

The IR-4 Environmental Horticulture Program

Environmental Horticulture Program

Overview

Registration Support

Invasive Species

Pollinator Protection

The IR-4 Environmental Horticulture Program fosters a diverse selection of healthy plants for bouquets, houseplants, landscapes and urban forests.

Healthy plants provide numerous physical and mental benefits:

- Filter impurities out of air and water
- Provide food and habitat for animals and people
- Ameliorate urban heat islands
- Reduce stress levels thereby improving productivity and conflict resolution
- Enhance property value
- Reduce neighborhood crime rates



Photos by Dr. Cristi Palmer



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- **Registration Support**
 - Helping growers get the tools they need to grow quality crops
- **Invasive Species**
 - Coordinating cross-institutional teams to mitigate new exotic species causing economic or environmental harm
- **Pollinator Protection**
 - Coordinating cross-institutional team to study attractiveness of environmental horticulture crops, systemic insecticide residue dynamics, economics/efficacy/ecotoxicology of alternatives, and consumer willingness to pay for quality pollinator attractive crops.

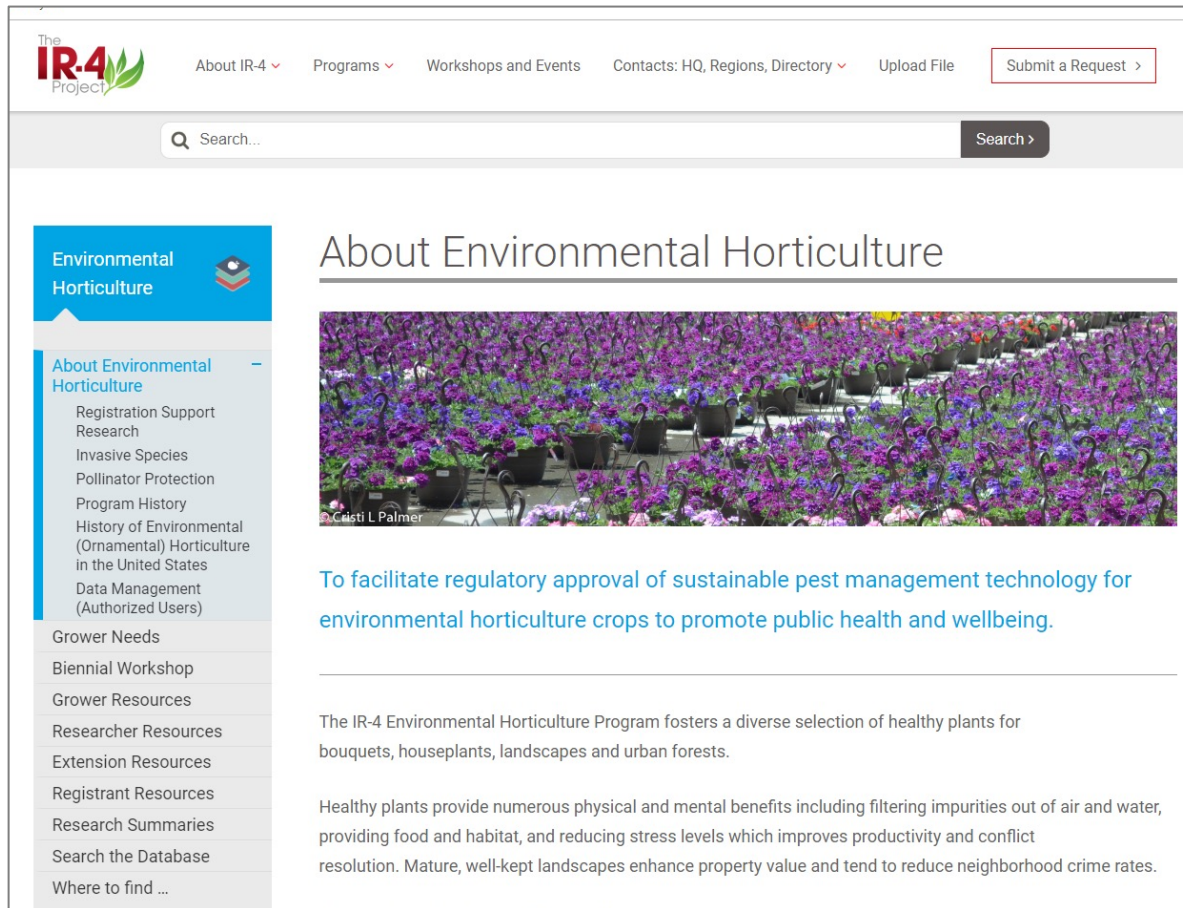
EnvironHort - Website

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The screenshot shows the website's header with the 'The IR-4 Project' logo and navigation links: 'About IR-4', 'Programs', 'Workshops and Events', 'Contacts: HQ, Regions, Directory', 'Upload File', and a 'Submit a Request' button. A search bar is located below the header. The main content area is titled 'About Environmental Horticulture' and features a large image of purple flowers in pots. Below the image, there is a blue text box with the text: 'To facilitate regulatory approval of sustainable pest management technology for environmental horticulture crops to promote public health and wellbeing.' The left sidebar contains a list of links: 'Environmental Horticulture', 'About Environmental Horticulture', 'Registration Support', 'Research', 'Invasive Species', 'Pollinator Protection', 'Program History', 'History of Environmental (Ornamental) Horticulture in the United States', 'Data Management (Authorized Users)', 'Grower Needs', 'Biennial Workshop', 'Grower Resources', 'Researcher Resources', 'Extension Resources', 'Registrant Resources', 'Research Summaries', 'Search the Database', and 'Where to find ...'.

