

chapter five

# **SOFT WHITE WHEAT MARKET CHARACTERIZATION**

*Thomas Worley*

## **Table of Contents**

- 2** Instructor Guidelines
- 3** Introduction
- 5** World Wheat Markets and the United States Relationship
- 21** United States Data for All Wheat Classes
- 32** Classes of Wheat with a Focus on Soft White Wheat
- 44** Appendix: List of Figures and Tables

## Instructor Guidelines

This chapter contains data tables and charts which characterize wheat markets at differing levels of aggregation including world totals, United States and Pacific Northwest regional markets. The chapter is intended to show important relationships among the various market levels and classes of wheat. The tables and charts cover the 1985/86 to 1998/99 marketing years.

The chapter is composed of three major sections. The first section shows the relative contribution of U.S. wheat production and trade to world totals. Section two focuses on the United States wheat market as a whole, what is generally referred to as "all wheat" which is an aggregation of all the various wheat classes produced. Section three shows how the various classes of wheat produced in the United States contribute to the overall U.S. wheat market. This section emphasizes Soft White Wheat data which is of primary interest in the Pacific Northwest.

The data tables and charts are meant to stand alone and be relatively self-explanatory. Instructors will want to draw upon their own experience and knowledge of the markets as a basis for discussing the material with various audiences. The supporting text included with the tables and figures represents only a sketch of the implications which the instructor may want to draw from the data.

All charts were prepared based upon the data in the tables. The tables and charts are in Microsoft Excel format and are included on the compact disc in Chapter 10 of the manual. Additional years' data can easily be added to the tables and charts as it materializes in the future. By using these files instructors can also create additional charts and graphs to emphasize different aspects of the data than those selected.

## Introduction

This chapter provides an overview of wheat market at all levels, including the world in total, the United States, and the Pacific Northwest (PNW) region. Any regional wheat market, such as the Pacific Northwest, is an integral component of the larger U.S. market and in turn the U.S. market is intricately tied into the world wheat market. Interactions among these levels cause situations where events at any one level to have implications for all the others. Understanding the relationships between the various market levels will help grain marketers analyze the effects of world events on the U.S., PNW regional, and local market situations. Ultimately, understanding the markets at all levels should lead to better risk management planning.

Most of the data used in this chapter cover the marketing years<sup>a</sup> 1986 through 1999 (the most recent year for which complete data were available.) This period was chosen because it includes the last few years of the major government support programs which were in place during the mid 1980's through the 1995 farm bill. During this period, changes in government programs created a major transition in farm policy that substantially decreased the stock holding activities of the U.S. government. Since the implementation of the 1995 Freedom to Farm Act, wheat markets are operating in relatively uncharted policy territory. The two or three years of data that are available under the new policy do not provide a long enough record predict the specific direction of trends. As a result, one must be cautious when drawing any definite conclusions from these data. Shorter time periods are used for tables devoted to export data by specific countries because it seemed more appropriate to focus on trade activity in later years under the more recent agricultural and trade policies.

## Data Sources

All data, except for the export data by country, are from the United States Department of Agriculture publication *Wheat Situation and Outlook Yearbook*. The yearbook is generally released in late March or early April succeeding the close of the previous marketing year. Annual data covers a calendar year, a June-May marketing year or a July-June marketing year as indicated by footnotes in the tables.

Country specific export data was supplied by U.S. Wheat Associates and is based upon USDA's export sales plus the Commodity Credit Corporation's

---

<sup>a</sup>A marketing year is a twelve month period based on the time of year when a crop becomes available for sale. For instance, the all wheat marketing year runs from June 1 through May 31. For the purposes of this discussion, marketing years are referred to by the year with the last month (i.e., the "1992" marketing year for all wheat means June 1, 1991 through May 31, 1992.)

(CCC) donations data. The use of these data provides consistency throughout the chapter and allows the user to update the tables and charts as new data becomes available.

### **Organization of Tables and Charts in the Module**

This chapter has three sections. The first is an overview of the world market while focusing on the United States as a component of that market. Production, consumption, trade, and ending stocks for the world are presented along with the corresponding data for the United States. The objective of this section is to show the relative contribution of U.S. wheat production and trade to world totals. The second section focuses on the United States “all wheat” market, which is an aggregation of all the various wheat classes. Data for U.S. production, consumption, trade, and ending stocks are presented. The third section illustrates the contribution of the various classes of wheat to the national market, with an emphasis on soft white wheat. This chapter is organized to provide a sense of how PNW wheat fits into the overall U.S. and world markets.

Although the data tables and charts<sup>b</sup> are meant to be self-explanatory, the following comments are intended as a brief guide. The charts are based upon the data in the tables and provide a visual representation of selected market factors. Some charts include a linear trend line to indicate the direction and average annual magnitude of change during the period covered by the data. In these charts, the equation for the trend line is given in the figure’s caption. The coefficient associated with the “x” variable represents the average annual change measured in the indicated units.

---

<sup>b</sup>The tables and charts are provided on the accompanying CD-ROM in Excel files so you can update and revise them if desired.

## World wheat markets and the United States relationship (Tables 1–8; Figures 1–14)

**Table 1. World wheat production, consumption, trade, and ending stocks, 1986-1999**

Table 1 shows the trends in world production, consumption, international trade and ending stocks. Stocks-to-consumption ratios and the share of world wheat production that enters international trade are calculated from the data. The stocks-to-consumption ratio is often used to gauge the sufficiency of world wheat reserves carried over into next crop year. Many analysts think that a ratio of 20 percent represents a critical threshold. This indicates that there is enough wheat in reserve for the world to meet 20 percent of its needs in the next marketing year out of the stocks carried over from the prior year. When the ratio falls below 20 percent, stocks are considered tight enough to cause concerns and possible positive price reactions. The trade shares show that although world production and consumption grew steadily during the period, the share of production traded has been relatively stable in recent years. This indicates increasing self-sufficiency in importing countries along with generally favorable growing conditions in these nations. (see Figs. 1-2)

**Table 1. World Wheat Production, Consumption, Trade, and Ending Stocks (1986-1999<sup>a</sup>)**

Year	Production	Consumption (Million metric tons)	Trade <sup>b</sup>	Ending stocks	Stocks-to-consumption <sup>c</sup> (%)	Traded share-of-production <sup>d</sup> (%)
1986	494.9	490.4	84.7	170.6	34.8	17.11
1987	524.1	515.6	90.7	179.1	34.7	17.31
1988	496.0	527.2	115.6	147.8	28.0	23.31
1989	495.0	524.5	104.3	118.4	22.6	21.07
1990	533.2	532.7	103.8	118.9	22.3	19.47
1991	588.0	561.9	101.1	145.1	25.8	17.19
1992	542.9	555.5	111.2	132.5	23.8	20.48
1993	562.4	550.3	113.0	144.5	26.3	20.09
1994	559.0	561.9	101.4	141.5	25.2	18.14
1995	524.8	547.6	100.8	118.7	21.7	19.21
1996	538.6	550.6	98.8	106.7	19.4	18.34
1997	582.8	576.7	101.3	112.8	19.6	17.38
1998	610.0	584.9	100.6	137.9	23.6	16.49
1999	586.6	597.1	95.6	127.4	21.3	16.30

<sup>a</sup>July-June Marketing Year

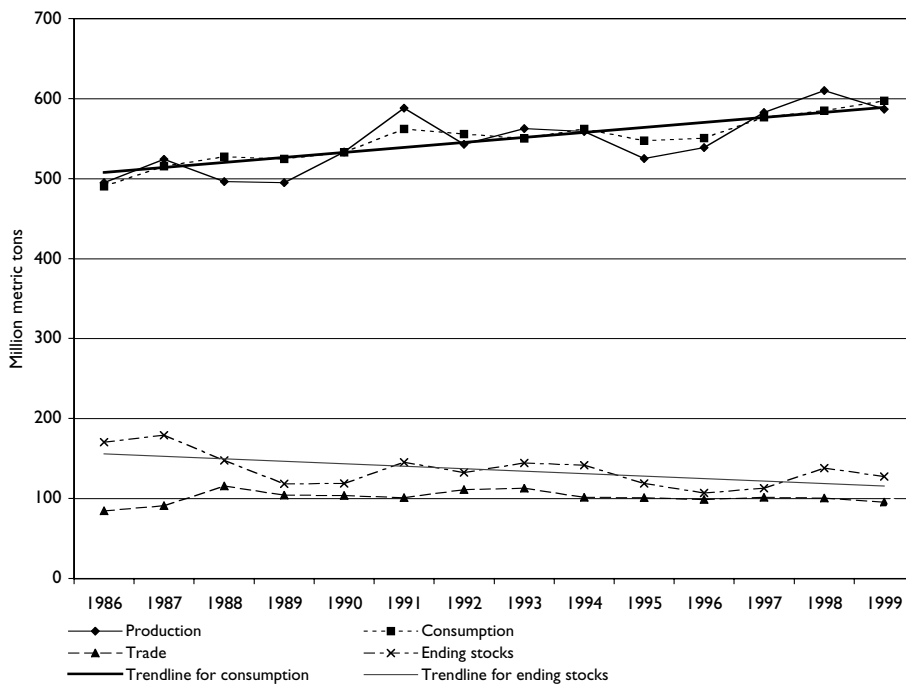
<sup>b</sup>Excluded intra-European Union Trade

<sup>c</sup>Stocks-to-consumption ratio

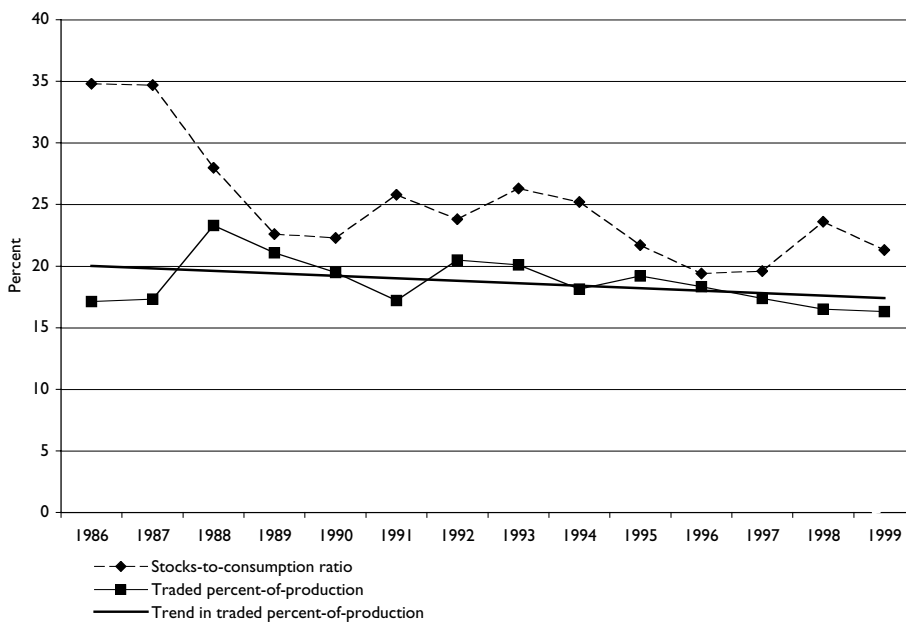
<sup>d</sup>Trade-to-production ratio

<sup>e</sup>Preliminary estimate

**Figure 1. World wheat production, consumption, trade, and ending stocks, 1986-1999 (July-June marketing year.) The trendline for consumption is  $y = 6.2569x + 501.42$ . The trendline for ending stocks is  $y = -3.1022x + 159.12$ .**



**Figure 2. World wheat stocks-to-consumption ratio and traded percent of production, marketing years, 1986-1999 (July-June marketing year.) The trendline equation for traded percent of production is  $y = -0.1997x + 20.204$ .**



**Table 2. World and U.S. wheat production, 1985-1998**

**Table 3. World and U.S. wheat exports, 1985-1998**

**Table 4. World and U.S. ending stocks of wheat, 1985-1998**

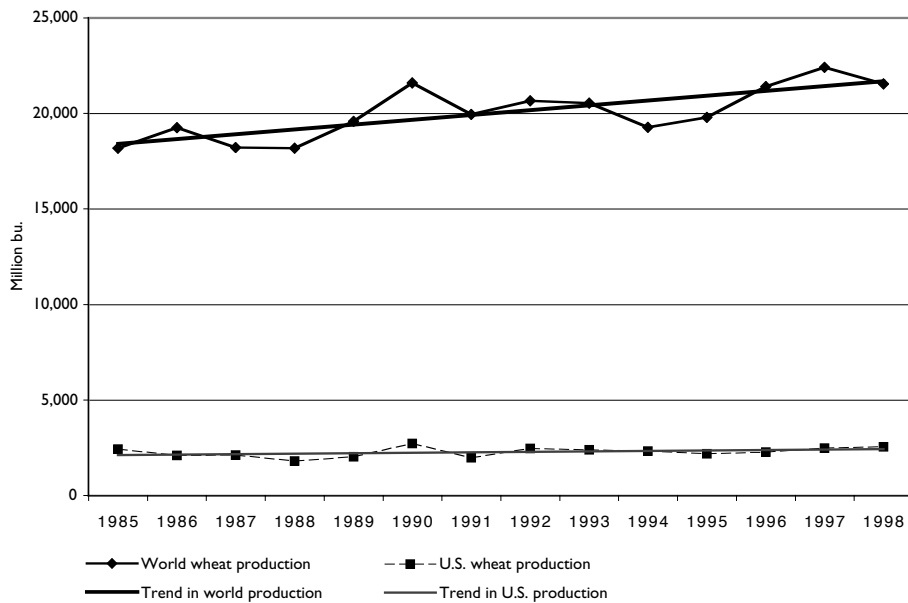
Tables 2, 3, and 4 show the U.S. share of the overall world wheat market in terms of production, trade, and ending stocks. Table 2 shows that the percentage of world production contributed by the United States ranges from just under 10 percent in 1988 and 1991 to a high of 13.3 percent in 1985 (Fig. 3.) The U.S. share of world exports (Table 3) is substantially higher than its production share and ranges between twenty-three and thirty-four percent during the period (Fig. 4.) This demonstrates a reliance on exports for marketing a substantial portion of the annual wheat production. In recent years the level of world trade has declined, partially due to the dissolution of the Soviet Union which had been a substantial market for wheat until 1990. Table 4 shows ending stocks of wheat for the world, the U. S., and the U.S. share of the world (Fig. 5.) The U.S. share of world stocks is now substantially lower than it was in the mid-1980's under the former farm policies that entailed holding of substantial stocks by the Commodity Credit Corporation of the USDA. The U.S. stocks have accounted for between 10 and 13.75 percent of total world ending stocks in recent years. See Figs. 6 and 7 for charts comparing the data from Tables 2-4.

