



**Growing Lawns on the  
Peninsula**

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York County Extension Agent

# What will I do with this Information



Teach the public

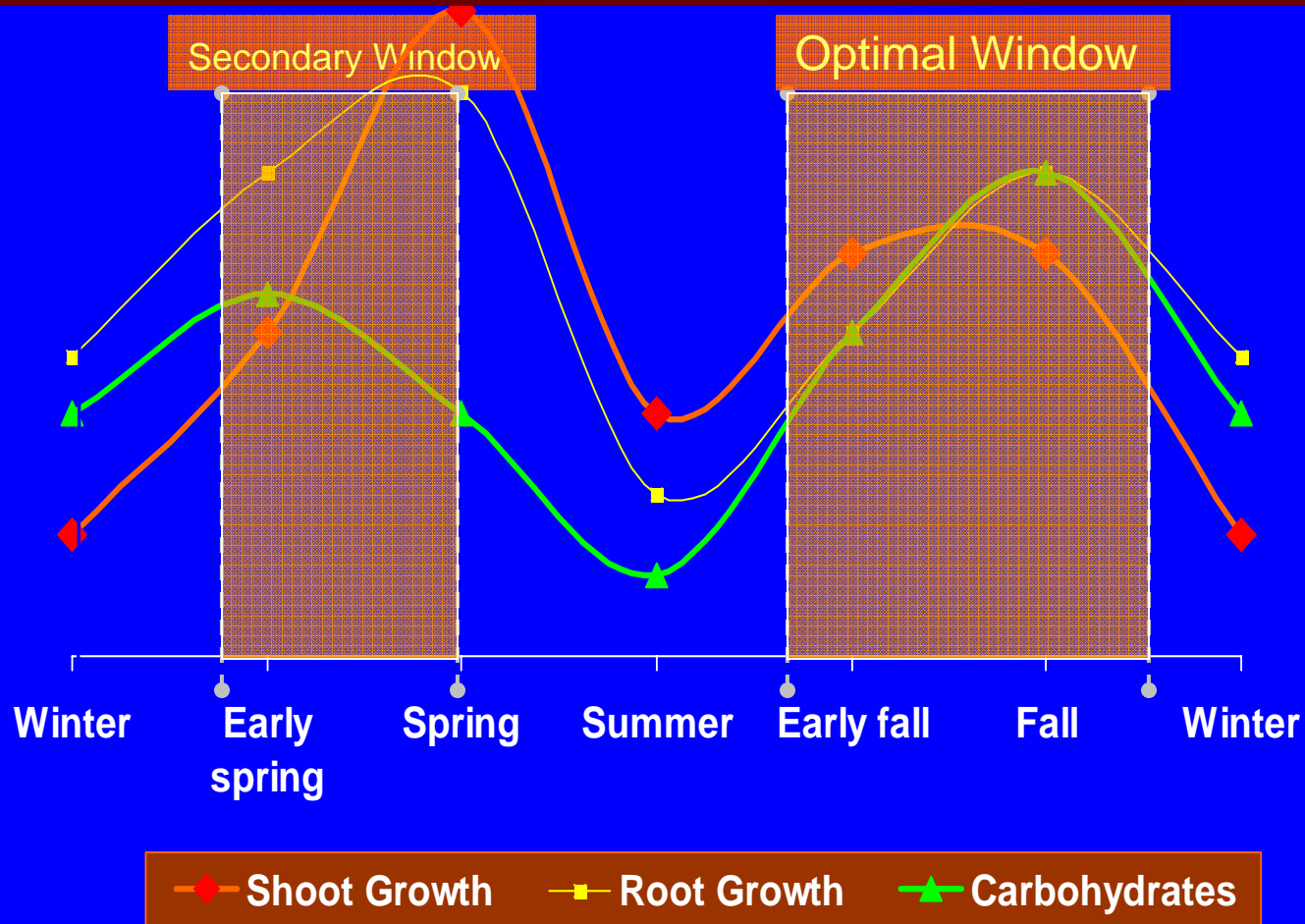


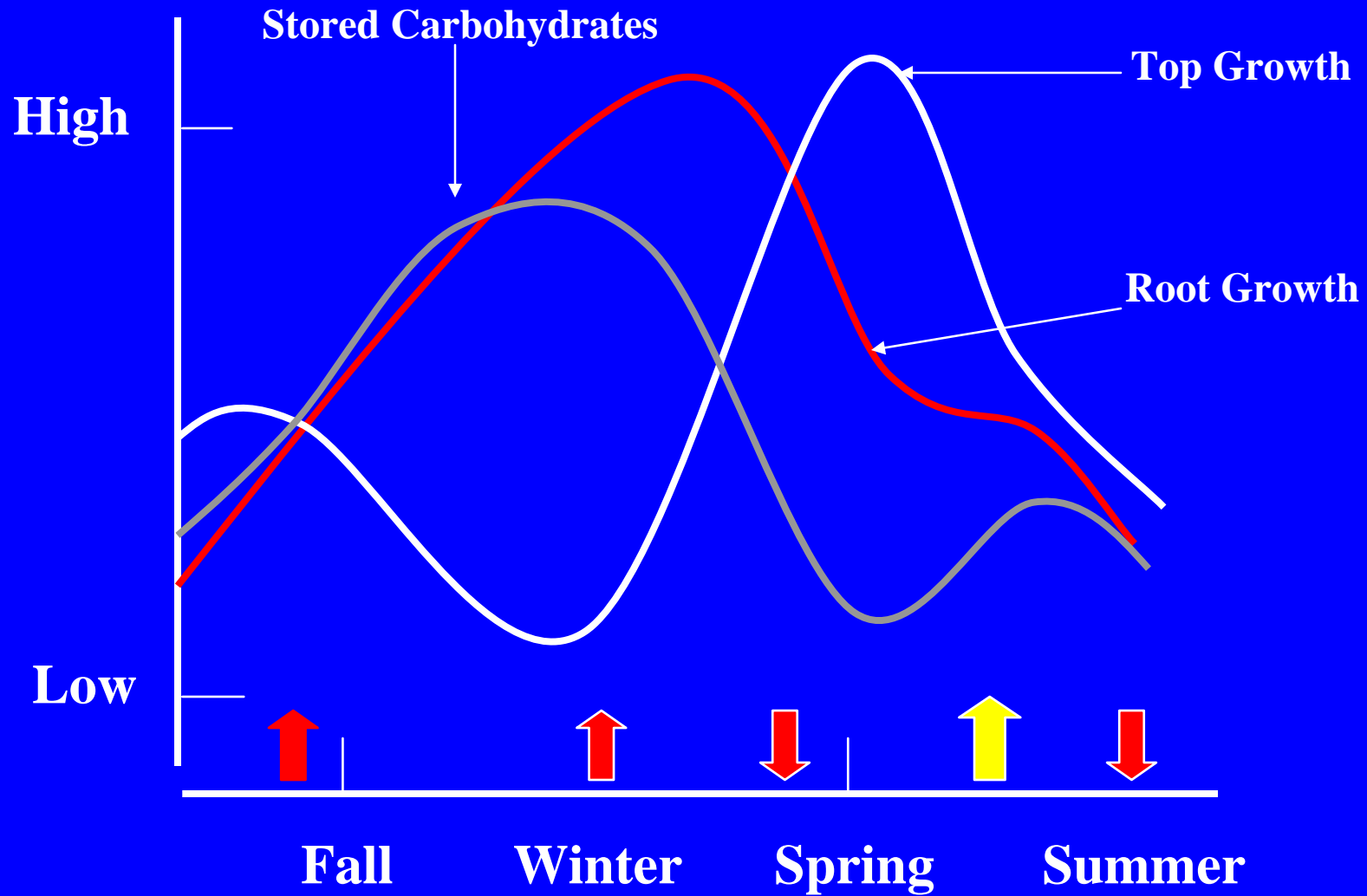
Provide resources as arranged  
by the local Extension office

# Fescue (Festuca)

- Ideal Shoot Growth 60-75F
- Ideal Root Growth 50-65F
- Upper Limit Shoot Growth 90F
- Upper Limit Root Growth 77F
- Lower Limit Shoot Growth 40F
- Lower Limit Root Growth 33F