Overview of each program element

Organized by users:

- Growers
- Researchers
- Extension Personnel
- Registrants

Where to find ...
page will help locate resources

Research
Summaries

Search the
Database

Environmental Horticulture Program

Overview **Registration Support** Invasive Species Pollinator Protection

IR-4 coordinates national and regional research projects to develop efficacy and crop safety data so that new biological and chemical active ingredients can be registered and current products expanded for new uses.

Outcomes

- Over 44,000 crop uses have been registered.
- Pathogen, pest, and weed management tools are readily available to greenhouse and nursery growers.
- Growers and consumers benefit by having more tools for Integrated Pest Management systems and resistance management strategies

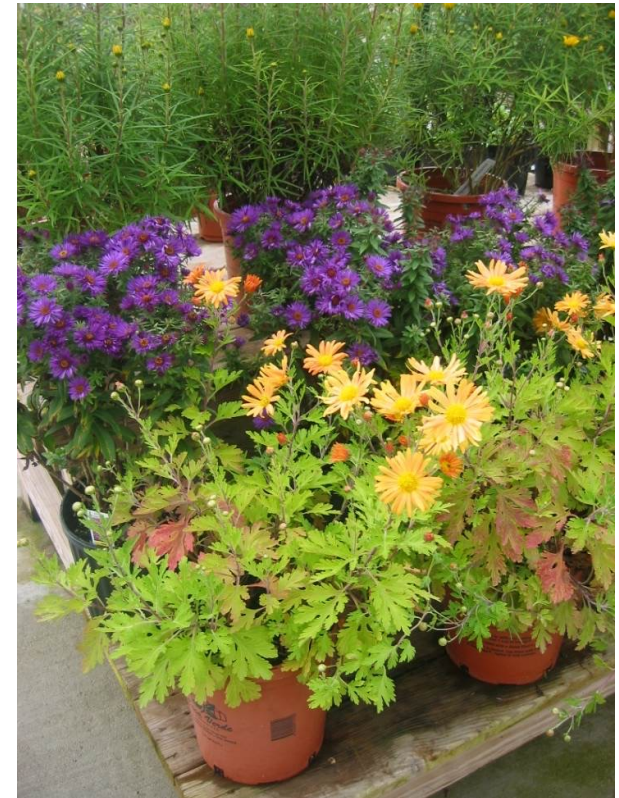


Photo by Dr. Cristi Palmer

EnvironHort - Process

Overview **Registration Support** Invasive Species Pollinator Protection

Identify [grower needs](#) through surveys and project requests

Prioritize projects at [biennial workshop](#)

Conduct research with key entomologists, horticulturists, plant pathologists and weed scientists throughout the US

Communicate results by compiling trial data and [posting summaries](#)

Track [impacts](#) of these research activities

Network with growers, researchers, registrants and regulatory officials

EnvironHort – Project Prioritization

Overview Registration Support Invasive Species Pollinator Protection

Stakeholder Input

Online Project Request Form

Paper or Online Biennial Survey

*balanced
with*



Researcher & Registrant Input

Project Criteria

- Availability & effectiveness of current options
- Damage potential of target
- Performance and crop safety of proposed products
- Compatibility with IPM, resistance management programs
- Economics
- Geographic distribution
- Registrant interest in labeling product(s)
- Other

