

## Managing *Baccharis* “Coyote Brush”

Knocking out noxious weeds workshop series

Eureka, CA

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## Herbicide/Application Methods

- Inject (100% @ 1 ml/3” diameter)
  - Imazapyr
  - Glyphosate
- Foliar Spray (5% @ 30 psi) and Drizzle (10% @ 20 psi)
  - All applications to wet with 5% Methylated Seed Oil (Super Spread MSO)
  - Imazapyr
  - Glyphosate
  - 2,4-D
  - Triclopyr



## Applicators



Tjet 8002 nozzle

SPRAYING SYSTEMS AAA3HA-AL2 ALUMINUM GUNJET SPRAY GUN

TYPE AAA

~~\$162.07~~  
Save: 35% off  
**Sale: \$99.50**


**SPRAYING SYSTEMS GunJet Spray Guns**

**LARGER IMAGE** Features: Designed and built for heavy duty service. Slows extends through extension to valve seat located directly behind orifice disc for drip-free shut-off and instant operating response.

- Convenient trigger-lock for continuous spraying
- Number AAA3L for operating pressures up to 200 PSI
- Number AAA3H for operating pressures up to 800 PSI
- Trigger handle control; ALL MODELS have 1/2" MPT or BSPF (F) inlet connections
- Exposed packing nut for easy adjustment of packing


**Details:**


- Material: Aluminum
- Overall Length: 13"
- Orifice Disc Number: D2



## Design

- 10 Plants/Treatment
- 2 Hack and squirt (“Inject”) treatments
- 8 Foliar “Spray” treatments: Short and Tall plants
- 4 “Drizzle” treatments
- 2 “Control”s: Short and Tall plants
- 2 Properties
- Replicated 4\* over time (“Spring”/”Fall”)
  - » 1120 plants will receive treatment.






