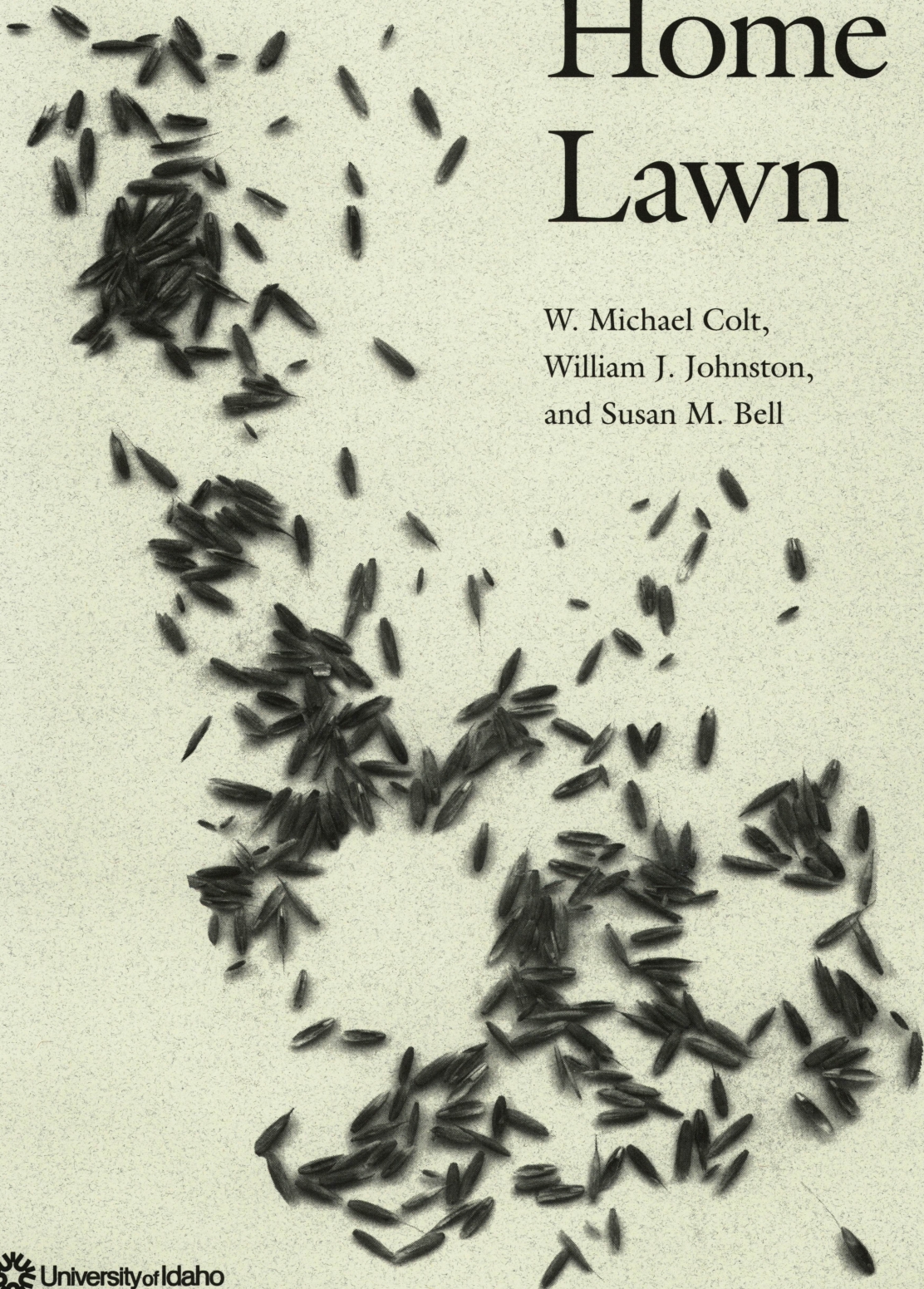



Starting a Home Lawn

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The saying “a house is no stronger than its foundation” applies equally to a lawn. A suitable soil is the foundation for a good lawn. Making sure you have one should be your first consideration in lawn establishment. In addition, use only high-quality seed or sod. There is no economy in planting mixtures of inexpensive grass seed or in installing poor-quality sod.