# Seasonal Growth Patterns of Cool-Season Turfgrasses



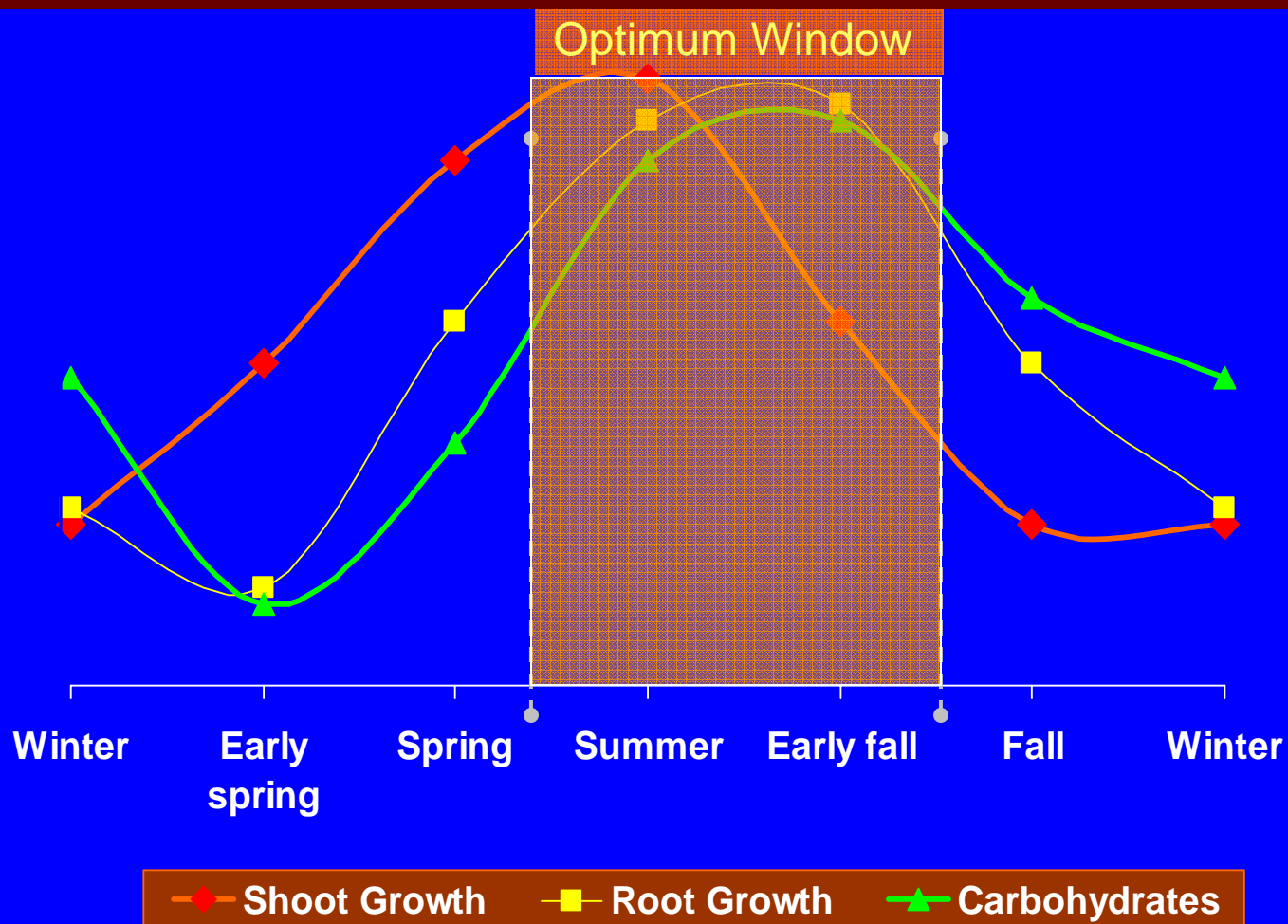


**↑** Low N May Be Beneficial

**↑** Nitrogen Most Beneficial

**↓** Nitrogen Fertilization Should Be Avoided

# Seasonal Growth Patterns of Warm-Season Turfgrasses



# Plant Characteristics

- Leaf Texture Fine-Coarse
- Shade Tolerance High
- Cold Tolerance High
- Heat Tolerance Medium
- Drought Tolerance Medium
- Wear Tolerance Medium
- Salinity Tolerance Low-Medium
- Nitrogen Requirements Medium

# Establishment

2008-2009 Turf Type Tall Fescue

2nd Millennium, Avenger, , Biltmore, Bingo, Bravo, Cochise III, Constitution, Coyote II, Crossfire II, Davinci, Daytona, Endeavor, Falcon IV, Fidelity, Forte, Good-En, Grande, Greenkeeper WAF, Guardian 21, Houndog 5, Inferno, Justice, Kalahari(3), Magellan, Masterpiece, Matador, Matador GT, Onyx, Padre, Picasso, Penn 1901, Quest(3), Raptor, Rebel Exeda, Regiment II, Rembrandt, Rendition(3), Southern Choice II, SR 8250, Tarheel, Tarheel II, Tempest, Titanium, Turbo(3), Ultimate, Watchdog, and Wolfpack.

