

# Spelt

## General Information

Spelt (*Triticum aestivum* var. *spelta*), a sub-species of the common wheat, is a hearty grain that is very popular in Europe and catching on in the northeast United States. Its history as a bread grain is well-documented, with spelt's origins in Switzerland and Germany. Germans call spelt "dinkle" and use the grain as animal feed, in bread, and for brewing.

Ground spelt is used as an alternative to oats and barley in animal feed. Its nutritional value is similar to that of oats. In addition, spelt hulls have almost as much nutritional value as the grain. De-hulled spelt can be consumed by humans, and is a popular fiber source in Europe. In the past decade the demand for spelt has increased substantially in the U.S. food market. Spelt is being used for a wide variety of products, from pasta and high fiber cereals to an alternative baking flour.



## Preparation & Planting

A winter spelt seedbed should be prepared in the same way as winter wheat. Seed should be planted in mid-September so that the crop can grow a few inches before a killing frost. Spring spelt is generally planted in the northeast in mid-April and harvested in late July. Spelt can grow in poorly-drained low fertility soils. When seeding spelt it is important to remember that because the hulls are attached to the seed, germination is slower than for wheat.

Before planting, the seed should be cleaned and germination rate determined. To plant spelt set the grain drill to the setting for oats and seed at a rate of 80-100 lbs per acre (although some growers suggest higher rates); plant seeds at a depth of at least 1¼ inches so that the root system can become established.

Spelt can grow in a range of soil pH's from 6.0-7.5, but for optimum growth the soil should be pH 6.0. Here again, the fertilization of spelt is similar to that of winter wheat. One exception is that overfertilization with nitrogen can cause increased stem growth, thus increasing the likelihood of lodging.

There are many cultivars of "spelt" available that are actually crosses between wheat and spelt, which causes growers some confusion. Because spelt is grown much like wheat and is a very similar grain, it crosses easily. However, now that there is an increased demand for spelt in the northeast, it is easier to locate seed.

## Cultural Practices

Spelt competes well against weeds because it has a large leaf mass, grows quickly and vigorously, and, if fall-seeded, can out-compete spring weeds. Spelt is not resistant to loose smut and stinking smut (bunt). Stem or leaf rust, as well as other foliar diseases, can be an issue. However, these diseases can be greatly reduced by rotating crops and not planting spelt after another cereal crop. Like wheat, spelt is susceptible to *Fusarium*, a fungus that can produce the mycotoxin deoxynivalenol (DON). DON levels over 1ppm are considered unsafe for human consumption (FDA, 1993). Therefore spelt should be tested before processing into commercial flour.

## Harvesting & Storing

Spelt is normally ready for harvest just before the winter wheat harvest, and will be ripe when the straw is yellow and the kernels break cleanly when cracked. Spelt is referred to as a “covered wheat,” meaning it has a thick, protective hull around its grain kernel. When combining, it is important to avoid de-hulling the spelt; this process must be done separately to achieve a clean grain. Spelt is much more difficult than wheat to process because its hull, or “glume,” is so hard and tight, and needs to be removed before milling. Spelt can be de-hulled with the same equipment used to de-hull oats.



Make sure you harvest and store spelt at a moisture level of no higher than 14%. Dry and store spelt the same way you would winter wheat. Spelt’s flavor is similar to wheat, and most North American spelt is grown for flour. Spelt can be mixed with white or whole wheat or used on its own, and many people enjoy “spelt flakes,” the rolled or flaked grain product, in recipes or as a hot cereal, like oatmeal. Spelt bread will have a denser texture than wheat bread and also tastes a bit nuttier. Spelt berries can be used whole in soups or as a substitute for rice or pasta—cooking time will decrease if grains are soaked first.

### References:

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