

Results from Weed Management Trials

Cheryl Wilen

UC Statewide IPM Program

UCCE San Diego/Los Angeles/Orange Counties

<http://ipm.ucanr.edu>



University of California

Agriculture and Natural Resources

■ Integrated Pest Management Program

Why do these tests?



New product
Need California
registration



Benefits

Label
expansion

Problem
weed or
crop



University of California

Agriculture and Natural Resources

Integrated Pest Management Program

IR-4

“Facilitating registration of sustainable pest management technology for specialty crops and minor uses”



The screenshot shows the IR-4 Project website. At the top left is the logo "The IR-4 Project" with a green leaf icon. To the right is a Google Custom Search bar. Below these is a navigation menu with links: Home, Food Crops, Ornamental Horticulture (highlighted in red), Biopesticides & Organic Support, Public Health, International Activities, Directory, Outreach Materials, and Quality Assurance (QA). A large banner image of colorful flowers contains the text "Facilitating Registration of Sustainable Pest Management Technology for Specialty Crops and Minor Uses". Below the banner are two main content areas. The "Ornamental Program Information" section lists: About This Program, Ornamental Horticulture Workshop, Annual Survey, Submit Project Request, Research Protocols, Research Reporting Instructions and Form Examples, Research Summaries, Project Information Sheets, Ornamental Horticulture Presentations, Literature, and Pollinator Workshop Summary and Presentations. The "Tracking Database" section lists: Search the Database, Download Recent Studies (with links to Access Database and Excel Worksheet), and Download List Of Trials For This Year (with links to Access Database and Excel Worksheet).

The IR-4 Project

Home Food Crops **Ornamental Horticulture** Biopesticides & Organic Support Public Health International Activities Directory Outreach Materials Quality Assurance (QA)

Facilitating Registration of Sustainable Pest Management
Technology for Specialty Crops and Minor Uses

Ornamental Program Information

- [About This Program](#)
- [Ornamental Horticulture Workshop](#)
- [Annual Survey](#)
- [Submit Project Request](#)
- [Research Protocols](#)
- [Research Reporting Instructions and Form Examples](#)
- [Research Summaries](#)
- [Project Information Sheets](#)
- [Ornamental Horticulture Presentations](#)
- [Literature](#)
- [Pollinator Workshop Summary and Presentations](#)

Tracking Database

- [Search the Database](#)
- [Download Recent Studies](#)
 - [Access Database](#)
 - [Excel Worksheet](#)
- [Download List Of Trials For This Year](#)
 - [Access Database](#)
 - [Excel Worksheet](#)



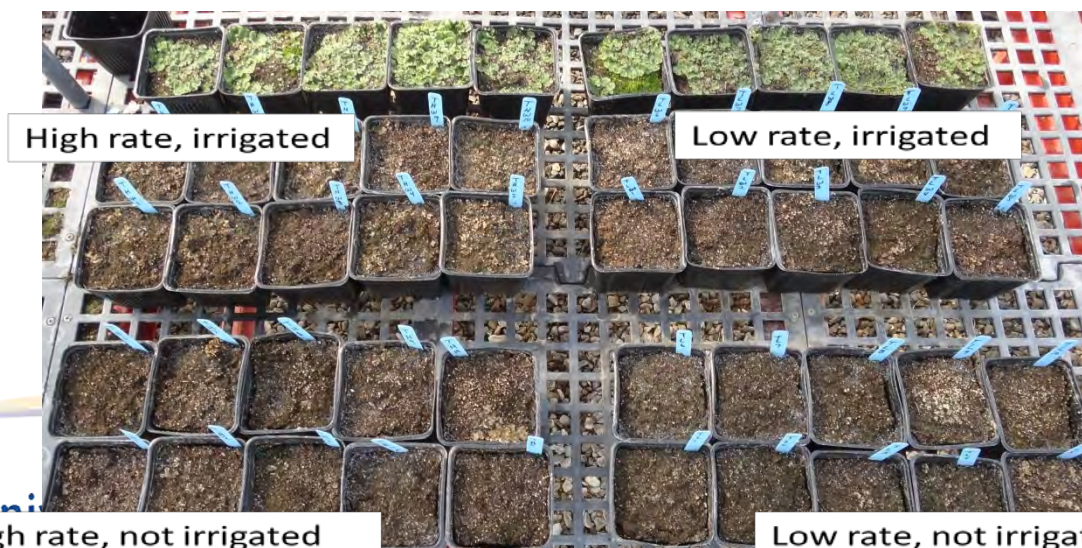
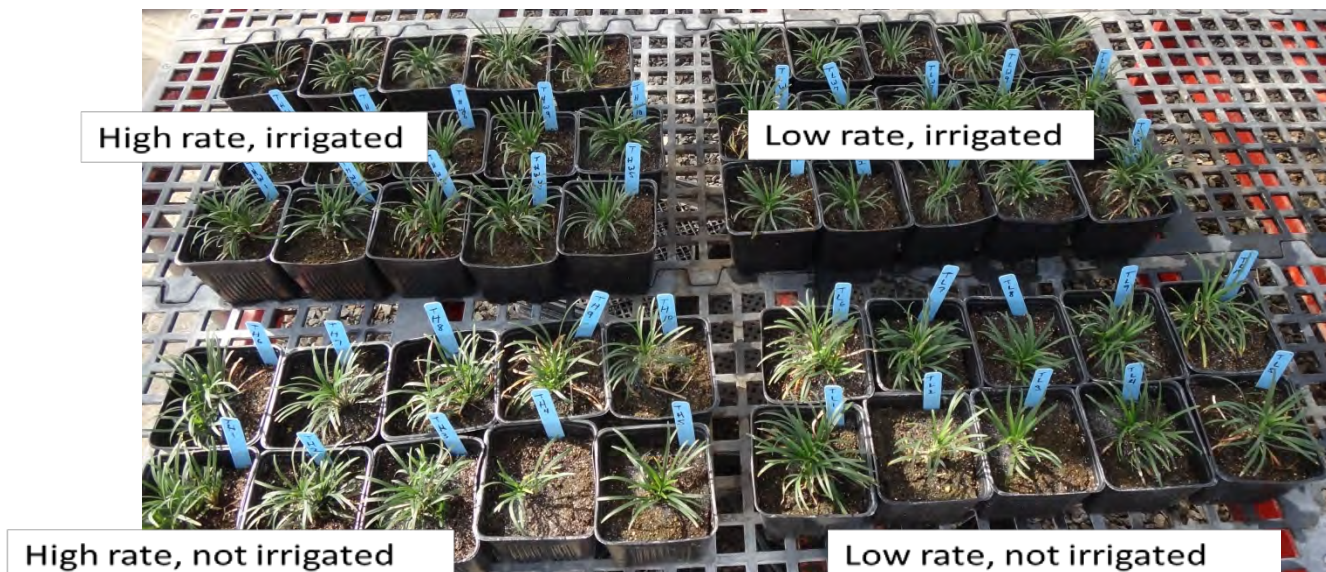
University of California

