

# Optimize Your Cheatgrass and Medusahead Control Program with Plateau



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# Plateau

- Rangeland Wildfires
- History
- Properties
- Proper use
- Tips for success
- Comparison to Rejurva
- Benefits of Plateau



# Rangeland Wildfires

- Historically every 60 to 100 years
- Small fires (hundreds of acres)
- Today every 3 to 5 years
- Large fires (hundreds of thousands of acres)
- 4 million acres burn every year (USDA- Ag Research Station)



# Invasive Weed Management

## ■ Prevention - Before wildfire

- ▶ Invasive weed control
- ▶ Greenstripping – minimize fire incidence and size

## ■ Restoration - After wildfire

- ▶ Release native plants
- ▶ Plant / seed native plants



# Cheatgrass

- More than 100 million acres infested
- Common along roadsides and in pasture and rangeland
- Germinates in the fall, take root and grow in the winter
- Outcompetes native plants
- Forms monocultures
- Creates highly flammable biomass
- Seeds tolerate intense heat of fires
- Increases intensity of fires



*Managing Landscapes for Sage Grouse with an Emphasis on Fire and Greenstripping*  
Dr. Terry Messmer, Professor of Wildland Resources, Utah State University

# Medusahead

- More than 5 million acres infested
- 25 million acres at risk
- Germinate in the fall, take root and grow in the winter
- Outcompetes native plants
- Forms monocultures
- Reduces ability to support livestock by 80%
- Creates dry, flammable biomass
- Seeds tolerates intense heat of fires
- Increases intensity of fires

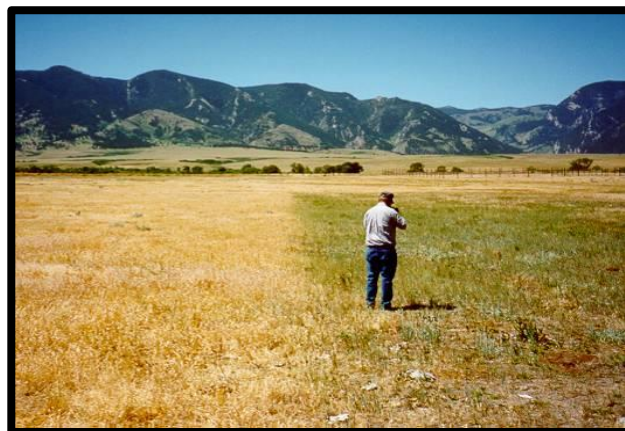


# History of Success



# Plateau History

- Registered in 1996
- BLM approval in 2007
- BLM rate set at 6 oz
  - ▶ Cheatgrass and Medusahead
  - ▶ Threshold rate – compromise rate to balance impacts
  - ▶ Longer lasting control at higher rates
- 20+ years of successful operational applications



# Mis-Information / Mis-Understanding

- Use in spring applications
- Spray after cheatgrass has greened-up
- Spray cheatgrass and Medusahead very late into fall or early winter
- Nothing will germinate following application
- Plateau kills sagebrush and other woody native vegetation
- Cheatgrass control is poor and only provides one year of control

# Plateau Mode of Action

- ALS Inhibitor
- Caution signal word
- Pre and early post-emergent activity
- Minimal woody species activity
- Controls cheatgrass and Medusahead pre-emergent
- Late summer timing (before green-up)
- Add glyphosate for burndown after cheatgrass green-up

# Plateau Mode of Action

- Best activity when applied to mineral soil following fire
- Must have rainfall to activate
- Controls many weeds post-emergent
- Most legumes and warm season grasses are tolerant
- Plateau will release beneficial native and pollinator plants
- Length of control is based on rate and environmental conditions

# Plateau Review

## ■ Important Species Controlled

- ▶ Cheatgrass
- ▶ Medusahead
- ▶ Leafy Spurge
- ▶ Japanese Brome
- ▶ Russian Knapweed
- ▶ Dalmatian Toadflax
- ▶ Many others