# Reading a Seed Label

## XYZ TALL FESCUE BLEND

LOT # 4973-31HW

- X TALL FESCUE: 32.29%
  - Y TALL FESCUE: 32.50%
  - Z TALL FESCUE: 33.03%
  - PURE SEED: 97.82%
  - CROP SEED: 0.64%
  - INERT MATTER: 1.54%
  - WEED SEED: 0.00
  - NOXIOUS WEED SEED: NONE FOUND
- |              |                   |
|--------------|-------------------|
| GERMINATION: | 85%               |
| GERMINATION: | 85%               |
| GERMINATION: | 85%               |
| NET WT:      | 50 LBS (22.68 KG) |
| ORIGIN:      | OR                |
| TESTED:      | 08/06             |

# Establishment

- When September-October
- Seeding Rate 6 pounds/1,000sq.ft.
- Seed Quality 85% germination  
98% pure
- Current test date
- Incorporate soil amendments, fertilizer, and lime as indicated by a soil test.
- Don't mix ryegrass with fescue.
- Don't use straw as a mulch with residential plantings.

# Fertilization

- September 1 pound N/1,000 sq.ft.
- October 1 pound N/1,000 sq.ft.
- November 1 pound N/1,000 sq.ft.

# Fertilizer

- Soil test always best, every 2-3 years.
- Use a complete turf grade fertilizer.
- Ratio of 3-1-2 or 4-1-2
- Analysis examples 15-5-10 or 16-4-8

# Fertilizer Analysis

## 4-1-2

**N** Nitrogen

Leaf growth

**P** Phosphorous

Root growth

Flower development

**K** Potassium

Plant stress tolerance

Promotes cold hardiness



NET WEIGHT 40 LBS. (18.1 kg)

10-10-10

**GUARANTEED ANALYSIS**

Total Nitrogen (N) . . . . .	10%
Available Phosphate ( $P_2O_5$ ) . . . . .	10%
Soluble Potash ( $K_2O$ ) . . . . .	10%

Nutrients derived from ammonium sulfate, triple super-phosphate, and potash. Also included is the mineral limestone.

How much 10-10-10 fertilizer required to cover a 5000 sq. ft. lawn with 1 pound of nitrogen per 1000 sq. ft.?

$$\frac{\text{Amt. N per 1000 sq. ft.}}{\% \text{ N in fertilizer}} \times \frac{\text{sq. ft. of lawn}}{1000}$$

$$\frac{1}{.1} \times \frac{5000}{1000} = 50 \text{ pounds}$$

# LAWN FERTILIZER

## 22-3-14

- ◆ *For A Thick, Green Lawn This Fall And Quicker Green Up Next Spring!*
- ◆ *Promotes Stronger, Deeper Root Systems*
- ◆ *Formulated To Help Your Lawn Survive Winter Stress*

**Protects All Winter Long!**

**Money Back  
GUARANTEE**

Net Wt 54 lb (24.4 kg)

**APPLY IN FALL**

How many bags of 22-3-14 fertilizer required to cover a 6000 sq. ft. lawn with 1 pound of nitrogen per 1000 sq. ft.?

$$\frac{\text{Amt. N per 1000 sq. ft.}}{\% \text{ N in fertilizer}} \times \frac{\text{sq. ft. of lawn}}{1000}$$

$$\frac{1}{.22} \times \frac{6000}{1000} = 4.54 \times 6 = 27.3 \text{ lbs.}$$

$$54 \text{ lbs per bag} / 27 = \frac{1}{2} \text{ bag}$$

# The pH Scale is Logarithmic

Most alkaline

14

13

12

11

10

Neutral

9

8

7

6.2 to 6.5 -----  
availability

6 -----

5

4

3

2

1

Most acid

0

A soil pH of 4 is ten times more acid than a soil pH of 5.

Best range for nutrient

About 100 pounds of lime per 1000 ft<sup>2</sup> raises soil pH one point.



