Vegetarian Newsletter
A Vegetable Crops Extension Publication

University of Florida
Institute of Food and Agricultural Sciences
Cooperative Extension Service

Vegetarian 00-02
February 2000

VEGETABLE CROPS CALENDAR

COMMERCIAL VEGETABLES

• Specialty Crops & Specialty Markets Session
• Potato Variety Trial Results, Hastings, Fla., 1999

VEGETABLE GARDENING

• Book Review: Vegetable Gardening in Florida
Vegetable Crops Calendar

2000 Florida Postharvest Horticulture Institute and Industry Tour.
Institute - March 6th, University of Florida, Gainesville, with video-links to several sites in Florida.
Industry Tour - March 7-10th Statewide
For more information contact: Steve Sargent, (352) 392-1928 ext. 215, e-mail or Abbie Fox (352) 392-1928 ext.235, fax (352) 392-5653, e-mail

Commercial Vegetable Production

Specialty Crops & Specialty Markets Session

(The following is abstracted from Suwannee Valley Field & Greenhouse Grower’s Short Course & Trade Show which was held Jan. 8, 2000)

A. So You’re Thinking About Growing for the Restaurant Market?

1. Betty O’Toole, O’Toole’s Herb Farm (growers’ perspective)

Who we are:

About 10 years ago, they decided they wanted to go back to the family farm (150 years in the family), always liked herbs.

Didn’t have an idea of how much work was involved.

Spent 2 years preparing: checked with Better Business Bureau, seed companies, herb growers, nurseries, Extension agents, upscale restaurants (what they used, sources, organic?).

Found most restaurants weren’t using local sources.

Determined to make it work.
Jim Wilson, Victory Garden, Callaway South was best source of knowledge.

Became FOG (Florida Organic Growers) certified before doing anything organic.

Had time to get ready for organic herb production.

**What we do:**

No down time (a good day is a rainy Sunday morning so only have to check the greenhouses, no field work that day).

Fresh-cut retail and potted plants.

Workshops in Fall and Spring.

January is "slow time" to inoculate Shiitake logs, and get ready for Spring production.

Spring is busiest time, but work 7 days a week, 12 months a year. Cannot leave the farm for a day without someone tending the crops.

Pulled in all directions, but have a more positive cash flow than traditional cash crop farming.

**How we got there:**

Unique to each farmer’s situation, but determined to make it work.

2. **Keith Baxter, Owner & Chef, Kool Beanz Café (chef’s perspective)**

**Opportunities:**

- fresh herbs
- lettuces

Chef has to see, touch, feel, taste
Chef has to be educated about seasonality of supply

**Restaurant people are unique:**

- extremely busy, work long hours
- transient
• some kitchen help is not trained/knowledgeable about products, especially unique products such as herbs, etc.
• challenge is to educate & communicate with kitchen staff and chefs, ex. Arugula and basil seasonality and supply.

Farmers:

• Bringing bags of expensive things that the chef can’t use, just show up, don’t develop relationship, just expect chefs to buy product, example squash blooms.

Talk with chef:

• show samples
• ask chef what he needs before you even plant (ex. restaurant customers now ask for Kool & Krazy Greens)
• build a relationship

The reason Baxter continues to buy from the O’Tooles for the last five years is because:

• Consistent delivery, etc.
• Good product
• Timely
• This means a lot to Baxter and that’s why he is loyal to O'tooles in spite of the competition.

Key = Balance between knowing/deciding:

• What to grow
• How much you are capable of growing
• Finding someone to buy what you produce.

In closing:

• Jacksonville is growing, with top notch restaurants & chefs probably looking for good product. Find the people who want it.

B. Alternative Hydroponic Systems & Specialty Crops Trials

(Producing crops out of normal season with alternative technology emphasis)

*Bob Hochmuth*, Multi-county Vegetable Extension Agent

*(Field production emphasis)*
Example: Difficulty in growing basil in February & lettuce in summer, (trying to come up with alternative ways of producing crops out of normal Florida season).

