

## 2013 COMMUNITY GARDENS INTEGRATED PEST MANAGEMENT PLAN

**DIVISION:** UF/IFAS Extension Sarasota County

**DATE:** February 27, 2013

**LAST REVISION:** September 23, 2014

**a. Area of Responsibility**

Sarasota County UF/IFAS Extension provides administrative oversight of community gardens located on County and City Park lands. The garden plots are assigned to members of the community for the primary purpose of growing edibles for consumption. The program currently involves seven gardens, including more than 200 individual plots at various parks throughout the County, as follows:

<u>Garden Name</u>	<u>Year Opened</u>	<u>Location</u>	<u>Number of Plots</u>
Bee Ridge	2013	Bee Ridge Park 4430 S. Lockwood Ridge Road Sarasota FL	25
Culverhouse	2012	Culverhouse Nature Park 7301 McIntosh Road Sarasota FL	65
Englewood	2012	Buchan Airport Park 1390 Old Englewood Road Englewood FL	21
Laurel	2000	Laurel Park 509 Collins Road Nokomis FL	16
Nokomis	2001	Nokomis Park 234 Nippino Trail Nokomis FL	22
North Port	2011	Warm Mineral Springs 12200 San Servando Avenue North Port FL	40
Bayou Oaks	1997	Firehouse Park 3530 Old Bradenton Road Bradenton, FL	18

**All community gardens are required to operate on an organic basis.** Any protocols, fertilizers or pesticides used must adhere to organic gardening guidelines set forth by UF/IFAS Extension Sarasota County. Pesticides used must also be on the Sarasota County IPM approved list of chemicals ([www.scgov.net/IPM/Pages/ApprovedChemicalList.aspx](http://www.scgov.net/IPM/Pages/ApprovedChemicalList.aspx)). This IPM Plan is intended to address specific pests commonly found in vegetable gardens, while focusing on proven acceptable techniques from a food safety standpoint.

With the implementation of this plan, garden boundaries are established as the physical area existing within the designated perimeter fence lines. Except as noted herein, community garden members are responsible for maintenance occurring within garden boundaries. Sarasota County Parks and Recreation (Parks) is responsible for maintenance of all areas outside of garden boundaries (see Parks' IPM Plan for questions regarding these areas).

## b. Major Pests

Commonly encountered garden pests include: worms, caterpillars, fungus, aphids, nematodes, weeds and small mammals. Identification and thresholds for garden pests in plots shall be established by each Member based on guidelines and references set forth by UF/IFAS ([http://edis.ifas.ufl.edu/topic\\_pest\\_management](http://edis.ifas.ufl.edu/topic_pest_management)). Pests typically controlled by county staff include: fire ants, mosquitoes and invasive plants.

## c. Scouting and Inspection

Garden Managers and Members will record observations of pests encountered and any approved actions taken in appropriate log books. Such books will be stored in garden sheds. Managers and members may contact Extension for further guidance via email or phone conversation as needed.

Extension staff will conduct inspections on a semiannual basis. Data collected in the form of inspection notes will be stored in respective community garden files at Extension for record retention. See the Community Garden Inspection Checklist (attached) for specific items typically reviewed during inspections.

## d. Control Options

Extension will provide county staff, Garden Managers and Members with resources and training to guide implementation of a tiered IPM approach. As a first option, cultural practices will be implemented. If successful results are not achieved, then physical methods will be used, followed by biological. Only after all other options have been fully explored will chemical (pesticide) solutions be permitted.

Methods identified below are based on UF/IFAS research and Florida organic farming standards.

### 1) Cultural

#### a) Education, including:

- Attending Extension educational courses regarding IPM
- Contacting staff with questions
- Reading County IPM guidelines
- Reading Garden Alerts from Extension staff
- Reading organic vegetable growing resources
- Following Extension seasonal gardening guidelines
- Recording observations and solutions in log books

#### b) Proper management techniques of irrigation, soil and nutrition to promote healthy plants, including:

- Site assessment to determine which plants are best suited for the area
- Crop rotation for plant and soil health
- Use of healthy starter plants
- Application of water to roots, not leaves
- Proper tool sanitation
- Use of cardboard and heavy mulch for weed suppression

#### c) Use of the following soil amendments and fertilizers:

- Compost produced from the garden
- Animal manures (composted before use)
- Alfalfa meal, blood meal, hoof and horn meal
- Kelp or seaweed (liquid or powder)
- Fish emulsion
- Wood ashes
- Granite or feldspar dust
- Greensand
- Charcoal
- Biochar

- OMRI Certified, NOP listed, and/or 100% natural organic fertilizers
- Bioinoculants approved for organic farming (examples include rhizobium/mycorrhizae inoculants that are used as foliar sprays and soil drenches)
- Compost teas
- Earthworm castings
- Beneficial microbes (e.g., *Azotobacter*, *Bacillus spp.*)

Note that any formulations containing sewage sludge, including Milorganite, are prohibited.

