Characterizing and Averting Cottontail Rabbit Damage in a Southern California Nurseries

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Thanks to Tracy Ellis
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)

Bed128

Bed129

Bed130

Rabbits Removed

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

Bed128

Bed129

Bed130

94 traps/6 nights = 4

338 traps/18 nights = 12

526 traps/27 nights = 19
DRIFT FENCE TRAPPING

Set Up of Drift Fence in Natural Area Using Black Silt Fence
Silt Fence Drift Fence with Traps at Doorways
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

<table>
<thead>
<tr>
<th></th>
<th>Trap Nights</th>
<th>Caught Rabbits</th>
<th>Mean Catch/Trap Night</th>
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</thead>
<tbody>
<tr>
<td><strong>Corral</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corral (silt fence)</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Corral - Live Within</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Loose corral - Live Within</td>
<td>144</td>
<td>8</td>
<td>6</td>
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<tr>
<td><strong>Drift Fencing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doorways - Live</td>
<td>60</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Doorways - Conibear</td>
<td>104</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>End of Fence - Live</td>
<td>68</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Along Fence - Live</td>
<td>104</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td><strong>Free-Standing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live</td>
<td>2045</td>
<td>65</td>
<td>3</td>
</tr>
</tbody>
</table>
Exclusionary Fence Using Silt Fencing-
An Excellent Temporary Barrier
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
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