Agriculture and Natural Resources

■ Integrated Pest Management Program

Liverwort

4/6/14
Tower



4/6/14
Avenger

High rate, irrigated

Low rate, irrigated

High rate, not irrigated

Low rate, not irrigated

High rate, irrigated

Low rate, irrigated

High rate, not irrigated

Low rate, not irrigated

Liverwort Pre and POE Studies

- UTC
- Broadstar 0.25G @ 50lb/A = 52g/100ft²
- Ronstar 2G @ 100lb/A = 104g/100ft²
- Mustard Seed Meal @ 2090 and 4180 g/100ft²
- Freehand @ 150lb/A = 156g/100ft²
- 8 Replications



University of California

Agriculture and Natural Resources

Integrated Pest Management Program

6 WAT-PRE

Freehand

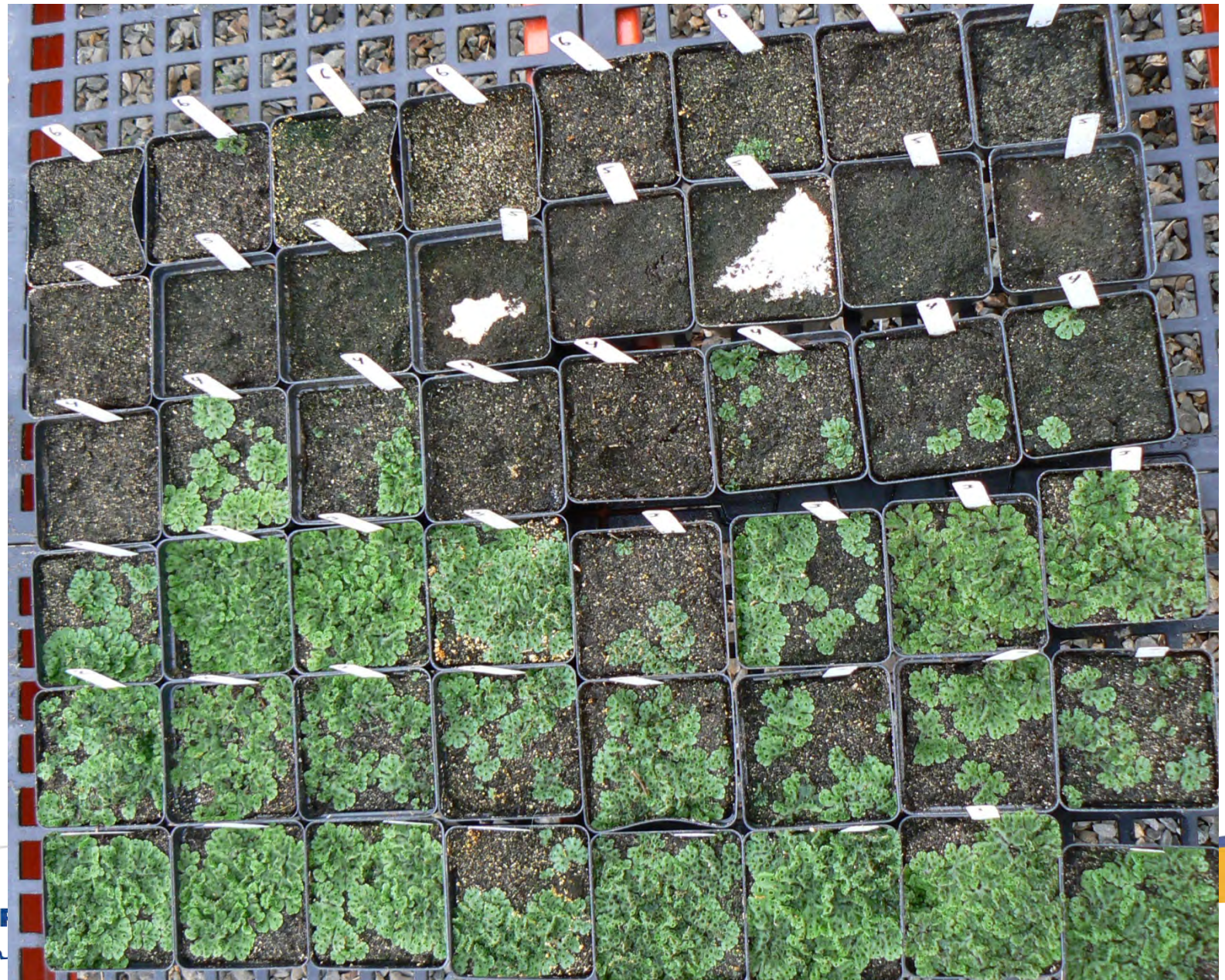
MSM High

MSM Low

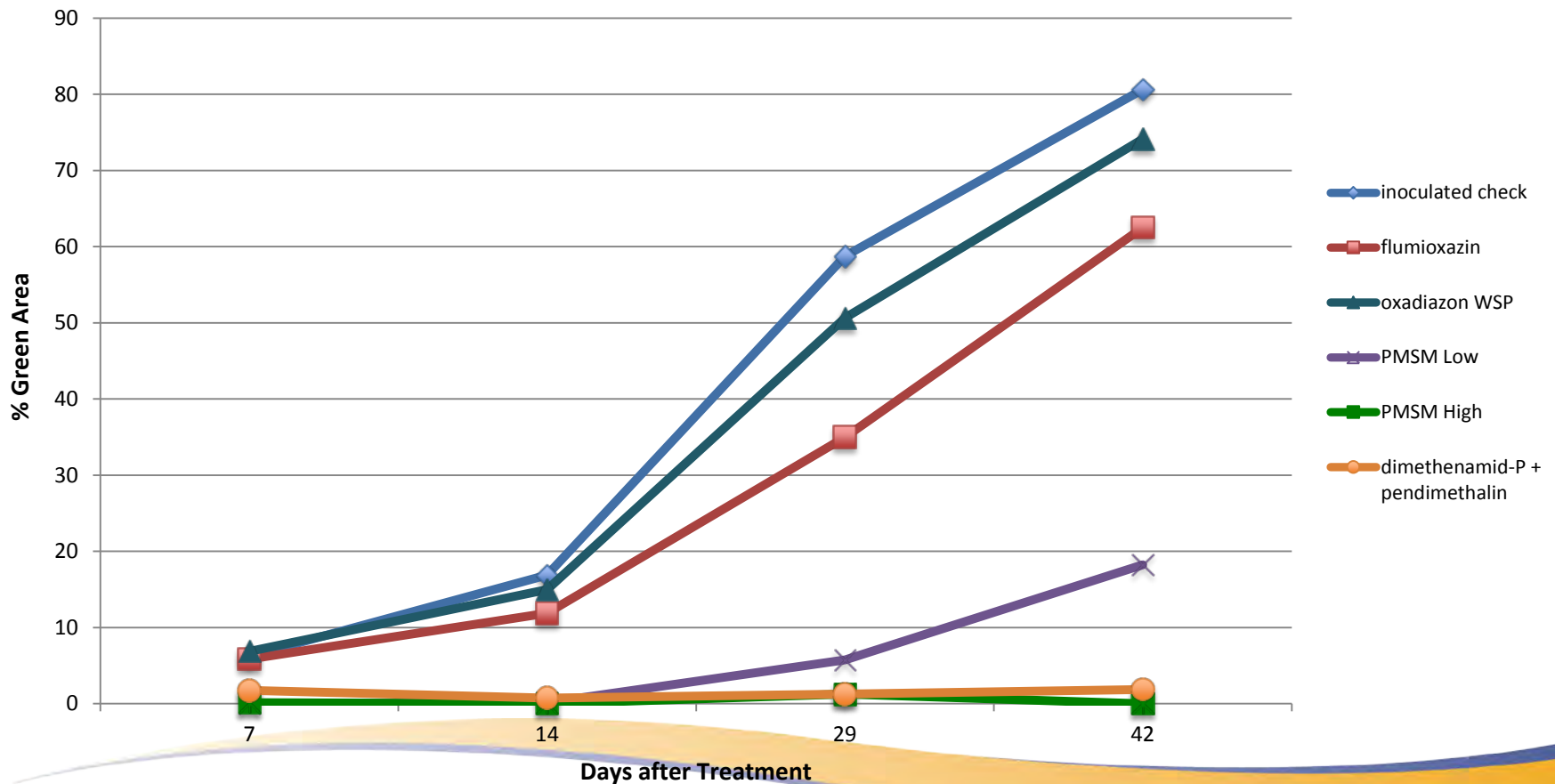
Ronstar

Broadstar

UTC



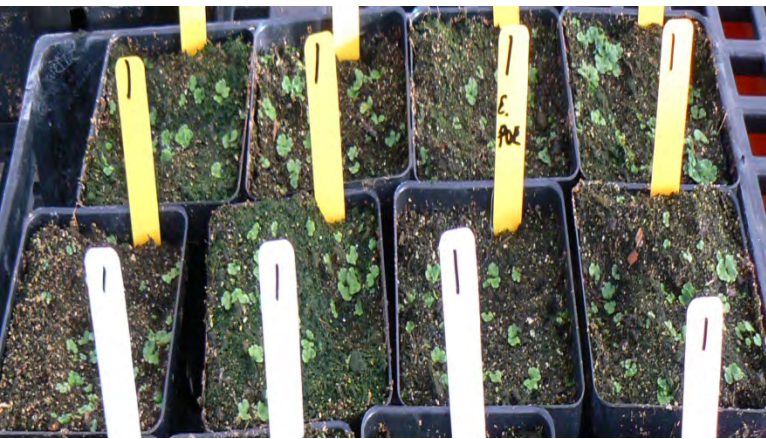
Preemergence Control



University of California

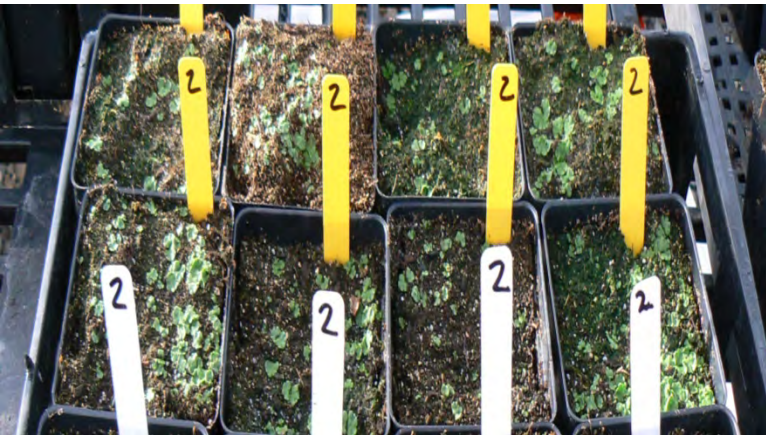
Agriculture and Natural Resources

Integrated Pest Management Program



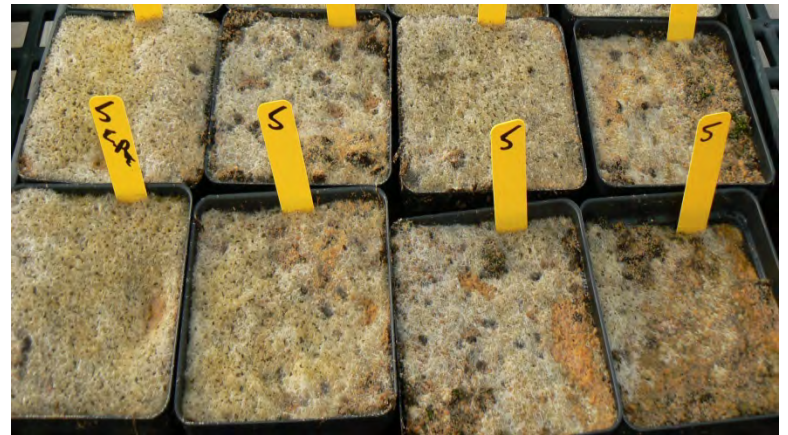
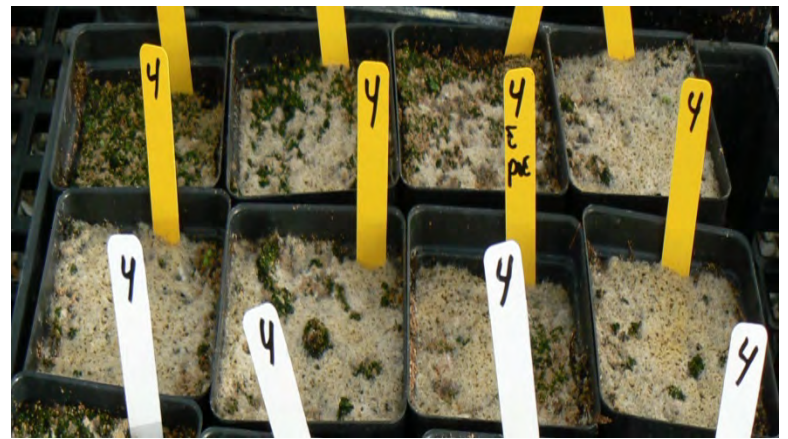
Control

