



Spring Lawn Care

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Warm-season grasses

- ▶ Bahiagrass
- ▶ Bermudagrass
- ▶ Centipedegrass
- ▶ Seashore paspalum
- ▶ St. Augustinegrass
- ▶ Zoysiagrass

Warm-season grasses

- ▶ Best time to establish in spring or summer
- ▶ Most establish vegetatively (sod, sprigs, stolons, rhizomes)
- ▶ Winter dormancy induced due to lower temperatures and reduced daylength



St. Augustinegrass

(*Stenotaphrum secundatum*)

▶ Advantages

- ▶ Excellent shade tolerance
- ▶ Good salt tolerance
- ▶ Tolerant to wide range of soil pH
- ▶ Establishes quickly from sod
- ▶ Dark green color



St. Augustinegrass

(*Stenotaphrum secundatum*)

- ▶ Disadvantages
 - ▶ Poor cold tolerance
 - ▶ Poor drought tolerance
 - ▶ Poor wear tolerance
 - ▶ Forms excessive thatch
 - ▶ Susceptible to chinch bugs



Bahiagrass

(*Paspalum notatum*)

- ▶ **Advantages**
 - ▶ Excellent drought tolerance
 - ▶ Low fertility requirements
 - ▶ Low maintenance
 - ▶ Tolerant of sandy, infertile soils
 - ▶ Establishes from seed



Bahiagrass

(*Paspalum notatum*)

- ▶ Disadvantages
 - ▶ Produces abundance of seedheads
 - ▶ Open growth habit encourages weed competition
 - ▶ Susceptible to mole crickets
 - ▶ Coarse stems are difficult to mow
 - ▶ Not wear tolerant



Zoysiagrass

- ▶ Advantages
 - ▶ Very drought tolerant (will brown)
 - ▶ Compact growth habit
 - ▶ Tolerant of wear (athletic fields)



Zoysiagrass

- ▶ Disadvantages
 - ▶ No shade tolerance
 - ▶ High fertility requirements
 - ▶ Browns in winter
 - ▶ Requires frequent mowing (2")
 - ▶ Reel mower
 - ▶ Susceptible to bill bugs, nematodes, leaf spots



Coming Out of Winter

Brown lawns = normal dormancy

The DO NOT's

- ▶ Do not fertilize after the freeze
- ▶ Do not over irrigate (regular irrigation - once a week)
- ▶ Do not scalp the lawn



Lawns

- ▶ Frost affects all types of lawns (St. Augustine, Bahia, etc)
- ▶ Harder hit areas may not recover
 - 1) Rake out dead leaf blades & roots
 - 2) Water regularly (do not overwater)
 - 3) Fertilize in March
 - 1) Slow release Nitrogen
 - 4) Replace hard hit areas (sod, plugs, or seed)



Is the lawn Dormant or Dead?

- ▶ Longer days + warmer temperatures = greener lawns
- ▶ Test to determine if its alive



After the Frost/Winter

- ▶ Remove decayed vegetation (rake it out)
- ▶ Replace dead areas is sod/plugs/seed
- ▶ Keep weed free



Components of Proper Lawn Maintenance

- ▶ Fertility practices
- ▶ Irrigation practices
- ▶ Mowing practices
- ▶ Pesticide spraying

Who's in charge?



