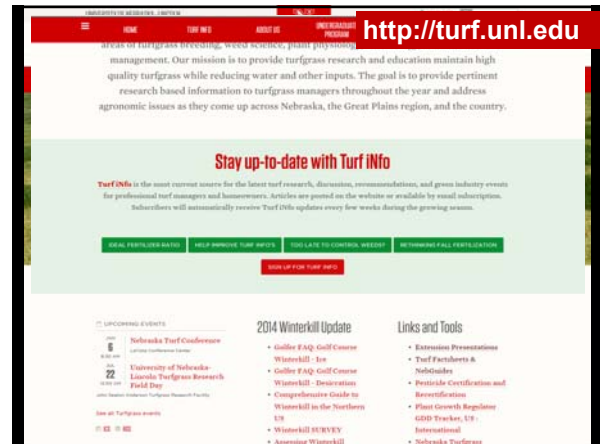


Maximizing Seeding Success

Zac Reicher
<http://turf.unl.edu/>



Fundamentals

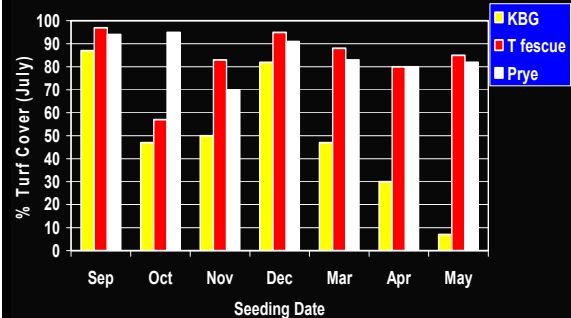
- Right grass, right place
- Soil prep
 - ✓ Drainage, layers, construction debris, etc
 - ✓ Tilling (give it a chance)
 - ✓ Maximize seed soil contact
- Starter fertilizer – 1.0 lb P2O5/1000 almost regardless of soil test
- Irrigation
- Mowing – early and often
- Post seeding fertilization – early and often



Timing of seeding

1. Mid to late August for cool-season grasses
 - Maximizes maturity by next summer
 - Minimizes inputs next summer
 - Minimum weed problems (crabgrass)
 - Should be mature enough for winter
2. Dormant seeding
 - Usually matures faster than seeding
 - Still needs significant summer inputs
 - Some risk of winter damage with warm fb cold weather
3. Spring seeding
 - Bad idea usually
 - Summer inputs

July turf cover of three species when seeded from Sep through May (Purdue 1990-91).



Dormant/spring seeding inputs

- High inputs to maximize maturity (and limit pest [weed] problems)
- Must maximize maturity first and foremost (*in case you missed that*)
- Irrigation
- Frequent fertilization
- Constant mowing
- Judicious herbicides
 - Compromise between turf safety and reducing competition

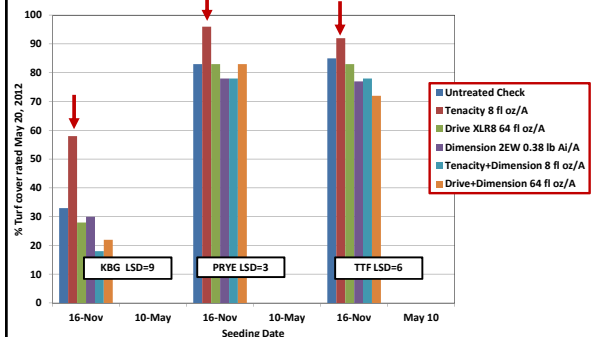
Labelled crabgrass options in dormant/spring seedings

