

Nursery Herbicide Trials

David South



Research Reports

- 06-01 - MSMA
- 06-02 - Halsulfuron methyl in oak seedbeds
- 06-03 - Shielded Applications of Sulfonylureas Part II
- 06-04 - Flumioxazin and dimethenamid Part II
- 07-01 - A spurge trial in Alabama
- 07-02 - Tolerance of young loblolly pine seedlings to MSMA
- 07-03 - Shielded Applications of Sulfonylureas Part III
- 08-01 - Preliminary Trials with Flumioxazin and Prodiamine
- 08-03 - Shielded Applications of Sulfonylureas Part IV
- 08-05 - Spurge reduces seedling growth

2008 trials





For Use as a Preemergent Weed Control Herbicide in Turfgrasses, Landscape or Grounds Maintenance, Noncropland Areas and Ornamental Production

ACTIVE INGREDIENT	
pendimethalin, N-[1-(4-chlorophenyl)-3,4-dimethyl-2,5-dinitrobenzyl]-N,N-dimethylethanamine	38.7%
INERT INGREDIENTS:	
TOTAL	100.0%
(1 gallon contains 3.8 lbs. of microencapsulated pendimethalin in an aqueous carrier)	

EPA Reg. No. 241-416

EPA Est. No. _____

Established
Container, or
Field-Grown
Nursery
Stock^{2, 3}

1. **DO NOT** apply during bud swell, bud break or at time of first flush of new growth.
2. Apply as a directed or over-the-top spray.
3. If newly budded or grafted rootstock, make an application using a shielded sprayer.
4. Care must be taken to ensure there are no cracks in the soil where **PENDULUM AquaCap** could come into contact with the roots.

