Postemergence Control of Summer Weeds in Bermudagrass Turf

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06-20-03
N.C. State University
January - March
April – June (ideal)
July – September (problems)
October - December
Problems With July - September Applications

• Weeds more mature (tillers, tubers, seedheads)
  Higher herbicide rates needed for adequate control
  Weeds hardened, sometimes more woody

• Many herbicides not recommended > 90 F and dry
  Volatility concerns

• Weeds not actively growing when very hot and dry
2003 Observations

Has it rained every other day since last November or am I just imagining this???
2003 Rainfall Issues

- Can your spray equipment stand up on saturated turf?
- Are your POST applications getting washed off too soon?
- Will your PRE crabgrass herbicides provide season long control this rainy season?
2002 Rainfall Issues

• Did it ever rain from April to November?
• Did you get weeds to actually germinate and survive?
• Did you get any herbicide absorption into the drought stressed weeds?
Postemergence Summer Weed Control Advice for 2003

When you leave this meeting and it quits raining long enough for you to make an application (grasses or broadleaves)…

DO SO IMMEDIATELY!!!

WHY?
Postemergence Summer Weed Control Advice for 2003

WHY?

Weeds love hot, wet, humid conditions and will get too large for effective control very rapidly

Remember: small weed seedlings are easier to control than large weeds
Check List for Effective Herbicide Applications

• Select the correct product
• Select the correct rate for the product
• Apply at the proper timing for the weed or weeds of concern
• Liquid application – proper boom height
• Granular application – proper coverage and proper equipment
2,4-D + mecoprop + dicamba
(Trade Names)

Trimec (several formulations)
Lesco Three-Way
Formula II
33 Plus
Weed-B-Gon

labeled in fescue, bermuda, perennial ryegrass
### 2003 Early Season Test Results

**Wild Violet Control:** 2 WAT

<table>
<thead>
<tr>
<th>Product</th>
<th>Rate (pt/A)</th>
<th>Control (%)</th>
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</thead>
<tbody>
<tr>
<td>Trimec Classic</td>
<td>3.5</td>
<td>19%</td>
</tr>
<tr>
<td>Millennium Ultra</td>
<td>2.5</td>
<td>34%</td>
</tr>
<tr>
<td>Confront</td>
<td>1.0</td>
<td>29%</td>
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</tbody>
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Wait a minute…I thought Confront had decent activity on wild violets!
2003 Early Season Test Results
Wild Violet Control: 2 WAT

Confront works quite well on wild violets when applied at the proper rate.

1 pt/A = 29% control
2 pt/A = 88% control

What works even better than Confront?
2003 Early Season Test Results
Wild Violet Control: 2 WAT

Manor 0.75 oz/A + NIS 0.25% v/v provided 98% control
Postemergence Dollarweed Control Quiz

Rank the following herbicides (best to worst)

Atrazine, Manor, or Trimec (3 way herbicides)
# Postemergence Dollarweed Control Quiz

8 WAT – 2003 Data

<table>
<thead>
<tr>
<th>Product</th>
<th>Control Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimec products</td>
<td>95-100% control</td>
</tr>
<tr>
<td>Manor</td>
<td>80-90% control</td>
</tr>
<tr>
<td>Atrazine</td>
<td>0% control</td>
</tr>
</tbody>
</table>
Improper spray application
Improper Granular Application
Summer Annual and Perennial Grasses
Postemergence Control

Summer Annuals
Crabgrass / foxtail sp., goosegrass, sandbur

Perennials
Dallisgrass, bahiagrass
Grass Quiz

Hint:
Both are summer annuals
Goosegrass Control

diclofop-methyl (Illoxan)

• Tolerance to established bermuda only
• 2 to 2.67 pt/acre depending on size
  1 to 4 leaf stage - small!

2003: This boat has been missed!!!
Crabgrass and Goosegrass Control

fenoxaprop (Acclaim Extra)
Perennial rye., fescues, zoysia, not bermuda!
0.75 to 2.5 pt/acre           2 apps 14 days apart

metribuzin (Sencor 75 Turf)
Established bermuda only
0.33 to 0.67 lb/acre   2 apps 7 to 10 days apart
Crabgrass and Broadleaf Weed Control

quinclorac (Drive 75DF)

Perennial ryegrass, fescues, bermuda, zoysia
1 lb/acre + MSO (1.5 pt) or COC (2 pt)

Broadleaf weeds controlled:
white and hop clover, dandelion, dollarweed
Crabgrass, Goosegrass, Sandbur
Dallisgrass, Bahiagrass, Nutsedge sp.

