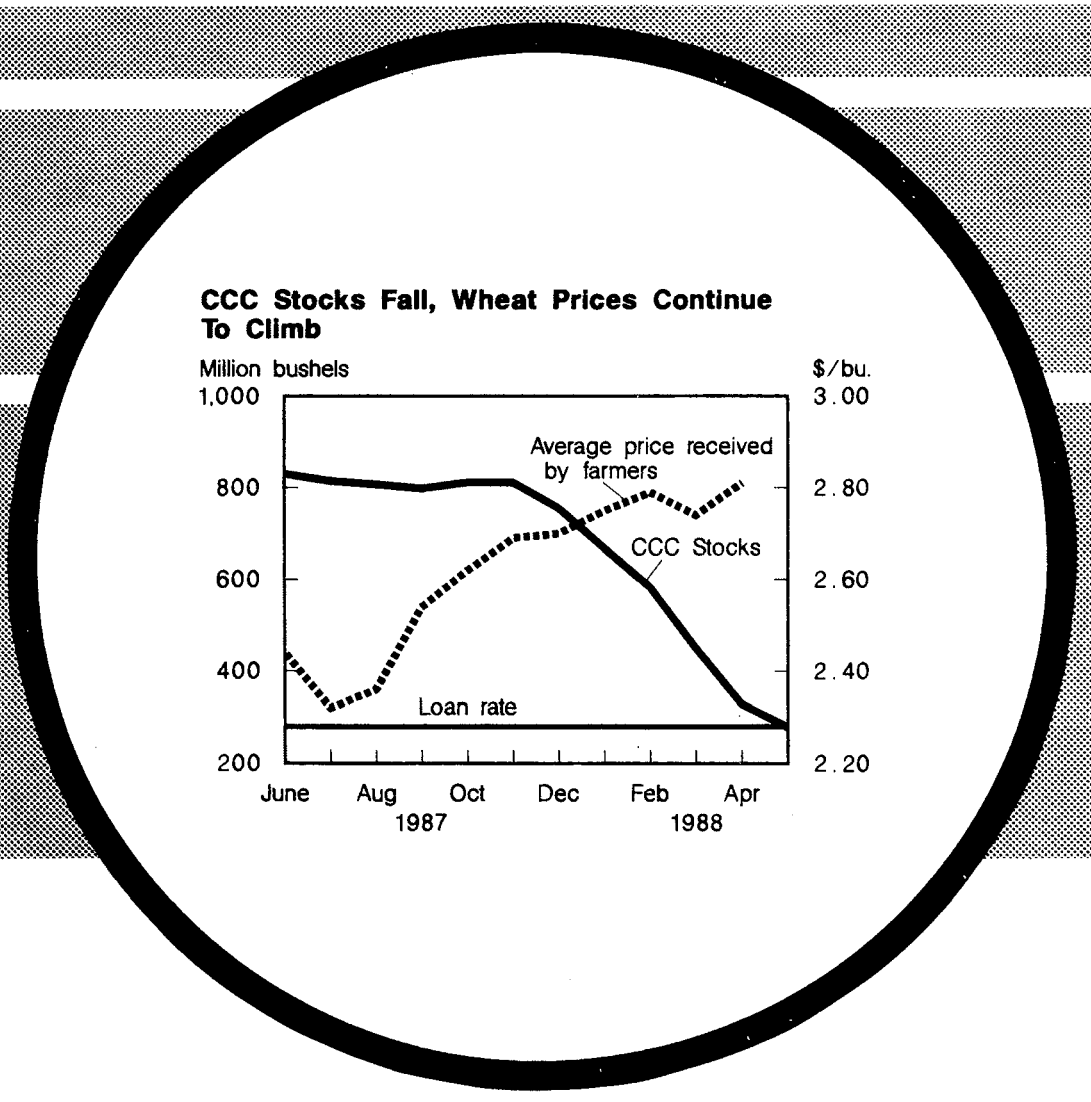
United States
Department of
Agriculture

Economic
Research
Service

WS-281
May 1988

Wheat

Situation and Outlook Report



CONTENTS

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Approved by the World Agriculture Outlook Board. The next summary will be released August 22, 1988. Summaries of Situation and Outlook reports, including tables, may be accessed electronically. For details, call (202) 447–5505.

