



# Managing Ventenata

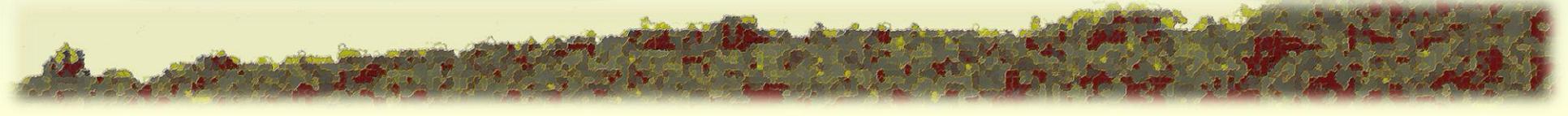
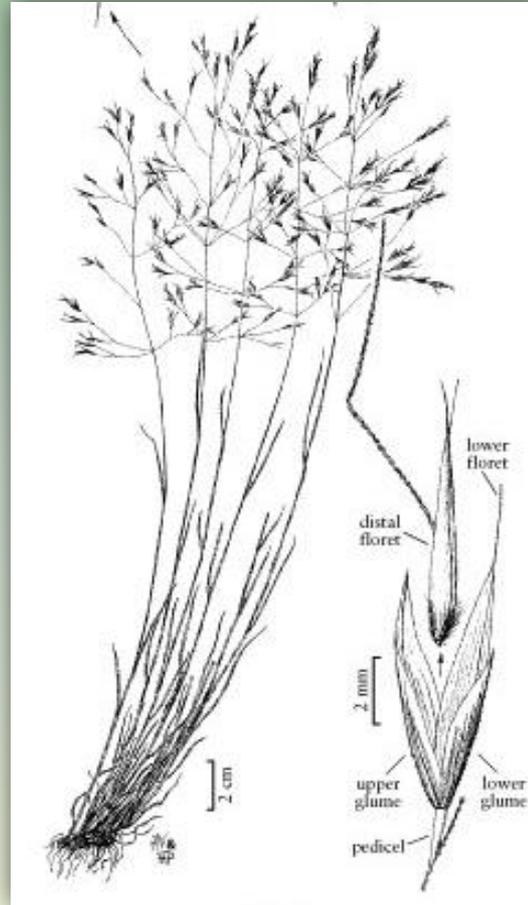


Why aren't they happy  
to see me?

Hi,  
My name is Tim



# *Ventenata dubia*



# How to Identify Ventenata: Early Stages (May – June)



➤ Dark red/black nodes

# How to Identify Ventenata: Early Stages (May – June)



➤ Ligule is unusually long  
(1 – 8 mm)

# How to Identify Ventenata: Early Stages (May – June)



- Roots are shallow
- If seedling is young, seed is often still attached





# European range: to Caspian Sea



# European Neighbors



Cheatgrass



Medusahead



Windgrass

Often starts in a depression  
or along roads



# Why is ventenata a problem?

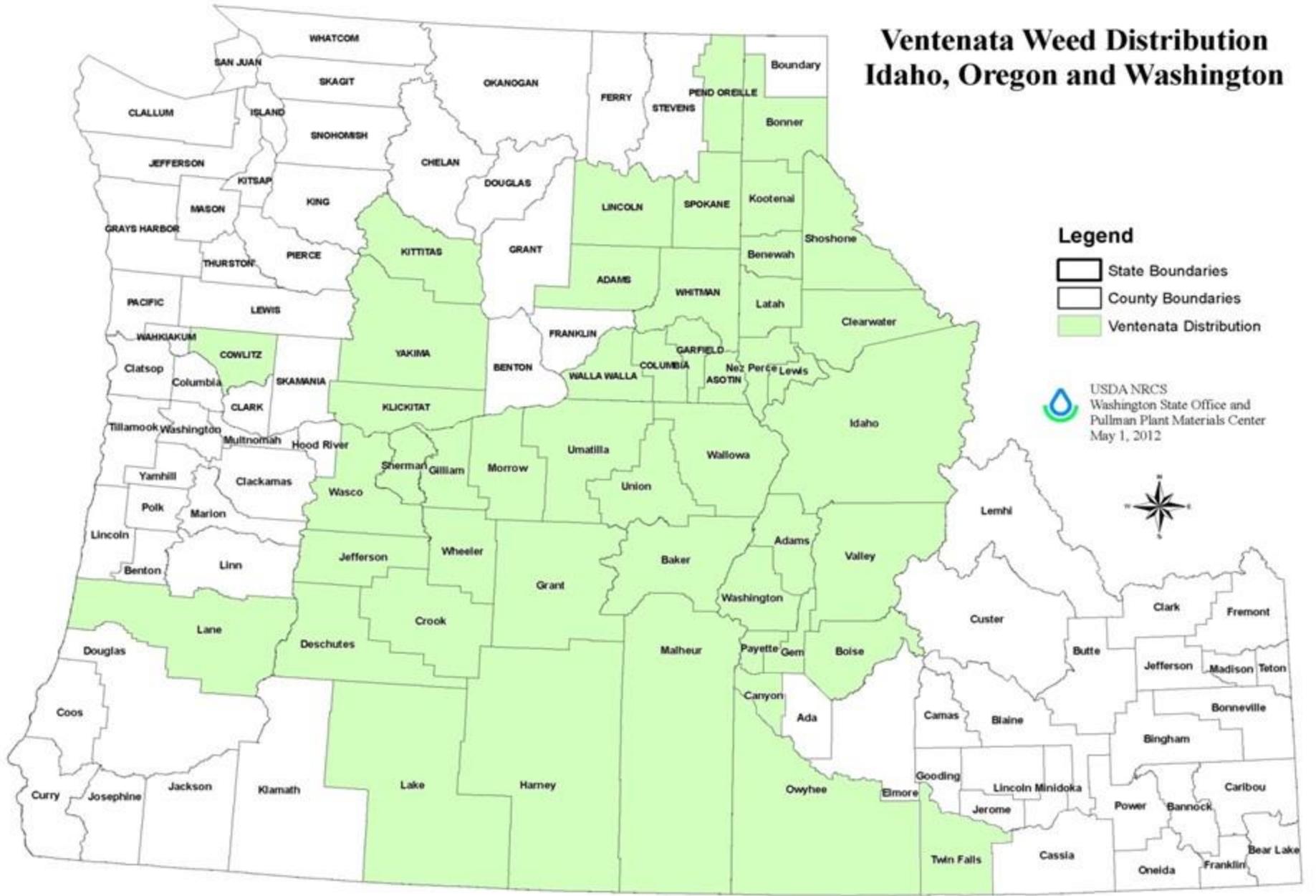
- No diseases which helps make ventenata competitive
- High in silica, discourages feeding by insects and mammals



