MARKET GARDENING: A Participatory Primer Course

Part #6: Food Safety; Regulations

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Outline

• Short Review of Course Syllabus

• Food Safety Concepts and Guidelines

• Regulations
Market Gardening Course Topics Sequence

• #1: Introduction
• #2: Holistic Management
• #3: Business and Marketing Plans
• #4: Production Systems & Planning
• #5: Equipment and Tools; Post Harvest Handling
• #6: Food Safety; Regulations
• #7: Farmers Markets
• #8: Financial Resources & Management
Food Safety

- Fresh produce of fruits & vegetables is part of a healthy diet …

- Food safety requires everyone to use smart management of growing and post-harvest activities . . .
Market Garden Food Safety

Production

Harvesting

Processing for Direct Marketing
Food Safety

• What is Food Safety?
  – Holistic Perspective Definition
    • Pesticide residues & contamination
      – Chemical body burden
    • Environmental pollution impacts
      – Farmer and family
      – Farmworkers
      – Biodiversity
      – Ecosystems
    • Nutrition aspects
      – Genetically modified crops
      – Irradiation treatments
    • Pathogen contamination

• Around 700 types of contaminants identified in fatty tissues of average person. Pregnant & nursing women pass them to children . . .
  - Chemical Body Burden.org

• FDA approves irradiation of fresh spinach and iceberg lettuce in an attempt to kill E. coli O157:H7 and other bacteria that cause food-borne illnesses - Aug 21, 2008

• USDA Approves Irradiated Meat for National School Lunch Program - May 29, 2003
Food Safety

• What is Food Safety?
  – Food Safety Regulatory and Food Industry Perspective Definition = TODAY’S TOPIC!
  • Pathogen Contamination Focus
  • Activities Focus
    – Production
    – Post-harvest
    – Processing
  • Onfarm Food Safety Plan Focus
What are foodborne illnesses?

- Diseases/illness that are transmitted to humans by food contaminated by different pathogens
Food Safety

Types of Pathogen Foodborne Illness

• **Toxin-mediated foodborne infection**
  – illness is caused by toxin produced by a pathogen infection (e.g., *Clostridium perfringens*)

• **Bacterial intoxication**
  – illness is caused by toxins produced by pathogen in food prior to the consumption (e.g., *Clostridium botulinum; Staphylococcus aureus*)

• **Foodborne infection**
  – pathogen growth in our body after ingestion of contaminated food (e.g., *Salmonella; Listeria*)
Food Safety

• Human Host Susceptibility Factors

✓ Very young = Immature immune system

✓ Very old = Aging immune system

✓ Chronically ill = Impaired immune system
Food Safety

• Today’s foodborne illnesses result from a complex interaction of
  ❖ pathogens
  ❖ people
  ❖ food production & distribution systems
Food Safety

**Food Safety Regulators**

**Federal Level (13 Food Safety Agencies)**
- Cooperative State Research, Education, & Extension Services (CSREES)
- Agricultural Research Service (ARS)
- Economic Research Service (ERS)
- Animal & Plant Health Inspection Service (APHIS)
- Agricultural Marketing Service (AMS)
- Food and Drug Administration (FDA)
- Food and Nutrition Service (FNS)
- Centers for Disease Control and Prevention (CDC)
- National Institute of Health & Human Services (NIHHS)
- Environmental Protection Agencies (EPA)
- National Marine Fisheries Service (NMFS)
- Grain Inspection, Packers & Stockyards Administration (GIPSA)

**State of Florida (3 Food Safety Agencies)**
- Dept. of Agriculture and Consumer Affairs (FDACS), Div. of Food Safety
- Dept. of Health
- Dept. of Business & Professional Regulation, Div. of Hotels & Restaurants
FL Food Safety Regulatory Agencies

✓ The Florida Department of Business & Professional Regulation (F-DBPR or DBPR)
- Regulates restaurants, theme park food carts, caterers, vending machine (with potentially hazardous foods), mobile food carts, food booths at festivals, carnivals and fairs.