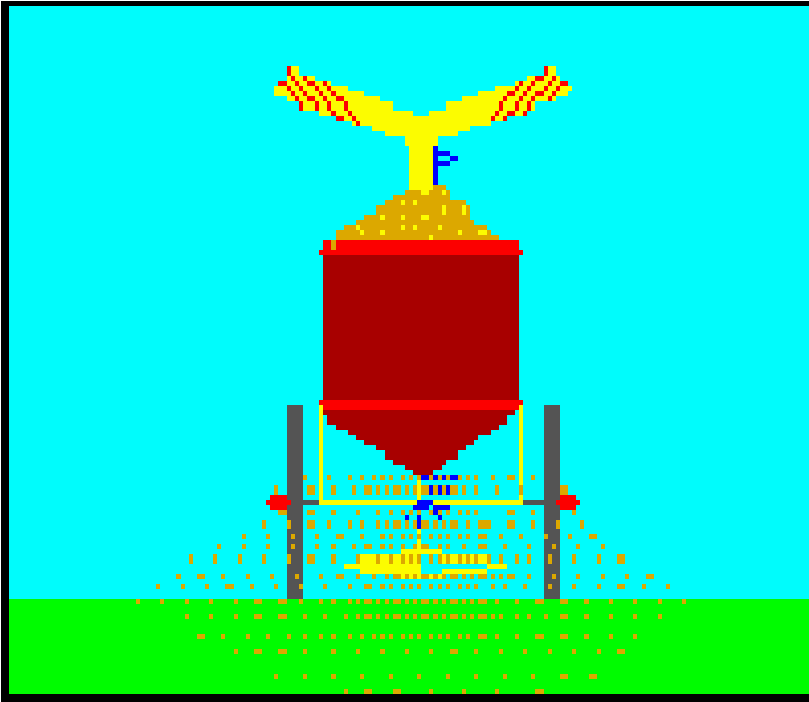
Best Management Practices

- ▶ Collaborative effort between UF turfgrass scientists, the lawn care industry, and government agencies
- ▶ These practices include fertility, irrigation, mowing, and pest control recommendations



Turfgrass Fertilization

Fertilization



- Minimizing environmental impacts
- Produce healthy, stress-tolerant turfgrass

The Fertilizer Bag

- Numbers refer to percent nitrogen, phosphorous, potassium in the bag

16-4-8

16% N, (or 8 lbs. in a 50 lb. bag)

4% P, 8% K



Nitrogen

- Needed in greatest quantity by turf
- Promotes shoot growth
- Enhances green coloration
- Excess N depletes carbohydrate reserves → → → leaves turf vulnerable to stresses



Fertilizer Source

- ▶ **Nitrogen (N)**
 - ▶ Water-soluble or “quick release nitrogen”
 - ▶ “Slow release nitrogen”
 - ▶ 50% of N should be slow release



Phosphorous

- For newly established lawns until root growth becomes established
- Naturally high amounts of P in soil
- P fertilization should be based on soil test results



Potassium

- Functions in water relations – helps turf maintain turgor pressure and hydration status
- Functions in cellular activities – photosynthesis and energy relations
- Provides increased tolerance to many stresses



Application Amount

- ▶ Depends on percentage slow-release N
- ▶ No more than $\frac{1}{2}$ lb. N 1000 ft² if quick-release
- ▶ Up to 1 lb. N 1000 ft² if slow-release



Application Timing

- ▶ Warm-season grass: growth cycle- based on **temperature AND daylength**
- ▶ Fertilization needs highest during spring growth
- ▶ Watch N applications during summer growth



Fertilizer Analysis

- ▶ Slow-release N (50%)
- ▶ Low P
- ▶ K ratio to N: 1:1 or 1:2



Current UF/IFAS Fertility Recommendations

(lbs. N 1000 ft⁻² yr⁻¹)

St. Augustinegrass/Zoysiagrass:

North FL:	2-4
Central FL:	2-5
South FL:	4-6



Current UF/IFAS Fertility Recommendations

(lbs. N 1000 ft⁻² yr⁻¹)

Bahiagrass:

North FL:	2-3
Central FL:	2-4
South FL:	2-4




Fertility Under Drought Conditions


- ▶ Fertilizers have a high salt content that increases drought stress.
- ▶ Growth is decreased during drought so, don't try to push it to grow and stress it more.



Turfgrass Irrigation



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When to Water



- ▶ The most efficient way is to apply water when turf begins to show signs of stress:
 - ▶ bluish gray color
 - ▶ footprints remain
 - ▶ leaf blades folded in half