# Movement



# Venttenata Weed Distribution Idaho, Oregon and Washington



# Idaho Neighbors



Cheatgrass

Canyon  
grasslands



Medusahead

Sagebrush  
grasslands

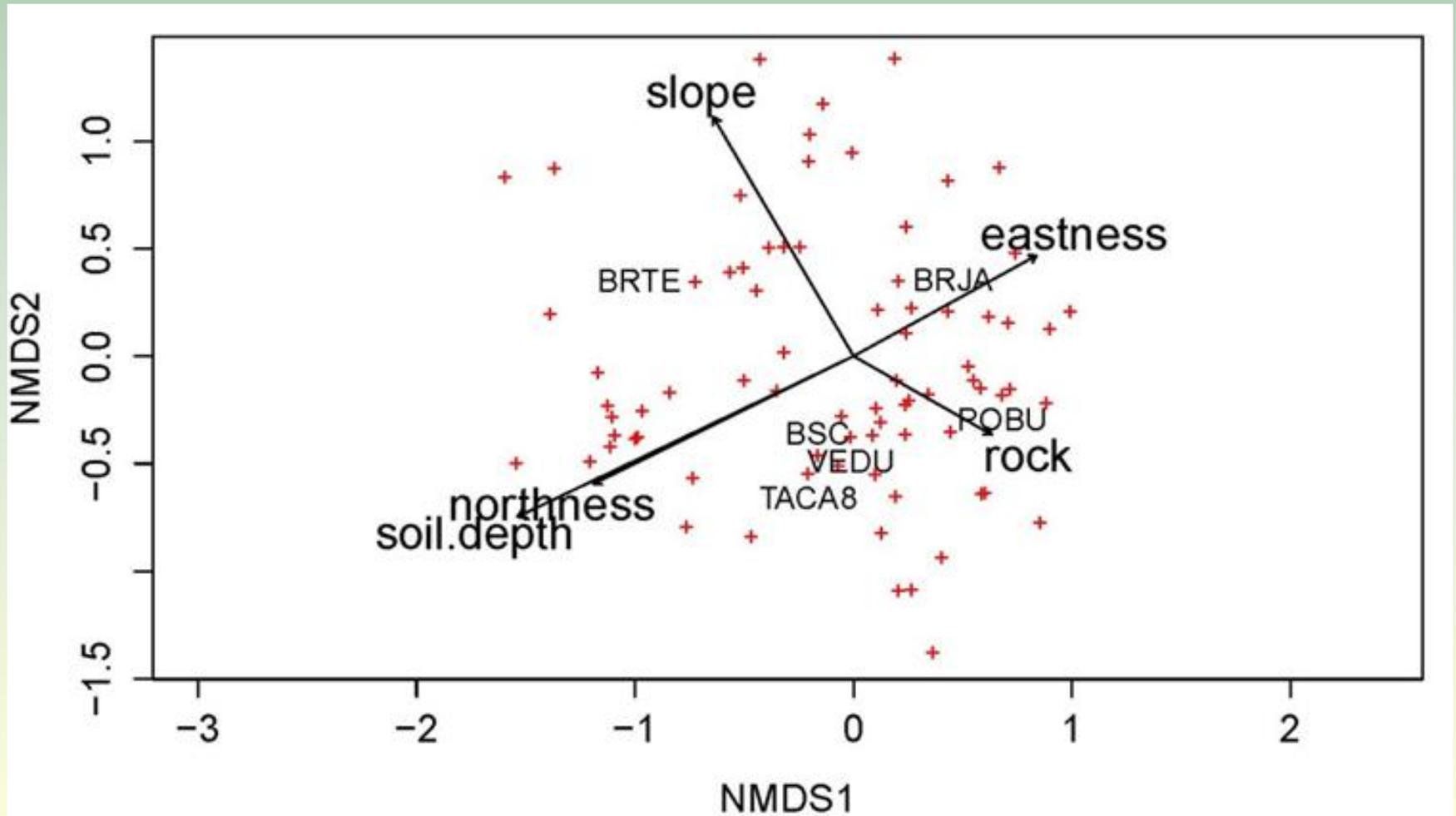


Windgrass

# Important Confusing Graphs

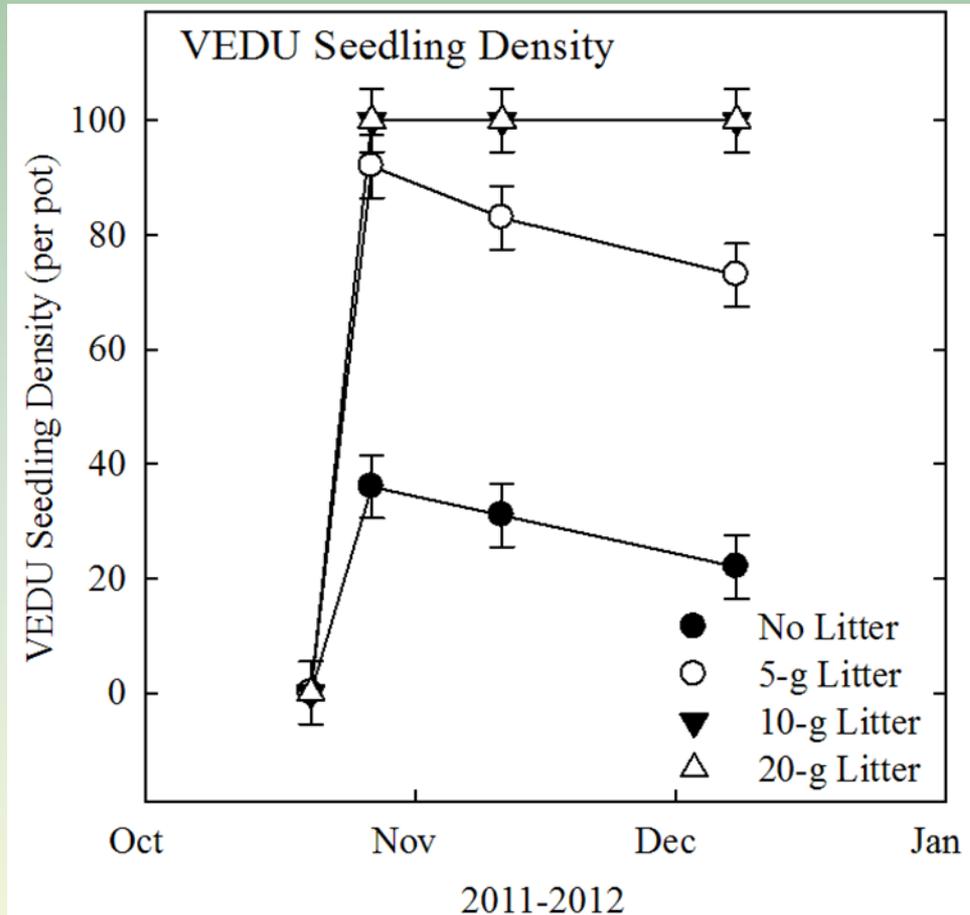


# Important Confusing Graphs

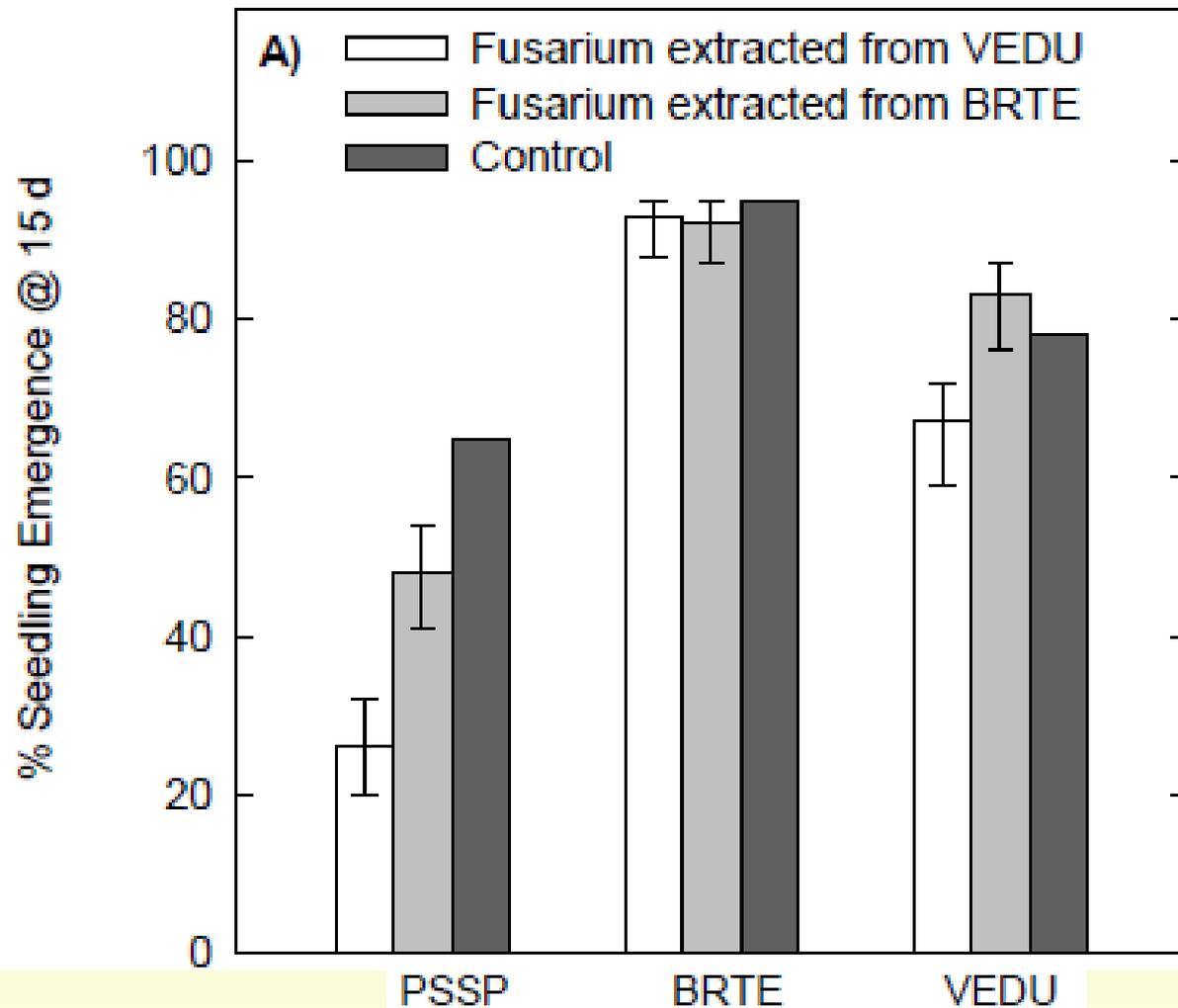


# Why is Ventenata Dominating?

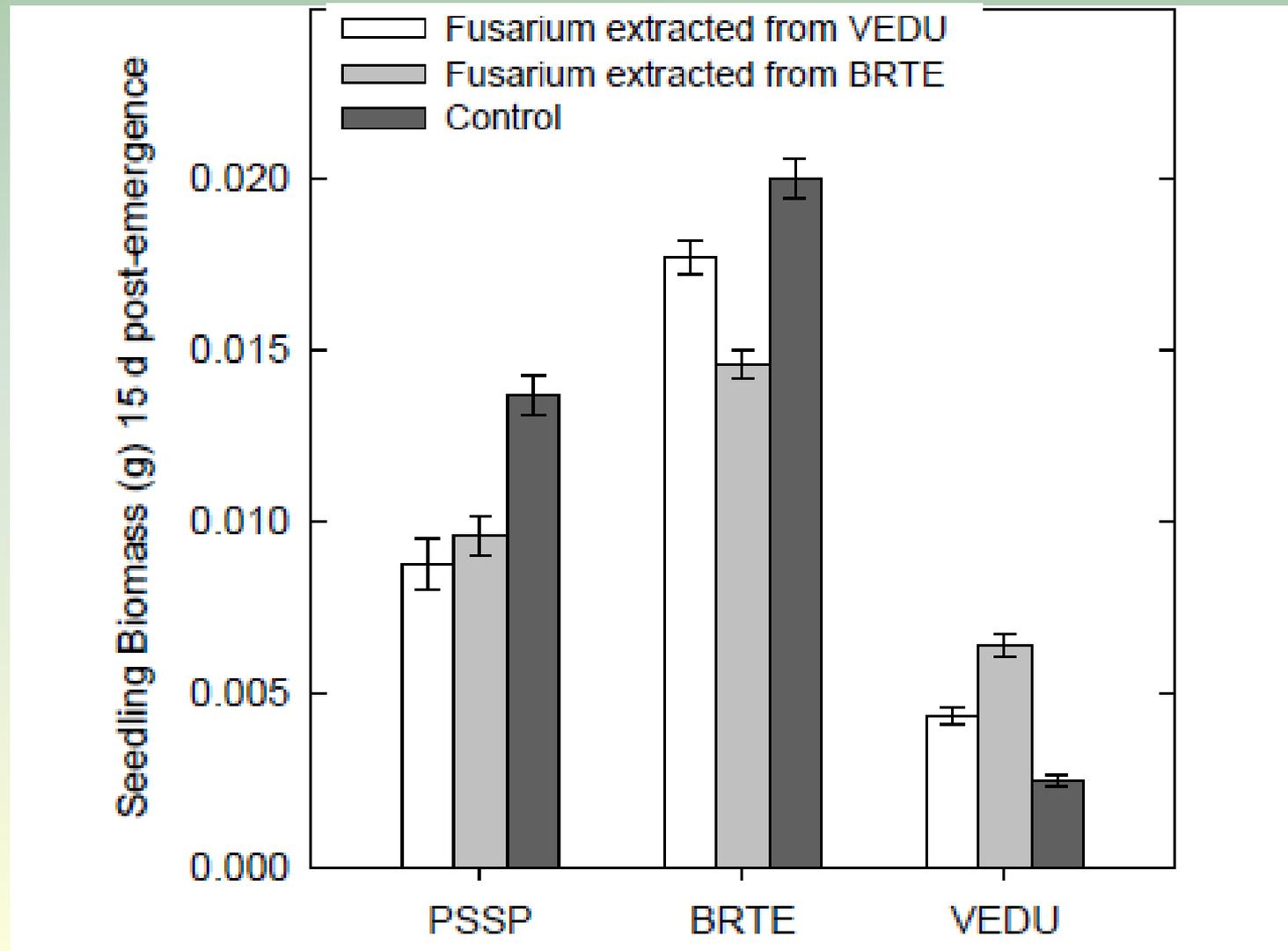
- ▶ Litter protects seedlings
  - ▶ 65% of seedlings die without litter during winter
  - ▶ Nearly all seedlings survive if there is litter



# Emergence



# Biomass



# Why is Ventenata Dominating?



Ventenata Infestation	Sites Sampled	Available Nutrients			Organic Matter	pH
		N	P	K		
	--n--	-----µg/g-----			--%--	
Low (<5% cover)	11	3.61 a	6.3 a	164 a	4.62 a	5.49 a
High (>40% cover)	11	3.85 a	4.3 b	115 b	5.04 a	5.45 a

Seedlings below litter have narrower roots, potentially increasing ability to find phosphorus

# Litter narrows root diameter

The screenshot displays the Glia Roots software interface. On the left, a sidebar contains navigation icons for Data, Features & Algorithms, Parameters, Clusters, Output, and Export. Below these is a file list with folders for Azu-1, Azu-3, Azu-4, Azu-5, and Azu-6. Under Azu-5, numerous files with IDs like Azu-5-11210810... are listed. Two files, Azu-5-11210814... and Azu-5-1121082c..., are highlighted in blue. Red arrows point from these highlighted files to the main grid of root images. The grid shows a 2x5 arrangement of root images, with the top row labeled Azu-5 and the bottom row labeled Azu-6. A search bar at the top right of the grid is labeled 'Filter by metadata'. At the bottom of the grid, the text 'Mybiosoftware.com' is overlaid in red. The bottom right corner of the window shows 'Double click to inspect' and a 'Ready' status indicator.