1. White Mulch, Late Season Lettuce Trial Results (see Fig. 1).

- Rated bitterness (1-5) with 3 too bitter for normal sales, > 3 unacceptable
- Bitterness taste-tested at mid-June, 1999 harvest
- Results:
  - Loose leaf types: Two Star only acceptable variety.
  - Dark Green and Red varieties too bitter.
  - Butter Crunch & Bibb types: Ermosa, Carmona, Red Rouge acceptable varieties.
  - Oakleaf types: Cerize (good), Salad Bowl (good), Red Salad Bowl (o.k.).
  - Romaine types: low bitterness but atypical growth habit, small "button".

![Fig.1. Lettuce trial](image-url)

Detailed information (Lettuce cultivars for warm seasons) available at: http://ntrec-sv.ifas.ufl.edu/south_g.htm

2. Ornamental Corn

- Too many pests to grow in Fall, can’t compete with Northeast.
- Plant on plastic and drip in Spring, Calico and Fiesta better varieties with 8 to 9 inch ears. (better yields, about 10,000
ears/acre at 50 cents/ear = potential gross revenue of $5,000/acre.
• Longer dry-down period during Spring, less pests, need to work on storage pest management.
• Can sell stalks as well as ears.

3. Organic Production in Verticulture

• Pelletized composted poultry manure.
• Vertigro: manure in top container, rest of system automated drip irrigation with plants in perlite (see Fig. 2).
• Grow Bag culture.

4. Conventional Production in Grow Bag System (Bradford County on-farm trial):

• 12 month production - strawberries (see Fig. 3) & leafy greens & onions followed by Okra.
• Total revenue as much from leafy greens (see Fig. 4) & okra as from strawberry production.

5. NFREC - Suwannee Valley Tour:

• To demonstrate organic, mulch, re-cycled gypsum, strawberry cultivars, specialty cool season crops, with more information at http://nfrec.ifas.ufl.edu/svrec_vg_trials.htm

![Strawberries in grow bags.](image)
C. Lei Lani Leon, NFREC - Suwannee Valley Lab Technician

(hydroponic& greenhouse alternative crops & systems emphasis)

1. Basil variety trial (Vertigro system)

- **Italian long leaf**, more stemmy.
- **Genevive**, more typical large Italian sweet basil
- **Purple Ruffled**, anise/licorice scent, will turn green when processed
- **Mammoth**, anise scent
- **Genovese Compact**, first choice for system, very leafy
- **Osmund**, floral scent

2. Basil profit projection
• Example of basil yields of about 8 ounces/plant, 16.5 pounds/tower in a 16 week period potential of $135/tower during scarce fresh basil period. (SVAREC 99-6 report has more information.)

3. Towers

• **Thyme** (normally slow grower) has taken off in this system.
• **Lettuces**, new red varieties look great.

(See Fig. 5)

Fig. 5. Towers system.

More information on greenhouse specialty crop trials 1999-2000 season is available at [http://nfrec-sv.ifas.ufl.south.gh.htm](http://nfrec-sv.ifas.ufl.south.gh.htm)
Outdoor hydroponic specialty crop production covered at tour of SVAREC, more information available at [http://nfrec-sv.ifas.ufl.edu/hydro_trial.htm](http://nfrec-sv.ifas.ufl.edu/hydro_trial.htm)

*(Jacque Breman, Union County Ext. Dir., Vegetarian 00-01)*

**Potato Variety Trial Results, Hastings, Fla., 1999**

One hundred and thirty entries were evaluated in five trials at the Hastings-REC in 1999. The lines were grouped by type and/or color. One of these trials is reported here.

