipping.

Make check or money orders, payable to RCUH, and send to:
 CTAHR-PIO
 3050 Maile Way, Gilmore Hall #119
 Honolulu, HI 96822-2279
 Tel. 808-956-7036
Ctahrpub@hawaii.edu

For free CTAHR publications on the internet Go to:
<http://www2.ctahr.hawaii.edu/oc/freepubs/index.asp>

Vegetable Research Reports

(For a copy please contact your local county extension agent or Hector Valenzuela (tel. 808-956-7903, fax. 808-956-3894, or hector@hawaii.edu)

1. Specialty Tomato Variety Trials, Poamoho, 1999.
2. Specialty Eggplant Variety Trials, Waimanalo, 1999.
3. Trellised cucumber Variety Trials, Poamoho, 1998.
4. Bush bean variety Trials, Waimanalo, 1998
5. Lettuce and Leafy greens hydroponic and field variety Trials, Oahu 1995-1999.
6. Bulb onion Variety Trials, Maui, 1997 & 1998.