The *Wheat Situation and Outlook* is published quarterly and includes an annual yearbook. Current annual subscription price: $5.00 U.S., $6.25 foreign. Subscriptions are available from the U.S. Government Printing Office, Washington, D.C. 20402. Make checks payable to the Superintendent of Documents.

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SUMMARY

Reduced 1988/89 U.S. wheat supplies and continued strong demand are projected to drop U.S. ending stocks to their lowest level since 1975/76. While the 1988/89 U.S. crop is projected up 3 percent, this will be more than offset by sharply lower carryin stocks. Total use is projected down 3 percent from the forecast 1987/88 record. The 1988/89 marketing year price received by farmers is projected to average the highest since 1985/86.

Carryin stocks for 1988/89, at 1.23 billion bushels, are forecast down 32 percent from a year earlier. While still equivalent to more than 5 1/2 months of anticipated use, almost 60 percent is expected to be in Commodity Credit Corporation (CCC) inventory or the Farmer-Owned Reserve. CCC inventory is forecast to be only 20 percent of total stocks, down from 45 percent a year earlier. In addition, 147 million bushels of the 250 million expected to be in CCC inventory on June 1, 1988, are designated as part of the Food Security Reserve.

The 1988/89 season average market price is forecast between $2.80-$3.20 per bushel, up from $2.55 in 1987/88, and $2.42 in 1986/87. Because of higher prices, less wheat is likely to enter the loan program.

Total wheat production is projected to reach 2.17 billion bushels. The Agricultural Statistics Board's May estimate of the winter wheat crop was 1.62 billion bushels, up almost 4 percent from 1987. Based on conditions as of May 1, winter wheat yields were estimated at 40.7 bushels per acre, the second highest on record. Durum area planted may increase 12 percent, but other spring wheat area is forecast down 7 percent.

U.S. exports in 1988/89 are projected to reach 1.5 billion bushels, down 100 million from forecast 1987/88, but still one of the larger shipments on record. Projected lower world import demand will limit U.S. wheat exports, but U.S. market share will exceed 40 percent.

Ending stocks on June 1, 1989, are projected to fall below 800 million bushels, as total use exceeds production for the third consecutive year. This would drive the ending stocks-to-use ratio down to 30 percent, the lowest since 1974/75.

Adverse weather in Europe and the Soviet Union, and low wheat export prices early in 1987/88, kept competitor production down and import demand up. As a result, U.S. exports are now expected to reach 43.5 million tons by the end of the 1987/88 trade year (July-June), the highest volume since 1981, and more than 15 million tons above 1986/87.

Rail car shortages have plagued grain shippers since June 1987. But the total distribution system may yet meet domestic and export commitments.

THE WHEAT SITUATION AT A GLANCE

All wheat: supply and disappearance 1/

Year beginning June 1	1985	1986	1987 Forecast	1988 Projected
		Million bushels		
Beginning stocks	1,425	1,905	1,821	1,231
Production	2,425	2,092	2,105	2,170
Imports	16	21	15	15
Supply, total	3,866	4,018	3,941	3,416
Domestic				
Food	683	724	750	775
Seed	93	84	85	95
Feed and Residual	270	385	275	250
Domestic, total	1,046	1,193	1,110	1,120
Exports	915	1,004	1,600	1,500
Disappear., total	1,961	2,197	2,710	2,620
Ending stocks	1,905	1,821	1,231	796

1/ Includes flour and products in wheat equivalent.

OUTLOOK FOR 1988/89

U.S. Production Up in 1988

The Agricultural Statistics Board's May estimate of the winter wheat crop was 1.62 billion bushels, up almost 4 percent from 1987. Winter wheat area planted was down from 1987, but area harvested is forecast to increase 500,000 acres. Based on conditions as of May 1, winter wheat yields were estimated at 40.7 bushels per acre, the second highest on record. Durum area planted may increase 12 percent, but other spring wheat area is forecast down 7 percent.