The amount of lawn you establish should reflect your personal preference and serve a purpose in your overall landscape plan. Consider which areas are suitable for lawn and which are perhaps better suited to other landscape elements such as herbaceous perennial flowers, ground covers, native plants, or ornamental grasses. Some critics of lawns in the home landscape describe them as a wasteful excess, yet this perspective is not environmentally justified. Lawns have a well-deserved place in the home landscape as one of the simplest ground covers to maintain and enjoy.

Preparing the site and soil

Remove all construction scraps, trash, and rocks that would interfere with turfgrass root growth and water movement. Slope the lawn area slightly away from the house, 6 to 12 inches per 100 feet. Avoid steep slopes because they are difficult to maintain. Make terraces to reduce steep slopes, if necessary.

Provide adequate soil drainage, and avoid depressions, which could become future water pockets. An impervious layer in the soil profile, such as hardpan, may need to be broken up by mechanical chiseling, by digging holes randomly throughout the layer, or both. Drainage tiles are not normally required in Idaho.

All trenches dug for installing water and sewer lines must be completely filled and settled to grade to avoid future depressions in the lawn.

When you plan new house construction, consider the lawn (and the rest of the landscape for that matter) because it will be an essential feature of your home. Make arrangements for the disposal of the subsoil from the basement excavation, and save the topsoil separately, if possible. Save enough good topsoil to cover the area to a depth of at least 4 to 6 inches.

If significant grading and leveling are required, scrape aside and save the top 5 to 6 inches of soil for replacement later. Unfortunately, when a house is built, the topsoil is frequently hauled away and the lawn area is covered with subsoil from the excavation. This subsoil usually lacks aeration and forms a layer that impedes drainage.

Most grass species grow satisfactorily in many soil types. In general, however, a sandy loam to loam soil is preferable. Lacking that, you can improve an existing soil or subsoil by adding and incorporating 2 inches of well-decomposed organic matter or peat moss. This will benefit the soil by

- Improving the structure of heavy soils so they can be more easily tilled, aerated, and drained;
- Increasing the water-holding capacity of coarse-textured soils such as a sandy soil or gravel;
- Providing a proper medium for soil microorganisms;
- Liberating plant nutrients such as nitrogen, phosphorus, and sulfur during decay and;
- Maintaining soil fertility by reducing plant nutrient loss due to leaching.



Weed control before planting

Controlling deep-rooted perennial weeds such as field bindweed (morning glory) and quackgrass before lawn establishment is very important. If the soil is badly infested, two or three herbicide treatments may be necessary at 2- to 3-week intervals. Allow sufficient time after the last treatment for herbicides to dissipate before sowing the lawn seed. Always follow instructions on the herbicide label.

Installing the sprinkler system

Supplemental irrigation is necessary to establish and maintain a healthy, attractive lawn in most areas of Idaho. Apply water by flood irrigation, by portable sprinklers, or with an underground sprinkler system. Install an underground system after the final grade has been established, but before seeding the grass. Be certain that you have a properly designed irrigation system for your lawn area and adequate water pressure to make a thorough and uniform application of water. After the system is in place, make certain that all the holes are filled and well tamped to avoid future settling.

Applying starter fertilizers

Apply starter fertilizers 1 to 2 weeks before planting the lawn or during the final stages of seedbed preparation. The starter fertilizer usually should be a mixture of nitrogen (N), phosphorus (P), and potassium (K). The percentage of each is printed on the fertilizer container. A good formulation is 16-20-10 (16 percent nitrogen) applied at 6 1/4 pounds of material per 1,000 square feet of lawn. This will contain about 1 pound of actual nitrogen. Both P and K move very little in soil, so work the starter fertilizer

into the upper 4 inches of soil.

Soil samples can be useful for determining the plant nutrients or soil amendments needed for good grass growth. Consult the University of Idaho extension educator in your county to get instructions for taking soil samples and obtaining the soil analysis.

Planting seed

Timing planting

Seed a new lawn either in late summer or early spring. Plan late-summer seedings for August 15 to September 15 when warm days and cool nights provide ideal conditions for seedling growth. Seed early enough in fall that the grass will be mature enough in winter to withstand freezing. Plants seeded in late summer are also better rooted and more drought and heat tolerant the following summer than grasses seeded that spring.

Seed as soon as the ground can be worked in spring. If you sow when the soil is too cold and damp, slow, irregular germination may result.

Establishing turfgrass by seeding during midsummer is difficult due to high temperatures and drought. Midsummer seeding is successful only if irrigation is available to keep the seeded areas well supplied with moisture.

