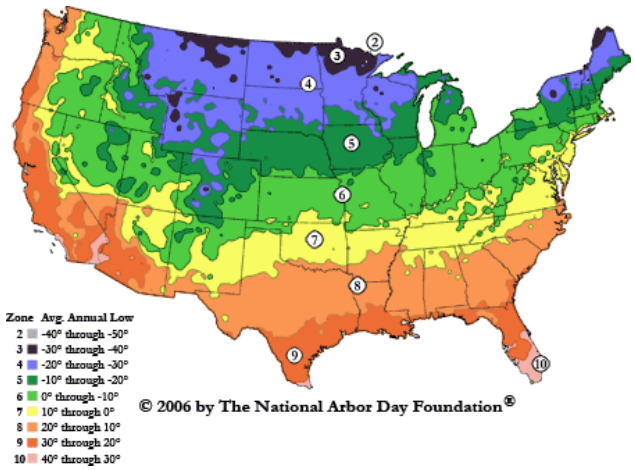
Overseeding Turf in Northern Regions

Pest Press **March 2013**



The U.S. is divided into regions to help growers determine which plants will thrive in their location. For the purposes of this document, the northern region includes zones 2-6, or everything in purple, blue and green on the map.

Overseeding, or adding grass seed to established turf, can improve the health and attractiveness of lawns and the playability of athletic fields. Overseeding also promotes thick turf that outcompetes perennial broadleaf weeds and eliminates bare spots where weeds can gain a foothold, reducing reliance on herbicides.

Assess your turf first

The two most important variables to evaluate before overseeding are the density, or the number of grass plants growing in a square foot, and the level of soil compaction. No bare ground should be visible in turfgrass areas, although natural density will vary by grass type. Turf varieties with a lower density and coarser leaf texture can require a higher mowing height and more regular overseeding to produce better quality turf. Additionally, some varieties such as fescue do not produce runners, and will greatly benefit from periodic overseeding.

Soil compaction is an ongoing challenge in athletic fields. Compaction occurs when air around soil particles, called pore space, is squeezed out. Overseeding a field that is compacted will have little or no long-term benefit; there is simply no room for new turf roots to grow. Compaction can be alleviated mechanically by core aeration, solid tine aeration or slicing to create air space. Over time, compost top dressing, organic slow-release fertilizers and aggressive overseeding will build soil organic matter and biomass including roots and beneficial organisms such as earthworms, improving resistance to compaction.

Other problems that should be addressed prior to overseeding to ensure seedlings germinate and remain healthy are poor drainage, insufficient or excess water, poor soil fertility and excess thatch. Be sure to note where turf is doing poorly and consider sun and shade. Grasses that need full sun may not thrive in shade and shade-tolerant varieties may wilt in too much sun. In a non-athletic field situation, keep in mind that tree roots compete with grass roots for water and nutrients. Grass planted around trees may have a harder time becoming established and alternative ground covers should be considered if so. The right plant in the right place is the rule for turf and other plants.

Overseeding, proper watering, and avoiding compaction results in thick, healthy root systems and few weeds. Photo courtesy of Chip Osborne.

Timing

In northern regions of the US, the fall is the best time to grow grass. The genetics of cool-season turf grasses are such that shorter, cooler days in fall are ideal for seeding and establishment. If an herbicide is to be used, delay treatment for four to six weeks after the new grass seed germinates. Herbicides can be harsh on seedlings and can be a major cause of poor seedling establishment.

Choose the right variety

Seed choice is largely determined by climate. Western, northern and eastern areas of the US generally need cool season grasses such as Kentucky bluegrass, perennial rye grass and fine and tall fescues. In these regions, bentgrass is preferable for golf courses and tennis and croquet courts.

Purchase good quality seed native to your area whenever possible. Mixtures of two or more species of grass can help reduce losses in the event of disease. Check the label to avoid buying seed with a high percentage of weed seeds. Consider purchasing a higher quality seed mixture, as cheaper mixtures typically contain a higher percentage of weed seeds. Look at national and local turf trial results, which should be available for most seed species and cultivars.

Proper watering essential

The most important factor for seed germination is seed to soil contact. A heavy watering immediately after seeding will help achieve this contact. Then water lightly on a daily basis until the grass seed germinates, which generally takes ten to 20 days. After germination, water grass less frequently and let water soak more deeply to encourage deeper root growth. Grass establishment will take three to six weeks. After the seedlings become established, water at the recommended level for the type of grass used.

Overseeding technique

Before seeding, rake and dethatch the turf if necessary. Then, simply broadcast the seed by hand or with a spreader, or use a "slit seeder" which opens a small furrow in established turf by cutting through the thatch layer. Slit seeding offers better seed to soil contact, so less seed may be needed than with broadcast seeding. To avoid a striped appearance where new grass grows, consider making two passes, each at 50 percent of the recommended rate, and at 45 degree angles to each other. This diamond pattern will more evenly distribute the new seed over the turf area.

If you broadcast seed, aerate the turf several times before seeding to expose more soil. Core aerating tines that remove soil plugs are best. After seeding, water heavily right away to help settle seeds stuck in the thatch layer and avoid growth only in aeration holes, which results in a spotted appearance. Another way to avoid this spotted look is to choose grass varieties such as Kentucky bluegrass, which has a creeping growing habit that can deter clumping.

For either seeding method, plan on using about five pounds of seed for every 1,000 square feet of turf.

Regardless of how you overseed, keep records of your pre-assessment, the methods you use and your results. Those records will be invaluable to help you learn what works best for your climate and sites.

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Special thanks to Chip Osborne, founder and president of Osborne Organics, LLC, and the National School IPM Steering Committee for reviewing this document.

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