



Characterizing and Averting Cottontail Rabbit Damage in a Southern California Nurseries

Cheryl Wilen
UC Cooperative Extension
South Coast and UC IPM
Thanks to Tracy Ellis



Liriope

Estimated Costs to One Nursery in Southern California from Rabbit Damage

-\$10,884/yearly in direct plant loss

-at least \$12,000/yearly irrigation repair labor



Where did the rabbits hide?

- Natural brush
- Wood and recycle piles
- Bougainvillea hedges
- Under storage pallets
- Iceplant plantings on slopes
- Under trailer buildings
- Drainage pipes
- Nursery vegetation
- Under and between rocks
- In riverbed/riparian areas

Example of Common Irrigation Damage Caused by Rabbits



Drip Irrigation using Spaghetti Tubing, Medium Planting Density, 15 gal, Medium Canopy Density

Irrigation Line Covers of Various Materials were Effective in Reducing Rabbit Irrigation Damage

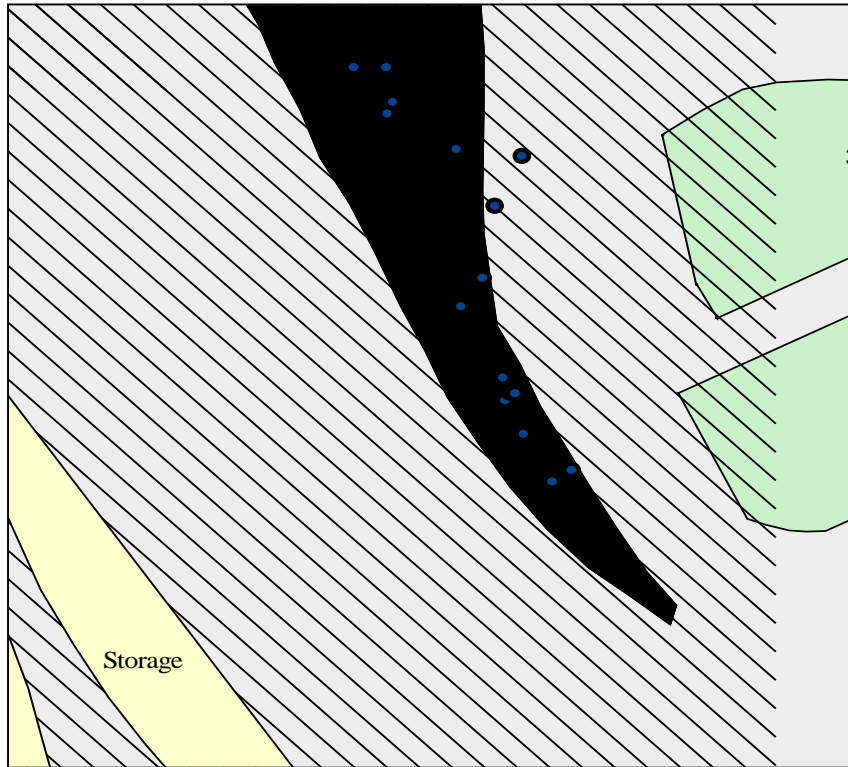


Medium planting density, 15 gal, drip irrigation, low density canopy

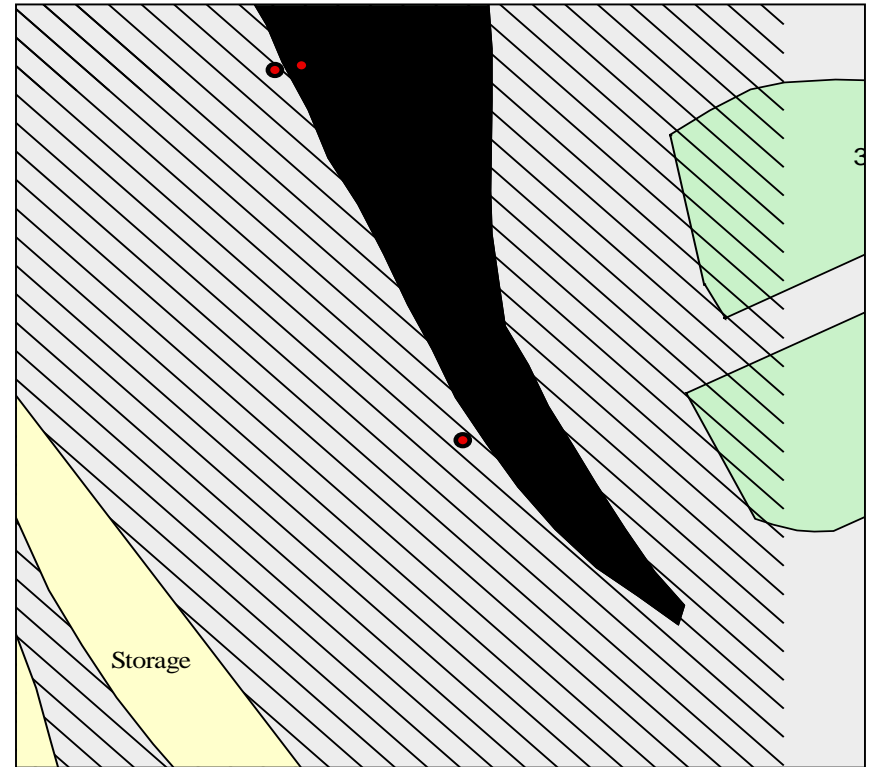
Spaghetti Line Covers using Recycled $\frac{3}{4}$ " Poly Hose



Reduction in Irrigation Damage Using Tubing Covers



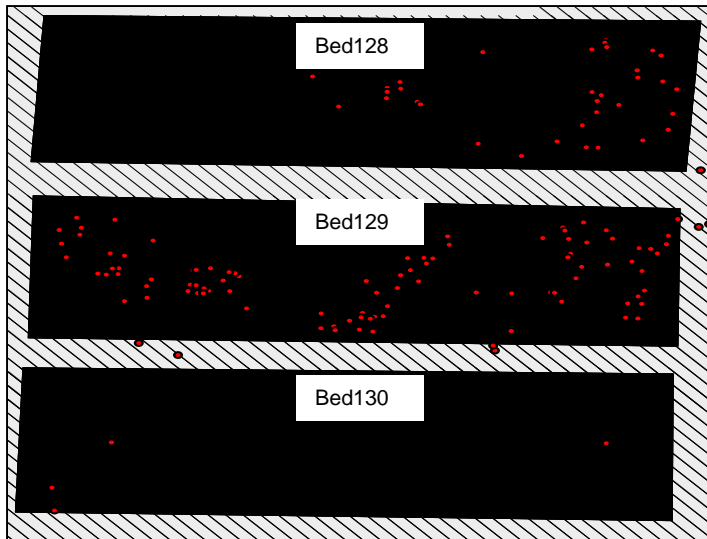
Damage Waypoints-Before



Damage Waypoints-After

Trapping for Control Test in Three beds

BEFORE (waypoints 5-30-05 to 6-20-05)



94 traps/
6 nights=

4

338 traps/
18 nights=

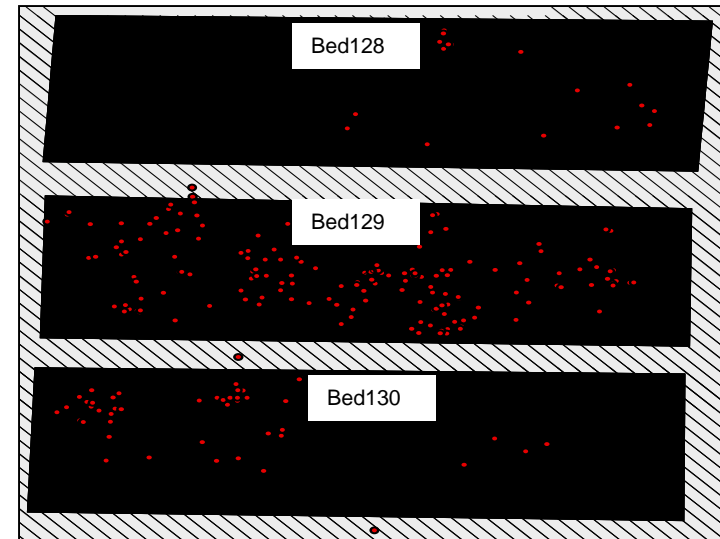
12

526 traps/
27 nights=

19

**Rabbits
Removed**

AFTER (waypoints 9-08-05 to 9-28-05)