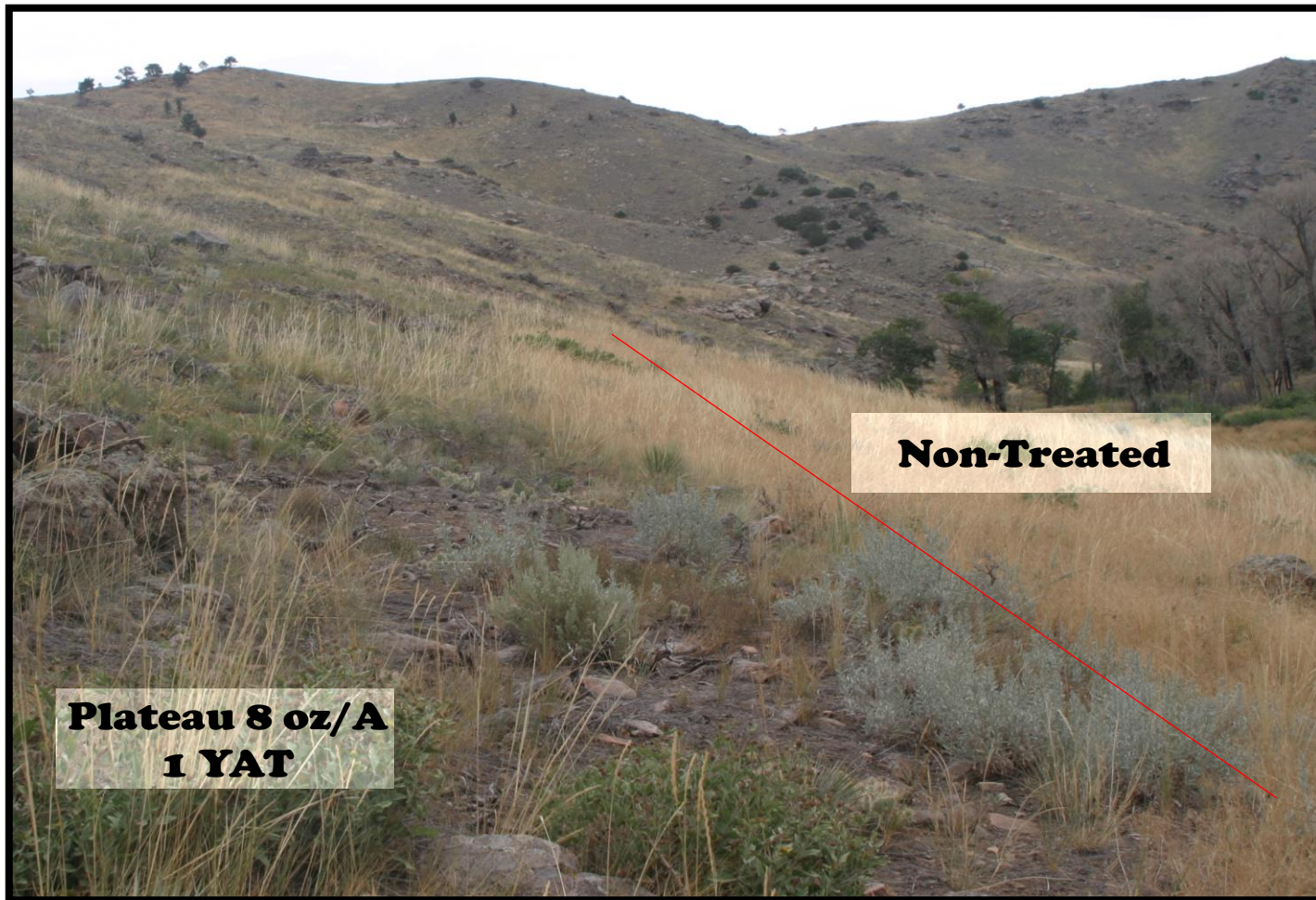
# Cheatgrass Control

## Control Options

- 2 – 12 oz. Plateau
  - ▶ Rate varies greatly by region
  - ▶ Pre-emergent application
  - ▶ Late summer before green-up
  - ▶ Best results after fire
  - ▶ Some cool season grass injury can occur
- 5 oz. Rejurva



# Cheatgrass Control



# Cheatgrass Control Impact on Fire

- Study by BASF and Synergy Resource Solutions - 2002
  - ▶ Flame height reduced up to 88%
  - ▶ Rate of spread lowered by as much as 95%



# Native Vegetation Restoration

	Cheatgrass Pre-Treat	Cheatgrass Post Treat	Native Vegetation Pre-Treat	Native Vegetation Post Treat
Non-Treated	67%	75%	33%	25%
Plateau	84%	0%	16%	100%

