Maximizing Seeding Success

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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

Dormant/spring seeding inputs

- High inputs to maximize maturity (and limit pest [weeds] 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"
Dormant- and spring-seeded KBG, PRYE, or TTF cover after spring applications of herbicides (UNL 2012)

TF cover 6 weeks after emergence (UNL 2011)

KBG cover 6 weeks after emergence (UNL 2011)

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).

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 bdlvs
  - Drive – Annual grasses and some broadleaves
  - Dismiss – Yellow nutesedge and some grasses and bdlvs
  - SquareOne – POST crab and some bdlvs

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
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)

<table>
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<th>Tolerant</th>
<th>Moderate tolerance</th>
<th>Do not use</th>
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<td>Drive (quinclorac)</td>
<td>Manor</td>
<td>Sencor</td>
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<tr>
<td>MSMA</td>
<td>Tank mixes w/MSMA</td>
<td>Aatrex (atrazine)</td>
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<td>Quicksilver</td>
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<td>Iloxan</td>
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<td>Revolver</td>
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<td>Acclaim</td>
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<td>TranXt</td>
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<td>Tupersan (siduron)</td>
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<td>Certainty</td>
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<td>Trimec Classic</td>
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<td>Control</td>
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<td>Millennium ultra</td>
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Summary of herbicide tolerance studies on seedling bermudagrass (applied 3 WAE)

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<td>All listed in previous slide</td>
<td>Sencor</td>
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<td>Dimension</td>
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<td>Pendulum</td>
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<td>Tupersan (siduron)</td>
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<td>Barricade</td>
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<td>Corsair</td>
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<tr>
<td>SedgeHammer (or Manage)</td>
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<tr>
<td>Dismiss</td>
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Courtesy Aaron Patton, Purdue University

Seeding into PRE’s???
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?

Keeley & Zhou, 2005
Kentucky bluegrass
Dimension 0.5 lbs ai
Pendimethalin 3.0 lbs ai/A
Prodiamine 0.75 lbs ai

Delay after slit seeding:
Dimen 11 weeks
Pendi 10 weeks
Prod 16 weeks

Delay after broadcast seeding:
Dimen 6 weeks
Pendi 8 weeks
Prod 14 weeks
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
  - ¾ 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 PRE’s applied 4, 2, or 0 weeks before interseeding with Turfco Triwave at Lochland CC in Hastings (UNL 2012).
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

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

- 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

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