Click to select or deselect

Double click to inspect

Ready

Mybiosoftware.com

# Range and Pasture



# Pasture Manual

PNW 614

## PASTURE AND GRAZING MANAGEMENT IN THE NORTHWEST



A Pacific Northwest Extension Publication  
University of Idaho • Oregon State University • Washington State University

- <http://www.cals.uidaho.edu/edc/omm/pdf/PNW/PNW0614.pdf>

# Estimate height where 90% of grass is below that height

Grass	75% to 90%	90%
Bromes	250*	350
Tall Fescue	300	350
Orchardgrass	300	400
Wheatgrass	300	400
Ryegrass	300	400

\*Pounds /acre per inch



# Range and Pasture

Grass	Start	Stop	Season	Regrowth
Bromes	8	4	Sp - F	Good
Tall Fescue	6	4	Sp,F	Good
Orchardgrass	8	4	Sp - F	Good
Wheatgrass	8	4	Sp - F	Good
Ryegrass	8 to 10	3	Sp, Su	Good

Example:

Brome is 80% canopy and 9 inches tall.

Estimated amount available is  $(9-4)*(250)= 1,250$  lbs/ac

High ventenata

vs.

Low ventenata

CRP

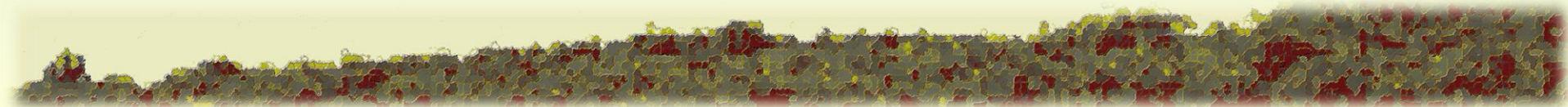
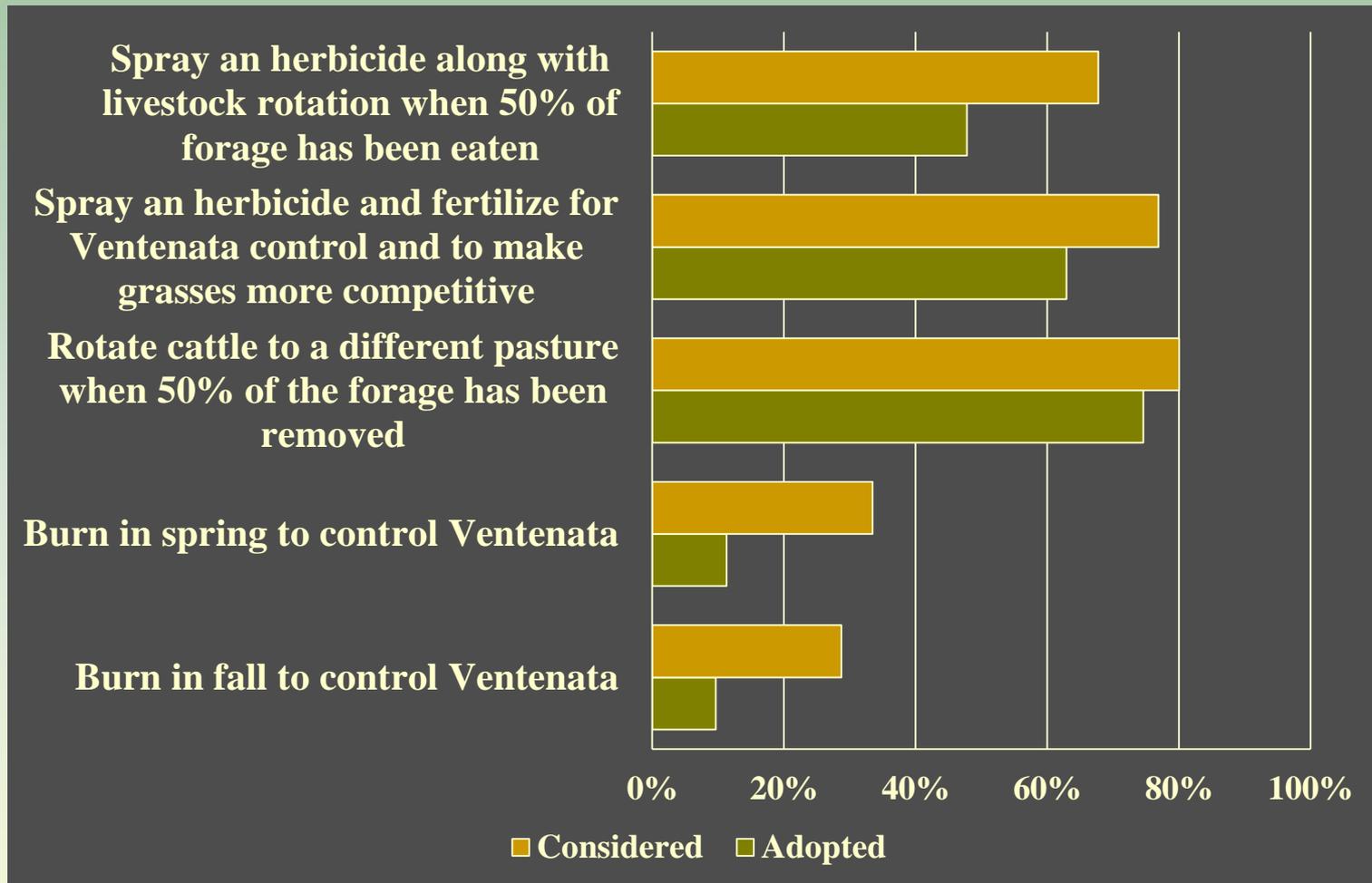
High ventenata  
>50%