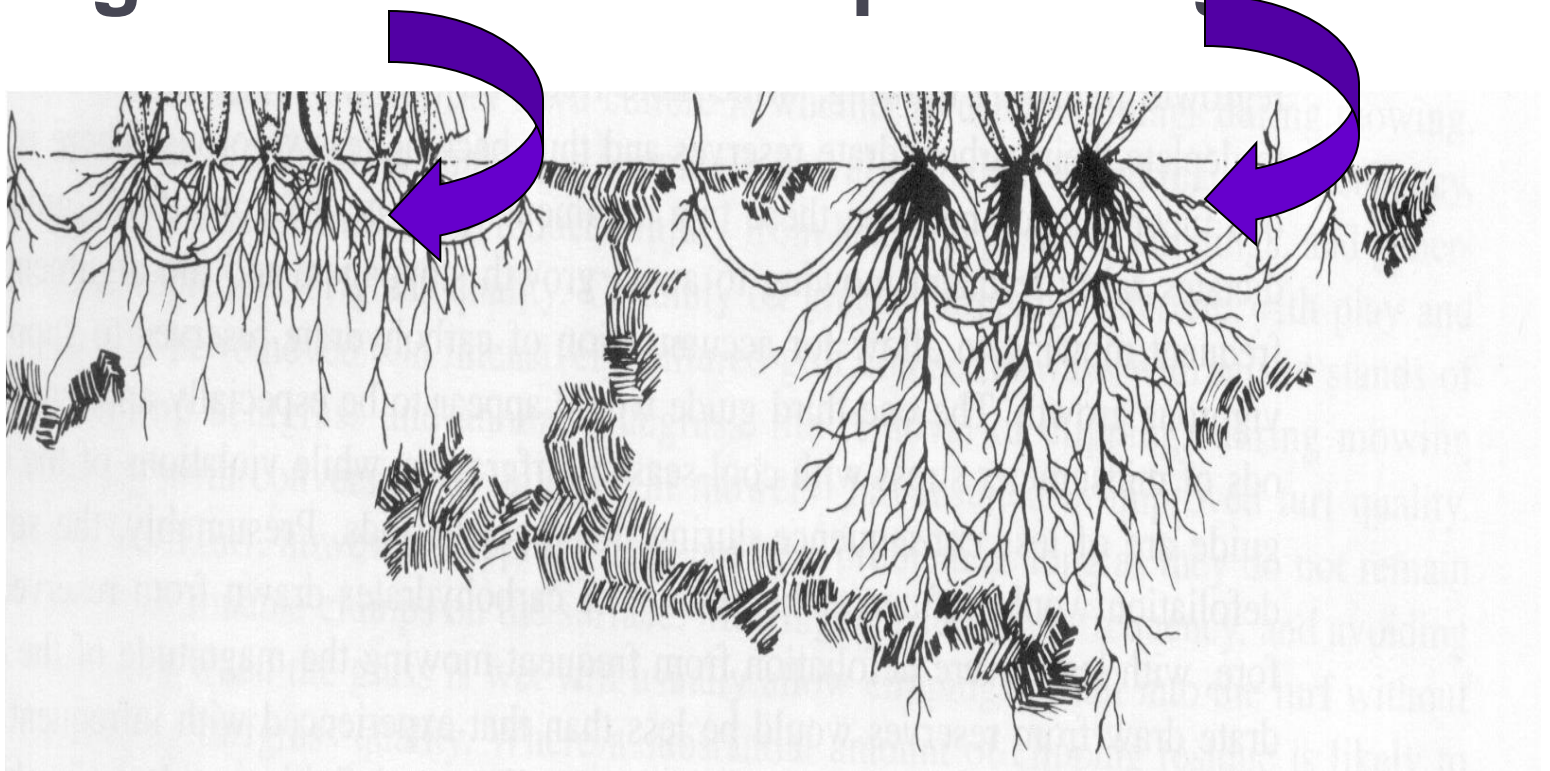
How Much to Water

Apply 3/4" to 1" when turf shows symptoms of wilt and do not apply any more until water stress symptoms appear.



**Short, frequent
irrigations**

**Longer, less
frequent irrigations**



Time of Day To Water

- ▶ Best time to water is 4am-10am
- ▶ Wet grass = disease opportunity
- ▶ Dew point should not be extended – grass must dry out



Mowing the Lawn

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Mowing



- Don't mow grass when wet
- Keep mower blades sharp!

