



Lunch 'n' Learn:
Texas Lawn Care

Becky Bowling, PhD
Assistant Professor and Extension
Urban Water Specialist


1



Turfgrass Selection


2

Turf Selection



Aesthetically Pleasing

Whether pristine and manicured or flowy and naturalized, many people have a particular idea for how they want their turf areas to **look and feel**. This plays a big role in the grasses that people choose.



Functional

Turfgrass areas are often the most trafficked areas of the landscape. Their ability to support different activities can determine which species are the right fit for you, and which ones aren't.



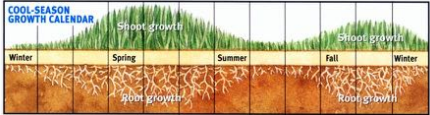

Resource-Use Efficient

Though often overlooked, this is the most important attribute of any turf selected. When the **right turf is in the right place**, it saves water, money, time, and reduces the input of things like fertilizers and pesticides.

3

3

Warm- Vs. Cool-Season Grasses

4

Warm- Vs. Cool-Season Grasses

Warm-season Characteristics* (C4 Plants)	Cool-season Characteristics (C3 Plants)
High water-use efficiency	Low water-use efficiency
High nitrogen-use efficiency	Low nitrogen-use efficiency
Ideal temperature range of 80-95 F	Ideal temperature range of 60-75 F
Drought hardiness	High disease incidence
Good stress recovery (rhizomatous/stoloniferous growth habit)	Poor stress recovery (rhizomatous/stoloniferous growth habit)

*Warm-season species are typically better suited for most regions of Texas

5

Warm- vs. Cool-season Species

Warm-season Species	Cool-season Species
Bahiagrass	Annual ryegrass
Bermudagrass	Creeping bentgrass
Buffalograss	Fine fescue
Centipedegrass	Kentucky bluegrass
Seashore Paspalum	Perennial ryegrass
St. Augustinegrass	Tall fescue
Zoysiagrass	Texas Bluegrass

6

Choosing the Right Turfgrass

Choosing the right turfgrass can significantly improve resource use efficiency.

Inappropriate selections typically require more water, fertilizer, and pesticides to maintain.

	Bermudagrass	Zoysiagrass	St. Augustinegrass	Centipedegrass
Minimum Light Requirement	5-8 Hours	7-8 Hours	9-10 Hours	9-10 Hours
Shade Tolerance	Low to Very Low	Very Low	High	High to Moderate
Water Requirement	Moderate to Low	Very Low	Moderate	Moderate
Usability (heat, salt, pH, etc.)	High	Low	Low	High to Moderate
Disease Potential	Moderate to Low	Low	High (in shade)	Moderate to Low
Mowing Frequency	3-7 Days	Infrequent	5-7 Days	5-10 Days
Mowing Height	1-2.5 inches	3-8 inches	2.5-3.5 inches	1-3 inches

7

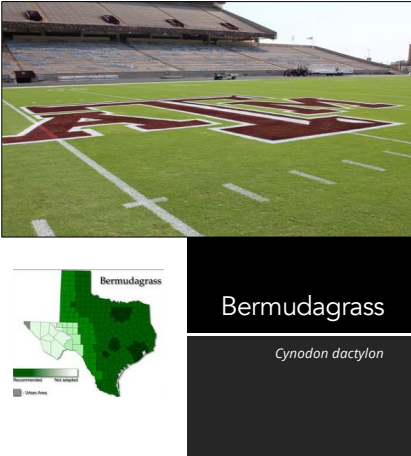
Drought Tolerance by Species



- Buffalograss
- Bermudagrass
- Zoysiagrass (*Z. japonica*)
- Bahiagrass
- St. Augustinegrass
- Zoysiagrass (*Z. matrella*)
- Centipedegrass

8

8



Bermudagrass
Cynodon dactylon

General Traits	
Where can it go?	
	Full Sun (6 to 8 hours of light per day)
	Tolerates Moderate to High Traffic
	Tolerates Low to Moderate Watering
	Can Require Frequent Mowing
	Moderate to High N Requirement
	Low to Moderate Disease Potential
	Moderate Insect Susceptibility
	Rapid Establishment & Recovery
	Seed & Sod Available
	Low to Moderate (select varieties) Cold Tolerance


9



St. Augustinegrass
Stenotaphrum secundatum

General Traits	
Where can it go?	
	Can Tolerate Moderate Shade (minimum 5 to 6 hours of light)
	Tolerates Low to Moderate Traffic
	Tolerates Moderate Watering
	Can Require Frequent Mowing
	Moderate to High N Requirement
	Moderate to High Disease Potential
	Low to Moderate Insect Susceptibility
	Moderate to High Rate of Establishment & Recovery
	Sod Only
	Low to Moderate (select varieties) Cold Tolerance

10




Zoysiagrass
Zoysia spp.
Zoysia japonica (coarse)
Zoysia matrella (fine)