Low ventenata  
<25%

Treatments

Treatments

# Techniques farmers/ranchers are considering



Low Ventenata – Fall Burn



High Ventenata – Fall Burn



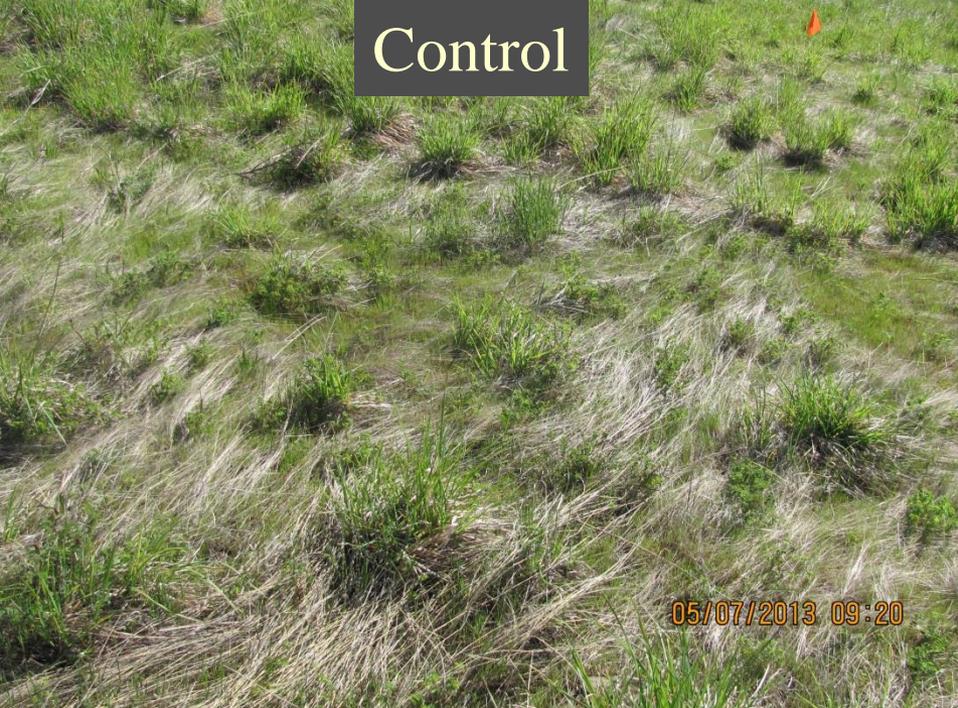
Low Ventenata – Spring Burn



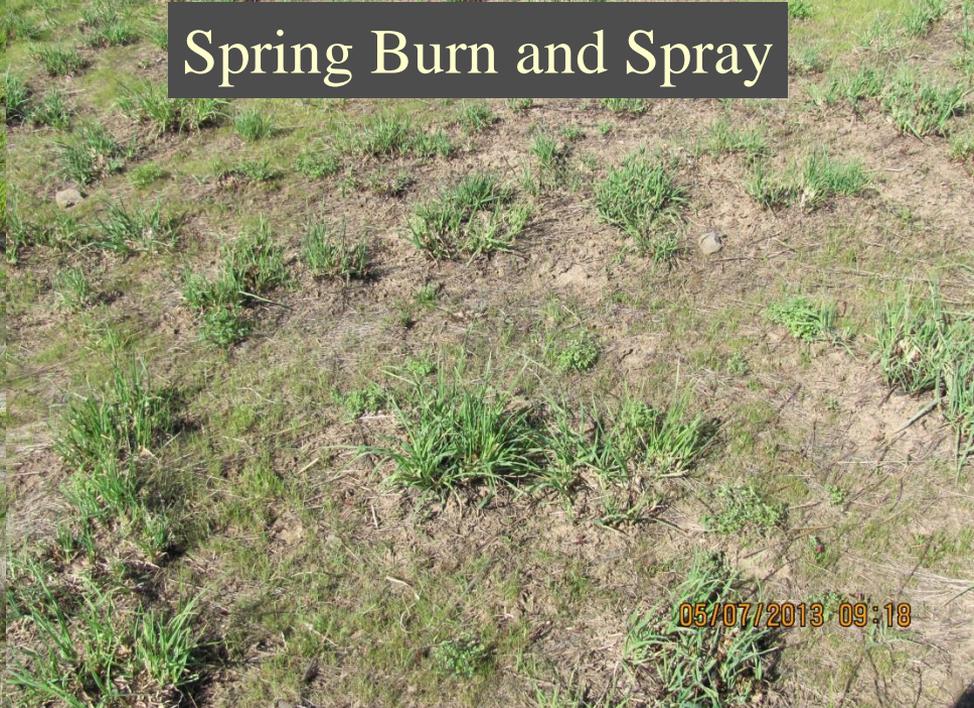
High Ventenata – Spring Burn



Control



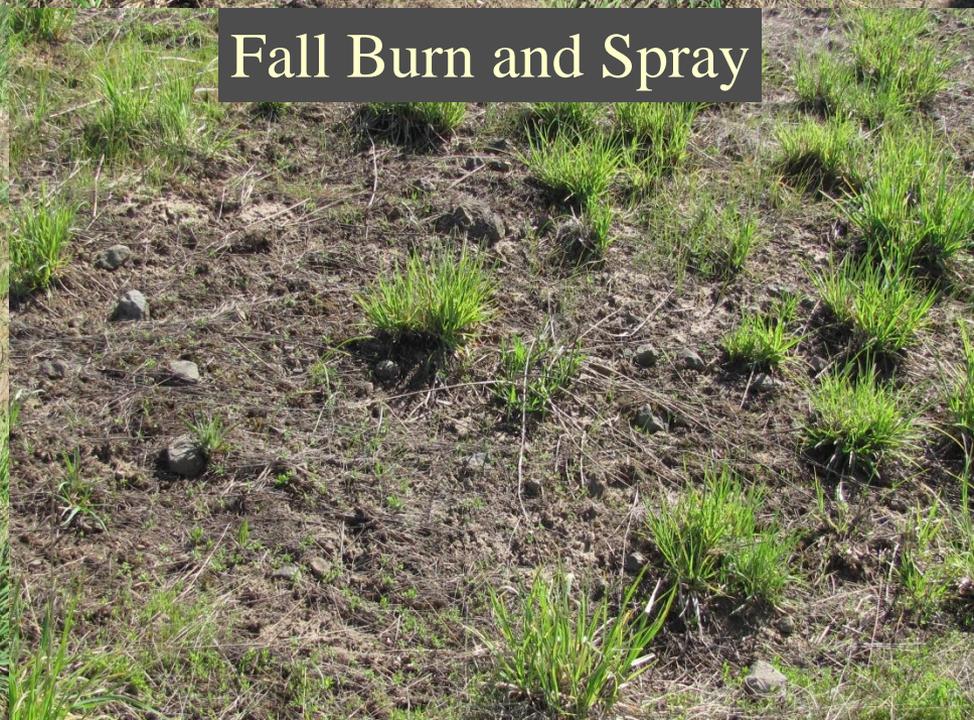
Spring Burn and Spray



Fall Burn Only

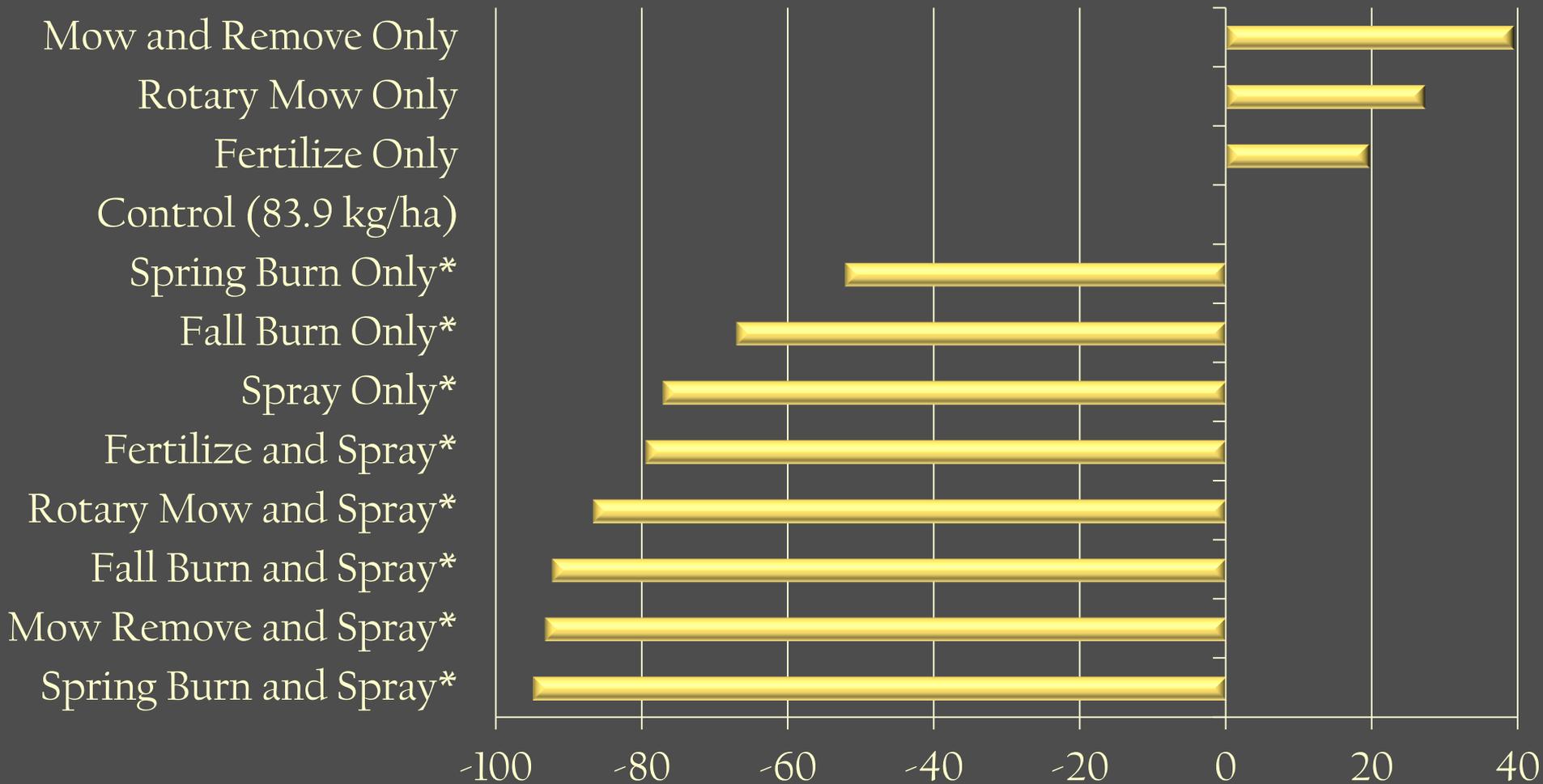


Fall Burn and Spray



# CRP

## High Infestation – Ventenata Biomass

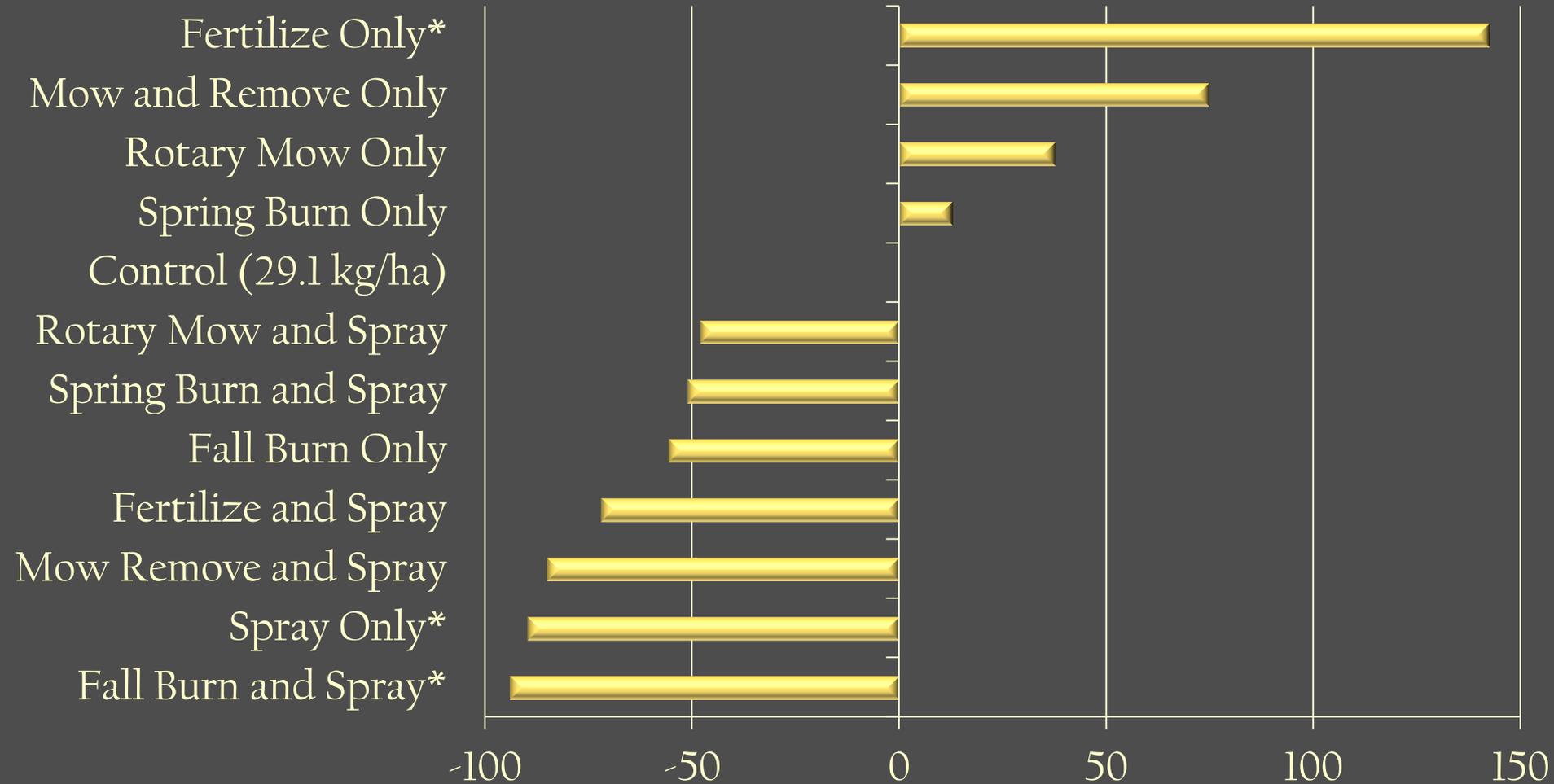


\* Treatment significantly different from control

Percent Change (%)

# CRP

## Low Infestation – Ventenata Biomass



\* Treatment significantly different from control