✓ The Florida Department of Health (FDH)
- Regulates public and private schools, childcare facilities, institutions (hospitals, nursing homes, community based facilities, etc.), fraternal and civic organizations, bars and lounges, theaters, mobile units and DOH permitted facilities.

✓ The Florida Department of Agriculture and Consumer Services (FDACS or DACS)
- Regulates retail food stores, including supermarkets, grocery stores, convenience stores, warehouses, processors in addition to minor food outlets, and mobile food units/semi-permanent vendors that limit their sells to prepackaged foods/beverages and or preparation of drinks, popcorn and bakery items. • Food processing facilities including seafood processing, bakeries, fresh sprouts and fresh juice producing facilities.
Food Safety

Potential Sources of Pathogen Contamination of Produce Can Be Easily Tabulated

• **Production factors**
  – Environment
  – Soil/improperly composted manure
  – Animal/human waste
  – Wildlife
  – Irrigation water

• **Post-harvest factors**
  – Ingredients (raw, fresh-cut produce)
  – Packaging materials
  – Processing aids (air, water, ice)
  – Facility environment
  – Food contact surfaces
  – Produce/Food handlers
However, These Sources Can Be Very Difficult to Separate!
Food Safety

• How Big is this Issue?

Statistics of Foodborne Illness in the USA

• Centers for Disease Control and Prevention (CDC) estimates 76 million cases of foodborne illness annually
• This includes 325,000 hospitalizations and 5,000 deaths
• 14 million cases caused by known pathogens and 62 million cases by unknown pathogens

Mead et al., 1999 and CDC, 2004
Food Safety

69 Produce Outbreaks 1996-2006 by Commodity

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes</td>
<td>12</td>
</tr>
<tr>
<td>Lettuce</td>
<td>14</td>
</tr>
<tr>
<td>Romaine lettuce</td>
<td>4</td>
</tr>
<tr>
<td>Mixed lettuce</td>
<td>1</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1</td>
</tr>
<tr>
<td>Spinach</td>
<td>2</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>7</td>
</tr>
<tr>
<td>Melons</td>
<td>2</td>
</tr>
<tr>
<td>Honeydew melon</td>
<td>2</td>
</tr>
<tr>
<td>Squash</td>
<td>1</td>
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<tr>
<td>Green onions</td>
<td>3</td>
</tr>
<tr>
<td>Parsley</td>
<td>2</td>
</tr>
<tr>
<td>Basil</td>
<td>4</td>
</tr>
<tr>
<td>Basil or Mesclun</td>
<td>2</td>
</tr>
<tr>
<td>Green grapes</td>
<td>1</td>
</tr>
<tr>
<td>Mango</td>
<td>2</td>
</tr>
<tr>
<td>Raspberries/berries</td>
<td>6</td>
</tr>
<tr>
<td>Snow Peas</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: FDA CFSAN

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
1998-2006 Produce Outbreaks

- 5 commodity groups make up >75 percent of produce related outbreaks

<table>
<thead>
<tr>
<th>Commodity</th>
<th>% produce outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce/leafy greens</td>
<td>30%</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>17%</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>13%</td>
</tr>
<tr>
<td>Herbs (Basil, parsley)</td>
<td>11%</td>
</tr>
<tr>
<td>Green onions</td>
<td>5%</td>
</tr>
<tr>
<td>Total % of 5 top commodities</td>
<td>76%</td>
</tr>
</tbody>
</table>
FDA can shut down an entire industry

Fresh bunched spinach shipments: September-October 2006

Food safety then is everyone’s concern – both big and small food production
History of FDA & USDA Responses to Recent Food Safety Events

• **FDA, 2004**: Produce safety from production to consumption: 2004 Action Plan to Minimize Foodborne Illness Associated with Fresh Produce Consumption.  
  [http://www.cfsan.fda.gov/~dms/prodpla2.html](http://www.cfsan.fda.gov/~dms/prodpla2.html)