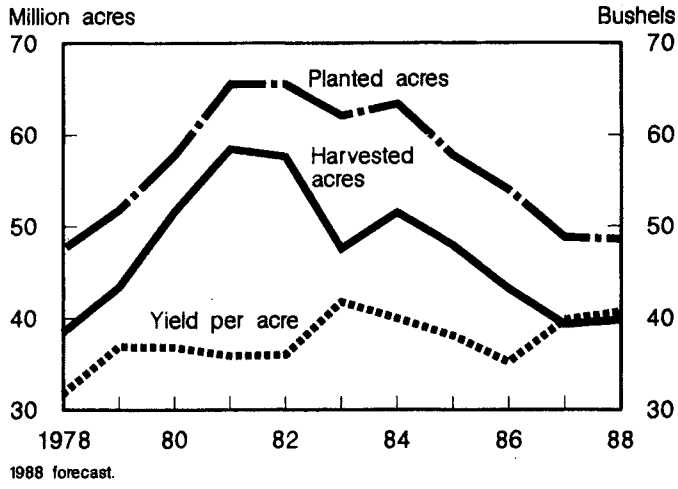
Based on the May winter wheat forecast and a projection of spring wheat, total wheat production is projected to reach 2.17 billion bushels. This is 3 percent above 1987, but below the 2.4- to 2.8-billion-bushel production of the first half of the eighties. Projected total planted area is down slightly, despite higher prices, because Government programs continue to remove area from production.

The Acreage Reduction Program (ARP) requires any producer who wishes to be eligible for program benefits (producer loans or deficiency payments) to reduce wheat plantings by 27.5 percent, the same as in 1987. Since program participation remains high (85 percent, down only 2 percent from 1987), 19.4 million acres will be maintained in the Acreage Conservation Reserve in 1988.

The Conservation Reserve Program (CRP) pays farmers to take highly erodible land out of production for 10 years. For the 1988/89 crop, 3 million additional acres of wheat base may enter the CRP for a total of over 7 million. Reduction of the effective wheat base in 1988/89 may be 8 percent.

The 0/92 provision of the 1988 wheat program allows farmers to devote all or a portion of their permitted acreage to conservation uses, and receive deficiency payments on an acreage not to exceed 92 percent of such permitted as if wheat had been planted. Producers with poor winter wheat stands could enter damaged area into the 0/92 program by the March 11 deadline. Cattle could then be grazed on the 0/92 acreage for those months allowed by the State Agricultural Stabilization and Conservation Committee. In 1988, 3.4 million acres entered the program, down from 3.7 in 1987.

Winter Wheat Area and Yield



Harvested area in 1988 may be the same as in 1987, despite the planted area decline, because winter weather was more favorable for wheat, thus reducing abandonment. In fact, 500,000 more winter wheat acres may be harvested, offsetting a projected decline in spring wheat planted area. Abandonment of spring wheat area averages less than 5 percent, much less than winter wheat (over 15 percent), so reduced plantings of spring wheat are less likely to be offset by lower abandonment. However, disease or adverse weather could encourage greater abandonment than anticipated.

Although yields depend on weather conditions through harvest, major developments through early May include:

- Excellent germination and stooling in the Southern Great Plains and Eastern growing areas, but drought-constrained planting in the Pacific Northwest;
- Winter conditions that likely resulted in reduced winter kill;
- Major outbreaks of disease and insect pests threatening the crop in some areas;
- Low soil moisture in much of the spring wheat areas of the Northern Plains.

U.S. Supply Forecast Down 13 Percent

Total U.S. wheat supplies in 1988/89 are projected to decline by over 500 million bushels. At over 3.4 billion bushels, supply is the smallest since 1980/81. The entire drop in supplies is due to lower beginning stocks.

Beginning stocks are forecast at 1.23 billion bushels, 32 percent below 1987 levels, but still equivalent to 5 months of projected 1988/89 use. However, an estimated 60 percent of total stocks are in the Farmer-Owned Reserve (FOR) or owned by the Commodity Credit Corporation (CCC).