Percent Change (%)

# Herbicides Registered

<b>System</b>	<b>Outrider</b>	<b>Plateau</b>	<b>Matrix</b>	<b>Landmark</b>	<b>Axiom</b>
Pasture	X	X			
Range	X	X		X	
Rights of Way	X	X	X	X	
Hay	X				X

# Herbicide Use

Herbicide	Rate	Timing	Remarks
Outrider	1 oz/acre	Postemergence	Kills meadow foxtail Injures bromes in high clay Wait 30 days to graze
Plateau/Panoramic	6 oz/acre	Postemergence	Litter decreases effectiveness
Matrix	3 oz/acre	Pre and postemergence	No grazing
LandMark	1-2 oz/acre	Pre and postemergence	No grazing for 1 year More than 1 year control

# Questions



# Hay Production



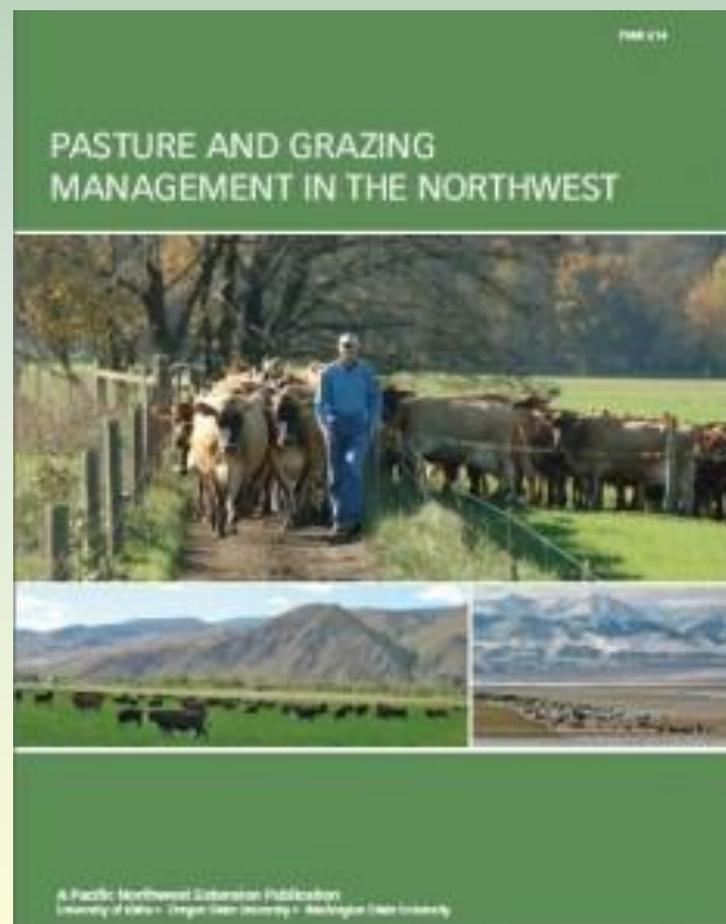
# Why is Ventenata a Problem in Timothy Hay?

