

Making Hay

An Alfalfa/Grass Approach to Forages

2015 Forages For “U” Workshops
Hutchinson/Fergus Falls
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Goals: Discussion/Group Learning



Objectives

- Identify what matters in alfalfa/grass system
- Outline approaches to successful production
- Discuss real production scenarios



History/Background

- Not a “new” idea
 - NY....85% of acres alf/grass mixes
 - Beef producers traditionally
 - Many “old” fields converted to this
 - Quackgrass, brome grass, bluegrass, annual grass weeds
- Newer concept in Midwest dairys
- Newer in idea of maximum production



Alfalfa Growth and Development

Stage Number

0 = Early Veg.

1 = Mid Veg.

2 = Late Veg.

3 = Early Bud

4 = Late Bud

5 = Early Flower

6 = Late Flower

7 = Early Seed

8 = Late Seed

9 = Ripe Seed

stems <6" no buds

stems 6-12" no buds

stems >12" no buds

1:2 nodes with buds

>3 nodes with buds

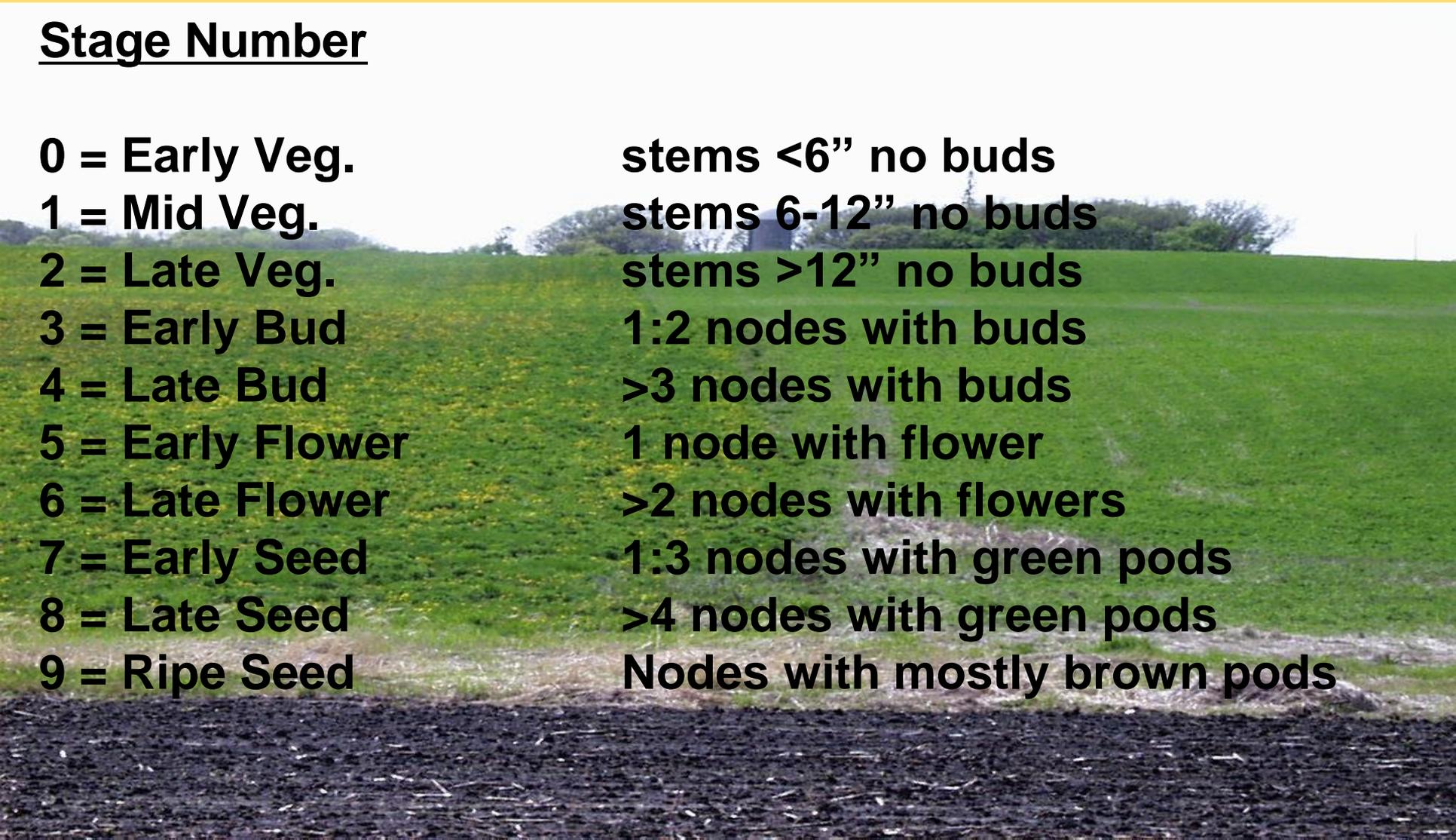
1 node with flower

>2 nodes with flowers

1:3 nodes with green pods

>4 nodes with green pods

Nodes with mostly brown pods



Grasses Growth and Development

Germination/Emergence



- 1. Vegetative
 - 2. Late vegetative (jointing)
 - 3. Boot
 - 4. Early bloom 25% headed
 - 5. Midbloom pollen shed (75% headed)
 - 6. Full bloom (100% heads)
 - 7. Milk
 - 8. Dough
 - 9. Mature
-
- Crown is plant “heart”
 - Needs photosynthetic material to regrow



Mixture Advantages

- Yield