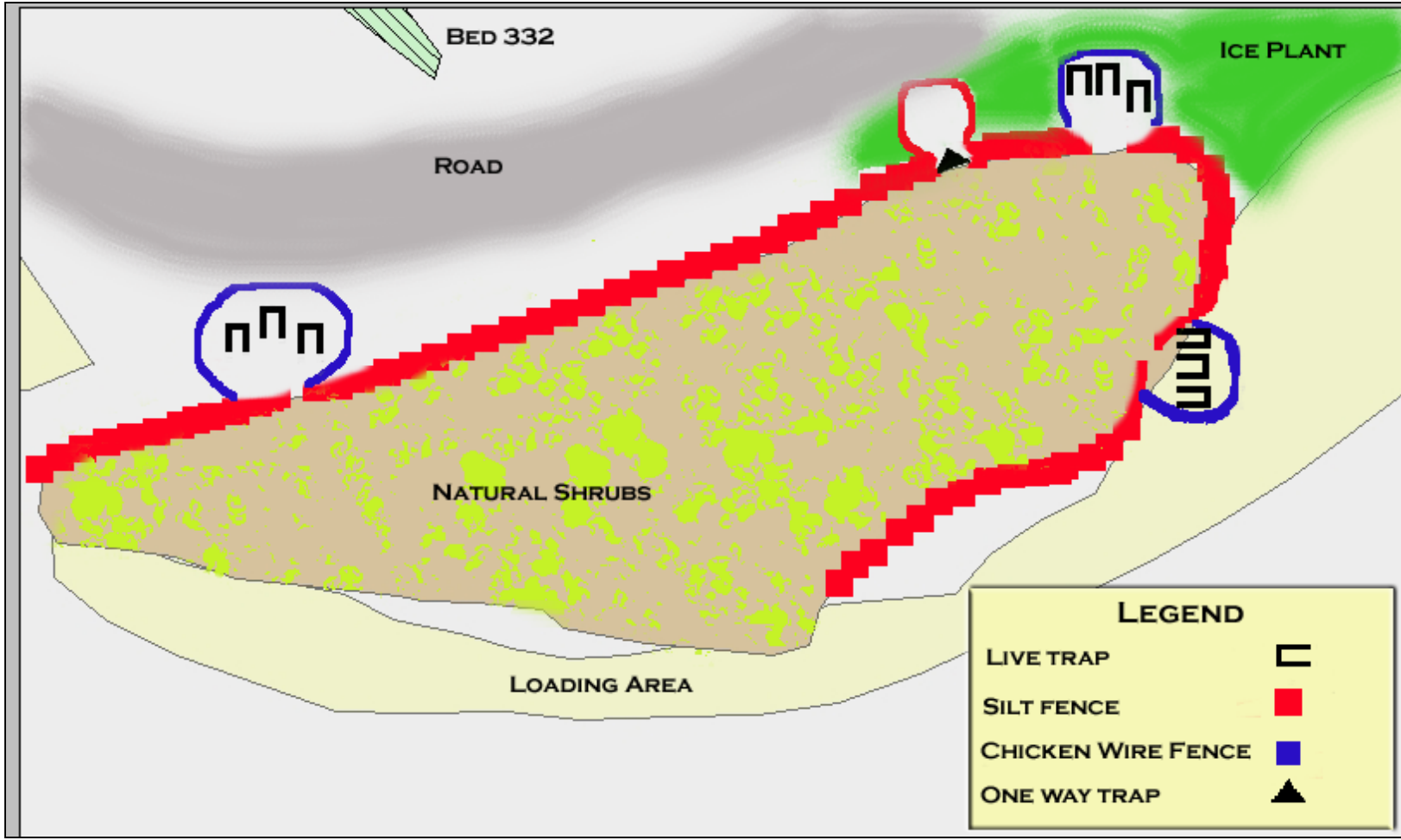


An aerial photograph of a nursery or agricultural site. In the foreground, a black silt fence is stretched across a natural, brushy area. The middle ground shows a dirt road and rows of potted plants. The background features large greenhouses and more nursery rows.

