



GRAINS AND LEGUMES OF THE WORLD



By:

Grains

1. Grains are the seeds or fruits of plants from the grass family, including barley, corn, oats, rice, and wheat.
2. Early agriculture arose with the cultivation of grains, which are a good source of energy. They are also small, hard, and dry, making them easy to store, measure, and transport.
3. Today in the United States most grains are harvested in late summer or fall with a machine called a combine that cuts the stalks (reaps the grain) and separates the seeds from the rest of the plant (threshes the grain).
4. After harvest, most grains are sent to a mill for further processing.



Barley

1. Barley originated in ancient Mesopotamia in the Middle East and was one of the first grains cultivated for food. Ancient Egyptians were credited with developing the barley grain into what it is today.
2. Barley is one of the main crops of Canada.
3. Barley is high in fiber and beta-glucans, which help lower cholesterol and boost the immune system.
4. Much of the barley grown in the United States is malted. Malted grains are germinated by soaking in water and then the germination is stopped by drying with hot air.

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Barley

Barley is:

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Corn

1. Corn originated on the American continent and was first cultivated by the ancient Maya, Aztec, and Inca empires over 5,000 years ago.
2. Native cultures developed corn into many different varieties. After thousands of years, they changed the plant so much that corn is one of the only cereal grains that can't plant its seed into the soil without the help of humans.
3. By the time Columbus reached America, corn was being grown from Chile to Canada. Today there are over 500 different varieties of corn.

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Corn

4. Dent corn (or field corn) is large and has a dent on top. It is used to feed livestock. It is also processed and used to make thousands of products ranging from cornmeal and sweeteners to ethanol and plastic.
5. Popcorn is small and round and has enough moisture inside to pop when heated.
6. Sweet corn is picked when it's young and eaten as a vegetable on or off of the cob.
7. The United States is the largest producer of corn in the world.

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Corn

Dent corn is:

Popcorn is:

dent corn

popcorn

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Oats

1. Oats probably originated in the Balkan region of southeastern Europe. Areas with cool climates like Russia, Poland, and Romania are where the grain was developed.
2. Oats were popular throughout early European history because of their ability to grow in cold and poor conditions.
3. Similar to barley, oats are high in beta-glucans which help to lower cholesterol and boost the immune system.
4. In the United States, oats are commonly steamed and flattened to produce rolled oats, which are eaten at breakfast as oatmeal and are also used in cookies and breads.

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Oats

Oats are:

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Rice

1. Rice originated in Asia and continues to be the main food staple there.
2. China and India produce approximately half of the rice grown in the world. The United States produces less than two percent of the world's rice.
3. Rice is commonly grown in flooded fields called paddies, which are designed so farmers can control the water level.
4. At the mill, the inedible hulls of rice are removed first. This is all the milling done to brown rice. White rice requires further milling to gently remove the bran layers.

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Rice

Rice is:

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Wheat

1. Wheat originated in the Middle East over 10,000 years ago.
2. The ancient Egyptians discovered how to use yeast to raise dough made from wheat flour. The high gluten (a type of protein) content of wheat allows it to rise better than flour made from other grains.
3. In 1831, Cyrus McCormick designed the first successful mechanical reaper, allowing farmers to cut wheat by machine rather than by hand.
4. Today approximately 60 million acres of wheat are harvested annually in the United States.

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Wheat

Wheat is:

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LEGUMES

1. Legumes are crops like soybeans, lentils, and beans that produce seeds in pods and have the ability to use soil bacteria to pull nitrogen from the air and use it for growth.
2. Legumes are often grown in rotation (on alternating years in the same field) with grains to replenish nitrogen in the soil.
3. Similar to grains, legumes were important at the advent of agriculture and remain important today. They are a good source of protein that is easy to store and transport.
4. Most legumes are annual crops, meaning they must be planted each year from seed. An annual crop completes its life cycle in one growing season.

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Soybeans

1. Soybeans originated in China and were cultivated as a food crop as early as 1600 BC.
2. Soybeans are often planted in rotation with corn, which needs lots of nitrogen.
3. The United States grows more soybeans than any other country.
4. Soybeans were used primarily to feed livestock until the early 1900s, when George Washington Carver discovered that they contain valuable protein and oil. Today soybeans are processed and used in a wide variety of food products and are even used to make biodiesel.

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Soybeans

Soybeans are:

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Lentils

1. Lentils were among the first cultivated crops in the Middle East approximately 10,000 years ago.
2. Lentils grow well in cool weather and don't need a lot of water. They are often grown in rotation (on alternating years) with wheat to replenish nitrogen in the soil.
3. In the United States most lentils are grown in Montana, North Dakota, Washington, and Idaho.
4. Lentils are high in protein, A and B vitamins, and iron, and they come in a variety of colors, including yellow, red, green, brown, and black.

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Lentils

Lentils are:

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Pinto Beans

1. Pinto beans are members of the same species (*Phaseolus vulgaris*) as green beans, kidney beans, black beans, and many others.
2. Beans originated in Central and South America. They were an important crop to many Native Americans, who often planted them together with corn and squash.
3. More than 40% of the dry beans produced in the United States are pinto beans.
4. Pinto means *speckled* in Spanish, but pinto beans' characteristic spots disappear when they are cooked.

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Pinto Beans

Pinto beans are:

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