Basics of Lawn Weed Control

Ron Strahan

Can't talk about weed control without discussing management

- Mowing

- Fertilizing

- Apply irrigation properly
  - Doveweed/kyllinga

Chronic weed problems - symptom of poor turf management!

Weed Control in Lawns

- Most important concept in weed control is proper turfgrass management

Thin Turf = **Weedy Turf**

Soil problem Indicator Weeds

Soil condition	Indicator weeds
soil compaction	goosegrass, annual bluegrass
low nitrogen	Clovers, lespedeza
poor drainage	Dollarweed, sedges, doveweed
drought/compaction	Dallisgrass, bahiagrass

Annual bluegrass

White clover

dollarweed

doveweed

dallisgrass

Big Mistakes I see with Lawn Services

- Cutting the lawn too short – thins out St. Augustinegrass
- Fertilizer? "I have to cut more often"
- Not sure which turf is which

St. Augustinegrass and Centipedegrass

St. Augustinegrass

Centipedegrass

- Lots of issues
- Brown patch
- Gray leaf spot
- Chinch bugs
- Few post options for grasses – Dismiss, Celsius

- Thatch problems
- Over-fertilization
- Mowing too tall
- Grass control options a +

Types of Weeds

- **Broadleaves –**
  - Netted veination
  - 2 cotyledons
  - Taproot
  - Showy flowers

buttercup

- **Grasses –**
  - Parallel
  - 1 cotyledon
  - Fibrous roots

Crabgrass

- **Sedges –** “nutgrass”
  - Triangular stems
  - Leaves in 3’s

purple nutsedge

BROADLEAF VS GRASS LEAF

Broadleaf leaf veins (netted) vs grass leaf veins (parallel)

Good news!

- You can control most broadleaves in your pasture with herbicides – many options available
- Grasses – harder to control in pastures
  - A fewer options available

Brief Herbicide School Session

Types of herbicides

- **Contact herbicides** - must have good coverage on weed - kills tissue that it hits – **sulfentrazone, carfentrazone**

- **Systemic herbicides** - moves throughout plant - **Roundup, metsulfuron, Celsius, sethoxydim**

Types of Herbicides

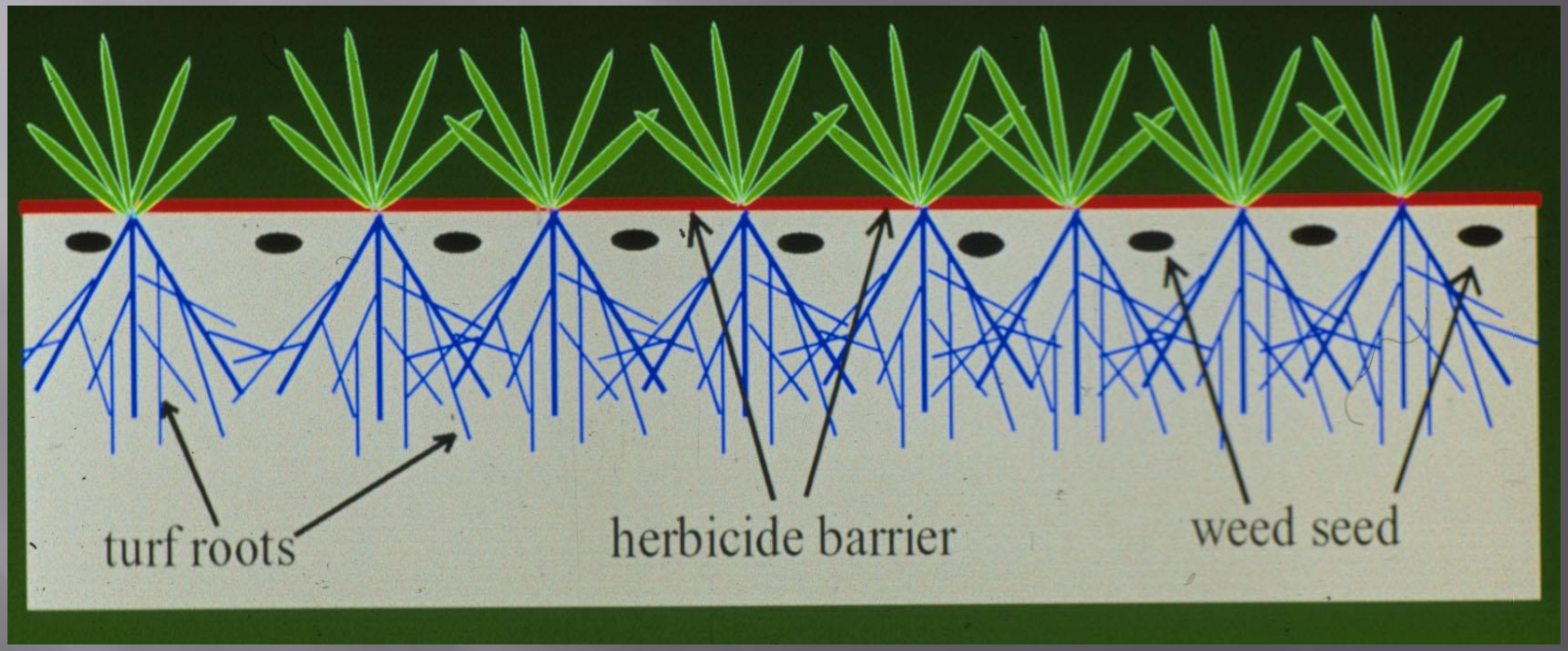
- **Preemergence** - applied to turfgrass prior to weed emergence - weed preventor - most important part of weed control program

