

# When Where and How to



Intensified production and handling techniques result in a high quality product at a reasonable price. Customers, especially those building new homes, have demonstrated their willingness to pay for instant, carpet-like lawns.

## Sod For Turf

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RAPID industrial and suburban development seems to require that period of "building and mess." Very shortly follows the day for moving in or dedication, when landscaping must be finished. A popular practice at present is the use of "instant turf"—grass sod—to give the landscape an early, beautiful setting.

Well over 50% of new lawns in Michigan are sodded. Sodding has a major advantage over seeding in that it can be done at any time the weather is suitable and the soil can be prepared. This normally means May through October in Michigan. It is particularly advantageous over seeding from May 15 through July, when uniform, weed-free seedings are difficult to obtain. Some sod is even laid during late fall or early winter, which does not permit good "knitting" of the roots into the soil previous to freezing of the soil. Under these conditions, desiccation, the dry-

ing out, of the sod may become a problem.

The use of sod for turf establishment on slopes has a decided advantage in preventing erosion. If the slope is very steep, it may be necessary to peg the sod strips to prevent slippage. Sodding the lawn of a new home can also reduce the dust and mud hazards of a seeded lawn.

Sodding may be more expensive than seeding, depending on location, but the advantages far outweigh the cost factor in the minds of many people in our present affluent society. The rapidly expanding sod production industry, with increased advertising and an improved image, make the buyer more aware of the use of sod for turf establishment as well.

The success of sodding is determined by the quality of sod used, the care taken in laying the sod and its subsequent management.

Quality turf begins with the seed source. Purchase sod from

a reputable sod producer who buys premium quality seed. The presence of weeds, especially weedy grasses such as bentgrass or annual bluegrass (*Poa annua*), can ruin a good quality turf. Quackgrass may also be a problem in poor quality sod obtained in northern climates.

The soil on which the sod was produced is an important consideration for some projects. For example, sod used on football fields should probably be grown on mineral soils of sandy loam or loamy sand texture for best results. This should lead to a turf which is less likely to tear, will allow good water penetration and resist compaction. For general turf use, sod grown on organic soils will establish equally as well as that from mineral soil under desirable environmental conditions.

The trend in Michigan is to the production of Merion buegrass sod on organic soils. At least 15,000 acres are in production on



**A beautiful turf** can be most readily established on sloping areas with sod. Erosion is much less of a problem on terrain of this type.



**Thinning of bluegrass sod** will occur under shady conditions because of susceptibility to powdery mildew.

these soils. The acreage has been increasing between 10% and 20% each year. Organic soils offer such advantages as light weight and larger pay loads, ease of harvest, and good moisture retention. Grass grown on organic soils grows better in midsummer because of the radiation and loss of heat at night, which results in cooler temperatures. The result is a high quality sod.

#### **Select Grass Variety To Fit New Site**

The variety or species of grass should be taken into consideration. Personal preference as well as site and use of the area are important factors in selecting the type of grass to be used. The same principles apply as for establishing turf from seed. Bluegrasses, especially Merion bluegrass, should not be used under heavily shaded conditions because of their susceptibility to powdery mildew. A mixture of varieties and/or species is generally to be desired, because of a wider base for resistance against such diseases as powdery mildew, rust, leafspot and stripe smut.

Good quality sod should be uniform with a dense system of roots and rhizomes. The suggested thickness of roots and soil varies from three-eighths to one inch. It is generally believed that the thinner-cut sod will lead

to fewer management difficulties, once established, although no experimental evidence is available to substantiate this. If cut sod is to be held more than a day before laying, it should be unrolled and kept watered. Rolled or stacked sod may break down rapidly due to heating, especially under high temperature and moisture conditions. In recent years, some sod producers shipping long distances have vacuum-cooled their product to maintain quality. Future research on handling and harvesting techniques will surely lead to greater market potential for sod growers because of longer shipping time and distances.

Soil preparation is one of the most abused steps in the sodding operation because a poorly prepared seedbed can be covered up temporarily. This leads to a poor quality turf ultimately. The soil should be prepared just as carefully as when seeding a new lawn.

Adequate drainage should be provided. In most cases, surface drainage with a very gentle grade ( $\frac{1}{2}$  to 1%) in all directions away from the building will be satisfactory. Any pockets where water will collect should be eliminated. If the soil drains slowly or surface drainage is not adequate, tile drainage may be necessary. This is especially important for areas which will re-

ceive heavy traffic, since excess water will lead to rapid compaction under traffic conditions.