6.12.2004

# Fresh Weight Grass Yields

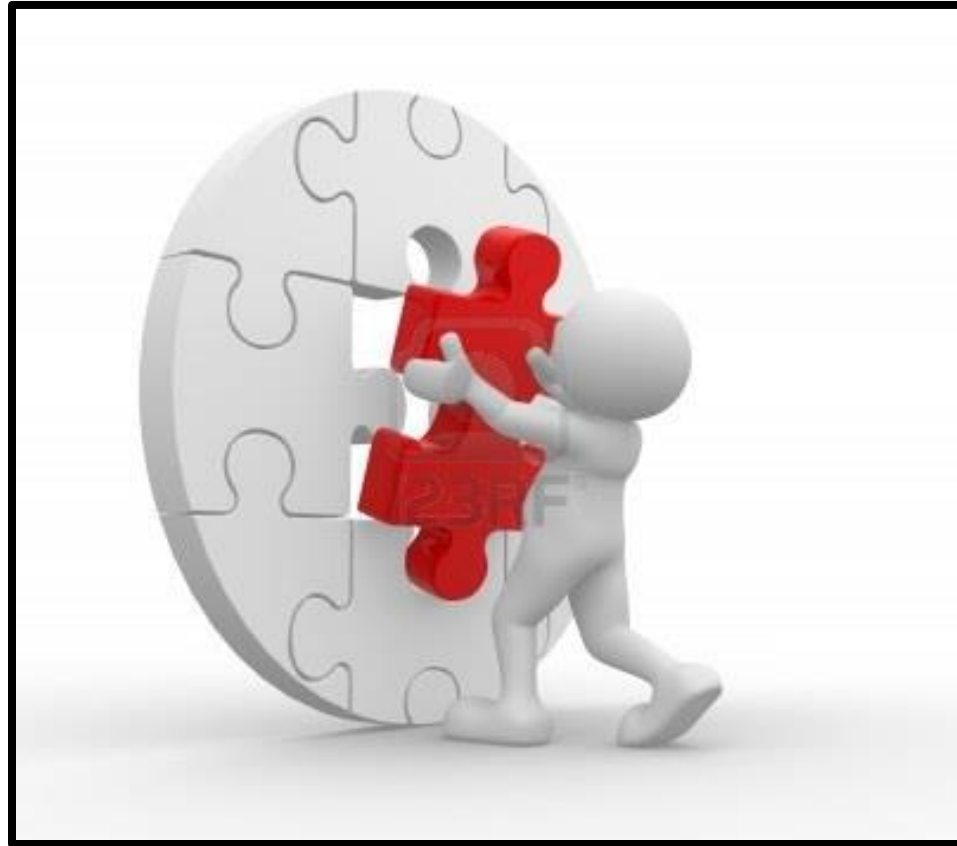
## Small Ranch, WY

	<b>Native Grass Yield Lbs/A</b>	<b>Cheatgrass Yield Lbs/A</b>
<b>Plateau 4 oz/A</b>	<b>3344</b>	<b>3</b>
<b>Non-Treated</b>	<b>408</b>	<b>2950</b>
<b>+/-</b>	<b>8.2 X increase</b>	<b>983 X decrease</b>

Applied 8/24/02 - Clipped 11 MAT

# Factors That Influence Control

- Timing
- Thatch
- Rate
- Moisture
- Soil



# Timing

- Use Plateau in August/October **BEFORE** Cheatgrass and Medusahead have emerged
- Add 8 oz. glyphosate + 1% MSO after green-up
- Use Post-emergent applications later in the fall for leafy spurge, Dalmatian toadflax or when trying to release desirable woody species



