Consumer Products for Home
Lawn and Landscape Weed
Control

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Weed Science Basics
Types of Weeds

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

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

- **Sedges** –
  - “nutgrass”
  - Triangular stems
  - Leaves in 3’s
Options for Weed Control

• Encouraging turf/crop growth
• Mowing
• Hand pulling/hoeing

✓ Herbicides
Brief Herbicide School
What is a herbicide?

A chemical or material which injures or kills a plant.
Herbicide Definitions

• **Active ingredient** – molecule that provides herbicidal action
  - Glyphosate – Roundup, Eraser etc
  - Trifluralin – Preen, Treflan

• **Mode of action** – physiological process that leads to negative plant effects
  - Photosynthesis inhibitor - Atrazine
  - Mitosis disruptor – Preen
  - Amino acid production disrupted - Roundup
Types of Herbicides 1/3

- **Nonselective** – kills everything – e.g. Roundup, Finale

- **Selective** – controls certain plants and releases other species – e.g. Weed-B-Gone, Vantage, Atrazine
Types of Herbicides 2/3

- **Contact** – burns back what only what it hits – e.g. Diquat, MSMA, Finale

- **Translocating (systemic)** – move throughout plant – e.g. Weed-B-Gone, Vantage, Roundup
Types of Herbicides 3/3

- **Preemergence** – Weed preventor/residual herbicides – controls weeds before you see them

- **Postemergence** – kills weeds that are actively growing
Preemergence Herbicide Information
Effective Preemergence Application

- Apply before weeds germinate

- Adequate rainfall or irrigation is needed

- Do not expect all season long control - might reapply
How do preemergence herbicides work?

✓ They provide a lethal barrier at or just below soil surface.
How Do Preemergence Herbicides Work?
You can break down the barrier easily in a flowerbed!

Walking, transplanting, dogs, cats can break herbicide barrier prematurely by disturbing the soil.
When Should I Apply Preemergence Herbicide in Turf?

Before they emerge!
Crabgrass

- **Summer annual**
- **Produces lots of seed**
- **Germinates - soils reach 53 - 58F**
- **Light is required for germination**
Goosegrass

- Summer annual
- Produces lots of seed
- Germinates - soils reach 60-65F
- Light is required for germination
Some common consumer Preemergence herbicides
Crabgrass Preventor (Team)

- **Greenlight Product**
- **Benefin + Trifluralin**
- **Annual grasses and small seeded broadleaves**
- **Use on established turf only**
- **Available at most nurseries**
Amaze Herbicide

- Benefin + oryzalin
- Rate: 4 lbs / 888 sq. ft.
- Crabgrass, goosegrass, annual bluegrass, and small seeded broadleaves
- Greenlight product
- Most annual and perennial ornamentals tolerant
Preen/Treflan Herbicide

- Trifluralin
- Annual grasses and small seeded broadleaves
- Safe in most flower beds over the top of annual and perennial plants
- Available at most nurseries, Lowes, Home Depot, Wal Mart
- Little more volatile than most herbicides
Consumer preemergence herbicides with **dithiopyr** as active ingredient
Crabgrass Preventor 2

- Dithiopyr
- Annual grasses and small seeded broadleaves
- Will kill small emerged crabgrass
- Most garden centers
Sta-Green Crab-EX

- Dithiopyr
- Annual grasses and small seeded broadleaves
- Will kill small emerged crabgrass
- Find it at Lowes
Hi-Yield Dimension Herbicide

- Dithiopyr

- Annual grasses and small seeded broadleaves

- Will kill small emerged crabgrass

- Can also be used in flowerbeds
Herbicides can cause root inhibition

- Halts (ai) on zoysiagrass
- Crabgrass Preventor (ai) on St. Augustinegrass
- Dithiopyr on bermudagrass

Swollen, stubby, club shaped roots prevent “rooting down”.
Preemergence broadleaf control

(that’s safe around trees)
**Portrait herbicide**

- Kills broadleaf weeds before they emerge
- Isoxaben – same ingredient in Gallery
- Excellent for winter broadleaf control
- No grass activity
- Apply in October
- Apply just before or after Crabgrass Preventor for broad spectrum weed control
- Good preemergence lawn burweed control
•NOTE: Be Careful with Atrazine!

✓ Near trees and shrubs
✓ Especially newly planted
✓ Terrific when used properly
✓ Weed and Feed problems in flower beds usually are from ATRAZINE products.
Atrazine Herbicide

- **Best for practically all winter weeds** – apply in Nov. and reapply in Feb. if necessary

- Be careful around trees, ornamentals and bermudagrass

- **Liquid formulation** – prefer liquid over weed and feed

- **Better as a preemergence or early postemergence**

- **Our favorite general winter weed control**
Weed and Feeds

- Usually contains atrazine
- **Be Careful** around flower beds, shrubs and trees
- **Late-March through April** applications
- We are not ‘big fans’ of these products
- We prefer addressing weed problem separately
Non-selective Herbicides
Glyphosate Herbicide

- E.g. Roundup, Hi-Yield Killzall, Eraser etc.
- Lb. for lb. there is no difference in control
- Will kill or injure most plants
- A systemic herbicide that is good on perennial weeds.
- Totally deactivated when it hits soil
  - No residual activity.
- Visual symptoms in 2-4 days in growing points
Several Roundup Formulations