The trial was grown in an Ellzey fine sand composed of 90-95% sand, <2.5% clay, <5% silt, <2% organic matter, and pH 6.8. The field was fumigated with 6 gal/A in-the-row (40 in. row spacing) of Telone® II (1,3-D) on December 10, 1998, and 20 lb/A of Temik® 15G (aldicarb) was applied at planting on February 10, 1999. The crop was seep fertilized with 1200 lb/A of a 14-2-12 at planting and 700 lb/A of the same analysis fertilizer on March 17. The crop was irrigated as needed. Variety treatments were replicated four times in a randomized block design. Plots were single 15 ft long rows with 22 seed pieces weighing 2-2.5 oz planted 8 inches apart. Lexone® DF was applied at 1.25 lb/A for weed control on March 3. Pesticides applied included Bravo Ultrex® (chlorothalonil) at 1.25 lb/A on April 2; Tattoo C® (50% propamocarb HCl + 50% chlorothalonil) at 37 oz/A on April 9; Manzate 200 DF® (mancozeb) at 1.5 lb/A on April 15, 22, 29, and May 5; Dipel DF® plus Latron B 1956® at 2.0 lb/A and 1.0 oz/A, respectively, on April 15, 22, 29, and May 5; Dithane DF® (mancozeb) at 1.5 lb/A and Biobit HP® (*Bacillus thuringiensis*) at 2.0 lb/A on May 12. Emergence counts were taken March 9, 16, 23, and April 1. Plant senescence was rated with 1 = vigorous and 10 = dead. The crop was harvested, washed, graded, sized, and weighed June 1, (111 days after planting). Random samples of 15-20 "A-size" tubers were taken for specific gravity determinations and tuber quality assessments. Specific gravity was determined using the weight-in-air/weight-in-water method. Appearance of tubers in a composite sample of each line was rated using the NE 184 project rating scheme. Tuber skin color, texture, shape, eye depth, and appearance were rated. Tubers were cut to examine for hollow heart, internal necrosis, corky ring spot, and brown rot. Selected data are reported in [Table 1](#). For a complete report, request Res. Rept. SAN 2000-11

Maranca, a relatively small cream color potato, had the highest marketable yield with 461 cwt/acre of which 78% were in the 1½ to 2½ inch size. Nine cream to yellow-flecked potato lines were included in the trial and were the top 5 in yield. Saginaw Gold was the only one in the top 5 with an appearance rating of good. There were 16 red potato entries with Rideau, Chieftan, Red LaSoda (USDA), and B1758-4 having the highest marketable yields. B 1758-4, B1145-2, B0817-4, and Redsen had an appearance rating of good. Five white lines were included in
the trial with Sebago and LaChipper having the highest marketable yields, but only poor to fair and fair, respectively, in appearance. Five purple lines were evaluated (Table 1). B1529-1 had the highest marketable yield, a good appearance, was moderately netted, mostly oblong, and deep eyes.

Table 1. Yield, size, specific gravity and general appearance data of potato varieties in the red and yellow trial, Hastings, FL, 1999.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Yield (cwt/A) No. 1</th>
<th>% Size distribution</th>
<th>Specific gravity</th>
<th>Skin color</th>
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<tr>
<td></td>
<td></td>
<td>No. 1</td>
<td>B</td>
<td>1f - 2½&quot;</td>
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<tr>
<td>Maranca (cream)</td>
<td>461 a</td>
<td>83</td>
<td>7</td>
<td>78</td>
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<td>Yukon Gold</td>
<td>392 b</td>
<td>93</td>
<td>2</td>
<td>73</td>
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<td>MSE149-5Y</td>
<td>385 b</td>
<td>93</td>
<td>3</td>
<td>67</td>
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<tr>
<td>Saginaw Gold</td>
<td>349 bc</td>
<td>94</td>
<td>3</td>
<td>88</td>
</tr>
<tr>
<td>Columbo</td>
<td>348 bc</td>
<td>85</td>
<td>5</td>
<td>79</td>
</tr>
<tr>
<td>Rideau (red)</td>
<td>338 cd</td>
<td>91</td>
<td>3</td>
<td>67</td>
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<tr>
<td>Chieftan</td>
<td>334 c-e</td>
<td>87</td>
<td>3</td>
<td>81</td>
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<tr>
<td>Red LaSoda (USDA)</td>
<td>329 c-f</td>
<td>83</td>
<td>4</td>
<td>64</td>
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<tr>
<td>B1758-4</td>
<td>319 c-g</td>
<td>87</td>
<td>10</td>
<td>87</td>
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<tr>
<td>Sebago</td>
<td>315 c-h</td>
<td>89</td>
<td>3</td>
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<td>LaChipper</td>
<td>310 c-i</td>
<td>91</td>
<td>3</td>
<td>76</td>
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<td>Column 3</td>
<td>Column 4</td>
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<tr>
<td>B1758-3</td>
<td>308 c-i</td>
<td>86</td>
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<tr>
<td>Red LaSoda</td>
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<td>91</td>
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<td>Norland</td>
<td>301 d-i</td>
<td>91</td>
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<td>B1425-9</td>
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<td>B1529-1</td>
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<td>(purple)</td>
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<tr>
<td>Sinora</td>
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<td>Norland</td>
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<td>86</td>
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<td>75</td>
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^2 No. 1 consists of sizes 1f to >3" of marketable quality
^3 Mean separation in columns by Duncan's multiple range test, 5% level.