General Traits	
Where can it go?	
	Can Tolerate Partial to Moderate Shade (5 to 8 hours of light)
	Tolerates Moderate Traffic
	Tolerates Low to Moderate Watering
	Less Frequent Mowing Requirement
	Low to Moderate N Requirement
	Moderate to High Disease Potential
	Low Insect Susceptibility
	Can be slower to establish and recover
	Sod with Few Seeded Options (Zenith and Compadre) ¹
	Moderate Cold Tolerance

11


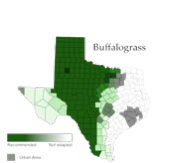
FINE TEXTURE (Z. MATRELLA)



COARSE TEXTURE (Z. JAPONICA)













12

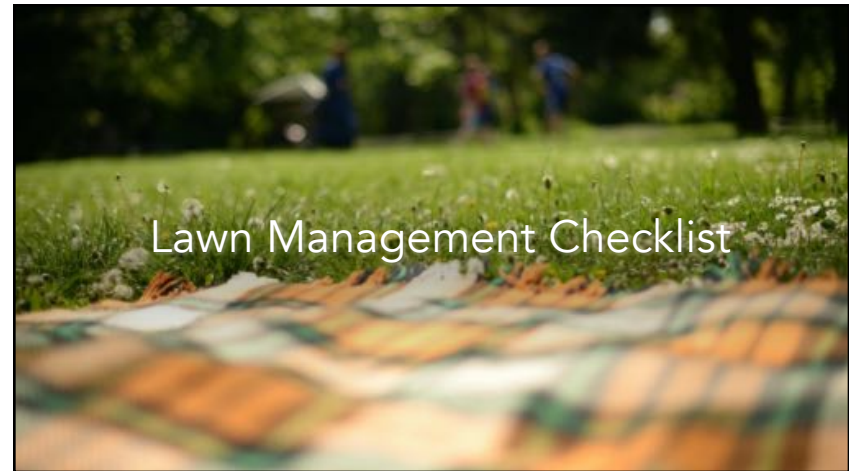
Buffalograss

General Traits

Where can it go?

	Full Sun (6 to 8 hours of light per day)
	Tolerates Low to Moderate Traffic
	Tolerates Very Low Watering
	Infrequent Mowing
	Low N Requirement
	Low to Moderate Disease Potential
	Low to Moderate
	Moderate establishment
	Seed & Sod Available 1 3
	Moderate cold tolerance

13



14



The taller the grass, the deeper the roots.

The benefits of a taller turfgrass:

- Improved water infiltration
- Access to deeper soil resources (water + nutrients)
- Improved overall stress tolerance
- Weed crowding
- Reduced mowing frequency

1. Keep it a little taller.

There is a direct relationship between above- and below-ground growth. This is sometimes referred to as the "root-to-shoot ratio".

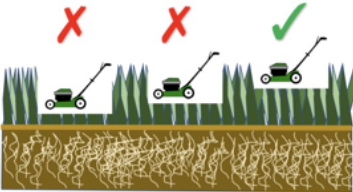
15

Table 1. Mowing height recommendations for warm-season turfgrass species in a lawn scenario

Warm-season turfgrass species		Recommended height of cut	
Common name	Scientific name	Rotary mower	Minimum height with reel mower*
Bermudagrass (Common)	<i>Cynodon dactylon</i>	1.5" to 4"	0.75"
Bermudagrass (Hybrid)	<i>Cynodon dactylon</i> (L.) Pers and <i>Cynodon dactylon</i> (L.) Pers x <i>Cynodon transvaalensis</i> Burt Davy	1.5" to 2.5"	0.75"
Buffalograss	<i>Bouteloua dactyloides</i> (Nutt.) J.T. Columbus	2" to unmowed	2"
Centipedegrass	<i>Erechthitea ophiuroides</i> (Munro) Hack.	1.5" to 2"	1"
Seashore Paspalum	<i>Paspalum vaginatum</i> Sw.	1.5" to 2"	0.75"
St. Augustinegrass	<i>Stenotaphrum secundatum</i> (Walt.) Kuntze	2.5" to 5"	2.5"
Zoysiagrass (Coarse-textured)	<i>Zoysia japonica</i>	1.5" to 4"	1"
Zoysiagrass (Fine-textured)	<i>Zoysia matrella</i>	1.5" to 2"	0.75"

*Reel mowers will allow for a lower height of cut (HOC) than a rotary mower. In some cases, it may be desirable to maintain a shorter mowing height (~1.5 inches) when a reel mower is available, depending on desired aesthetics and functionality of a particular site. However, it should be noted that when using a reel mower to maintain a lower height of cut, more frequent mowing—sometimes three times per week—is often required.

16




2. Follow the 1/3 Rule

To avoid accidental scalping or injury, avoid removing more than 1/3 of the total canopy height in a single mowing.

When possible, mow in response to the rate of growth.

- Growth rate will change throughout the year in response to **temperature, moisture, and nutrient inputs.**
- In response, mowing frequency will change as well in order to follow **The 1/3 Rule.**
- When areas become **overgrown**, mow multiple times to *gradually* decrease the height.