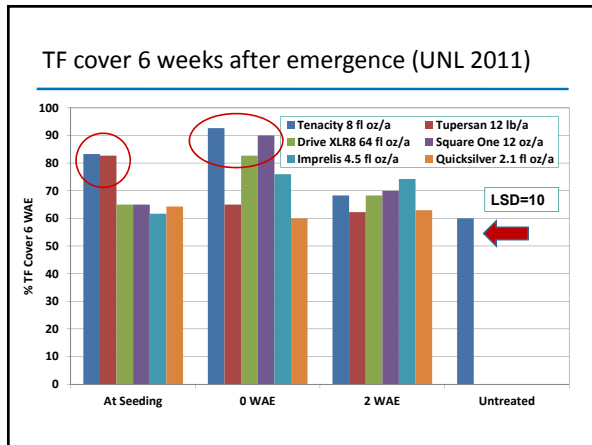
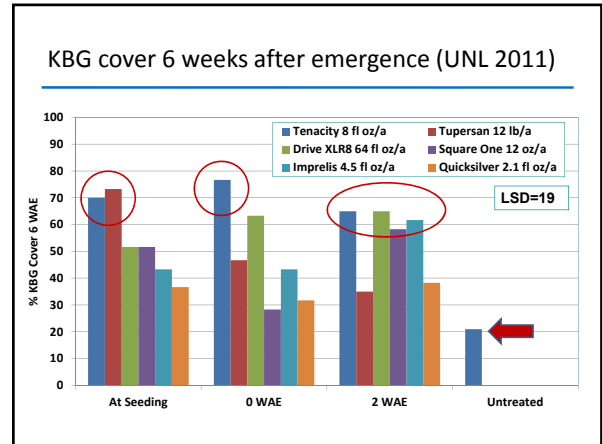
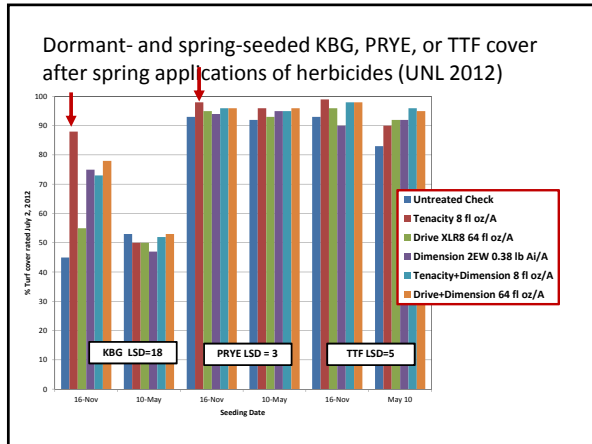
- Tenacity
 - PRE on bare soil
 - POST over turfed areas, 28 days after emergence
- Drive
 - POST 28 days after emergence
- SquareOne (Quinclorac+Carfentrazone)
 - POST 7 DAE
- Dithiopyr
 - Early POST with PRE residual
 - "Developed a good root system and uniform stand, and have received at least two mowings"

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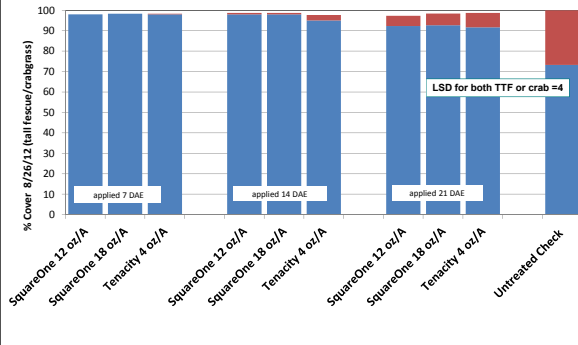
Dormant- and spring-seeded KBG, PRYE, or TTF cover after spring applications of herbicides (UNL 2012)





- ### Labelled broadleaf options in dormant/spring seedings
- Tenacity
 - PRE on bare soil
 - POST (?) over turfed areas, 28 days after emergence
 - Drive
 - POST 28 days after emergence
 - Quicksilver (Carfentrazone)
 - POST 7 DAE
 - SquareOne (Quinclorac+Carfentrazone)
 - POST 7 DAE

