Seasonal Lawn Maintenance
in Central Texas
### Warm Season vs. Cool Season Grasses

<table>
<thead>
<tr>
<th>Warm</th>
<th>Cool</th>
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<tbody>
<tr>
<td>St Augustine</td>
<td>Rye (overseeded)</td>
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<tr>
<td>Bermuda</td>
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<tr>
<td>(common and hybrid species)</td>
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<tr>
<td>Zoysia</td>
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<tr>
<td>(Pallisades)</td>
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<tr>
<td>(Buffalo)</td>
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Mowing

**Height** (lower height = more frequent mowing = healthier turf)

- St Augustine: 2 ½ inches to 3 ½ inches
- Bermuda: ½ inch to 2 inches

**Schedule**

- Never Remove more than 1/3 of leaf surface

**Clippings**

- Best not to bag them
Fertilization

Begin one month after complete green-up in spring
  April/May
Every 4 to 8 weeks throughout growing season
  On major holidays:
    Memorial Day
    Independence Day
    Labor Day
more fertilization = more growth = more water = more mowing
Fertilization

If only once: fall
If only twice: fall and spring

more fertilization = more growth = more water = more mowing

Top-dress with compost in late winter
Also helps improve soil
Fertilization

Use lawn fertilizer

   Controlled-release

High Nitrogen

   21 – 0 – 0   31 – 0 – 10   15 – 5 – 10

Common Ratios (N : P : K)

   3 : 0 : 1   3 : 1 : 2

Soil Test
Fertilization

Types of Products

Winterizer
Organic vs. Conventional
Weed and Feed (both pre and post emergence)
   “Southern Lawn” or “Bonus S” products
Slow-release
Ironite
Fertilization

Amount to Apply

Recommendations always given based on N

~ 1 pound of Nitrogen per 1000 ft$^2$ every 8 – 10 weeks

Must calculate:

21 – 0 – 0 fertilizer is 21% N

~ 5 lbs of this product would equal 1 lb N
Fertilization

Product label will indicate number of square feet

Use **correct spreader settings** (easiest if match product to spreader)

Best to make two crosswise passes
Watering

Ideally, about 1 inch per week (summer)

To depth of 6 inches

Evapotranspiration rates vary with temperature

Early morning is best

Cycle and soak

Perform irrigation audit at least yearly

Use catch cans
Watering

Drought tolerant vs. water efficient, depends on:
- turf species
- temperature
- wind
- soil type
- health of lawn
- amount of sun/shade
Pests and Pesticides

Pests include
- insects, diseases, weeds, rodents, mites etc.

Pesticides include
- insecticides, fungicides, herbicides, rodenticides, miticides, etc.

Lawn Problems
- insects, diseases and weeds are the most common pests we must deal with in turf
Lawn Problems

Most lawn problems begin with cultural issues

- water (too much/too little)
- soil (texture, slope, compaction)
- nutrient levels (too low/too high)
- sunlight & humidity (sunny and dry/cloudy and humid)
- temperature (too hot/too cold)

...so the first step in combatting them should involve cultural controls
Water

- Too little
  - Patches of dead turf
  - Dry/cracked areas
  - Soil compaction
  - Weed & insect infestation
  - Trouble recovering from other stresses

- Too much
  - Patches of dead turf
  - Disease issues
  - Algae and slime mold
Drought Stress

Lack of rainfall
Abrupt change in weather
Irrigation system issues
Shrinking Soil

Solutions:
core aeration
add compost
Weed Infestations

Solutions:
hand pull
spot treat
Algae and Moss

Solutions:
correct drainage issues
core aeration
copper/iron sulfate
lime
Soil

- Texture
  - Sand, silt, clay, organic matter (rocks!)
- Slope
- Compaction
  - Heavy traffic areas, tree roots, prolonged drought
  - Periodic aeration
- Thatch
  - Exacerbated by improper maintenance regimes
  - Periodic dethatching
Texture

