Hay & Pasture Herbicides and Weed Control Updates

Scott A. Nolte, Ph.D.
Extension Weed Specialist
Texas A&M AgriLife Extension
College Station, TX

Rezilon™ Herbicide

- Indaziflam, Group 29
- Residual preemergence herbicide
- 0.25-0.5" of rainfall or irrigation required for activation
- Make applications early, well before seed germination
- Long residual without photodegradation

Rezilon™ Herbicide

APPLICATION USE RATES

- 3-5 fl oz/A per application
- 6 fl oz/A is MAX in a 12-month period
- At rates <u>over</u> 3oz, don't harvest hay for 40 days
- No grazing restrictions following applications

Rezilon – Target Weeds

- Crabgrass
- Ryegrass
- Goosegrass
- Annual foxtails
- Sandbur
- Approximately 60 broadleaf & annual grass weeds

Rezilon™ Herbicide

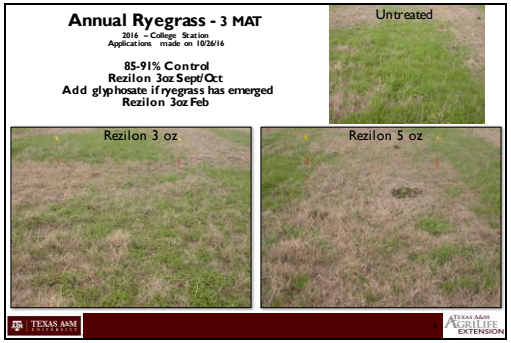
Use Precautions

- Only apply to well established forages/pastures
  - At least 1 growing season, may restrict new stolons
- 18 Month plant-back for Winter forages
- 22 Months for other crops

Annual Ryegrass - 3 MAT

2016 – College Station
Applications made on 10/26/16

85-91% Control
Rezilon 3oz Sept/Oct
Add glyphosate if ryegrass has emerged
Rezilon 3oz Feb



Rezilon™ Herbicide

Sandbur control

- 3oz in February fb 3oz after 1st cutting
- Perennial or overwintered plants add glyphosate
- Need Pastora in 2nd shot to increase control
- $$

Weed Control and Forage Safety

- Overall, much longer residual control on ryegrass and crabgrass
- Greater consistency of control on sandbur compared to pendimethalin across a variety of years and environments
- Our tests show comparable forage safety to other products
- Ongoing work is being done to evaluate activity on seedling perennial grass species

DuraCor™ HERBICIDE

- Aminopyralid + Florpyrauxifen-benzyl (Rinskor®)
- Non-Restricted – No applicator license required
- 12-20 fl oz/acre use rate
- No grazing restrictions
- Adjuvant recommendations:
  - NIS 0.25% v/v
  - MSO 1% v/v

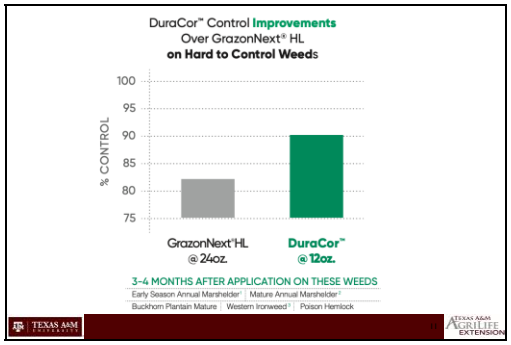
CORTEVA agriscience

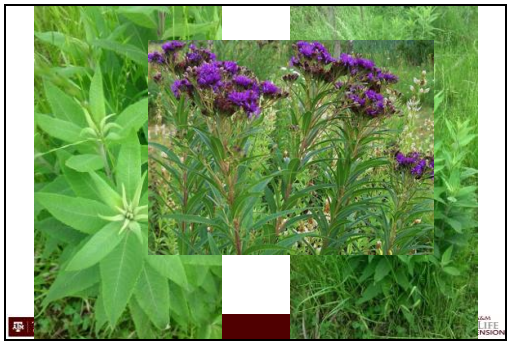
DuraCor™ Details

- Non-volatile, low odor
- Broadcast foliar
- Mixed w/UAN, or on dry fertilizer

- ~$95/gallon ($7.42-14.84/ac)