We've got some
GOOD NEWS

and some
BAD NEWS



May PendulumAC

May Pendulum
+June PendulumAC

May PendulumAC+Escort

Control

September 15, 2008

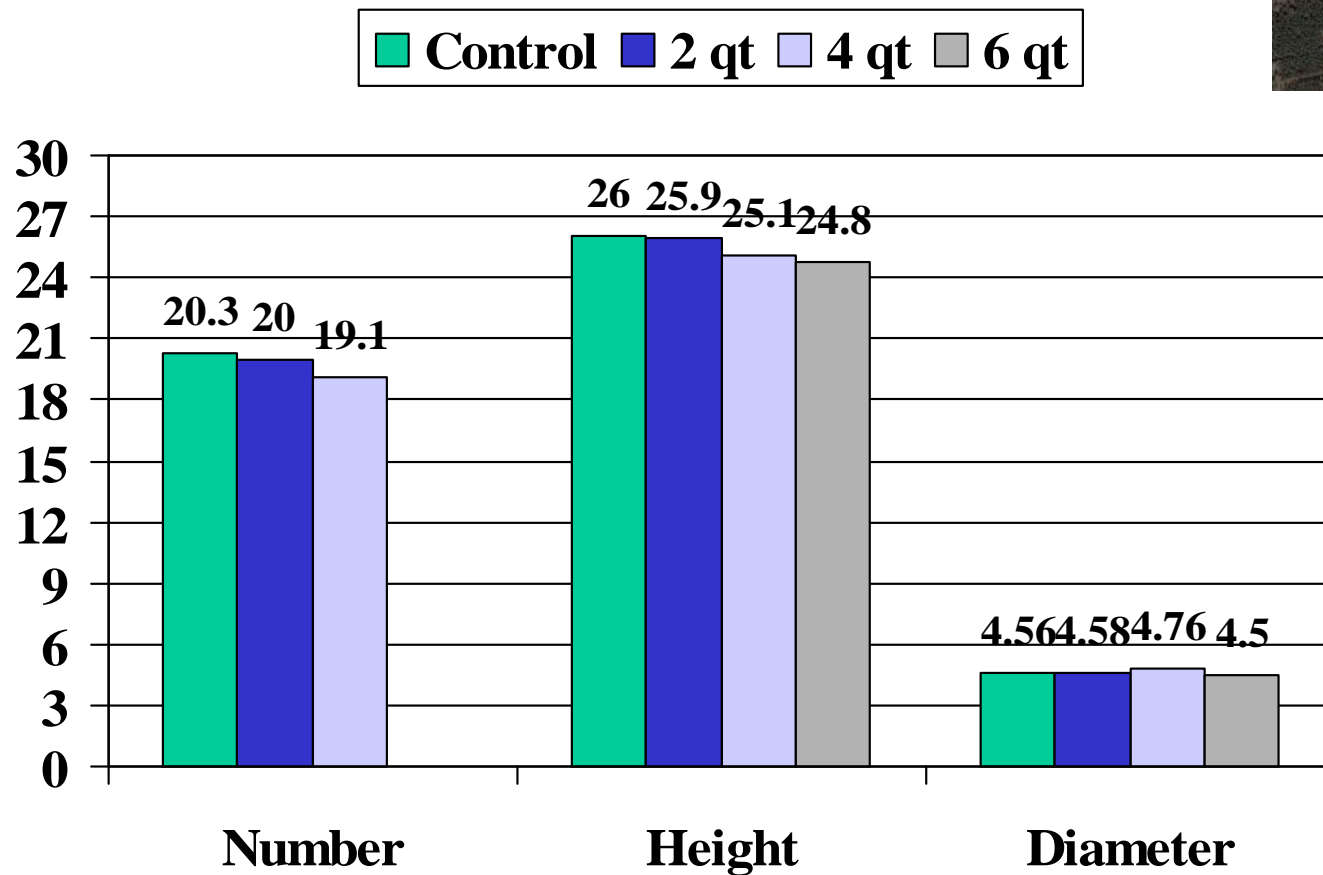
Control



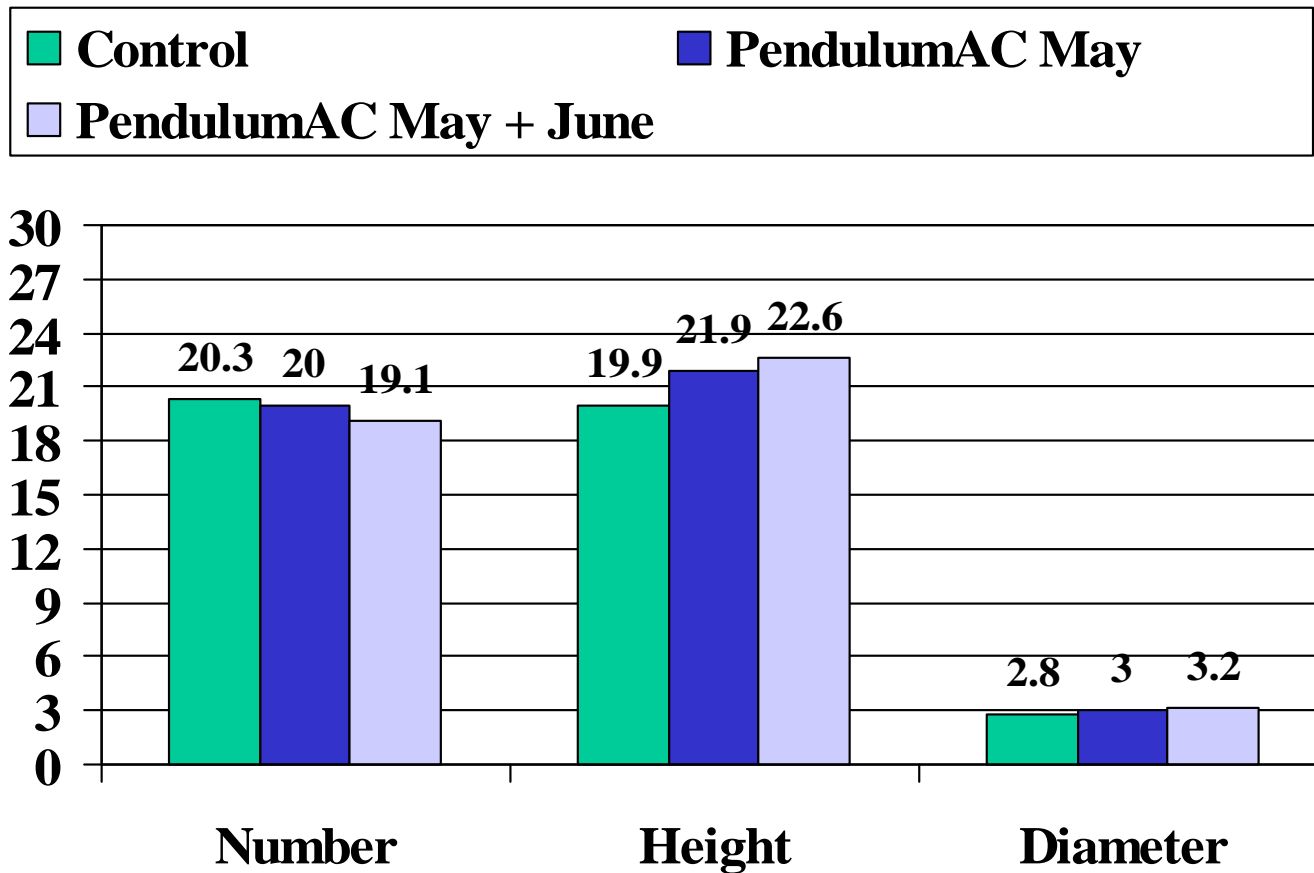
Pendulum



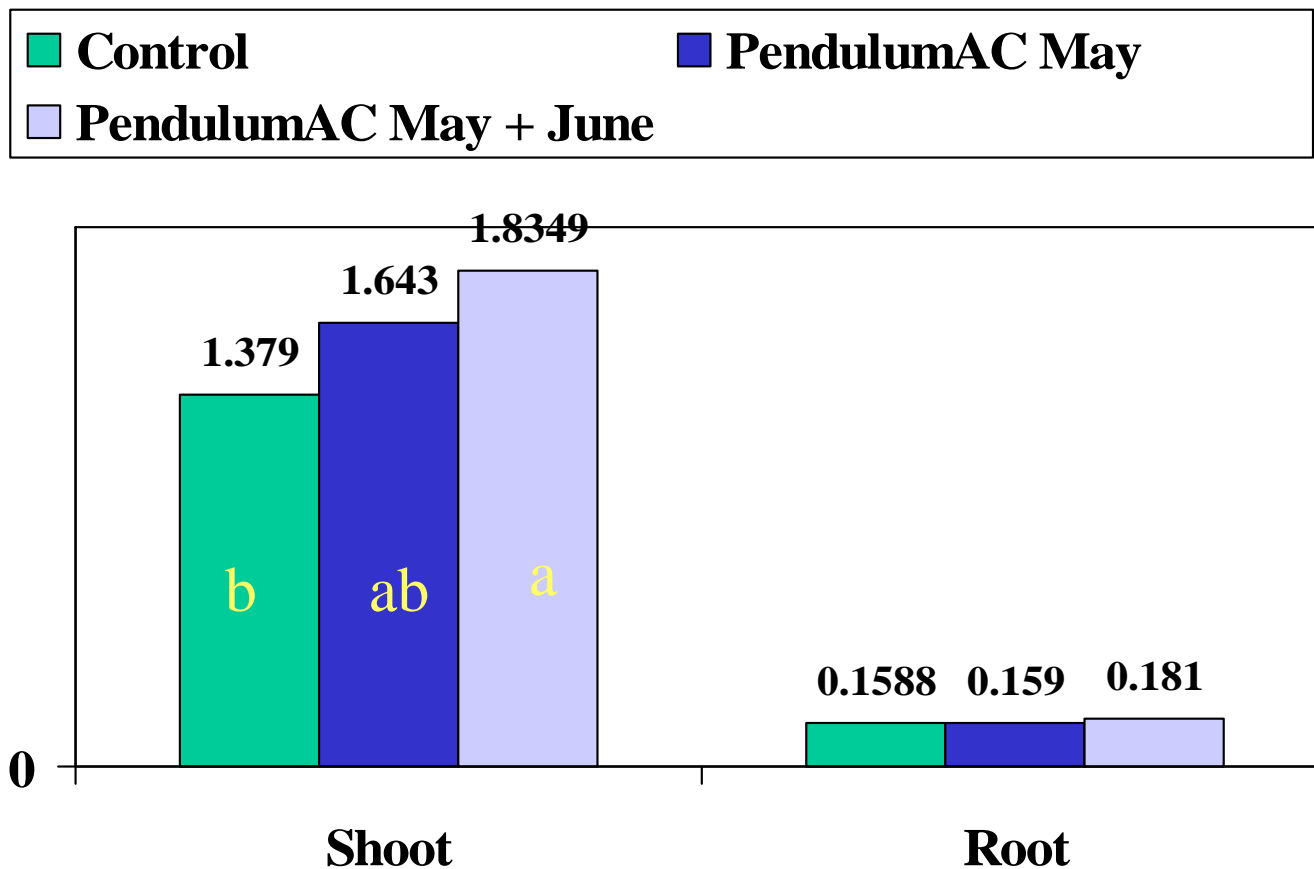
Pendimethalin rate study



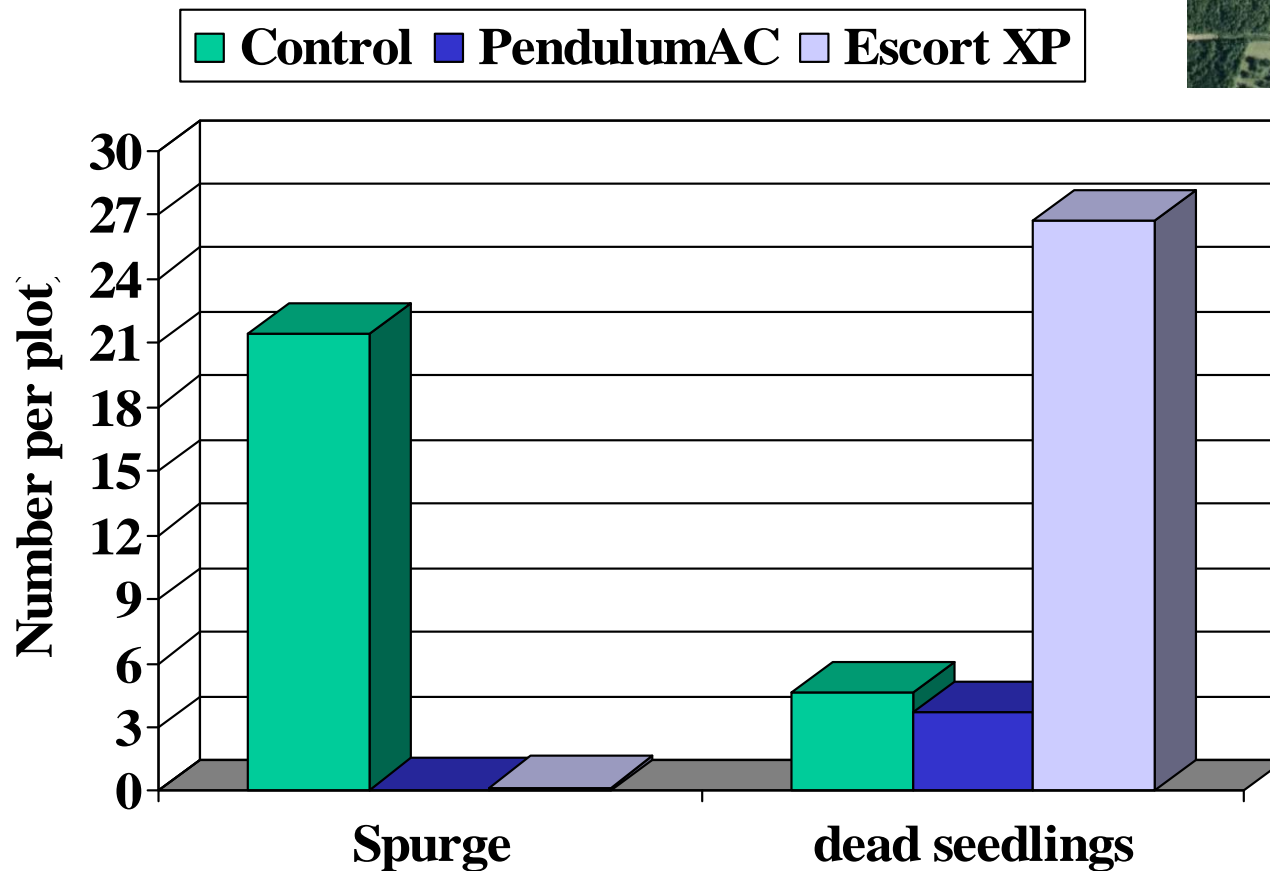
Pendimethalin (68 oz/acre)



Pendimethalin (68 oz/acre)



Applied 4 weeks after sowing

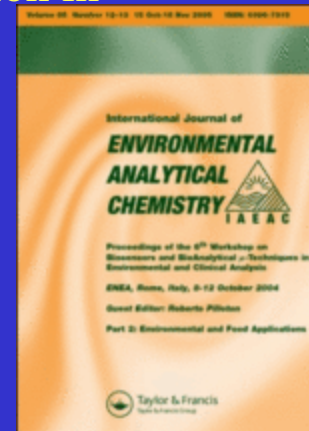