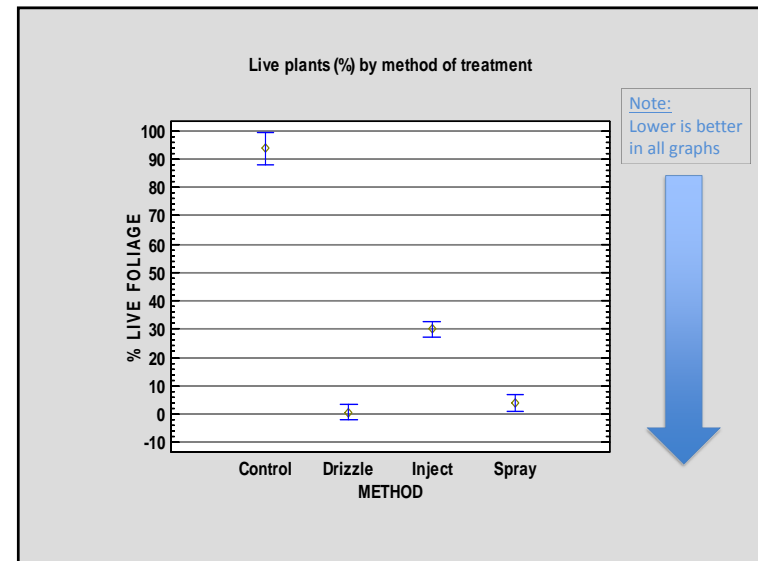
## Tall Plants

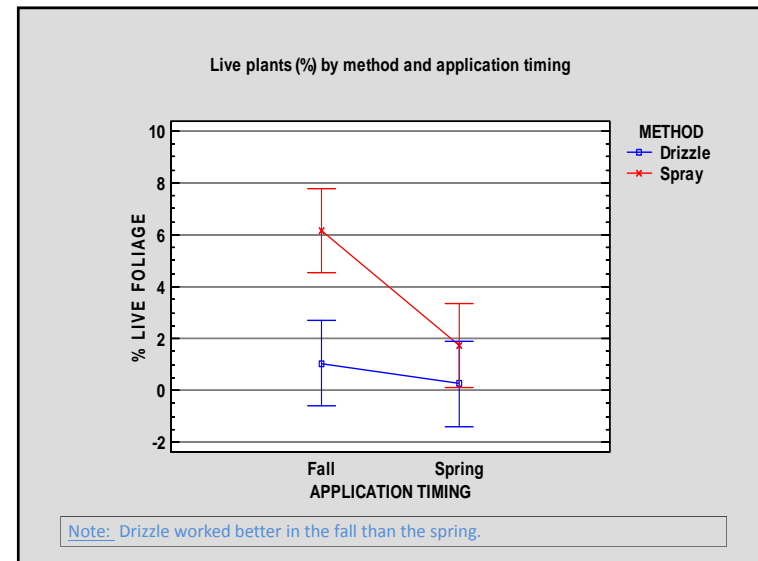
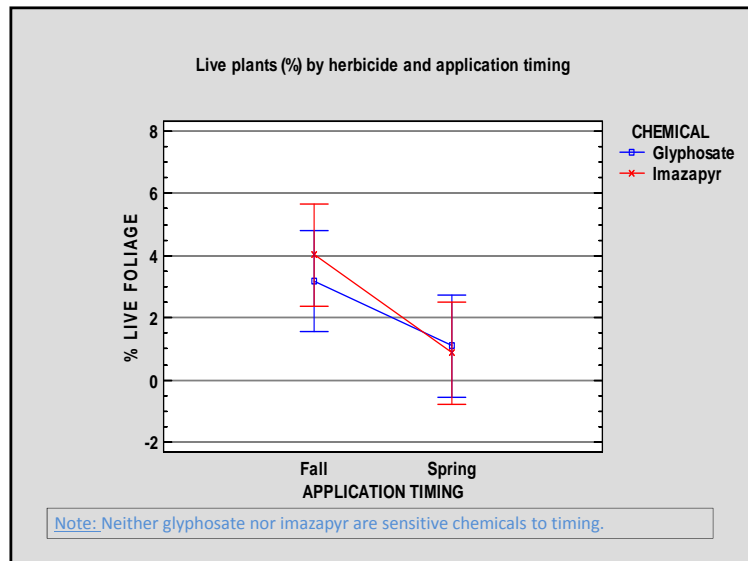
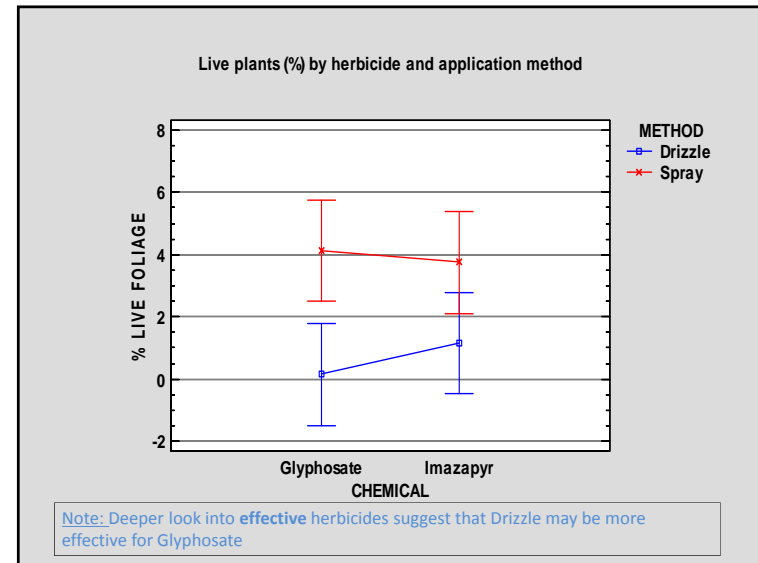
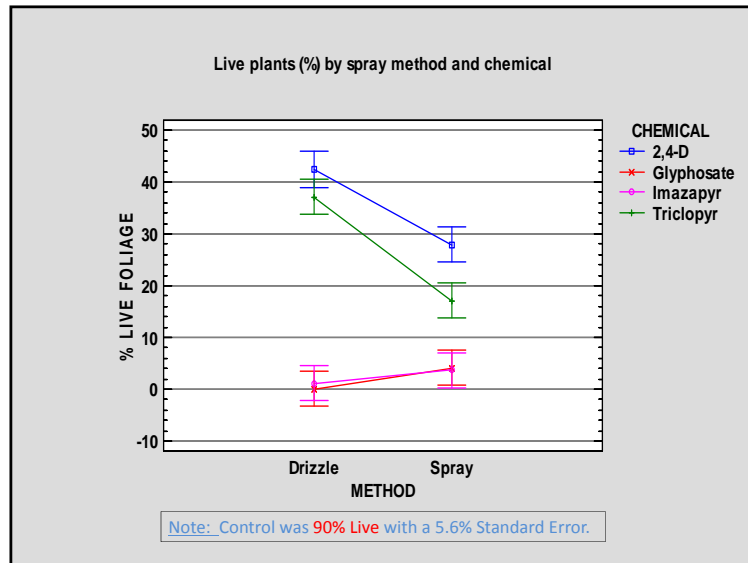
**Analysis of Variance for % LIVE FOLIAGE - Type III Sums of Squares**

