

Seeding A Lawn

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When establishing a lawn area, a choice must be made between seeding or sodding. Before selecting seeding as the establishment method, consider both the advantages and disadvantages. The advantages of seeding are:

1. Lower costs.
2. Greater selection of turfgrass species and cultivars.
3. Greater range of available grasses for shade, heavy traffic, wet or dry location, and low maintenance lawns.

Disadvantages are:

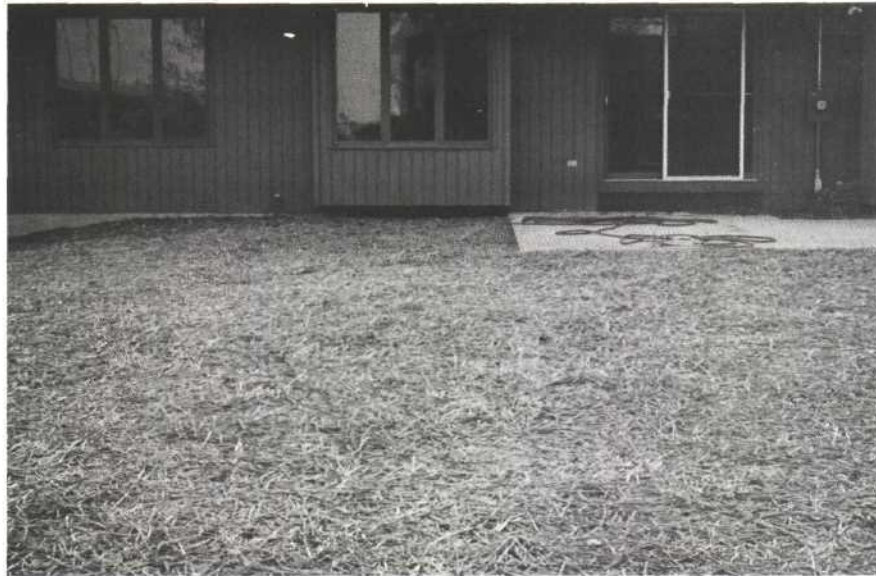
1. Slower establishment requiring more care.
2. Limited establishment period during the season.
3. Increased risk of poor establishment.
4. Greater difficulty in establishing a lawn on sites subject to erosion or heavy wear.

Seeding can provide a satisfactory lawn for a wide range of site conditions, uses, and maintenance levels. To obtain good results and meet these variable conditions, carefully review the following factors:

1. Provide adequate site and soil preparation.
2. Select adapted turfgrass species and cultivars according to site conditions, usage, and maintenance levels.
3. Follow proper steps for establishment.
4. Supply the required cultural care (water, mowing, fertilizing and weed control) during and after establishment.

Site Preparation

Proper site preparation is important in the establishment of a lawn.



A straw mulch stabilizes the seed and soil and conserves moisture, improving germination.

The same practices for establishment can be applied for either seeding or sodding. For detailed information on site preparation, refer to Extension Bulletin E-1401, "Site Preparation for Lawn Establishment." The suggestions which follow are an overview of the preferred practices.

Weedy perennial grasses, such as quackgrass, tall fescue, and bentgrass, should be killed before an area is seeded. Tilling alone will not eliminate these undesirable species. Use a suitable herbicide to eradicate these weedy grasses.

For a fine quality lawn, extensive and deep rooting is important. A porous, well-drained topsoil with good water-holding capacity is desirable. How much is enough? The more, the better—from a minimum of 3-4 inches to a preferred 6 inches. If an adequate depth of top-

soil is not already spread on the site, additional topsoil can be purchased. Avoid using topsoil contaminated with troublesome weedy grasses such as quackgrass. Do not use fine textured, dark muck as a topsoil because, being an organic soil, it breaks down too quickly. Good topsoil need not be black in color.

Do not simply apply a thin layer (less than 3 inches) of topsoil without tilling into the soil below. A shallow layer becomes a barrier to rooting and drainage, making it difficult to maintain a healthy lawn.

