



Hard Red Wheat Industry Profile

*by Jeri Stroade, Extension Assistant, Department of Agricultural Economics,
Kansas State University;*

*Mykel Taylor, Extension Assistant, Department of Agricultural Economics,
Kansas State University,*

mtaylor@agecon.ksu.edu

*Michael Boland, Associate Professor, Agricultural Economics, Kansas State University
mboland@agecon.ksu.edu*

Background

The United States is the third largest wheat-producing country in the world. Wheat is the third largest field crop in the United States behind corn and soybeans. While half of the U.S. crop is exported, the U.S. share of wheat exports has decreased in the past twenty years. Since 1981 the wheat area harvested has decreased by 27 million acres. The cause of this decline is two-fold. First, foreign competition for the wheat market has caused wheat returns to decrease relative to other crops that U.S. farmers could produce. Next, current government programs allow these alternative crops to be planted.

Production

Wheat produced in the United States can be divided into five major classes (Figure 1). Most classes contain both winter and spring varieties. Winter wheat is sown in the fall and harvested in the summer. Seventy to eighty percent of U.S. wheat production is winter wheat. The crop establishes itself in the fall, goes into dormancy over the winter, and resumes growth in the spring. Spring wheat is planted where the winters are particularly harsh and winter wheat would not survive. It is sown in the spring and harvested in the late summer or fall.

Figure 1. *U.S. wheat classes.*

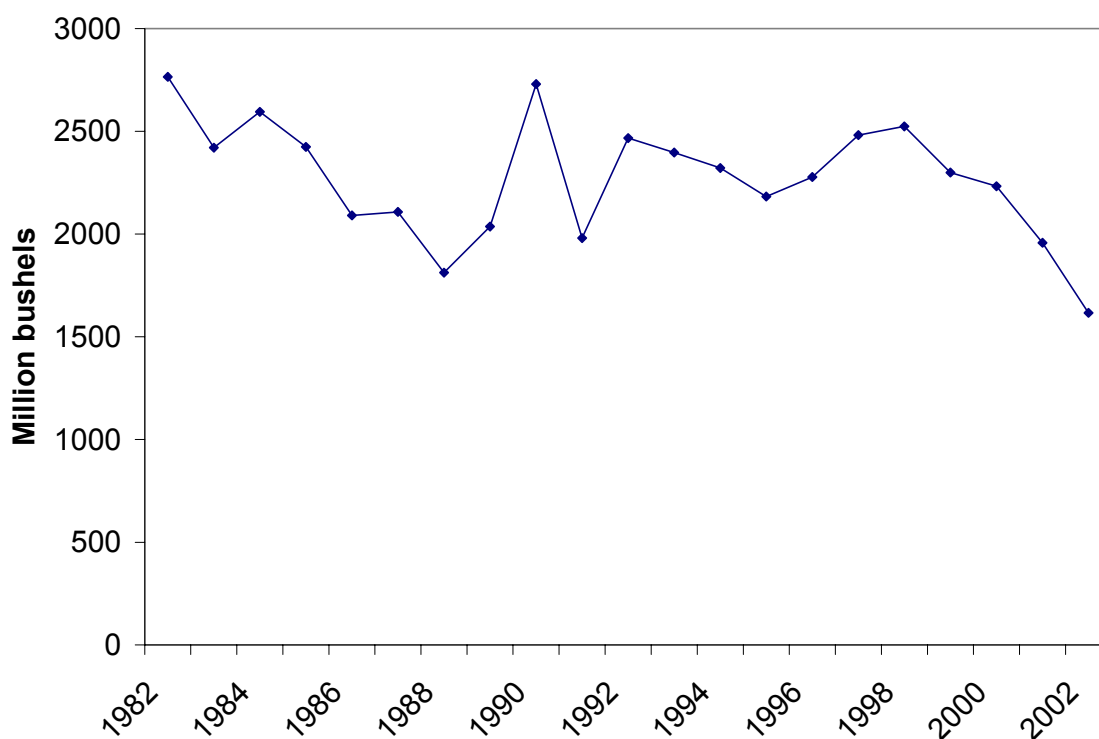
<i>Class</i>	<i>% of wheat production</i>	<i>Location produced</i>	<i>Uses</i>
Hard Red Winter	40	Great Plains (TX to MT)	Bread flour
Hard Red Spring	25	Northern Plains (ND, MT, MN, SD)	High protein blending
Soft Red Winter	15-20	Eastern States	Cakes, cookies, crackers
White	10-15	WA, OR, ID, MI, NY	Flour for noodles, crackers, cereals