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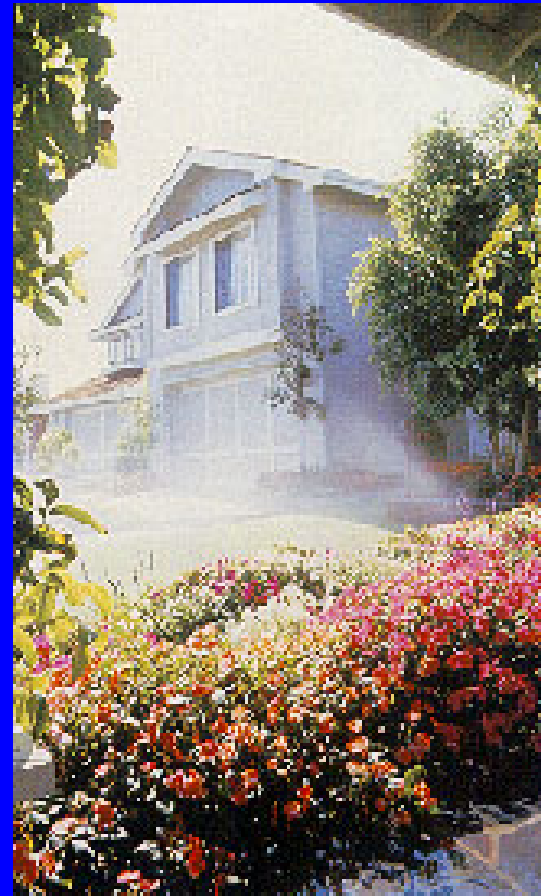
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# Irrigation Timing

- Early morning:
  - minimizes the duration of leaf wetness = less disease pressure
  - less likely to be affected by wind = better distribution.
  - Water infrequently but deeply



# Irrigation

- 1 inch of water per week.
- Not at night, early morning best.
- Irrigate infrequently, but thoroughly.
- Learn the signs of drought
  - Wilting
  - Color Change
  - Footprinting

# Mowing

- 2 1/2 to 3 inches best height for fescue.
- Keep mower blades sharp
- Sharpen blades after 25 hours of normal operation
- Can actually help control weeds

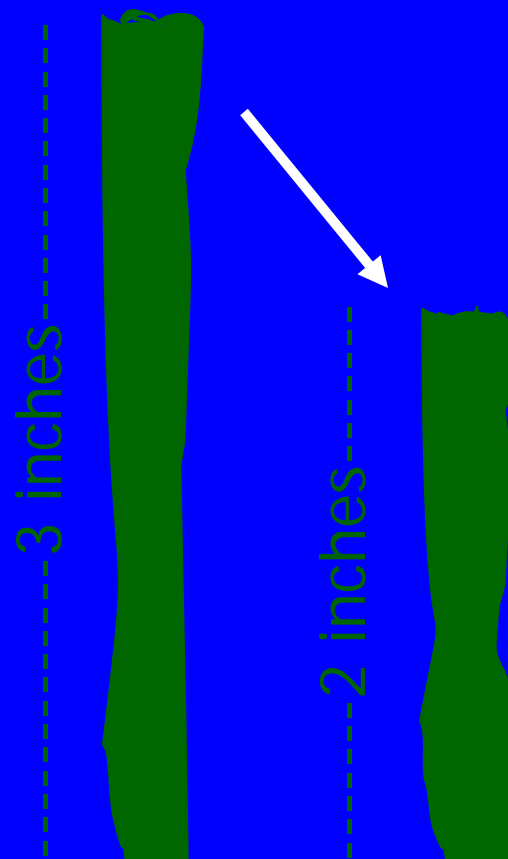
# Mowing

- One of the most frequent culprits inciting turfgrass “disease” in tall fescue is mowing with a dull blade.
- Two things that help maintain turf health regarding mowing:
  - Clip at the proper height for the respective turf.
  - Clip with a sharp mower blade.



# “1/3<sup>rd</sup> rule” of Mowing

- To maintain a healthy, photosynthetically active turf that can rapidly recover from the damage of mowing, remove no more than 1/3<sup>rd</sup> of the leaf blade at any single mowing event.