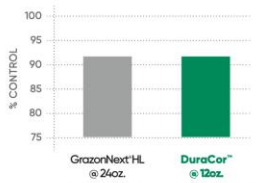
- Per Acre cost comparison:
  - GrazonNext ~$48/gallon* ($9/ac) @ 24oz/ac
  - Grazon P+D ~$30/gallon* ($7.5/ac) @ 1qt/ac






Wild carrot
Poison hemlock
Wild parnsip

DuraCor™ Control **Comparison** to GrazonNext® HL **on Core Weeds**



3-4 MONTHS AFTER APPLICATION ON THESE WEEDS

Buttercup	Canada Thistle	Common Broomweed	Common Cocklebur
Common	Curly Dock	Musk Thistle	Silverleaf Nightshade
Ragweed	Wooly Croton	Spotted Knapweed	Early Season Tall Ironweed [4]
Early Season Western Ironweed [4]			

[1] *Before the four leaf (V4) stage* [2] *Beyond the four leaf (V4) stage and up to flowering*
[3] *After flowering* [4, 5] *Prior to bud stage*

DuraCor 16 oz
Snow-on-the-Mountain and Mature Broomweed

Sprayed on June 20, 2019

Picture taken on September 4, 2019
76 Days after Treatment

DuraCor Applied via dry fertilizer
Western Ragweed Control

Applied on May 28, 2019

Picture taken on September 3, 2019
98 Days after Treatment

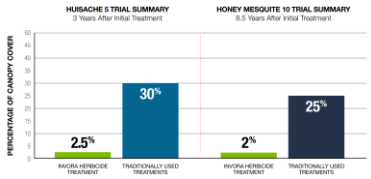
Invora® Herbicide

- Aminocyclopyrachlor + Triclopyr
- 12-48 fl oz/acre use rate
- Restricted Use – Requires applicator license
- Excellent Brush control – **Grazed** Settings
- **NOT for use in hay production or harvested sites**
- Adjuvant recommendations:
  - MSO 1% v/v

-Pre and Post activity
-Broadcast applied

-Honey mesquite: 24-36 fl Oz/A
-Huisache 36-48 fl Oz/A

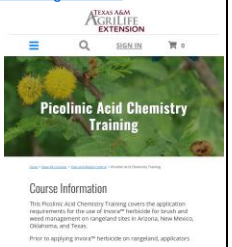
Other Weeds:
Yucca
Common persimmon
Dogfennel
Western ragweed
Bitter sneezeweed
Bull thistle



Requires Picolinic Acid Chemistry Training (PACT)

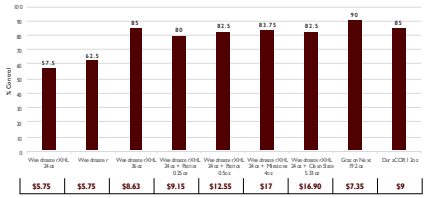
https://agrilifelearn.tamu.edu/product?catalog=AGCH-003

- Specific to Invora Herbicide
- Complete every 2 years
- 1 CEU in Laws and Regs w/course

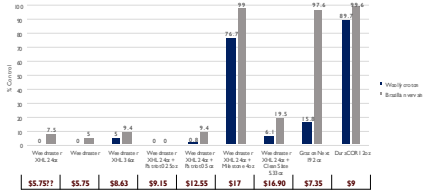


WeedMaster XHL on Texas Thistle

Texas Thistle Control 30 DAT



Weed Control 90 DAT



Native Species Tolerance Studies

Thanks to Nick Bamert and Bamert Seed for funding and seed

Native Tolerance - Greenhouse Testing: 7 DAE

- 10 Species Tested:
  - Galleta
  - Blue Grama
  - Side Oats Grama
  - Little Bluestem
  - Buffalo Grass
  - Sand Lovegrass
  - A.B. Sunflower
  - Green Sprangletop
  - Hooded Windmill Grass
  - Illinois Bundleflower
- 11 Herbicides Tested:
  - Calvacade 4L
  - Tallinor
  - Anthem Flex
  - Valor SX
  - Derigo
  - Telar
  - Invora
  - Outlook
  - Beyond
  - Esplinade
  - Duracor