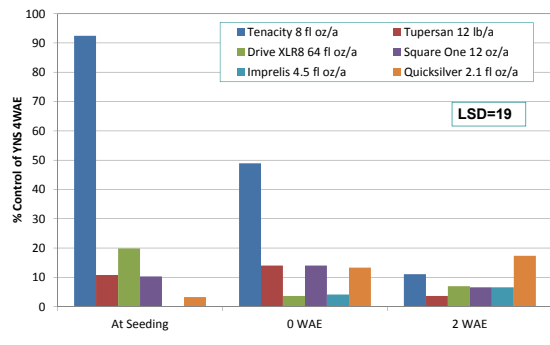
Tenacity or SquareOne applied over spring seeded tall fescue (UNL 2012).



Labelled yellow nutsedge options

- Tenacity
 - PRE on bare soil
 - POST (?) over turfing areas, 28 days after emergence
- SedgeHammer
 - POST over "well established" turf. "
 - "Allow the turf to develop a good root system and uniform stand before application"
- Dismiss
 - POST over "well established" turf.
 - First application of this product can be made *following the second mowing* providing the turfgrass has developed a good root system

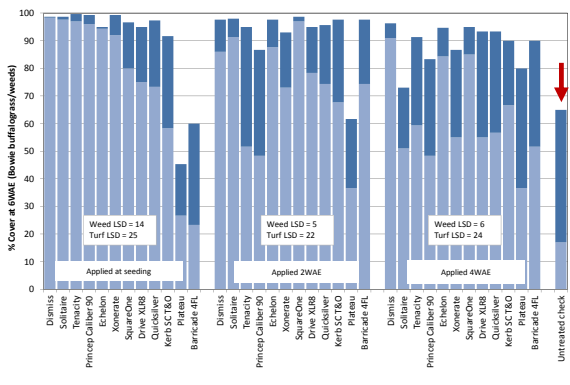
YNS control in newly-seeded KBG 4 weeks after emergence of KBG (UNL 2011)



Weed control in seedling buffalograss

- Low maintenance (AFTER ESTABLISHMENT!)
- Requires irrigation, fertilization, and **aggressive weed control** in first year of establishment like any other turfgrass
- Most overlook this part and stand failures quickly occur
- Herbicides during establishment?
- Better to apply earlier than later
- Depends on weed spectrum
 - Tenacity - PRE + 28 DAE app for crab and bdvls
 - Drive - Annual grasses and some broadleaves
 - Dismiss - Yellow nutsedge and some grasses and bdvls
 - SquareOne - POST crab and some bdvls

2012 - Effect of single applications of herbicides over seedling buffalograss (UNL 2012) (primary weed was redroot pigweed)



BDLV herbicide effects on buffalograss cover/greenup

- Roundup is best control for cool-season weeds when buffalograss is dormant
- Not very effective on BDLV weeds though
- When can we apply broadleaf herbicides during the buffalograss transition from dormancy to green?
- Lawn height, 'Bowie' buffalograss
- 7 herbicides
 - Quinclorac 64 fl oz/A
 - Quicksilver 2.1 fl oz/A
 - 2,4-D 4 pt/A
 - Trimec 4 pt/A
 - Confront 1.5 pt/A
 - OneTime 64 fl oz/A
 - Speedzone 64 fl oz/A
- 7 Applications dates
 - April 1 and 15
 - May 1 and 15
 - June 1 and 15
 - July 1

BDLV herbicide effects on buffalograss cover/greenup

Preliminary data

- Surprisingly few instances of damage
- No serious damage
- Damage may show up weeks after application
- Avoid 2,4-D or Speedzone to be extra cautious on buffalograss

Weed control in seedling zoysia

- Crucial for slow germination and fill-in of zoysia
- Herbicides are labeled for use on zoysiagrass seedlings
 - Drive 75 DF (quinclorac)
 - Quicksilver (carfentrazone)
 - SquareOne (quinclorac + carfentrazone)
 - MSMA