## 2) Physical

- Physical removal of insects, including:
  - Spraying with water
  - Wiping off or hand removal from plants
  - Removal or excavation of pest insect nests and ant mounds
- Proper disposal of insects and diseased plant material
- Traps, including: beer, pheromone, sticky, water and food (no synthetic lures)
- Soil solarization
- Hand-pulling weeds
- Applying boiling water to weeds
- Use of row covers

## 3) Biological

- Recognition and promotion of biological control and pollinator insects
- Use of companion and insectary plants
- Encouragement of habitat for birds, bats, toads, snakes and spiders
- Biorationals that are OMRI listed [e.g., Bt (*Bacillus thuringiensis*) and *Trichoderma*]. For further details, refer to <https://attra.ncat.org/attra-pub/biorationals/>.

## 4) Chemical

**Other than those identified and approved herein, synthetic herbicides and insecticides are prohibited in Sarasota County community gardens. A major premise of this plan is that to avoid potential food safety and soil contamination concerns, unauthorized products cannot be applied within gardens or within the surrounding vicinity. No county staff, subcontractors or others shall use non-listed products without the prior written consent of Extension.**

- Chemical control should only be implemented after the first three IPM steps have proven ineffective.
- Appropriate diagnosis of pests should be made.
- Reasonable thresholds of pest tolerance should be used.
- Community gardens consist of two designated space categories (common areas and assigned plots). Specific IPM guidelines apply to each:

Common areas: Those physical spaces located outside of assigned plots, but within boundary fences (e.g., pathways, perimeters, sheds) are referred to as common areas. As per garden rules, all members are required to help maintain these areas in a communal effort.

- Garden members: Due to state licensing requirements, garden members (non-staff) are not authorized to apply any chemical pesticide solutions in common areas. Garden members are only permitted to conduct the methods outlined above (cultural, physical, and biological). If these efforts have been exhausted without successful elimination of pests, garden members should notify the Community and School Gardens Coordinator to request additional treatment by County staff.
- County staff: Treatments shall only utilize chemicals that are labeled for use on or near edibles (where appropriate) and which appear on **both** the Sarasota County IPM Approved Chemicals List ([www.scgov.net/IPM/Pages/ApprovedChemicalList.aspx](http://www.scgov.net/IPM/Pages/ApprovedChemicalList.aspx)) **and** the NOP/OMRI lists. Application of

chemicals inside gardens by county staff of organic insecticide, herbicide and/or agricultural use chemicals shall be consistent with organic gardening practices, product label instructions and all applicable local, state and federal laws. Extension should be notified **prior to any application!**

- Fire Ant Management Recommendations:
  1. For the acreage outside the garden, broadcast application of Advion (Indoxacarb) at least 50' away for the fence line and extending out as far as possible.
  2. For inside the garden and within the 50' buffer zone adjacent to the exterior of the fence line, Use Conserve SC or Entrust SC mound drenches as label suggests for all visible mounds. Following that application, broadcast Fertilome (Spinosad granules) to allow foragers of unseen mounds to incorporate the product in those colonies.
- Weed Control: County staff may use a flamer tool as a mechanical means of weed management.

Assigned plots: Each member is assigned a specific garden plot, which is viewed as an extension of their own homeowner property. Garden Members should be able to rely on the accepted cultural, physical and biological IPM techniques listed above to manage pests. As a last resort, application of the following products is permitted within assigned plots, in a manner consistent with organic gardening practices, product label instructions and all applicable local, state and federal laws (see website for further details-<https://attra.ncat.org/attra-pub/biorationals/>):

- Horticultural Oils and Sprays (Neem, sesame, fish oil, garlic, onion, and pepper sprays)
- Insecticidal Soaps (no detergent or degreaser)
- Diatomaceous Earth
- Spinosad (edible compatible variety only)
- Sulfur
- Limonene and Linalool
- Iron Phosphate
- Vinegar
- Isopropyl alcohol
- Hydrogen peroxide
- Chitin for control of nematodes
- Other OMRI listed products and ATTRA listed biorationals

**Always read the label! Note that the identification of individual products in this document does not imply endorsement of that product. Many products are not organic and/or not safe for edibles. Garden Members should submit questions to Extension staff for review, including names and labels and/or MSDS sheets from the manufacturer.**

e) Prohibited products: Any product not shown above may only be used with Extension's prior written consent.

**e. Record Keeping Forms.**

Records are stored at Extension. Any work tickets or paperwork generated by Parks should be copied to Extension for retention with other garden-related documents. In accordance with County record retention guidelines, records will be stored for a 5-year time period.

**f. Certifications.**

Based on products listed in IPM plan and use within designated assigned plots, certifications are not required for Garden Members. County staff will adhere to organic gardening practices where necessary, product label instructions and all applicable local, state, and federal laws.

**g. Pesticide Storage.**

No pesticides are allowed to be stored at community gardens. County-owned pesticides are stored in the same common location as other Parks or Extension supplies (currently Twin Lakes Park). Appropriate MSDS sheets will

remain on file with Parks and Extension. Organic, non-hazardous substances may be stored within tool sheds located at each garden. These items must not require MSDS sheets, PPE, eye-wash stations, or spill kits.