One reason to plant your lawn by seeding is cost. For larger areas, seeding might cost 20 to 25 percent less than sodding. On the other hand, for smaller areas in particular, people who do not want to water may



Table 1. Seeding rates of major turfgrass species.

Species	Seeding rate (pounds per 1,000 square feet)
Kentucky bluegrass	3
Fine-leaf fescues	4
Perennial ryegrass	5
Tall fescue (turf type)	7

find sod installation preferable. An additional alternative is hydro-seeding by a commercial firm. This is more expensive than direct seeding, but the grass establishes better under dry conditions.

Table 2. Recommended mowing heights.

	Mower height (inches)	Maximum grass height before mowing (inches)
Kentucky bluegrass	1.0-2.0	1.5-3.0
Perennial ryegrass	1.0-2.0	1.5-3.0
Tall fescue	2.0-3.0	3.0-4.5
Fine-leaf fescues	1.0-2.0	1.5-3.0

Planting methods

Seed at the recommended rate because skimping on seed can result in a thin, patchy lawn. Too high a seeding rate can lead to weak seedlings. Grass seed is best sown with a mechanical seeder, although small areas can be seeded by hand. Follow directions on the seed package or use the guidelines in table 1. Generally 15 to 20 seeds per square inch is an adequate seeding rate. Because the seeds of different grasses vary in size, weight, and growth, there is considerable variation in seeding recommendations.

The best time to seed is early morning or late afternoon on a windless day. Calibrate the grass seeder carefully and plant one-half of the seed in one direction and the remainder at a 90 degree angle to the first seeding.

After sowing, rake the soil surface lightly (not more than 1/4 inch deep). Raking in one direction only (instead of raking with a back-and-forward motion) will prevent you from pulling the seeds into channels or ridges. After raking, roll the surface to firm the seedbed and to en-

sure a firm soil-seed contact. Keep the roller dry so that it will not pick up the seed. Rolling is especially important on light, sandy soils.

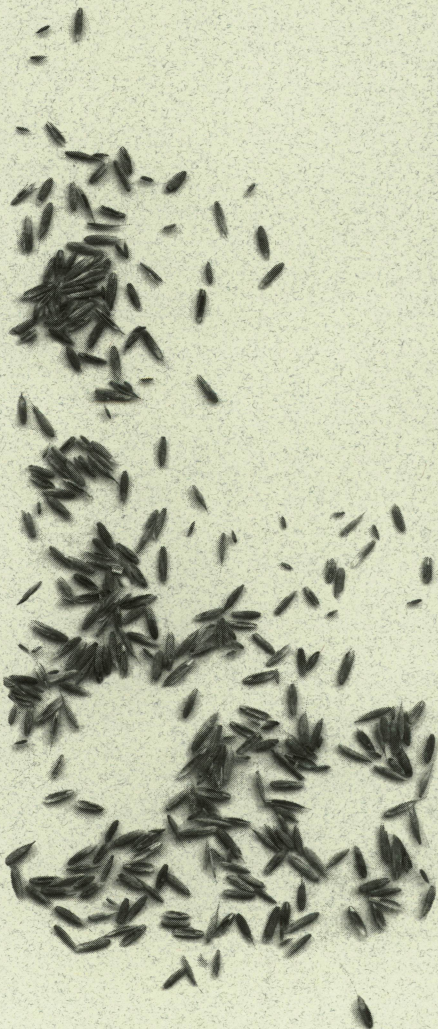
After planting you may want to mulch the seeded area to ensure uniform and rapid germination and establishment. Mulch reduces moisture loss and controls water and wind erosion of the new seedbed. Peat moss applied at the rate of 50 pounds per 1,000 square feet is a good mulch. Peat moss should just lightly cover the seed to about 1/4 inch deep. Straw (weed free) can be used at the rate of 50 to 90 pounds per 1,000 square feet. Avoid overmulching, which can bury the seed too deep. Wood mulches such as sawdust, wood chips, and shredded bark should be well decomposed to avoid creating a possible toxic environment for your new lawn or a nitrogen deficiency in the soil.

Newly seeded areas should be watered frequently (as often as five times a day) to keep the seedbed moist. Keep the seedbed uniformly moist, but not saturated, until the seed germinates and the seedlings become visible. Apply only a fine spray to avoid uncovering the seed.

