


## Strategies for Weed Control

*Colusa, Glenn and Tehama Counties*

Josh Davy  
Farm Advisor  
University of California

### Thistles



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### Also toss in Tansy Ragwort



### Broadleaf selective all growth regulators

- 2,4-D (Weedar 64)
  - Treatment range
  - Effective but no preemergence
  - Permit?
- Milestone (aminopyralid) and Transline (clopyralid)
  - Pre-emergent
  - Treatment range
  - Permit?
  - Why two choices? Spectrum, trees, timing
- Combinations of both
  - But what works for me??

## Costs

- Milestone
  - \$2.85/oz 5 ounces/acre = \$14.25/acre
- Transline
  - \$2.14/oz
- 2,4-D (Weedar 64)
  - \$0.16/oz
- MCPA
  - \$0.21/oz but save the cash!

## Rates

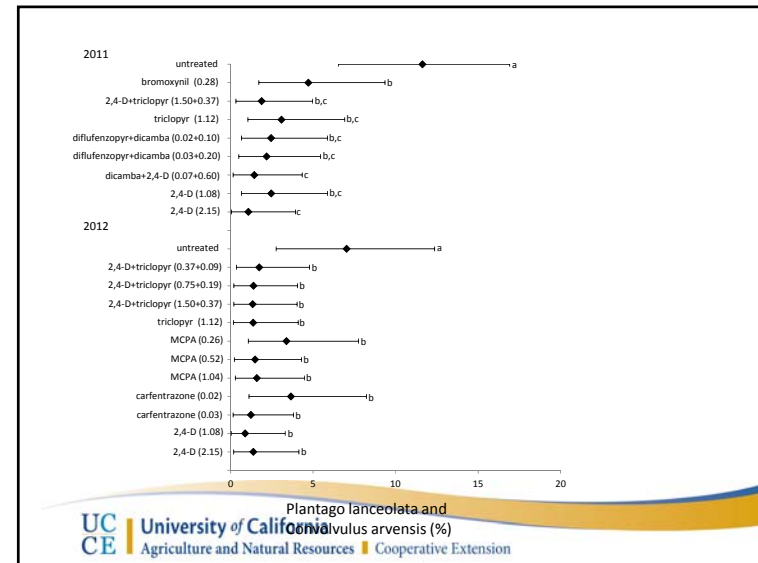
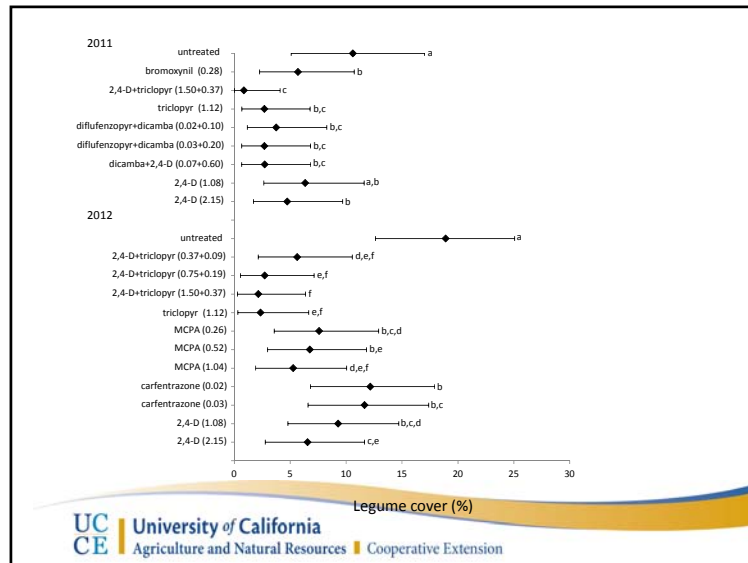
- Weedar64 (2,4-D)
  - Small thistles early spring 32 oz/acre
    - But may germinate later
    - \$5.12 an acre
  - Large thistles late in the year 48-64 oz/acre
    - May not re-germinate, but have already done damage
    - \$7.68-10.24/acre
  - Filaree is killed but will re-germinate well
  - Clover will be hurt by the higher rate, some will survive this year

## Rates

- Transline (clopyralid)
  - Small thistles mid spring 5 oz/acre
    - Good chance of no late germination unless rainfall lasts really late
    - \$10.70/acre
  - Later spring larger thistles 11-16 oz/acre
  - Little chance of late season germination
  - \$23.54-34.24/acre
  - Filaree will survive, clover is toast this year
  - Very safe with trees