• **FDA, 2007**: New guidance for safe production of fresh-cut fruits and vegetables: [http://www.cfsan.fda.gov/~dms/prodgui2.html](http://www.cfsan.fda.gov/~dms/prodgui2.html)

• **FDA, 2006**: Lettuce Safety Initiative  
  [http://www.cfsan.fda.gov/~dms/lettsafe.html](http://www.cfsan.fda.gov/~dms/lettsafe.html)

• **FDA, 2006**: Guidelines for the Fresh Tomato Supply Chain  
  [http://www.cfsan.fda.gov/~dms/tomatsup.html](http://www.cfsan.fda.gov/~dms/tomatsup.html)

• Industry initiatives – CA, AZ 3,000 growers calling for mandatory GAP (Food Protection Report, **Nov.2006**, 22(11)).  
  [www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt](http://www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt)
FDA/USDA Responses (con’t)

• **USDA, May 31, 2006.** Requirement for GAP verification for all fresh products supplied to USDA programs beginning **July 1, 2007** with voluntary audits beginning July1, 2006. Suppliers meeting GAP verification listed on USDA GAP/GHP website.

• **CSPI, Citizen Petition, November 15, 2006.** Urging FDA to issue standards and regulations to ensure safe food production of fresh fruits and vegetables. Requesting mandatory hazard control programs for farms and processors in the GAP areas such as manure, water and sanitation.

• **California legislation, February 2, 2007** – Leafy green vegetables

• **CA Department of Food and Agriculture, February 7, 2007** – Leafy Green Marketing Agreement – inspection program for handlers of leafy greens certified by CDFA.

[www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt](www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt)
FDA/USDA Response (con’t)

• **FDA, June 12, 2007.** Tomato safety initiative to reduce tomato-related foodborne illnesses due to *Salmonella*. To begin with VA farms and packing facilities as to degree implement GAP and GMP’s.

• **FDA, September, 2008.** Original guidance document revisited for updating in response to 10 years of outbreaks.

• **Food Safety Enhancement/Modernization Acts 2009.** Proposed, House and Senate. Incorporates all food products. Proposed requirement for food safety plans and/or standards for fresh produce.

• **FDA, 2/23/2010:** Request for comments on preventive controls for fresh produce

[www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt](http://www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt)
FDA Food Modernization Act of 2010

New Food Safety Standards and Regulations: Impact on the Produce Industry at all Scales of Production

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Some Key Expectations

• Registration and re-registration
• Produce Safety Standards – GAP/Food Safety Plan at Harvest: High risk foods?
• Preventive Control Food Safety Plans for processors, wholesalers and distributors (HAACCP-type)
• **Flexibility for small farmers and businesses**
• Food defense as part of plan
• Records
• Traceability provisions
• Impact at retail – FDA reportable food registry
• FDA Mandatory recall authority
• Other – Importer accountability, inspections, 3rd party etc.

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Produce Safety Standards

- Address growing, harvesting, sorting, packing/storage
- Science-based minimum standards for
  - Soil amendments
  - Hygiene
  - Packaging
  - Temperature controls
  - Animals
  - Water
- High Risk Produce - prioritize

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Produce Safety Standards - Timeline

- Proposed rule = 1 year
- Final rule = 1 year
- Phase in for Farmers
  - Large farms - immediately
  - Small farms – 1 year from regulations
  - Very small farms – 2 years from regulations
- What will the standards look like
  - Some kind of food safety plan, based on GAP

www.uri.edu/ce/ceec/food/documents/Intro_GAP_202011.ppt
Preventive Controls – HACCP-type

- Hazard evaluation for reasonable biological, chemical, physical, pesticide etc. hazards - written
- Include bio-security issues
- Implement preventive controls to prevent, minimize or eliminate hazard - CCP
- Includes sanitation, training, recalls, GMPs etc.
- Monitor controls, Corrective Actions, Records, Verification steps to make sure plan working