If adequate topsoil is not available there are alternatives for improving sandy soils or clay subsoils. Sandy soils have a low water-holding capacity that can be improved by working 2-3 inches of loamy topsoil or fibrous peat into the soil to a 6 inch depth. Fine textured clay subsoils present a more common and

SEED COMPANY	
ADDRESS	
LOT NO. 111	
TEST DATE: 1/14/81	
GRASSES	
34.62% Adelphi Kentucky bluegrass	80% Germination
37.33% Baron Kentucky bluegrass	80% Germination
21.97% Glade Kentucky bluegrass	75% Germination
OTHER INGREDIENTS	
1.19% Other Crop Seed	
4.67% Inert Matter	
0.22% Weed Seeds (none noxious)	

Fig. 1. A sample of what should appear on a certified seed label.

difficult problem. These soils compact easily and are not favorable for root development. To improve these soils, apply 2-3 inches of sandy topsoil, or 2 inches each of coarse sand and fibrous peat, and mix into the existing soil to a 6 inch depth.

If topsoil or amendments (sand, peat) are not used, loosen the existing subsoil to a 4 to 6 inch depth. Grading and traffic on the site often leave the soil highly compacted and undesirable for seeding. Tilling the soil will reduce this compaction and improve root growth. Before tilling the soil, be sure it is dry enough to work without forming clods. The site can be tilled in much the same way as when preparing a garden. Break up large clods and remove sticks, stones and other debris.

Have your soil tested and apply fertilizer and lime as indicated. A soil test is available from your County Cooperative Extension Service. If you cannot get a soil test, apply 15-20 pounds of 10-10-10 or 12-12-12 per 1,000 square feet. Do not use lime unless indicated by a soil test. Incorporate this fertilizer into the upper 3-4 inches of soil. Complete the preparation process by smoothing the surface. Pay special attention to firming the soil over pipes and tile lines. Water thoroughly and allow time for set-

ting, with the finished grade about 1½ to 2 inches below walks and drives.

Turfgrass Selection

The establishment of a satisfactory, permanent lawn requires the selection of adapted turfgrass species and cultivars. An inferior quality lawn or failure to establish a lawn will result if the grasses selected are not adapted to the environment, level of maintenance, or use. In Michigan only a few species of grasses are useful for a lawn. They include Kentucky bluegrass, fine-leaved fescue and perennial ryegrass.

Seed Package Labeling

The seed label is a buyer's guide for purchasing quality seed. Check the label to determine the species or cultivars in the package. Also check the percentage of (a) pure seed, (b) other crop seed, (c) weed seed and (d) inert matter. The price of a seed package is usually determined by its varietal composition, germination and purity. The current market supply of the included grasses is an important cost factor. A low priced, rapid establishing seed mixture is a poor buy if it contains large portions of temporary and weedy perennial grasses unsuited for a permanent, quality lawn. Figure 1 is a

sample of what should appear on a certified seed label.

Selecting the Appropriate Turfgrasses (Blends and Mixtures)

The location of a lawn may include a wide range of soil and environmental conditions. Mixtures and/or blends of desirable turfgrasses are advantages for adaptation to varied conditions.

A blend is a combination of two or more cultivars of the same species, such as Adelphi and Baron Kentucky bluegrass. It is usually suited to a broader range of soils, environments, and cultural intensities than a stand of a single cultivar. In addition, blending generally reduces the incidence of disease.

A seed mixture is composed of two or more different turfgrass species. For example, a combination of Kentucky bluegrass and fine-leaved fescue is a mixture. Its chief advantage is that each species within the mixture will be better adapted to certain conditions than the other components. Shade, sandy soils, poorly drained soils or low maintenance are conditions which require specific turfgrass mixtures. Two important criteria in selecting components for a mixture are the degree of shade, and level of cultural care.

The guidelines in Table 1 should help to determine the appropriate turfgrasses for most lawns.

Seeding Methods

In Michigan, moisture and temperature conditions are most favorable for establishment during late summer. The preferred time to seed is between August 15 and September 15 in southern Michigan, and between August 10 and September 1 in northern Michigan. Gentle fall rains are conducive to turfgrass establishment with minimal weed competition. Turfgrass areas seeded later in the fall may fail if the seedlings have insufficient growth to survive the winters. A dormant seeding after early November is acceptable because low temperatures will prevent germination until the following spring. An alternate time for seeding is early spring. Both spring and mid-

Table 1. Guidelines to help determine the appropriate turfgrasses for most lawns.