## Rates

- Milestone (aminopyralid)
  - As early as winter small thistles 3 oz/acre
  - \$8.55/acre
  - Later spring large thistles or hard to kill plants 5-7 oz/acre
  - \$14.25-19.95/acre
  - Clover is toast this year
  - Filaree is toast only with the higher rates
  - Check label for tree restrictions
  - Best residual



- ### Best two options
- Tryclopyr (Element, Garlon, Remedy)
    - The ester form is best when temps are below 80 degrees. If temp is over 80 use the amine (vaporization)
      - Typically know as 4 (ester) vs. 3A (amine)
      - Examples = Garlon3A vs. Garlon4
    - Best sprayed at 1.5% mixture for broom (2 oz/gallon water)
      - 1% for black berries
    - Best sprayed mid summer but can even work dormant
      - If sprayed later add crop oil at 3%
    - Adding 1% glyphosate (roundup can help)
    - Homeowner versions have very reduced concentrations!

## Costs

### Note, backpack so no acre costs

- Tryclopyr (Garlon, Element)
  - Timing matters, but the best for woody plants
  - \$136/gallon Garlon
    - \$1.06/oz
  - \$82/gallon Element
    - \$0.64/oz
  - \$100/gallon Remedy
    - \$0.78/oz

## Two best options continued

- 41%+ glyphosate (Roundup Pro)
  - 1.5% solution (2 oz/gallon)
    - Other products such as Roundup Concentrate (18%) will need 4.5 oz/gallon
    - Spray late summer to early fall, not during flowering
      - Spray window is less than tryclopyr
    - Coverage is essential!
  - Mow or burn 40-60 days after treatment for berries, leave for 4 mos with broom
  - \$0.47/oz

## Quick notes

- Cut stump methods
  - Use the concentrate directly of either
  - Do not wait after cutting or the treatments worthless!
- Cost effective choice
  - Roundup is cheaper but has a narrow window
- Broom seeds last 30 years!
- Blackberries probably last several years

## Other options for broadleaves

- Mowing/grazing
  - Can exhaust root reserves, but must be repeated and timed perfectly!
- Burning
  - Works better on some than others
  - Will usually stimulate rhizomes or seeds left so a follow-up spray is very important
  - Can potentially be the best if followed up

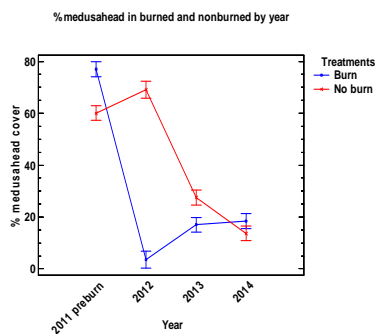


### Effective?

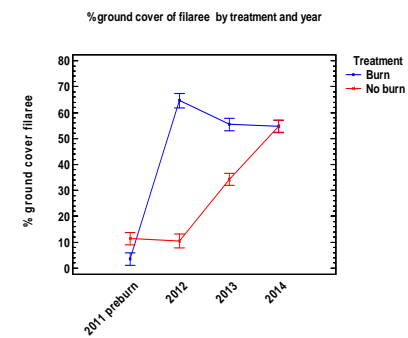
- In this case 79% mh to 3.6% mh in yr 2 after burn
- We will see how long that lasts
- 900 vs 1,800 lbs of production the next yr!



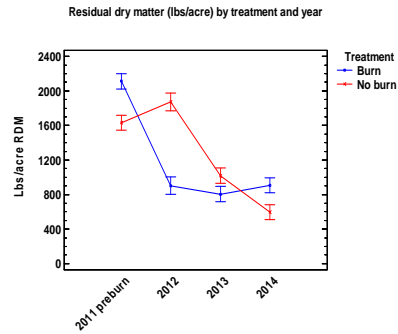
### How long did it last?