- **Postemergence** - applied directly to emerged weeds - easier to kill small weeds

How do preemergence herbicides work?

- Pre herbicides provide a barrier at or just below soil surface

How Do Preemergence Herbicides Work?



For Effective Preemergence Application

- Time of application is critical
- Adequate rainfall or irrigation is needed within 7 days or so
- Do not expect all season control - reapply

Good Preemergence Herbicides

Preemergence

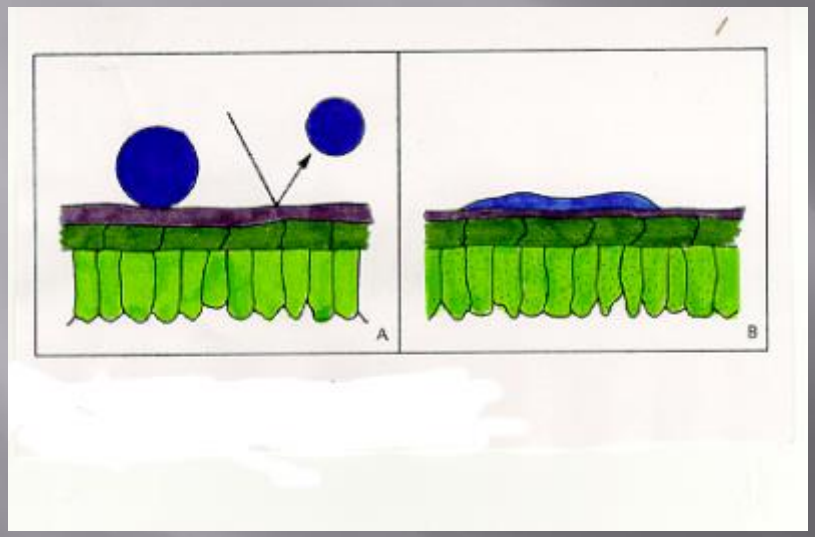
- Simazine - Winter Weeds – base of winter weed control for years – resistance showing up
- Indaziflam – established turf only – long residual – new mode of action
- Pendimethalin - established turf only – crabgrass, goosegrass, a. bluegrass
- prodiamine - established turf only
  - crabgrass, goosegrass, a. bluegrass
- dithiopyr - established turf only
  - crabgrass, goosegrass, a. bluegrass

Effective Postemergence Herbicides Application

Effective Postemergence

- Postemergence herbicides should be applied to small actively growing weeds
- Do not apply when turf is stressed – drought especially
- Hotter weather – more turf injury – usually better weed kill
- Use a surfactant if the label recommends it

What does a surfactant/spreader sticker do?