**Table 2. World and U.S. wheat production (1985-1998)**

<b>Year</b>	<b>World (Million Bushels)</b>	<b>U.S.</b>	<b>U.S. share (%)</b>
1985	18,183	2,424	13.33
1986	19,259	2,091	10.86
1987	18,224	2,108	11.57
1988	18,189	1,812	9.96
1989	19,591	2,037	10.40
1990	21,606	2,730	12.63
1991	19,949	1,980	9.93
1992	20,665	2,467	11.94
1993	20,538	2,396	11.67
1994	19,281	2,321	12.04
1995	19,792	2,183	11.03
1996	21,413	2,277	10.64
1997	22,413	2,481	11.07
1998 <sup>a</sup>	21,553	2,550	11.83

<sup>a</sup>Preliminary estimate

**Figure 3. World and U. S. wheat production and linear trends, 1985-1998. The trendline equation for world wheat is  $y = 251.4x + 18161$ . The trendline equation for U.S. production is  $y=24.068x + 2095$ .**



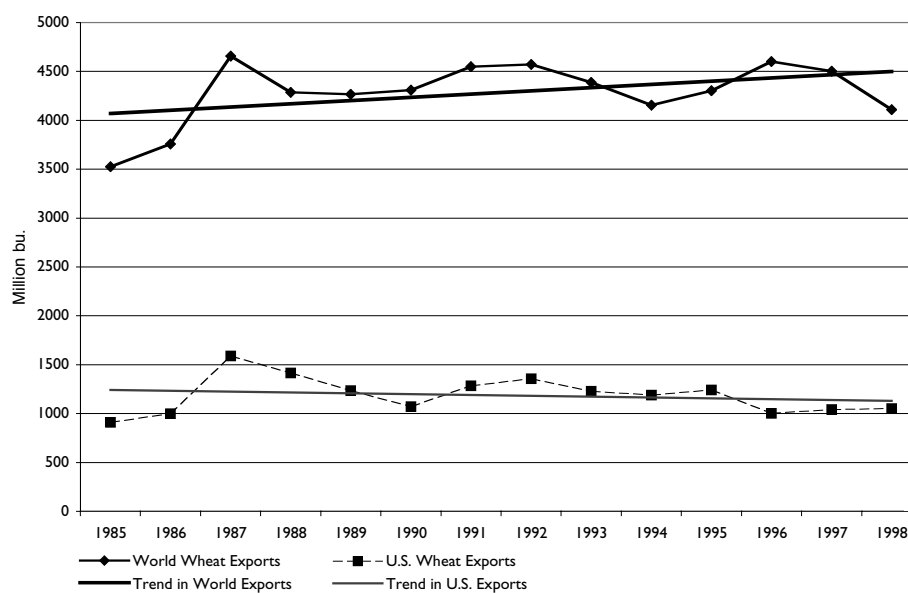
**Table 3. World and U.S. wheat exports (1985-1998)**

Year	World <sup>a</sup> (Million Bushels)	U.S.	U.S. share (%)
1985	3,525	909	25.79
1986	3,758	999	26.57
1987	4,654	1,588	34.12
1988	4,285	1,415	33.02
1989	4,264	1,232	28.89
1990	4,309	1,069	24.82
1991	4,547	1,282	28.20
1992	4,569	1,354	29.63
1993	4,388	1,228	27.98
1994	4,153	1,188	28.62
1995	4,301	1,241	28.86
1996	4,601	1,002	21.77
1997	4,502	1,040	23.11
1998 <sup>b</sup>	4,107	1,050	25.57

<sup>a</sup>Includes intra-European Union trade

<sup>b</sup>Preliminary estimate

**Figure 4. World and U.S. wheat exports and linear trends, 1985-1998. The trendline equation for world wheat exports is  $y = 33.163x + 4034.4$ . The trendline equation for U.S. exports is  $y = 8.525x + 1249.4$ .**

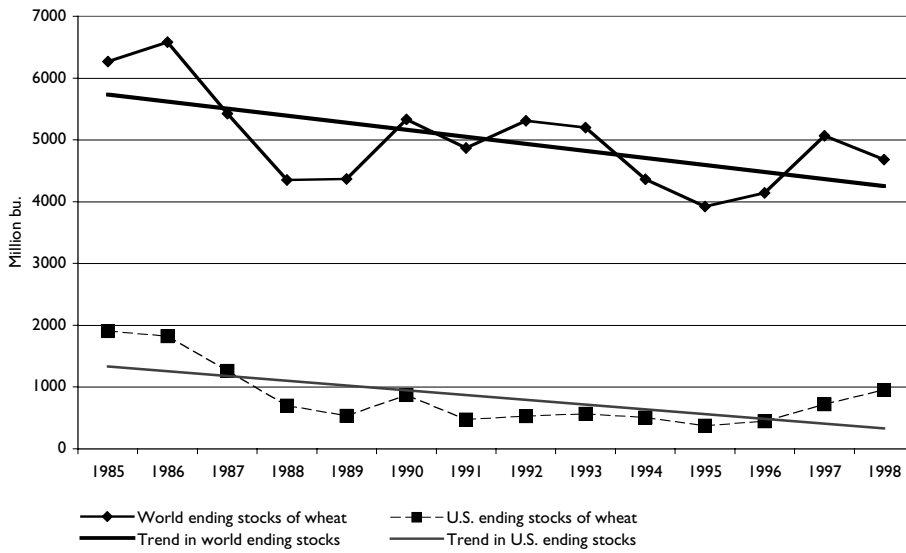


**Table 4. World and U.S. ending stocks of wheat (1985-1998)**

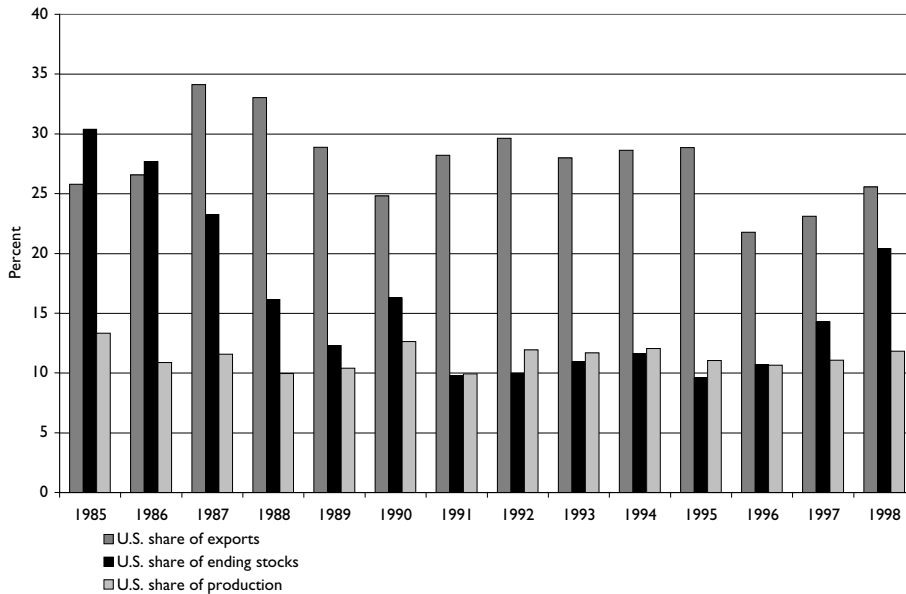
Year	World (Million Bushels)	U.S. (Million Bushels)	U.S. share (%)
1985	6269	1905	30.39
1986	6581	1821	27.67
1987	5425	1261	23.24
1988	4351	702	16.13
1989	4370	536	12.28
1990	5330	868	16.29
1991	4867	475	9.76
1992	5311	531	9.99
1993	5201	568	10.93
1994	4361	507	11.62
1995	3921	376	9.59
1996	4144	444	10.70
1997	5066	722	14.26
1998 <sup>a</sup>	4680	955	20.40

<sup>a</sup>Preliminary estimate

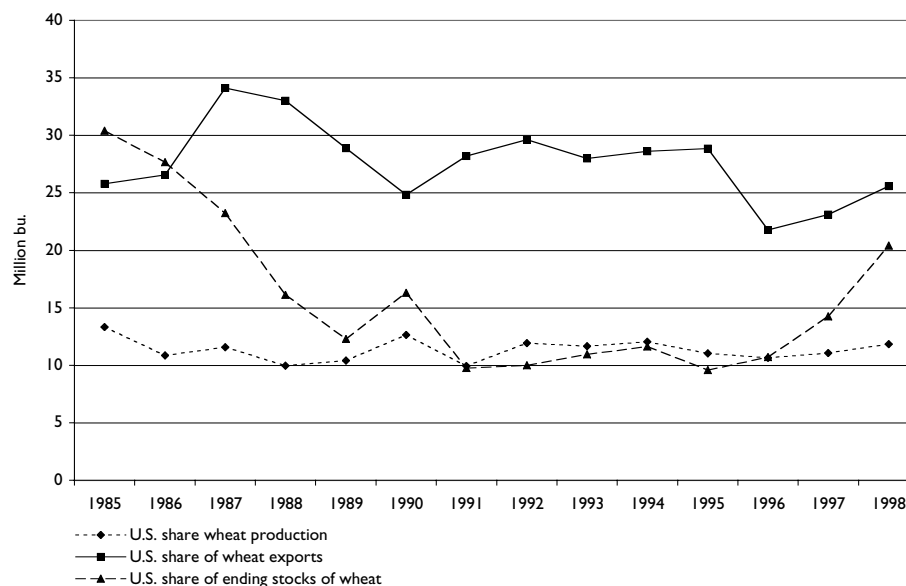
**Figure 5. World and U. S. ending stocks of wheat and linear trends, 1985-1998**  
 The trendline for World Ending Stocks is  $y = -113.95 + 5845.9$ . The trendline for U.S. Ending Stocks is  $y = -77.062 + 1411.6$ .



**Figure 6. U. S. share of world exports, ending stocks, and production of wheat, 1985-1998. Data sources are tables 2, 3, and 4.**



**Figure 7. U. S. production, exports, and ending stocks of all wheat classes, 1985-1998. Data sources are Tables 2, 3, and 4.**



**Table 5. Wheat production and exports—major foreign exporters, U.S., and total foreign, 1985-1998**

**Table 6. Foreign, U.S., and world production, exports, and percentage shares, 1985-1998**

**Table 7. Wheat and wheat flour imports, selected regions and countries, 1992-1999**

**Table 8. Ending stocks of wheat, U.S., and major foreign producers, 1986-1999**

These four tables illustrate the major importing and exporting countries in the world wheat market. Table 5 (Figs. 8 and 9) details the production and exports of the U.S. and the four primary foreign exporters (European Union, Canada, Australia, and Argentina). These five countries account for about three-fourths of all world exports. In terms of export competition for the U.S., the largest competitors are the European Union (EU) and Canada, followed by Australia, then Argentina. Table 6 compares all foreign production, exports, and percentage shares of the world market to the U.S. (Figs. 10 and 11.)

Table 7 shows the major wheat importing nations' volumes during the decade of the 1990's (Figs. 12 and 13.) The world markets for wheat are quite varied among nations with the 14 listed nations accounting for only thirty to forty percent of all imports. China and the former Soviet Union have been the largest volume importers during this period. However, their volumes are quite volatile and in recent years they have not been heavy importers. The most consistent world customer for wheat imports has

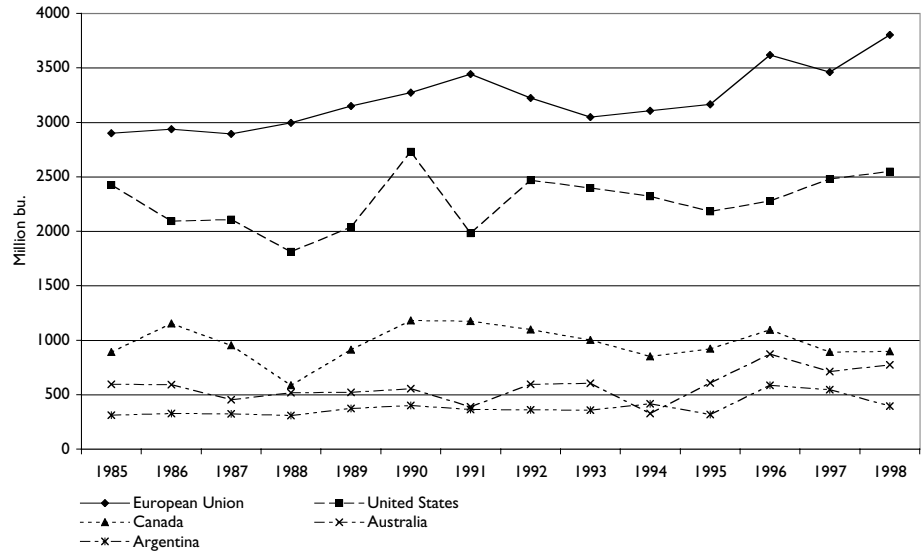
been Japan, which imported roughly six million metric tons annually during this period. Egypt, Brazil, South Korea, and Indonesia were also relatively stable importers during this period. Imports by other countries and regions tended to rise and fall due to weather induced shortages and unpredictable economic and/or political events.

Table 8 shows the ending stocks of wheat held by the major exporting countries and their overall shares (Fig. 14.) The data reveals how few stocks Argentina and Australia tend to hold compared to the other major exporting countries. This would indicate that these competitors tend to sell their entire current crop regardless of market conditions.

