Bermudagrass is a warm-season grass that produces many above ground runners (stolons), and below-ground runners (rhizomes). It is medium to fine textured and is very fast growing when it receives enough sunlight and fertilizer. There are both seeded and vegetatively propagated varieties available. In general, the sterile hybrids are finer, denser and darker green in color.

Popular vegetative varieties include: Tifway (also known as 419), TifSport, Celebration, and TifGrand. Some popular seeded varieties are Princess-77, Riviera, Sahara, and Bermuda Triangle (a blend).

Bermudagrass can be a very invasive weed. Its below ground rhizomes allow it to spread unseen, only to pop up in flower beds, gardens and other turfgrass areas. It is very sensitive to shade, however. In anything less than full sun, bermudagrass will slow its growth and become thin and prone to infestation by weeds. It will not survive under trees or in heavy shade from buildings. Varieties of bermudagrass with improved shade tolerance are available, but even the most shade tolerant bermudagrasses will do better in full sun.

Bermudagrass does best when mowed short. Mow it at 1-2 inches for best results. When mowing, be sure to use a sharp blade and mow often enough so you do not cut off more than one third of the leaf blade at any given mowing.

Bermudagrass requires a fairly high amount of nitrogen in order to maintain the best quality. Unlike centipedegrass, bermudagrass will thrive when fertilized monthly at a rate of one pound of nitrogen per 1000 square feet.

Bermudagrass is a favorite host for fall armyworms and can be susceptible to nematode problems on sandy soils. It will tolerate winters in Alabama with few problems most years. It also has excellent drought tolerance when its root system is healthy.

<table>
<thead>
<tr>
<th>Recommended Mowing Height</th>
<th>Recommended Fertilization Rate</th>
<th>Shade Tolerance</th>
<th>Drought Tolerance</th>
<th>Cold Tolerance</th>
<th>Common Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 inches</td>
<td>3-5 pounds of Nitrogen per 1000 square feet per year</td>
<td>Very Poor - Poor</td>
<td>Very Good</td>
<td>Good</td>
<td>Mowed too high, too much shade, soil compaction, thatch</td>
</tr>
</tbody>
</table>

ALABAMA A&M AND AUBURN UNIVERSITIES AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING.

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Zoysiagrass is a warm-season grass that produces many above ground runners (stolons), and below-ground runners (rhizomes). Depending on the variety, zoysiagrass can be coarse, medium or fine textured. There are both seeded and vegetatively propagated varieties available. In general, the vegetatively propagated varieties are more popular because zoysiagrass can take several months to establish from seed.

Some popular vegetatively-propagated zoysiagrass varieties include the coarse-textured Empire, the medium-textured Meyer, JaMur, Palisades, UltimateFlora, and El Toro, and the fine-textured Emerald, Zorro, Zeon, PristineFlora and BK-7. In general, the coarser varieties are faster growing than the finer-textured varieties. A popular seeded zoysiagrass variety is Zenith. All zoysiagrasses can produce a very dense turf. This helps keep weeds out of the lawn, but can result in excess thatch buildup. Zoysiagrass lawns with thick thatch layers can be especially susceptible to the disease Zoysia patch (large patch) in the spring and fall. Only irrigating when needed to prevent drought stress will help to minimize disease problems.

Mow zoysiagrass at 1 to 2 inches with a rotary mower or a reel mower. Some of the very dense zoysiagrasses and those with very stiff leaf blades will dull a mower blade after only a few mowings. Be sure to keep your mower sharp. Mow often enough so you do not cut off more than one third of the leaf blade at any given mowing.

Zoysiagrass requires a moderate amount of nitrogen in order to maintain the best quality. Be sure to follow soil test recommendations for the amount of potassium and phosphorus to apply, and for lime recommendations, if any.

Most zoysiagrass varieties will tolerate winters in Alabama with few problems if they are healthy.

<table>
<thead>
<tr>
<th>Recommended Mowing Height</th>
<th>Recommended Fertilization Rate</th>
<th>Shade Tolerance</th>
<th>Drought Tolerance</th>
<th>Cold Tolerance</th>
<th>Common Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 inches</td>
<td>2-3 pounds of Nitrogen per 1000 square feet per year</td>
<td>Fair</td>
<td>Good</td>
<td>Excellent to Good</td>
<td>Soil compaction, thatch, Zoysia patch disease</td>
</tr>
</tbody>
</table>

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Centipedegrass

David Y. Han, Extension Specialist, Turfgrass Management

Centipedegrass is a warm-season grass that produces above ground runners (stolons), but no below-ground runners (rhizomes). It is coarse textured and a very light green color. Its natural color has often been compared to that of a Granny Smith apple.

