

## Weed Science Program

*Cornell University  
Cooperative Extension of  
Suffolk County*

**Program Leader:** Andrew Senesac, Ph.D., Sr. Extension  
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### **Project Objectives:**

The Weed Science Program assists the agricultural and horticultural industry by developing educational programs and conducting applied research in weed management and identification in several horticultural enterprises: including vegetables, grapes, turf, woody and herbaceous perennial production in the field and containers, field grown cutflowers, container-grown chrysanthemums and landscape use of woody and herbaceous plant materials.



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### **Project Summary:**

The Weed Science program focuses on two major areas:

**Applied Research:** Several weed management problems are being addressed through research. The program investigates both traditional weed control approaches and alternative and cultural methods that can be integrated and used successfully.

**Educational Extension efforts:** some major areas of focus are the Cornell Guidelines for Weed Management in Woody Ornamentals and Cornell Guidelines for Weed Management in Herbaceous Perennials as well as other means of disseminating information about the results of recent research such as: weed identification display gardens, articles in trade journals, illustrated lectures, factsheets and website contributions.

A recent additional role has been involvement with a consortium of representatives from several other state and regional governmental and NGOs in developing a Weed Management Plan for Long Island to control and prevent new infestations of invasive weeds.



Recent establishment of demonstration planting of some of the best perennials that were tested for roadside planting.

### **Project Justification:**

Growers and end-users of horticultural products are constantly confronted with potential loss of quality and economic loss due to weed competition and interference in the production cycle and in the end use. Additionally, great concern about the potential contamination of the single source aquifer from which Long Island draws its drinking water has resulted in many fewer new registrations of herbicides and loss of several older materials that were heavily relied upon. The weed science program is continually evaluating new and alternative methods and measures that will help solve some of these issues.

### **Impact to Industry:**

Several recent research projects have had either direct or indirect impact on the industry:

- Vegetable growers and nurseries on Long Island have recently lost the use of a valuable tool for weed management, the pre-emergence metolachlor. Recently, Research has been focused on replacements or alternatives to this material.
- Evaluation of herbaceous perennial groundcovers for use along roadsides, median strips and near guidrails. In these areas, where regular mowing is not feasible, there is currently a widespread use of herbicides to reduce weed growth. This four-year project evaluated nearly 100 perennial species for their ability to grow and establish rapidly after planting and thereby reduce and suppress weed growth. Recently five demonstration plantings were established on Long Island and Upstate New York to further evaluate the best performing plants. The potential for increased demand for herbaceous perennials could be enormous if Departments of Transportation begin to adopt this approach.
- New selective postemergence herbicides are being evaluated in both field and container production of perennials. If a broadly applicable postemergence approach can be established, many troublesome weed problems can be reduced or eliminated.
- Weed management in grapes: Unique environmental and cultural conditions exist for weed management in grape production on Long Island. Issues involving off target herbicide drift and alternative under-trellis weed management are being addressed.
- Both conventional and alternative approaches to weed management in field grown cutflowers have been evaluated. Because of the multi-species and small acreage approach of many cutflower growers, weed management is a very difficult aspect of crop production. Several new 'spins' on some old approaches (stale seed bed and soil solarization) have shown promise.

### **Project Team Members:**

Andrew Senesac, Extension Weed Science, Program Leader  
Irene Tsontakis-Bradley, Research Technician  
Wayne Lindsay, Program Assistant  
Kerry McLean, Program Assistant  
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#### Collaborators:

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