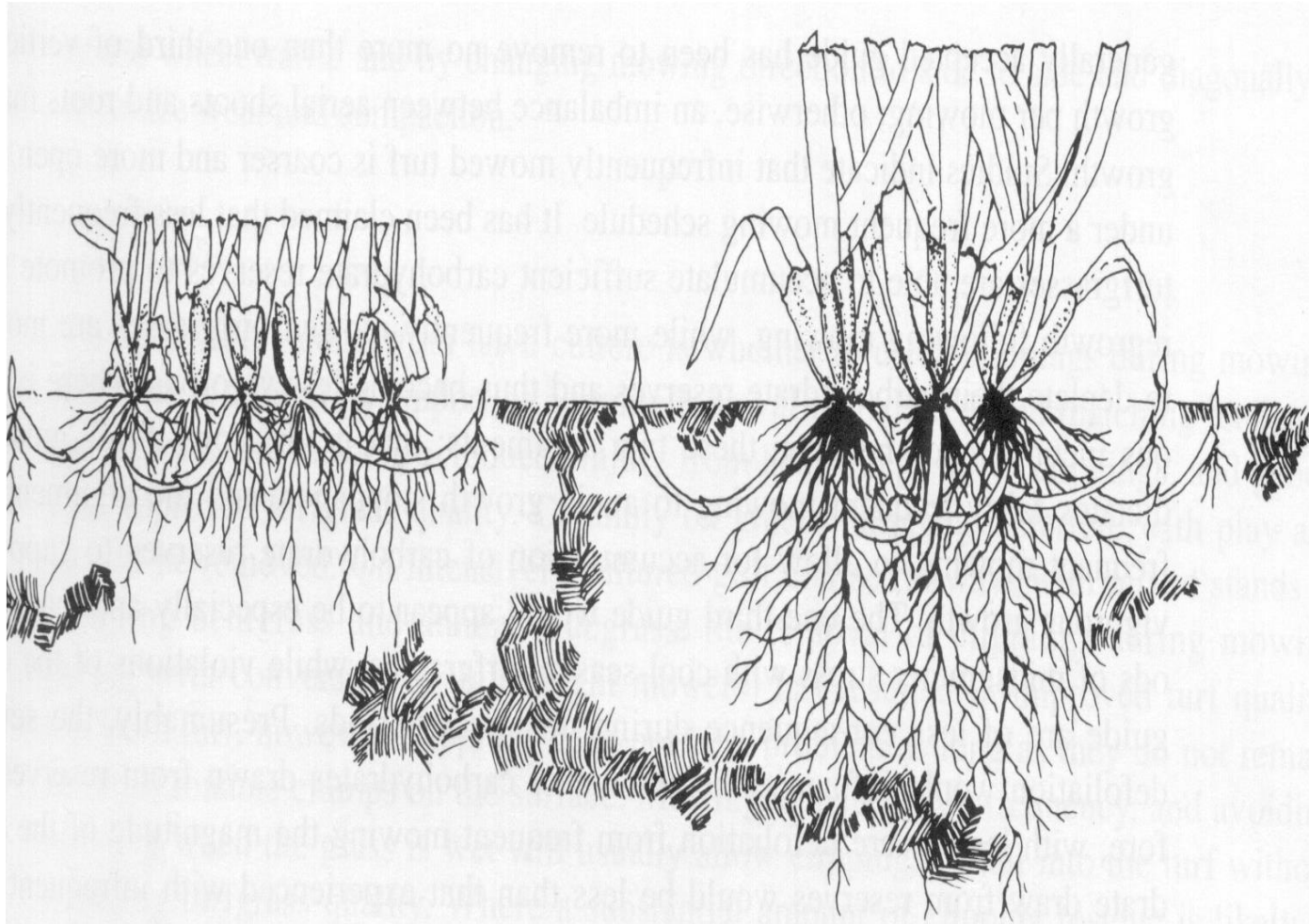


Mowing

- ▶ Mow at highest recommended height for species – leave as much shoot tissue on as possible
- ▶ Don't remove more than 1/3 of the leaf blade at any one time
- ▶ Leave clippings on the ground
- ▶ Increase mowing height under any environmental stress (shade, drought, etc.)



Influence of mowing height on rooting depth



Preparing the Lawn for Winter

- ▶ Warm season grass goes dormant
- ▶ Keep healthy with proper maintenance during growing season



Fall Fertility

- ▶ What is that “winterizer fertilizer” about, anyways?
- ▶ Fall K can be beneficial
 - ▶ Helps with cold stress
 - ▶ Enhances spring green up
- ▶ Last fertilization = September
 - ▶ 15-0-15 (high K, equal to N)



Weed Control



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Classification

- ▶ Broadleaf
- ▶ Grass
- ▶ Sedge



Broadleaf Weeds

- ▶ Dicots
- ▶ Netted veins
- ▶ Showy flowers



Grass Weeds

- ▶ Monocots
- ▶ Hollow, rounded stems
- ▶ Nodes
- ▶ Parallel veins



Sedges

- ▶ Triangular stems
- ▶ No nodes



Weed Control

- ▶ Cultural
- ▶ Mechanical
- ▶ Chemical



What About Crabgrass?