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Preventive Controls – Timeline

- Proposed rule = 9 months
- Implementation = 1.5 years
- Large farms = immediately
- Small farms = 6 months from effective regulation date
- Very small farms = 18 months from effective regulation date

- What will the FDA regulations look like?
  - Seafood HACCP and Juice Regs

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Flexibility for Small Farmers

• **Produce safety standards**
  - 3 yr average sales < $500,000 **ALL** food
  - Distribution intrastate or within 275 mi. radius
  - Majority distribution end-users e.g. directly to customers, restaurants or retail food (NO distributors)
  - Product label: name/place business, if no label provided through placard at a retail, for example
  - Exemption can be withdrawn by FDA with reason of contamination

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Flexibility for Small Businesses

• Preventive Controls/Food Safety Plans
  – Exclusions:
    • FDA must define small and very small business
    • Warehouses storing raw agricultural commodities for further processing
    • Facilities subject to produce safety standards
    • Processors subject to other HACCP regulations
    • Dietary supplements
    • Alcohol-related facilities
Flexibility for Small Businesses

- **Preventive Controls/Food Safety Plans**
  - Exemptions (still must register)
    - 3 yr average sales < $500,000 **ALL** food
    - Distribution intrastate or within 275 mi. radius
    - Majority distribution end-users e.g. directly to customers, restaurants or retail food (NO distributors)
    - Product label: name/place business, if no label provided through placard at a retail, for example
    - **Must document applying controls or in compliance with other state, local requirements**
  - Exemption can be withdrawn by FDA with reason of contamination

[www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt](http://www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt)
But......

Buyers Requirements:
Food safety applies to all sizes!

www.uri.edu/ce/ceec/food/documents/Intro_GAP_%202011.ppt
Food Safety For Market Gardens

Good Agricultural Practices (GAPs)

• a set of recommendations that can help improve the quality and safety of the produce grown
• can be adapted and/or incorporated into any production system
• focus on four primary components of production and processing: soil, water, hands, and surfaces
• develop a food safety plan for your operation as a roadmap for actively reducing risks that may jeopardize product safety

Benefits of a Food Safety Plan
• Provides operational roadmap for food safety risk reduction
• Offers mechanism for monitoring effectiveness of changes to improve product safety and quality
• Provides structure through which assessment of an operation can occur
• Creates a documentation process to verify production and processing changes
• Serves as a reference for all employees during training and throughout the season

National GAPs Educational Materials Cornell University
Food Safety For Market Gardens

Farm Food Safety Plan/Manual

Online Resources

• USDA On-Farm Food Safety Project
  http://onfarmfoodsafety.org/

• National GAPs Educational Materials Cornell University
  http://www.gaps.cornell.edu/gapsd/EdumtrlsEng.html

• Primus Labs online manual
  www.primuslabs.com
Food Safety For Market Gardens

**USDA On-Farm Food Safety Project**
- A free and voluntary online tool for a comprehensive food safety program developed for small & mid-scale farmers, especially for selling into wholesale markets.
- To generate a food safety plan using the tool, a producer must answer a series of questions online -- on a variety of areas, including worker health and hygiene, previous land use, pest control, packinghouse activities, and product transportation.
- Provides the following technical assistance:
  - onfarm safety plans
  - training program for employees
  - record keeping tools to document a food safety program
  - preparation for GAP certification
Food Safety For Market Gardens

USDA On-Farm Food Safety Project - Background

- Coordinated by USDA “Know Your Farmer, Know Your Food Program” to support safe local foods direct markets
- Developed with funding from USDA’s Risk Management Agency (RMA)
- Supported by large buyers, which usually require GAP food safety certification, including, Compass Group, SYSCO, and Chipotle Mexican Grill
Food Safety For Market Gardens

USDA On-Farm Food Safety Project
* How to Get Food Safety Certified *

Step 1: DEVELOP A FOOD SAFETY PLAN

Step 2: IMPLEMENT THE PLAN

Step 3: THE FOOD SAFETY AUDIT
P.A.C.E. Principles = Approach

• Taken from UF/IFAS interactive training program ‘Small Farm Food Safety: Fresh Produce’ which introduces food safety concepts as applied to fresh produce.