- 18%, 41%, 50% glyphosate
- ‘Ready to use’ products also; usually < 2% strength
- Some have diquat added – strictly for consumer – gives superficial burn
- Newest - Roundup Extended – also contains diquat and imazapic
  - Around trees
  - Patios – bricks and driveways, gravel areas
  - Do not spray in flower beds
- Roundup Brush Killer – has triclopyr for woody broadleaf control
Azaleas & tomatoes are sensitive to Roundup/glyphosate drift.
Glyphosate on tomato
Rubber/Cotton Glove Application Method
Rubber Glove/Cotton Glove

- 4 oz glyphosate in 32 oz water
- Rubber glove inside cotton glove
- Dip and squeeze off excess
- Use ungloved hand to remove desirable foliage
- Gently wipe only weed leaves
Finale Herbicide

- Non-selective
- Glufosinate – active ingredient
- No soil residual
- Alternative to Roundup (glyphosate)
- Not quite as good on perennial grasses
Postemergence Herbicides for Turfgrass
Postemergence Herbicide Facts

• Easier to control small actively growing weeds

• Some temporary injury to turf

• Greater turf injury at high temps (> 85°F)

• Few options for St. Augustinegrass; it’s very injury prone
Broadleaf Weed Killers – For Homeowners

- 2,4-D, Mecoprop & Dicamba (three-ways)

- Multiple applications needed with Weed-B-Gone type products

- Watch out in hot weather on St. Aug – spot treat.

- Don’t expect Virginia buttonweed control; repeat

- Excellent on winter broadleaves
2,4-D Herbicide

• For broadleaf weeds only

• Can be tough on St. Augustinegrass – very tough in hot weather

• NOTE; tomato and okra are very sensitive

• Fair on buttonweed; repeat applications

• Poor on mature lawn burweed (sticker weed)
Weed B Gon Herbicide

- Ortho products
- 3-way type herbicides
- Easiest on turfgrass
- Low % of 2,4-D content
- Very poor on buttonweed
- Excellent for winter broadleaves
Weedout Herbicide

- Ferti-lome product

- 3-way herbicide – 2,4-D, dicamba, mecoprop

- Easiest on turfgrass

- Relatively low % of 2,4-D

- Poor on buttonweed

- Good on winter broadleaves
Which one for buttonweed?
Weed Free Zone Herbicide

- Ferti-lome

- 4 way herbicide that contains carfentrazone

- Decent St. Aug tolerance

- Same strength as professional Speedzone

- Probably our current favorite on VBW and other broadleaves
Base weed control in bermudagrass and zoysiagrass
MSMA Herbicide

- Controls many annual grasses and some broadleaves
- For Bermuda and Zoysiagrass only
- Not good on goosegrass or torpedograss
- Use when warm and active growth
Grassy weed control in centipedegrass
Vantage/Poast Herbicide

• **Use in Centipedegrass only – no other southern turf is tolerant**

• **Kills grasses only**

• **Can be used in flower beds**

• **Not good on torpedograss or annual bluegrass**
Nutsedge Killers for lawn and landscape
Sedges

**Sedges in landscape**
- Annual sedge
- Purple nutsedge
- Yellow nutsedge
- Kyllinga

**Identification**
- seedhead color
- leaf shape
- nutlets/chains

- Purple nutsedge - tubers and chains
Image Herbicide

- Pretty good on sedges (nutgrass)
- Dollarweed control
- Landscape uses
- Safe on all warm season turf
Sedgehammer Herbicide

- Purple and yellow nutsedge plus green kyllinga
- Safe on all warm season turf
- Should be available in consumer packets for 1 gallon of spray material
- May be applied around woody ornamentals
- Contact Gowan representative
- Replaces MANAGE TURF herbicide
Sedge Control in Lawns and Landscape

- **Sedgehammer Herbicide** - Best sedge activity available to homeowners – safe for the lawn

- **Sedgehammer Herbicide** - can be applied around woody ornamentals

- **Image Herbicide** - Good on sedges plus some broadleaf activity – several tolerant ornamentals in landscape beds – safe for the lawn
  - Indian Hawthorne, gardenia, asiatic/confederate jasmine, Holly (several), Juniper (several), red crape myrtle, liriope, mondo, Hosta
Eptam Herbicide

- **EPTC**
- **Rate:** 5 lbs / 1000 sq. ft.
- **Crabgrass, goosegrass, annual bluegrass, chickweed, pigweed**
- **Has a little purple nutsedge activity**
- **Apply 2 weeks after transplanting annuals and other herbaceous plants**
- **Most established annual and perennial ornamentals tolerant**
Grass Control in Flowerbeds

- Vantage
- Poast
- Greenlight Berm. Killer
- Ferti-lome Over the top
- Grass B Gon - RTU
- These are safe for non-grass plants like liriope, mondograss, daylilies etc.
Brush and Briar Control
Best brush killers
– contain triclopyr

- **Brush B Gon** – contains about 8% triclopyr
  - Briar control
  - Woody plant control

- **Roundup Brush Killer** – glyphosate + triclopyr

- **Triclopyr** has a very short soil life and limited root uptake
  - Be careful!!! Can be absorbed by bark
Poison Ivy

- Perennial
- Reproduces by seed
- Has some look-a-likes
- Roundup, Brush-B-Gone, Greenlight Cut vine and stump killer.

✓ Fingers 3 turn and flee.....fingers 5 let it thrive

Va. Creeper
Greenlight’s
‘Cut-vine and Stump Killer’
The End of Weeds