MSM Low



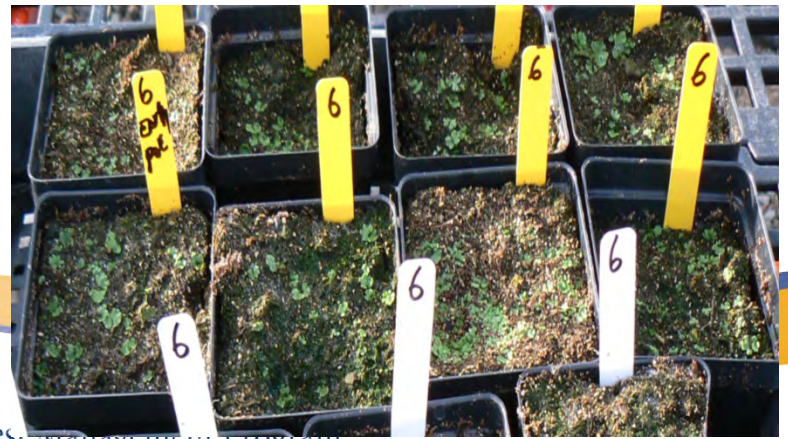
Broadstar

MSM High



Ronstar

Freehand



6 WAT- POE

Freehand

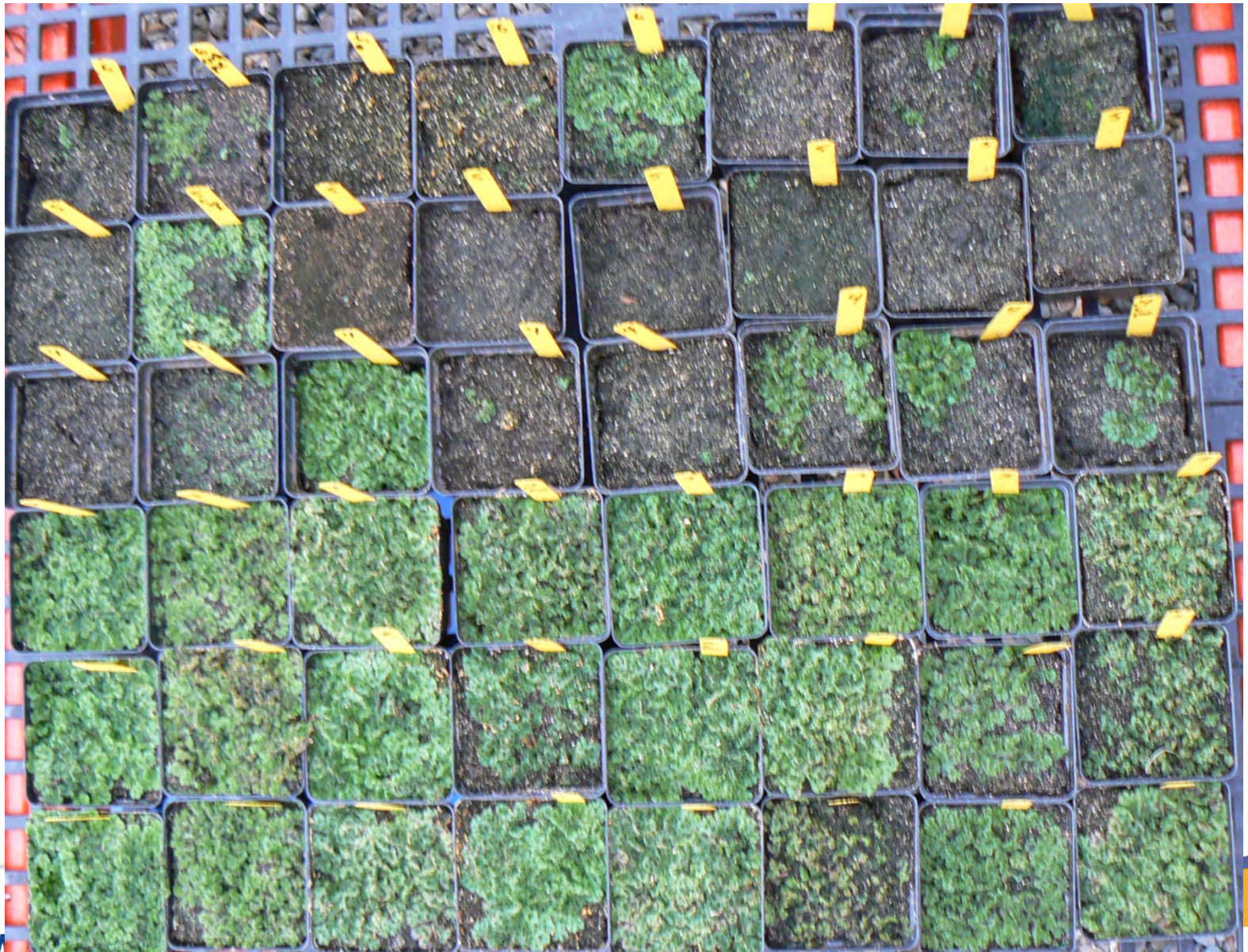
MSM High

MSM Low

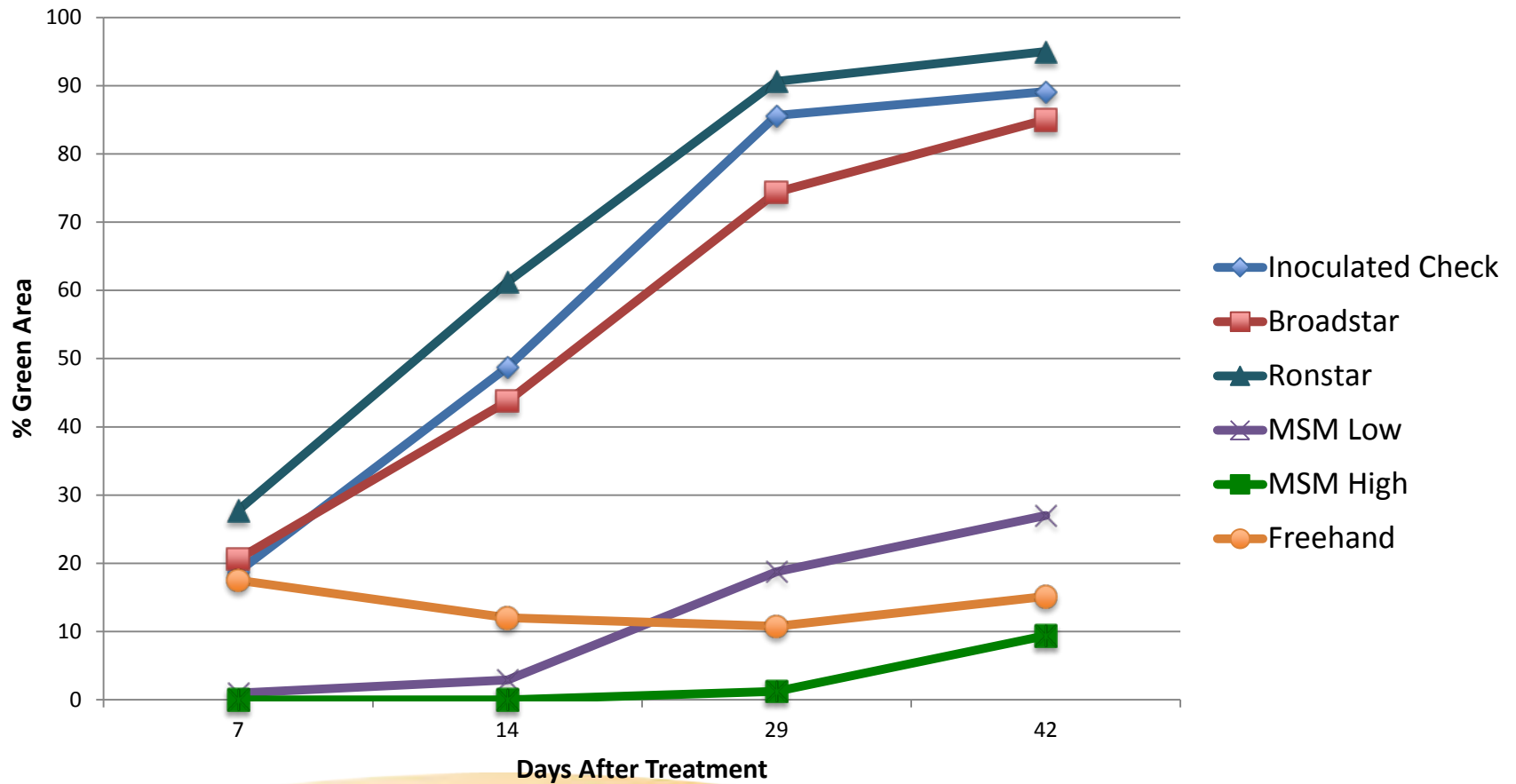
Ronstar

Broadstar

UTC



Postemergence Control



University of California

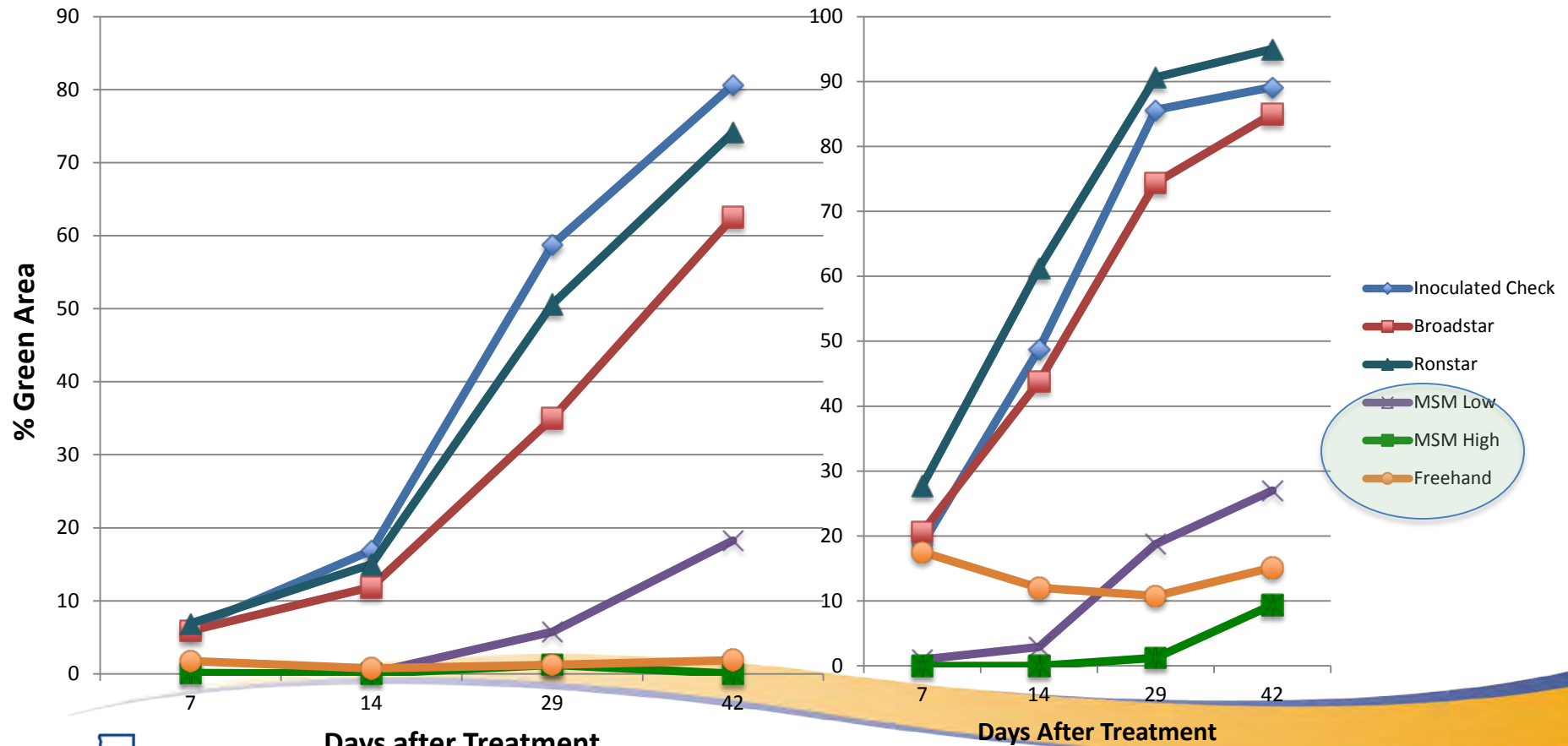
Agriculture and Natural Resources

Integrated Pest Management Program

Outcomes