• Based on small farm application of FDA’s Guide to Minimized Microbial Food Safety Hazards for Fresh Fruits and Vegetables (FDA-GAPs).

• Each letter in PACE represents an important idea for reducing microbial contamination.

• Current technologies cannot eliminate all potential food safety hazards associated with fresh produce that will be eaten raw.

• Therefore, aim is for risk reduction, not risk elimination.
Food Safety For Market Gardens

• P.A.C.E. Principles

Keep P.A.C.E. with safe handling practices on your farm!

Prevention
Accountability
Control
Education
**Prevention--**
Preventing microbial contamination is always superior to corrective action!

**Control--**
It is important to understand what aspects are under your control and that you should attempt to expand that control whenever possible to ensure reasonable safe and healthy produce.

**Accountability--**
You are accountable for all inputs, processes and production on the farm and must be prepared for all the responsibility that comes with it!

**Education--**
Everyone who is involved with your production and distribution--employees, volunteers, family and consumers--needs thorough training on safe food handling practices.
Food Safety For Market Gardens

P.A.C.E. Principles – Videos

- UF/IFAS interactive training program ‘Small Farm Food Safety: Fresh Produce’
  - Video #1 – “In The Field”
  - Video #2 – “The Packing Shed”
  - Video #3 – “In The Truck”

http://edis.ifas.ufl.edu/fy966
Food Safety For Market Gardens

P.A.C.E. Principles – Example Tools

• Farm Activities Map
  - illustrate the physical characteristics of your market garden operation
  - identify potential contamination points in your market garden operation

• Food Safety Plan
  - list the most important food safety practices to teach workers in order to avoid potential hazards of pathogen contamination

Sample Food Safety Plan

Steps 1-2. While assessing your storage facility, you identify the cold storage temperature as a potential risk of promoting bacterial growth.

Step 3. Measuring and recording the temperature routinely is a way of monitoring this risk.

Steps 4-5. Start monitoring and recording temperatures. This is a modification that easily can be implemented with minimal expense and time commitment.
Food Safety For Market Gardens

- Farm Activities Map Example
- Identify Hazards And Solutions At Each Station

1. Surface Water Source for Irrigation
2. Overhead Irrigation Piping
3. Unmanaged Forest
4. Compost Heap
5. Vegetable Wash Station
6. Citrus Grove

http://edis.ifas.ufl.edu/fy969
P.A.C.E. Principles – Example Guidelines

- **Production Activities**
  - only use well-composted manure and isolate treatment areas away from fresh produce fields.
  - the quality of water contacting edible portions of a plant must be high and the water should be tested for bacteria, protozoa and viruses. Water applied to crops for other purposes (frost protection and pesticide application) must also come from a safe source.
  - proper hygiene procedures should be established and included in hygiene and health training programs of all employees.
  - keep records of safe fertilizer, watering and site selection procedures followed
Food Safety For Market Gardens

P.A.C.E. Principles – Example Guidelines

• Harvest Activities
  – avoid contact between fruits, vegetables, bins, etc. and the soil.
  – avoid bruises or cuts to the fruits or vegetables that may allow internal contamination.
  – do not use open water sources for field washing.
  – clean and sanitize bins and harvest equipment before each use.
  – provide restrooms and hand-washing stations.
Food Safety For Market Gardens