- Reduces hay production
- Shortens stand life
- Inhibits swathing of hay
- Excluded from overseas contracts
  - For Northern Idaho and Eastern Washington the loss is \$22,000,000 each year

# Fertilizer and Herbicide Application

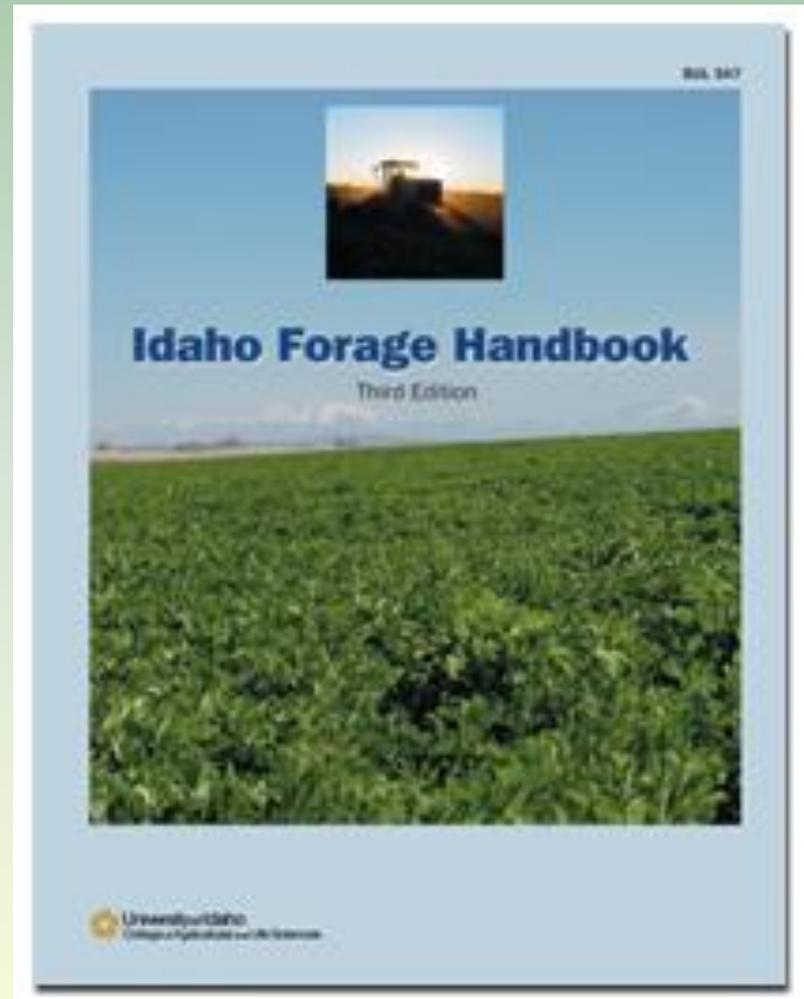
- Nitrogen – Phosphorous – Potassium
- Applied in November
- *Axiom 8 oz/A*

Fertilizer	Analysis applied
Nitrogen	50–0–0
Phosphorous	0–4 to 100–0
Potassium	0–0–150



# Timothy Hay Production Practices

- Forage handbook was used to guide harvest and fertilization
- Excellent resource for hay production



# Background on Timothy Production

- Corms are produced in fall
- Carbohydrates in stems after harvest are used for corms
- 4 INCH CUT HEIGHT
- Root regrowth begins in fall
- K and P should be applied in fall
- N applied in spring



# Treatments

- Cut height 2 or 4 inches
- Herbicide Axiom at 0 or oz/A
- Fertilizer (fall P and K; spring N; no fertilizer)



