



WHEAT

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Wheat is used mostly for human food. History shows that the first people to eat wheat probably did so 17,000 years ago by chewing kernels of the wild grain.

There are two major types of wheat planted in the United States. They are winter wheat and spring wheat. Winter wheat is planted in September and harvested the following summer. Spring wheat is planted in April or May and is harvested in August or September.

Two types of winter wheat are used primarily to make breads and hard rolls. These are called Hard Red winter wheat and Hard White winter wheat. The Hard White winter wheat has the same qualities and functionality as Hard Red winter wheat, but white in color. Millers and bakers are able to make a whole wheat product that looks and tastes like an enriched white flour product.

Planting

The soil must be prepared before winter wheat is planted in the fall. First, a disk is used to turn and loosen the soil and to destroy any young weed plants. Pulled behind a tractor, a disk has a set of metal "plates" that dig deep into the soil. An implement called a harrow is used to smooth out the soil for planting.

Wheat is planted by a machine called a grain drill. First, a shovel cuts a trench into the soil so the seeds can fall into the ground. A "notched wheel" feeds the seeds into a tube and drops the seeds one at a time into the trench. Loose soil is pressed over the seeds. Now the seeds are ready to grow.

Growing Cycle

The seed begins to grow when there is enough moisture in the soil. The first signs of growth are tiny root hairs that stretch down into the soil. Eventually, a small shoot pushes upward through the soil.

Tissue within the wheat seed provides the plant with its first nourishment. As the plant grows, it uses the sun to make food in its leaves. Its roots get food from the soil. Winter wheat grows four to eight inches tall in the fall, but stops its growth when winter arrives.

In the spring, the wheat plant grows many leaves and sends up three to 12 stems called tillers. A group of flowers called a spike develop at the top of each tiller and mature into the wheat head. Kernels within the head grow and turn golden before harvest.

Harvest

The wheat must be dry before it can be harvested. A machine called a combine is used to cut, separate and clean the grain with one pass through the wheat field. The producer takes the grain to the nearby elevator. From the elevator, the wheat will be sold to be processed into food for humans or livestock feed.

Wheat is ground into flour at a mill. Most products such as bread, rolls, cookies, pastries and bagels are made from wheat flour. Bran from wheat is added to breakfast cereals for fiber. Other products made from wheat include spaghetti, muffins, crackers, tortillas and macaroni. Wheat products have carbohydrates, protein, minerals and vitamins.



On The Front

A. Wheat Plant

Wheat is an annual grass plant that grows two to three feet tall. The plants have long and narrow green leaves that turn golden as harvest nears.

B. Wheat Head and Kernels

The wheat head contains kernels or seeds and is located at the top of the plant. Kernels are the only part of the wheat plant used for human food. Each wheat head contains 50 to 75 kernels.

C. Wheat Kernels

Wheat kernels are very small. A bushel of wheat weighs about 60 pounds and contains about one million kernels. If wheat averages 35 bushels per acre, a baker can make 1,960 loaves of bread. An acre is about the size of a football field.