**Table 5. Wheat production and exports for major foreign exporters, U.S., and total foreign (1985-1998)**

Year	Production (%)	Exports (%)	Ending stocks (%)
1985	13.33	25.79	30.39
1986	10.86	26.57	27.67
1987	11.57	34.12	23.24
1988	9.96	33.02	16.13
1989	10.40	28.89	12.28
1990	12.63	24.82	16.29
1991	9.93	28.20	9.76
1992	11.94	29.63	9.99
1993	11.67	27.98	10.93
1994	12.04	28.62	11.62
1995	11.03	28.86	9.59
1996	10.64	21.77	10.70
1997	11.07	23.11	14.26
1998	11.83	25.57	20.40

**Figure 8. Wheat production for major exporting nations, 1985-1998**



**Figure 9. Wheat exports for major exporting nations, 1985-1998**

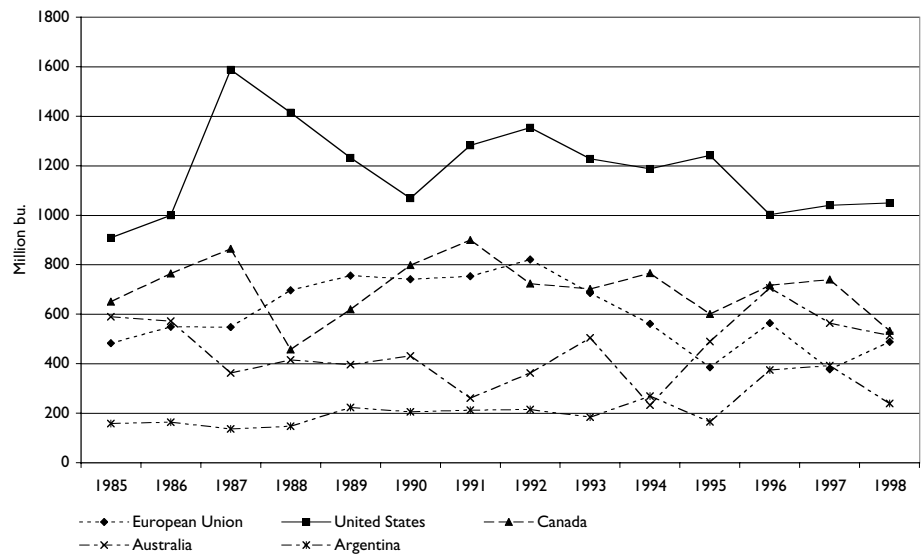
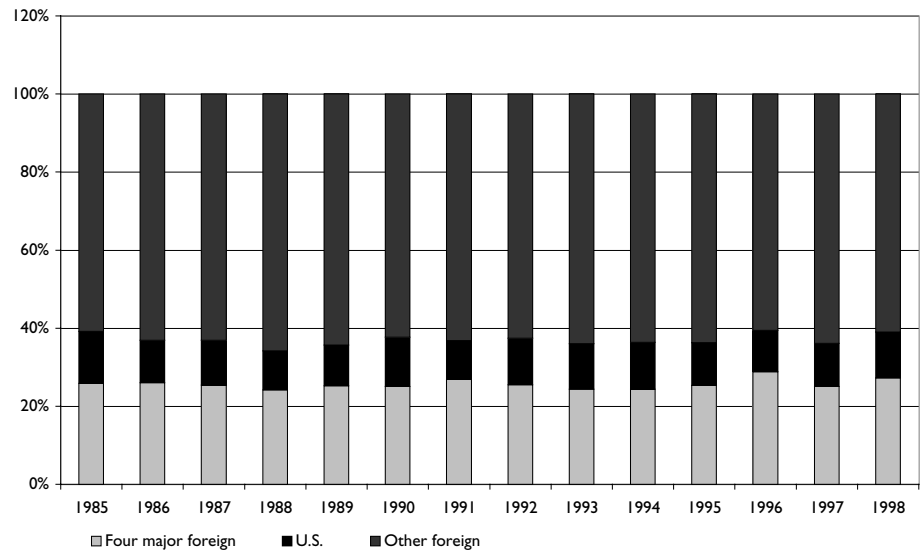


Table 6. Wheat production and exports for major foreign exporters, U.S., and total foreign (1985-1998)

Year	European Union		Canada		Australia		Argentina		Total four major foreign		United States		Total foreign	
	Pdn <sup>a</sup>	Exp <sup>b,c</sup>	Pdn	Exp	Pdn	Exp	Pdn	Exp	Pdn	Exp <sup>c</sup>	Pdn	Exp	Pdn	Exp <sup>d</sup>
1985	2901	483	891	650	594	589	312	158	4698	1880.2	2424	909	15759	2616
1986	2936	549	1152	764	592	572	328	163	5008	2048	2091	999	17168	2759
1987	2895	547	953	864	454	362	323	136	4625	1909.3	2108	1588	16116	3067
1988	2995	697	585	457	517	415	309	148	4406	1716.7	1812	1415	16377	2870
1989	3148	756	911	620	522	396	373	223	4954	1994.6	2037	1232	17554	3032
1990	3274	741	1179	798	554	432	401	205	5408	2175.9	2730	1069	18877	3240
1991	3443	753	1174	900	388	261	363	212	5368	2126.4	1980	1282	17969	3265
1992	3223	821	1098	724	595	362	360	215	5276	2122.3	2467	1354	18198	3215
1993	3047	686	1001	702	605	504	356	184	5009	2076.1	2396	1228	18142	3160
1994	3106	561	850	766	327	233	415	269	4698	1829.2	2321	1188	16960	2964
1995	3166	386	920	600	606	489	316	165	5008	1639.7	2183	1241	17609	3059
1996	3619	564	1095	717	871	706	584	375	6169	2362.2	2277	1002	19136	3600
1997	3462	377	892	740	713	564	544	392	5611	2072.7	2481	1040	19932	3462
1998	3802	489	897	533	772	514	395	239	5866	1774.5	2550	1050	19003	3057

<sup>a</sup>Pdn = production<sup>b</sup>Exp = exports<sup>c</sup>Excludes intra-European Union trade;<sup>d</sup>Includes intra-European Union trade

**Figure 10. Shares of world production for U.S. and foreign nations, 1985-1998**



**Figure 11. Shares of world exports for U.S. and foreign nations, 1985-1998**

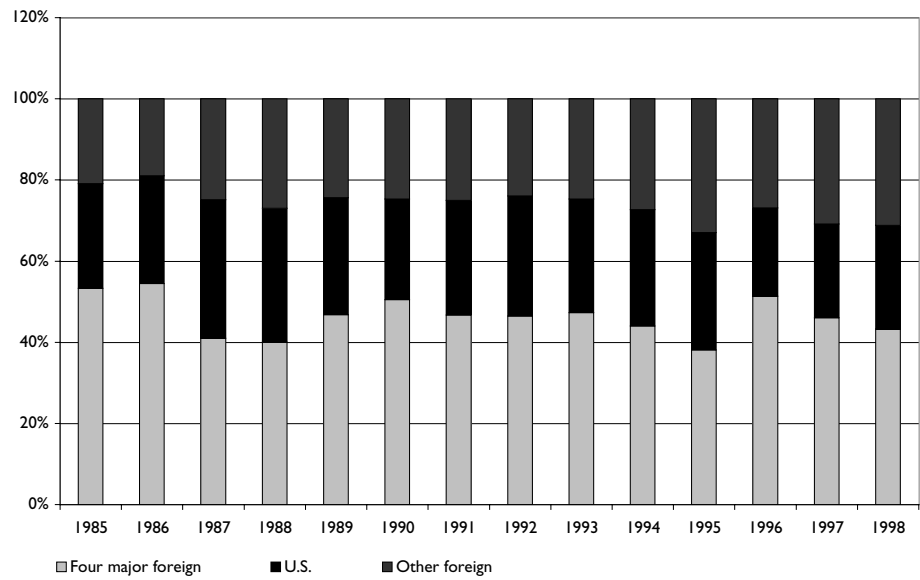


Table 6. Foreign, U.S., and world production, exports, and percent shares (1985-1998)

Years	Total 4 major foreign		All other foreign totals		Total foreign		United States		World totals		4 major foreign exporters share of world total		Other foreign share of total		U.S. share of total	
	P <sub>d</sub> <sup>a</sup>	Exp <sup>b,c</sup>	P <sub>d</sub>	Exp <sup>d</sup>	P <sub>d</sub>	Exp <sup>d</sup>	P <sub>d</sub>	Exp	P <sub>d</sub>	Exp <sup>d</sup>	P <sub>d</sub>	Exp	P <sub>d</sub>	Exp	P <sub>d</sub>	Exp
(million bu.)																
(%)																
1985	4698	1880	11061	736	15759	2616	2424	909	18183	3525	25.84%	53.33%	60.83%	20.88%	13.33%	25.79%
1986	5008	2048	12160	711	17168	2759	2091	999	19259	3758	26.00%	54.50%	63.14%	18.92%	10.86%	26.58%
1987	4625	1909	11491	1158	16116	3067	2108	1588	18224	4655	25.38%	41.01%	63.05%	24.88%	11.57%	34.11%
1988	4406	1716	11971	1154	16377	2870	1812	1415	18189	4285	24.22%	40.05%	65.81%	26.93%	9.96%	33.02%
1989	4954	1994	12600	1038	17554	3032	2037	1232	19591	4264	25.29%	46.76%	64.32%	24.34%	10.40%	28.89%
1990	5408	2176	13469	1064	18877	3240	2730	1069	21607	4309	25.03%	50.50%	62.34%	24.69%	12.63%	24.81%
1991	5368	2126	12601	1139	17969	3265	1980	1282	19949	4547	26.91%	46.76%	63.17%	25.05%	9.93%	28.19%
1992	5276	2122	12922	1093	18198	3215	2467	1354	20665	4569	25.53%	46.44%	62.53%	23.92%	11.94%	29.63%
1993	5009	2076	13133	1084	18142	3160	2396	1228	20538	4388	24.39%	47.31%	63.94%	24.70%	11.67%	27.99%
1994	4698	1829	12262	1135	16960	2964	2321	1188	19281	4152	24.37%	44.05%	63.60%	27.34%	12.04%	28.61%
1995	5008	1640	12601	1419	17609	3059	2183	1241	19792	4300	25.30%	38.14%	63.67%	33.00%	11.03%	28.86%
1996	6169	2362	12967	1238	19136	3600	2277	1002	21413	4602	28.81%	51.33%	60.56%	26.90%	10.63%	21.77%
1997	5611	2073	14321	1389	19932	3462	2481	1040	22413	4502	25.03%	46.05%	63.90%	30.85%	11.07%	23.10%
1998	5866	1775	13137	1282	19003	3057	2550	1050	21553	4107	27.22%	43.22%	60.95%	31.21%	11.83%	25.57%

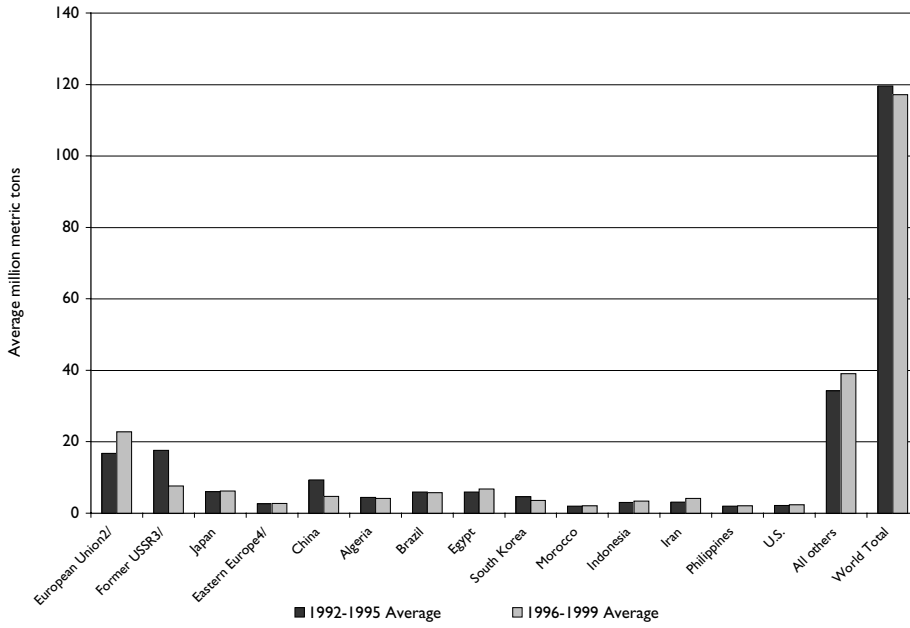
<sup>a</sup>P<sub>d</sub>n = production<sup>b</sup>Exp = exports; excludes intra-European Union trade<sup>c</sup>Exp = exports; excludes intra-European Union trade<sup>d</sup>Includes intra-European Union trade