Durum	3-5	ND, MT	Pasta
-------	-----	--------	-------

Since the early 1980s government farm programs have allowed production choices, and the result has been a steady decline in wheat acres planted. The 1985 Farm Act introduced the Conservation Reserve Program (CRP) and offered to pay farmers for idling their land for a certain time period. The 1990 Farm Act allowed planting flexibility in that producers could plant up to 25 percent of their base wheat acreage to other crops without losing base acreage. This caused the acres planted of soybeans, corn, and other crops to increase and acres planted of wheat to decrease. The 1996 Farm Act decoupled government payments from planted acres. Accordingly, farmers did not have to maintain any base acreage. Figure 2 shows wheat production in the United States from 1982 through 2002. The average wheat acres harvested from 1998 to 2002 was 21 percent lower than the average from 1982 to 1986.

In addition to government program allowances of production choices, decreased wheat acres is also a reflection of strong genetic improvements in other crops. Due to these improvements, corn and soybeans will now grow in areas where they previously would not.

Figure 2. U.S. Wheat Production, 1982-2002.

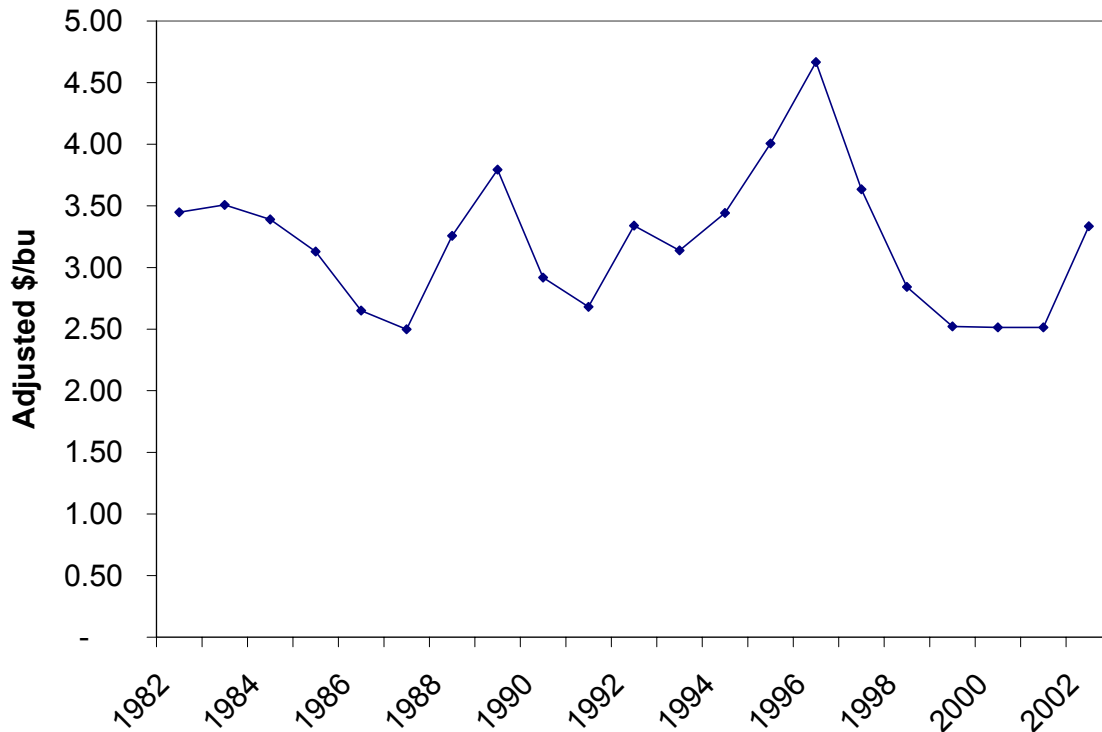


Prices

Figure 3 shows wheat prices in the United States from 1982 to 2002. These prices have been adjusted to reflect 2002 dollars. Prices have fluctuated in the last twenty years and have ended the period at the relatively same level they were at the beginning of the period. However, current prices are significantly lower than their 1996 peak. In the mid-1990s, both world and U.S. supplies were low and so, prices increased. Since then, increases in supply and little demand

growth have caused prices to decrease. When prices are adjusted for inflation, their current levels are the lowest since the late 1800s. However, yield increases due to improved varieties and production methods have compensated somewhat for lower real prices.