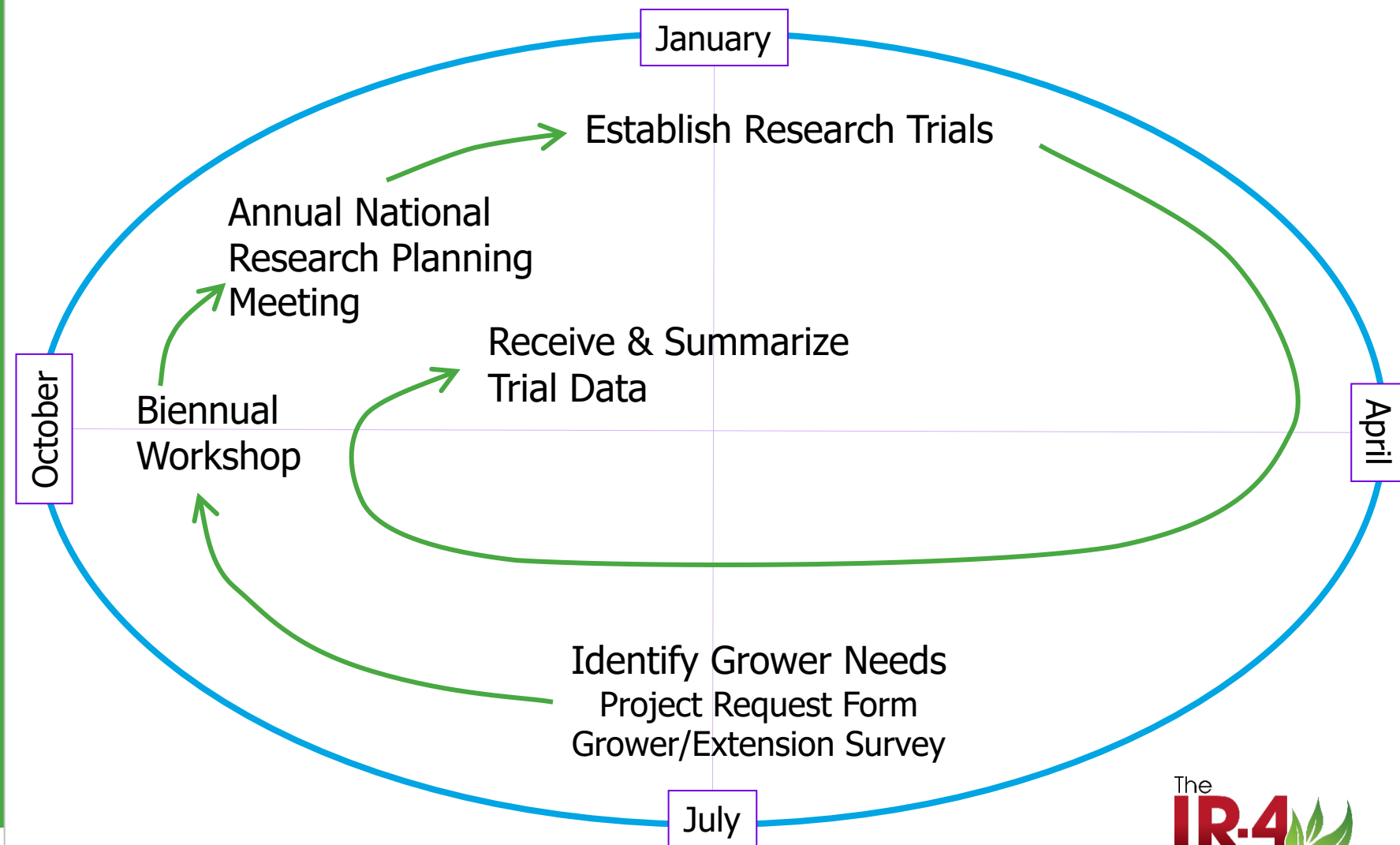
EnvironHort – Research Cycle

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IR-4 has coordinated research projects studying mitigation strategies and developing basic knowledge for several invasive species – boxwood blight, chrysanthemum white rust, European pepper moth, gladiolus rust, impatiens downy mildew.



Gladiolus leaves severely infected with gladiolus rust.

Outcomes

- Improved management strategies
- Better understanding of environmental parameters for pathogen infection and pest development
- Serological and genetic diagnostic tools
- Increased knowledge of basic biological and genetic characteristics of these pathogens and pests



European Pepper Moth on Rosemary, Dr. Jim Bethke

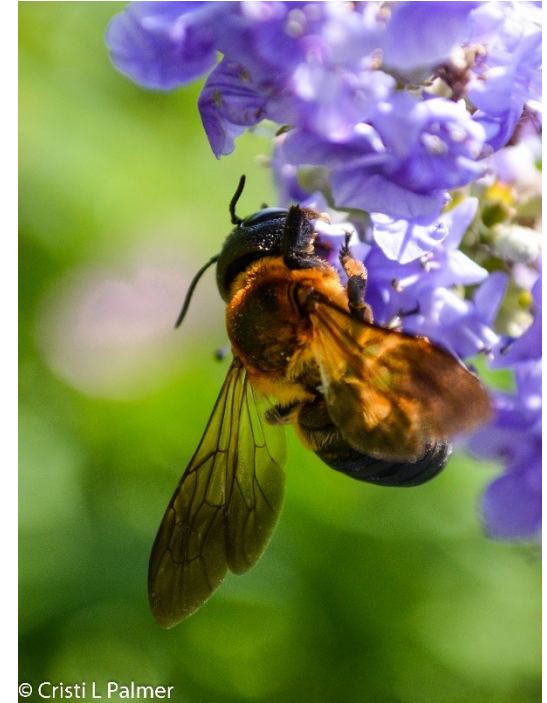
Environmental Horticulture Program

Overview Registration Support Invasive Species Pollinator Protection

IR-4 is coordinating a cross-institutional team to study how to produce quality environmental horticulture crops while protecting pollinators.

Outcomes/In Progress

- Knowledge of attractiveness level of top produced annuals, herbaceous perennials and woodies
- Residue dynamics of systemic insecticides in environmental horticulture crops
- Efficacy, Economic & Ecotoxicology comparisons of alternatives
- Consumer perceptions and willingness to pay for plant attributes
- Revised best management practices



Thank You!

**DON'T
JUST STAND
THERE**

