Comparison of Options for Managing Vegetable Garden Pests

... a cooperative project between scientists at Ohio State University and community organizations dedicated to gardening.

Objectives:
1) Demonstrate cultural, mechanical, and chemical methods of managing pests.
2) Compare three different systems for managing insects, diseases, and weeds that infest vegetable gardens, by collecting data on the inputs (materials and time) and outputs (yield and quality) of each system.
3) Seek comments from gardeners about what information they need to better manage their own gardens.

Garden set-up:
- Crops grown in each of three systems (see below).
- Each system is repeated three times.

Low maintenance system (blue flags): FOR THE BUSY GARDENER INTERESTED IN NON-CHEMICAL GARDEN MANAGEMENT BUT WITH LITTLE TIME TO SPEND.
- Row covers: to exclude insects
- Newspaper mulch: to suppress weeds

Integrated biorational system (white flags): FOR THE GARDENER AVIDLY INTERESTED IN NON-CHEMICAL GARDEN MANAGEMENT.
- Newspaper mulch, to suppress weeds
- Biological control: cilantro border rows to attract natural enemies
- Hand removal of pests once per week
- Scouting (inspection for pests) once per week
- Natural insecticides, used only if pests above a threshold level
- Natural fungicides, used only at critical times

High input system (orange flags): FOR THE GARDENER WHO WANTS MAXIMUM YIELD AND NO DAMAGE BY PESTS, AND IS WILLING TO USE PESTICIDES.
- Fertilizer
- Weed block fabric, to suppress weeds
- Watering, regularly
- Conventional insecticide, used if any pest found
- Conventional fungicides, to prevent diseases

Project sites:
- Columbus: Franklin Park Conservatory
- Springfield: Gateway Learning Gardens, OSU Extension/Clark County
- Dayton: Community Gardens of Wegerzyn Gardens MetroPark
- Stow: Community Gardens
- Twinsburg: Community Gardens
- Wooster: Ohio Agricultural & Research Development Center

Project Researchers at Ohio State University:
- Celeste Welty, entomologist
- Sally Miller, plant pathologist
- Mark Tucker, communications specialist
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