- Reduce surface tension on leaf
- Gets herbicide in plant quicker
- Herbicide sticks to leaf better
- Check label – some require it some don't

Environmental Factors Affect Postemergence Herbicides

- **Light** – enhances absorption by increasing photosynthesis – sunny days are good
- **Temperature** – can enhance or inhibit – optimum temperatures exist / herbicide specific – usually cold is not good
- **Humidity** – low humidity –dries out cuticle
  high humidity – favors absorption
- **Wind** – adversely affects foliar absorption – causes evaporation
- **Rainfall** – may wash residues off foliage

HERBICIDES RELEASED IN THE LAST 5 YEARS OR SO

CELSIUS

- iodosulfuron, thiencarbazone, and dicamba

- rate range is 2.5 to 7.4 oz/acre
- St. Aug and Centipedegrass – do not apply on paspalum

- Excellent St. Aug tolerance in hot weather

- Tough on carpetgrass

- Suppresses dallisgrass, large crabgrass

- Several broadleaf weeds – like it on buttonweed

- Good on clover and lespedeza, etc.
- Like teaspoon per gallon of water – spot treatments

SPECTICLE

•indaziflam – Bayer

inhibits cellulose biosynthesis in plants.

alkylazine group of herbicide

•Long residual preemergence herbicide

•Reduced rates for St. Aug and Centipedegrass – 6 oz/Acre
    •Consider split apps
•Not recommended for paspalum

•Crabgrass, goosegrass, *Poa*
•Several small seeded broadleaf weeds - doveweed

BLINDSIDE

- Metsulfuron + sulfentrazone
- St. Aug and Centipedegrass – not labeled for paspalum
- Some injury from the sulfentrazone
- Several broadleaf weeds – like it on buttonweed
- Good on doveweed
- Several of my lawn care guys in LA are using it and love it

DISMISS

- Sulfentrazone

- 6 to 8 oz. for centipedegrass St. Aug – expect injury (especially St. Aug)

- Very good on yellow nutsedge and green kyllinga – multiple apps for purple nutsedge

- Some pre suppression of annual grasses

- Suppression/control on goosegrass – better on smaller goosegrass – consider split app 6 oz. fb 6 oz.

MSMA PRODUCT LABEL

MSMA NEW PRODUCT LABEL

- Athletic Turf and Home Lawns
  - Applications no longer allowed under the new product label !!!!!
  - Product purchased before 2010 can still be applied as long as the container has the inclusive label

TOP WEEDS PROBLEMS

WINTER WEEDS

Winter Weeds

- Bedstraw
- Black medic
- Common chickweed
- Henbit
- White clover
- Lawn burweed
- Annual bluegrass

Weeds in turf in February to April

Winter Weeds !

Annual bluegrass *Poa annua*

- Light green winter annual
- Germinates in Sept/October in deep south
- Pendimethalin, prodiamine, dithiopyr, - in mid September in baton rouge – c, st, paspalum
- Indaziflam – c, st
- Simazine – 1 to 2 qt/A after October 1 – c, st
- Atrazine – 2 applications – Oct to Nov and Jan to Feb – c, st
- Resistance to triazine herbicides becoming more of a problem
- Monument, Revolver, rimsulfuron for bermudagrass/zoysiagrass

Lawn Burweed – sticker weed

- Treat in February and March
- Too late in late April and May
- Atrazine, simazine (early), Trimec, metsulfuron, Celsius
- **Speed Zone – watch hot weather**

How many times have I seen this?

Clover – indicator weed

- **Indicates low Nitrogen fertility**

Winter Broadleaf Control

Easy to control with timely applications:

* Simazine – preemergence – mid October to November – st aug, centipede, bermudagrass, zoysiagrass
- Trimec type, Speed Zone Southern – tank mix with simazine
- Celsius – very good but spendy
- MSM Turf

- Like a program approach for winter weed control

Typical Winter Broadleaf Control Program in St. Aug/Centipedegrass

- Pre such as prodiamine/dithiopyr/ indaziflam in mid September
- followed by simazine + trimec type from late October to December window
- followed by Atrazine/simazine + 3 way (if needed), summer pre in February
- False garlic – metsulfuron best in a 2015 trial

Bahigrass

Bahiagrass

- Perennial - stubby rhizomes
- Common throughout the south
- Tolerates drought
- Makes seedhead quickly

Bahiagrass Control

- **Metsulfuron (msm turf, manor, mansion) – very effective – safe for most deep south turf - Watch application during transition in centipede**
  - **Repeated applications necessary 6 weeks later**
  - **Better on pensacola bahiagrass – not effective on argentine**
  - **Not on the metsulfuron label – I saw tolerance in an establishment study with Sea Isle**

Dichondra

Dichondra

- Low growing, creeping perennial
- Shaped like a pony's foot
- Pale green color
- Common in thin turf

Dichondra Control

- Trimec type herbicides work extremely well – st, c, p
- Increase mowing height on St. Augustinegrass
- Fertilize
- Get lawn healthy!