17







3. Mulch Your Clippings


- Clippings are a significant source of nutrients.
- Mulch clippings to reduce nitrogen requirements by as much as 50%!
- Avoid leaving behind piles - rake clippings out for better coverage.

18

4. Choose efficient irrigation options

Fixed Spray	Multi-stream Rotary Nozzle	Rotor Head	Drip Irrigation
			
Output: Up to 3 GPM Small Droplets Generally Least Efficient, But Most Common	Output: Up to 1.5 GPM Low Precipitation Rate More efficient Good for smaller areas (~15 ft or less)	Output: Up to 9 GPM Lower Precipitation Rate Can Cover 4x Area of Spray Large Turfgrass Areas (~30 ft or greater)	Much lower pressure 20 to 40 PSI Up to 90% Efficient

19



5. DON'T SET IT AND FORGET IT.

20

6. Learn your precipitation rate.



Catch Can Test

- ruler
- tuna fish or coffee cans
- stop watch
- 15 minutes

21

7. WATER DEEPLY AND INFREQUENTLY

Watering deeply (~6 inches) and less frequently promotes deeper, more vigorous root growth.

2x per week more than enough!

Shallow, too frequent Deep, Infrequent



22

8. CYCLE AND SOAK

Program irrigation systems to cycle 2 to 4 times with 30-60 minute rests.



23



Midday watering leads to higher evaporative losses.

9. WHEN POSSIBLE, WATER IN THE EARLY MORNING HOURS

Evening watering can promote plant disease.

24

10. Don't guess, soil test

- pH
- Conductivity (salinity)
- Nutrient availability

~6" depth

10 – 15 subsamples

Sample lawn & garden areas separately

DON'T GUESS, SOIL TEST!
SOILTESTING.TAMU.EDU

SOILTESTING.TAMU.EDU IS YOUR ONE-STOP SHOP FOR EVERYTHING YOU NEED TO GET YOUR SOIL SAMPLE SUBMITTED TO TEXAS A&M AGRILIFE SCIENTISTS FOR TESTING.

25

11. Apply fertilizer when turfgrass is *actively* growing

Particularly for quick-release products

- Spring applications can be made after warm-season turfgrass has been **mowed twice**.
- Final N applications should be made no later than around 6 weeks before the historic first frost date
- For quick-release N, do not exceed 1lb N/1000 sq ft in a single application to avoid injury

26

12. Keep Fertilizer on the Lawn

Avoid accidental application onto impervious surfaces like sidewalks and driveways

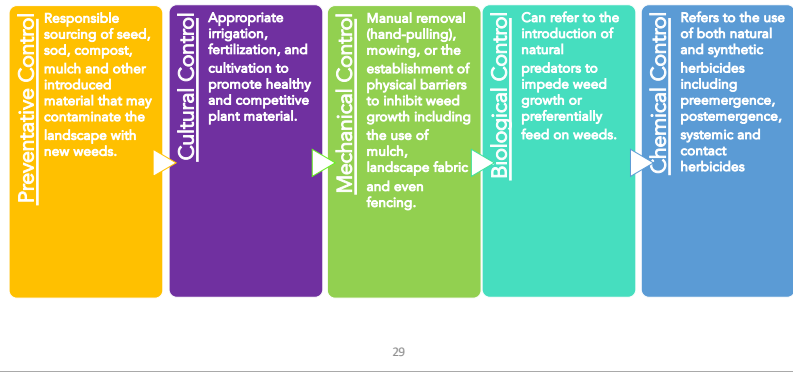
- Misapplication of fertilizer onto impervious surfaces increases nutrient contamination of storm water
- Sweep granules back onto the turf
- Avoid liquid overspray onto pavement

27

13. Know your pests. Don't spray without proper identification and research.

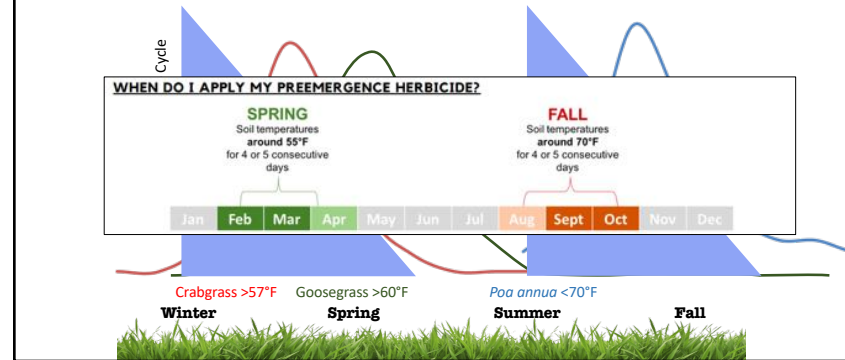
28

14. IPM all the way!



29

15. Preemergents are handy



30



16. Enjoy it!

31



32