



# Establishing a Lawn from Seed

The establishment of a home lawn from seed can be challenging. The keys to successfully establishing a lawn from seed are selecting high quality seed, seeding at the optimum time, and following proper establishment procedures.

## Time of Seeding

The best time to seed a lawn in Iowa is between mid-August and mid/late September. However, lawns can be successfully established as late as late-September in central Iowa and early October in southern Iowa. Late summer planting is preferred to spring seeding because seeds germinate and grow rapidly in the warm soil. The warm days and cool nights are ideal for seedling growth.

Establishment from seed in the spring is possible when irrigation is available. However, lawns established in spring often become infested with annual weeds unless preventive steps are taken. A pre-emergent herbicide such as siduron or mesotrione should be applied to the area during a spring establishment. Most of these preemergent herbicides kill the seeds of the cool season lawn grasses and cannot be used at the time of seeding. Mesotrione and siduron are the only exceptions. Siduron can be applied to areas seeded with Kentucky bluegrass, fine and tall fescues, and perennial ryegrass. Siduron selectively control weedy annual grasses, such as crabgrass, foxtail, and barnyardgrass, while allowing the desirable turfgrasses to grow. Siduron is the active ingredient of many crabgrass preventer/starter fertilizer materials. Once the barrier of siduron has been established, the soil should not be further disturbed. Wherever the barrier is broken, annual weeds will emerge. Mesotrione is labeled for preemergent use only on newly seeded Kentucky bluegrass lawns to help control crabgrass seedlings and other annual weeds.

**Do not use crabgrass preventer unless it is labeled for new seedlings.**

**Seeding from late May to mid-August is extremely difficult and usually unsuccessful.**

## Fertilizer

Fertilization is very important at the time of seeding. This is the only time you will be able to incorporate required soil amendments or fertilizer into the root zone.

Prior to preparing the seedbed, broadcast fertilizer according to soil test recommendations, then incorporate to a depth of 4 to 6 inches. Soil testing information can be found at [www.extension.iastate.edu/publications/ST11.pdf](http://www.extension.iastate.edu/publications/ST11.pdf).

If the soil tests results indicate a need for nitrogen and phosphorus, select a farm grade fertilizer that is high in phosphorus, such as diammonium phosphate (18-46-0), or monoammonium phosphate (11-52-0). Fertilization at a rate providing 0.75 to 1 pound of actual nitrogen per 1,000 square feet is usually sufficient. Additional fertilizer may be needed 3 to 4 weeks after germination, when the grass is approximately 1 to 1.5 inches tall. See PM 1057, Lawn Fertilization, for more information on fertilization.

## Preparing the Seedbed

Preparing the seedbed is the most labor intensive and time consuming step in establishing a lawn, but it is also very important. A well-prepared seedbed is essential for rapid, successful establishment of a lawn.

Using a rototiller or other cultivation equipment, work the soil to a depth of 4 to 6 inches, incorporating the fertilizer or other soil amendments recommended from soil test results. Do not till the area when the soil is wet. The soil

is too wet when a handful of soil formed into a ball retains its shape when pressed with the thumb. The soil is ready to till when the soil ball crumbles. Be sure not to overtill the soil, which will destroy soil structure and is undesirable.



Rake the area to finish-grade just prior to seeding. Light rolling will indicate any low spots or irregularities in the seedbed.

## Seeding

Select high quality seed of the grass species best adapted to the site. Perennial ryegrasses may be included in seed mixtures for spring plantings to help the lawn establish quickly. However, for late summer planting, a mixture of three or four Kentucky bluegrass varieties is preferred. The following table lists several seed mixtures and the seeding rate for each. See PM 1067, *Which Grass Is Best for Your Lawn*, for information on selecting lawn grasses and buying seed.

Divide the total seed quantity in half. Using a dropseeder, sow one half in one direction and the other half at right angles to the first. After the starter fertilizer and seed have been broadcast, lightly rake the area to cover the seed to a depth of no greater than 0.25 to 0.5 inches. Seeding depth varies based upon seed size. The larger the seed size, the deeper it can be covered with soil. Roll the area lightly to firm the soil around the seed.

Grass seedlings are very susceptible to desiccation and the surface of a newly seeded lawn should not be allowed to dry. Water should be applied only in amounts necessary to keep the soil surface moist. Avoid overwatering and runoff. Two light applications of water per day will usually be sufficient unless it is hot and windy. In more extreme conditions, up to four light waterings per day may be necessary.

## Mulching

When irrigation is not available, mulching the lawn with clean (weed free) straw will help conserve moisture and prevent erosion. 1 to 1.5 bales of straw per 1,000 square feet will give a light mulch covering that will not have to be removed after germination. There are also other mulching materials available for lawn establishment. These include pelletized newspaper and excelsior (wood shavings) mats.

## Mowing

Kentucky bluegrass should be maintained at a mowing height of 2 to 3 inches. As a rule, no more than one third of the grass blade should be removed during a single mowing. The new grass should be first mowed when it reaches 3 to 3.5 inches in height. Mowing at this time will promote the spreading and thickening of the grass. New lawn grasses should not be allowed to grow excessively long before the first mowing. If this occurs, it will be necessary to mow the grass in stages, preventing scalping and removal of more than one-third of the tissue.

## Broadleaf Weed Control

After you have completed the task of establishing your lawn, you will notice broadleaf weeds germinate along with the grass seedlings. Most broadleaf weeds can be easily controlled with a broad spectrum selective broadleaf herbicide like 2,4-D after the turf is established. It is safe to apply a herbicide after the lawn has been mowed at least 3-4 times. See [PM 930, Weed Control in Home Lawns](#), for more information on lawn weed control.

Seed mixture	Seed rate	
	pounds/1,000 square feet	pounds/acre
100% Kentucky bluegrass	1 - 1½	45 - 65
20% perennial ryegrass + 80% bluegrass	2 - 2½	85 - 110
50% perennial ryegrass + 50% bluegrass	3 - 3½	130 - 150
50% red fescue + 50% bluegrass	2½ - 3	110 - 130
100% red fescue	3½ - 4½	150 - 195
100% tall fescue	7 - 9	300 - 390

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