Post-planting care

The time it takes before you observe germination will vary with the grass species. Be patient! It may be as long as three weeks before Kentucky bluegrass seedlings appear or as short as six days with perennial ryegrass.

Before you know it, it will be time to mow your new lawn. Don't worry about how fragile it looks. Depending on the grass species, the new grass should be mowed to remove one-third of its height when it reaches 1.5 to 4.5 inches tall (table 2). Make sure the mower blades are



sharp or they will pull the grass seedlings out of the soil. Mowing at this time will encourage the grass to thicken and spread.

You may notice broadleaf weeds germinating in your seedbed. Don't fret. Most broadleaf weeds can be easily controlled with continued mowing or with a broadleaf selective herbicide after the turf is established. Withhold herbicide applications until the turf has been mowed at least twice to avoid injuring young turf seedlings. Because there are no satisfactory herbicides to selectively control perennial weedy grasses, hand weeding or spot treatment with a registered herbicide may be necessary.

A light application of fertilizer (half rate of the starter fertilizer) approximately four to six weeks after germination can encourage greater turf density. This may not be necessary, however, and usually should be skipped if the new seedlings are growing well. It is better to err on the side of adequate, rather than excessive, growth.

Sodding

Sodding provides an instant lawn and is preferable to seeding in the following situations:

- When a lawn is desired in a short period of time. Sod permits pedestrian traffic a week or two after installation, whereas a seeded area should receive minimal traffic for six to eight weeks.
- For the establishment of a terrace or steep slope where severe soil erosion would occur if the disturbed soil were left unprotected.
- For areas where seeding is difficult due to foot traffic or heavy shade.

Table 3. Characteristics of cool-season turfgrasses.

	most			least
Shade tolerance	Fine-leaf fescues	Tall fescue	Perennial ryegrass	Kentucky bluegrass
Wear tolerance	Tall fescue	Perennial ryegrass	Kentucky bluegrass	Fine-leaf fescues
Recuperative ability	Kentucky bluegrass	Tall fescue	Perennial ryegrass	Fine-leaf fescues

- In midsummer, very early spring, or late fall when conditions are unsuitable for seedling establishment.

When sod is properly grown and rolled prior to harvest, the thinner the soil layer on the sod the more rapidly the sod will establish. New roots from sod with a thin soil layer will rapidly penetrate the soil beneath, and the sod will become firmly established within a couple of weeks.

Soil preparation for sodding is similar to that for seeding. With sodding, however, only a new root system has to be established. The rate at which a new root system develops depends more on the carbohydrate level in the sod than on any other single factor.

Lay sod almost immediately after its delivery to the site. Excessive heating within the sod roll occurs quickly during the middle of summer, and severe damage can occur within 12 hours. Avoid sodding in midsummer when possible. Lay the sod rolls end to end, in a staggered brick-like pattern. Avoid stretching the sod because it will shrink upon drying and leaves gaps. These gaps are perfect sites for annual weed grasses to germinate.

After laying sod, be certain to roll it to ensure good contact be-

Table 4. Kentucky bluegrass cultivars recommended for Idaho lawns.

- Adelphi¹
- Alene
- Aquila¹
- Baron¹
- Blacksburg¹
- Bonnieblue¹
- Challenger
- Continental¹
- Freedom¹
- Fylking¹
- Galaxy¹
- Glade¹
- Liberty¹
- Majestic¹
- Merion
- Midnight¹
- Newport
- Parade¹
- Park
- Pennstar¹
- Ram 1¹
- Ronde¹
- Touchdown¹
- Victa¹

¹Improved cultivars with low growth habit and suitable for relatively close mowing.

Table 5. Fine-leaf fescues recommended for Idaho lawns.

Creeping red fescue

Atlanta
Dawson
Illahee
Pennlawn
Rainier
Ruby
Wintergreen

Chewings fescue

Barfalla
Cascade
Highlight
Jamestown
Koket
Scarlett

Hard fescue

C-26 (Biljart)
Discovery
Durar
Ecostar
Nordic
SR 3100

tween the sod and the soil beneath. Water the sod well within one hour of laying it to eliminate any air pockets and ensure adequate moisture for root growth. If the sod is allowed to dry, the root system will be injured and the plants will dry out and die. After the first watering on the day of installation, water every two or three days to keep the soil moist until the sod is rooted, usually in two weeks. Avoid overwatering.