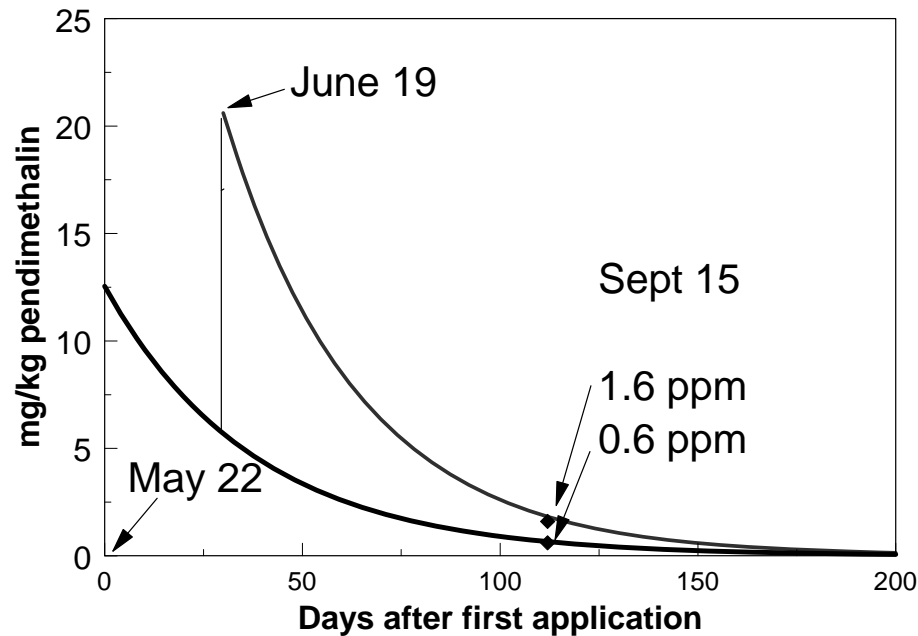
Half-life in soil

Herbicide	Trade names	Half-life (days)	V
isoxaben	Gallery	50-120	
oxyfluorfen	Goal	35	
simazine	Princep	60	
napropamide	Devrinol	70	
metolachlor	Pennant, Dual	15-25	
dichlobenil	Casoron	60	
pronamide	Kerb	60	
oxadiazon	Ronstar	60	
oryzalin	Surflan	20-128	
pendimethalin	Pendulum	44	
prodiamine	Factor Barricade	69-120	
trifluralin	Treflan	45	

Persistence of pendimethalin in cotton fields under sprinkler or drip irrigation in central Greece Authors: Nicholas G. Tsiropoulos ; Peter C. Lolas

- At 150 days after application, pendimethalin residues found in the soils were 10-18% of the initial measured concentrations.
- The half-life, calculated from the first-order kinetics dissipation equation, was estimated at between 43 and 62 days. No leaching of pendimethalin was observed below 10 cm during the experimental period of 230 days under cotton growing conditions in Thessalian fields.