Preemergence

Postemergence



Days after Treatment
University of California

Agriculture and Natural Resources

Integrated Pest Management Program

Nursery

IR-4 Work

Rates uses are **label, 2X, 4X** to determine crop safety

Treatments are applied once and then applied again ~6 weeks later



FREEHAND



600lb/A 300lb/A 150lb/A Untreated
7WAT2



600lb/A 300lb/A 150lb/A Untreated
10WAT2





600lb/A

300lb/A

150lb/A

Untreated



600lb/A

FREEHAND 10WAT2



48oz/A

24oz/A

12oz/A

Untreated

F6875 4SC

10WAT2

Little northern willowherb control

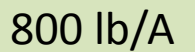


University of California

Agriculture and Natural Resources

Integrated Pest Management Program

28 days after second application



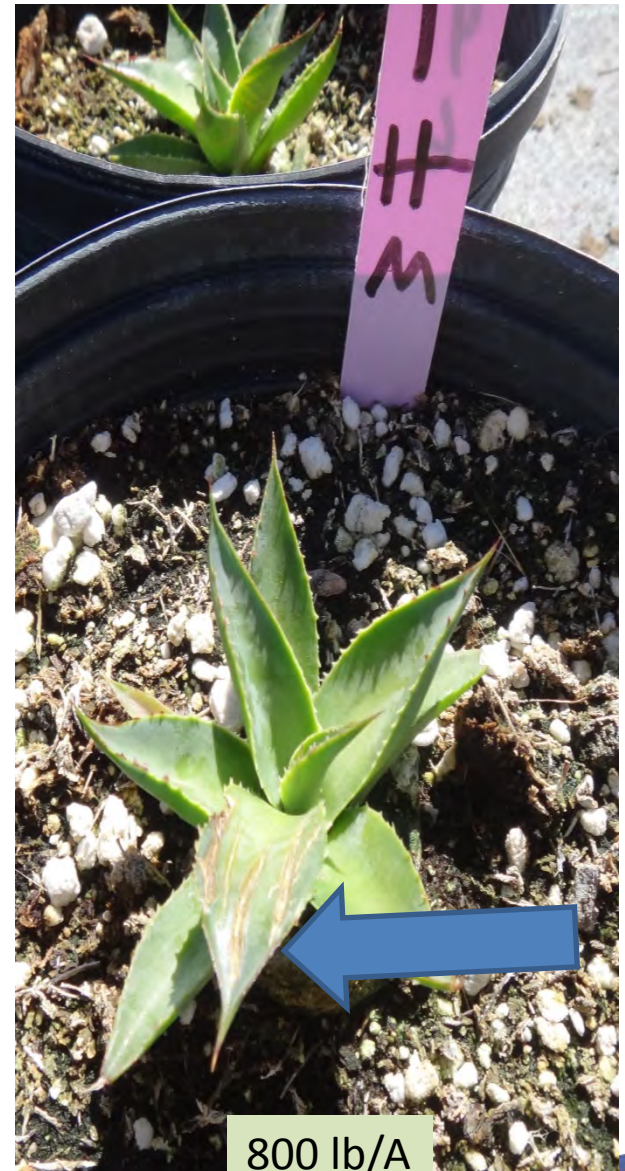
Marengo
28 days after second application
Cracks in leaves