NUTSEDGE

Nutsedge (nutgrass or coco)

Sedges in Turf

Sedge Control

- Halosulfuron (sedgehammer and others)- Good sedge activity –
  - weak on kyllinga

- Certainty - sulfosulfuron – most sedges including green kyllinga – recommend this one a lot

- Monument – bermudagrass and zoysiagrass
- Image - weaker on yellow nutsedge – not bad on kyllinga

Crabgrass and Goosegrass

Crabgrass

- Summer annual
- Thousands of seed per year per plant – 10 or more year soil life
- Germinates - soils reach 53 - 58F
- Light is required for germination

Goosegrass

- Summer annual
- Thousands of seed per year per plant – 10 or more year soil life
- Germinates - soils reach 60-65F
- Light is required for germination

Backbone of crab and goose control ….
preemergence herbicides

PRE Herbicide Options for Annual Grasses

Preemergence

- Pendulum – c, st, b, z
- Barricade – c, st, b, z
- Tower – c, st, b, z
- Dimension - c, st, b, z
- Ronstar – st, b, z
- Specticle – c, st, b, z

POST OPTIONS FOR ANNUAL GRASSES

- Sethoxydim – centipedegrass only
- Acclaim – zoysiagrass only

- Celsius – St. Augustinegrass – 1 teaspoon per gallon spot rates – large crabgrass, barnyard on label as well

- Dismiss (sulfentrazone) – goosegrass – St. Aug and other southern turf

- Drive (quinclorac) – crabgrass control bermudagrass, and zoysiagrass

Celsius @ 1 teaspoon – Salvage Treatment for Large Crabgrass in St. Aug

DOLLARWEED

Dollarweed

- Perennial
- Reproduces by seed and rhizomes
- Parsley family
- Prefers moist areas
- Will grow anywhere

Dollarweed

- Metsulfuron – st, c
- Atrazine + 3 way – - St. Aug, centipede, zoysiagrass - November to April
- Trimec type herbicides – z, b, watch hot weather with st, c

Bermudagrass

Bermudagrass

Bermudagrass

- Perennial with both stolons and rhizomes
- Very aggressive
- Problem in centipedegrass and St. Augustinegrass, paspalum

Bermudagrass

- No preemergence control
- Centipedegrass – repeat applications of sethoxydim herbicide
- St. Aug – proper mowing height
- Spot Roundup – St. Aug and re-sod spot
- St. Aug – Prograss /(Poa Constrictor)+ Atrazine – expensive and moderately effective – 3 applications

Dallisgrass

DALLISGRASS

Dallisgrass Control

- Repeated applications of sethoxydim in centipedegrass – suppression
- Celsius suppresses temporarily – St. Aug
- Spot treatments with Roundup in St. Augustine
- Legal apps of MSMA in ber and zoy
- Dig it out

TRIBUTE TOTAL

- Thiencarbazone + foramsulfuron + halosulfuron – Bayer
- Bermudagrass and zoysiagrass only
- Looks good on buttonweed and doveweed
- **Dallisgrass – late summer to early fall application**
  - 2 applications may be necessary spaced 4 to 6 weeks apart
  - Pretty good control observed next spring

Torpedograss

Torpedograss!!!!