### What replaces medusahead?



## What about production?



## What about perennial grasses?

- *Poverty oat grass etc.*



## Selective without a selective



## Techniques for success

- Rate = at least 33% concentrate or 1 part glyphosate to 2 parts water

Treatment	Average green smutgrass	Homogeneous Groups
68%	10	X
33%	16	X
10%	55	X
control	91	X



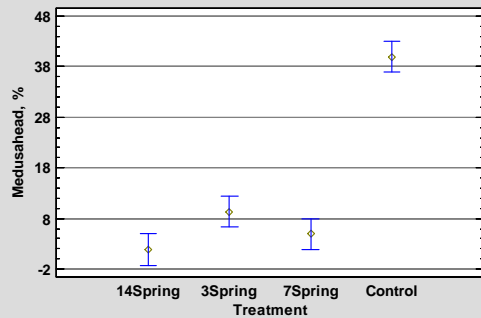
Annual grasses  
Medusahead

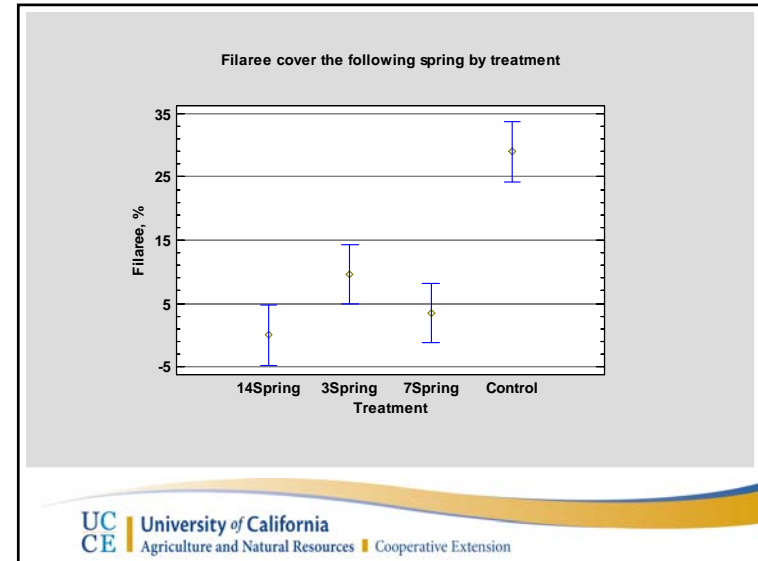
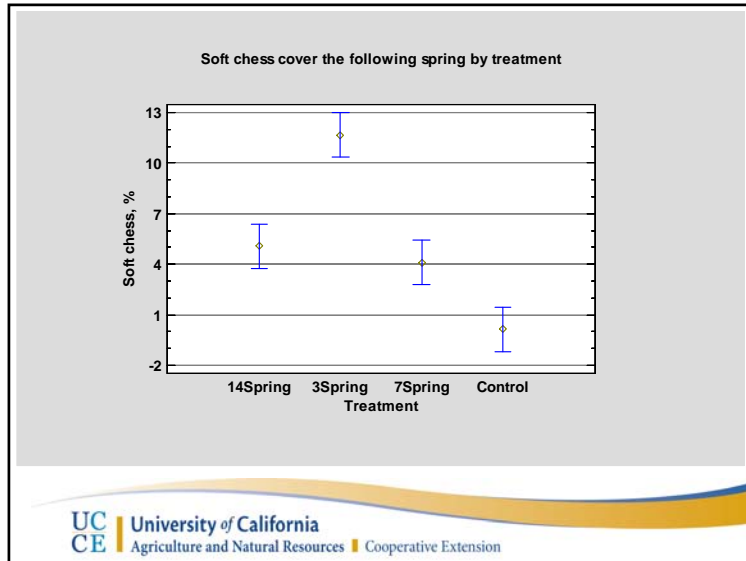


Chemical options – 51% to 4%




Medusahead cover the following spring by treatment






### Considerations

- Variable timing of phenology
  - Boot stage is critical for spring
  - Pre-rain critical for fall
- Spring is much lower cost
  - But harder to time
  - Especially with light or no grazing
- Sites are Idiosyncratic on replacement species



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### Grazing attraction - nitrogen




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## Grazing attraction - molasses

Effectiveness – Questionable at best



**Don't judge efficacy in a single year  
Enter into grazing/weed management programs with long term goals!**

- Late rains can highly impact success
  - Ending grazing hinges on many factors such as water availability
- We were mildly successful with cattle in one year with late rain
- In Yolo they were very successful
- Mowing at heading was very successful
- SFREC grazing project – Rangeland Watershed Lab



## County Regulations

- Operator ID
- Private applicators license
- NOI
- Grazing withholds