DRIFT FENCE TRAPPING

**Set Up of Drift Fence in Natural Area
Using Black Silt Fence**

Silt Fence Drift Fence with Traps at Doorways



Map of Drift Fence with Traps

Habituation of Rabbits to Doorways in Drift Fence



Corral Traps



**Corral Trap using
Silt Fence**



Rabbit Going thru One-Way Door

Traps Associated with Doorways and Ends of Drift Fences



Conibear Traps



Live Traps

Free-Standing Live Trap



Live traps set in bed between 5-gallon plant containers “free standing”

Catch Rates of Rabbit Trapping Program

		TRAP NIGHTS	CAUGHT RABBITS	MEAN CATCH/TRAP NIGHT
CORRAL				
	Corral (silt fence)	10	0	0
	Corral- Live Within	11	0	0
	Loose corral-Live Within	144	8	6
DRIFT FENCING				
	Doorways-Live	60	8	13
	Doorways-Conibear	104	12	11
	End of Fence-Live	68	8	12
	Along Fence-Live	104	11	12
FREE-STANDING				
	Live	2045	65	3

Exclusionary Fence Using Silt Fencing- An Excellent Temporary Barrier



A dirt road runs through a field of green bushes. A white plastic barrier is stretched across the road, and red plastic sheeting is draped over the bushes on the left side. The sky is clear and blue.

Exclusionary Fencing
using Wire and Plastic-
An Excellent Barrier

General Recommendations

- Protect & modify irrigation methods
- Develop runways using drift fence, then trap
- Exclusionary fencing where possible
- Target known rabbit harborages for modification and turnover

Impracticality of Fencing and Irrigation Line Covers

CONSTANT MOVEMENT
DURING PRODUCTION
& SHIPPING



Repellents

Before

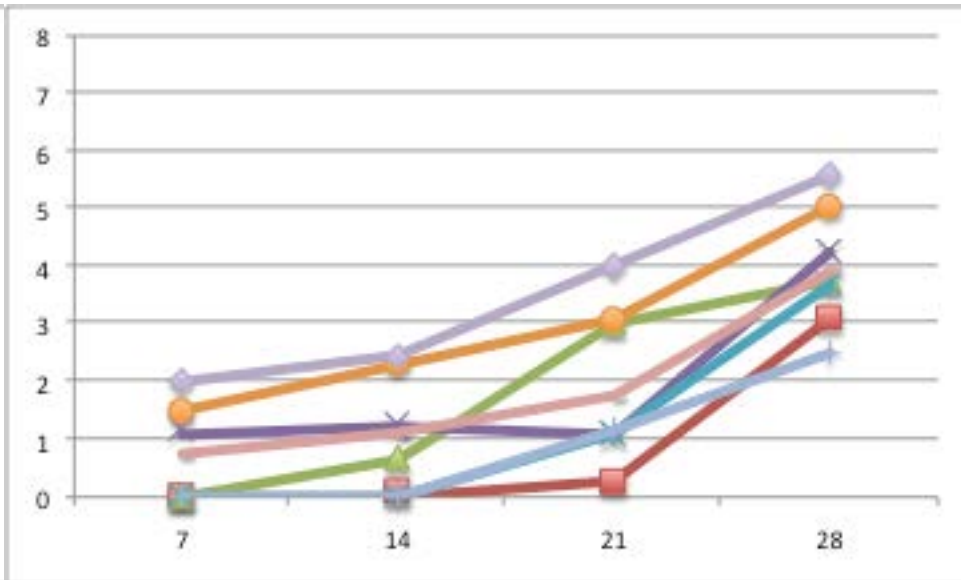
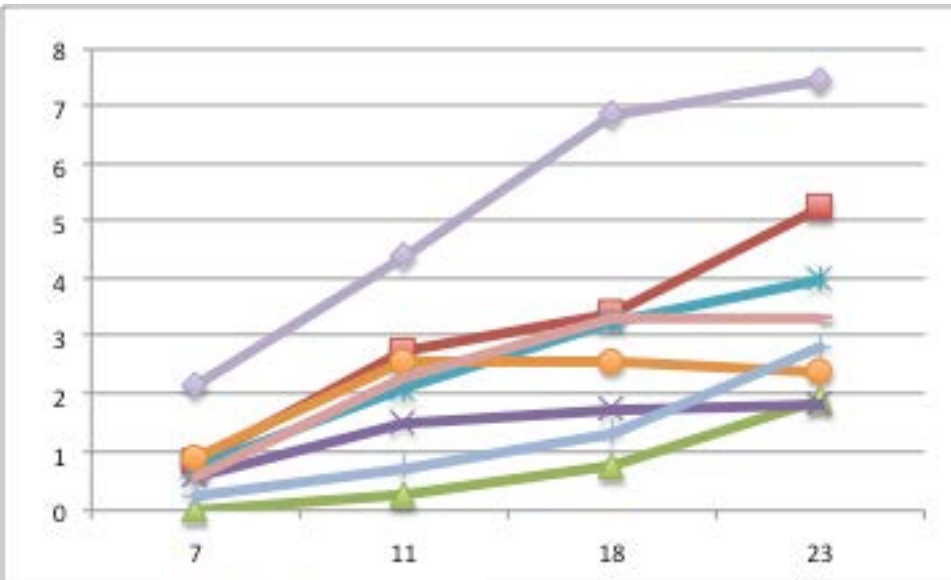