New sod usually requires no fertilizer for three to four weeks, when you can apply it as for a mature lawn. Traffic control may be necessary for three to four weeks to ensure the sod stays in place until the new root system anchors it to the soil beneath. Mowing height and frequency should be the same as for the established lawn.

Turfgrass selection

Four cool-season turfgrasses are planted in Idaho: Kentucky bluegrass, fine-leaf fescues, tall fescue, and perennial ryegrass. A blend of two or more cultivars (cultivated variety) of one species is frequently packaged to ensure a more uniform, durable, attractive turf.

Your choice of turfgrass species and cultivars will depend on the intended use of the lawn. Different turfgrasses require different levels of maintenance, produce different levels of quality, and perform well under different climatic, soil, and shade conditions (table 3).

One of the most frequent causes of turf deterioration is shade. Before selecting the grass for a lawn, consider the amount of shade the grass will receive now and in the future as trees grow and the landscape matures. Common turfgrasses tolerate shade in this order, from most to least tolerant: fine-leaf fescues, tall

fescue, perennial ryegrass, and Kentucky bluegrass.

How you plan to use the lawn should have a big influence on the grass you select. If the lawn is mainly for show, wear resistance is not an important consideration. If the lawn gets frequent use, select a grass or mixture of grasses that will resist wear and recover quickly.

Common turfgrasses tolerate wear in this order, from most to least tolerant: tall fescue, perennial ryegrass, Kentucky bluegrass, fine-leaf fescues. Grass types listed from highest to lowest in recuperative ability are as follows: Kentucky bluegrass, tall fescue, perennial ryegrass, and fine-leaf fescues.

Kentucky bluegrass

Kentucky bluegrass, which does well in sunny areas, is the most widely adapted and used lawn grass in Idaho (table 4). Many people have tried to replace bluegrass with other grasses, but most find that if they want a bluegrass look-alike lawn, perhaps the easiest approach is to plant bluegrass. Kentucky bluegrass remains popular because it spreads by underground runners (rhizomes) in spring and fall. However, this attribute is a continual challenge to gardeners who desire a clean demarcation between the lawn and planting beds. Some even consider Kentucky bluegrass to be the most invasive garden weed.

When managed properly Kentucky bluegrass produces a dense, vigorous, durable, and attractive turf. Bluegrass requires the most water and fertilizer of all grasses. It has high levels of winter hardiness and drought tolerance.

Fine-leaf fescues

Fine-leaf fescues are most frequently used in mixtures with blue-

grass and are generally more drought tolerant than other turfgrasses (table 5). Also, they are more tolerant of shade and will therefore perform well on the northern exposures of buildings or under shade trees. Fescues are best for shady areas. When managed properly they make an excellent turf.

Creeping red fescue has a spreading, or rhizomatous, root system and will spread over damaged areas of the lawn. Chewings fescue cultivars are bunch-type and do not spread. They should be planted thickly enough to ensure a dense and even turf. Hard fescue is also bunch-type, has an extensive root system, and tolerates droughty conditions.

Tall fescue

Tall fescue, because it is deep rooting, has gained favor recently. While 80 percent or more of Kentucky bluegrass roots are found in the top 3 or 4 inches of soil, tall fescue roots can be 12 or more inches deep. Because these roots allow the grass plants to obtain water from a greater reservoir of soil, tall fescue may need watering every five to seven days during the hot months compared with every three days for bluegrass. Contrary to widely publicized claims, research shows that tall fescue needs as much water over the growing season as Kentucky bluegrass; tall fescue simply needs more water at less frequent intervals.

Many new fine-leaved tall fescue cultivars are available. They have slightly coarser leaves than Kentucky bluegrass and are bunch-type with excellent persistence even in high pH soils. Tall fescue tolerates shade; drought; and flooded, wet soils better than Kentucky bluegrass; and it requires less fertilizer. The seed should be sown thickly and can be

seeded with Kentucky bluegrass. There are several cultivars of turf-type tall fescue now available (table 6). Be sure, however, that they are identified as "turf-type."

Perennial ryegrass

Perennial ryegrass is a special-use grass for sports fields and heavy-use areas. It may be used alone or in mixtures with Kentucky bluegrass when fast germination and growth are desirable. Improved cultivars of perennial ryegrass have fine texture, good mowing quality, and good wear tolerance (table 7). When properly managed, they make an attractive turf.

