St. Augustinegrass

St. Augustinegrass is a good choice for a low-maintenance lawn in shady, low-traffic areas. It should remain free of weeds, insects, and fungal diseases if it is not overwatered, overfertilized, or cut too low.

Known to botanists as *Stenotaphrum secundatum* (Walt) Kuntze, St. Augustinegrass is often called “buffalo grass” in Hawaii and the South Pacific, but it should not be confused with true buffalograss (*Buchloe dactyloides*), which is a fine-textured prairie grass. The Hawaiian name for St. Augustinegrass is *manienie-haole* or *akiaki-haole*. It was first used as a lawn grass in Hawaii in 1816.

St. Augustinegrass is native to the coastal regions of both the Gulf of Mexico and the Mediterranean and is widely adapted to subtropical regions. It is one of the most commonly used turfgrasses in urban and coastal areas of Florida and California. It is often used in Hawaii for commercial office building sites, shopping plazas, and residences, particularly when the lawns are shaded.

St. Augustinegrass produces a very dense, dark blue-green turf and is well adapted to most soils. The coarse, broad leaves form a thick, spongy turf, a texture which some people find objectionable. It has good salt tolerance and tolerates shade better than most other warm-season turfgrasses. It spreads rapidly by above-ground stolons, tends to be shallow-rooted, and therefore does not withstand drought conditions as well as some other turfgrasses. It is prone to excessive thatch buildup when given large amounts of nitrogen fertilizer and frequent irrigation.

Once established, St. Augustinegrass chokes out most weeds, but it has fairly poor tolerance of wear. It is a low-maintenance turf, requiring much less time and care than other grasses (for example, bermudagrass).

The major insect pest of St. Augustinegrass in Hawaii is the chinch bug. If left untreated, this pest can destroy an entire lawn in a matter of months.

### Cultivars
The most common cultivar in use in Hawaii is ‘Floratine’, which has a purple stigma and is finer textured and darker green than the common type. Other cultivars, including some of the newer semi-dwarf and insect resistant varieties, are also available.

### Establishment
St. Augustinegrass is established by vegetative propagation because its seeds have poor germination and do not remain true to type. It is a stoloniferous grass (with above-ground stems) and can be planted by sod, sprigs, or plugs. It is not effectively propagated by broadcasting stolons. Plugging, the most common establishment method, and sodding are very successful if the site is properly prepared before and maintained after planting. Unwanted vegetation should be removed with a non-selective herbicide (Roundup™ or Finale™). A soil test should be taken to determine the pH and nutrient status. The soil should contain a minimum of 480 ppm potassium (K) and 150 ppm phosphorus (P) for a quality St. Augustinegrass turf. The pH should be between 6.0 and 8.5. Fertilizers and soil amendments should be applied as needed and tilled into the soil.

If sprigging or plugging is done, well rooted sprigs or 3–4 inch square sod plugs should be planted on 12-inch spacing followed by an application of a pre-emergence herbicide. A final topdressing of a composted organic material provides beneficial micronutrients and helps to keep the surface moist during establishment. The new planting should be watered for short periods several times a day until the lawn has grown in.

### Mowing
St. Augustinegrass is easily maintained using a rotary mower. The recommended mowing height is 3–4 inches. The newer semi-dwarf varieties have a lower growth habit and are mowed at 1½–2 inches. Mowing frequency should be adjusted so that no more than one third of the leaf blade is removed with any one cutting. Mowing too low reduces the quality, density, and vigor of the lawn. Weed problems in St. Augustinegrass can usually be attributed to low cutting height and improper watering.

Grass clippings can be left on the lawn that is mowed at the proper height and frequency. Under these conditions, clippings do not contribute to thatch buildup and will help to recycle nutrients in lawns maintained with low to moderate soil fertility levels.
Watering
Although St. Augustinegrass is not as drought tolerant as some of the other warm-weather turfs, the best way to irrigate a St. Augustinegrass lawn is on an as-needed basis. A thorough watering should be applied when 30–50 percent of the lawn begins to show the first sign of wilting. The turf will fully recover within 24 hours. However, it is important to avoid even short periods of advanced wilt. This irrigation schedule works well for any soil type or environmental condition and helps to reduce mowing and thatch buildup. Proper watering helps develop a deeper root system and encourages greater resistance to pests and environmental stress.

Fertilizer
A St. Augustinegrass lawn of acceptable quality can be grown with either a low or a high level of soil fertility, depending on what the homeowner wants. A low-fertility lawn is best for those with little time for or desire to do lawn maintenance. A high-fertility lawn is better for those who find a low-fertility lawn unattractive and have more time for lawn care. A low-fertility lawn of this grass should receive at least one application per year of a complete fertilizer with micronutrients, at a rate of one pound of nitrogen per 1000 square feet. It is best to leave the clippings on these lawns to recycle the nutrients.

A high-fertility lawn should receive three to four applications per year of a complete fertilizer at a rate of one pound of nitrogen per 1000 square feet at each application. A slow-release, nitrogen-only fertilizer may be substituted for the complete type on alternating applications. This regime will require more frequent mowing and more water but will result in a high-quality lawn. Care must be taken not to overfertilize—more is not better! High levels of nitrogen lead to excessive thatch buildup, which invites insect problems.

Weed control
The best approach to weed control is a healthy, vigorous turf maintained under the recommended conditions. If a herbicide is needed, be careful to apply the right one, because St. Augustinegrass is sensitive to some types. Never use MSMA or CMA, because they will cause severe damage. Always read the entire label before applying any herbicide and do not apply if the turf is under moisture stress or the temperature is over 85°F.

Broadleaf weeds in St. Augustinegrass are best controlled with either Weed-B-Gon for Southern Lawns™ or Trimec Southern™. For green and white kyllingas and purple nutsedge (nutgrass), the best choices are Image™ or Manage™. Both of these may temporarily cause stunting and discoloration of the lawn. Several preemergence herbicides will control weeds dispersed by seed. Refer to the CTAHR publication “Chemical weed control recommendations for turfgrasses in Hawaii” (no. II-20) for more information.

Insects and diseases
The major insect pest of St. Augustinegrass is chinch bug. Some populations of this insect on the U.S. mainland have become resistant to organophosphate insecticides. Two varieties of St. Augustinegrass, ‘Floratam’ and ‘Floralawn’, are resistant to chinch bug invasion. Other possible insect pests include the webworm and armyworm. High levels of nitrogen fertilizer encourage insect problems.

Brown patch and gray leaf spot can be disease problems. Brown patch is more likely to occur in warm, humid weather and is encouraged by excessive nitrogen fertilizer application. Gray leaf spot is more prevalent during rainy periods and is encouraged by overwatering. Both diseases can be controlled with fungicides if necessary.

Thatch buildup
Thatch is the layer of undecomposed leaf blades, stolons, roots, and crowns intermingled with the soil surface. Contrary to common belief, return of mowing clippings does not cause thatch. Excessive thatch develops when the lawn is overfertilized, overwatered, and improperly mowed. If the thatch layer exceeds one inch, remove it by vertical mowing. Special equipment is required for this process and may result in a damaged turf, which will need a period of recuperation. Remove the debris by raking and then fertilize and irrigate well. If fertilization and watering are controlled, there will be little need for periodic de-thatching.

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