**Table 7. Wheat and wheat flour imports, selected regions and countries (1992-1999<sup>a</sup>)**

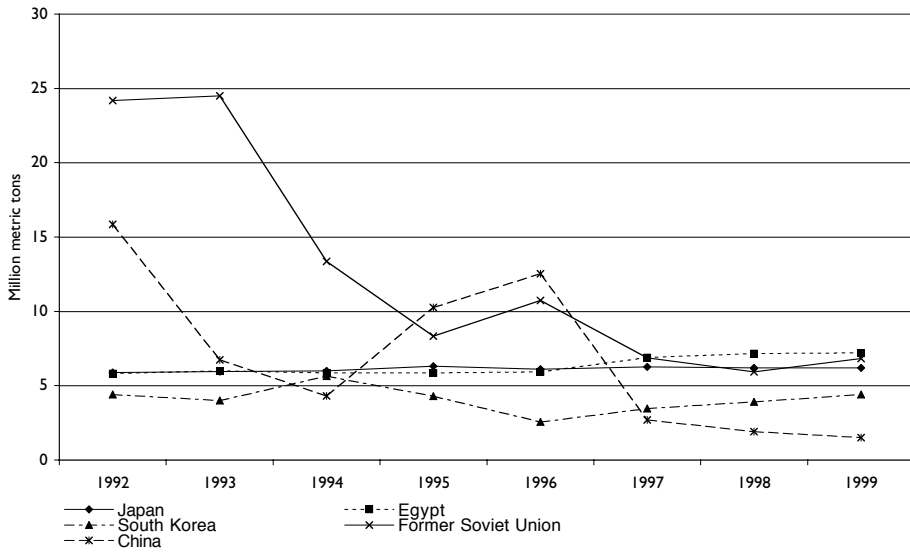
Country or Region	1992	1993	1994	1995	1996	1997	1998	1999	Average
European Union <sup>b</sup>	16.2	15.9	17.4	17.3	21.5	22.9	25.8	20.8	19.7
Former Soviet Union <sup>c</sup>	24.2	24.5	13.4	8.3	10.7	6.9	5.9	6.8	12.6
Japan	5.9	6.0	6.0	6.3	6.1	6.3	6.2	6.2	6.1
Eastern Europe <sup>d</sup>	1.4	3.6	2.6	2.9	2.5	5.1	1.8	1.4	2.7
China	15.9	6.7	4.3	10.3	12.5	2.7	1.9	1.5	7.0
Algeria	3.4	3.6	4.8	5.8	3.8	3.6	5.2	4.0	4.3
Brazil	5.3	5.8	5.8	6.6	5.5	5.6	5.7	6.1	5.8
Egypt	5.8	6.0	5.9	5.9	5.9	6.9	7.2	7.2	6.3
South Korea	4.4	4.0	5.6	4.3	2.6	3.5	3.9	4.4	4.1
Morocco	1.6	2.8	2.4	1.3	2.3	1.5	2.5	1.8	2.0
Indonesia	2.6	2.7	2.9	3.9	3.6	4.2	3.7	2.2	3.2
Iran	2.4	3.0	3.5	3.3	2.8	7.0	3.6	3.0	3.6
Philippines	1.7	2.0	2.2	2.1	2.0	2.2	2.0	2.0	2.0
U.S.	1.2	1.9	3.2	2.4	1.7	2.6	2.5	2.6	2.3
All others	32.6	35.2	34.7	34.6	32.5	39.5	42.5	41.8	36.7
World Total	124.6	123.7	114.7	115.2	116.1	120.4	120.2	111.8	118.3

<sup>a</sup>July-June Marketing year<sup>b</sup>Includes intra-EU Trade<sup>c</sup>Includes intra-trade among the individual former Soviet Union countries<sup>d</sup>Excludes former East Germany

**Figure 12. Four year averages for 1992-1995 and 1996-1999 (July-June marketing year) for wheat and wheat flour imports by selected countries and regions**



**Figure 13. Wheat and wheat flour imports, selected countries and regions, 1991-1999 (July-June marketing year.)**



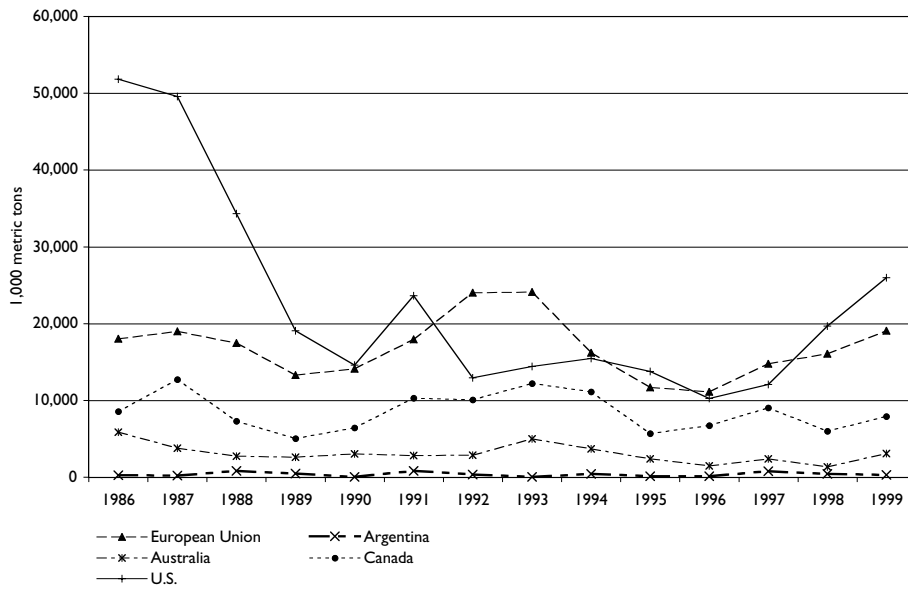
**Table 8. Ending stocks of wheat, U.S. and major foreign producers (1986-1999<sup>a</sup>)**

Year	Former Soviet Union	China	European Union	Argentina	Australia	Canada	U.S.	Five major exporters total
1986	NA	30,700	18,051	251	5,865	8,569	51,846	84,582
1987	NA	28,017	18,980	220	3,772	12,731	49,557	85,260
1988	24,605	26,344	17,451	815	2,750	7,305	34,313	62,634
1989	23,931	22,800	13,283	481	2,600	5,032	19,094	40,490
1990	24,784	21,907	14,106	31	3,035	6,442	14,601	38,215
1991	30,272	23,513	17,936	822	2,823	10,285	23,626	55,492
1992	25,675	23,690	24,035	345	2,870	10,066	12,927	50,243
1993	30,961	22,853	24,134	45	5,017	12,193	14,443	55,832
1994	31,925	22,730	16,218	449	3,710	11,117	15,472	46,966
1995	19,796	21,715	11,706	150	2,405	5,679	13,787	33,727
1996	11,192	24,252	11,120	150	1,475	6,728	10,233	29,706
1997	6,901	24,166	14,758	800	2,395	9,047	12,073	39,073
1998	16,495	33,366	16,082	420	1,348	5,989	19,663	43,502
1999	6,932	27,866	19,085	300	3,078	7,889	25,988	56,340

/ 1000 metric tons

<sup>a</sup> July-June marketing year

**Figure 14. Ending stocks of wheat, U. S., and major foreign producers, 1986-1999 (July-June marketing year.)**



**United States data for all wheat classes  
(Tables 9-13; Figures 15-25)**

**Table 9. All wheat supply and use: United States, 1986-1999**

This is the typical aggregate supply and demand balance sheet for all classes of wheat grown in the United States. Acreage harvested is multiplied by average yield to arrive at total production. The use is separated into domestic use and exports. Finally, ending stocks are calculated as total supply minus uses. The stocks-to-use ratios show the difference between the situation during the 1990's and the mid-1980's. The dramatic reduction in the stocks-to-use ratio is primarily the result of changes in government farm programs that tended to reduce the stocks held by the government. As a result, more of the wheat produced in any one year is now being marketed during that year. The 1998 marketing year indicates an increase in the stocks-to-use ratio as the world market became glutted with supplies in response to the previous two years of low stocks-to-use and high prices that stimulated worldwide production. See Figs. 15 and 16.

---

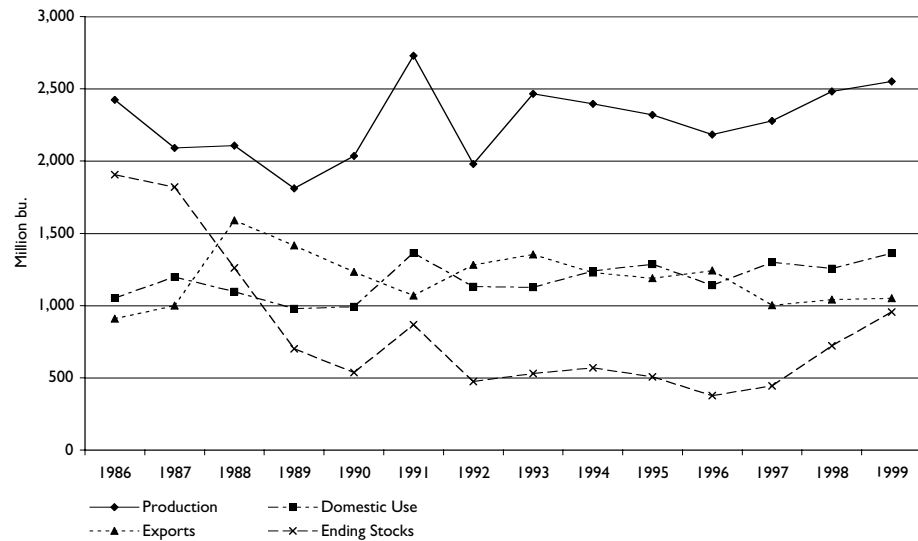
“Disappearance” is the calculated per capita consumption.

Table 9. All wheat supply and use in the U. S. (1986 – 1999<sup>a</sup>)

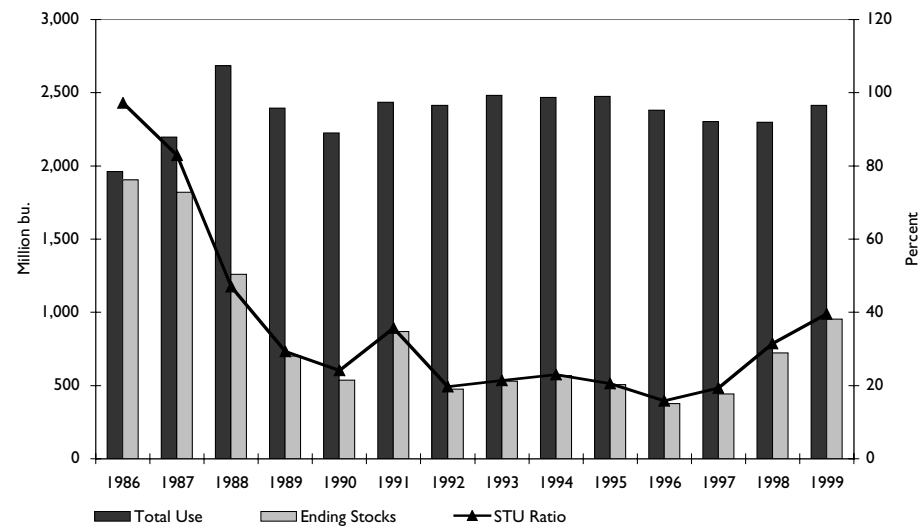
Year <sup>b</sup>	Acreage harvested (million ac.)	Yield per harvested acre (bu.)	Production	Domestic use (million bu.)	Exports	Ending stocks	Stocks-to-use ratio (%)
1986	64.7	37.5	2,424.1	1,051.5	909.1	1,905.0	97.2
1987	60.7	34.4	2,090.6	1,197.4	998.5	1,820.9	82.9
1988	55.9	37.7	2,107.7	1,096.0	1,587.9	1,260.8	47.0
1989	53.2	34.1	1,812.2	979.2	1,414.9	701.6	29.3
1990	62.2	32.7	2,036.6	992.3	1,232.0	536.5	24.1
1991	69.1	39.5	2,729.8	1,365.1	1,069.5	868.1	35.7
1992	57.8	34.3	1,980.1	1,131.6	1,282.3	475.0	19.7
1993	62.8	39.3	2,466.8	1,127.6	1,353.6	530.7	21.4
1994	62.7	38.2	2,396.4	1,239.7	1,227.8	568.5	23.0
1995	61.8	37.6	2,321.0	1,286.6	1,188.3	506.6	20.5
1996	61.0	35.8	2,182.7	1,140.1	1,241.1	376.0	15.8
1997	62.8	36.3	2,277.4	1,300.6	1,001.5	443.6	19.3
1998	62.8	39.5	2,481.5	1,257.0	1,040.4	722.5	31.4
1999 <sup>b</sup>	59.0	43.2	2,550.4	1,363.0	1,050.0	954.9	39.6

<sup>a</sup>June-May marketing year<sup>b</sup>preliminary estimate

**Figure 15. All classes of U.S. wheat production and domestic use, exports, and ending stocks, 1986-1999 (marketing years.)**



**Figure 16. U.S. wheat total use, ending stocks, and stocks-to-use ratio, 1986-1999 (marketing years.)**



**Table 10. Wheat used by U.S. flourmills, flour production imports, exports, and per capita disappearance<sup>c</sup>, 1985-1998**

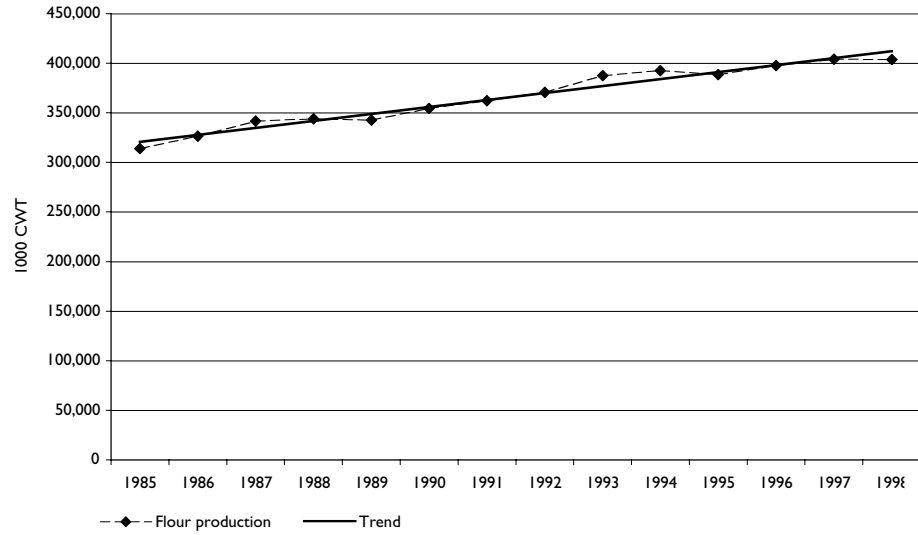
These data show the domestic use of wheat for flour production, the imports and exports of flour, and the per capita disappearance of flour in the U.S. (Figs. 17-19.) Flour production, imports and per capita disappearance have all been on increasing trends. Exports of flour were generally steady, then declined dramatically in the last two years of the period. This may be due to the construction of flourmills in many overseas markets and/or due to economic slow downs or pressure from competitors for flour shipments.

