

which has created an abundance of soybeans and soy products for exportation, giving U.S. producers the advantage of offering their product at a lower price than producers from competing countries. According to the ASA, U.S. soybean and soybean products exports totaled \$7.1 billion in 2001. That year, the European Union (21.5 percent), China (18.7 percent), Mexico (13.9 percent), and Japan (13.4 percent) were the leading U.S. export markets.

The Farm Security and Rural Investment Act of 2002, also known as the 2002 Farm Bill, provided increased levels of support for U.S. Farmers, reducing the intent of past legislation to make farmers more dependent upon the market, as opposed to government support. For soybean farmers, the 2002 Farm Bill provided benefits in numerous areas. In addition to marketing loans and other forms of financial support, it ramped up funding for conservation and bio-energy programs and provided increased support on the trade front by strengthening funds for initiatives like the Food for Progress program.

### FURTHER READING

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## SIC 0119

### CASH GRAINS, NOT ELSEWHERE CLASSIFIED

This industry includes establishments primarily engaged in the production of cash grains, not elsewhere classified. Primary cash grains in this classification include dry field and seed peas and beans, safflowers, sunflowers, and popcorn. The industry also includes farms growing barley, buckwheat, lentils, oats, sorghum, rye, mustard seeds, cowpea and flaxseed.

### NAICS CODE(S)

111130 (Dry Pea and Bean Farming)

111120 (Oilseed (except Soybean) Farming)

111150 (Corn Farming)

111191 (Oilseed and Grain Combination Farming)

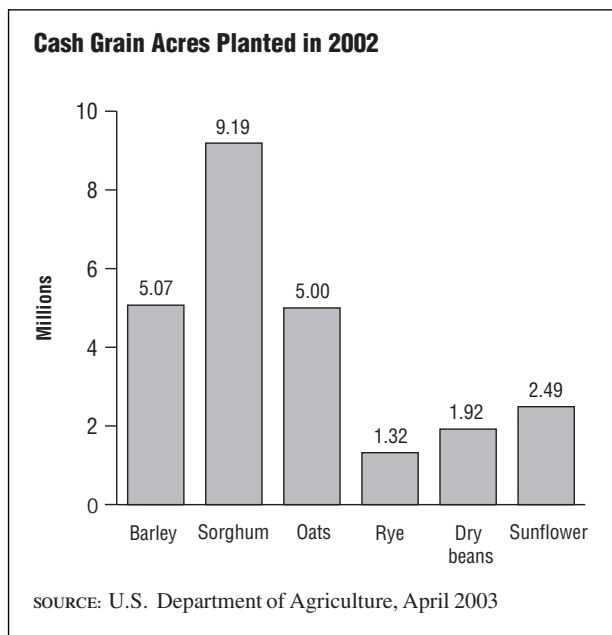
111199 (All Other Grain Farming)

Major members of this industry, such as barley, oats, sorghum, and dry beans combined for more than \$2.2 billion in production in 2002, according to the U.S. Department of Agriculture (USDA). This group of cash grains accounted for more than 21 million acres of farmland in the early 2000s, which yielded more than 715 million bushels per year. Cash grains, like most U.S. crops, had depended on government price supports since the Great Depression up until 1996, when Congress passed the Federal Agriculture Improvement and Reform Act, or "freedom to farm" legislation. This act gradually decreased subsidies over a seven-year period, with a goal of eliminating them by 2002 and ushering in a new era of market-dependent farming. However, the passage of the 2002 Farm Bill, signed by President Bush in May of that year, extended price subsidies for cash grains and other crops for an additional six years.

**Barley.** About 60 percent of the barley grown in the United States is used for livestock feed, especially dairy and beef cattle. Another third of the crop is used for malt by the food and brewing industries. Barley has been affected by acreage reduction programs through which the U.S. government has paid farmers to suspend the planting of barley on portions of their land. In 2001, barley acres planted reached a record low of 4,967, compared to the nearly 9,000 bushels planted in 1991. Between 1998 and 2003 annual U.S. barley production fell from 352 million bushels to 227 million bushels. Over the same time period, yield per acre harvested dropped from 60 bushels to 54.9 bushels. North Dakota, Idaho, Montana, Washington, and Minnesota are among the top barley producing states.

Genetic research may enhance barley's future by developing breeds of barley that can yield leavening flour for breads—conventional barley flour alone cannot yield raised loaves of bread—and that are resistant to disease. If biotechnology produces such a barley hybrid, then the demand for barley would likely increase because of its growing efficiency: barley yields about 35 more bushels per acre than wheat.