# Harvest



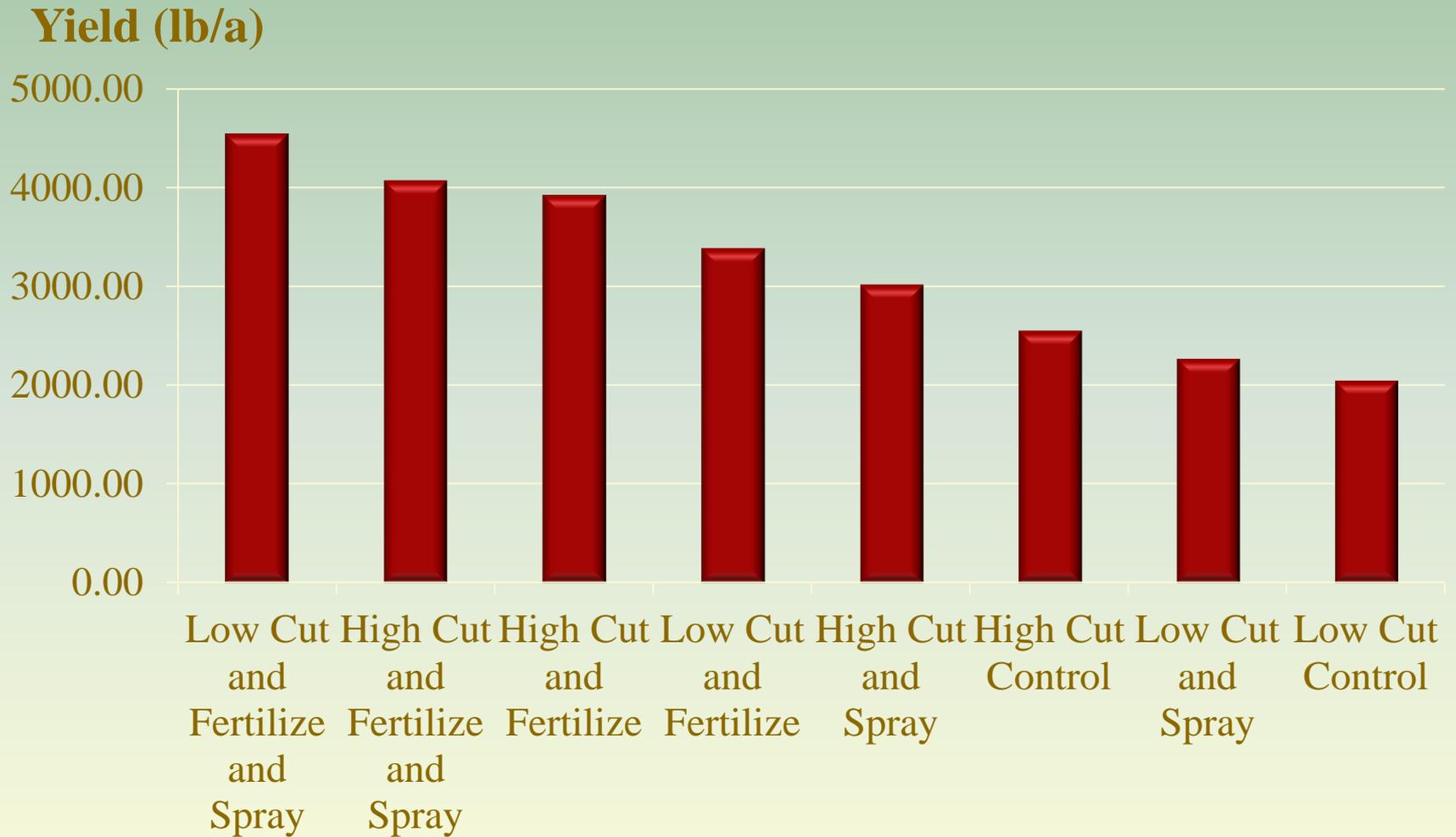


Fertilizer and Spray at 4 inch Height

A man wearing a light-colored short-sleeved shirt, dark pants, and a wide-brimmed hat is kneeling in a lush green field. In the background, a white SUV is parked with its rear hatch open. The field is filled with tall grass and some smaller plants. A dense line of trees is visible in the distance under a blue sky with scattered white clouds. A diagonal yellow line runs across the field from the bottom left towards the top right, passing behind the man and the SUV.

Not Sprayed/Sprayed at High Ventenata

# Cut Height and Yield

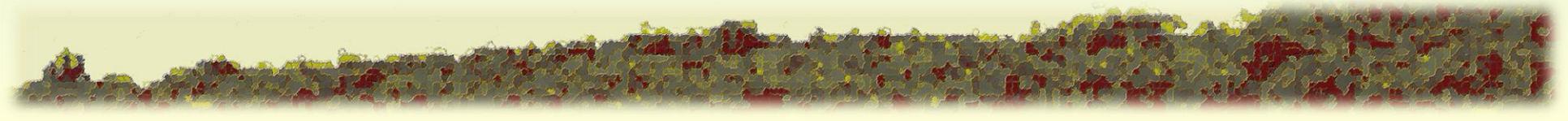


# Hay Production

- Hay is cut at 2 inches with 2,000 lbs of hay but when hay is cut at 4 inches, production is 2,500 lbs.
- Shouldn't I get more hay if I cut more of it?
- Explanation:



- Stems for next year come from corms
- Corms produced each year
- Energy in stems produces corms
- More energy = more corms = more stems = more forage



# Ventenata Biomass For High Ventenata Cover



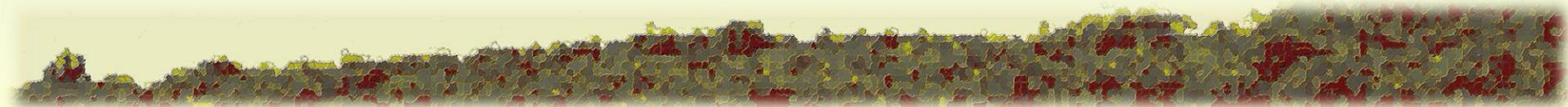
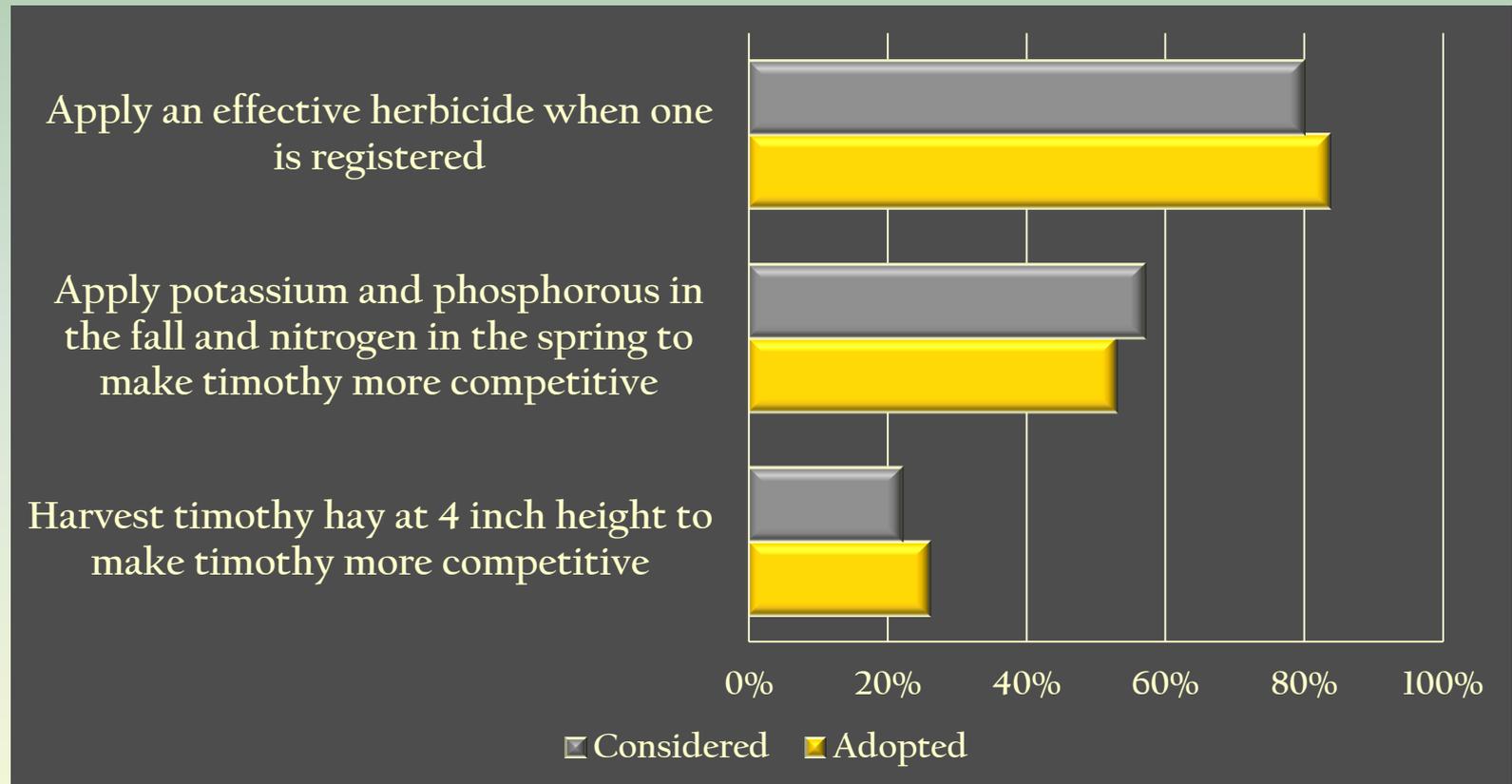
# Herbicides Registered

<b>System</b>	<b>Outrider</b>	<b>Plateau</b>	<b>Matrix</b>	<b>Landmark</b>	<b>Axiom</b>
Pasture	X	X			
Range	X	X		X	
Rights of Way	X	X	X	X	
Hay	X				X

# Herbicide Use in Hay

Herbicide	Rate	Timing	Remarks
Outrider	1 oz/acre	Postemergence	Kills meadow foxtail Wait 30 days to hay
Axiom	8 - 10 oz/acre	Pre and postemergence	Wait 30 days to hay Don't graze Minimum 3.5 inch cut height

# Farmer Interest in Ventenata Management



# Hay Summary

- Keep cut height at 4 inches
- Axiom applied in fall either pre or post emergent
- Fertilization
  - Fall for P and K
  - Spring for N
- Ventenata control allows for overseas markets



# Questions