**Table 10. Wheat utilized by U.S. flour mills, flour production imports, exports, and per capita disappearance (1985-1998)**

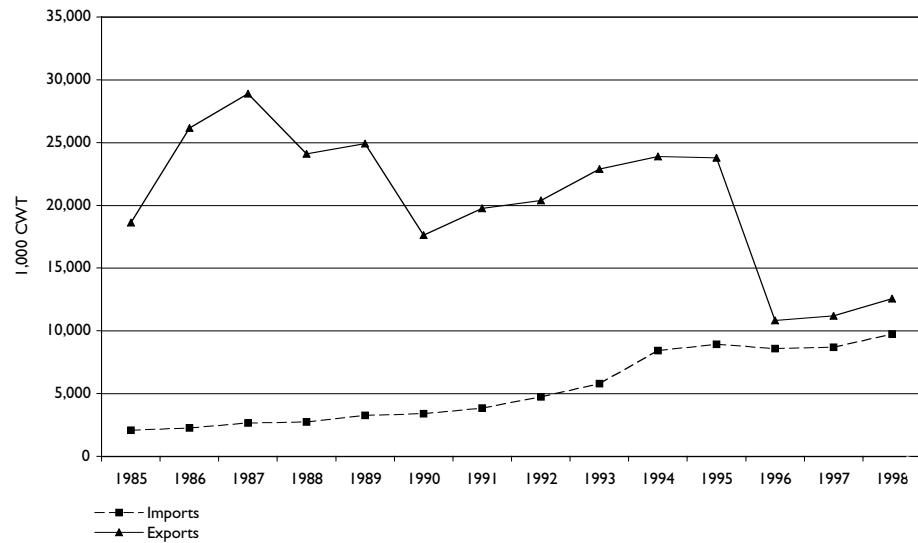
Year	Wheat ground	Flour production	Imports	Exports	Per capita disappearance
	(million bu.)	(1000 cwt)			(lbs.)
1985	700	313,815	2,087	18,614	125
1986	738	326,316	2,252	26,160	126
1987	768	341,565	2,663	28,880	130
1988	770	344,154	2,727	24,097	132
1989	761	342,762	3,277	24,917	130
1990	788	354,348	3,392	17,620	136
1991	809	362,311	3,858	19,739	137
1992	833	370,829	4,749	20,382	139
1993	871	387,419	5,786	22,886	143
1994	885	392,519	8,425	23,884	144
1995	869	388,689	8,918	23,770	142
1996	878	397,776	8,574	10,825	149
1997	886	404,143	8,684	11,190	150
1998 <sup>a</sup>	903	403,880	9,745	12,551	148

<sup>a</sup>Preliminary estimate

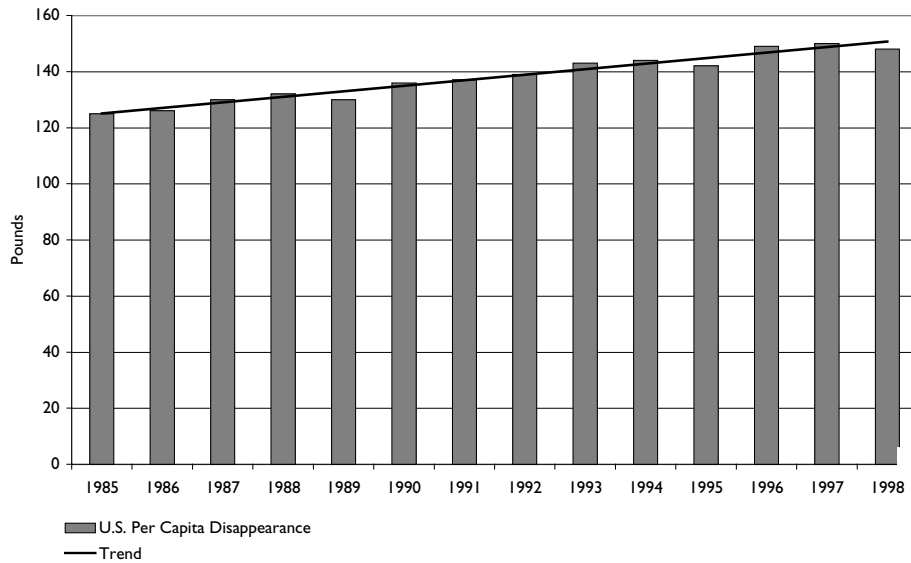
**Figure 17. U.S. flour production and trend, 1985-1998. The trendline for U.S. flour production is  $y = 7035.4x + 313701$ .**



**Figure 18. U.S. wheat flour imports and exports, 1985-1998**



**Figure 19. U. S. per capita flour disappearance and trend, 1985-1998. The trendline for U.S. per capita flour disappearance is  $y = 1.9714x + 123.14$ .**



**Table 11. All U.S. wheat exports to selected countries and regions, 1993-1998**

The other major use of wheat in the U.S. is for exports (Table 11; Fig. 20.) Egypt, Japan, Pakistan, Philippines, and South Korea are the largest consistent markets. The data for the former Soviet Union shows the dramatic reduction in exports during the 1990's. This is tied to the economic turmoil in the former Soviet republics and the lack of hard currency necessary to deal in international markets.

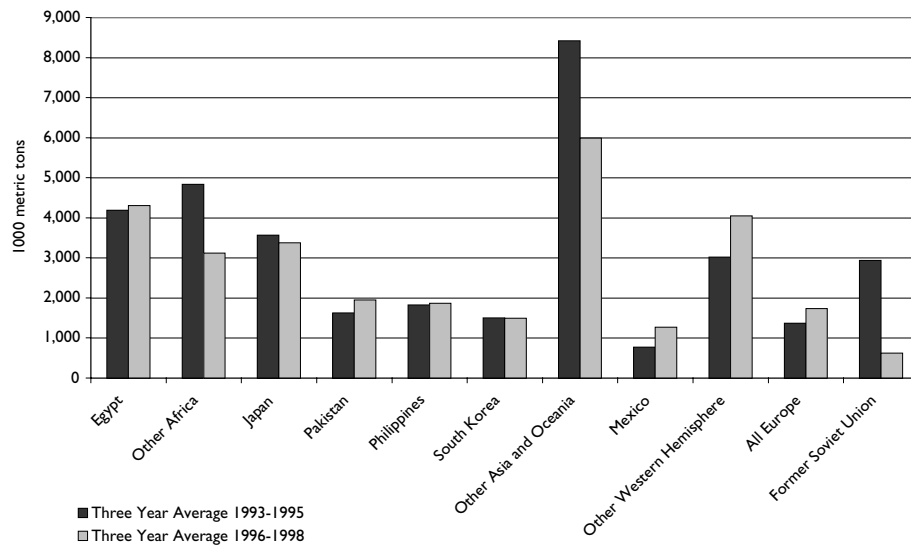
Table 11. All U.S. wheat<sup>a</sup> exports to selected countries and regions (1993-1998<sup>b</sup>)

Year	Egypt	Other Africa	Japan	Pakistan	Philippines	South Korea	Other Asia & Oceania	Mexico	Other Western Hemisphere	All Europe	Former Soviet Union	Total
1993	3723.2	5152.0	3504.4	1651.5	1562.2	1414.3	7801.3	732.0	2908.1	1238.5	4693.4	34380.9
1994	3174.8	5800.8	3397.0	1758.6	1948.3	1516.9	7164.2	801.6	3263.6	1500.5	2611.4	32937.8
1995	5661.3	3546.6	3793.8	1464.4	1966.3	1579.2	10286.2	787.8	2898.8	1369.3	1511.3	34865.1
1996	5097.9	3444.5	3489.0	1671.7	2059.1	1428.7	8464.7	1084.0	4710.9	1627.9	900.8	33979.2
1997	2826.3	2779.6	3264.2	1876.4	2019.0	1646.2	4558.3	1551.3	4258.7	1679.7	455.4	26915.1
1998	4983.0	3138.3	3372.7	2290.2	1530.7	1400.2	4936.9	1174.3	3164.4	1888.8	519.6	28399.1
6 Year Average	4302.4	3120.8	3375.3	1946.1	1869.6	1491.7	5986.6	1269.9	4044.7	1732.1	625.3	29764.5

(1000 metric tons)

<sup>a</sup>Includes Wheat Products<sup>b</sup>June-May marketing year

**Figure 20. Three year averages for the 1993-1995 and the 1996-1998 marketing years for all wheat exports to selected countries and regions.**



**Table 12. Total U.S. wheat exports by class, 1993-1998**

This table provides a breakdown by class of wheat entering export markets from the U.S. (Figs. 21-24.) Hard red winter is the dominant class, followed in importance by hard red spring wheat, soft white wheat, soft red wheat and durum. Total exports have declined during the six-year period, although soft white wheat has maintained a relatively stable share of export totals.

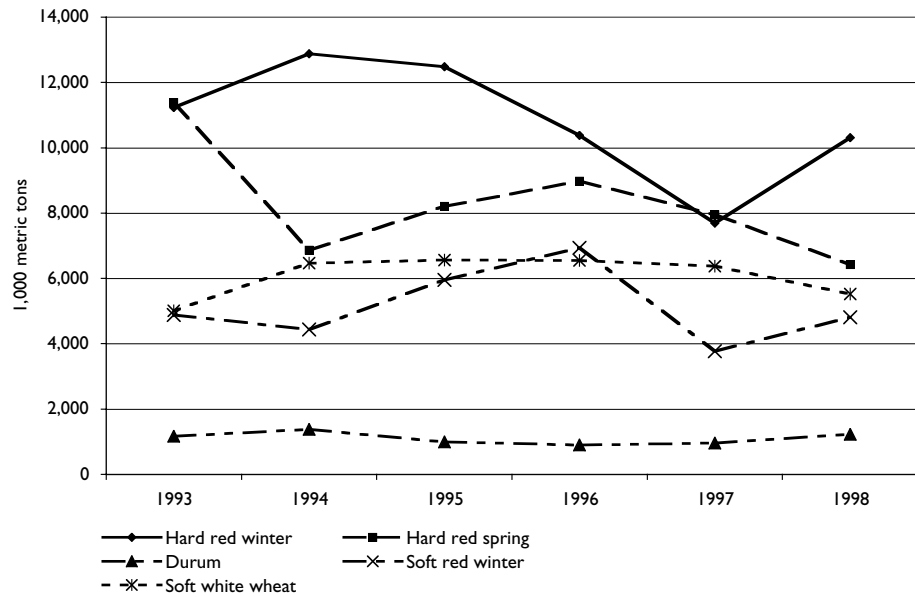
**Table 12. Total U.S. wheat exports by class, three year averages for (1993-1998<sup>a</sup>)**

Year	Hard red winter	Hard red spring	Durum	Soft red winter	Soft white wheat	Total <sup>b</sup>
	(1,000 Metric tons)					
1993	11,238.1	11,380.2	1,165.4	4,882.5	5,004.5	34,380.9
1994	12,880.1	6,865.5	1,376.1	4,436.1	6,467.1	32,937.8
1995	12,484.2	8,204.2	992.9	5,952.4	6,559.7	34,865.1
1996	10,378.6	8,973.4	895.2	6,935.0	6,556.1	33,979.2
1997	7,689.8	7,952.7	963.2	3,773.0	6,374.5	26,915.1
1998	10,307.4	6,416.8	1,231.7	4,808.9	5,526.6	28,399.1

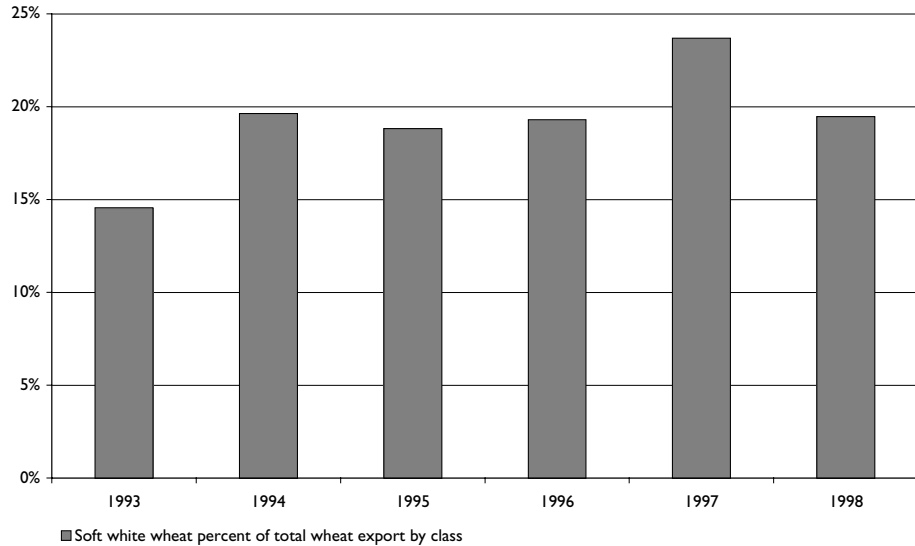
<sup>a</sup>Marketing year

<sup>b</sup>Includes wheat products

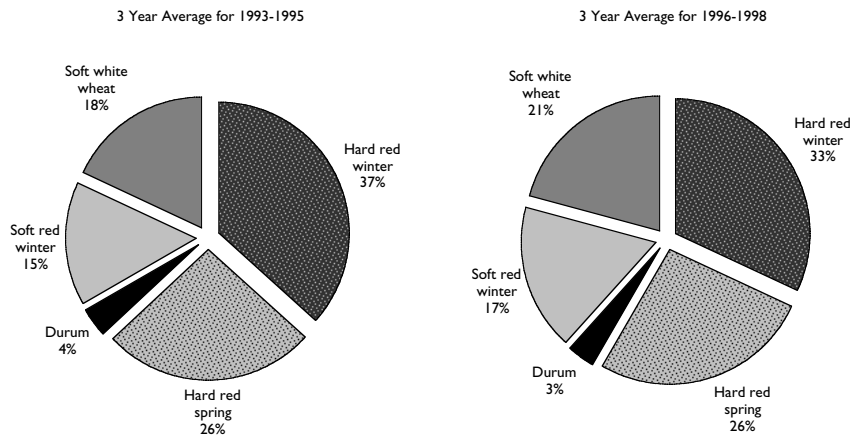
**Figure 21. Wheat exports by class, 1993-1998 (marketing years.)**