While June 1, 1988, stocks may drop 590 million bushels below 1987 carryin, CCC inventory is expected to be reduced by 580 million. The Government thus may own only 20 percent of beginning stocks, down from over 45 percent a year earlier. Of the forecast CCC inventory of 250 million bushels, 147 are designated for the Food Security Reserve, futher limiting Government supplies for other purposes in 1988/89.

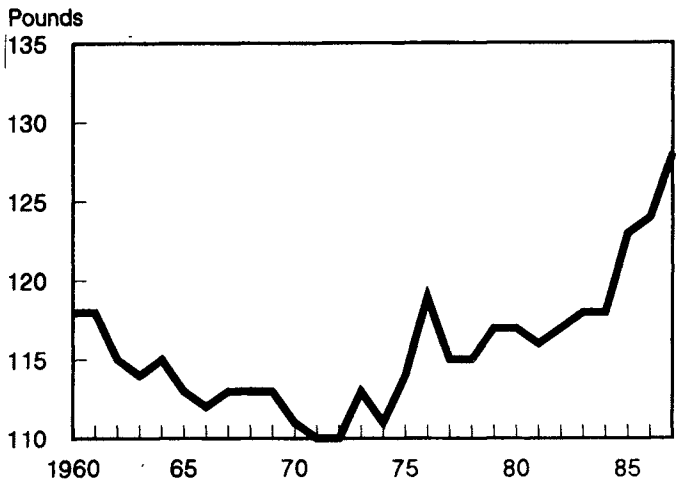
The Special Producer Storage Loan Program has ended. However, the FOR wheat from 1983 and earlier, which is maturing and must be redeemed or forfeited to the CCC, is only gradually exiting the FOR. Processing of the forfeitures and movement of the wheat to CCC storage can take months.

Free carryin stocks (including those under loan) are expected to exceed 500 million bushels, up over 40 percent from a year earlier. Large trade flows and upward price potential make it more attractive for commercial interests to hold stocks. Moreover, fewer free stocks are in farmers' ownership under the 9-month Government loan program. Free stocks not encumbered by the loan program may increase 170 percent from 1987, but would still represent only 27 percent of total stocks.

Domestic Use Stable in 1988/89

Domestic use of wheat is projected to remain around 1.1 billion bushels in 1988/89. Underlying domestic wheat food use is population growth of almost 1 percent per year. Food use of wheat is expected to continue increasing faster than population growth. Fast food consumption encourages

Wheat Flour: Per Capita Disappearance



use of hamburger buns and pizza dough. Pasta consumption continues to increase, and a health-conscious population is consuming more high fiber variety breads. The price of wheat represents only a small fraction of the cost of the final product, so higher wheat prices are unlikely to significantly change consumer prices and affect the level of food consumption.

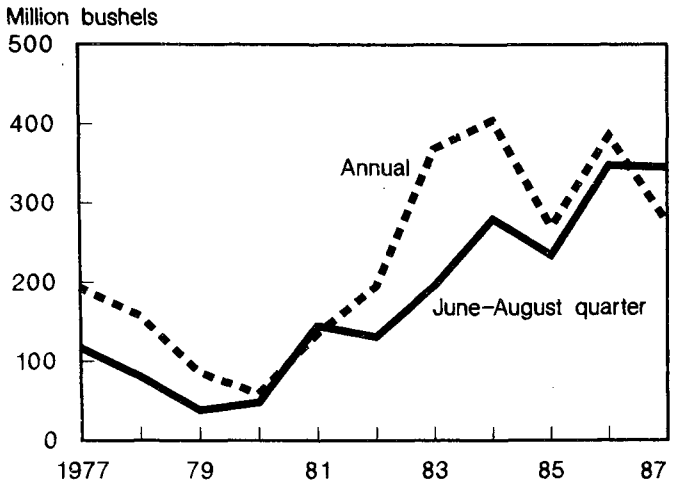
Wheat ground by flour mills reached record levels in 1987, and is expected to continue to expand in 1988. Capacity utilization in the milling industry has been high, exceeding 100 percent of rated capacity in some months. Over 90 percent of wheat ground in the United States is for domestic use.