- Drying Rate
- Persistence
- Feeding Value
- Natural Weed Suppression
- Insect/Disease Management
- Manure Applications/Traffic
- Erosion Control
- Bloat Management
- Livestock Genetics/Soils History



Mixture Focal Points (differences)



- Seeding
 - Drill, seed, %, ...
- Fertility
 - N and S additionally
- Cutting height
- Herbicides
 - Carryover and post emerge
- Genetic events



Alfalfa Variety Selection

- Same as your pure stands
 - Tonnage
 - Fall Dormancy and Winterhardiness
 - Quality
 - Disease Resistance
 - Insect Resistance



Grass Species Selection

Secondary Criteria



- Orchardgrass (32)
- Tall Fescue (18)
- Meadow Brome (4)
- Timothy (19)
- Festulolium (TF+R) (5)
- Perennial Rye (26)
- Smooth Broom (4)
- Reed Canarygrass (3)
- Italian Ryegrass (32)
- Annual Ryegrass (?)



Grass Variety Section

Most Important to Success

- Tonnage
 - Distributions of yield
- Maturity/Paletability
 - Matching with alfalfa
- Disease Resistance
- Longevity
- Cost
- Seed Availability



Alfalfa/Grass Seeding Rates

target is plants/ft² not #/A

- Alfalfa 7-10#/A
- Reed Canary 5-7#/A
- Smooth Broom 6-10#/A
- Timothy 2-5#/A
- Orchard 2-5#/A
- Tall Fescue 4-8#/A
- Festulolium 4-8#/A
- Perennial Rye 4-8#/A



Planting



- Late summer and/or spring
- Desired mixture
- Alfalfa and grasses stabilize population at first season's end
- -target=60-75 seeds/ft² with stand of 30-35 plants/ft²
- Seeding method
 - Drill, no-till, broadcast