Perennial ryegrass is not as cold tolerant as other cool-season turfgrasses and is subject to winter kill, particularly in short-summer-season areas. Many times, the loss of ryegrass from a mixture is not critical because the Kentucky bluegrass fills the void in a few months to a year.

Blends and mixtures of cool-season grass cultivars

Lawn grass seed is frequently packaged and sold as a blend of cultivars of the same species. Mixtures, on the other hand, contain two or more grasses of different species. The most common mixture is Kentucky bluegrass and red fescue. Mixtures may provide grasses that are complementary, but this may not always be the case. Under certain conditions of soil, water, shade, and management, some cultivars of cool-season grasses may be superior to others. Where these conditions occur, consider planting the best-adapted.

Other grasses

Southern-type, warm-season grasses such as bermudagrass and

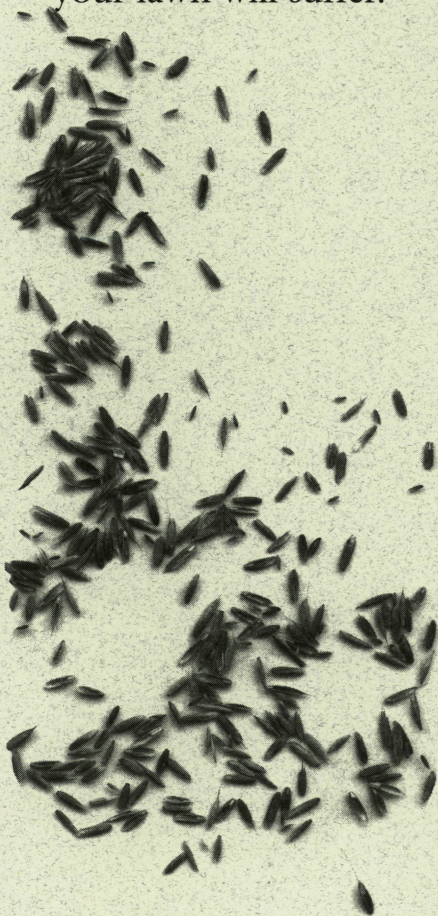
Table 6. New tall fescue cultivars recommended for Idaho lawns.

Amego
Arid
Bonanza
Bonsai
Crossfire
Falcon
Finelawn I
Houndog
Jaguar II
Monarch
Mustang
Olympic
Tarus
Thoroughbred
Trident
Twilight
Rebel

Table 7. Perennial ryegrass cultivars recommended for Idaho lawns.

Barry
Brenda
Diplomat
Manhattan
Norlea
Omega II
Ovation
Palmer
Pennate
Pennfine
Saturn
Yorktown II

Once you have installed your lawn as well as you can, remember that lawn maintenance over time will significantly influence how attractive and healthy your lawn becomes. If you fail to effectively mow, water, fertilize, weed, control pests, and aerate, the quality of your lawn will suffer.



zoysiagrass survive in Idaho but are dormant and brown for up to eight months of the year. Other warm-season grasses, such as st. augustinegrass and dichondra, should not be planted in Idaho lawns because they do not survive in our cool climate.

Many other grasses such as timothy, crested wheatgrass, and brome-grass are also not desirable lawn grasses for Idaho. For example, buffalograss, a native from the western high plains, has received recent attention because of its ability to survive with limited irrigation. It looks somewhat like Kentucky bluegrass, but with finer leaves that are not as dark green. Buffalograss goes dormant and turns gray after a killing frost in the fall and remains dormant until late spring. This results in Kentucky bluegrass having about six more weeks of green color at each end of the growing season.

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Further readings

Bluegrass Billbug Control in Idaho Lawns and Turf
CIS 374, 50¢

Don't Bag It
CIS 1016, 50¢

Fairy Rings in Turf
EXP 676, 50¢

Fertilizing Lawns in Southern Idaho
CIS 846, 35¢

Herbicides for Lawn Weed Control
EXT 723, 50¢

Lawn Pest Control
CIS 340, 50¢

Natural Grass Athletic Fields
PNW 240, \$1.50

Northern Idaho Fertilizer Guide:
Northern Idaho Lawns
CIS 911, 35¢

Thatch Prevention and Control in
Home Lawns
CIS 1063, \$1.00

Turfgrass Seedings: Recommendations
for the Pacific Northwest
PNW 299, 75¢

Weed Control in Lawns
CIS 888, 50¢

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