Assuming an initial amount of 12 ppm applied in May, the amount of herbicide remaining in the top inch of soil (112 days) is estimated at 5% of that applied. Half-life estimated at 24 days.

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GOOD NEWS

and some
BAD NEWS

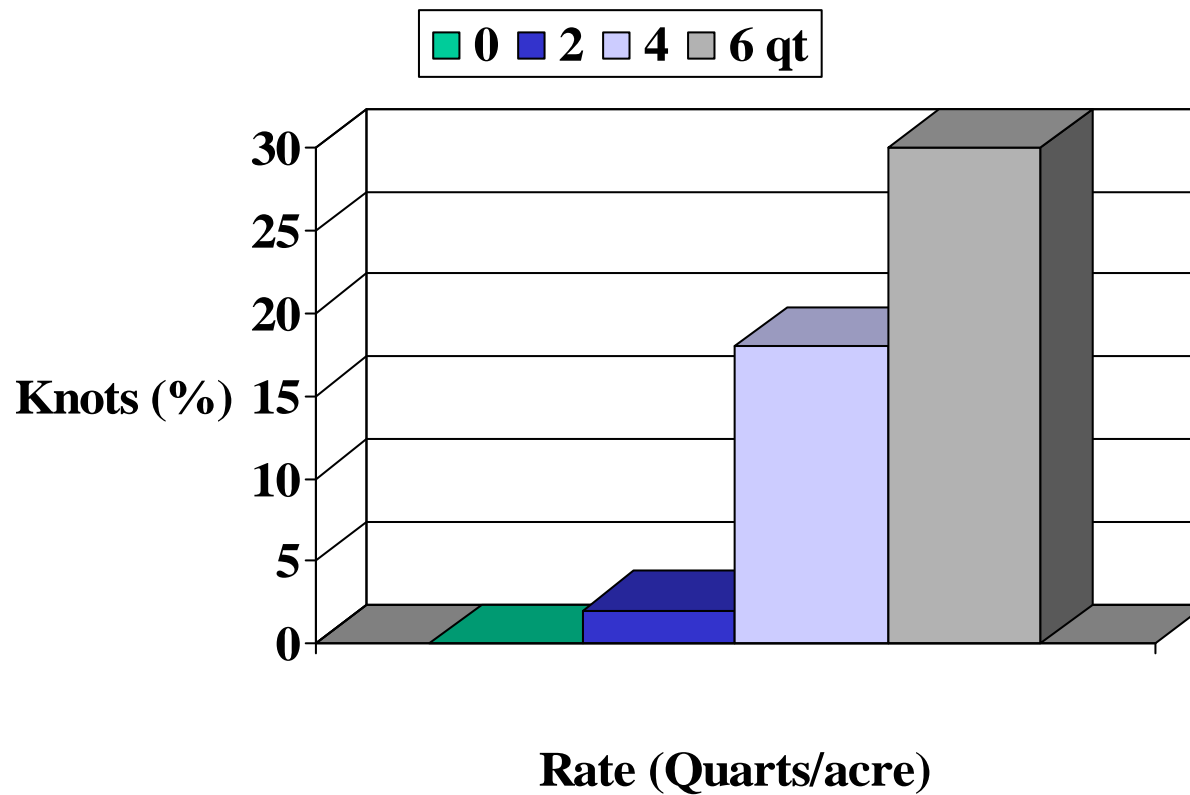
Knots from pendimethalin





11 11:23AM

Knots – May 19





Inheritance of resistance to pendimethalin herbicide induced stem damage in soybean

D.G. Glover¹ & W.T. Schapaugh, Jr.²

¹Terral Seed, Inc. P.O. Box 826, Lake Providence, LA, 71254 U.S.A.; ²Dep. of Agronomy, Throckmorton Hall, Kansas State Univ., Manhattan, KS, 66506-5501 U.S.A.