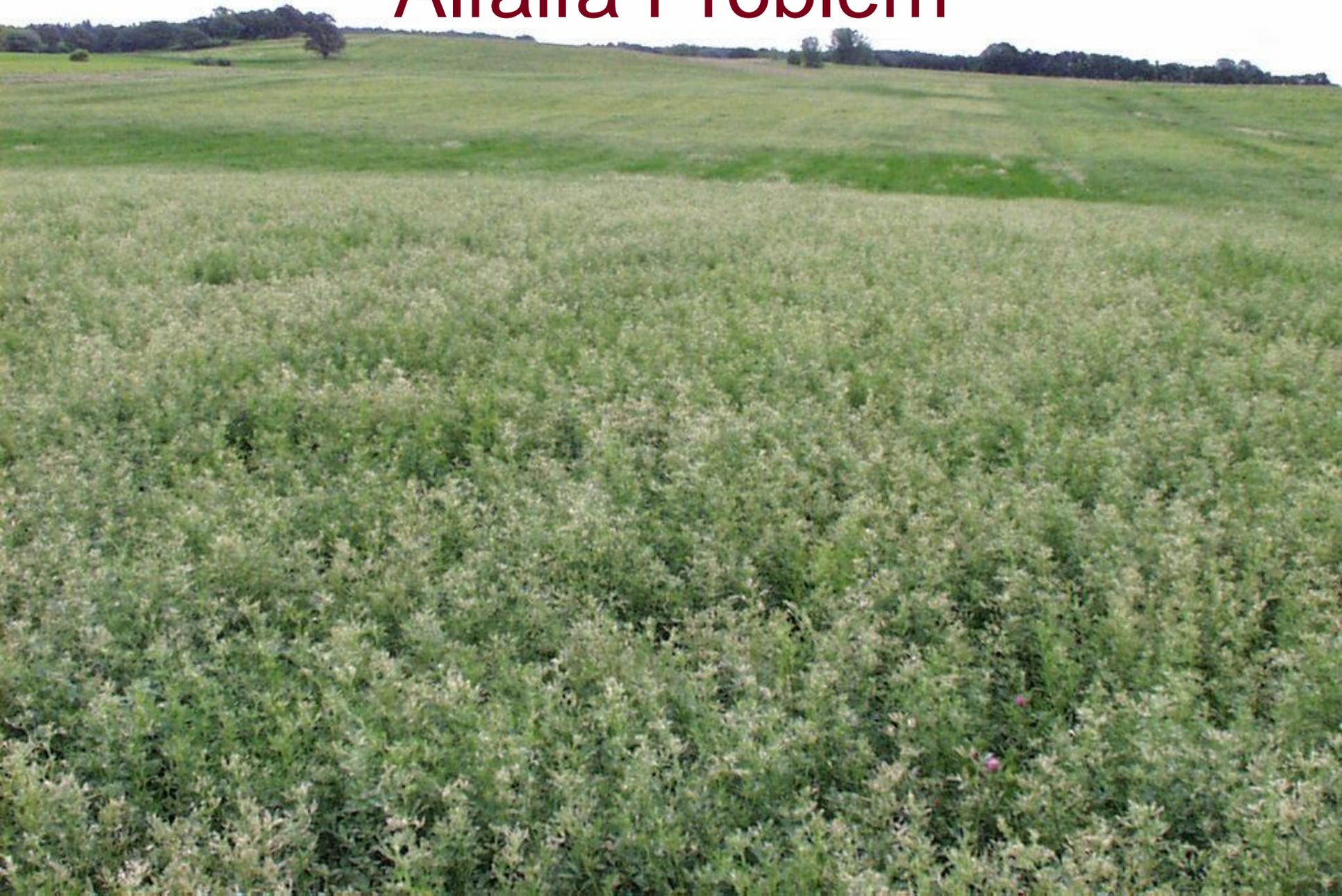
Getting a Good Forage Stand



- 3 common mistakes 90%)
 - Soil pH and drainage
 - Loose soil
 - Seeding Depth
- Scouting
 - Seedbed prior to seeding
 - Seed to soil and depth
 - Seeds on surface