- ▶ Summer annual
- ▶ Germinate from seed when temps reach 60°F for 5 nights
- ▶ Atrazine: St. Augustinegrass
- ▶ Pendimethalin: Bahiagrass



Insects of Turf

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Chinch Bugs

- Are the most injurious pests of St. Augustinegrass in Florida.
- Are not a serious pest on any of the other lawn grasses.
- In south Florida, eggs begin hatching in late February and there are seven generations per year.





- Suck the plant juices from grass (generally on nodes of runners) resulting in yellowish to brownish patches
- Damage often first noticed in water stressed areas along edges of lawns

Chinch Bug Damage



UF - IFAS

Chinch Bug Early-Instar Nymphs



UF - Entomology

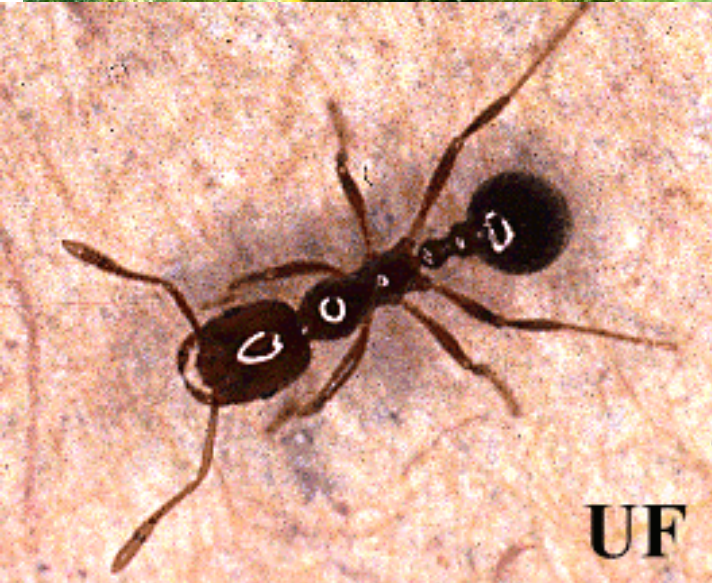
- Nymphs are about the size of a pinhead after they emerge from eggs.
- They molt five times before reaching the adult stage.
- Small nymphs are bright red with a white band.

