Native Warm Season Grass Establishment and Maintenance using Plateau Herbicide

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Jim Bean

- B.S. in Forest Resources Management from West Virginia University
- 36 years of Forestry and Vegetation Management Experience
- Over 27 years with BASF
- As Strategic Accounts Manager, I help educate and serve customers in the Forestry, Utility R/W, Industrial Bareground, Roadside, Aquatic, Pasture & Rangeland and Invasive Species markets across the U.S.
- Live in Cary, NC
Agenda

- Native Warm Season Grass Establishment
- Wildflower Establishment
- BASF Products
  - Plateau
- Additional BASF Products
  - Detail
  - Overdrive
- Use Recommendations
- Keys to Success
Failure is an Option
Desired Results
Long-Term Results
Keys To Success

- Site preparation
- Quality seed
- Control competition
- Establish grass FIRST
- Establish wildflowers in years 2 or 3
- Periodic maintenance
Site Preparation

- Plowing or Disking
- Grazing
- Haying
- Fire
- Herbicide
Plowing / Disking
Why Use Herbicide?

- The rate of annual weed growth can result in poor establishment and stand loss
  - Native grasses may require 3 years for establishment without weed control
- Slow establishment leads to spotty stands
  - Creates gaps for thistles and invasive weeds
- Small herbicide expense compared to seed cost and multiple mowings for weed control
PLATEAU herbicide in native grass establishment projects

- Unique fit in establishment of native grasses
- Use seed mixtures with native legumes and some wildflowers
- Weed control in prairie plantings and CRP
- Reclamation of degraded pasture and rangeland
Plateau Review

- Unique product for many purposes (rate and timing)
  - Remove grass from other grasses
  - Native grass establishment and maintenance
  - Selective weeding and seedhead suppression
  - Invasive weed control
  - Soft residual bareground

- Active Ingredient: Imazapic

- Pre and Post-emerge control + residual soil activity

- Chemical Group 2
Plateau Target Areas

- Native Grass
- Invasive Weeds
Plateau Target Areas

- Selective Weeding
- Soft Residual
Perennial Grasses Controlled

- Perennial Grasses
  - Johnsongrass (seedling & rhizome)
  - Barnyardgrass
  - Reed Canarygrass
  - Vaseygrass
  - Bahiagrass
  - Dallisgrass / Smutgrass
    - Suppression only
Invasive Species Controlled

- Medusahead
- Cheatgrass
- Downey Brome
- Leafy Spurge
- Japanese Brome
- Russian Knapweed
- Dalmatian Toadflax
- Many others
Annual Grass Control

- Annual Grasses
  - Sandbur
  - Crabgrass
  - Broadleaf Signalgrass
  - Foxtails
  - Fall Panicum
- Nutsedge
Johnsongrass Control

8 oz/acre, 30 DAT
Use up to 12 oz. for established stands
Tolerant Grasses

- Big Bluestem
- Little Bluestem
- Indiangrass
- Smooth Bromegrass
- Kentucky Bluegrass
- Needlegrass
- Wheatgrasses
- Sideoats Grama
- Blue Grama
- Buffalograss
- Russian Wild Ryegrass
- Prairie Sandreed

Tolerance varies greatly between varieties and species!
Warm-season grass establishment: Why PLATEAU?

- Native grasses, legumes and a few forbs are tolerant
- Reduces risk and time required for establishment
- Allows for maintenance
Establishment of native grasses
- Big bluestem, indiangrass, little bluestem, sideoats grama
- Western wheatgrass, *Stipas*, wildryes

Establishment of native legumes and wildflowers
- Illinois bundleflower, partridge pea, prairie clover, coneflowers, Black-eyed susan

Reclamation of degraded pasture and rangeland
- Leafy spurge, cheatgrass, toadflax (range restoration)
- smooth brome, tall fescue, Kentucky bluegrass (pasture conversion)
Warm-season grass establishment

- PLATEAU- pre. 4 oz/A
- Big bluestem
- 1 yr after planting and trt.

- Nontreated
- Big bluestem
- 1 yr after planting and trt.
Five Species Warm-season Grass Mixture

One yr. after planting and treatment

PLATEAU (4 oz/A pre)

Foxtail

Bluestems, indiangr., s. grama, switchgr.
Control With Plateau

8 oz. Plateau

Untreated
Warm-season grass establishment

- Plateau POST 6 oz/A
- Big bluestem stand
- 4 weeks after treatment for foxtail control

Central IA
Native Grass First Growing Season
Competition

Crabgrass

Johnsongrass
Plant Forbs in Openings Year 2 or 3
Seedling Establishment with Plateau Seedlings per m²

Pre emergence

Post emergence

Warm-season Grass and Legume Establishment

- Plateau PRE 4 oz/A
- Warm-season grass and legume mixture
- 8 weeks after planting