P.A.C.E. Principles – Example Guidelines

• Post-Harvest Activities
  • when produce from many fields come together, any errors preharvest can contaminate clean uninfected fruit at post harvest
  - keep dirty fruit from the field separated from the clean, packed fruit. Wash dirty fruit separately.
  - handle produce carefully to prevent wounds. Remove injured product and discard fruit that fall on the floor. Remove cull fruit and debris promptly.
  - wash your hands!
  - wear gloves when touching produce.
  - triple-wash leafy vegetables.
P.A.C.E. Principles – Example Guidelines

• Post-Harvest Activities (continued)

- know the quality of water used for washing and test for bacteria, protozoa and viruses.
- clean and sanitize packing areas, storage rooms, fruit bins and equipment regularly.
- temperature control is important. Low temperatures supplement good sanitation practices. Avoid delays that postpone cooling.
- keep animals (including pets) away from vegetables--especially after the produce has been washed.
- be aware of microbial sources and avoid cross-contamination.
Food Safety For Market Gardens

P.A.C.E. Principles – Example Guidelines

- Room and Equipment Cleaning Procedures
  - Empty and sweep cold rooms
  - Pre-rinse equipment or walls
  - Visually inspect surfaces
  - Apply appropriate cleanser (scrub from top, downward)
  - Do not allow cleanser to dry on surfaces (rinse from top, downward)
  - Visually re-inspect surfaces
  - Apply a high level sanitizer (800 ppm quaternary ammonia)
  - Let stand for 20 minutes
  - Rinse with potable water
  - Apply regular level sanitizer (200 ppm quaternary ammonia)
  - Rinse with potable water
  - Always rinse ammonia products before adding chlorine (e.g. dump tanks)
The Importance of Record Keeping

• Documentation highlights a grower’s commitment to produce safety by reducing microbial risks to fruits and vegetables.

• When foodborne illness outbreaks occur, attempts are made to trace the contamination back to the point of origin.

• Documenting movement of a food crop from the field to the farm gate, worker health, worker training programs, building sanitation, and equipment maintenance may provide important data in determining the origin of the contamination.
Sample of Different Comments to Food Safety Issues and Benefits of Locally Grown Foods

• One of the main challenges in boosting produce food safety along the entire supply chain is identifying and monitoring the variety of paths that the food can take from the farm to the consumer. The process is “hugely complicated.”

• Perhaps locally grown food, with a focus on organic guidelines and sustainability is a step toward greater food safety.

• The future of sustainable agriculture has never looked more promising -- or more challenging.

• “No Local Farms, No Safe Food.”

Food Safety

• **Example Issues for Small & Diversified Farms**
  
  • GAPs and related issues need to be evaluated as solutions by considering their full context.
  
  • Food safety change now is a push down the supply chain to the farmers who supply processing plants that have had food contamination problems. Farmers for local food markets are not part of this distribution system.
  
  • In these efforts to keep bacteria out of the food supply, the FDA, USDA, and various other agencies, large food processors, and food buyers are on the verge of creating a system that would essentially prevent farmers from raising both livestock and crops for human consumption on the same farm, or in the same neighborhood.
Food Safety Impact In Perspective

- **2006 Cancer deaths**: 543,000 (30% lung cancer)
- **CDC reported in July 2009 “Hospital Acquired Infections”**: 1.7 million people get sick each year; 99,000 people die of these infections each year
- **2006 Automobile incidents**: 6.42 million accidents—about 2.9 million injuries; 42,642 deaths
- **2003 deaths related to firearms** (non-war related): 29,000 deaths
- **2006, CDC reported**: 325,000 hospitalizations of food borne illness; 5,000 deaths
Food Safety Regulations
FL Small Famers’ Perspectives

- see video at
  http://www.gainesville.com/article/20090501/VIDEO/905012001
FL Food Safety-Based Regulations for Direct Market Sales

- Summaries of regulations – see
  [http://edis.ifas.ufl.edu/fy1225](http://edis.ifas.ufl.edu/fy1225)


General Regulations

• Contrary to popular belief agriculture is not exempt from regulations.
• The costs associated with regulations have been identified as a major obstacle to starting and operating a small farming operation.
Regulations Information Sources