# Recommended Mowing Heights

<u>Grass species</u>	<u>Cutting height (in.)*</u>
Kentucky bluegrass	1-2.5
Tall Fescue	2.5-3
Perennial ryegrass	0.5-2.5
Fine-leaf fescue	1-2.5
Bermudagrass	0.5-2.5
Zoysiagrass	0.5-2.5
Centipedegrass	1.5-2.5
St. Augustinegrass	2-3

**\*Mowing heights less than one inch require mowing with a reel mower, a specialized cutting machine pictured here.**



# Remove less than 1/3 of blade

If your cutting height is:	Don't let the grass get higher than:
4"	6"
3 1/2"	5 1/4"
3"	4 1/2"
2 1/2"	3 3/4"
2"	3"

You may need to cut the grass more often



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# Importance of Proper Mowing Height

Mowing Height	# of Weeds Per 100 Sq. Ft.
1"	42.3
2"	2.5
3"	.2

May-September / grasses 3" minimum

September 15-end of season / grasses 2.5" min.

Proper mowing height helps control weeds



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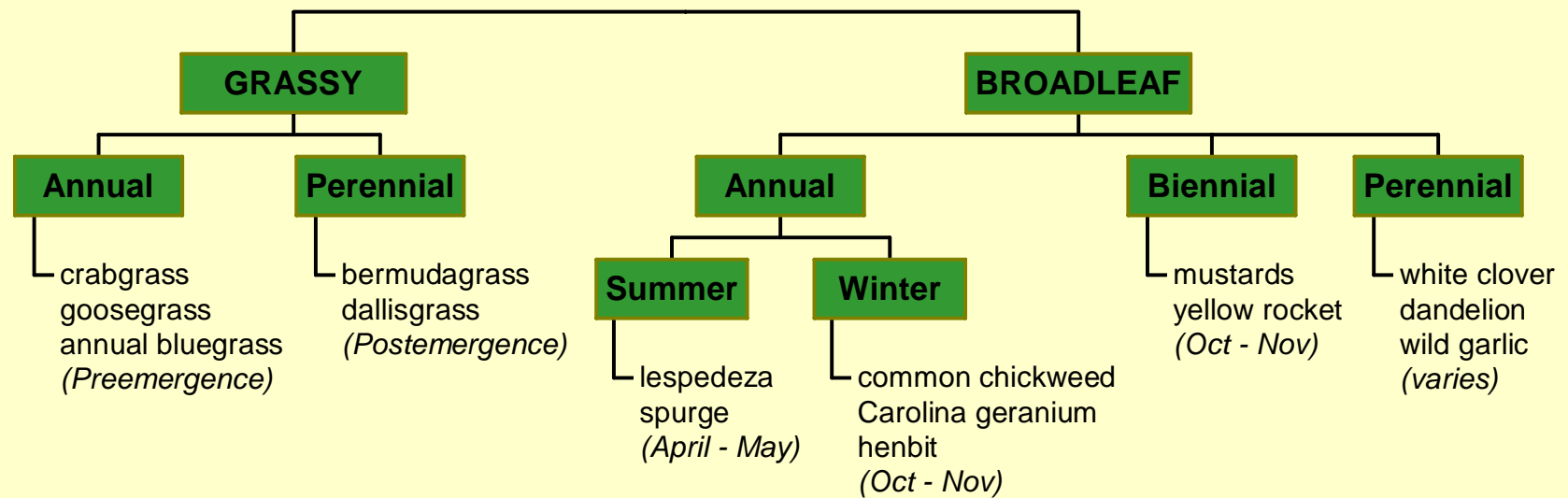
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# Types of Weeds