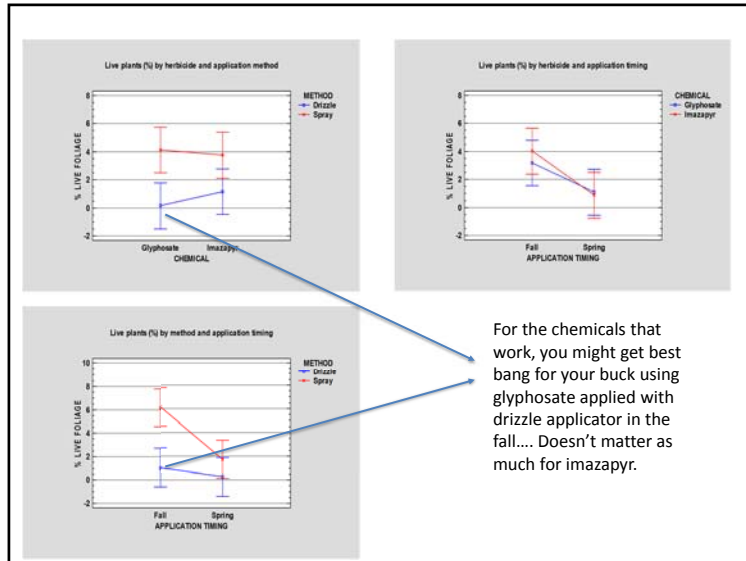
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
<b>MAIN EFFECTS</b>					
A:METHOD	3878.11	1	3878.11	16.19	0.0001
B:CHEMICAL	69206.0	3	23068.7	96.29	0.0000
C:APPLICATION TIMING	2205.0	1	2205.0	9.20	0.0026
D:OWNER	99.0125	1	99.0125	0.41	0.5208
<b>INTERACTIONS</b>					
AB	8723.66	3	2907.89	12.14	0.0000
AC	490.05	1	490.05	2.05	0.1537
AD	4545.11	1	4545.11	18.97	0.0000
BC	678.625	3	226.208	0.94	0.4196
BD	3716.06	3	1238.69	5.17	0.0017
CD	20.0	1	20.0	0.08	0.7728
ABC	99.925	3	33.3083	0.14	0.9366
ABD	1989.51	3	663.171	2.77	0.0420
ACD	11.25	1	11.25	0.05	0.8286
BCD	832.575	3	277.525	1.16	0.3259
ABCD	1440.57	3	480.192	2.00	0.1135
RESIDUAL	68997.2	288	239.574		
TOTAL (CORRECTED)	166933.	319			

All F-ratios are based on the residual mean square error.