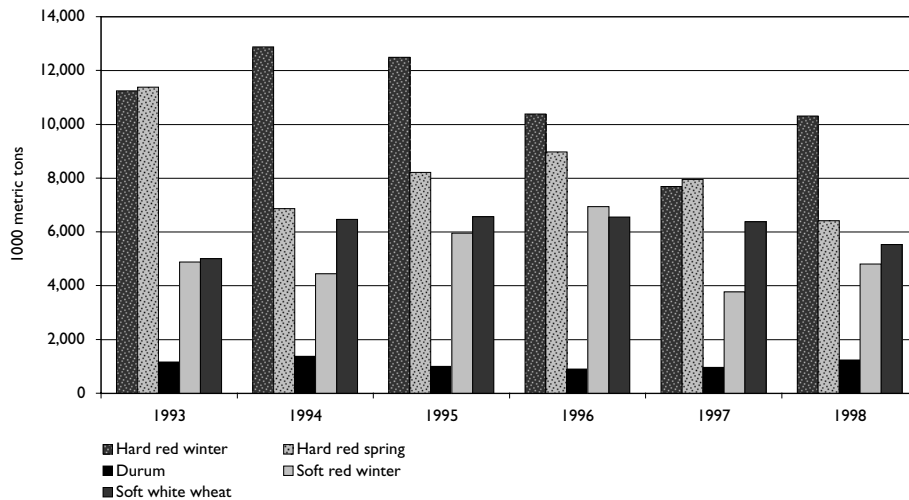
**Figure 22. Soft white wheat percent of total wheat exports, 1993-1998 (marketing years.)**



**Figure 23. Three year averages for the 1993-1995 and the 1996-1998 marketing years for total U.S. wheat exports by class.**



**Figure 24. U.S. wheat exports by class for 1993-1998 (marketing years.)**



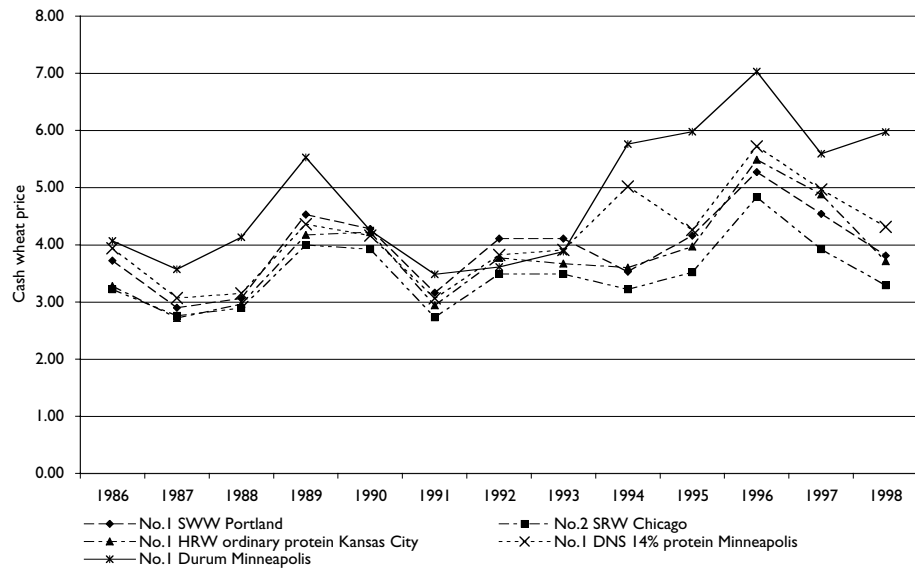
**Table 13. Average annual cash wheat prices by class at selected major markets, 1986-1998**

Table 13 shows the price relationships among the classes of wheat at major U.S. marketing centers (Fig 25.) Soft white wheat at Portland tends to have a price pattern closely related to all the other classes, although somewhat higher with the notable exception of durum. This is partly due to its location as a port city, which tends to make wheat delivered to Portland relatively more valuable than wheat delivered to Chicago or Kansas City because of the closeness to ocean going freight. This data also shows that the supplies and demands of the alternative classes affect all classes of wheat. In other words, the prices for all classes tend to move together in response to macroeconomic and political events and other supply demand factors affecting world and U.S. markets.

**Table 13. Average annual cash wheat prices by class at selected major markets (1986-1998)**

Year	No.1 Soft white wheat Portland	No.2 Soft red wheat Chicago	No.1 Hard Red Winter Ordinary Protein Kansas City	No.1 Dark Northern Spring 14% Protein Minneapolis	No.1 Durum Minneapolis
1986	3.72	3.22	3.28	3.94	4.07
1987	2.90	2.76	2.72	3.07	3.57
1988	3.06	2.89	2.96	3.15	4.13
1989	4.53	4.00	4.17	4.36	5.53
1990	4.28	3.92	4.22	4.16	4.25
1991	3.16	2.73	2.94	3.06	3.48
1992	4.11	3.49	3.77	3.82	3.61
1993	4.11	3.49	3.67	3.91	3.88
1994	3.53	3.22	3.60	5.02	5.76
1995	4.16	3.52	3.97	4.26	5.98
1996	5.27	4.83	5.49	5.72	7.03
1997	4.54	3.92	4.88	4.97	5.59
1998	3.81	3.29	3.71	4.31	5.97

**Figure 25. Average annual cash wheat prices by class at selected markets, 1986-1998 (marketing years.)**



## **Classes of wheat with a focus on soft white wheat (Tables 14-17; Figures 26-37)**

**Table 14. All wheat and white wheat—domestic use, exports, and ending stocks, 1986-1999**

**Table 15. All wheat and soft red winter—domestic use, exports, and ending stocks, 1986-1999**

These two tables show the distribution patterns for soft white wheat (Table 14, Fig. 26) and soft red winter wheat (Table 15, Fig. 27) in domestic markets, export markets, and ending stocks since the 1986 marketing year. The situation in one of these classes is of particular importance to the market prospects of the other class because they are close substitutes in the domestic market for making pastry and pasta products. Soft red winter wheat is used domestically more than soft white wheat. Ending stock levels are somewhat higher for white wheat than for red wheat. This may be due to the competition for storage space in red wheat production areas that are heavily oriented to corn and soybean production. Exports of soft white wheat have generally exceeded soft red wheat in recent years. See Figs. 28-37 for charts comparing the data from Tables 14 and 15.

Soft white wheat achieved a thirty-four percent increase in domestic food use over the last decade, with an annual average of seventy-five million bushels sold between 1993 and 1997. Imports contributed ten to twenty million bushels to this total. The Pacific Northwest's contribution to this market is unknown because the data are combined with figures from the eastern U.S. However, if one assumes that most of the 30 million bushels produced each year in the eastern United States is used domestically, the Pacific Northwest's annual share of this market is twenty-five to thirty million bushels. If this assumption is true, ninety percent of the Pacific Northwest's annual production of approximately 300 million bushels is exported.

**Table 16. Soft white wheat exports to selected countries, 1993-1998**

**Table 17. Soft red winter wheat exports to selected countries, 1993-1998**

These tables show the major nations that import soft white wheat (Table 16, Figs. 34 and 35) and soft red winter wheat (Table 17, Figs. 36 and 37) from the U.S. Generally, there is little overlap in the major markets for these two classes. The exception would be Egypt, where both are imported quite steadily in fair quantities. Japan, Pakistan, Philippines South Korea are all strong, steady customers for soft white wheat exports.

Table 14. All wheat and white wheat for domestic use, exports, and ending stocks (1986-1999<sup>a</sup>)

Year	Domestic use			Exports			Ending stocks		
	All (million bu.)	White	Share (%)	All (million bu.)	White	Share (%)	All (million bu.)	White	Share (%)
1986	1,052	81	7.7	909	150	16.5	1,905	198	10.4
1987	1,197	77	6.4	999	175	17.5	1,821	185	10.2
1988	1,096	59	5.4	1,588	210	13.2	1,261	135	10.7
1989	979	43	4.4	1,415	247	17.5	702	81	11.5
1990	992	57	5.7	1,232	193	15.7	536	85	15.9
1991	1,365	105	7.7	1,070	216	20.2	868	87	10.0
1992	1,132	65	5.7	1,282	193	15.1	475	54	11.4
1993	1,128	70	6.2	1,354	195	14.4	531	64	12.1
1994	1,240	104	8.4	1,228	249	20.3	569	67	11.8
1995	1,287	103	8.0	1,188	222	18.7	507	57	11.2
1996	1,140	108	9.5	1,241	238	19.2	376	55	14.6
1997	1,301	126	9.7	1,002	237	23.7	444	59	13.3
1998	1,257	105	8.4	1,040	205	19.7	723	90	12.4
1999 <sup>b</sup>	1,363	111	8.1	1,050	225	21.4	955	61	6.4

<sup>a</sup>Marketing year<sup>b</sup>Projected

**Figure 26. Soft white wheat shares of total U. S. market for domestic use, exports, and ending stocks of wheat, 1986-1999 (marketing years.)**

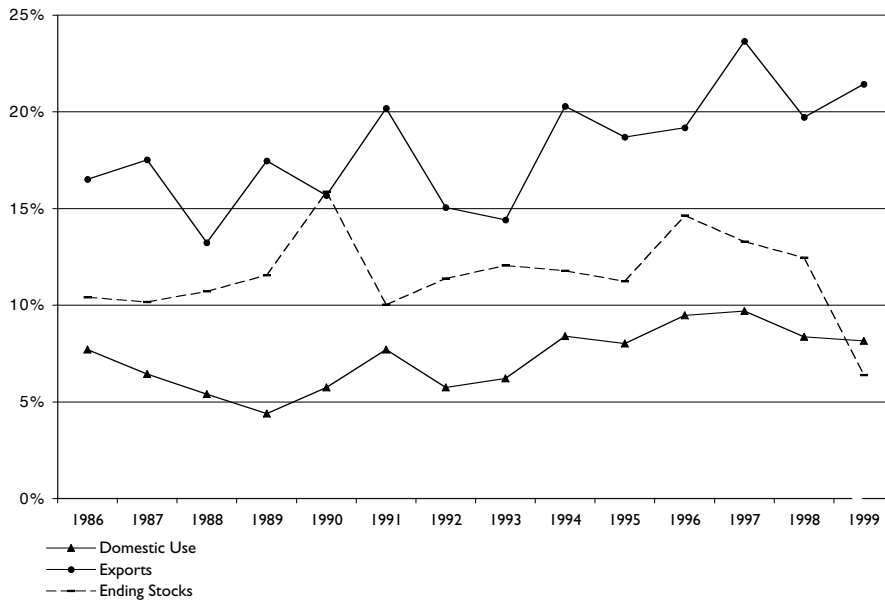
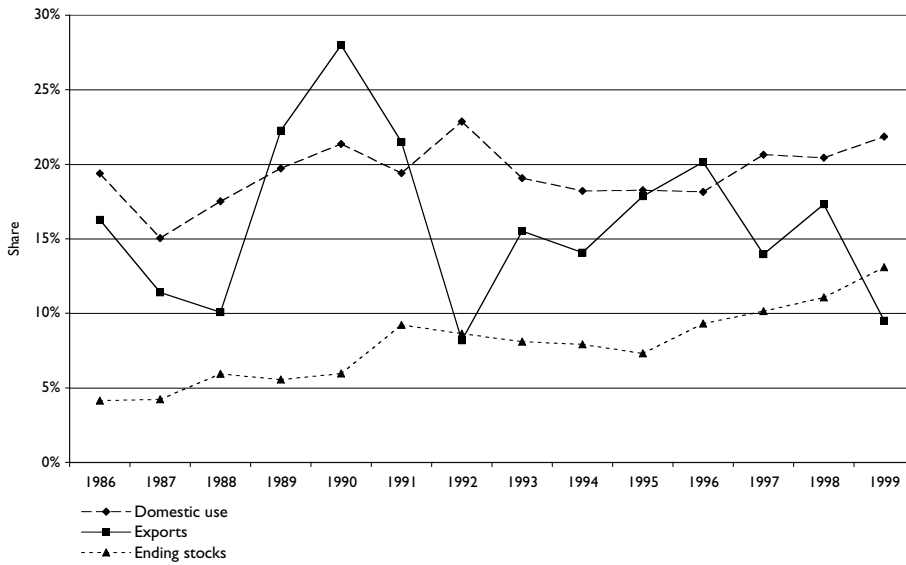


Table 15. All wheat and soft red winter for domestic use, exports, and ending stocks (1986-1999)

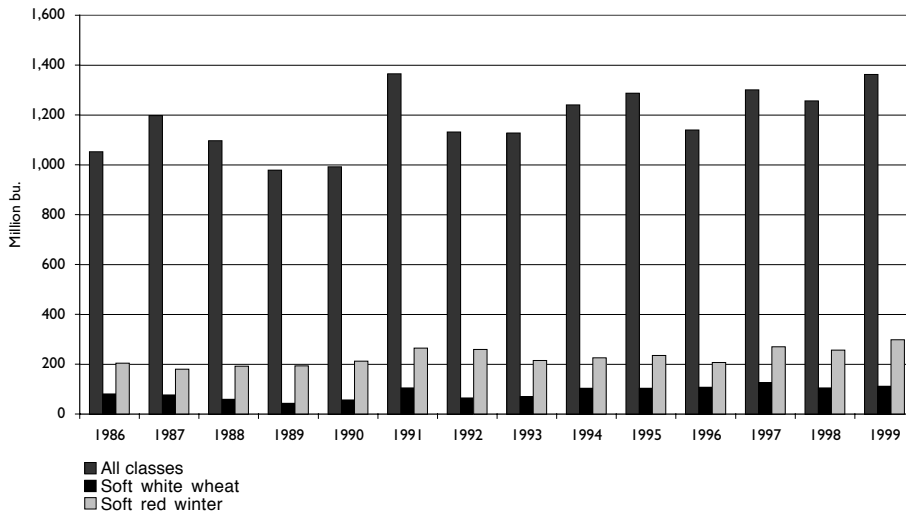
Year	Domestic use			Exports			Ending stocks		
	All (million bu.)	Soft red winter	Percent share (%)	All (million bu.)	Soft red winter	Percent share (%)	All (million bu.)	Soft red winter	Percent share (%)
1986	1,052	204	19.4	909	148	16.3	1,905	79	4.1
1987	1,197	180	15.0	999	114	11.4	1,821	77	4.2
1988	1,096	192	17.5	1,588	160	10.1	1,261	75	5.9
1989	979	193	19.7	1,415	315	22.3	702	39	5.6
1990	992	212	21.4	1,232	345	28.0	536	32	6.0
1991	1,365	265	19.4	1,070	230	21.5	868	80	9.2
1992	1,132	259	22.9	1,282	105	8.2	475	41	8.6
1993	1,128	215	19.1	1,354	210	15.5	531	43	8.1
1994	1,240	226	18.2	1,228	173	14.1	569	45	7.9
1995	1,287	235	18.3	1,188	212	17.8	507	37	7.3
1996	1,140	207	18.2	1,241	250	20.1	376	35	9.3
1997	1,308	270	20.6	1,002	140	14.0	444	45	10.1
1998	1,257	257	20.4	1,040	180	17.3	723	80	11.1
1999 <sup>b</sup>	1,363	298	21.9	1,050	100	9.5	955	125	13.1