Rocky soils
Clay soils

Solutions:
don’t plant turf
build soil base
Slope

Solutions:
- build barrier
- compact soil
Compaction

Heavy traffic, prolonged drought, tree roots

Solutions:
- core aeration
- topography correction
Thatch

Can be healthy

Solutions:
- annual dethatch/core aeration
- decrease fertilizer
- decrease pesticide
- remove clippings
- vertical mowing/scalping
Nutrient Levels

- Under/over-fertilization
  - Amount applied
  - Timing of application
- Wrong nutrients applied
  - Soil test
- Micronutrients
  - Iron chlorosis
- Lawn clippings
Nutrient Deficiencies

Iron Chlorosis common
  yellow blade/green veins

Nitrogen deficiency
  overall less green
  acceptable for low-input lawns
Sunlight & Humidity

- Shade
  - St. Augustine
  - Zoysia

- Sun
  - Bermuda
  - Zoysia
  - Buffalo (buffalo mixes)

- Heavy shade vs. bright shade

- Humidity & evaporation (prolonged clouds or sun)
Excessive Sun/Heat

Shade-loving turf in full sun
Turf close to sidewalk or street
Heavy Shade

Difficult to reestablish Sun-loving turf in shade
Temperature

- Extreme heat
- Extreme cold
- Planting times
- Prepping for winter dormancy/spring growth
- Nearby hardscapes
Extreme Heat/Cold

Solutions:
- irrigation/remove turf
- rake out dead areas
Miscellaneous Issues

▪ Leaf litter
▪ Lawn clippings
▪ Mowing heights
▪ Weed and Feed products
▪ Annual top-dressing
Leaf Litter

Solution:
rake leaves
Lawn Clippings
Identify the Issue

in this fact sheet:
• Chinch bugs
• Grubs
• Brown Patch
• Take All Patch
• Drought Stress
• Iron Chlorosis
• Shade Stress
Damage Patterns

Brown patch

Chinch bugs
Solutions

- Chinch bugs
  - Irrigate efficiently
  - Remove turf near hardscaping
  - Preserve beneficial insect populations
  - Manage fertility and thatch
  - Use insecticide when damage is excessive (cyfluthrin, bifenthrin, pyrethroids)
Solutions

▪ Brown Patch
  ▪ Core aeration/increased drainage
  ▪ Irrigate early morning
  ▪ Decrease fertilization/don’t fertilize affected area
  ▪ Decrease irrigation
  ▪ Use fungicide at first sign of damage
Damage Patterns

Pet urine

Solutions:
- rake out dead grass
- irrigate heavily
- isolate pet
Damage Patterns
Damage Patterns

Herbicide damage

Solution:
read product label
Damage Patterns

Take-all patch

Solutions:
- decrease irrigation
- increase drainage
- decrease fertilization
- decrease herbicide use
- top-dress with peat moss
Damage Patterns

Grub worms
Damage Patterns

Gray leaf spot

Solutions:
- decrease humidity
- decrease fertilizer
- dethatch
- apply fungicide
Damage Patterns

Scalping

Photo credit: Bob Mugaas, U of MN
Damage Patterns

Fertilizer misapplication
Miscellaneous

- Always start with cultural controls
- With all diseases, avoid mowing and remove grass clippings
- Read labels
  - right pest/right plant
  - “Southern” lawns
Miscellaneous

- Identify pest
- Annual vs. perennial weeds
- Broadleaf vs grassy weeds
- Preventive treatment may be necessary
Turf Resources

Aggie Turf website  aggieturf.tamu.edu/
Texas Plant Disease Diagnostic Lab  plantclinic.tamu.edu/
TAMU soil testing lab  soiltesting.tamu.edu/
Extension publications  agrilifebookstore.org
Daphne Richards, County Extension Agent—Horticulture
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http://bit.ly/1nzHAFR

Program Announcements:
centraltexashorticulture.blogspot.com

Questions?
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