Untreated

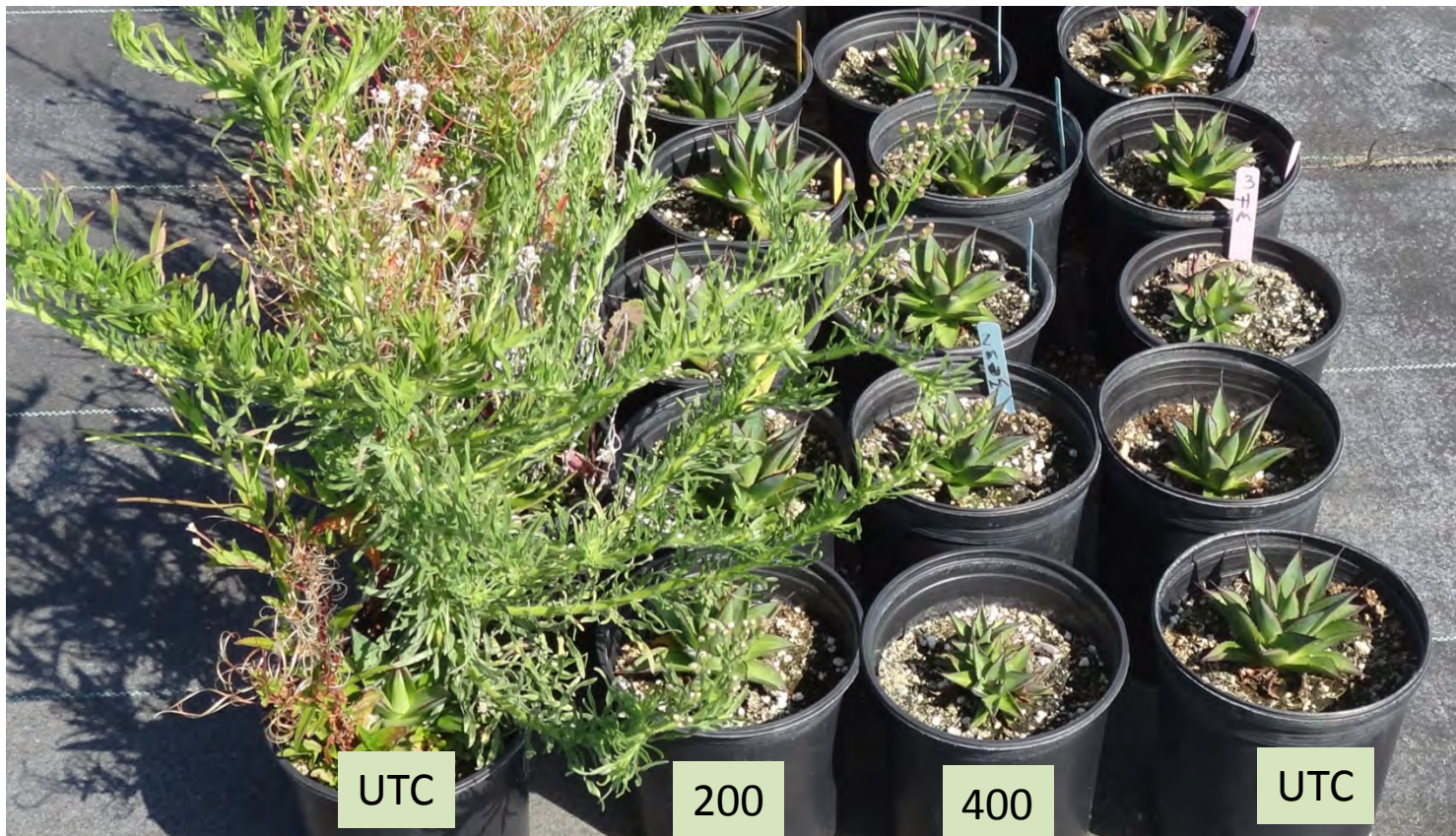


400 lb/A



800 lb/A

May 30, 2016
~9 months after treatment



University of California

Agriculture and Natural Resources

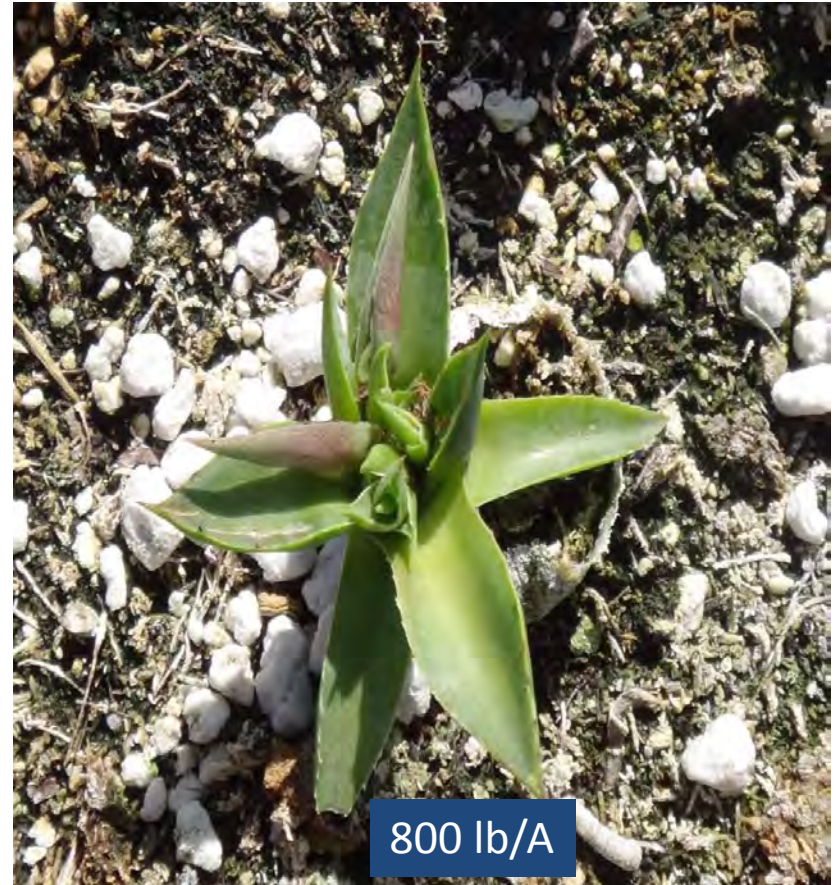
Integrated Pest Management Program

Marengo

10/2/15

28 days after second application

Note twisting multiple meristems. This was not commonly observed and may be due to other factors.





University of California

Agriculture and Natural Resources

Integrated Pest Management Program

Fe HEDTA



3 tests

2 sedums, liriope, agapanthus, lavender





University of California

Agriculture and Natural Resources

Integrated Pest Management Program

Clover in ranunculus



University of California

Agriculture and Natural Resources

■ Integrated Pest Management Program

Carfentrazon
0.25 oz/A - 6 oz/A
(label is 1 oz/A)





University of California

Agriculture and Natural Resources

■ Integrated Pest Management Program



University of California

Agriculture and Natural Resources

■ Integrated Pest Management Program

[HOME](#)[SEARCH](#)[ON THIS SITE](#)[What is IPM?](#)[Home & landscape pests](#)[Agricultural pests](#)[Natural environment pests](#)[Exotic & invasive pests](#)[Weed gallery](#)[Natural enemies gallery](#)[Weather, models & degree-days](#)[Pesticide information](#)[Research](#)[Publications](#)[Events & training](#)[Links](#)[Glossary](#)[About us](#)[Contact us](#)

How to Manage Pests Floriculture and Ornamental Nurseries

[All crops](#)

Provisional Treatment Guidelines

- [Bagrada Bug](#) (PDF)

Emerging Pests in California

- [Asian Citrus Psyllid](#) (in Citrus Pest Management Guidelines)
- [Dufo Moth](#) (PDF)
- [Light Brown Apple Moth](#)
 - [Field Identification Guide](#) (PDF)
 - [Scouting and Field Identification Video](#) (13:10)

UC IPM Pest Management Guidelines