Alfalfa Problem



Alfalfa Weevils



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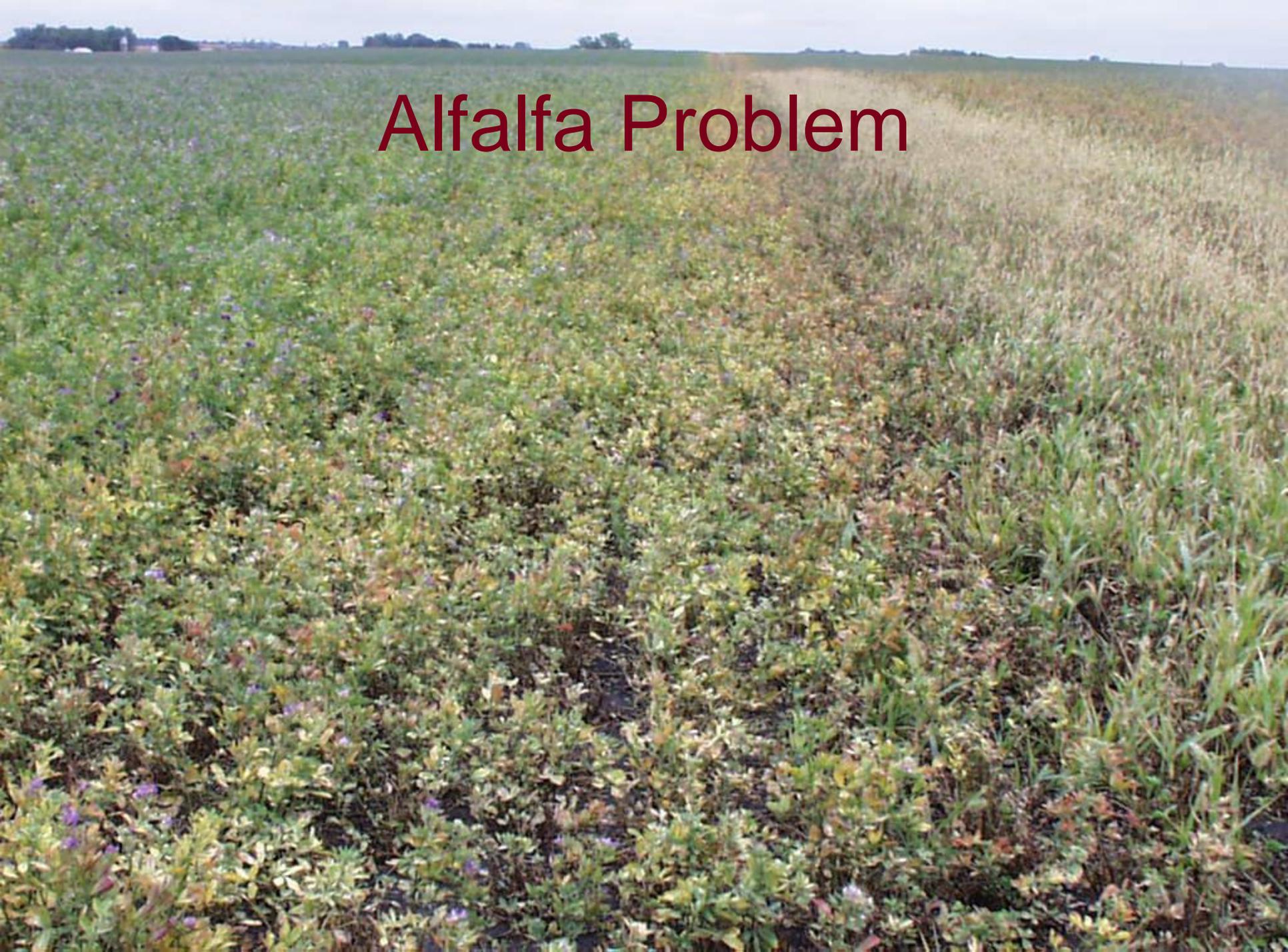
Armyworms



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Alfalfa Problem



Orchardgrass



Harvesting

- **First Cutting Timing**
 - Managing tonnage and quality
- **Harvest intervals**
- **Cutting Height**
- **Cutting Frequency**
 - Research/Field Production
- **Windrow widths/drying time**
- **Wheel traffic**

Fertility

- Need to address legume and grass needs
 - Alfalfa = P and K
 - Grasses = N and S
- Timing
 - Fall, Spring, post 1st cut, manuring
- Amounts
 - Soil sampling and goals (maintain/build/deplete)



Other Considerations

- Insecticides and labels
- Stand longevity
- Nitrogen credits (rotation)
- Allelopathy (plant back)
- Interseeding/frost seeding