# Yellow nutsedge

Grows best in low lying, poorly drained soils



Triangular stem and leaf arrangement





# Some of the most persistent broadleaf weeds

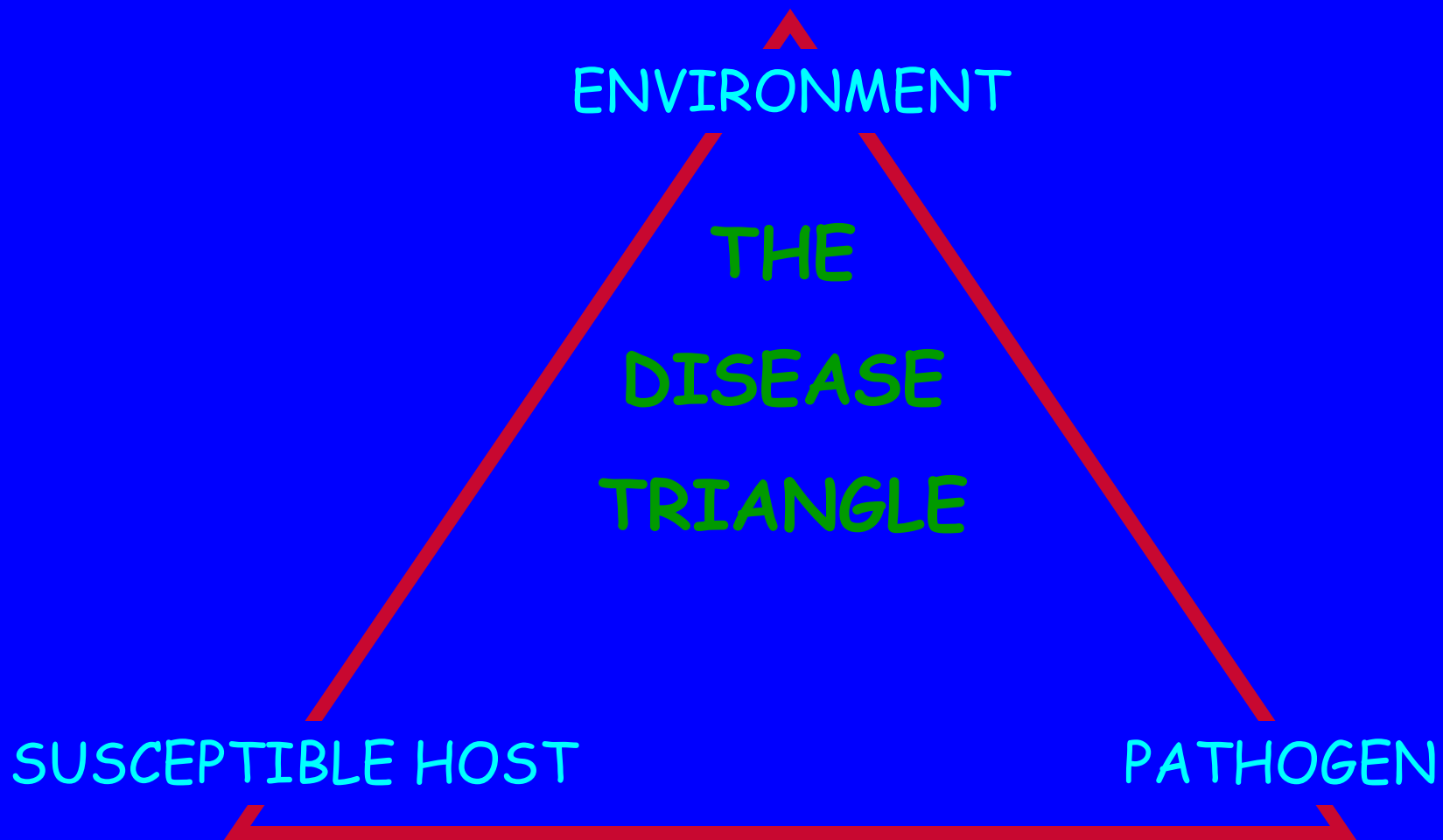


Ground ivy (Creeping Charlie)



Wild violet





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# Rhizoctonia blight (brown patch)



# Individual lesion

## Brown Patch



# Distinguishing dollar spot from brown patch



Dollar spot



Brown patch

# Grasscycling

- Clippings are 75-85% water.
- Good source of nutrients, 20-25%.
- Decompose quickly.
- Add one pound of nitrogen per 1000 ft<sup>2</sup>
- 5-7 day mowing frequency.

# Core Aerification

- Improves turf grass rooting.
- Improves water infiltration.
- Improves soil structure.
- Increased soil oxygen.

# Questions

When is the best time to seed and fertilize a fescue lawn?

The best time is in the Fall. Start the process early enough to get the grass germinated and a root system to become established.

# What do I do to get started?

- Develop a plan to systematically accomplish the goal. (Mark the significant dates on your calendar).
- Soil Test
- Lawn Establishment OR Lawn Maintenance
- Help them through their questions and thought processes.

I have a lot of weeds, very little grass and I want to start a new lawn!!! Should I get some nutrigreen and put it on top of the soil and throw some seed down?

NO

# What are some factors that could cause turfgrass diseases?

Slope of the Lawn Area

Drainage

Poor mowing practices

Soil conditions

