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Turf
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St. Augustine Grass Lawns

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St. Augustine grass (*Stenotaphrum secundatum*) is a turf-grass widely adapted to the warm, humid regions of the world such as Guam. Its large and fast-spreading stolons are easy to cut around flower beds and shrubs, either by hand or with a piece of turf equipment called an edger. This characteristic makes St. Augustine grass a desirable choice for many home-owners and landscapers. It can be successfully grown in a wide variety of soils and under proper maintenance and a mowing height of 2-3 inches, it produces a dark-green, dense turf with exceptional shade tolerance. The shade tolerance of St. Augustine grass is superior to that of all other tropical turf-grasses. On the other hand, St. Augustine grass has poor tolerance for heavy traffic and is quite often infested by insects, mostly by leaf chewing caterpillars. Weed control in St. Augustine grass is somewhat challenging and few herbicides effectively control weeds without injuring the turf. For that reason, the best weed control is frequent mowing. St. Augustine grass needs watering, especially during the dry season. Planting material on Guam is still not commercially available. Lawns are often planted by obtaining plugs from friends and neighbors.

Establishment

St. Augustine grass must be established by vegetative propagation in the form of sod, sprigs, or plugs because its seeds are usually not viable. Numerous varieties of this species are available around the world but on Guam 'Florida' and 'Texas common' seem to dominate.

Soil Preparation

Proper soil preparation is essential for successful establishment of a lawn. Grasses and other weeds that are hard to control should be treated with herbicide such as Roundup (glyphosate) before planting. Especially on larger areas, cultivation by plowing or rototilling to six inches would be helpful to establishing and maintaining a healthy turf. After leveling the area and collecting rocks bigger than golf balls, soil test can be performed to determine fertilizer recommendation. If you wish to use a general rule of thumb (without testing soil), mix 4-5 lbs of 15-15-15 fertilizer per 1000 sq. ft. into the top 4-6 inches while raking or harrowing the area to smooth the surface before planting.

Figure 1. A lawn with St. Augustine grass.

Figure 2. St. Augustine grass.

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Sprigging & Plugging

Planting with sprigs and/or plugs requires more time and labor than seeding. Runners (stolons) with at least two nodes (joints) can be planted every 4 to 6 inches in rows dug 8 to 12 inches apart (closer spacing will provide quicker cover). After planting sprigs 1 to 2 inches deep, leaving a portion exposed to light, firm the soil to insure a good soil- plant contact. Sprigs can also be broadcast over the soil and top-dressed with ½ inch of soil.

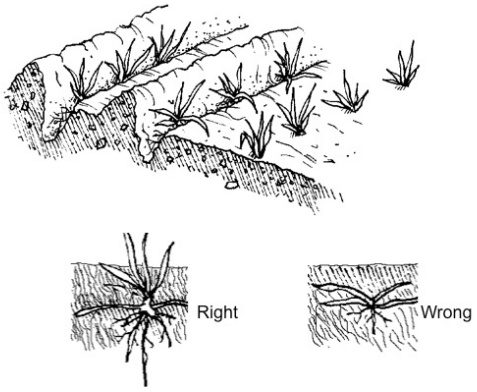

Figure 3. Sprigging.

To plug St.Augustine grass, cut sod in 2 x 2 inch squares and plant on 6 to 12 inch centers (closer spacing will provide quicker cover). Keep the soil moist, but not soggy, until new growth appears. Begin mowing to a height of 2 inches. Be sure the mower blades are sharp and do not mow when the grass and/ or soil is wet.

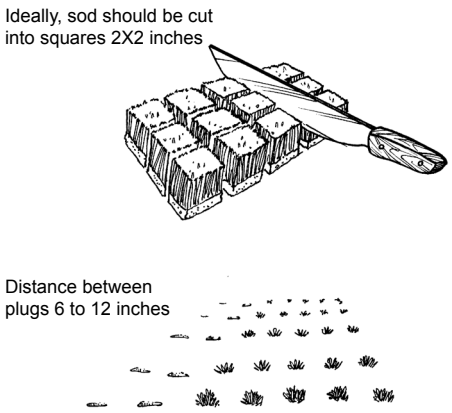

Figure 4. Plugging.

The rate of initial coverage from seeding, sprigging or plugging can be increased by fertilization. After new growth is seen, apply a fertilizer that is high in nitrogen at a rate of 1 lb nitrogen per 1000 sq. ft. This fertilizer application can be repeated every four weeks.

Maintenance

Fertilization

A fertilization program of larger areas should be based on soil test analyses. High rates of fertilizer, especially nitrogen, will produce a dark green color but will also lead to growth problems, especially development of excessive thatch. One pound of nitrogen per 1000 sq. ft. twice year would be needed if excellent appearance of St. Augustine grass is desired. Although in many situations it will grow satisfactory with even less fertilizer. It is the best to apply fertilizer 2 times a year using a fertilizer with a 3:1:2 nitrogen-phosphorus-potassium ratio. The fertilizer should be applied evenly over the area when the grass leaves are dry. Use a spreader and use a two-direction application at right angles to each other. This practice assures uniformity of coverage and prevents accidental skips.

Mowing

Proper mowing is essential to maintaining healthy, attractive turf. St. Augustine grass should be mowed at 3 inches. Use a rotary mower with sharp blades and mow often enough so that no more than one-third of the plant height is removed. High and infrequent mowing tends to encourage thatch development, which can lead to yellowing and susceptibility to drought, stress, and diseases.

Irrigation

Irrigation during periods of moisture stress will keep St. Augustine grass healthy. Water when the grass shows signs of moisture stress such as rolling of leaves, grayish color or wilting. Apply enough water to thoroughly wet the soil to a depth of 6 to 8 inches. Early morning is the best time to water since evening watering can encourages disease development.

Thatch
Thatch is a layer of dead plant material, which accumulates on the soil surface. St. Augustine grass is susceptible to thatch buildup because its stolons (runners) are slow to decomposition, thick and abundant. When fertilized extensively, rapid stolon growth leads to the development of a soft and spongy layer that makes mowing difficult and promotes development of diseases and insects. Thatch control is not easy and often requires special machines. The key is to discourage thatch development by avoiding excessive fertilization.

Pest Problems
A dense, healthy turf obtained through proper fertilization, mowing and watering is the best defense against pest problems. However, when problems arise from unwanted insects, diseases, or weeds, good control is dependent upon proper pest identification and treatment.

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