AGRONOMY BIOLOGY PLANT MATERIALS RANGE WOODLAND

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ST. AUGUSTINEGRASS AND CENTIPEDEGRASS SOD PRODUCTION

Establishment

Soil Preparation

Proper soil preparation eliminates surface compaction, provides better air and water movement, and enhances deep rooting. Preparation includes removal of trash, rototilling or plowing (discing), fine grading, and light rolling. Soil analyses may indicate the need for pH adjustment or a basic fertilizer (e.g. 0-20-2) for correcting phosphorous deficiencies. Fumigation for pest control, and planting certified vegetative material (if available) is strongly recommended.

Planting

St. Augustine grass (Stenotaphrum secundatum). Sprigs or plugs can be planted once soil preparation is complete. The more vegetative material used, the faster the coverage. If plugged on one-foot (30 cm) centers and maintained with proper fertilization and irrigation, a sod crop should be produced in 12 to 14 months (other factors may shorten or lengthen this time).

Centipedegrass (Eremochloa ophiuroides). Vegetative or seeded plantings can be made. Vegetative plantings can be sprigged or plugged. As with St. Augustinegrass, the more vegetative material used, the faster the coverage.

If seeding, use as much seed as is economically feasible. The optimum seeding rate would be 200 lb/acre (244 kg/ha), but economics prohibit this. At a minimum use 10 lb/acre (11.2 kg/ha), which is equivalent to the suggested home lawn rate of 0.25 1b/1000 sq ft (1.25 g/m2). Low seeding rates mean a longer time until sod maturity. The purchase of good quality seed is essential. Insist on scarified seed with 95 percent purity and 85 percent germination as a minimum. Seed should be sowed, worked into the soil surface to a depth of 0.25 to 0.50 inches (6 mm to 12 mm), and kept moist until seedlings emerge. Dessication will lower viability and reduce seedling stand. Seeding does not allow for the preemergence control of weeds

since any material used will also affect the grass seed. Soil sterilization by fumigation is the only method to eliminate weed competition in a seeded planting.

Fertilization

Soil test for pH~ phosphorous~ potassium and micronutrients. Correct the pH if necessary~ and apply phosphorous based on soil test recommendations prior to planting. Apply 150 to 250 lb of nitrogen/acre (168 to 280 kg/ha) and 120 to 200 lb of potassium/acre (134 to 224 kg/ha) for each crop production year. Applications of fertilizer every 6 to 8 weeks should give optimum efficiency. At least two applications of micronutrients per year is suggested but more may be necessary. A chelated iron source should be applied either separately or in combination with macronutrients. The first application of fertilizer should be at the time of vegetative planting or when seed germination occurs ~ and the second application at the first mowing.

Irrigation

Since this is a production situation, the grass should not lack moisture. Turf will require approximately 2 inches (5 cm) of water per week during the peak growing period for April to' September, but only 0.5 to 1 (1.3 to 2.5 em) inch per week for the rest of the year. Sub irrigation is commonly used, and it works well for most situations. On sandy soils, make certain the turf receives 0.75 inches (2 cm) of water every three days to prevent moisture stress.

Mowing

A mowing height of 3 inches (7.5 cm) is suggested for St. Augustinegrass and 2 inches (5.0 cm) for centipedegrass. Mowing frequency will vary; adjust mowing frequency so that no more than 30 percent of the leaf tissue is removed at anyone mowing. Reel mowers give the best cut, but rotary mowers are acceptable if blades are properly sharpened. Clippings should be returned to recycle nutrients.

Pest Control

Fumigation prior to planting will eliminate pest problems such as weeds, insects, diseases, and nematodes. If soil sterilization is not used, the following guidelines are provided:

Weeds--Selective Control:

St. Augustinegrass:
Preemergent - Atrazine
Postemergent - Asulam
Atrazine
Bromoxynil

Centipedegrass:
Vegetative Plantings:
Preemergent - Atrazine
Postemergent - 2, 4-D, MCPP
Seeded Plantings:
PreemergentNot - recommended
Postemergent - 2, 4-D, with caution at lower rates after 2nd mowing
Nonselective Control:

Glyphosate
Paraquat

Diseases--After diagnosis, consult IFAS Plant Disease Control Guide, Circular 221-F, and Extension Plant Pathology Report No. 29 for control recommendations.

Insects--After diagnosis, consult IFAS Insect Control Guide, Entomology Fact Sheets, 14, 22, 24, 27, 33, Entomology Circular 265, and Extension Entomology Report #51 for control recommendations.

Nematodes--After diagnosis, consult IFAS Nematode Control Guide and Nematology Plant Protection Pointer 18 for control recommendations.

When using any pesticide, follow the label recommendations explicitly.

Harvesting

Sod should be cut when well knit, and with minimum soil adhering to hold the grass together. Never cut sod under moisture stress. With stoloniferous grasses, vegetative material must be left after harvest for regrowth. Strips or ribbons are commonly left between harvested rows. These should be lightly incorporated into the soil by rototilling, and lightly rolled to smooth the soil surface. This is not always done, and although simply leaving strips for growth will produce a new crop, the soil surface will be bumpy for equipment when mowing, fertilizing, and harvesting sod. This can be minimized by harvesting the second crop at right angles to the first.

Equipment

Equipment for sod production is expensive. Specialized harvesting equipment is a must unless harvesting is contracted out. Spray equipment, designed to deliver given volumes at given pressures for optimum efficiency of application and coverage, is also required. Mowing is a critical part of the operation. Tractor-drawn reel units are preferred for quality of cut, but rotary units provide an acceptable cut if the blades are kept sharp. Tractor-drawn equipment will allow large areas to be mowed rapidly, thus reducing labor input. Mowing equipment must be kept sharp and well adjusted to minimize turf injury. Turf equipment is highly specialized and requires mechanics who are trained in maintenance and repair. Repair facilities need to be maintained and stocked with tools, equipment, and a supply of parts.

Summary

Sod production is atypical of many other agronomic systems. Production and marketing considerations must be closely scrutinized for potential within a given locality. For further information, contact the Florida Cooperative Extension Service Agent in your county.

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