



Grains of truth about **WHEAT PRODUCTION AND CONSUMPTION**

Definitions

Wheat is one of eight cereal grains known to man. It is a grass variety producing edible seeds and is the most widely cultivated grain grown in the world. Its botanical name is *Triticum aestivum*.

History

The development of civilization may be directly connected to the cultivation of wheat. Villages developed when primitive man discovered he no longer needed to follow game and forage for his food. He could grow wheat during the summer, store it for food in the winter and use the remaining seed to plant in the spring. Actual cultivation may have started in the Fertile Crescent of western Asia around 6,000 to 8,000 B.C. or earlier.

Anthropologists speculate that primitive man first chewed the raw wheat kernel before he learned to pound it into flour and mix it with water to make porridge. About 10,000 years before Christ, man first started eating a crude form of flat bread—a baked combination of flour and water.

Ancient Egyptians are believed to be the first bakers of the white, leavened bread that we know today. Around 3,000 B.C., they started to ferment their flour and water mixture using wild yeast present in the air. Eventually they added sugar, salt and flavorings such as poppy and sesame seeds. Even though the Egyptians and Romans made leavened bread, they did not understand that airborne yeast caused the bread to rise. Not until the 1800's was yeast identified as the organism that converts carbohydrates into alcohol and produces a leavening gas (carbon dioxide) in the process.

Wheat was introduced into the United States through two separate avenues: first, by the French and Spanish into the Southwest; and second, by Northern Europeans into the eastern United States.

Spanish wheat was introduced into what is now the Big Bend area of Texas in 1582. Hard red winter wheat, the largest commercially grown wheat in the United States, was not introduced until 1874, when Mennonite immigrants from the Crimea brought this winter-hardy wheat to the Kansas plains.

Classes of wheat

Six classes of wheat are grown in the United States: hard red winter, soft red winter, hard red spring, hard white, soft white and durum. Wheat is classified by hardness of the grain, the color of the kernel and the time of planting.

Growing wheat requires soil, water and sunlight. Farmers use special equipment to prepare the soil, plant the seeds, water the crop and harvest the wheat.

Winter wheats are planted in the fall. After the grasslike seedlings emerge, they lie dormant during the winter months. They emerge again in the spring, ripen and are harvested in early summer. Spring wheats are planted in the spring and harvested in late summer. Spring wheats grow best in the northern areas of the United States where the summers are not too hot for the young plants. Conversely, winter wheats grow best in those areas where the winters are not too cold.

Among the classes of wheat, the only difference in nutrients is the protein content. This difference is nutritionally insignificant, but the protein content and quality does make a difference in terms of baking. Durum, the hardest wheat, averages 14 to 16 percent protein and is primarily used for pasta. Hard spring wheats range from 12 to 18 percent protein and are used for yeast breads. Hard winter wheats range from 10 to 15 percent and are used for breads and all-purpose flour. Soft wheats range from 8 to 11 percent protein and are used in cakes, cookies, pastries, crackers and cereals.

Availability

Wheat is grown in nearly every state in the United States and in many other countries. The top wheat-producing countries are China, India, the United States, former Soviet Republics, France, Canada and Australia.

The United States exports as much as 50 percent of its own production and is considered a primary supplier of wheat to the world. This wheat helps improve the nutritional status of many people. The top 5 wheat customers of the United States in 2003/04 were: 1) Egypt, 2) Japan, 3) Mexico, 4) Nigeria and 5) South Korea.

Wheat consumption

A nation of 1 billion people, China is traditionally thought of as a rice-eating nation. The Chinese, however, consume 180 pounds of wheat flour per person every year, mostly in the form of noodles. Some nations have much higher annual per capita wheat flour consumption, such as Israel, at 294 pounds; France, at 241 pounds; Egypt, at 384 pounds; and Algeria, at 441 pounds.

Revised 2005

The average American consumed 133 pounds of wheat flour in 2004. There is room for increased wheat consumption in the United States. At the turn of the century, Americans consumed about 210 pounds of wheat flour per person each year. In 1971, that figure hit an all-time low of 110 pounds per person because of inaccurate information that portrayed bread, starches and carbohydrates as fattening.

Today, health professionals recommend that more than 45-65 percent of daily caloric intake should be from grain based foods. The 2005 Dietary Guidelines suggest that we consume 5 to 10 ounces of grain foods daily (depending on age, gender and activity level), with half of them coming from whole grains. Consumption has had its up and downs through the years due to various fad-diets. Hopefully consumption will be on the rise again and may someday approach the 210-pound level.

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