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Lawn Renovation – Turf Tips

Michigan State University Extension Service

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Many lawns deteriorate due to improper maintenance, disease or insect damage that results in bare or thin areas. However, steps can be taken to improve these lawns.

The cause of deterioration or damage should first be determined to avoid the same problem in the future. If the area has good drainage and contours, and the topsoil is of a desirable texture, some method of renovation can be used to improve the lawn. Renovation refers to any practice beyond routine maintenance used to improve a deteriorated or damaged lawn. It can be as simple as seeding small bare spots or as complex as overseeding the entire lawn. Areas that need soil modification and/or recontouring should be reestablished rather than renovated.

Late summer through early fall is the best time to renovate a lawn. Gentle rains and cool temperatures are conducive to seed germination and turfgrass growth along with reduced weed competition. Early spring is an alternate time for renovation, although weed competition and summer heat may reduce its success. Supplemental watering should be available after renovating to protect the new seedlings from drying out.

Spot Seeding or Sodding

Bare areas larger than about six inches in diameter should be spot seeded or sodded. Smaller bare areas tend to fill in naturally as the grass spreads laterally, if good growing conditions prevail. Bare areas that require spot seeding or sodding should first be cleared of



Thin, weed-infested areas can be renovated if the existing soil needs no modification.



Tall fescue is a common weedy perennial grass that cannot be controlled selectively in a lawn.

any weeds and dead grass to expose the soil. A stiff rake or small hoe can then be used to loosen the soil thoroughly. Additional soil should be added if the spot is below the level of the lawn.

When spot seeding, a seed blend or mixture similar to the existing lawn can be spread by hand. Uniform coverage with approximately 15 seeds per square inch is necessary. The seed should then be raked lightly into the top ¼-½ inch of soil and the soil firmed. Straw or another mulch should then be applied to the spots. Following mulching, irrigate thoroughly and maintain a moist seedbed in these areas for a few weeks until the grass is well established. A light application (about 5 pounds per 1000 sq. ft.) of a complete fertilizer (such as 12-12-12) may aid the growth of new seedlings.

With spot sodding, a piece of sod can be cut to fill the area completely. The soil should be loosened thoroughly as in spot seeding, but be sure to account for the thickness of the sod when establishing the soil level. The sod should be tamped and then watered thoroughly. Maintain good moisture until the sod is well rooted. A light application of fertilizer (5 pounds per 1000 sq. ft.) high in phosphorous and potash will aid establishment. Spot sodding can be done any time during the growing season provided that water is available.

Further Renovation

Areas that have too many bare spots to make spot seeding or sodding practical, or areas that have undesirable weedy grasses present, will require further renovation practices. The following sequence should be followed to ensure successful renovation (alternative options are suggested for some of the steps).

1. Soil Sampling

Collect soil samples to a depth of 2-3 inches from 20 locations of uniform soil throughout the area to be

renovated. Use clean equipment when sampling. Mix the subsamples well. Air dry about one-half pint of soil, package securely, and send it to your local county Cooperative Extension Service or a reputable laboratory for testing. The test report will indicate the soil acidity level, and the phosphorous and potassium content of the soil. Particular attention should be given to the phosphorous level since an adequate supply is essential for grass seedling establishment. Follow recommendations of the soil testing lab for fertilizer and lime.

2. Perennial Weed Control

Control perennial broadleaf weeds prior to renovating. Since many herbicides require a waiting period prior to seeding, complete the application of the broadleaf weed control several months prior to renovation. Control is best obtained during periods of active weed growth, which normally occur during the spring and fall. For more information on broadleaf weed control, consult Extension Bulletin E-653, Lawn Weed Control. Weedy perennial grasses pose a more difficult problem, and may, in themselves, be the reason for renovating.

A few grasses, such as tall fescue, spread very slowly and form unsightly clumps in the lawn. These clumps can be dug out with a shovel, removing the grass and soil 4-6 inches deep. Dig about four inches outside of the clump to remove all the weedy grass.