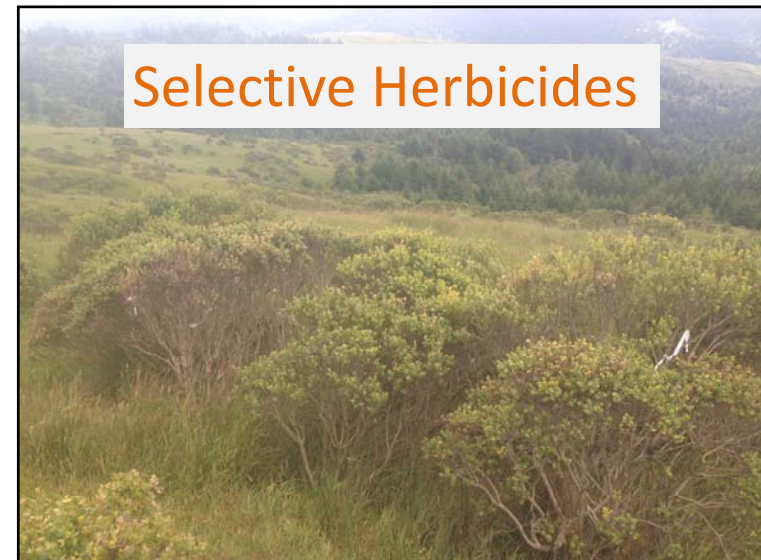
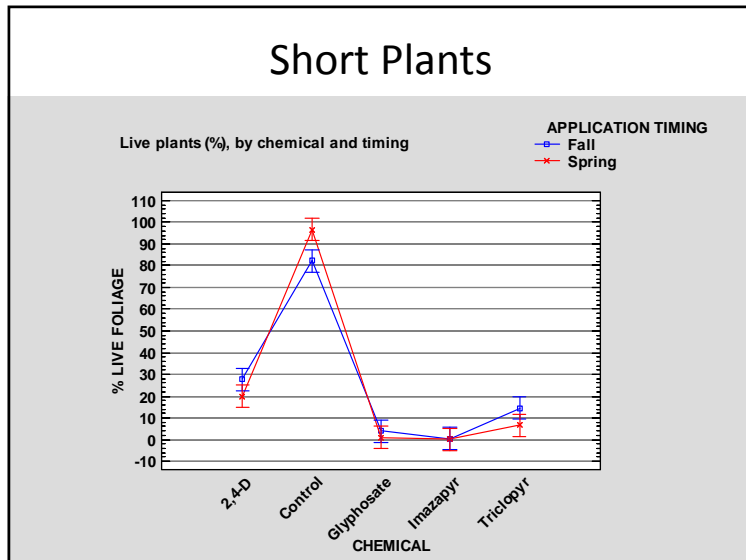
## Small Plants Cont.

Analysis of Variance for % LIVE FOLIAGE - Type III Sums of Squares

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
MAIN EFFECTS					
A:CHEMICAL	218790.	4	54697.5	201.41	0.0000
B:APPLICATION TIMING	42.32	1	42.32	0.16	0.6935
C:OWNER	1458.0	1	1458.0	5.37	0.0216
INTERACTIONS					
AB	3317.68	4	829.42	3.05	0.0182
AC	9396.1	4	2349.03	8.65	0.0000
BC	35.28	1	35.28	0.13	0.7189
ABC	408.82	4	102.205	0.38	0.8253
RESIDUAL	48883.8	180	271.577		
TOTAL (CORRECTED)	282332.	199			

All F-ratios are based on the residual mean square error.

Note: Timing does not matter on small plants, but chemical does. (Remember, only one method was used on small plants: Spray).







Non-Selective Herbicides





## Herbicides and Active Ingredients

- 2,4-D- (Weedar 64) \$16.67/gal
- Triclopyr- (Element 4) \$54.82/gal
  - Use ester form when temps are below 80 degrees, and the amine form if temps are over 80 degrees.
- Imazapyr- (Rotary 2 SL) \$49.10/gal
- Glyphosate- (Roundup- Weather Max) \$31.64/gal

## Over-Estimated Cost/Acre

- 2,4-D @ \$16.67/gal
  - Spray (47 gal\*5%)= ~\$39.17/acre
  - Drizzle (36 gal\*10%)= ~\$60.01/acre
- Triclopyr @ \$54.82/gal
  - Spray (47 gal\*5%)= ~\$128.83/acre
  - Drizzle (36 gal\*10%)= ~\$197.35/acre
- Imazapyr @ \$49.10/gal
  - Spray (47 gal\*5%)= ~\$115.38/acre
  - Drizzle (36 gal\*10%)= ~\$176.76/acre
- Glyphosate @ \$31.64/gal
  - Spray (47 gal\*5%)= ~\$74.35/acre
  - Drizzle (36 gal\*10%)= ~\$113.90/acre

## Applicator's Perspective

- Old, dense stands: Drizzle
  - More resistance to winds.
  - Less maneuvering around plants for coverage.
  - Mixed tank lasts longer.
    - *Be sure to calculate these into cost.*
- Young or mixed age stands: Spray
  - Ability to spray big, small, and additional species if desired.

**\*\*\*100% Coverage is essential!!!\*\*\***



## Recap of Results

Assessed by: “% Live”

- Injections didn't kill whole plant in either timing scenario.
- Small plants die more readily than large plants.
- Imazapyr and Glyphosate are comparable.
  - Timing does not matter much
- What would I use? *Glyphosate; drizzle; fall.*

## Big Question?

Will the dead  
remain that way?



## Other options for Baccharis

- Saw
- Cat
- Excavator
- Burning?



- Know your soils.
- Physical removal usually stimulates resprouting and seed germination, so a follow-up treatment is necessary.

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