Centipedegrass can be established both from seed and vegetatively. Although seed is available, many centipedegrass lawns are established using sod since centipedegrass is very slow to germinate and establish.

Centipedegrass is slow growing and does best under low nutrient conditions. In particular, centipedegrass requires low nitrogen levels in order to thrive. The most common mistake most homeowners make with centipedegrass lawns is fertilizing them too much. However, on poor soils with no fertilization, centipedegrass can be very competitive and crowd out other grasses and weeds. In no case should you fertilize centipedegrass with more than one pound of nitrogen per 1000 square feet per year.

Centipedegrass is also one of the most tolerant turfgrasses to acidic soils, but it can also grow in neutral or slightly alkaline soil.

Centipedegrass suffers from several insect pests, most notably spittlebugs. Infestation is noticeably less when centipedegrass is mowed at 1 ½ inches or lower. When mowing, be sure to use a sharp blade and mow often enough so you do not cut off more than one third of the leaf blade at any given mowing.

Centipedegrass has only fair cold tolerance, and care should be used when planting in the extreme northern parts of Alabama, especially at higher elevations and in exposed areas. A new variety, TifBlair, has much improved cold tolerance and should be considered for colder areas. Other improved varieties include Hammock and Covington.

<table>
<thead>
<tr>
<th>Recommended Mowing Height</th>
<th>Recommended Fertilization Rate</th>
<th>Shade Tolerance</th>
<th>Drought Tolerance</th>
<th>Cold Tolerance</th>
<th>Common Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ½ inches</td>
<td>0 –1 pounds of Nitrogen per 1000 square feet per year</td>
<td>Fair</td>
<td>Good</td>
<td>Fair</td>
<td>Too much fertilizer, mowed too high, spittlebugs</td>
</tr>
</tbody>
</table>

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St. Augustinegrass is a warm-season grass that produces above ground runners (stolons), but no below-ground runners (rhizomes). It is coarse textured and dark green in color. It produces a very dense turf, but most varieties cannot stand short mowing.

St. Augustinegrass is fairly fast growing and has good shade tolerance for a grass. It has the best shade tolerance of all the warm-season grasses, but does perform well in full sun, although hot and dry locations are favored by the most common insect pest of St. Augustinegrass, chinch bugs. Chinch bug infestation is noticeably less in cooler and moister locations. Some varieties have been released with resistance to chinch bugs, although over time, chinch bugs have been known to overcome this resistance.

Popular varieties of St. Augustinegrass include Raleigh, Palmetto, Sapphire, DeltaShade, Captiva, Floratam, and Classic. These varieties are all only vegetatively propagated; there are no commercial seeded varieties of St. Augustinegrass.

St. Augustinegrass requires a moderate amount of fertilizer (2-4 pounds of nitrogen per 1000 square feet per year). Be sure to follow soil test recommendations for the amount of potassium and phosphorus to apply, and for lime recommendations, if any.

Most St. Augustinegrass varieties should be mowed at 3 to 4 inches. There are a few dwarf varieties that will withstand closer mowing. When mowing, be sure to use a sharp blade and mow often enough so you do not cut off more than one third of the leaf blade at any given mowing.

St. Augustine has only fair cold tolerance, and care should be used when planting in the northern parts of Alabama, especially at higher elevations and in exposed areas. In these areas, a more cold-hardy grass might be a better choice.

<table>
<thead>
<tr>
<th>Recommended Mowing Height</th>
<th>Recommended Fertilization Rate</th>
<th>Shade Tolerance</th>
<th>Drought Tolerance</th>
<th>Cold Tolerance</th>
<th>Common Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-4 inches (2 ½ -3 inches dwarf varieties)</td>
<td>3-4 pounds of Nitrogen per 1000 square feet per year</td>
<td>Moderate</td>
<td>Good</td>
<td>Poor-fair</td>
<td>Chinch bugs, brown patch, soil compaction, thatch</td>
</tr>
</tbody>
</table>

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