The use of wheat in some cereal products is not included in flour statistics. The Department of Commerce estimates that per capita consumption of wheat in ready-to-eat breakfast cereals rose from 3.1 pounds per capita in 1982 to 3.6 pounds in 1987, an increase of over 16 percent in 5 years.

Seed use of wheat in 1988/89 is likely to increase as larger area is sown for 1989/90 production. The ARP will be reduced from 27.5 percent, ensuring greater plantings.

Feed and residual use of wheat is projected to decline in 1988/89. For the second year in a row, the wheat-to-corn price ratio does not favor wheat feeding, and corn stocks are expected to be ample. Yet, in 1987/88, feed and residual use is forecast at a

U.S. Wheat Feed and Residual



surprisingly large 275 million bushels. Forecasting "residual" use is complicated because it encompasses the statistical errors in measurement of all other parts of supply and demand. A change in the stocks date from October 1 to September 1, further complicates analysis of feed and residual use over an extended period.

Most wheat feeding takes place in the summer, after the wheat harvest but before the corn harvest. The economic factors that could be expected to influence wheat feeding this summer may be largely unchanged since 1987.

International Outlook for 1988/89

Global wheat production in 1988/89 is expected to increase 3 percent over 1987/88 to 520.7 million tons. An expected rise in foreign production in 1988/89, particularly in the Soviet Union, will likely ease world import demand. However, world wheat consumption is forecast to exceed production, requiring a drawdown of world stocks. Global carry-in stocks in 1988/89 are forecast 16 percent lower than in 1987/88, and are projected to decline another 11 percent by the end of 1988/89.

Major competitors' production is projected 2 percent above 1987/88, and carry-in stocks are forecast 18 percent below a year earlier. Competitors' exports are forecast to decline slightly from 1987/88. Reduced foreign exportable supplies, together with an expected further tightening of U.S. stocks could push up export prices. U.S. wheat prices (FOB Gulf, Hard Red Winter No. 2) in April were 11 percent above a year ago. Prices in 1988/89 could average above 1987/88, if competitor and/or U.S. production falls much below the current forecast. However, bumper wheat crops in the United States and/or in competing countries that are of better quality than in 1987/88 could keep 1988/89 prices near a year ago.

World trade in 1988/89 (July-June, excluding intra-EC trade) is projected at 100 million tons, 4 percent below 1987/88, led by a 7- million-ton decline in Soviet wheat imports. The fall in world trade is expected to result in a 6-percent decline in U.S. wheat exports from the 1987/88 forecast 41 million tons. The U.S. share of the reduced market is expected to be over 40 percent.

The Export Enhancement Program (EEP) is expected to continue to play an important role in maintaining U.S. market share in targeted countries in 1988/89. Average EEP bonuses have declined in recent months because of a rise in world prices caused, in part, by tightening world stocks. The premium between U.S. prices and the world price has narrowed in recent months. The value of future EEP bonuses will continue to depend on

World wheat supply and distribution, 1984-88 1/

Year*	Carryin 2/	Pro-duction	Total exports	Total use 3/
	Million Metric Tons			
1984/85	145.2	511.8	107	489.8
1985/86	164.1	499.8	85	494.4
1986/87	168.2	529.7	91	521.7
1987/88 4/	176.1	504.9	105	533.9
1988/89 5/	147.2	520.7	100	536.4

*Marketing year.

1/ Data are based on an aggregate of differing local marketing years, but exports are on a July-June season. 2/ Stocks data are only for selected countries and exclude such major countries as the USSR and part of Eastern Europe for which stocks data are unavailable; aggregate stocks levels have, however, been adjusted for estimated year-to-year changes in USSR grain stocks. 3/ For countries where stock data are unavailable, or for which no adjustments have been made for year-to-year changes, utilization estimates assume a constant stock level. 4/ Forecast. 5/ Projected.

the quantity of competitor supplies and the strengh of import demand.

Reduced Import Demand and Competitor Supply Forecast for 1988/89

Total world wheat trade for 1988/89 is projected at 100 million tons, 4 percent below forecast 1987/88. Although the major competitors are expected to increase production slightly in 1988/89, total exportable supplies will be down 3 percent from a year ago because of a drawdown of wheat stocks in 1987/88. The majority of stocks held by major competitors belongs to the EC and is expected to be of lower quality. EC and Argentine exports are expected to be up, while exports are projected to decline in Canada and Australia.