<sup>a</sup>Marketing year<sup>b</sup>Projected

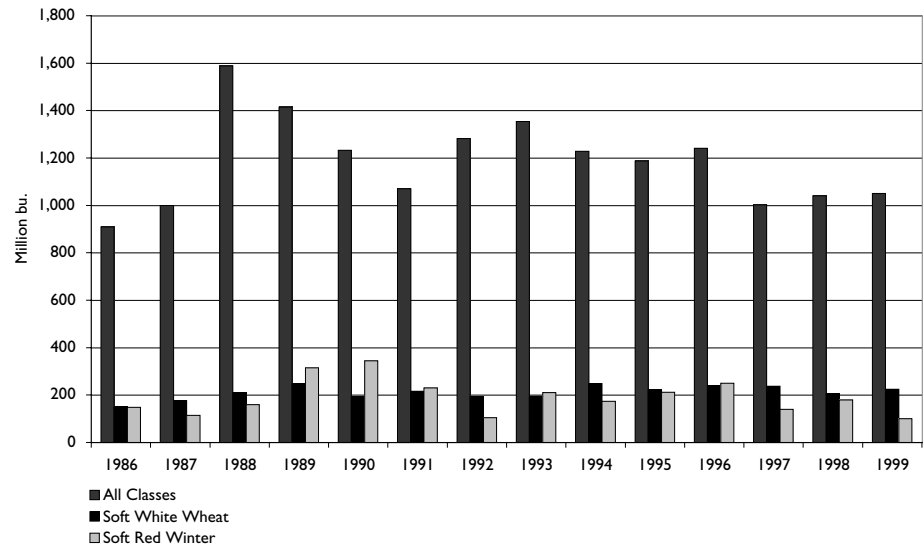
**Figure 27. Soft red winter wheat shares of total U.S. for domestic use, exports, and ending stocks, 1986-1999 (marketing years.)**



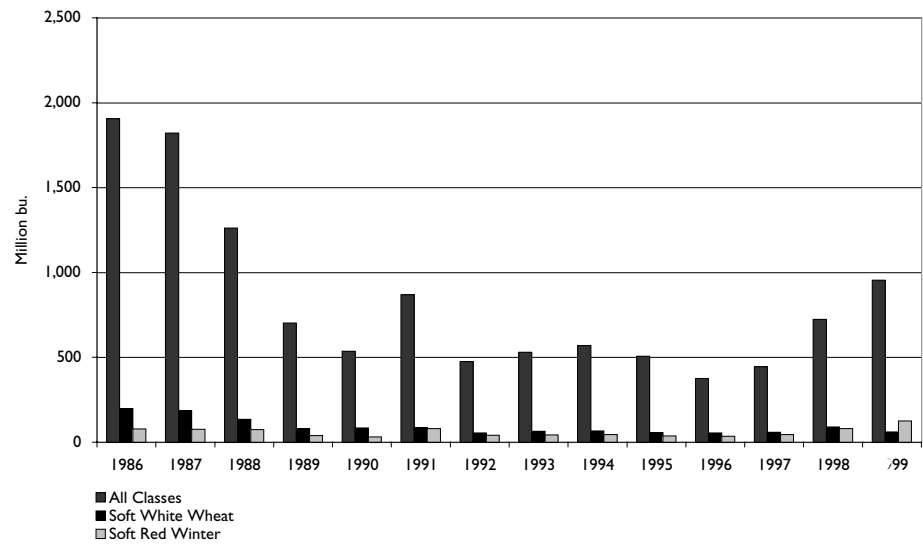
**Figure 28. Domestic use for all wheat, soft white wheat, and soft red winter, 1986-1999 (marketing years.)**



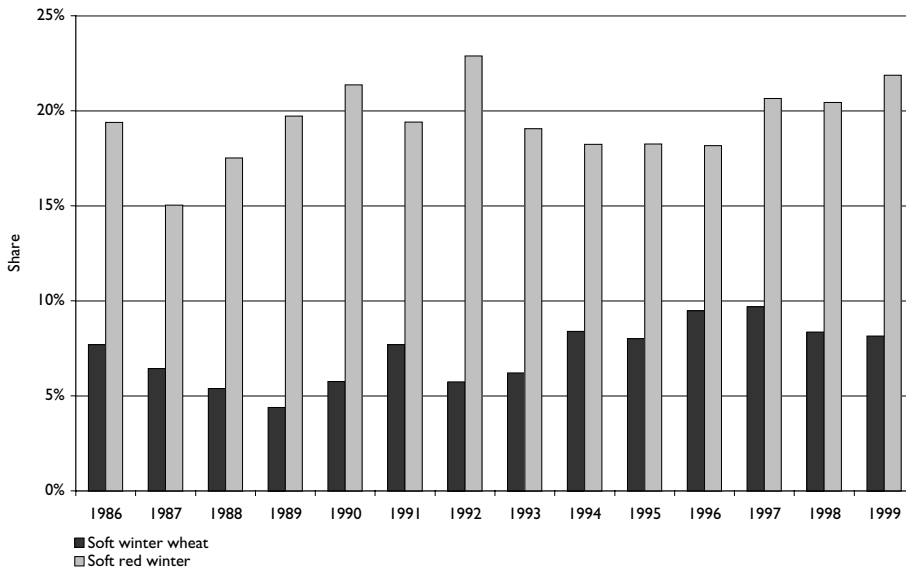
**Figure 29. U. S. exports for all wheat, soft white wheat, and soft red winter wheat, 1986-1999 (marketing years.)**



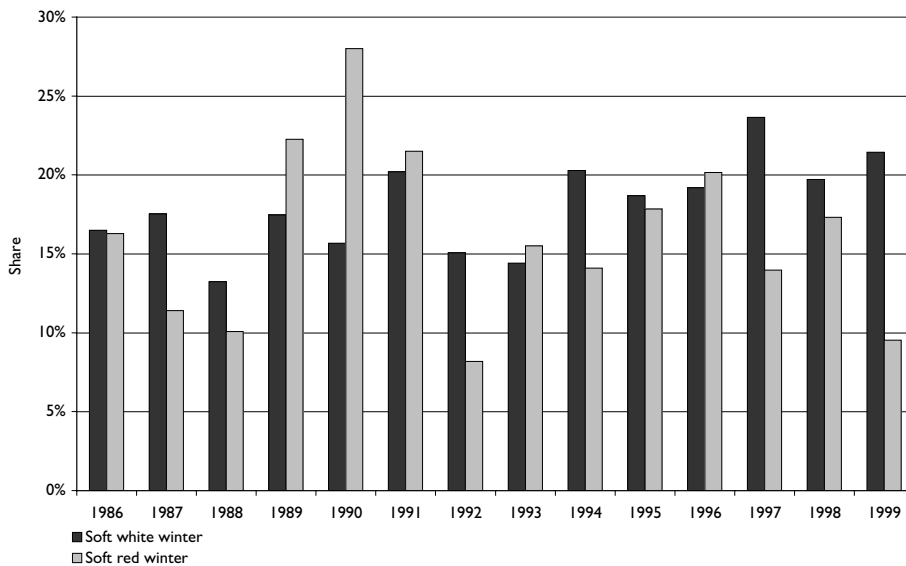
**Figure 30. Ending stocks for all wheat, soft white wheat, and soft red winter wheat, 1986-1999 (marketing years.)**



**Figure 31. Domestic use shares for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)**



**Figure 32. Export shares for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)**



**Figure 33. Ending stocks for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)**

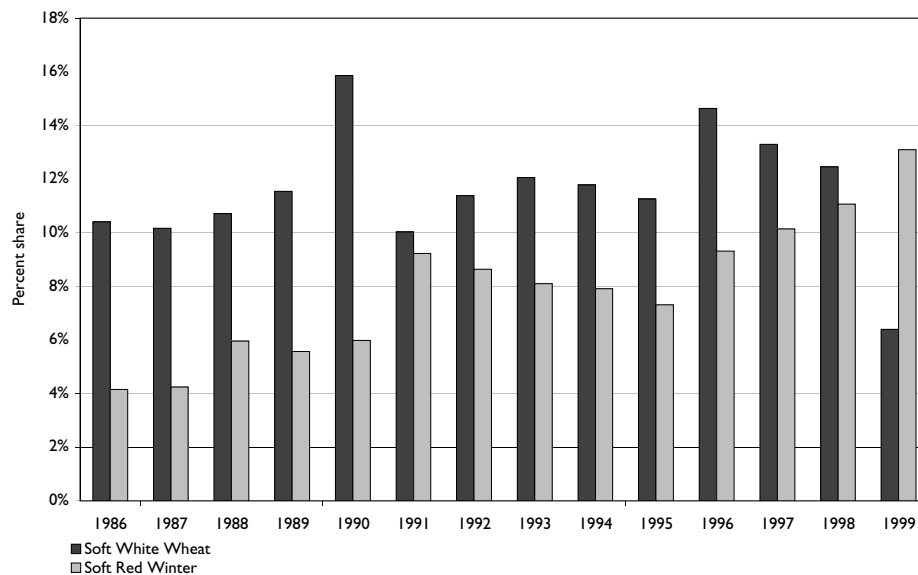


Table 16. Soft white wheat exports to selected countries (1993-1998<sup>a</sup>)

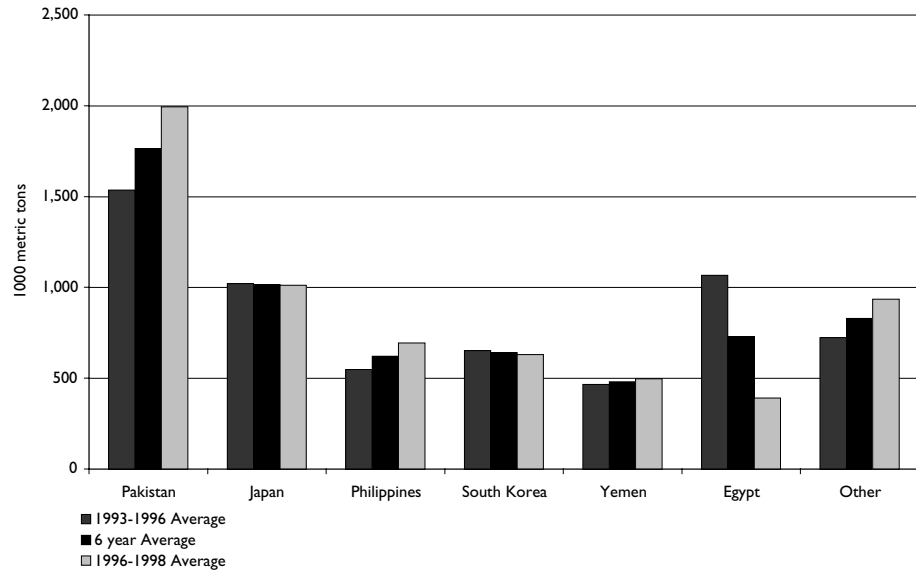
Year	Indonesia	Pakistan	Japan	Philippines	South Korea	Yemen	Egypt	Taiwan	Bangladesh	Sri Lanka	Turkey	Total
1993	0.0	1382.2	1025.9	413.9	628.5	382.0	643.2	129.2	0.0	176.3	0.0	5004.5
1994	0.0	1758.6	1000.5	586.9	645.4	454.2	1400.1	114.6	73.3	210.0	0.0	6467.1
1995	0.0	1464.4	1033.5	643.2	683.3	560.5	1155.2	125.5	334.2	335.1	0.0	6559.7
1996	214.0	1671.6	1098.8	708.5	615.0	385.5	498.8	118.3	261.1	511.2	142.1	6556.1
1997	56.7	2019.0	1000.2	718.5	685.2	556.9	545.0	127.7	195.3	153.0	52.3	6374.5
1998	0.0	2290.2	934.2	656.4	589.7	547.8	129.9	114.9	63.5	52.5	0.0	5526.6
6 year average	45.1	1764.3	1015.5	621.2	641.2	481.2	728.7	121.7	154.6	239.7	32.4	6081.4

(1000 Metric Tons)