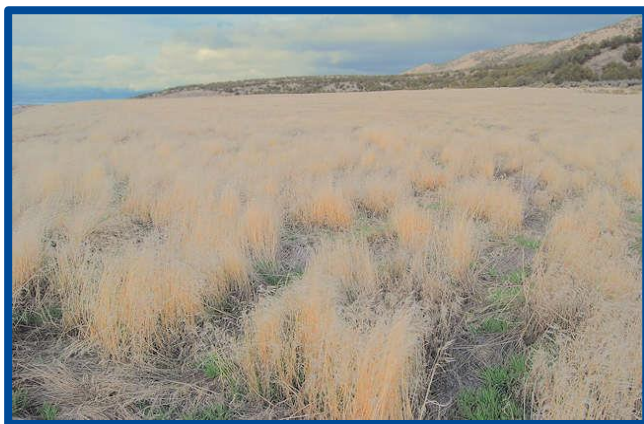
# Thatch Removal

- Prescribed burn
- Heavy grazing
- Mowing/racking
- Other



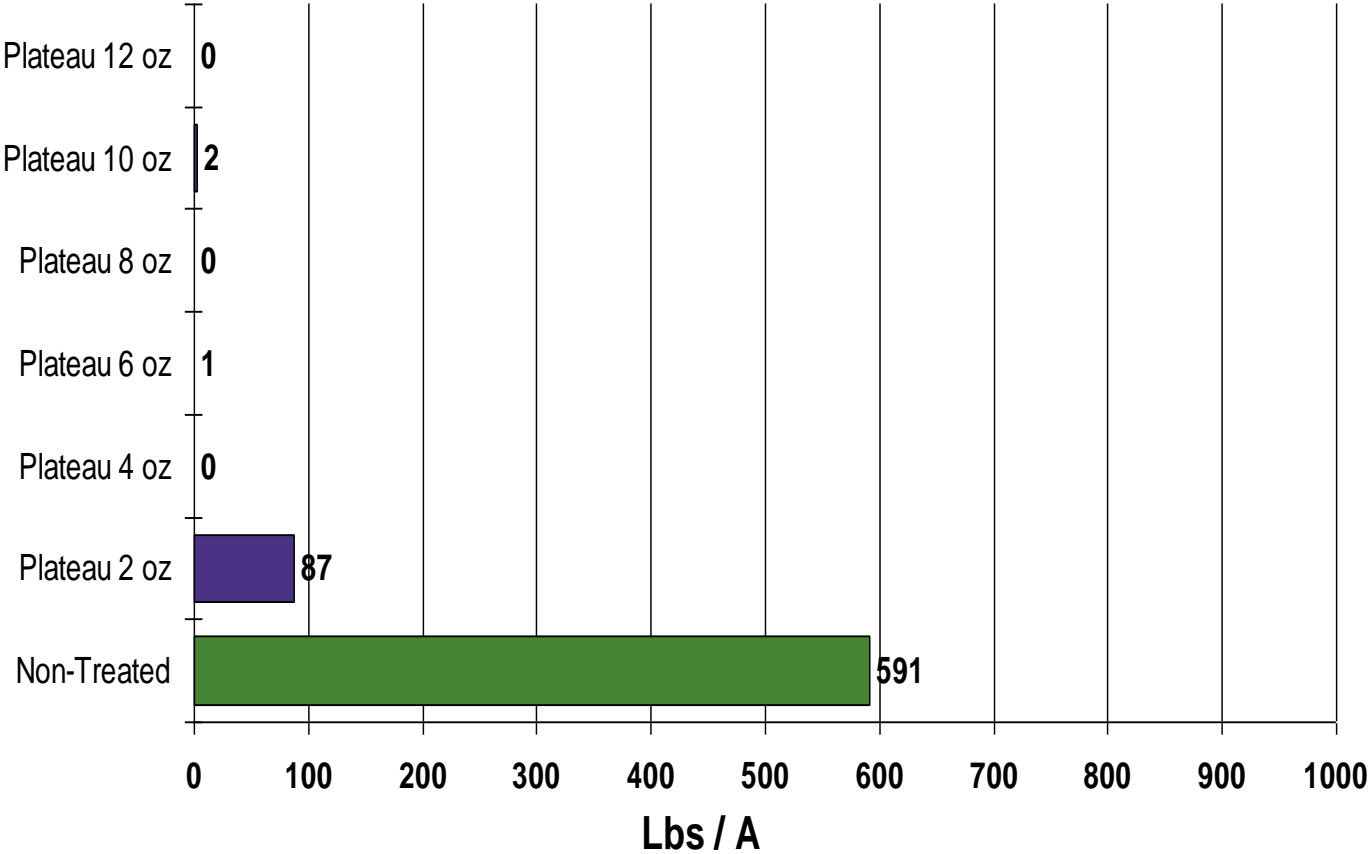
# Rates

- Length of control dictated by rate, moisture and temperatures
- In many cases, 6-10 oz. per acre is the appropriate rate
- Use lower rates on sandy soils, soils with low pH or in cool dry sites.
- Add 1% MSO for ALL post-emergent applications
- Plateau controls cheatgrass for 3 years in most cases