The consequences of the 1987 drought in South and Southeast Asia are expected to create strong import demand. A wet autumn and mild winter are leading to an expected increase in the winter wheat crop in the Soviet Union. Improved yield prospects are also projected for parts of Eastern Europe. In China, area is up and favorable autumn weather helped winter wheat get a good start. As a result, China may produce a record wheat crop.

World wheat production: Major exporters and importers, marketing years, 1983/84-1988/89

Country	1983/84	1984/85	1985/86	1986/87	1987/88 (Forecast)	1988/89 (Projected)
	Million metric tons					
EXPORTERS						
United States	65.9	70.6	66.0	56.9	57.3	59.1
Major Competitors	125.0	136.0	120.6	128.4	119.7	122.5
Canada	26.4	21.2	24.3	31.4	26.3	25.4
EC-12	63.8	82.9	71.6	71.9	71.3	74.1
Australia	22.0	18.7	16.1	16.2	12.1	13.0
Argentina	12.8	13.2	8.5	8.9	10.0	10.0
IMPORTERS						
USSR	77.5	68.6	78.1	92.3	83.3	92.0
E.Europe	35.4	42.1	37.1	39.1	39.0	41.3
N. Africa	5.5	6.3	7.1	7.1	7.4	7.1
Algeria	0.8	1.6	1.7	1.2	1.0	0.9
Morocco	2.0	2.0	2.1	3.3	2.4	3.2
Tunisia	0.6	0.7	1.4	0.5	1.4	0.3
Egypt	2.0	1.8	1.9	1.9	2.4	2.5
Asia	143.2	151.1	148.5	157.9	152.6	154.5
China	81.4	87.8	85.8	90.0	87.7	91.0
India	42.8	45.5	44.1	47.1	45.6	44.0
Pakistan	12.4	10.9	11.7	13.9	12.2	12.3
Middle East	22.2	21.0	23.9	26.6	24.2	25.3
Turkey	13.3	13.3	12.7	14.0	13.0	13.5
Iran	5.2	4.5	5.7	7.1	6.0	6.5
Iraq	0.8	0.5	1.4	1.0	0.7	0.7
Syria	1.6	1.1	1.7	1.9	1.6	1.6
Latin America (Excl. Argentina)	6.9	8.1	11.0	12.8	12.3	10.7
Brazil	2.1	1.9	4.3	5.6	6.2	5.1
Subsaharan Africa	3.2	3.2	3.2	3.8	4.7	4.4
S. Africa	1.8	2.2	1.7	2.3	3.3	2.9
Foreign total	423.5	441.2	433.8	472.8	447.6	461.7
World total	489.3	511.8	499.8	529.7	504.9	520.7

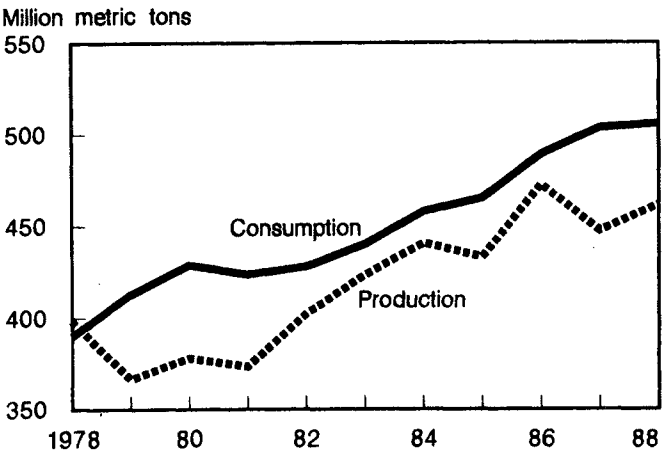
The Soviet wheat crop is currently projected at 92 million tons, 10 percent above last year. Improved fall and winter weather and an expansion of the Soviet intensive technology program are contributing to the projected larger crop. Imports are expected to fall to 15 million tons, about 30 percent below the 1987/88 forecast.