<sup>a</sup>Marketing year

Source: US Wheat Association/USDA

**Figure 34. Average exports of soft white wheat to selected countries, 1993-1998 (marketing years.)**



**Figure 35. Six year average for soft white wheat exports, 1993-1998 (marketing years.)**

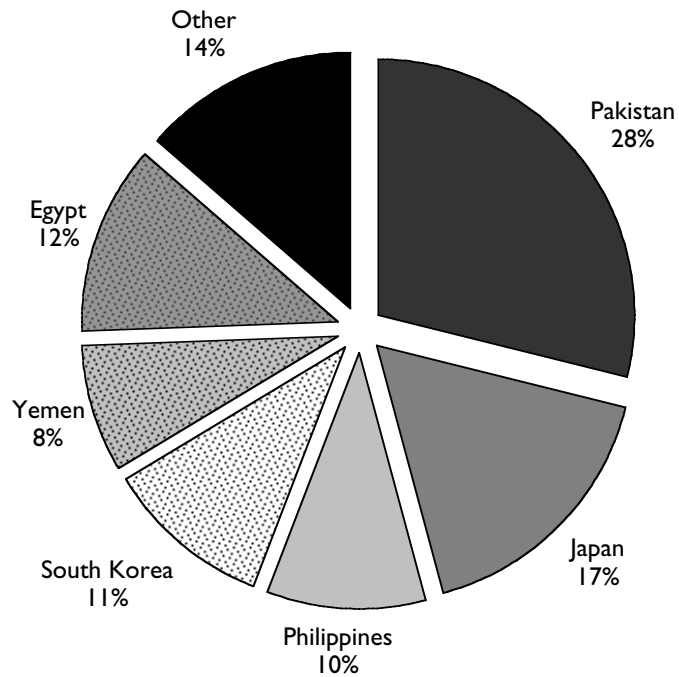
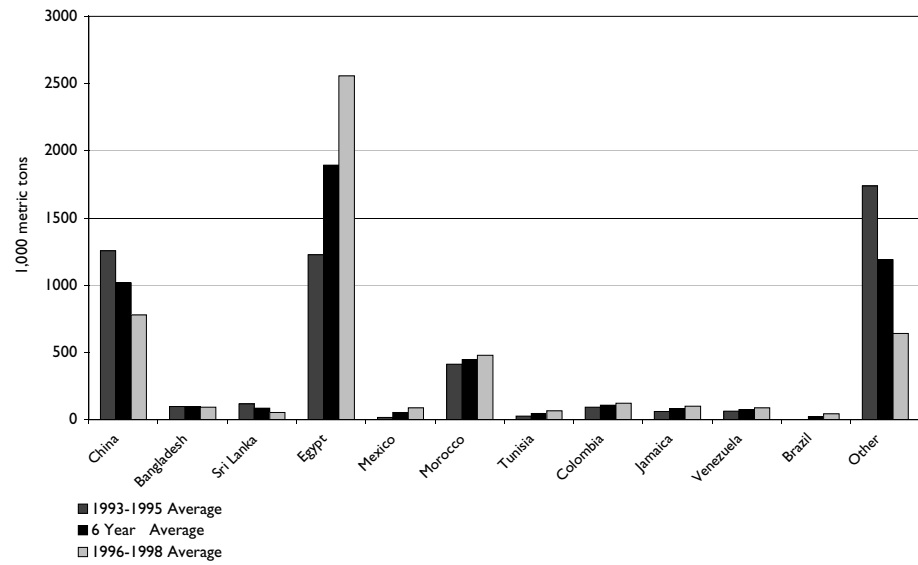


Table 17. Soft red winter wheat exports to selected countries (1993-1998<sup>a</sup>)

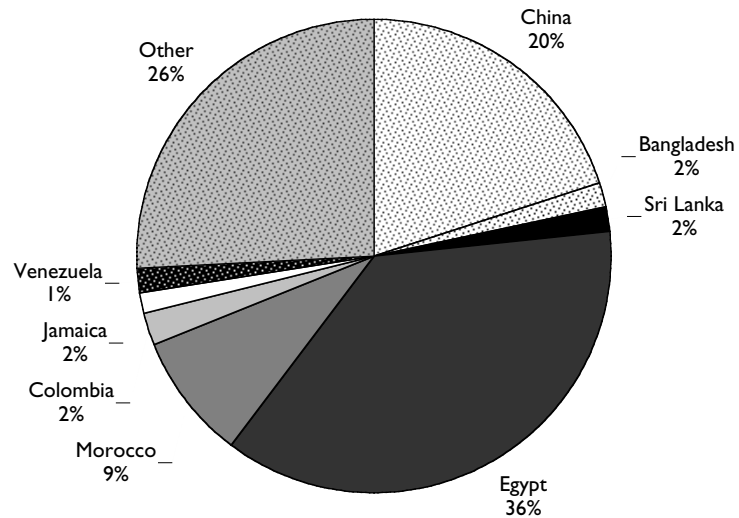
Year <sup>a</sup>	Turkey	China	Bangladesh	Sri Lanka	Egypt	Mexico	Morocco	Tunisia	Colombia	Jamaica	Venezuela	Brazil	All Others	Total
1993	0.0	606.8	93.3	38.4	351.3	14.9	440.4	0.0	79.5	104.0	68.6	0.0	3085.3	4882.5
1994	0.0	1510.2	38.0	154.5	542.5	1.4	791.2	0.0	85.1	70.8	61.5	0.0	1180.9	4436.1
1995	39.8	1649.6	153.5	151.2	2783.0	29.0	0.0	72.9	108.1	6.0	55.0	0.0	904.3	5952.4
1996	52.5	1483.0	204.9	0.0	3571.7	67.1	590.9	0.0	139.1	91.3	74.0	36.7	623.8	6935.0
1997	19.5	624.8	0.0	0.0	1294.7	142.3	353.7	81.3	127.8	105.0	94.0	85.8	844.1	3773.0
1998	79.9	227.0	67.0	152.5	2807.9	51.0	489.7	110.2	98.4	99.7	91.7	0.0	533.9	4808.9
6 year average	32.0	1016.9	92.8	82.8	1891.9	51.0	444.3	44.1	106.3	79.5	74.1	20.4	1195.4	5131.3

<sup>a</sup>Marketing year

**Figure 36. Average soft red winter wheat exports to selected countries, 1993-1998 (marketing years).**



**Figure 37. Six year average for soft red winter wheat exports to selected countries, 1993-1998 (marketing years.)**



## Appendix: List of figures and tables

The following lists give the table or figure number in the printed version of this chapter (first column), the title of the table or figure (second column), and the worksheet name in the Excel file (the last column).

### World wheat markets and the United States relationship

In text	Title	In spreadsheet
Table 1	World Wheat Production, Consumption, Trade, and Ending Stocks (1986-1999 <sup>a</sup> )	Sec. 1 Tbl. 1
Fig. 1	World wheat production, consumption, trade, and ending stocks, 1986-1999 (July-June marketing year.) The trendline for consumption is $y = 6.2569x + 501.42$ . The trendline for ending stocks is $y = -3.1022x + 159.12$ .	Sec. 1 Tbl. 1, Chart 1
Fig. 2	World wheat stocks to consumption ratio and traded percent of production, marketing years, 1986-1999 (July-June marketing year.) The trendline equation for traded percent of production is $y = -0.1997x + 20.204$ .	Sec. 1 Tbl. 1, Chart 2
Table 2	World and U.S. wheat production (1985-1998)	Sec. 1 Tbl. 2
Fig. 3	World and U.S. wheat production and linear trends, 1985-1998. The trendline equation for world wheat is $y = 251.4x + 18161$ . The trendline equation for U.S. production is $y = 24.068x + 2095$ .	Sec. 1 Tbl. 2, Chart 1
Table 3	World and U.S. wheat exports (1985-1998)	Sec. 1 Tbl. 3
Fig. 4	World and U.S. wheat exports and linear trends, 1985-1998. The trendline equation for world wheat exports is $y = 33.163x + 4034.4$ . The trendline equation for U.S. exports is $y = 8.525x + 1249.4$ .	Sec. 1 Tbl. 3, Chart 1
Table 4	World and U.S. ending stocks of wheat (1985-1998)	Sec. 1 Tbl. 4
Fig. 5	World and U.S. ending stocks of wheat and linear trends, 1985-1998. The trendline for World Ending Stocks is $y = -113.95 + 5845.9$ . The trendline for U.S. Ending Stocks is $y = -77.062 + 1411.6$ .	Sec. 1 Tbl. 4, Chart 1
Fig. 6	U.S. share of world exports, ending stocks, and production of wheat, 1985-1998. Data sources are tables 2, 3, and 4.	Sec. 1 Tbls. 2-4, Chart 1
Fig. 7	U.S. production, exports, and ending stocks of all wheat classes, 1985-1998. Data sources are tables 2, 3, and 4.	Sec. 1 Tbls. 2-4, Chart 2
Table 5	Wheat production and exports for major foreign exporters, U.S., and total foreign (1985-1998)	Sec. 1 Tbl. 5
Fig. 8	Wheat production for major exporting nations, 1985-1998	Sec. 1 Tbl. 5, Chart 1
Fig. 9	Wheat exports for major exporting nations, 1985-1998	Sec. 1 Tbl. 5, Chart 2
Table 6	Foreign, U.S., and world production, exports, and percent shares (1985-1998)	Sec. 1 Tbl. 5b
Fig. 10	Shares of world production for U.S. and foreign nations, 1985-1998	Sec. 1 Tbl. 5b, Chart 1
Fig. 11	Shares of world exports for U.S. and foreign nations, 1985-1998	Sec. 1 Tbl. 5b, Chart 2
Table 7	Wheat and wheat flour imports, selected regions and countries (1992-1999 <sup>a</sup> )	Sec. 1 Tbl. 6
Fig. 12	Four year averages for 1992-1995 and 1996-1999 (July-June marketing year) for wheat and wheat flour imports by selected countries and regions	Sec. 1 Tbl. 6, Chart 1



Fig. 13	Wheat and wheat flour imports, selected countries and regions, 1991-1999 (July-June marketing year.)	Sec. I Tbl. 6, Chart 2
Table 8	Ending stocks of wheat, U.S. and major foreign producers (1986-1999 <sup>a</sup> )	Sec. I Tbl. 7
Fig. 14	Ending stocks of wheat, U. S., and major foreign producers, 1986-1999 (July-June marketing year.)	Sec. I Tbl. 7, Chart 1

### United States data for all wheat classes

In text	Title	In spreadsheet
Table 9	All wheat supply and use in the U. S. (1986 – 1999 <sup>a</sup> )	Sec. II Tbl. 8
Fig. 15	All classes of U. S. wheat production and domestic use, exports, and ending stocks, 1986-1999 (marketing years.)	Sec. II Tbl. 8, Chart 1
Fig. 16	U. S. wheat total use, ending stocks, and stocks-to-use ratio, 1986-1999 (marketing years.)	Sec. II Tbl. 8, Chart 2
Table 10	Wheat utilized by U.S. flour mills, flour production imports, exports, and per capita disappearance	Sec. II Tbl. 9
Fig. 17	U. S. flour production and trend, 1985-1998. The trendline for U.S. flour production is $y = 7035.4x + 313701$ .	Sec. II Tbl. 9, Chart 1
Fig. 18	U. S. wheat flour imports and exports, 1985-1998	Sec. II Tbl. 9, Chart 2
Fig. 19	U. S. per capita flour disappearance and trend, 1985-1998. The trendline for U.S. per capita flour disappearance is $y = 1.9714x + 123.14$ .	Sec. II Tbl. 9, Chart 3
Table 11	All U.S. wheat <sup>a</sup> exports to selected countries and regions (1993-1998 <sup>b</sup> )	Sec. II Tbl. 10
Fig. 20	Three year averages for the 1993-1995 and the 1996-1998 marketing years for all wheat exports to selected countries and regions.	Sec. II Tbl. 10, Chart 1
Table 12	Total U.S. wheat exports by class (1993-1998 <sup>a</sup> )	Sec. II Tbl. 11
Fig. 21	Wheat exports by class, 1993-1998 (marketing years.)	Sec. II Tbl. 11, Chart 1
Fig. 22	Soft white wheat percent of total wheat exports, 1993-1998 (marketing years.)	Sec. II Tbl. 11, Chart 2
Fig. 23	Three year averages for the 1993-1995 and the 1996-1998 marketing years for total U. S. wheat exports by class.	Sec. II Tbl. 11, Chart 3
Fig. 24	U.S. wheat exports by class for 1993-1998 (marketing years)	Sec. II Tbl. 11, Chart 4
Table 13	Average annual cash wheat prices by class at selected major markets (1986-1998)	Sec. II Tbl. 12
Fig. 25	Average annual cash wheat prices by class at selected markets, 1986-1998 (marketing years.)	Sec. II Tbl. 12, Chart 1

### Classes of wheat with a focus on soft white wheat

In text	Title	In spreadsheet
Table 14	All wheat and white wheat for domestic use, exports, and ending stocks (1986-1999 <sup>a</sup> )	Sec. III Tbl. 13
Fig. 26	Soft white wheat shares of total U. S. market for domestic use, exports, and ending stocks of wheat, 1986-1999 (marketing years.)	Sec. III Tbl. 13, Chart 1
Table 15	All wheat and soft red winter for domestic use, exports, and ending stocks	Sec. III Tbl. 14

Fig. 27	Soft red winter wheat shares of total U. S. for domestic use, exports, and ending stocks, 1986-1999 (marketing years.)	Sec. III Tbl. 14, Chart 1
Fig. 28	Domestic use for all wheat, soft white wheat, and soft red winter, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart1
Fig. 29	U. S. exports for all wheat, soft white wheat, and soft red winter wheat, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart 2
Fig. 30	Ending stocks for all wheat, soft white wheat, and soft red winter wheat, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart3
Fig. 31	Domestic use shares for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart4
Fig. 32	Export shares for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart5
Fig. 33	Ending stocks for soft white wheat and soft red winter wheat, 1986-1999 (marketing years.)	Sec. III Tbls. 13&14, Chart6
Table 16	Soft white wheat exports to selected countries (1993-1998 <sup>a</sup> )	Sec. III Tbl. 15
Fig. 34	Average exports of soft white wheat to selected countries, 1993-1998 (marketing years.)	Sec. III Tbl. 15, Chart 1
Fig. 35	Six year average for soft white wheat exports, 1993-1998 (marketing years.)	Sec. III Tbl. 15, Chart 2
Table 17	Soft red winter wheat exports to selected countries (1993-1998 <sup>a</sup> )	Sec. III Tbl. 16
Fig. 36	Average soft red winter wheat exports to selected countries, 1993-1998 (marketing years.)	Sec. III Tbl. 16, Chart 1
Fig. 37	Six year average for soft red winter wheat exports to selected countries, 1993-1998 (marketing years.)	Sec. III Tbl. 16, Chart 2