# Dry Weight Yields of Downy Brome

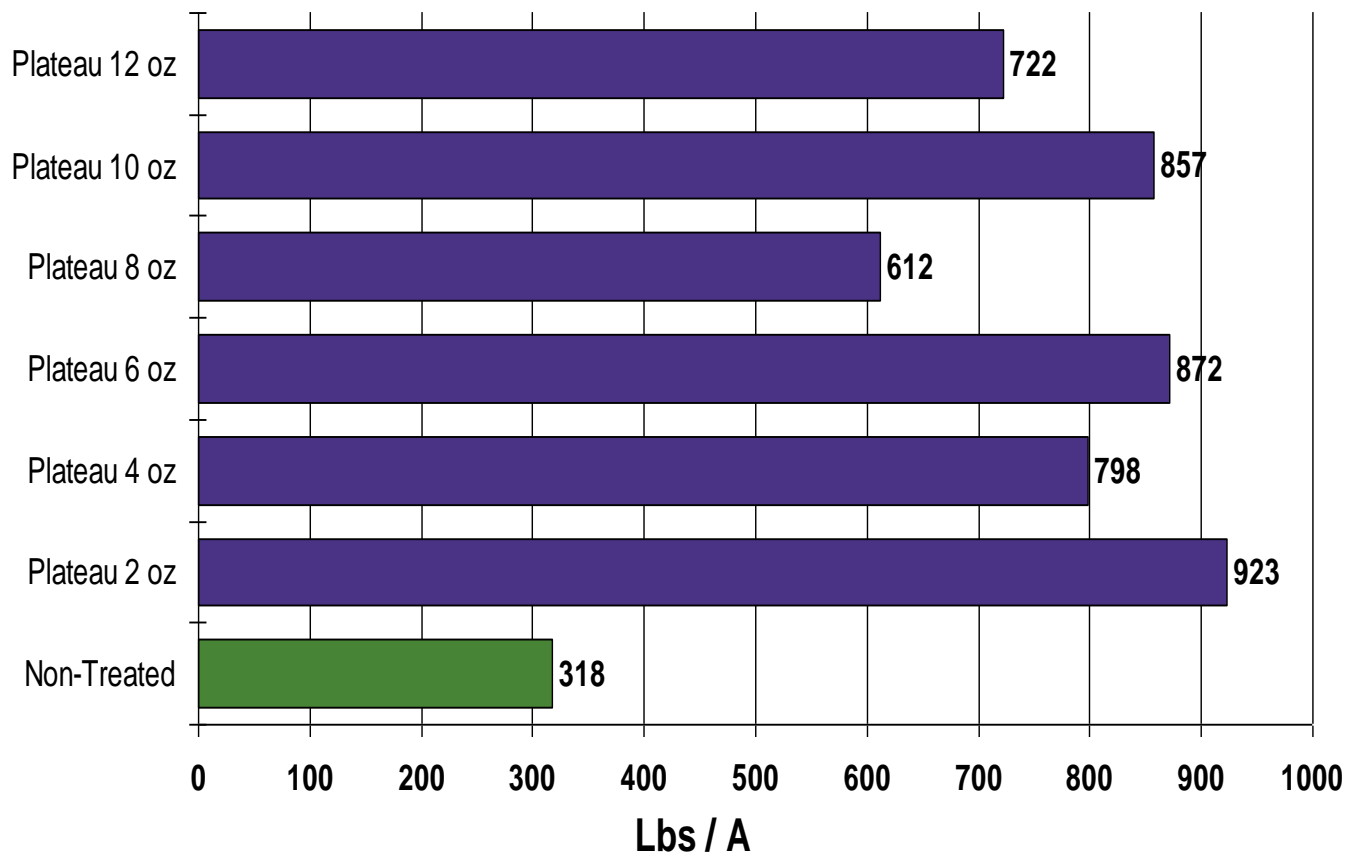
Applied 9/5/02    8/20/03    11 MAT



Data by Dr. Tom Whitson, UWY

# Dry Weight Yields of Perennial Grass

Applied 9/5/02 8/20/03 11 MAT



Data by Dr. Tom Whitson, UWY

# Western Wheatgrass Release



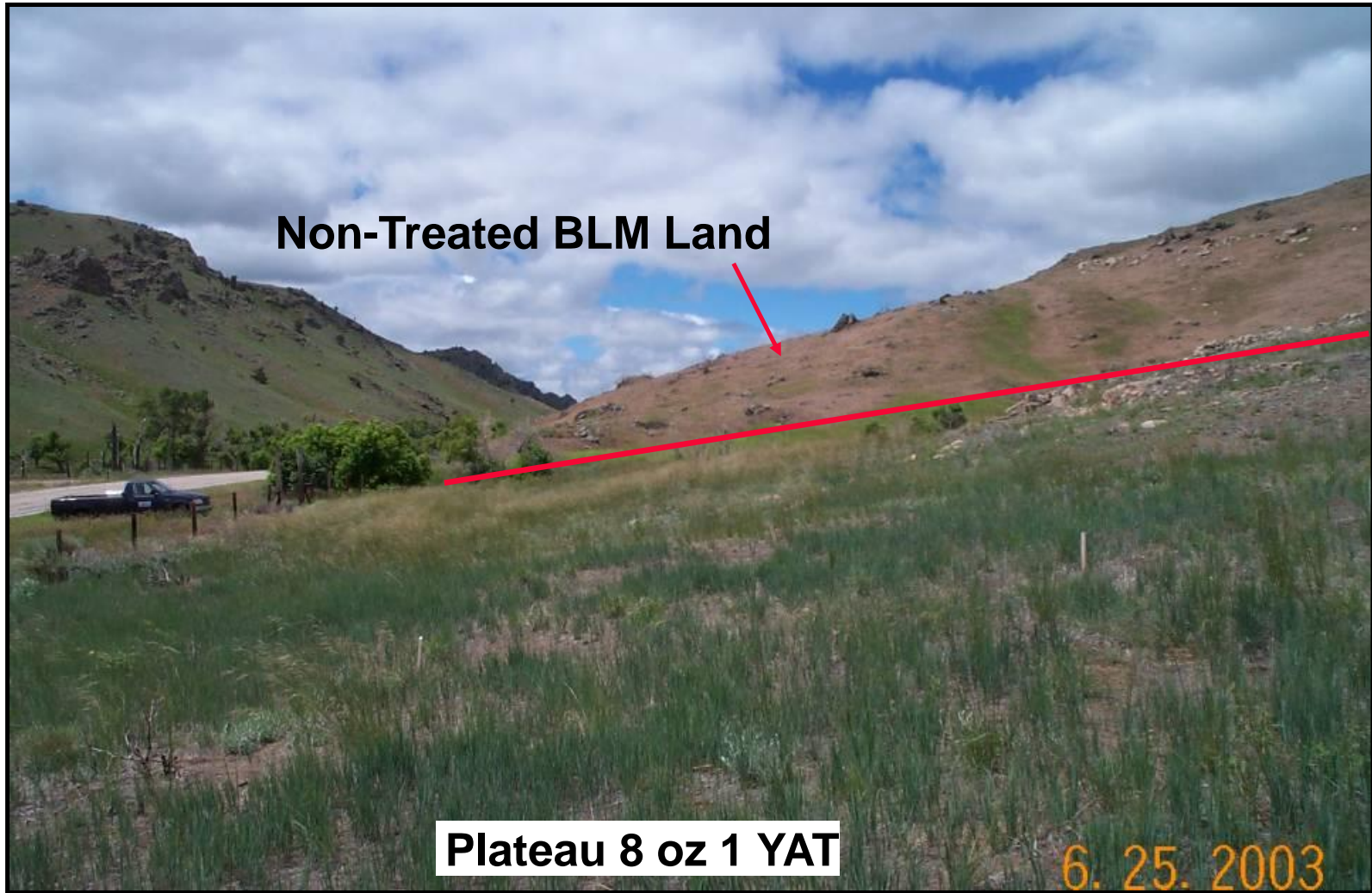
**Non-treated**

**3 oz Plateau**

# Western Wheatgrass Release



# Plateau Cheatgrass Control 1 YAT



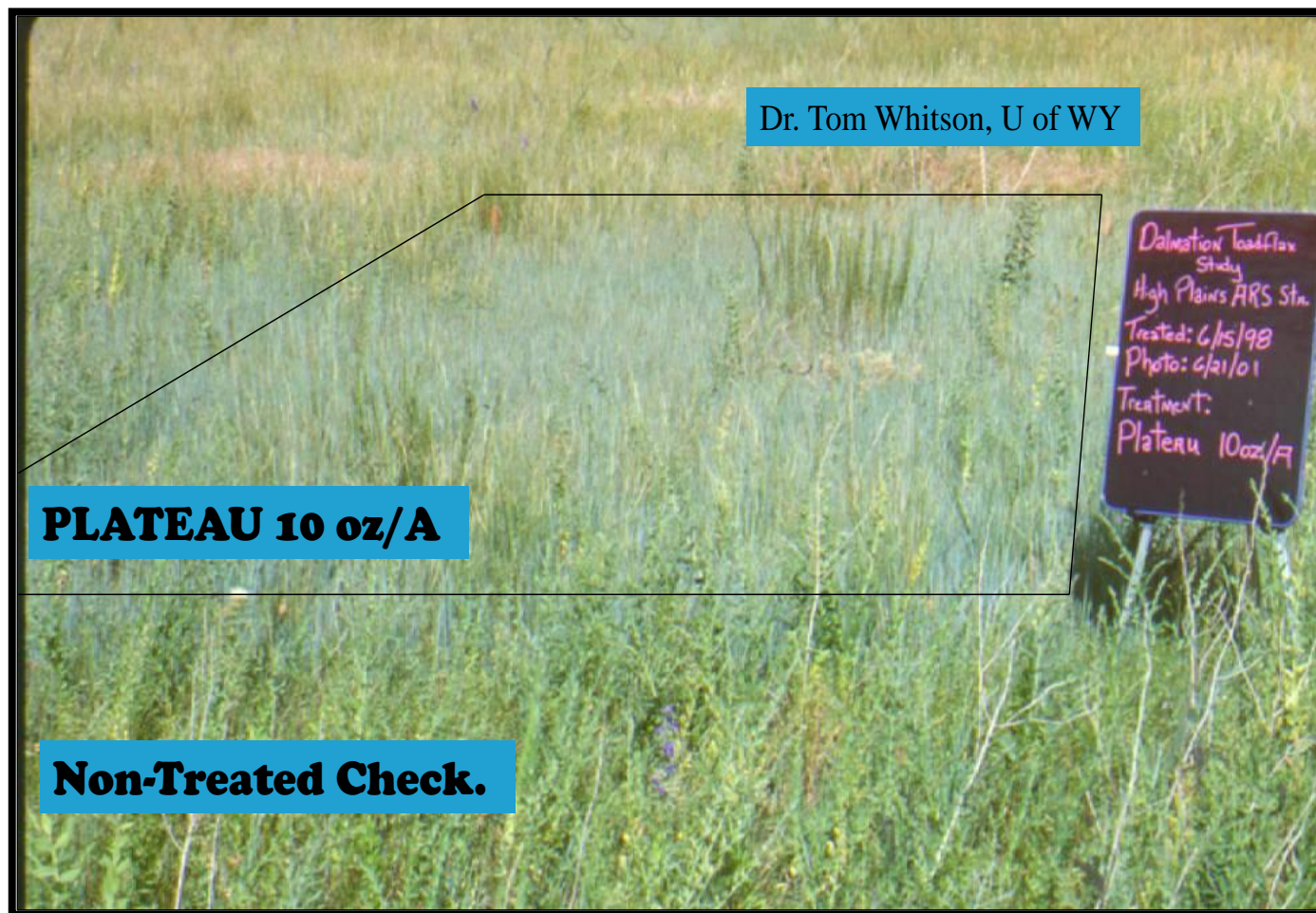
# Plateau Cheatgrass Control 3 YAT

## 8 oz. Plateau



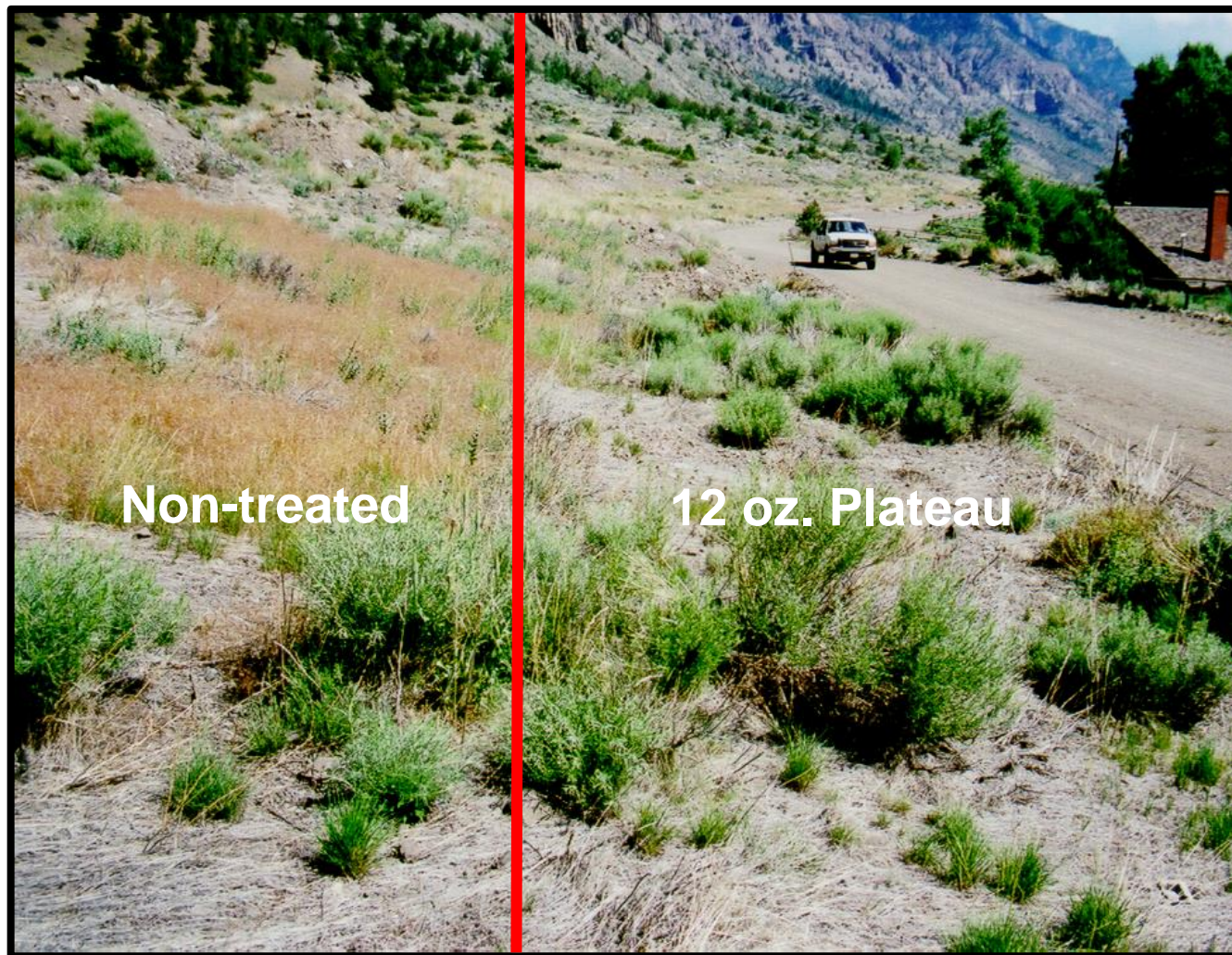
8 oz. Plateau - WY

# Dalmatian Toadflax & Downy Brome Control 3 YAT



Western Wheatgrass Release

