

Crop Profile for Sod in Rhode Island

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General Production Information

Sod production in Rhode Island is a 16 million-dollar industry. The average wholesale value of sod is approximately \$.20 per sq. ft. Nationally sod production in RI is ranked behind New Jersey, Michigan and Maryland as far as square footage of harvested sod, however, a stronger marketing program is in place in Rhode Island due to competition from nearby states. Presently there are 4,000 acres in the state devoted to sod production. Approximately 1,500 - 2,000 acres is available for harvest at any one time due to the 12-18 months growing cycle. The average farm size is approximately 90 acres. Cultivar selection of turfgrass has changed over the years. Ten years ago, blends of Kentucky bluegrass mixed with small amounts of rye and fine fescue were prevalent. Today growers are producing more customized mixtures with increasing emphasis on fine fescues and perennial ryegrasses. Additionally, increasing amounts of creeping bentgrass sod is being marketed.

Most of these changes are market driven. Competition is strong within the state and throughout New England as well. Growers are forced to produce a quality crop due to this market pressure. In addition to fine tuning cultivar selection, harvesting methods have evolved over the last 10 years. Seamless 4' x 50' rolls have replaced the older standard 3' x 16" rolls of sod, allowing easier installation for end users.

Increased awareness of pests and their life cycles have lead growers toward a more integrated approach to pest management. One innovative IPM approach is used on rolled sod, especially creeping bentgrass. The practice of washing sod can be considered an IPM approach since washing physically removes grubs and other insects, however, the disease susceptibility may be altered adversely by the process and disease incidence exacerbated depending upon the medium the sod is planted on. Use of pesticides is targeted to specific pest problems. In light of these improvements, Rhode Island is an innovative leader in sod production in the Northeast.

Production Regions

The southern part of Rhode Island is where the majority of growers are located. This region comprises outwash plain of deep rich topsoil.

Cultural Practices

Sod provides good cover and stability to soil in the landscape. It is important in preventing soil erosion, improving soil organic matter and enhancing soil microbial populations as well as creating aesthetics to the landscape.

Cultivar selection is an important step in the establishment of sod farm crops. Landscapers are the dominant end users and require sod in the spring and fall for installation of new landscapes. Some growers are producing custom blends of sod for pre-established markets, others are producing Kentucky bluegrass blends for home lawns and playing fields. Mixes of Kentucky bluegrass, fine fescue and perennial rye are produced for fairway use and home lawns since they will withstand shaded conditions. Cultivar selection and use has become much more complex with the abundance of cultivars for all types of turfgrasses. Several growers in the area are producing bentgrass sod for specialized end uses such as golf course greens and tees.

Sod is preferably seeded in the fall, however, it can be seeded at various times during the growing season. Harvest usually occurs in both fall and spring. Given the optimum one-year growth cycle, sod is cycled from fall through the next fall, or spring to spring harvest. In practice, two crops in 3 years is the norm. Mechanical harvest is the norm, cutting and rolling sod for delivery to end-users.

Post-harvest care is crucial since it is a perishable crop. Sod must be lifted and laid within 24 hours and is usually sold within a 150 mile radius of the production fields. Irrigation is common on sod farms in Rhode Island especially near harvest time since it allows for easier cutting and rolling.

Insect Pests

Control of insects in sod is done only when necessary. There are very few if any preventative applications made. The growing cycle of the turf generally prevents establishment of damaging insect populations. The white grub complex (larvae of Japanese, oriental, European chafer, Northern masked chafer, and Asiatic garden beetles) are the main insect problems for sod growers. Other states do not allow shipments of infested turf, and customers also don't want to pay for grub infested turf. A 24C label for Merit (imidacloprid) has been granted to Rhode Island for use on sod farms. Other control options include: Mach 2, Sevin, and Dursban.

Sod may also be infested with cutworms, chinch bugs, sod webworms, and bluegrass billbugs. Rarely do these insects approach population sizes that warrant control.

Diseases

Fungal diseases, especially leaf spot, brown patch and dollar spot are occasional problems and may require fungicide use. Daconil, Chipco 26019, or Mancozeb are used when necessary in curative applications. Bentgrass turf is prone to additional diseases (*Pythium* blight, take-all patch, etc.) and may require preventative treatments with a wider range of fungicides, both contact and systemic.

Weeds

Weed control falls into various types for sod production

1. Annual bluegrass (*Poa annua*)
2. Crabgrasses and other annual grasses (pre- and post-emergent products)
3. Yellow nutsedge
4. Broadleaf weeds.

Pesticides are often used in sod production. Many factors can effect herbicidal activity such as organic matter and soil texture. In sod production, *Poa annua* control is most critical, especially with bentgrass turf. Occasionally growers resort to preplant fumigation with Vapam if *Poa annua* infestation becomes serious. In most lawn turf, *Poa annua* does not present a problem due to higher cutting heights and more tolerance in the home lawn market. *Poa annua* flourishes under close mowing conditions, and its invasion of highly maintained bentgrass turf severely impairs quality.

Crabgrass control can be accomplished in two ways. One is by use of a pre-emergence product such as Tupersan on newly seeded fields. The other is by use of Dimension or Pendimethalin (pre-emergence products) on established grasses.

Broadleaf weed control is routine. Trimec (2,4-D, MCP, Dicamba) or other combination products are often used on established sod as well as other combination products. Buctril is often selected for post-emergent weed management of young broadleaf seedlings on newly emerged turfgrass seedlings.

Nutsedge control is accomplished with Daconate (MSMA) or Manage with the latter being the premier

product.

Postemergence crabgrass products are not generally used since they can temporarily damage sod. Products such as Acclaim Extra can be used if it becomes necessary. A new product on the market, Drive, is showing excellent results in postemergent annual grass control in both young and mature turfgrasses.

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