The Torpedograss Rhizome

- Reproduces by rhizomes and stem fragments
- Survive burial depths (16cm)
- High levels of carbohydrates
- Very competitive

Torpedograss – tough out

- Quinclorac repeated - paspalum
- No control in St. Aug
- Some suppression with sethoxydim
- Glyphosate and resod – with zoysiagrass or bermudagrass

VBW

Virginia Buttonweed – Game Changer

Mother Plant Emerges First – March/April

Virginia Buttonweed – Seedlings

- Emerges in late March/April when it gets warm
- highest germination at >85F
- No dependable preemergence option

June through October – heavy mat forms – difficult to manage

Key active ingredients that have performed the best in trials at LSU

- Metsulfuron – repeated
- thiencarbazone, iodosulfuron, & dicamba - Celsius
- Clopyralid – Lontrel
- Carfentrazone
- 2,4-D, dicamba, mecoprop, carfentrazone - Speed Zone Southern
- 2,4-D

Program approach is best – St. Aug and Centipedegrass

1. Early season applications – Speed Zone Southern April to early May
2. Then apply metsulfuron or Celsius - for hotter weather applications – June to July
3. Always follow up metsulfuron or Celsius with a second application in 4 to 6 weeks

- ✓ Getting near 100% control with the program approach
- ✓ Goal – stop the mat from forming and stop seed production

VBW – Very heavy seed production

Doveweed

Doveweed Control

Postemergence

- ✓ Roundup is totally ineffective
- Simazine + Speed Zone – fastest way to get the weed out – st, c – injury in hot weather

- Simazine –after sept 1
- Atrazine –after oct 1
- Celsius – repeated – st, c
- Blindside – st, c
- Speed Zone Southern/Trimec – st, c, p – a little suppression
- Specticle and Tower – preemergence control

Common Lespedeza

- Annual legume/clover type
- Mat forming
- Indicates low nitrogen fertility
- Celsius
- Metsulfuron
- atrazine
- Get the fertility right

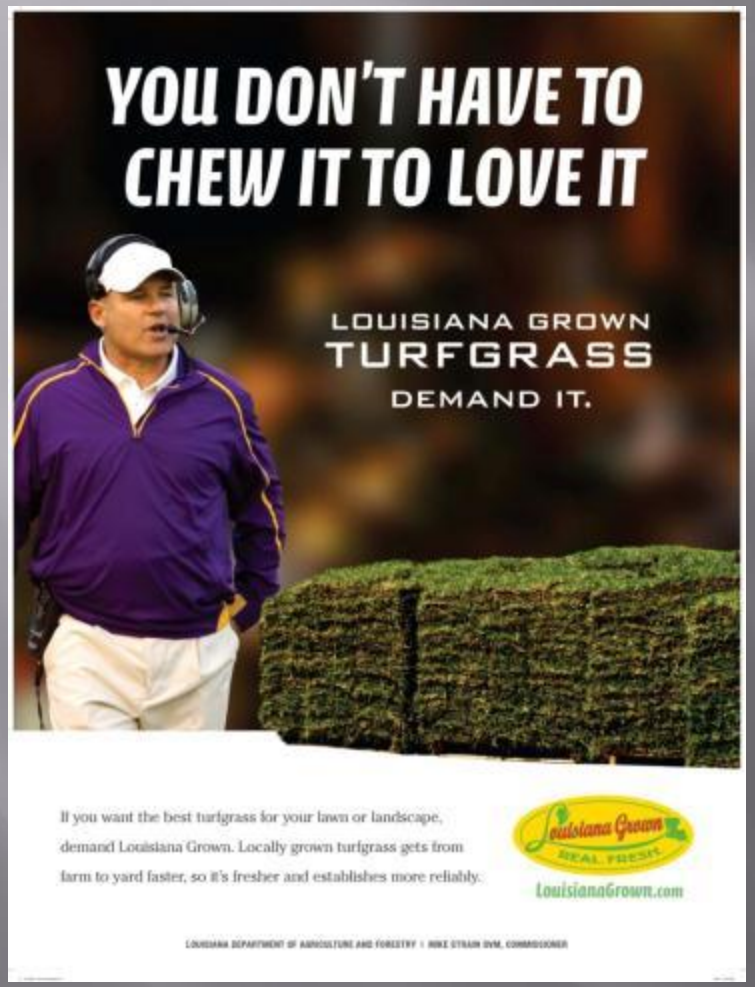
Manage Turf Properly – half the battle of weed control

- Mowing
- Fertilize properly
- Disease and insects

- ID weed and pick the correct herbicide

Questions?

Questions ?



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