**Sorghum.** Valued at \$883 million in 2002, sorghum (cereal grasses, also called milo) is used primarily for livestock feed. Close to two-thirds of the sorghum grown in the United States is used as livestock feed. About one-third of the U.S. sorghum production is exported, primarily to Japan and Mexico. Between 2000 and 2001, U.S. sorghum exports grew 26 percent. Applications of sorghum in food, seed, and industrial processing account for about two percent of the U.S. crop. The use of sorghum in liquors has been its most common food appli-



cation. Sorghum is also processed into starch, oil, and dextrose. Production has suffered a modest decline since the early 1990s. Sorghum, which has competed with corn as a primary livestock feed, yielded only 50.7 bushels per acre in 2002, compared to 72.6 bushels per acre in 1992. Growers planted 9.5 million acres in 2002, compared to the 13,177 acres planted a decade earlier.

**Oats.** Oats, the smallest agricultural contracts traded on the Chicago Board of Trade, is used as a cash grain as well as for on-farm uses as straw, pasture, forage, or as a companion crop to help establish an alfalfa crop or other legume crop. Leading states in oat production include Iowa, Minnesota, South Dakota, and Wisconsin. Although the value of oat production grew from \$175 million in 1999 to \$212 million in 2002, oat production dropped to its lowest level on record in 2001, with only 117 million bushels harvested. These trends reflect the view that U.S. oat crops are viewed as inferior to foreign oats. While oat consumption in general gained ground as food in the early 2000s due to growing evidence that eating oats helped to reduce cholesterol, an increasing proportion of this consumption was of foreign oats.

**Rye.** A minor crop in the United States, rye is used primarily as livestock feed and is often mixed with other grains. Rye, especially rye flour, is also used for food. Less than two million acres were planted annually during the 1990s and early 2000s. Approximately one-third of this acreage was harvested, and the rest was grown for grazing, ground cover in the winter, or was plowed under to enrich the soil. Leading rye-producing states are South Dakota, Georgia, North Dakota, and Minnesota. In 2002, 286,000 acres of rye were harvested, valued at \$23.7 million.

**Dry Beans.** The United States has consistently been a major dry bean exporter, ranking second behind China in exports and fifth in the world in production. Leading states producing dry beans include North Dakota, Michigan, and Nebraska. Dry edible beans, including pintos, garbanzos, navy beans, limas, black, and black eye, have constituted this industry's third largest segment with annual sales of \$519 million in 2002. With mild fluctuations, dry bean production has risen and has been predicted to continue this trend, regularly yielding more than 20 million hundredweight (cwt.). In 2002, the average yield of dry beans was 1,736 hundredweight (cwt) per acre from 1.9 million total acres. The largest dry bean crops were pinto, navy, black, and great northern beans. Pinto bean crops totaled more than 40 percent of total dry bean production.

**Sunflower/Safflower.** Sunflower and safflower seeds produced nearly 4.2 billion pounds from just over 3.1 million acres of farmland at the turn of the twenty-first century. Sunflower production has maintained this level of production with 2.65 million harvested acres in 2002. These seeds are primarily used in cooking oil, as the oil content of sunflower seeds is typically 40 percent or higher. Safflower oil had a peripheral industrial application, because it resembles linseed oil, and safflower cakes were used as high-protein livestock supplement. As sunflower seeds have become more acceptable in international markets, demand is expected to increase.

**Popcorn.** Popcorn is native to the Americas and has been cultivated and eaten by Native Americans for centuries. The United States grows nearly all the popcorn used in the world. Nebraska, Indiana, and other Corn Belt states have consistently been the leading popcorn producers in the United States.

#### FURTHER READING

Ayer, Harry. "The U.S. Farm Bill: Help or Harm for CAP and WTO Reform." *Agra Europe*, 24 May 2002.

Food and Agriculture Policy Research Institute. "Implications of the 2002 U.S. Farm Act for World Agriculture." 24 April 2003. Available from <http://www.fapri.missouri.edu>.

U.S. Department of Agriculture. *Track Records of U.S. Crop Production*. Washington, DC: 2003. Available from <http://usda.mannlib.cornell.edu/data-sets/crops/96120/track03b.htm>.

## SIC 0131

### COTTON

This industry classification includes establishments primarily engaged in the production of cotton and cottonseed.