Courtesy Aaron Patton, Purdue University

Herbicide tolerance studies on seedling bermudagrass (applied 2 WAE)

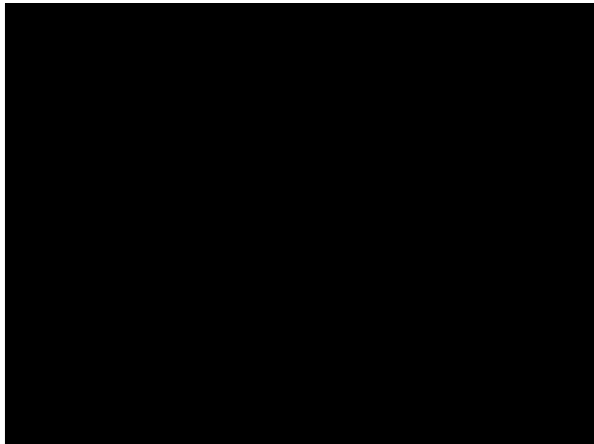
Tolerant	Moderate tolerance	Do not use
Drive (quinclorac)	Manor	Sencor
MSMA	Tank mixes w/MSMA	Aatrex (atrazine)
Quicksilver		Illoxan
Revolver		Acclaim
TranXit		Tupersan (siduron)
Certainty		
Trimec Classic		
Lontrel		
Millennium ultra		

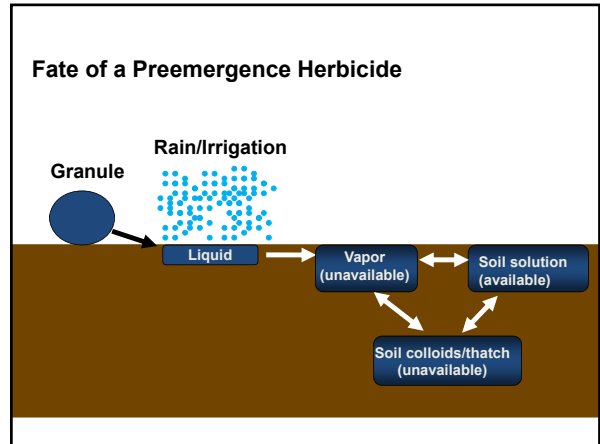
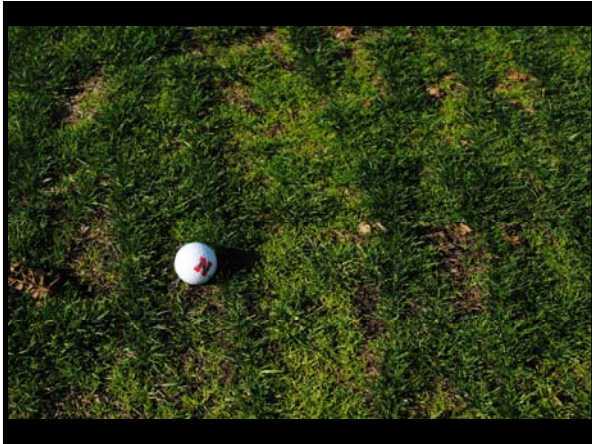
Courtesy Aaron Patton, Purdue University

Summary of herbicide tolerance studies on seedling bermudagrass (applied 3 WAE)

Tolerant	Moderate tolerance	Do not use
All listed in previous slide		Sencor
Manor		Aatrex (atrazine)
Tank mixes w/MSMA		Illoxan
Dimension		Acclaim
Pendulum		Tupersan (siduron)
Barricade		
Corsair		
SedgeHammer (or Manage)		
Dismiss		