Site Conditions	Amount of Care	Potential Quality	Grasses (% by weight)	Seed per 1000 sq. ft.
Sun	Above average	Excellent	Blends of Improved Kentucky Bluegrass Cultivars	100% 1.5-2.5 lbs.*
Sun	Below average to average	Fair to very good	Kentucky Bluegrass Fine Fescue Improved Perennial Ryegrass	30-40% 60-40% 10-20% 3-4 lbs.*
Shade	Average	Good	Kentucky Bluegrass (shade adapted cultivars) Fine Fescue	40-50% 60-50% 2-4 lbs.*
Shade (very wet)	Below average	Fair	Kentucky Bluegrass Fine Fescue Rough Bluegrass	40-50% 30-30% 30-20% 2-3.5 lbs.*
Sun (heavy traffic)	Average	Good to very good	Kentucky Bluegrass (improved) Perennial Ryegrass (improved)	40-60% 60-40% 4-5 lbs.*

*For additional information on currently recommended cultivars (varieties), refer to Turfgrass Mimeo No. 1, "Recommended Turfgrass Species and Cultivars for Michigan." This can be obtained from your county Cooperative Extension office.

summer seedings are often unsuccessful because of high temperatures, lack of moisture, and competition from weeds, particularly annual grasses.

Proper seeding means uniform distribution of seed at the recommended rate. It is best to seed when wind activity is minimal because of the light, chaff-like nature of turfgrass seeds. Seed one half of the total amount to be applied in one direction and the remaining half at a right angle. Use a cyclone or drop-type spreader for seeding. After seeding, rake lightly to mix the seed into the top 1/8 - 1/4 inch of soil. An inverted metal or bamboo leaf rake dragged over the seedbed is excellent for this job. Roll the seedbed to insure good seed-to-soil contact.

Apply a straw mulch to provide consistent moisture and cool temperatures during the establishment period, and to reduce soil erosion and displacement of the seed. Oat straw is preferred on fall seedings because volunteer oat seedlings will be killed during the winter. Approximately one bale of straw should cover 500 square feet of seeded area. Spraying the straw with water after it is spread will help stabilize the mulch under windy conditions. On steep areas where erosion is a problem, burlap or twine netting can reduce washing of the seed and soil.

Watering is one of the most important practices for effective turfgrass establishment. The soil surface should always be kept moist because young seedlings can die within a few hours if water is not available. A light sprinkling several times a day is best. Apply water lightly to avoid displacement of seeds.

When the grass seedlings are 1 1/2 to 2 inches tall, remove approximately one-half of the straw. In a spring seeding, the remaining straw will decompose during the season. In a fall seeding, the remaining straw should be removed prior to snowfall if erosion will not be a problem. Redistribute windblown piles of straw to prevent smothering of the grass. Burlap, cloth or netting do not need to be removed.

Hydromulch Seeding

In hydromulch seeding, a mixture of seed, fertilizer, water, mulch and a binder are applied from a spray tank onto a prepared seedbed. This hydromulch mixture provides an excellent medium for germination and rapid establishment. The water holding capacity of the hydromulch reduces the need for irrigation during the establishment period. This cover also helps stabilize moderate slopes. The guarantee of satisfactory results, provided by most seeding companies, is an additional benefit to homeowners.

Post-Establishment Care

Mow a newly seeded turf when the grass is 2 1/2-3 inches tall. Mow to a height of 1 1/2 to 2 1/2 inches. The mower must be sharp so the grass is cut cleanly, and the plants are not pulled out of the ground.

When the grass seedlings reach a height of 1 1/2 to 2 inches, an application of a high nitrogen, turf fertilizer will enhance establishment. The first number on the fertilizer bag is a measurement of the nitrogen content, so a suitable fertilizer would be a 30-4-4 or a 23-4-6. Apply this fertilizer at one-half the application rate recommended on the bag, and water immediately to prevent possible foliar burn.

Broadleaf weeds that germinate during the establishment period can seriously compete with the developing grasses. Herbicides can be used to control these weeds. However, to avoid injury to the lawn, apply the correct herbicide at the appropriate time.

Water will continue to be a prime concern for a new lawn. About one inch of water per week (rainfall plus irrigation) is required to maintain a quality lawn. July and August are especially critical periods when watering may be necessary.

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