(White and Weingartner, Acting Ctr. Dir. - Hastings REC, Vegetarian 00-02)

**Vegetable Gardening**

**Book Review: Vegetable Gardening in Florida, by Brent Rowell**

The following is a review of my book, *Vegetable Gardening in Florida*. The review was written by Brent Rowell of the University of Kentucky in Lexington for the January-March, 2000 issue of HorTechnology, a publication of The American Society for Horticultural Science.

The most important disclosure of the review is that the book, *Vegetable Gardening in Florida*, would make a useful reference not only in Florida, but for gardeners and gardener advisors everywhere in the USA.


Working with commercial vegetables and living far from the balmy subtropical realms of Florida, I didn’t respond over enthusiastically when asked to review *Vegetable Gardening in Florida* by James M. Stephens. I was pleasantly surprised to learn that 95% or more of the information in the book is applicable to gardening in general and that it was written by someone with a solid career’s worth of commercial and gardening experience with vegetable crops.

Far from a chore, this turned out to be an easy assignment as the book is very well written with good quality color photographs and/or color artwork on every page. A lot of thought went into the design of the book; it has just the right combination of photographs, text, and white space to make it easy to use without patronizing the reader.

The book assumes nothing and is suitable for everyone from the beginner to the master gardener. Most of the technical jargon has been eliminated or carefully explained. The author even goes the extra mile in explaining some old garden terminology that is often confusing to new gardeners. For example, he explains planting in hills vs. rows and raised beds. This brings back memories of 25 years ago as an undergraduate trying to fathom why planting in hills may never involve raised mounds of earth.

*Vegetable Gardening in Florida* is logically arranged into 15 chapters on gardening principles and techniques followed by a long chapter with brief treatments of individual vegetables, a mandatory chapter on herb production, and a final chapter on harvesting, storage, and exhibiting produce. Specifics on yields, seed requirements, variety selection, and Florida planting dates are conveniently located in tables (Planting Guides) at the end of the book.

Together with the usual gardening topics, readers will find chapters on *Alternative Gardening*, including a brief treatment of organic gardening and a fairly detailed discussion of hydroponic gardening.

Many topics of interest to organic gardeners are also found in other chapters like *Garden Insects* or *Organic Matter* which discuss the use of animal manures, cover crops, and composting. I would have like to see more detailed information on the use of trickle irrigation in the home garden. Many gardeners I know get confused by our commercial trickle irrigation publications and would like to have the (simple) plumbing laid out in detail. The only other suggestion might be to include more of the newer disease-resistant commercial hybrids in the table of recommended garden varieties.

All of the vegetables we’re familiar with are included in the Individual Vegetable Crops section plus many others may be limited to gardens in the tropics and
subtropics. Not many of us will be growing cassava, jicama, or malanga, for example; on the other hand, most extension agents and specialists do get questions about tropical vegetables from time to time, and the information provided here should be helpful.

This is a far cry from the black and white (can I say boring?) gardening extension publications that many of us are accustomed to. This book should be out there competing on the shelves with other high quality gardening books from major publishers. It offers more good information than most and is certainly more bang for the buck. There are important differences in this book and the popular competition. This is a book you can trust. The information presented is solid, science-based, and without the fluff and mythology often included at no extra charge in popular books on vegetable gardening.

*Vegetable Gardening in Florida* is highly recommended to the general public anywhere in the country and especially to extension agents for reference of for use in their Master Gardener programs.

*(Stephens, Vegetarian 00-02)*

**Extension Vegetable Crops Specialists**

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John Duvall  
Assistant Professor, strawberry

Betsy M. Lamb  
Assistant Professor, production

Yuncong Li  
Assistant Professor, soils

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Professor, varieties

Stephen M. Olson  
Professor, small farms

Mark A. Ritenour  
Assistant Professor, postharvest

Ronald W. Rice  
Assistant Professor, nutrition

Steven A. Sargent  
Professor, postharvest

William M. Stall  
Professor, weed control

James M. Stephens  
Professor and Editor, vegetable gardening

Charles S. Vavrina  
Associate Professor, transplants

James M. White  
Associate Professor, organic farming