#### **Settling Is Problem In New Lawns**

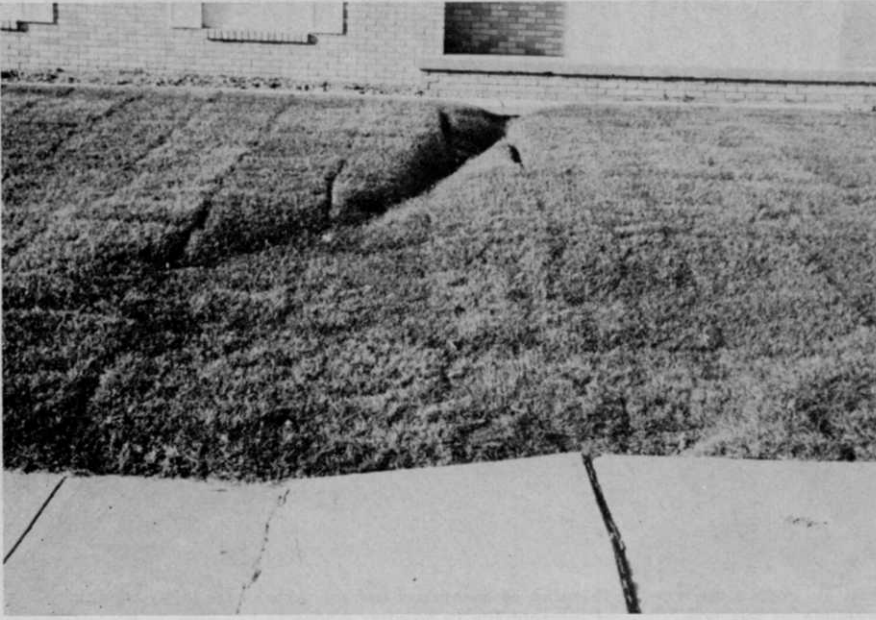
Care should be taken to insure complete settling over tile and sewer lines and around buildings. Many beautiful turfs have been marred by settling in these areas.

If needed to improve soil physical properties, amendments may be added. The most desirable amendment would be a good topsoil, rather high in organic matter, of loam to sandy loam texture. Care must be taken to watch for weeds and weedy grasses in topsoil. A layer of at least six inches of topsoil should be used, unless this material is worked into the base soil. For clay soil, amendments such as peat and sand may be used, while peat and clay loam can be added to droughty, sandy soils. In order to prevent layering of these materials, they should be worked into the soil to a total depth of at least six inches.

In cases where the soil is heavily compacted to a considerable depth, it would be desirable to work the soil as deeply as possible in order to allow natural drainage to take place. Stones, sticks, and other debris should be removed and the soil tilled to break up large clods.

Fertilizer and lime should be





**Expensive repairs** are often necessary to correct improper soil preparation over sewer lines.

applied according to soil needs. A soil test can best give this information. If soil tests are not available, however, a general recommendation would be 15 to 20 pounds per 1000 square feet of a fertilizer such as 12-12-12, which contains approximately equal quantities of nitrogen, phosphate, and potash. The higher phosphate and potash containing fertilizers should probably be continued for a period of two to three years if subsoil is the base on which the sod is laid. Most recommendations suggest mixing the fertilizer with the soil.

Lime should be applied if the pH is below 5.5 to 6, especially for bluegrasses. It is particularly important for the lime to be worked into the soil, at least 4 inches deep, since it will not readily move into the root zone if applied on the surface.

A final raking will probably be needed. The soil is then often rolled to insure level conditions.

Sod should not be laid on dry, powdery soil. Under these conditions, it would be well to water the area one or two days previous to laying, if possible.

The first row should be laid straight, usually in some suitable direction that matches the landscape. Successive pieces of sod can be matched so the joints do not coincide across the yard. Care must be taken in making

sure the edges of the sod are in good contact with each other, yet not wrinkled or overlapped.

A light rolling to bring the roots into good contact with the soil should follow. New roots will likely dry up rapidly if they must grow into air pockets before reaching the soil surface.

The newly sodded turf is not yet established. A thorough watering should follow the final rolling operation. This is the homeowners responsibility. De-

pending on the time of year, subsequent watering may be needed every day to keep the sod moist, until the roots have grown down into the soil. This point is often overlooked, as sod has a tremendous evaporating surface. The available water in a layer of sod is less than  $\frac{1}{4}$  inch. Once established, watering can be reduced to once a week or less, depending on the environmental conditions. Care must be taken not to overwater. Under slow drainage conditions, excess water would limit root growth. Soils containing little sand would also be quite subject to footprints and compaction if too wet.

Once the roots have "knitted" into the soil below, good turf management practices should be followed for the given turf conditions. Special attention may be necessary in providing regular irrigation and fertilization, since the root systems may not be completely developed. This is especially important during the first year when nitrogen may be needed in greater quantities than in subsequent years.

When the base soil is an alkaline subsoil with a pH above 7.5, it may be necessary to use a regular program of iron nutrition until the grass is well established.

**Delay in watering** after the sod is laid can be costly, especially during hot weather.