Received 12 December 2000; accepted 11 October 2001

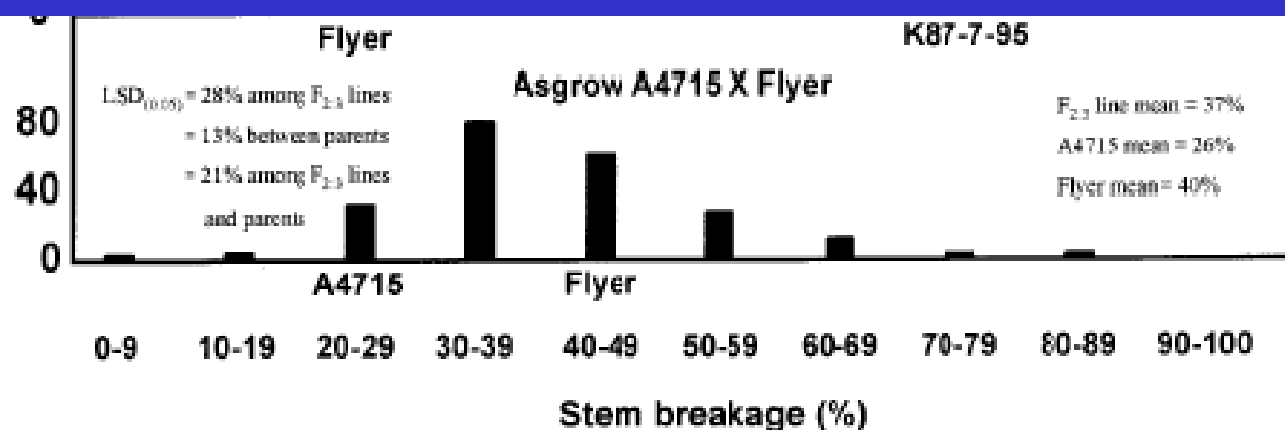


Figure 1. Distribution of F_{2:3} lines for percent stem breakage for crosses of Asgrow A4715 with Essex and Flyer, and K87-7-95 with Flyer. Note change of scale on the ordinate axis.

Questions??



Metsulfuron methyl trials



**Vegetation
Manager™**

**METSULFURON
METHYL DF**

DRY FLOWABLE

SPECIMEN LABEL

ACTIVE INGREDIENT:
METSULFURON METHYL
METHYL 2-[[[4-METHOXY-6-METHYL-
1,3,5-TRIAZIN-2-YL]AMINO]-
CARBONYL]AMINO]SULFONYLBENZOATE 60%
INERT INGREDIENTS: 40%
TOTAL: 100%

DO NOT USE ON FOOD OR FEED CROPS EXCEPT AS RECOMMENDED



DuPont™ Escort® XP

herbicide



0.75 = 0.15 ounce product/acre

1X = 0.2 ounce

1.5 X = 0.3 ounce

\$3.20 per acre



A photograph of a field of young pine trees, likely a nursery or experimental plot. The trees are arranged in neat rows, separated by dark brown mulch. The trees in the foreground are smaller and more densely packed, while those in the background are larger and more spread out. The ground is covered with a layer of dark brown mulch. Two small blue flags are visible in the field, one near the 'PENDULUM' label and another further back. The overall scene is a well-maintained agricultural or research area.