- UF/IFAS Small Farm & Alternative Enterprise Program – see http://smallfarms.ifas.ufl.edu/
  – Legal aspects of regulations

- UF Center for Agribusiness, UF/IFAS Food and Resource Economics Department – see http://www.fred.ifas.ufl.edu/agbuscenter/
  – Website has links of the following:
    - Business resources
    - Agriculture resources
    - Data resources
Start-Up Considerations
General Business Issues

- **Business Organization Type** – Sole Proprietor, Partnership or Corporation

- **Fictitious Name Registration** – If your business will use any name other than the owners’ legal name or full corporation name then a fictitious name registration is required.

  Agency: Florida Department of State
  Division of Corporations
  (800) 755-5111

- **Employer Identification Number (EIN)** - Also known as a Federal Tax Identification Number, and is used to identify a business entity. Generally, businesses need an EIN.

  Agency: IRS, (800) 829-4933
Regulations

Occupational License

• An occupational license is a privilege tax to engage in or manage any business, profession, or occupation within a particular jurisdiction.

• FL Right to Farm Act exempts producers of agricultural products from occupational licenses as long as all products being sold were grown or produced by the farmer.

• Any person who buys, receives, solicits, handles, or negotiates ag products from producers must be licensed and bonded.

Agency: FDACS, Division of Marketing & Development
(850) 488-4101
Florida Right to Farm Act

The law (F.S. 823.14) states that agricultural activities conducted on farm land in urbanizing areas are potentially subject to lawsuits based on the theory of nuisance and that these suits encourage and even force the premature removal of the farm land from agricultural use. It is the purpose of this act to protect reasonable agricultural activities conducted on farm land from nuisance suits.
Regulations
Zoning

- Most agricultural uses can only occur on Agriculture Zoned property.
- Commercial production of produce can be grown on non-agricultural land as long as the sales are offsite.
- Consultation with Zoning office of food production plans are highly recommended.

Agency: Sarasota County Planning and Development Services
(941) 861-5000
Regulations
Land Alteration Regulations

Natural Resource Permits

- Tree removal
- Land Clearing
- Earthmoving (Excavating, Filling, Grading)
- Natural habitats

Activities such as these typically require a permit from the county unless otherwise exempt.

Agency: Sarasota County Planning and Development Services
(941) 861-5000
Regulations
Well & Water Permitting

• **Consumptive Water Use Permit (WUP)** - Required for all wells of 6 in. diameter or larger or capable withdrawing 100,000 gallons per day on an annual average basis or 1,000,000 gallons on any single day.

• **Well Construction Permit (WCP)** - Required for the construction of all new wells that are greater than 2 in. diameter

**Agency:** Southwest Florida Water Mgt District
(352)796-7211 or (800)423-1476
www.swfwmd.state.fl.us
Regulations

Building Permits

• Nonresidential “farm buildings” are exempt from the Florida Building Codes and any county or municipal building code.

• Most jurisdictions require notification to the county or city Building Department.

• Signs need permitting.

Agency: Sarasota County Planning and Development Services
(941) 861-5000
Regulations
Nursery Inspection

• All nurseries MUST be inspected and registered with the Division of Plant Industry prior to selling any plants
• If your business requires an occupational license you must be registered with DPI prior to getting an occupational license.

Agency: Florida Department of Agriculture and Consumer Services Division of Plant Industry
Regulations
Pesticide Licensing

• If you are going to apply restricted use pesticides on your market garden a Private Applicators License is required.

• **Worker Protection Standard** - A federal regulation designed to protect agricultural workers and pesticide handlers.

  see [http://edis.ifas.ufl.edu/pi150](http://edis.ifas.ufl.edu/pi150)

**More Information:**  FDACS

Regulations
Best Management Practices

• Growers that implement the appropriate voluntary State adopted BMPs receive a presumption of compliance with state water quality standards.

