

Cereal Rye

General Information

Cereal rye, *Secale cereale* L., can be milled into flour or used whole or cracked in many recipes. Local bakers insist that the winter rye grown in the northeast has more bran, sugars, and overall flavor than rye from the Midwest. Rye is often grown either for its grain or as a cover crop to reduce erosion and compaction, or as a green manure. It is taller than oats and barley, reaching heights of five feet. Because cereal rye is a cool-weather plant and can grow in fair soils and tolerate damp environments, it does quite well in the northeast and can be a very successful crop if there is a specific market demand for the grain or flour.

Preparation & Planting

Winter rye is grown much like winter wheat—planted in autumn (usually September), overwintered, and harvested the next summer. Rye does best in fertile soils but does not need great soil to grow. It can be planted on land that is not quite fertile enough for crops like wheat. Rye can easily be over-fertilized, and combining will be very difficult if the rye lodges from too much nitrogen. The rye field should be well-prepared and relatively moist for good germination. If rye is planted after another cereal crop, two cultivations should be enough to kill weeds before seeding the new winter rye, unless there are very pervasive and problematic annual weeds.

Obtaining pure rye seed can be difficult because it is cross-pollinated by wind. If you are seeding last year's rye harvest, make sure to use clean seed and test for germination rates, as germination decreases quickly in winter rye. Rye is very winter-hardy; it can germinate in temperatures as low as 34-40°F and can



survive overwintering in temperatures as cold as -40°F. Rye should be planted early enough in the fall so that it can grow to about 4-6 inches before a hard frost. However, it will not germinate in temperatures above 85°F. Do not seed rye deeper than 2 inches. It can be planted with a grain drill at a rate of about 1.5 bushels per acre (85 lb per acre) or by broadcasting at a slightly greater rate.

Cultural Practices

Cereal rye is extremely competitive and has an aggressive root system. It grows very quickly in the spring and therefore outgrows many weeds that could compete for nutrients. For this reason,

and because most annual weeds are killed by cold winters, rye crops rarely encounter weed problems.



Ergot, a fungal disease that makes grains unsafe for consumption, is a prevalent problem in cereal rye crops. Ergot produces black growths called sclerotia, which are visible in the heads of the rye (see image at left). Usually, ergot infestations affect the borders of rye fields first, so it is important to take note of ergot and harvest infested sections of the field separately,

especially if you are saving rye seed for next year's crop. Good crop rotation practices will minimize the chances of damage from disease, but rye crops should always be tested before human consumption.

Harvesting & Storing

In our area, winter rye is harvested in late July or early August. It is usually ripe just ahead of winter wheat, but does not yield as fruitfully. One way to determine whether rye is ripe is to use your fingernail to test its strength; your fingernail, when pressed firmly into the kernel, should only make a very light indent (this is called the 'soft dough stage'). The moisture level in rye should be about 15% at harvest. Only harvest in dry conditions. When harvesting with a combine, growers may need to cut the straw high in order to avoid clogging the equipment, since rye is tall and produces a large quantity of straw. This will obviously leave taller stubble in the field.

Test rye for ergot and then dry, process, and store rye carefully to avoid disease and moisture in the crop. Rye can be milled into many different products for human consumption and animal feed. As animal feed, rye grain is not as tasty or nutritious as other cereal crops, so rye is grown primarily for use as rye flour or whole or cracked rye seed. For a delicious rye bread, you can mix rye and wheat in a ratio of about half-and-half or use more rye.

References:

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