# Dalmatian Toadflax and Cheatgrass Control



# Moisture

- Time applications when rainfall is likely within a few days
- Minimum of ½ inch rainfall required to activate in soil
- Results will diminish if no rainfall within 30 days of application

✧ Sept 2-Sept 12, 2010 - Spray Plateau herbicide

✧ 5 oz Plateau/acre

1 qt MSO/acre

Applied in 10 gal water/acre



# Behavior in Soil

- Half-life is 31 to 410 days depending on rate, moisture and temperature (120 days typical)
- Plateau is broken down by soil microbes. Product breaks down the fastest when it is warm and moist
- Plateau is more effective at lower soil pH; No effect for increasing pH above 6.5.
- Applications to bare mineral soil, after fire are the most effective. Wait 2 weeks after fire before treatment

# Requires Uniform Application

- Most applications are by fixed wing and helicopter
- Note green streaks where applicator missed.



Diamond, OR

# Successful Rehab of BLM

- 30,000 near Burns, OR
- Sprayed 2016
- Medusahead controlled
- Desirable native vegetation released
- BLM has documented shifting of plant population toward desirable native vegetation



# Native Plant Release Following Wildfire

7 oz. Plateau for Medusahead



Treated



Untreated

# Native Plant Release Following Wildfire

## 7 oz. Plateau + MSO for Medusahead



# After Fire Restoration

The best time to apply Plateau is immediately after a fire!

