Field Bindweed Management for Processing Tomatoes

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FIELD BINDWEED

Convulvulus arvensis
**Convolvulaceae**

- Morningglory family
  - Tall morningglory, *Ipomoea purpurea*
  - Japanese morningglory, *Ipomoea nil*
Seedling field bindweed
- Metam pre-plant
- Trifluralin (Treflan) at layby
- Post emergence, directed sprays with carfentrazone (Shark)
- Cultivation

Fall glyphosate (Roundup) applications (also Paraquat, Shark)

Established bindweed
- Roundup (fall)
- Cultivation
Extensive Root System

> 10 ft underground horizontal stems (rhizomes)
2007 Variety Trial
Background

- Reduced tillage favors perennial weeds.
- Earlier work by Bob Mullen suggested partial control with rimsulfuron (Matrix) pre/post, Shark post, Treflan pre.
- 2010 - 11: Tom Lanini reports Treflan as the best registered material to control bindweed; control improved with post applications of Matrix or Shark.
Trial work (sulfentrazone - Zeus)
Field Bindweed control (%) on July 13, 2011
Field Bindweed Control (%) at Two Rates of Treflan

![Bar chart showing field bindweed control at different rates and dates.]
No significant reduction in bindweed by any of the Zeus PPI treatments.

Total weeds reduced with herbicides

Matrix post significant at 0.10
Field bindweed control trial 2011
2012 Trials
BINDWEED TRIAL AT WSREC AND UCD 2012

**PPI Trts:**
- UTC (no herb, no cultivation)
- Prowl (pendimethalin) 3 pints
- Matrix 2 oz/A
- Treflan 2 pints/A
- Spartan/Zeus 3.2 fl oz/A

**Post trts:**
- UTC, Matrix 2 oz/A, Shark 2 fl oz/A

**Other:**
1. Matrix post 2x
2. Shark post 2x
3. Matrix + Sandea (halosulfuron) post
4. Treflan pre and post
5. Treflan + Dual Magnum (metalochlor) 1.5 pints/A PRE
6. UTC (no herb, hand weed)
WSREC Bindweed Trial 2012

August Weed Rating

Wednesday, January 29, 14
UC Davis 2012 Bindweed Trial

* No significant differences

Wednesday, January 29, 14
2013

- **UCD**
  - Lynn Sosnoskie adds planting date, glyphosate treatments.

- **WSREC**
  - 3-way (Treflan + Dual PRE, Matrix POST)
  - Roundup + Shark POST 2x
  - Zeus + Dual
July weed rating.
8 weeks after transplanting
Putting it all together

Wednesday, January 29, 14
Putting it all together

Wednesday, January 29, 14

Field Bindweed Summary 2011 - 13

Only 6 treatment combinations > 40% control
Prowl H₂O only

Prowl + Matrix

Wednesday, January 29, 14
Treflan only
Other Broadleaf Weeds

Main Plot Treatment

Split Plot Trt
a. UTC
b. Matrix
c. Shark

Other trts
Bindweed
Broadleaf
Grass

Other Herbicide Treatments
total weed pressure

- Dual Mag 1.5 pts/A + Treflan 2 pts/A PPI + Matrix POST X2
- Zeus 6.0 fl oz PPI + Matrix 2 oz/A POST X 2
- Zeus 6.0 fl oz + Treflan 2 pts/A PPI
- Zeus 4.5 fl oz + Treflan 2 pts/A PPI
- Zeus 6.0 fl oz + Dual Magnum 1.5 pts/A PPI
- Zeus 4.5 fl oz + Dual Mag 1.5 pts/A PPI
- Zeus 6.0 fl oz/A PPI
- Zeus 4.5 fl oz/A PPI
- UTC

weed pressure (0-10)
Summary

1. Best treatment Treflan PRE + Matrix POST.
   - Matrix +15 - 20% “boost”

2. Higher rates of Matrix at 4 oz (2X rate) may improve control; 2x Treflan.

3. Roundup may help (only 1 yr of data).
“Where drip irrigated tomatoes are grown, rotate only to tomato, potato, or field corn as crop injury may result.”

*DuPont Matrix label*
THANK YOU
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