Winter Annual Grass Control: Experiences with Indaziflam in NE California

Tom Getts – UCCE Weed Ecology and Cropping Systems Advisor
Where I work

- Lassen
- Modoc
- Sierra
- Plumas
- Lots of Cows - Not a lot of people
- Invasive Weeds
- Agronomic Pests
- Other Issues

Cal Flora Medusahead Map
Outline

• Indaziflam
• My experiences
  • 2016-2017 trials
  • 2019-2022 trials
  • General take aways
Indaziflam

- Group 29 herbicide
  - Inhibit Cellulose Biosynthesis

- Alion
  - Tree and Vine Market

- Esplanade 200 SC or F
  - Non-Crop, Wildlife/Natural areas

- Marengo
  - Ornamentals

- Spectacle
  - Turf

- Rejuvra
  - Grazing lands
  - 5 oz/acre rate for grazed areas
  - Late 2021
Sebastian et. al. 2017

Non-treated

Indaziflam Treatments
(2 years after treatment)
Western Society of Weed Science

- Indaziflam
  - Quick count
  - Presentations
  - Range/Natural Areas

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<tr>
<th>Year</th>
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June 2019-31 MAT
Esplanade 7oz
June 2020 - 43 MAT
Esplanade 7oz +
Weathermax
Spring Method - 8 oz + Esplanade-14 MAT-June 2018
Fall-Method - 8 oz + Esplanade-21 MAT- June 2018
Take home Early Trials

• Good Annual grass control!
• Where desirable perennials established- can release them
• Also will release undesirable perennials....

• Monocultures
  • Bare ground....
    • Erosion!
  • Disturbance
  • Re-establishment?
  • Other weeds can colonize
More Recent Trials

• Sequential Treatments
  • Desirable Perennials
  • Three Sites

• Dryland pasture Case study

• Monitoring Firebreaks Clear Lake
Likely

- Applications
  - September 2020
  - SUPER dry winter
  - Little precipitation for incorporation until Nov
  - Little spring precipitation
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Matrix 4 oz (2020, and 2021) June 2022
Untreated June 2022
Rejuvra 7 oz 2020 - June 2022
Perennial Grass safety?

• Peter Rice Montana State
  • WSWS 2021
    • “Uprooted perennial grass”
• Wyoming, Colorado No signs....
Rejuvra 5 oz  fall 2020 root club
Willow Creek

- Applications
  - September 2020
  - SUPER dry winter
  - Little precipitation for incorporation until Nov
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Dryland Pasture

• Applied September 2020
• Wetter Location
• Alfalfa and Bromegrass
• VERY dry year
Dryland Pasture

- Released Perennials
Dryland Pasture

- 2021
- Wetter year
  - (still dry)
  - Had some spring rain
  - Cool April and May
Undesirable Grass Control Two Years after Treatment

- bulbous
- medusahead
- cheatgrass
Clear Lake National Wildlife Refuge

- Sage grouse
  - Declining populations
  - Invasive annuals
- Large Priority
Boulder County

Jim Sebastian shows where he sprayed long-acting herbicide for cheatgrass control.
June 2019 - 31 MAT
Esplanade 7oz
Clear Lake

- 2019 Fire Break
  - Rimsulfuron + Indaziflam
  - Post
Clear Lake

- 2019 Fire Break
  - Rimsulfuron + Indaziflam
  - Post
- 2020 Fire Break
  - Indaziflam
  - Pre?
- 2021
  - Indaziflam
  - Pre?
  - Intact Sage
Transects

• 10 in each treatment
  • 2019, 2020, 2021, Untreated
• Random Orientation
• Random Placement
  • 50 meters from edge of treatments
• Species Richness
  • 30m*6meter
• Cover
  • 10 1m^2 Quadrats
  • Every 3 meters
2020?

• Wasn’t sure what was sprayed....
• Dry Year
• Incorporation??
  • My plots didn’t look that good
Number of Species 2021

- Annual Forb
- Perennial Forb
- Annual Graminoid
- Perennial Graminoid

![Graph showing the number of species for different categories across years and control.](image-url)
Perennial Grass safety?

- Peter Rice Montana State
  - WSWS 2021
  - “uprooted perennial grass”
- Wyoming, Colorado No signs....
Only Saw Uprooted Grasses in 2019 Treatment
Rejuvra + Matrix
Thoughts on Indaziflam

• Excellent multi year annual grass control
  • BUT has to be applied PRE
  • 2020 treatments? (incorporation?/dry conditions?)
• Bare ground a real possibility
• Can release perennials but will kill many annuals
  • Good safety?
  • Yes and no
• Powerful tool
  • Firebreaks
  • Roadside
  • Established perennials (small strips first?)
Questions?

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- tjgetts@ucanr.edu