China's import demand is projected to remain stable at 13.5 million tons despite an expected record crop of 91 million tons. Consumption continues to rise at a faster rate than production due to increased population and continued strong demand for wheat products resulting from higher incomes.

In Eastern Europe, a major export market for the United States in 1987/88, improved weather will likely boost yields, particularly in Bulgaria, Yugoslavia, and Romania. Production in 1988/89 is expected to increase 6 percent over 1987/88, and total wheat imports are projected to decline 16 percent.

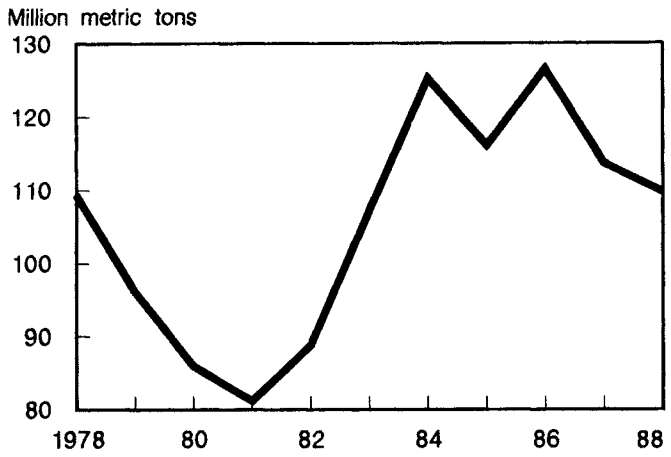
In India, a poor rice crop in 1987/88 has resulted in a substantial drawdown of food grain stocks. Consumers have substituted a larger proportion of wheat in their diets in place of unavailable rice supplies. Total wheat and rice stocks fell 37 percent in 1987/88, the lowest level in 5 years. With the prospect of a lower 1988/89 wheat crop and another year of large consumption, wheat imports have become essential to keep domestic grain prices from rising. Despite the projected 2.6-million tons of wheat imports in 1988/89, ending stocks may drop an additional 40 percent to the lowest level since 1981/82.

Foreign Wheat Production and Consumption[1]



1988 projected. 1987 forecast. 1/ Aggregate of local marketing years.

Foreign Wheat Ending Stocks[1]



1988 projected. 1987 forecast. 1/ Aggregate of local marketing years.

Total South Asian imports (July-June) are forecast at 7.1 million tons in 1988/89. In Pakistan, as in India, domestic supplies will need to be supplemented by imports following two consecutive poor wheat crops. Imports are projected at 1.8 million tons, which includes about 300,000 tons of wheat to be donated to Afghan refugees residing in Pakistan. In other parts of South Asia, improved food grain crop prospects may lower wheat imports in 1988/89. Bangladesh's imports are projected more than 20 percent below 1987/88. Sri Lanka's wheat demand is expected to remain strong, but prospects of an improved rice crop may translate into slightly less wheat imports in 1988/89.

North African imports are projected to decline slightly from 1987/88 to 14 million tons. While Morocco is expected to reduce imports by nearly 1 million tons due to improved production prospects, Tunisia and Algeria may increase imports due to drought and reported damage from locust infestations.

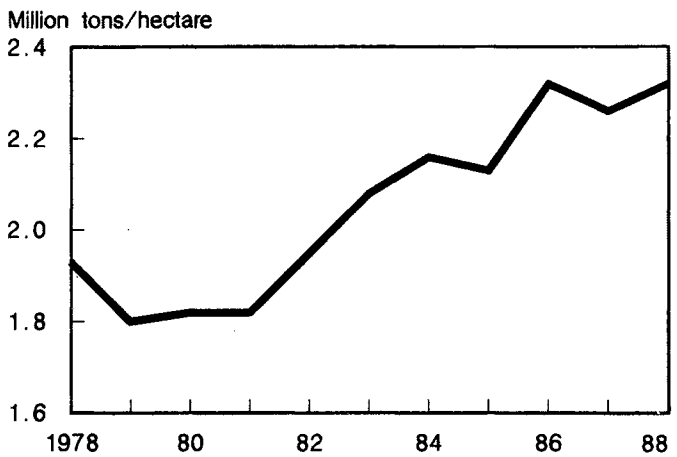
East Asian imports in 1988/89 are expected to remain strong, but may exhibit little growth, if any, from 1987/88. Neither Japan nor South Korea is expected to increase imports above 1987/88. South Korea will most likely continue to import nearly 2 million tons of feed wheat in addition to bread quality grain.

