



# **Consumer Products for Home Lawn and Landscape Weed Control**

**Ron Strahan**

# Weed Science Basics

# Types of Weeds

- **Broadleaves –**

- Netted veination
- 2 cotyledons
- Taproot
- Showy flowers



Virginia  
buttonweed

- **Grasses –**

- Parallel
- 1 cotyledon
- Fibrous roots



Crabgrass

- **Sedges –**  
“nutgrass”

- Triangular stems
- Leaves in 3’s



purple nutsedge

# 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**

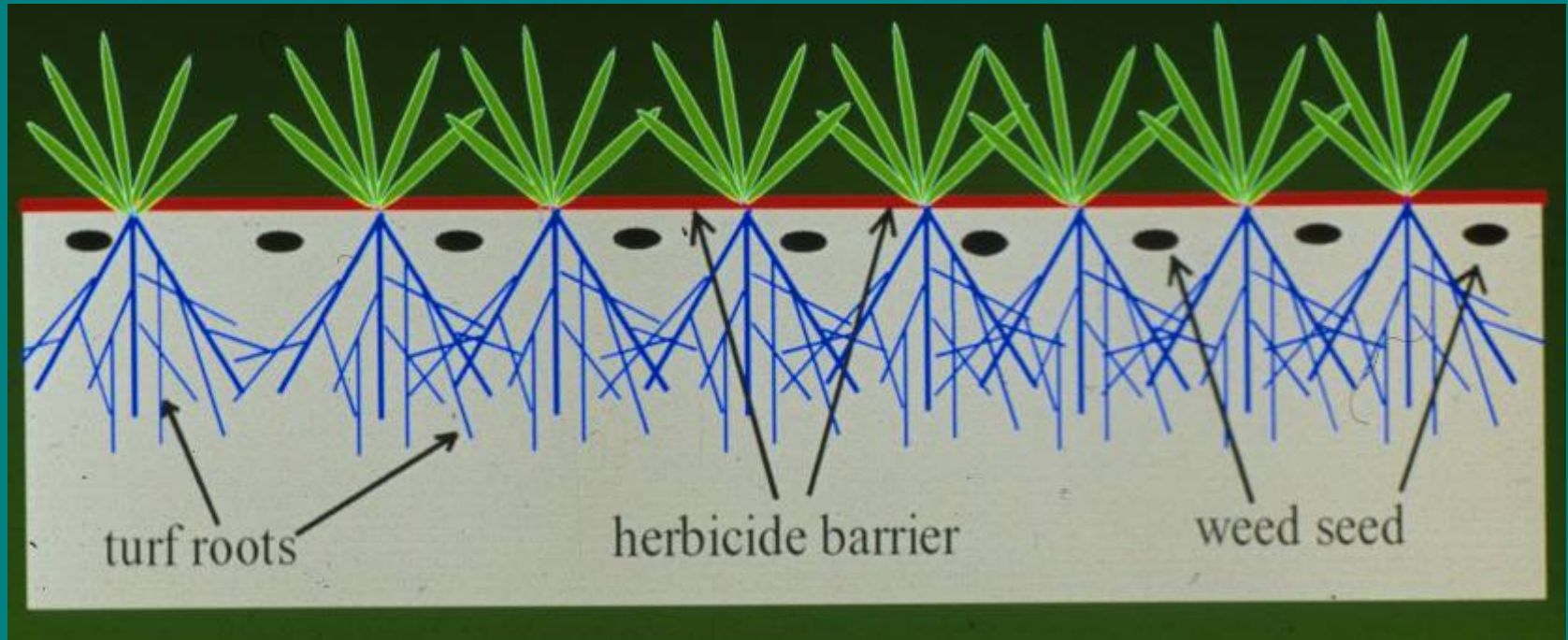
# Effective Preemergence Application

- 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

04/12/2005





# **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 (> 85F)
- 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 cyllinga
- 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**

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- **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 lirioppe, 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*



# Greenlight's 'Cut-vine and Stump Killer'



# The End of Weeds