Managing Chinch Bugs

Follow cultural suggestions

- Especially avoid excessive amounts of soluble Nitrogen

Beneficial Insects



University of Nebraska
Department of Entomology



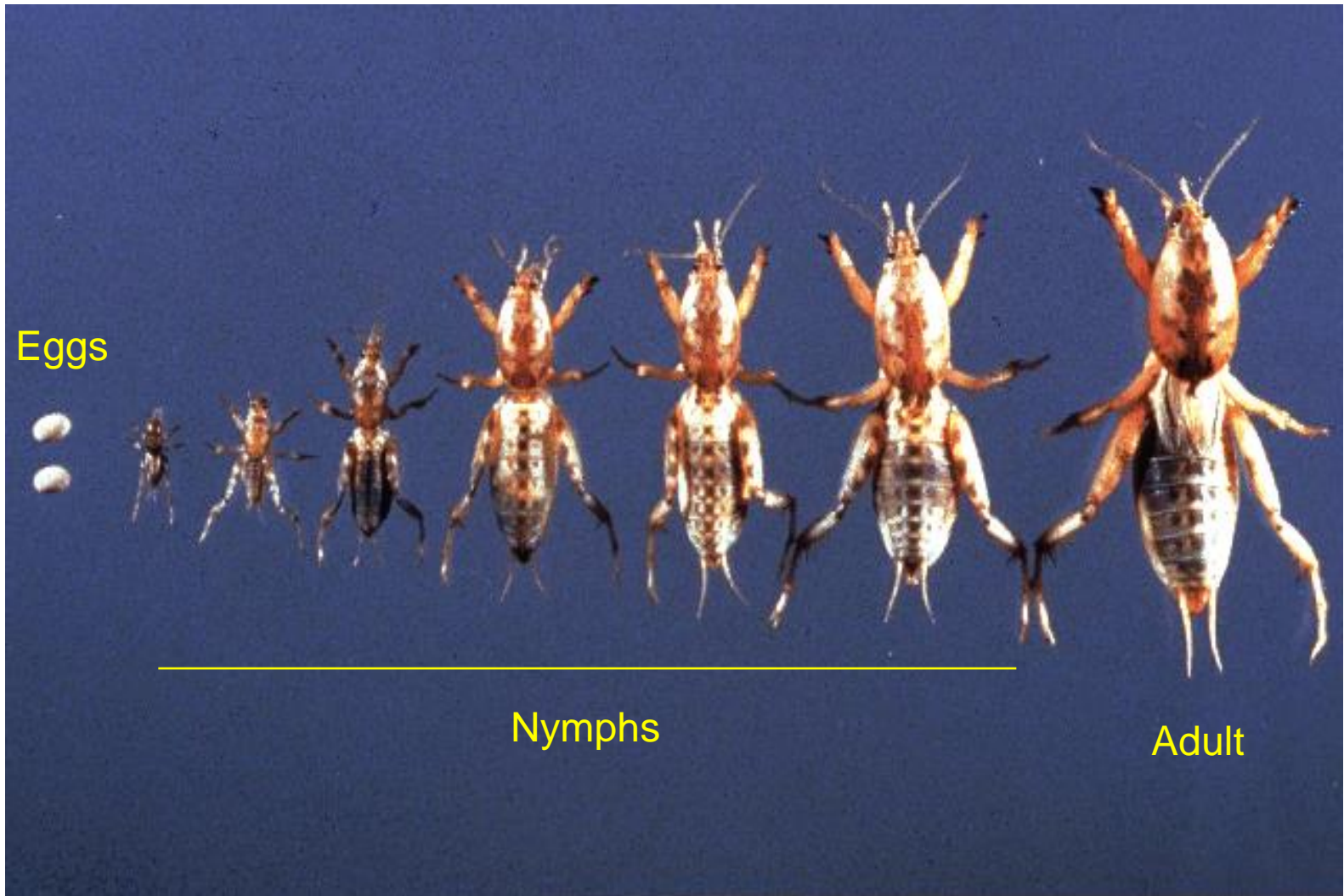
UF

Managing Chinch Bugs

Insecticide treatments

- Threshold: 20 - 25 bugs per square foot
- Many products are labeled
- Can treat damaged areas plus a 5 foot buffer
- Watch for resistance

Mole Crickets



Mole crickets damage turfgrass by tunneling

- They tunnel through the soil near the surface. This tunneling action loosens the soil so that the grass is often uprooted and dies due to desiccation of the root system.



Mole Cricket Management

Biological Control

- Biological control organisms are being imported from South America and introduced in mole cricket infested areas. This includes a parasitic nematode and the Brazilian red-eyed fly, *Ormia depleta*.



Nematode-infested mole cricket



Mole Cricket Parasite: Brazilian Red-Eyed Fly



Mole Cricket Management

Chemical Control

- Threshold is 2 - 4 per square foot
- Sprays or granular formulations are applied while most are still nymphs (August).
- A number of products are labeled for mole cricket management
- Water in according to labeled directions



Turfgrass Diseases

GRAY LEAF SPOT



BROWN PATCH

Conditions favorable for disease:

- Excessive nitrogen fertility
- Cool/warm temperatures; not a summer disease
- Wet weather or over-irrigation
- Stressed turfgrass



BROWN PATCH







SLIME MOLD



Turfgrass Disease Summary

- Diseases are a rare event
- Induced with stressed turfgrass
- Learn to distinguish between injuries, disorders and diseases
- Emphasize the importance of cultural controls (proper water & fertilizer)



QUESTIONS??

- ▶ Osceola County Master Gardeners
 - ▶ Monday – Friday 9am – 3pm
 - ▶ (321) 697-3000
- ▶ “Gardening in Central Florida” Facebook Group
 - ▶ <http://www.facebook.com/#!/pages/Gardening-in-Central-Florida-UF-IFAS-Osceola-County-Extension/174682932589304>
- ▶ Follow me on Twitter
 - ▶ “CentralFLGarden”