Most perennial grasses spread aggressively by underground shoots called rhizomes or aboveground shoots called stolons. Because of this spreading nature, digging these grasses out is extremely difficult and may even aggravate the problem. Control is best achieved by applying a nonselective herbicide, which will kill both desirable and undesirable grasses in the area. Glyphosate (Roundup, Kleanup) is a particularly effective herbicide because it requires waiting only seven days prior to reseeding. Follow the label directions carefully when using this herbicide or any other pesticide.

If these weedy grasses are in small confined areas, the same method for spot seeding or sodding can be used for reestablishment. Usually, these grasses will be spread throughout the lawn, making any spot treatment impractical. When faced with this problem, killing off the entire lawn area where these grasses occur is recommended. Skip two or three mowings prior to applying glyphosate to ensure good plant uptake of the herbicide.

3. Cultivation

After weed control and before seeding, use a lawn mower set at the lowest cutting height to remove most of the green grass or dead grass killed by the herbicide. This will provide higher light intensities for the seedlings and reduce competition from the existing grass. Excessive clippings should be removed prior to seeding, and can be stockpiled for use as a mulch.

The seed must have good soil contact to germinate and grow properly. Some method of cultivation is necessary to ensure this contact. The easiest piece of equipment for the homeowner to obtain and operate is a dethatcher. This is also referred to as a power rake or vertical mower. The rotating tines remove some of the thatch layer and may be set to cut into the soil. Dethatch in several different directions to thoroughly expose the soil and obtain a good seedbed.

Coring is another form of cultivation that can be used to provide a good seedbed. This piece of equipment brings small cores of soil to the surface. Core in several directions and after the cores have dried, break up the soil plugs by dragging a piece of fence or an inverted rake over the area. A dethatcher also can be used to break up these plugs. If much of the area has exposed topsoil with very little thatch, cultivation can be done after the application of fertilizer and seed. This will save time while still providing a good seedbed.

4. Fertilizer and lime

It is best to follow recommendations based on a soil test for lime, phosphate and potash needs. Nitro-

gen should be applied at 1-1½ pounds of actual nitrogen per 1000 square feet. If no soil test was obtained, a general recommendation is to apply 10 to 12 pounds per 1000 square feet of 1-1-1 ratio fertilizer (such as 12-12-12). Rake lime and fertilizer into the seedbed, or incorporate by lightly going over the area with a dethatcher.

5. Seeding

Take half the seed and apply in one direction with the remaining seed applied at right angles to the first. This will ensure good seed distribution. Either a drop-type or a cyclone spreader can be used. Use species and varieties of grass similar to the existing lawn. Areas that were killed with a non-selective herbicide prior to renovation should be seeded

with species and/or cultivars recommended for use in Michigan. Follow the seeding rates listed on the package or refer to Extension Bulletin E-1491, Seeding a Lawn.

Mix the seed with the soil by dragging a leaf rake lightly over the area. Then roll the area to improve the seed contact with the soil. A thin mulch applied over the area will stabilize the seed and trap moisture. Mulching materials include peat, straw, or dry clippings. Existing stubble will also provide a mulching effect.

6. Post renovating care

Once the seed is applied, water the area thoroughly. The surface should be kept moist during the germination period. Water should be supplied daily at midday if rainfall

is inadequate. Once the grass is well established, watering can gradually be reduced.

Mow the area as you normally would. A sharp blade is important to keep the seedlings from being pulled from the soil. A light fertilizer application (½ rate normal of nitrogen) can be applied one month after germination to stimulate growth. Keep any unnecessary traffic off the renovated lawn until it is well established.

For further information, the following publications may be helpful. Extension Bulletin E-1489—Grasses for Lawns in Michigan; Extension Bulletin E-1490—Sodding a Lawn; Extension Bulletin E-1491—Seeding a Lawn.



Glyphosate is a nonselective herbicide that can be used to kill existing vegetation.



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