Southeast NE

Dr. Robert Masters, USDA-ARS
Warm-season Grass and Legume Establishment

- Plateau PRE 4 oz/A
- Big bluestem and Illinois bundleflower
- 4 weeks after planting

Southeast NE
Warm-season Grass and Legume Establishment

- Plateau PRE 4 oz/A
- Big bluestem and partridge pea
- 12 weeks after planting

Southeast NE
Native Grass/Forb Planting in First Growing Season
Native Grass and Wildflower Establishment

- PLATEAU- pre. 2 oz/A, 1 yr after trt and planting
- Native grasses, legumes, wildflowers
Guidelines for PLATEAU Use
Native Grass Establishment

- Rates vary by geography, weed pressure and soil type
  - Eastern and central U.S. use 4-12 oz/A
  - western Plains states use 2-4 oz./A (w-s grasses and legumes)
  - use 2 oz rate in sandy, high pH soils in cool or dry sites

- Pre-emergent to planted species

- Post-emergence can also work under specific situations - rescue trt.
  - Annual grass control

- Methylated seed oil or nonionic surfactants
  - See label (MSO for perennial weeds, NIS for annuals)

- Switchgrass sensitivity
  - Use lower PLATEAU rate and increase seeding rate
  - Plateau will thin switchgrass
  - Mixtures only
Guidelines for PLATEAU Use
Native Grass and Forb Establishment

- Legume and wildflower establishment at lower rates
  - 2-8 oz/A pre.
  - 4 oz/A post on legumes with 3 leaves
  - bundleflower, partridge pea, prairieclover
  - alfalfa and clovers in a mix with grasses for CRP, wildlife, ROW planting, etc
  - Aster wildflowers
    - blanket flower, coreopsis, blackeyed susan, and others
Diverse forb plantings and Plateau Three step approach

1) Plateau-tolerant mixture of grasses Year 1
   ▶ Spring planting
   ▶ Spring Plateau application
   ▶ Stabilizes site and reduces weed interference
   ▶ Establishes the foundation prairie species

2) Plant tolerant legumes and forbs year 2
   ▶ Spring application of Plateau and mixtures for troublesome / invasive weeds
   ▶ Fall planting of forbs
   ▶ Improved success of costly and less available forbs

- Plant non-tolerant forbs year 3
  ▶ Plant in openings that are available
Noxious weeds create big headaches in prairie plantings
- Johnsongrass
- Field bindweed
- Musk thistle
  - Canada thistle flowering suppression only
- Bromegrass, reed canarygrass, and fescue encroachment
- Cheatgrass
- Leafy spurge

Legumes and other forbs limit other herbicide options
PLATEAU for Warm-season Grass Conversion

- Reed canarygrass, smooth bromegrass, Kentucky bluegrass

- Methods are similar to those used for tall fescue
  - Use Plateau + glyphosate for renovation
    - Follow with spring planting of natives
  - Plateau alone + burning
    - For stands with natives present
PLATEAU for Warm-season Grass Conversion

Plateau 12 oz/A

Plateau 12 oz/A + glyphosate 48 oz/A

Nontreated stand of reed canarygrass
Selective Weeding / Seedhead Suppression
2 MAT
Seedhead Suppression 2 MAT

Smyrna Airport, Nashville, TN
Plateau 4 oz/ac
Application Date: Early June
Seedhead Suppression 2 MAT

Tall Fescue Seed Head Suppression Plot
Creating Pollinator Habitat
3 oz. Plateau 3 MAT
Other Products
Other Products

- **Detail**
  - Pre and post emergent control of difficult to control weeds like pigweed, marestail, ragweed and kochia

- **Overdrive**
  - Post emergent control of difficult to control weeds like Canada thistle, pigweeds and leafy spurge
Detail Summary

- Fast post emergent control of many difficult to control and invasive weeds

- Excellent for resistant weed management

- No grazing restrictions

- Labeled for establishment and maintenance of native grasses

- Excellent tank-mix partner for many situations
Competition

Pigweed

Marestail
Removing Canada Thistle

16 oz. Transline + 1 oz. Detail
Overdrive Summary

- Very broad spectrum but grass friendly
- Very effective with dual modes of action
- Great tank-mix partner
- Excellent for resistance management
- No grazing restrictions
- Improves grazing quality
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<th>3 MAT</th>
<th>Overdrive 4 oz/A + MSO</th>
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Canada Thistle Control with Overdrive
Leafy spurge control

Overdrive 6 oz + Picloram

Nontreated

3 MAT Minot, ND
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2018 BASF Podcasts

- 5 Minute Podcasts - Free
  - Posted on the ProVM website
  - Timely subjects
Questions

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See the ProVM webpage for podcasts and a schedule of upcoming webinars!
Thank You!