



# Growing Wheat for Grain - Make your own flour!

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If you're deep into gardening and self-sufficiency, sooner or later you'll want to try growing wheat. Among other benefits, it allows you to get away from the commercial process that grows a perfectly good grain, then scrapes off the bran, peels out the germ, bleaches the flour and sells all those things back to you separately.

If you try, you will discover wheat is easy to grow almost anywhere in the United States, even as a wide-row crop in your garden. One gardener in Vermont attests to having planted 30 pounds of winter wheat on one-eighth of an acre and harvesting 250 pounds of grain in July. On a somewhat smaller scale, even if you have a front yard that's 20 feet by 50 feet, you could plant 6 pounds of wheat and harvest nearly 50 pounds of grain.

Before you enthusiastically plan to put in enough wheat to make all your bread for the next year, start with a small trial area the first year. This test run will allow you to learn how the grain behaves, what its cultivation problems are, how long it takes you to handle it, how it's affected by varying climate conditions, and more.

## **Different Types of Wheat**

After you've decided how much wheat to plant, you'll need to decide which type to plant. It's easy to get confused about types of wheat. *Winter wheat* is planted in the fall and harvested from mid-May in the South to late July in the North. *Spring wheat* is planted in the spring and harvested in the fall. Both spring and winter wheat are further divided into soft wheat (lacking a high gluten content and used primarily for pastries and crackers), hard wheat (with a high gluten content and used for breads), and durum wheat (used for pasta). The variety you select will depend on where you live. Check with your local cooperative extension agent to learn which varieties are best for your region. We only sell Hard, Red Winter Wheat, as we've found it's the most popular for most of our customers.

## **Planting Wheat**

Plant winter wheat in fall to allow for six to eight weeks of growth before the soil freezes. This allows time for good root development. If the wheat is planted too early, it may smother itself the following spring and it could be vulnerable to some late-summer insects that won't be an issue in the cooler fall weather. If winter wheat is planted too late, it will not overwinter well.

Spring wheat should be planted as early as the ground can be worked in spring. Do the initial plowing in the fall, then till and sow in the spring. To ensure an evenly distributed crop, figure out the amount of seed you'll need, divide it into two piles, and broadcast one part in one direction, such as from east to west. Then broadcast the remainder from north to south. A cyclone crank seeder will do an even job, but broadcasting by hand is fine for a small plot. You also can plant it in rows like other crops.

Cover the seed by rototilling or raking it in to a depth of 2 to 2 1/2 inches for winter wheat and 1 to 1 1/2 inches for spring wheat. For best results, roll or otherwise firm the bed to ensure good seed-soil contact.

## **Harvesting the Grain**

As you admire your wheat stand, you'll notice in midsummer (later for spring wheat) that the color of the stalks turns from green to yellow or brown. The heads, heavy with grain, tip toward the earth. This means it's time to test the grain. Choose a head, pick out a few grains, and pop them into your mouth. If they are soft and doughy, the grain is not yet ready. Keep testing. One day the grains will be firm and crunchy, and it will be time to harvest.

At harvest, how should you cut the wheat? If you have a small enough plot, you'll just snip the heads of wheat off the stems. It goes quickly if your wheat field is no larger than about 6 feet wide by 25 feet long.

**Using a scythe.** If you like the old-time way of doing things and are going to harvest a larger amount of grain, you might use a scythe and cradle. The cradle is a series of long wooden fingers mounted above the scythe blade. The scythe cuts the wheat, and then the cradle carries the cut wheat to the end of each swing and deposits it in a neat pile, stacked with all the heads grouped together. You could cut with the scythe alone, but you would spend a lot of time picking up the cut wheat and arranging it for easier handling.

**Harvesting with a sickle.** Another possible tool for cutting small amounts of grain is the sickle. It's a matter of grab and cut, grab and cut. Hold a handful of wheat in your left hand and swing the sickle with your right to cut the plants at nearly ground level. It's possible to kneel or crouch in various positions to

avoid getting too tired. As you cut handfuls, lay them in small piles with all the heads pointed in the same direction.

**Binding sheaves.** The next step is to bind the grain into sheaves, each about 12 to 14 inches in circumference — a bunch you can hold comfortably in your hands. Bind the same day you cut the wheat. It's nice to have two people taking turns cutting and binding. You can bind with cord or baler's twine or even with some of the wheat stems, twisting them in a way that holds the bundle firm.

**Curing the grain.** Stack sheaves upright in a well-ventilated, dry location safe from grain-eating animals. Our ancestors stacked sheaves to make shocks in the field, but with small quantities, it's easy to bring the sheaves in out of the weather. The grain has been cured when it is hard, shatters easily and cannot be dented with your thumbnail.

**Threshing.** Now it's time to thresh the grain — to separate the straw and chaff from it. You can go about this in any number of ways. One method is flailing. A flail consists of one piece of wood about 3 feet long — the handle — attached with a leather thong to a shorter piece about 2 feet long. The shorter piece is flung at the heads of grain repeatedly, shattering a few heads each time. If you are using this method, you can expect to produce about 3 pounds of wheat in 20 to 25 minutes. That's slow work. Also, there's a trick to learning to swing the tail without rapping yourself on the head.

Another way is to beat the individual sheaves against the inside of a large, clean trash can. In two hours a thresher can produce a can full of wheat, but with a lot of chaff and even solid heads in it. This is faster than flailing, but produces more debris that has to be separated from the wheat.

**Winnowing.** The usual method for winnowing is pouring the grain from one container to another, letting either the wind or the breeze from an electric fan push the lighter chaff out of the grain. Repeat the process a few times to get the grain as chaff-free as possible.

## **The Best Ways to Store Wheat**

The way you store grain depends on how much you're dealing with. Storing it properly means protecting it from heat, light and moisture, as well as from rats, mice and insects. You can keep a small amount of grain in plastic bags in the freezer practically forever, but it takes more effort to store larger amounts.

The general recommendation is to store hard winter or spring wheat with less than 10 percent moisture content — a moisture level that is actually difficult to attain without additional drying (see below). Five-gallon metal or plastic

buckets with friction lids are ideal for storing all grains. One hundred pounds of grain can be stored in three of these containers. (Garbage cans are not good for storage because making them bug-proof is difficult.)

These cans prevent insects from getting into the grain, but you must take another step to eliminate any eggs or larvae already in the grain. A simple method is to heat the grain in the oven for 30 minutes at 140 degrees Fahrenheit, which also will help reduce the moisture content. If you're not sure about the accuracy of your oven's thermostat, check it with an oven thermometer: temperatures higher than 140 degrees may damage the grain.

## **Grinding the Grain**

Some books suggest using a blender to grind the grain, but that doesn't work well. You won't be able to make nice, fine flour — only a coarse meal with particles of uneven size. At first, buying an inexpensive, hand-cranked mill sounds right and romantic — back to nature all the way! But how much flour are you going to be grinding? You'd have to grind all afternoon to get enough flour for six loaves of bread, and that's apt to discourage you from baking at all after the first few tries. Using an electric flour mill is a better way to grind large quantities. When you're selecting a mill, ask the following questions:

- Will it handle the amount of flour you expect to grind in a reasonable amount of time?
- Does it grind without overheating the grain?
- Can it be adjusted to grind different degrees of coarseness?
- Is it easy to use and clean?
- Will replacement parts be available if you need them?
- Is it manufactured by a reputable company that will honor the warranty?

When grinding grain, avoid the temptation to grind large amounts for future use. Grind what you need for perhaps a week, and refrigerate the unused portion in an airtight container. Whole grains can be stored for months without loss of taste or nutrition, but this is not true of whole grain flour.