Trends

- Anthem Flex
  - High Mortality
  - High Necrosis
- Derigo
  - Moderately High Necrosis
- Duracor
  - Varying Degrees of Epinasty
  - Minimal Stunting
- Telar
  - Relatively Low Mortality

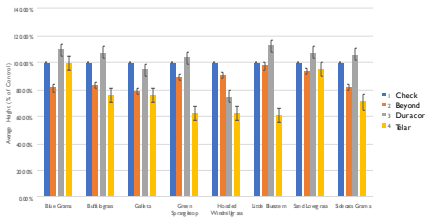
Green Sprangletop Treated with Duracor

Native Species – Field Trial

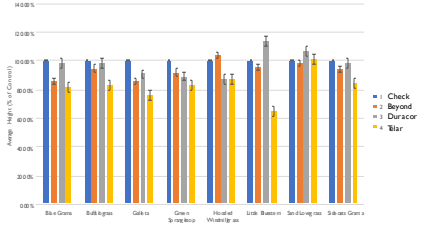
Treatment Number	Treatment Name	Active Ingredient(s)
1	Untreated Check	N/A
2	Beyond	Imazamox
3	Duracor	Aminopyralid, Florpyrauxifen-benzyl
4	Telar	Chlorsulfuron

Galletta
Little Bluestem
Blue Grama
Sideoats Grama
Buffalograss
Green Sprangletop
Hooded Windmillgrass
Sand Lovegrass

14 Days After Treatment



30 Days After Treatment



Potential Recommendations

- Hooded Windmillgrass
  - Beyond
  - Duracor
  - Possibly Telar
- Galleta
  - All Treatments
- Little Bluestem
  - Possibly Beyond and Duracor
- Buffalograss:
  - Beyond
  - Duracor
- Blue Grama
  - Duracor
  - Possibly Beyond
- Sideoats Grama
  - Duracor
- Green Sprangletop
  - None that Were Statistically Similar
  - Hesitant Recommend Beyond and Duracor

TEXAS A&M | BAMERT SEED COMPANY | TEXAS A&M AGRILIFE EXTENSION

Smutgrass Control in Perennial Pasture in Texas

Zachary Howard

32

Key Field Trial Takeaways

Rate

- 4.5pts/ac of (Velpar L) on clay soils is an appropriate rate
  - 3pts/ac is insufficient for most East Texas soils

Rainfall

- **Summer applied Velpar** > Spring > Fall applied – HIGHLY correlated to rainfall!
  - Label states 0.25 - 0.5" rainfall needed
  - Recent research suggests 0.4 - 3" w/in 7 days may be needed & moist soil at the time of application.

Delivery

- IPT treatments hand applied are very effective
  - Liquid and Pellet Hexazinone cause the least injury

Key Field Takeaways

Rate

- **4.5pts/ac of (Velpar L)** on clay soils is an appropriate rate
  - 3pts/ac is insufficient for most East Texas soils
  - Control will be marginal and residual limited

Key Field Takeaways

Rainfall

- **Summer applied Velpar** > Spring > Fall HIGHLY correlated to rainfall!
  - Label states 0.25 - 0.5" rainfall needed
  - Recent research suggests 0.4 - 3" w/in 7 days may be needed & moist soil at the time of application

Rainfall Following Applications Exp. 1

	Application		Rainfall[a]		Treatment
Location	Timing	Date	7DAT	14DAT	Velpar
			------- Inches -------		% Control
Richards	Spring	16-Apr	0.08	0.8	40
	Summer	12-Jun	1.2	2.4	70
	Fall	23-Oct	0.04	0.08	23
Bellville	Spring	17-May	0.04	0.24	3
	Summer	22-Jul	0.16	1.1	55
	Fall	23-Oct	10.9	12.1	12

Key IPT Trial Takeaways

Delivery

- 5% glyphosate provide effective control
  - Spray to wet; most effective over hexazinone; most injury
- 2% hexazinone provide effective control
  - Spray to wet; more expensive over glyphosate
- Pronone Powerpellets (hexazinone) offer an easy, effective way to eliminate individual plants
  - One whole tablet or ½ table per plant
    - Better for light infestations; least injury

Thank you!

- **Contact Info**
- Mobile (979) 318-2358
- email: scott.nolte@tamu.edu
- foragefax.tamu.edu