Figure 3. *Real U.S. Wheat Price, 1982-2002.*



Demand

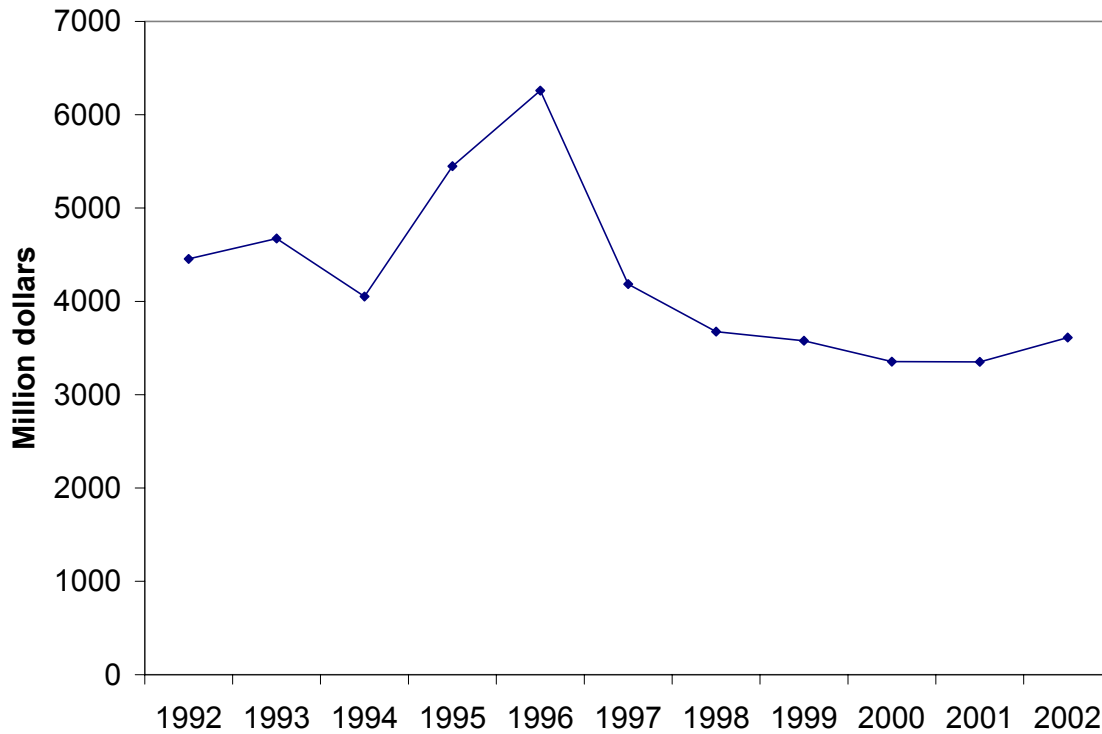
Since most food products made from wheat are highly processed, changes in wheat price do not affect their consumption. Per capita wheat consumption has been declining since the mid 1800s due to a decrease in physical labor and an increasingly diverse diet. In 1879, per capita wheat flour consumption was 225 pounds. That number dropped to 180 pounds in 1925, and reached a low of 110 pounds in 1972. Consumption rebounded to 148 pounds per person by 2000. This growth was partially due to the increasing popularity of pizza and other wheat-based foods. In 1992 the USDA food pyramid was released. This daily nutrition guide recommends 6-11 servings of grains per day. As the food pyramid became more widely followed, consumption of wheat products increased.

Trade

The United States exports half of the wheat crop and just over one-third of hard red wheat. While it remains the world's largest wheat exporter, the United States has lost market share in global wheat trade. U.S. exports made up 45 percent of the global market in 1981. Since 1990 U.S. market share has varied between 25 and 30 percent. Export competition is expected to

continue to increase. Argentina, Australia, and Canada are traditional exporters that will remain competitive while new competition is anticipated from Eastern Europe and the former Soviet Union.

Figure 4. Value of U.S. wheat exports, 1992-2002.



World wheat trade is forecasted to increase by 2 percent per year until 2009. The source of much of this increase will be middle and low income countries as they undergo economic and population growth. Competition for this emerging market will come from Australia, Argentina, Canada, and the EU.

Research

With wheat prices at their lowest levels in recent history and increasing competition for wheat export market share, research becomes more important than ever in the wheat industry. Wheat research progress is slower than corn or soybean research due to wheat's more complex genetic structure. Much of the current research focuses on developing new varieties and production methods. New varieties of white wheat could open possibilities in Asian and Middle Eastern markets. Herbicide-tolerant wheat varieties that would allow increased production efficiency are also currently being developed. The goals of this research are to enhance wheat's competitiveness in the market and to make its production more cost efficient.