University of California's official guidelines for pest monitoring techniques, pesticides, and nonpesticide alternatives for managing pests in agriculture, floriculture, and commercial turf. [More](#)

[Authors & credits](#) | [All crops](#) | [Download PDF](#) | [Recent updates](#)

Diseases

- [General Properties of Fungicides](#) (3/09)
- [Management of Soilborne Pathogens](#) (3/09)

Diseases Common to Many Plants

- [Cottony Rot](#) (3/09)
- [Crown Gall](#) (3/09)
- [Damping-off](#) (3/09)
- [Downy Mildew](#) (3/09)
- [Fusarium Wilt](#) (3/09)
- [Gray Mold](#) (3/09)
- [Phytophthora Root and Crown Rots](#) (3/09)
- [Phytoplasmas](#) (3/09)
- [Powdery Mildew](#) (3/09)

Insects and Mites

General Information

- [Biological Control](#) (3/09)
- [Establishing Treatment Thresholds](#) (3/09)
- [Managing Pesticide Resistance](#) (3/09)
- [Monitoring with Sticky Traps](#) (3/09)

Major Insect and Mite Pests

- [Aphids](#) (6/10)
- [Armored Scales](#) (6/10)
- [Armyworms and Cutworms](#) (6/10)
- [Bulb Mites](#) (3/09)



<http://ipm.ucanr.edu>

UNIVERSITY OF CALIFORNIA AGRICULTURE & NATURAL RESOURCES

UC IPM

Statewide Integrated Pest Management Program

What is IPM? Identify & Manage Pests Research Publications Training & Events Links About Us Contact Us Subscribe

Solve your pest problems with UC's best science

What's New

- Strategic plan 2015–2025
- Green Bulletin: April-May 2016
- Pest Notes: Lyme Disease in California and Weed Management in Lawns revised, Mealybugs added
- Ag Pest Management: Apricot revised, Carrot updated, Cilantro and Parsley added
- Plant problem diagnostic tool
- Provisional treatment guidelines for Brown Marmorated Stink Bug in apple, pear, and peach
- More...

QUICK LINKS

- Newsletters
- Recursos en español
- Online training

Home, Garden, Turf & Landscape Pests



Agricultural Pests



Natural Environment Pests



Exotic & Invasive Pests