MSMA

- Perennial ryegrass and bermuda tolerant fescues and zoysia slightly sensitive
- 2 to 3 lb ai/acre (when air temp ~80 F)
- 3 to 4 applications 7 to 10 days apart for mature and hard to control weeds
- Some formulations require surfactant
Purple Nutsedge

- Blunt leaf tips
- Purple seedheads
- Tuber chains
- Brownish-black tubers
  bentazon (Basagran T/O) will not control!

Yellow Nutsedge

- Pointed needlelike leaf tips
- Yellow seedheads
- Tubers do not form chains
- Tannish-brown tubers
  Basagran T/O will control
  1 to 2 qt/acre  (10 to 14 days)
  Most turfgrasses tolerant
Purple and Yellow Nutsedge (usually only fair control)
MSMA (same as grass rates)

- Image LC 1.3 to 2.7 pt/acre
- 0.25% v/v NIS

Bermuda, centipede, zoysia
Control annual sedges also

(Fair to Good Control)
Image LC + MSMA (1.5 lb ai)
Centipede not tolerant

- halosulfuron (Manage)
- 0.67 to 1.33 oz/acre
- 0.5% v/v NIS (retreat 6-10 wk)

Most turfgrasses tolerant
Purple and Yellow Nutsedge
(Good to Excellent Control)

Monument (0.35 to 0.59 oz/A)
0.25% v/v NIS

New product from Syngenta
(Controls kyllinga species also)
Kyllinga species

Look like nutsedges
Triangular stems, glossy leaves

More mat-forming
Fragrance when leaves crushed
Seedheads not like nutsedges

Control Options
Monument + NIS
Image LC + MSMA
Manage + NIS (only suppresses green kyllinga)
same as nutsedge rates
Kyllinga species: Green, false green, annual, cocks-comb
Bahiagrass Control

Manor + surfactant

0.5 oz/acre + 0.25% v/v
May retreat in 4 to 6 weeks

Apply after spring greenup but before seedhead formation
Raleigh: June 15-20 seedheads

Bermuda, St. Augustine, zoysia, fine fescue, Kentucky bluegrass tolerant
Perennial Ryegrass
Removal From Bermuda

Totally remove when bermuda is actively growing

Reduces bermuda competition and allows for healthier stand

Herbicides are most consistent way to remove
Perennial Ryegrass Removal From Bermuda

• Sencor 75 Turf 0.67 lb/acre
  Kills in 2 to 3 days - unattractive until fills in
• metsulfuron (Manor) + NIS
  Kills in 2 to 3 weeks 0.5 oz/acre + 0.25% v/v
  Clumpy ryegrass may take 1 oz/acre Manor
• pronamide (Kerb WSP) 2 lb/acre
  Kills in 4 to 6 weeks - smoothest transition
Perennial and Summer Annual Broadleaf Weeds

Virginia buttonweed
Dollarweed (Lawn pennywort)
Spotted spurge
Common lespedeza
Prostrate knotweed
Virginia Buttonweed

Perennial, yellow-green color
2,4-D + clopyralid + dicamba (Millennium Ultra)
2 to 3 pt/acre
2 applications 4 weeks apart
Not centipede or St. Augustine

Other Control Options

Two and three-way herbicides previously listed for perennial and winter annual broadleaf weed control
Repeat applications needed
Common Lespedeza

Taproot, low growing
Control with products containing mecoprop, dicamba, triclopyr, clopyralid
Control when young and actively growing

Spotted Spurge

Taproot, low growing
Control with products containing mecoprop, dicamba, triclopyr, clopyralid
Control when young and actively growing
Summer Annual and Perennial Grasses
Nutsedge Species
Kyllinga Species
Summer Annual and Perennial Broadleaves
(July - September)

Initiate applications (What are you waiting for!!??)

OR

Repeat applications (hopefully started last quarter)