

Stop #11: Evaluation of Groundcovers with No Supplemental Summer Irrigation for Water Conserving Landscapes

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Project Overview

This project has been in progress since 2009. This year, no irrigation has been applied since fall of 2015. What is visible in the plots is what is left of plant material. Surprisingly, there are still some plants left. After this Field Day, plots will be rewatered and we will determine which plants actually regrow. We will then be placing new plant species in for another cycle of plant growth observations. For the next experiment, we will be considering several more plants native to the drier regions of the Southwestern U.S. and northern Mexico. In addition, we will incorporate some Australian and South African species that show promise for drought tolerance and low maintenance. The study will still include Honeysuckle (*Lonicera*) and *Lantana* as standard plants that most people in the Industry can use as a 'measuring stick' to gauge performance with the other lesser-known plant species. The last irrigation event was July 29th, 2015, when the plots received 1.0 in. of water through overhead irrigation. There are 13 groundcover plant materials and one turfgrass managed as a groundcover. Plots have been established for 6 years. The plants represent a mix of native and non-native as well as woody and herbaceous plant materials (Table 1). Replicated field plots were planted in late 2009 through early 2010.

Results from July 2015 (for review)

To date, the best performers are: lantana, star jasmine, honeysuckle, red apple, ice plant, rosemary, sedums, and juniper. These plants show very few signs if any of drought stress. Lantana has smaller leaves that are becoming more purple than green. Rosemary has slowed in growth but has good color. Star Jasmine is beginning to experience a small amount of leaf burn. The growth of honeysuckle has slowed and the new growth has smaller leaves, but there are no symptoms of leaf burn. Sedums have slowed in growth and are off-color with more red pigment in some of the plant material. Red apple and juniper are beginning to become off-color. Ice plant appears normal.

The groundcovers showing significant burning and/or dieback include correa (Australian fushia), salvia, and thyme. Buffalograss is generally dormant. Correa, salvia and thyme appear to be dying in patches rather than showing uniform burning and dieback on the plot.

GROUNDCOVER RESPONSE TO NO SUMMER IRRIGATION STUDY – U.C. RIVERSIDE

Specific Epithet	Common Name	Source Size ²	Date Planted	Notes
1. <i>Drosanthemum speciosum</i> , <i>Delosperma</i> , <i>Mesembryanthemum</i> ??	vygie, iceplant	Altman Plants #1 container	4-2-10	Newer iceplant introduction, spring flowering, re-flowers in summer, So. Africa native, (vygie is Afrikaans term for <i>Mesembryanthemums</i> , fam. Aizoaceae)
2. <i>Rosmarinus officianalis</i> 'Irene'	prostrate rosemary	Native Sons 4-in. pot	11-4-09	Drought tolerant low groundcover
3. <i>Thymus praecox arcticus</i> (T. <i>praecox</i> subsp. <i>Arcticus</i> ; T. <i>serpyllum</i>) 'Pink Chintz'	creeping thyme	Native Sons 4-in. pot	11-4-09	Low growing thyme
4. <i>Atriplex cinerea</i> Poir.	coast or grey saltbush	Native Sons #1 container	11-4-09	Silver foliage, low-spreading, dioecious, Australian native
5. <i>Correa</i> X unk. 'Dusky Bells' ('Carmine Bells')	Australian fuchsia	Native Sons #1 container	11-4-09	Reported to be low wide-spreading, deep red flowers, Australian native
6. <i>Juniperus horizontalis</i> 'Wiltonii'	blue rug juniper	Monrovia #1 container	12-2-09	Very flat dense growing, trailing branches, silver blue foliage
7. <i>Hypericum calycinum</i> L.	creeping St. Johnswort, Aaron's beard	Expertise Growers cuttings in flats	10-29-09	Low-growing, widely adapted, flowers primarily in spring and periodically in summer
8. <i>Salvia sonomensis</i> 'Gracias' (<i>S. sonomensis</i> X <i>S. clevelandii</i>)	creeping sage	Las Palitas #1 container	9-11-09	California native, reported low growing, wide spreading, lavender-blue flowers, possibly a hybrid of <i>S. sonomensis</i> X <i>S. clevelandii</i> , flowers winter/spring
9. <i>Aptenia cordifolia</i> (L.f.) N.E. Br. 'Red Apple' (<i>A. cordifolia</i> X <i>A. haeckeliana</i> ?)	red apple	Expertise Growers cuttings in flats	10-29-09 add plt 4-2-10	Ice plant relative
10. <i>Lantana montevidensis</i>	trailing purple lantana	Expertise Growers cuttings in flats	10-29-09 add plt 4-8-10	Common landscape lantana, purple flowers spr.-summer
11. <i>Trachelospermum jasminoides</i>	star jasmine	Expertise Growers cuttings in flats	10-29-09	Vigorous once established, widely adapted
12. <i>Sedum</i> spp.	mixed sedums	Altman Plants 8 ft. x 8 ft. mats	3-31-10	Sod-like product with cuttings of 4 <i>sedum</i> spp. Rooted in jute mat under laden with plastic netting
13. <i>Buchloe dactyloides</i> 'U.C. Verde'	buffalograss	Todd Valley Farms plugs	4-8-09	Warm-season grass, a standard of performance under limited irrigation
14. <i>Lonicera japonica</i> 'Halliana'	Hall's honeysuckle, Japanese honeysuckle	Expertise Growers cuttings in flats	10-29-09	Very vigorous, reported to be tolerates drought well