- PLATEAU

- Wildfire May-August

- ▶ Allow carbon residue to dissipate (~2wks)
- ▶ Apply after late July before germination of cheatgrass or medusahead
- ▶ Seed at the desired time

- PLATEAU + Glyphosate

- Wildfire May-August

- ▶ Allow carbon residue to dissipate (~2wks)
- ▶ Apply after cheatgrass or medusahead germinate, up to early tiller
- ▶ Seed after herbicide application

# Restoration - Revegetation

- Prepare seed bed
- Thatch removal
- Apply Plateau in fall
- Seed area next spring



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# Seeding Native Plants

## ■ Native plants

- ▶ Drill – preferred method
  - No-till or rangeland drills
- ▶ Aerial Seeding – large areas or when access is difficult
  - Follow with chaining to cover seed

## ■ Planting companion crops is not recommended



# Common Species

## ■ Low rainfall: (less than 15 inches annual precipitation)

- ▶ Crested wheatgrass
- ▶ Siberian wheatgrass
- ▶ Russian wildrye
- ▶ Dryland alfalfa
- ▶ Blue flax
- ▶ Lewis flax



- ▶ Forage kochia In higher rainfall areas hard fescue, sheep fescue, Russian wildrye and small burnet should be considered.

# Common Species

■ Higher rainfall: (more than 15 inches annual precipitation)

- ▶ Hard fescue
- ▶ Sheep fescue
- ▶ Russian wildrye
- ▶ Small burnet



# Native Woody Vegetation Restoration

- Spray during leaf color change or after leaf drop
- No surfactant
- See label for tolerance information



# Native Woody Vegetation Restoration

- Sagebrush:
  - ▶ Fringed, Silver, Wyoming, Sand, etc.
- Antelope Bitterbrush
- Atroplexes – Four wing, Shadscale
- Mountain Mahogany
- Rabbit brush species
- Greasewood
- And many others

# Mountain Mahogany Release - Fort Collins, CO

**Cheatgrass Control**  
**Applied 11/9/15 - 7 MAT**



**5 oz. Plateau + 1% MSO**

# Tips for Success

- Know the tolerance of the species you want to promote
- Reducing the thatch layer will greatly improve performance
- Use higher rates to extend control
- Add 1% MSO for post-emergent applications
- Uniform application is critical
- Aerial applications from 5 to 10 gpa

# Important Points for Success:

- Long-term management plan
  - ▶ Monitor results
  - ▶ Utilize competitive plant species
  - ▶ Manage to give desirable species the advantage
  - ▶ Consider thatch complications
  - ▶ Spray herbicide prior to planting!

# Plateau versus Rejurva Comparison

## ■ Better value

- ▶ Rejurva cost 6x+ more per acre

## ■ Fewer restrictions

- ▶ No grazing restrictions
- ▶ Much shorter haying interval
- ▶ No hay export restrictions
- ▶ Easier and faster reseeding
- ▶ Shorter soil persistence allows for land use changes
- ▶ No history of soil movement issues causing off-target injury to crops
- ▶ Less concern with root pruning of desirables

# Plateau versus Rejurva Comparison

## ■ Proven Success

- ▶ Operational control for 20 years

## ■ Length of Control

- ▶ 3 years vs 4 years

## ■ Simple

- ▶ One product



# Plateau versus Rejurva Comparison

## ■ Flexible

- ▶ Pre-emergent AND early post emergent control of cheatgrass and Medusahead
- ▶ Post-emergent control of many other invasive weeds
  - Leafy spurge, Dalmatian toadflax, Russian knapweed and more!

## ■ Broader Spectrum

- ▶ Undesirable grasses and many broadleaf weeds at higher rates
  - Pre-emergent and post-emergent
  - Bayer recommends adding Plateau

# Plateau versus Rejurva Comparison

Is one more year of control and many more restrictions worth 6x+ the cost?



# A Better Option If You Have Extra Money!

- Add broadleaf weed control to broaden the spectrum
  - ▶ Overdrive – broad spectrum control
  - ▶ Milestone – broad spectrum control
  - ▶ Detail – Difficult to control species like kochia, Russian thistle, pigweed and mareestail
- All three products have pasture and rangeland labels

# The Optimal Program Balances Effectiveness, Cost and Versatility!

**Plateau provides:**

- ▶ The most economical and effective solution
- ▶ Time tested, unique and versatile
- ▶ Provides broad spectrum control
- ▶ Reduces wildfire hazards
- ▶ Restores native plants
- ▶ Improves grazing quality

# BASF ProVM Podcasts

- **5 - 7 Minute Podcasts**
  - **Posted on the ProVM website**
  - **In multimedia section**
  - **Timely subjects**



**[www.bettervm.basf.us](http://www.bettervm.basf.us)**

# BASF ProVM Webinars

- 15 – 30 Minutes
  - Slides and Audio
  - Posted on the ProVM website
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  - Timely subjects



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**Look for the PGR and Pollinator webinars!**

# BASF ProVM Social Media Presence

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# Questions

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