PENDULUM

CONTROL



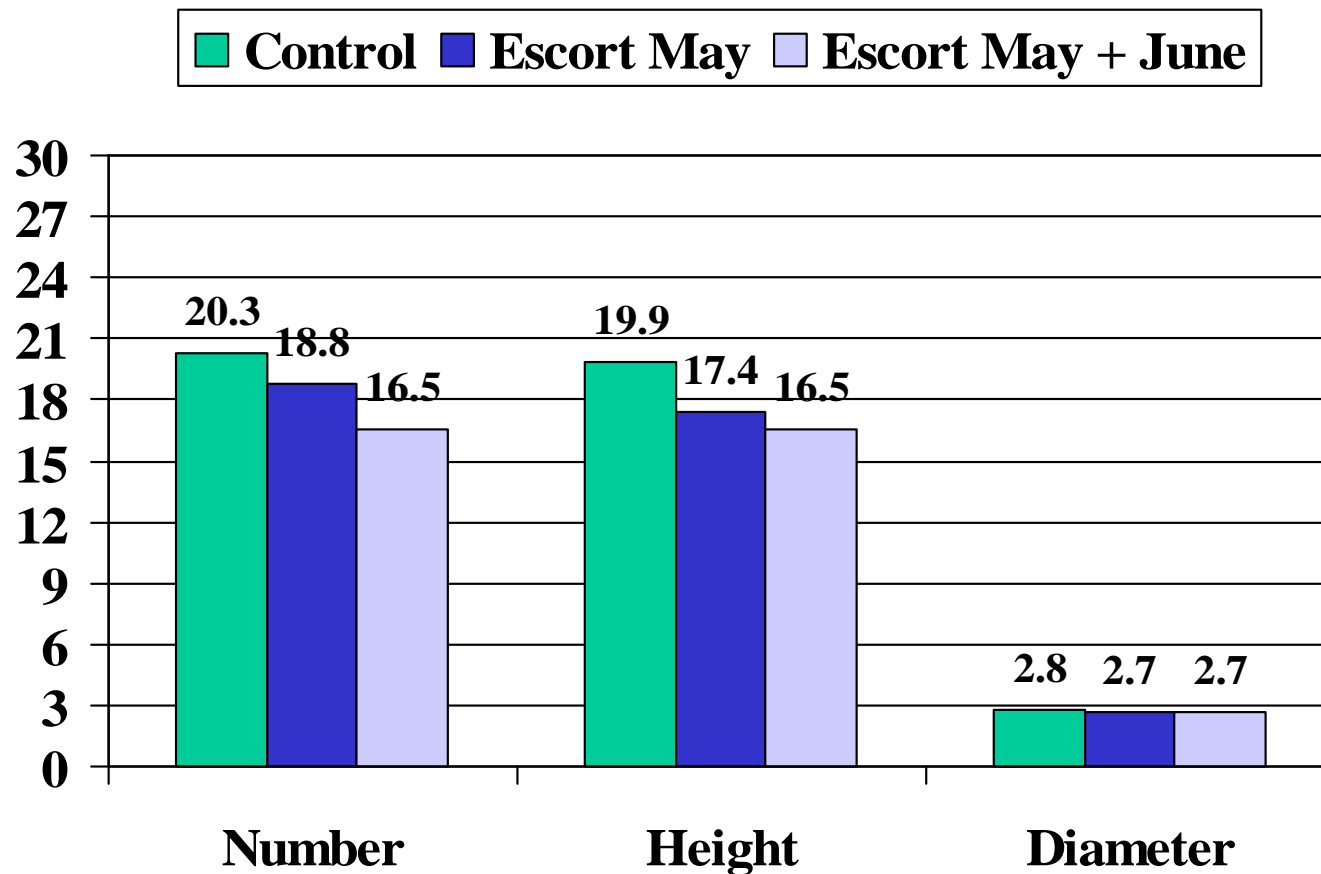
Sown 4/24/08

Treated 5/22/08

Treated 4 weeks after sowing

Escort XP 0.15 ounce/acre

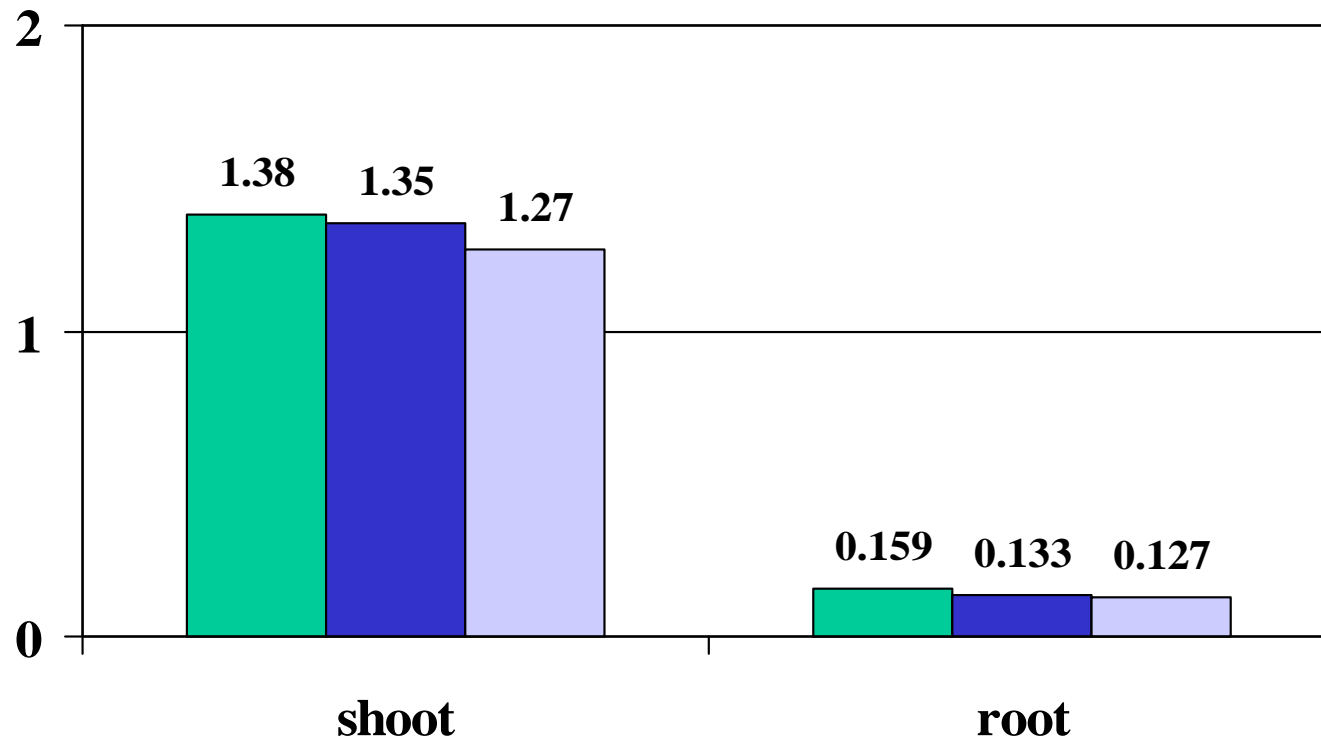
Metsulforon-methyl



Metsulforon-methyl



Control Escort May Escort May + June





Sown 4/19/08

Treated 5/28/08

5 weeks + 4 days

Escort XP 0.15 ounce/acre

Metsulfuron (5.1 g ai/acre)
photo taken about 92 hours after application

broadcast

directed

control



Trials since with metsulfuron

- Atmore 2000
- Elberta 2000
- Camden 2000
- Verbena 2000
- Atmore 2001
- Byromville 2001
- Ashburn 2001
- Trenton 2001
- Goldsboro 2001
- Elberta 2001
- Shubuta 2001
- Shubuta 2003
- Elberta 2004
- Shubuta 2004
- Atmore 2004
- Elberta 2005
- Shubuta 2005
- Taylor 2006
- Flint River 2006
- Trenton 2007
- Byromville 2007
- Trenton 2008
- Camden 2008
- Jessup 2008