• Manuals have been completed or are available online at

Contact: Office of Agricultural Water Policy, FDACS (850) 488-6249
Regulations
Agricultural Classification

• The Agricultural Classification, commonly referred to as the "green belt" assessment, while not an exemption, may result in lower property tax bills for qualified property owners.

• The agricultural use classification should not be confused with zoning. If your land is used for a bona fide commercially viable operation producing an agricultural product that is actively marketed, you may request an agricultural filing at the Property Appraiser's Office.

Agency: Sarasota County Property Appraiser (941) 861-8200
ACKNOWLEDGMENTS

Amy Simonne
Department of Family, Youth and Community Sciences
IFAS, University of Florida
“Food Safety Considerations for Small Farmers”

Stephen Gran
Manager – Agriculture Industry Development
Hillsborough County Economic Development Department
“Agriculture Regulations Overview”
Market Gardening Food Safety & Regulations Online Resources

- Best Management Practices, Office of Water Policy, FDACS
- Center for Food Safety
  http://www.centerforfoodsafety.org/index.cfm
- Chemical Body Burden Website
  http://www.chemicalbodyburden.org/
- EDIS Small Farm Food Safety Series Publications
  http://edis.ifas.ufl.edu/TOPIC_SERIES_Small_Farm_Food_Safety
- Florida Dept. of Agriculture and Consumer Affairs, Division of Food Safety
  http://www.doacs.state.fl.us/fs/other.html
  Division of Marketing and Development
  http://www.florida-agriculture.com/marketing/licensing/index.htm
  Division of Plant Industries
  http://www.doacs.state.fl.us/pi/
- Guide to Good Agricultural Practices (GAPs), ISU
  http://www.extension.iastate.edu/Publications/PM1974A.pdf
- Hobby Farm News – Food 911
Market Gardening Food Safety & Regulations Online Resources

- Iowa State Extension, Farm Food Safety Resources
  http://www.extension.iastate.edu/foodsafety/resources/index.cfm?listID=4
- National GAPs Educational Materials, Cornell Univ.
  http://www.gaps.cornell.edu/farmassessmentws.html
- Sarasota County Property Appraisal Office, Agricultural Classification
  http://www.sarasotaproperty.net/agricultural_defined.asp
- University of CA, Small Farm Center, Food Safety Education,
  Rangarajan, A. et. al., 1999. Food Safety Begins on the Farm
  http://www.sfc.ucdavis.edu/docs/foodsafety.html
- UF Center for Agribusiness, UF/IFAS Food and Resource Economics Department
  http://www.agbuscenter.ifas.ufl.edu/
- UF/IFAS/FAMU Small Farm & Alternative Enterprise Program Food Safety Publications
  Burbaugh, B. Direct Marketing Regulations
  http://smallfarms.ifas.ufl.edu/floridasmallfarmsconference/presentations/policy_regulations/direct_marketing/burbaugh.pdf
  Ritenour, M. Production and Post-Harvest Safety
  http://smallfarms.ifas.ufl.edu/planning_and_management/farm_safety.html
- UF/IFAS Food Safety Website
  http://foodsafety.ifas.ufl.edu/
- UF/IFAS Small Farm Food Safety Series
  http://edis.ifas.ufl.edu/topic_series_small_farm_food_safety
- US National Food Safety Programs Website
  http://www.cfsan.fda.gov/~dms/fs-71toc.html
Online Reading Assignments

• UF/IFAS Small Farm and Alternative Enterprise Program Publications – see Direct Marketing section, UF/IFAS Publications
  – Farmers Market Series
    http://smallfarms.ifas.ufl.edu/planning_and_management/marketing.html

• ATTRA Publications
  – Market Gardening: A Start-Up Guide
    http://attra.ncat.org/attra-pub/marketgardening.html
  – Farmers Markets
    http://attra.ncat.org/attra-pub/farmmrkt.html