After

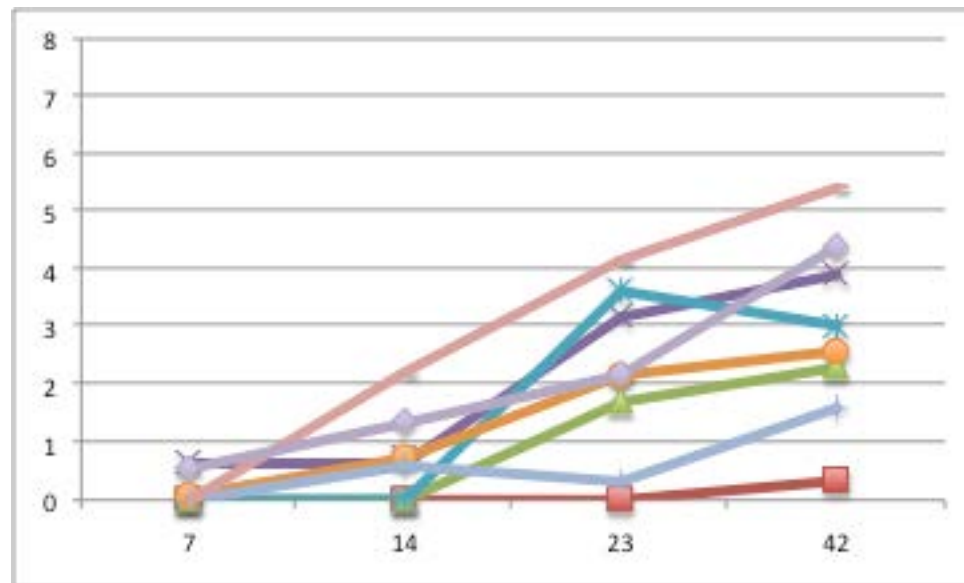




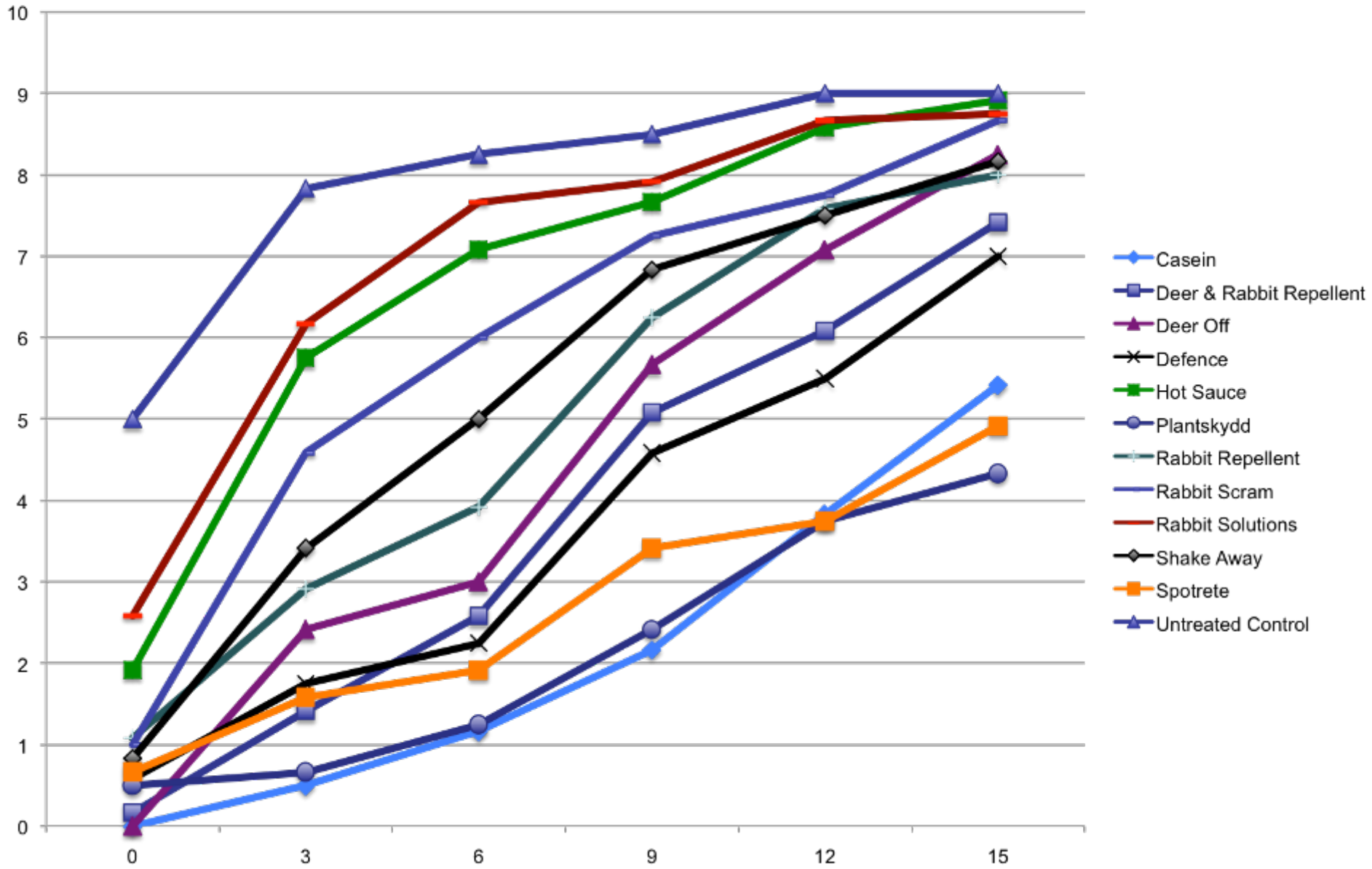
2007



- casain
- deeroff rtu
- Hot Sauce
- liquidfence
- rabbit soim rtu
- repellez rtu
- shakeaway
- UTC



Three Trials – Combined Data (2009)



Repellents

- Repellents may be used but expect variable results
- Reapply 6-9 days
- Liquid Fence, Casein best in 2007
- Spotrete, Casein, Plantskydd best in 2009
- Most reliable management tools are 3' fencing with footing and removal of hiding places



Solve your pest problems with UC's best science

What's New

- Highlights: [2014 Annual Report](#)
- Ag Pest Management: [Nectarine, Citrus and Alfalfa updated](#), [Grape and Pistachio revised](#)
- Green Bulletin: [August 2015](#)
- Retail Nursery & Garden Center IPM Newsletter: [July 2015](#)
- Pest Notes: [Wild Pigs added](#), [Flies and Skunks revised](#)
- Online courses:
 - [Pesticide Resistance](#)
 - [Providing IPM Services in Schools and Child Care Settings](#)
- [More...](#)

QUICK LINKS

- [Newsletters](#)
- [Recursos en español](#)
- [Online training](#)
- [Weather, models, & degree-days](#)

Home, Garden, Turf & Landscape Pests



Agricultural Pests



Natural Environment Pests



Exotic & Invasive Pests

