

Growing Wheat

WHEAT – FROM FIELD TO FLOUR

Wheat Processing



In the summer, wheat producers prepare the soil for planting. The plow turns the soil over and kills all the weeds. When the soil is ready for planting, the farmer uses a grain drill to plant the seeds.

Hard Red Winter Wheat is planted usually in September or early October when the soil has sufficient moisture to germinate the seed.



Winter wheat is harvested in May and is usually finished by late July. The farmer uses a combine to quickly harvest the crop once the kernels have dried to 15% moisture or less. The combine cuts the stalks and separates the kernel from the rest of the plant.



Farmers face many challenges like weather, insects, and fungus that may diminish a once profitable wheat crop.

The wheat plant will grow about six inches before the first frost then the plants will stop growing. This is called the dormant period. In some areas cattle graze on the young wheat plants during this time. The plants are not damaged by proper grazing and will grow back.



After the kernels have fully developed, the leaves and stem fade from dark green to a golden brown and the kernels quickly dry. At this time the wheat is ripe and nearly ready for harvest.

After the wheat is harvested from the field and loaded onto trucks, it is usually transported to a local grain elevator where it is unloaded and put in storage bins. If the wheat is sold it will be loaded onto railcars or on trucks where it is shipped to its buyer's destination. Some wheat is then loaded onto ships for export.



The winter wheat plant will resume its growth in the spring. The head of the wheat plant, which contains the kernels, develops at the tip of the stem. The stem grows rapidly, pushing the head up and out of the top leaf sheath.



After the head emerges, flowering occurs and the kernels begin to develop. Most wheat plants grow between two and four feet tall.



Wheat that is sold for food or feed is taken to a mill. There are four major steps in the flour milling process:

Cleaning: First, the wheat is cleaned by machines that remove impurities such as weeds, seeds, dirt and small stones. A giant magnet removes any metal pieces that might have shaken loose from the farm machinery.

Tempering: Moisture then is applied to the kernel which toughens the bran coat and causes it to separate from the endosperm.

Grinding: The tempered wheat is then fed to the mill, where the kernel is cracked and ground by passing it through a series of rollers. The wheat is sifted to separate the fine flour from the coarser endosperm particles and bran. The fine particles become flour, the remaining that is not bran are known as the middlings which are removed and used in livestock feed.

Enrichment: The final step, the miller bleaches the flour and adds B vitamins, as well as iron, to the flour before it is packaged.



The rest of the wheat is shipped off to other processors to be used in animal feed or other industrial products.