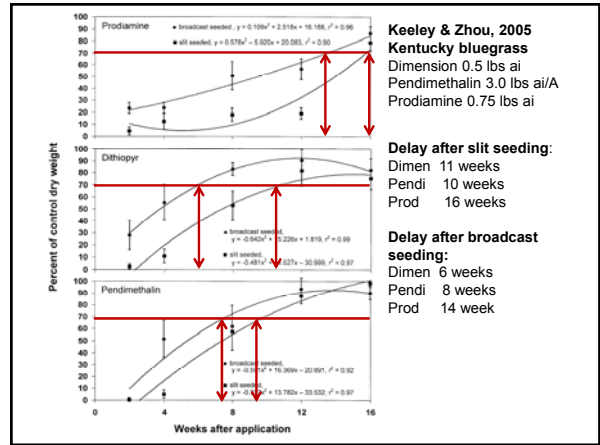
Courtesy Aaron Patton, Purdue University

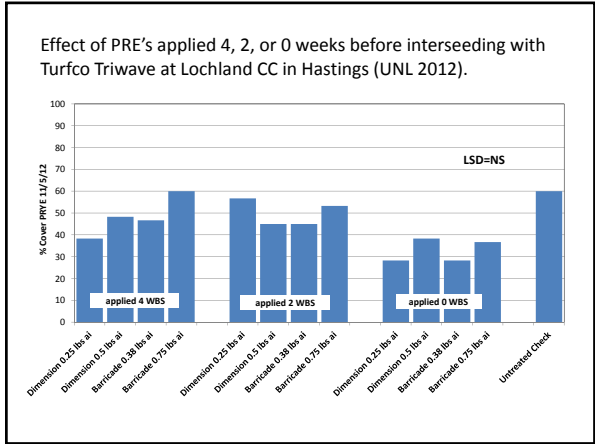




Seeding and PRE's

- Seeding into PRE
 - Labels state 60-90 days for seeding most PRE's
- What about with soil disruption?
- Fall Poa control in overseeded fairways
- Spring reseeding into winter-killed turf
- Reseeding into mis-apps of PRE
- Weed control following?





Seeding into PRE's

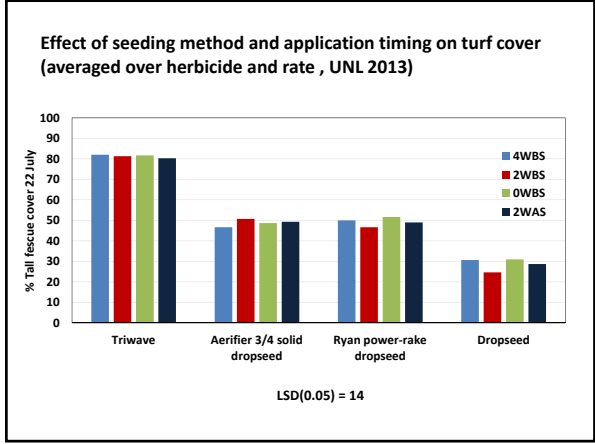
- Always risk herbicide damage when done intentionally
- Can we minimize damage and maximize weed control?

Seeding into PRE's

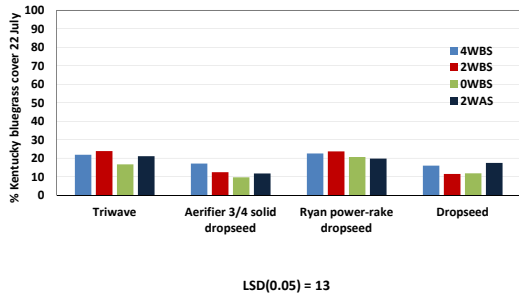
- Herbicides
 - Dimension 2 EW @ 0.25 and 0.5 lbs ai/A
 - Barricade 65 WDG @ 0.38 and 0.75 lbs ai/A
 - Untreated control
- Application dates (Spring 2013)
 - 4, 2, 0 weeks before seeding (WBS)
 - 2 weeks after seeding (WAS)
- Methods
 - Triwave
 - 3/4 inch solid tines and dropseed
 - Ryan power rake and dropseed
 - Dropseed

Seeding into PRE's

- Maximize soil disruption and placement of seed into slits/holes beyond PRE layer
- Large seeded turf species are more tolerant
- Not much different in application/seeding timing