Stunting

- Ashburn 2001 height
- Goldsboro 2001 height
- Shubuta 2001 height- RCD
- Elberta 2004 height
- Elberta 2005 height
- Byromville 2006 height- RCD
- Jessup 2008 height
- Camden 2008 height - density
- Trenton 2008 height



ESCORT® XP may be applied on conifer and hardwood plantations, and noncrop sites that contain areas of temporary surface water caused by the collection of water between planting beds, **in equipment ruts**, or in other depressions created by management activities

Equipment rut



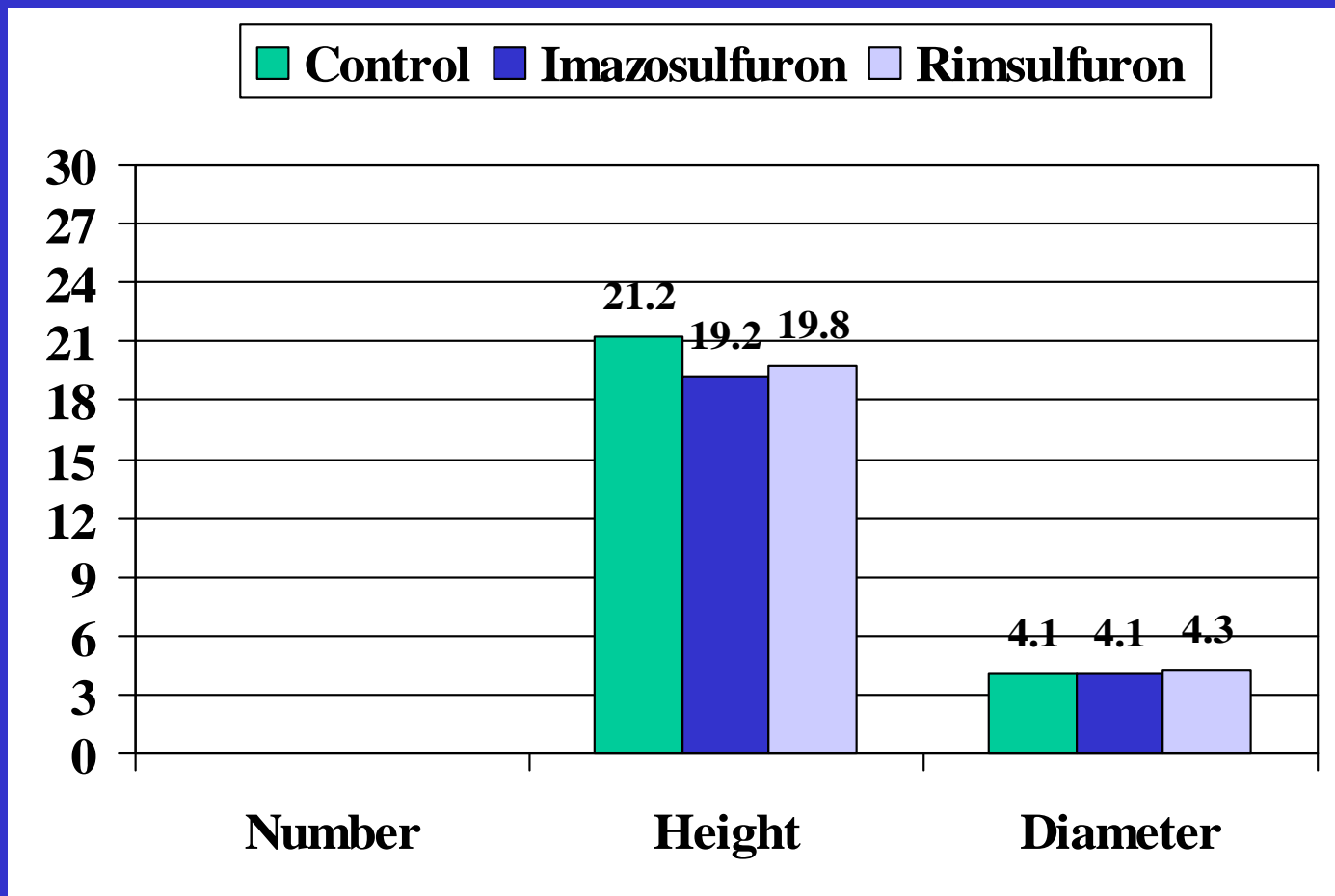
Nutsedge Herbicides

- Rimsulfuron **Matrix**
- Imazosulfuron **V-10142**

Trenton, SC

Delano, TN

Nutsedge trial - SC



Questions?