2014-2015

Winter Effects on Forages

Dormancy
period

Cold temperatures

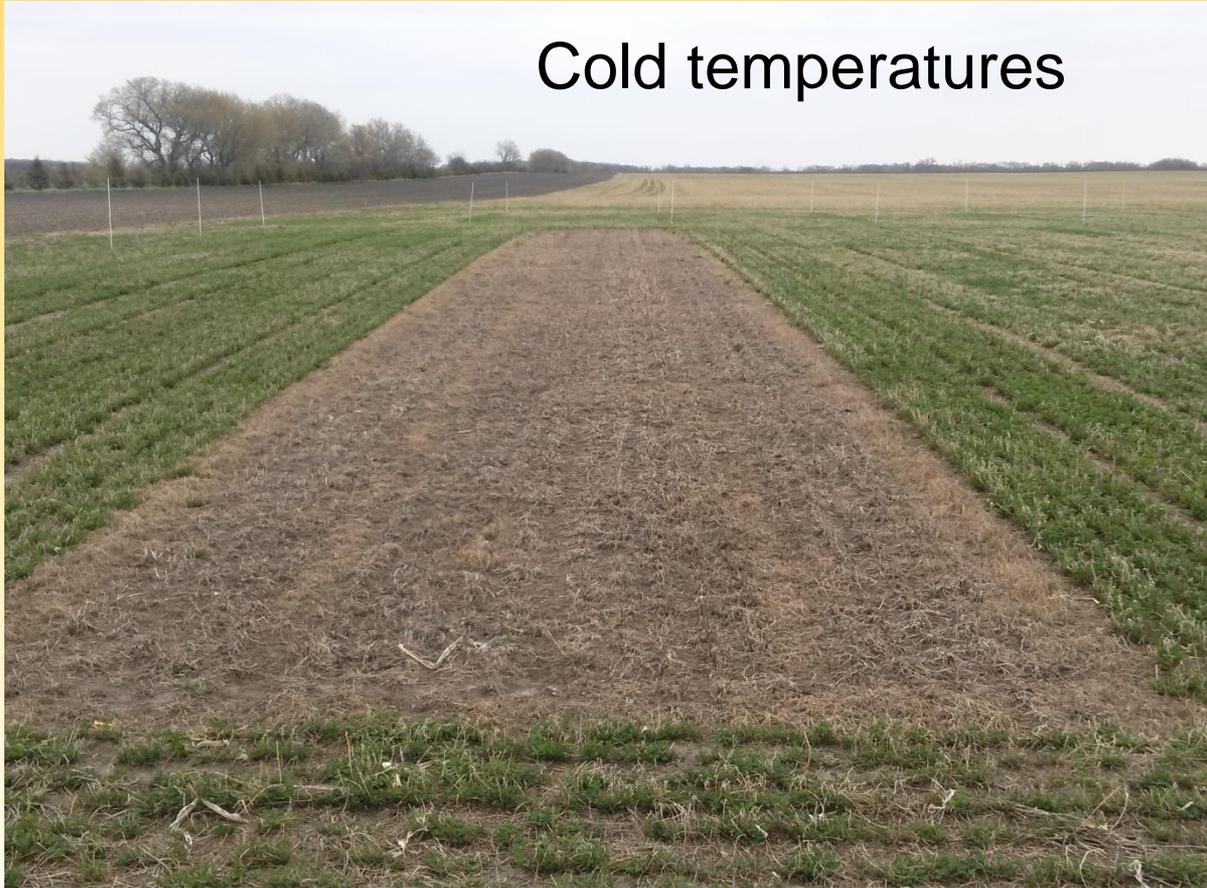
No snow
cover

December
thaw

Wind

Rain events

Weather
still coming



Spring Stand Evaluations

- Stand counts.....No, use plants to evaluate winter injury
- Stem counts over 3-4" ht (much more accurate)
 - greater than 55/ft²
 - Stems not limiting
 - Yield same as previous year
 - 40-55/ft²
 - Some yield reduction expected
 - Less than 39/ft²
 - Consider replacing stand
- ***Must also evaluate root health to be reliable



Spring Stand Evaluation Alfalfa+Grasses



Spring Stand Evaluation Alfalfa+Grasses



Alfalfa Grass Advantages Revisited

- Yield
- Drying Rate
- Persistence
- Feeding Value
- Natural Weed Suppression
- Insect/Disease Management
- Manure Applications/Traffic
- Erosion Control
- Bloat Management
- Livestock Genetics/Soils History



Discussion and Questions



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