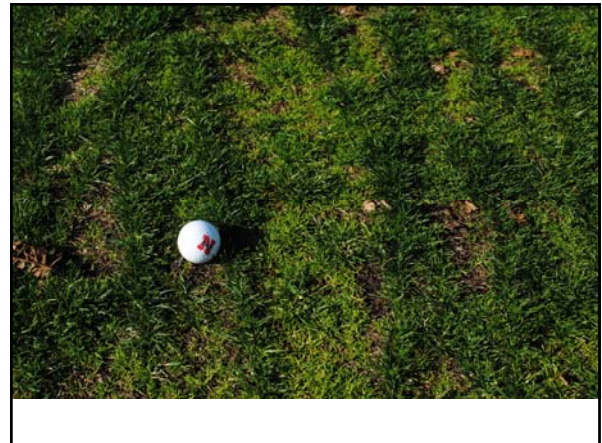
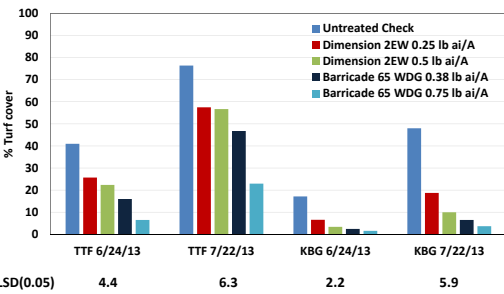
Effect of seeding method and application timing on turf cover (averaged over herbicide and rate, UNL 2013)



Seeding into PRE's

- Lower rates are safer
- Dimension a little safer than Barricade

Effect of herbicide on turf cover (averaged over seeding method and application timing, UNL 2013)



Seeding into PRE's, Part II

- Two locations (Mead, NE and Rocky Ford at KSU)
- Roundup + Reward two weeks prior to seeding
- TTF blend 10 lbs/1000
- Order:
 1. Seeded
 2. Applications
 3. Power raked in 2 directions
- Weekly mowing once seedlings reached 2.5"
- Irrigated as needed for seedlings

Seeding into PRE's, Part II

- 2 herbicides and 2 formulations each
 - Dimension 2EW
 - Anderson's 0.25% Dimension DG Pro 150 SGN
 - Barricade 65 WDG
 - Anderson's 0.48% Barricade
- 6 strategies
 - At seeding and/or 4 weeks after seeding (off label)
 - Initial apps only low and high rate
 - Initial plus sequential low rates
 - Sequential only low and high rate
 - Liquids followed by granulars, and vice versa
- Untreated check
- Two locations

Seeding into PRE's, Part II

- Determine if dithiopyr or prodiamine is safest on TTF seedlings while still affording adequate crabgrass control?
 - Dithiopyr tends to be a little safer, especially the granular application and split 0.25 + 0.25.
- Determine if initial application of PRE is essential during seeding
 - The at-seeding application inhibited TTF early but usually recovered
- Determine if various application timings and/or rates will improve seedling safety and/or crabgrass control
 - Minor differences
- Determine if formulation in the first or second app makes a difference in overseeding success/crabgrass control
 - Minor differences

Seeding into PRE's, Part II

Bottom line (so far) to optimize establishment

- Don't use a PRE unless absolutely needed
- Outside stresses (no irrigation, low mowing, excess heat) could exaggerate damage
- Don't over think the applications
- Apply at four weeks after seeding, granular may be most effective and a smidge more safe
- Could get by with typical initial plus sequential
- Avoid high rate of either product at seeding

Seeding into PRE's, Part II

- Determine if dithiopyr or prodiamine is safest on TTF seedlings while still affording adequate crabgrass control
- Determine if initial application of PRE is essential during seeding
- Determine if various application timings and/or rates will improve seedling safety and/or crabgrass control
- Determine if formulation in the first or second app makes a difference in overseeding success/crabgrass control

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