Competitor Production Recovers Marginally

Improved yields, particularly in the EC, and higher export prices may lead to some increase in competitor production in 1988/89. While farmers in Argentina and Australia may bring significant wheat area back into production, prices may still not be high enough for Australia's producers to plant all the area they took out of production in 1987/88.

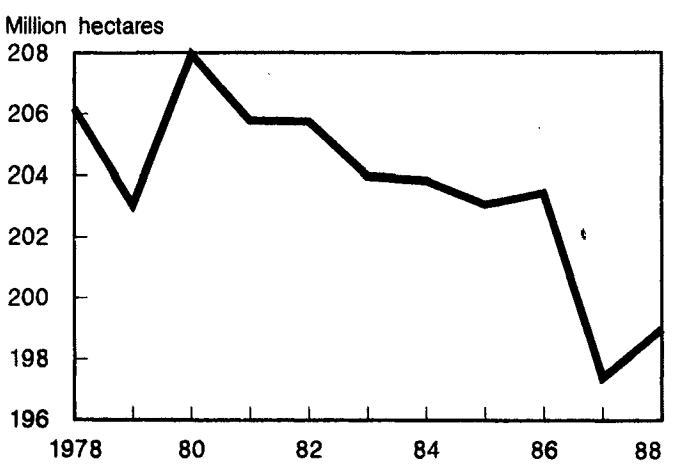
EC production is forecast to increase only 3 percent to 74.1 million tons. Wet autumn conditions in 1987 resulted in a lower than expected planted area and will constrain the expected yield increase in EC production. Because of the wet autumn, farmers planted 7 percent less wheat in Italy than in 1987/88 and 3 percent less (or about 60,000 hectares) in the United Kingdom. Moreover, some wheat area in the United Kingdom, France, and Germany was planted later than usual. The late planting and early spring could make the crops more shallow rooted and susceptible to pests and disease. Yields in most EC countries are expected to exceed those of 1987/88, but summer and harvest weather can still exert a strong influence over the quantity and quality of the crop.

Foreign Wheat Yield[1]



1988 projected. 1987 forecast. 1/ Aggregate of local marketing years.

Foreign Wheat Area[1]



1988 projected. 1987 forecast. 1/ Aggregate local marketing years.

EC exports, excluding intra-trade, are projected at 16 million tons, 10 percent above forecast 1987/88. Prospects of improved quality may allow the EC to expand its share of the world market from 14 percent in 1987/88 to 16 percent in 1988/89.

The recent increase in export prices may encourage Argentine farmers to expand wheat area, which is forecast up 8 percent to 5.3 million hectares. However, production is not expected to exceed that of 1987/88 because of an expected return to normal yields. Argentina may reduce stocks and increase exports 10 percent to 5.5 million tons in 1988/89 (July-June).

Although export prices have risen in recent months, Canadian farmers are not expected to expand area. However, producer expectations of higher prices are being influenced by the Canadian Wheat Board announcement that this year's initial price paid to farmers would equal the recently adjusted 1987/88 price. The Wheat Board announced an upward revision of its 1987/88 payments to encourage farmers to deliver old crop supplies to the Board. The Wheat Board subsequently announced that 1988/89 initial payments will equal 1987/88.

While continued dry weather in the prairie may adversely affect spring wheat plantings, wheat area in Canada is initially projected to decline only marginally to 13.4 million hectares. If yields equal the 5-year average (compared to above-average yields in 1987/88), production may be down 4 percent from 1987/88. Beginning stocks are forecast down 29 percent from 1987/88 and, when combined with projected reduced production, are expected to limit Canadian exports to 21 million tons, down 7 percent from the forecast 1987/88 record.

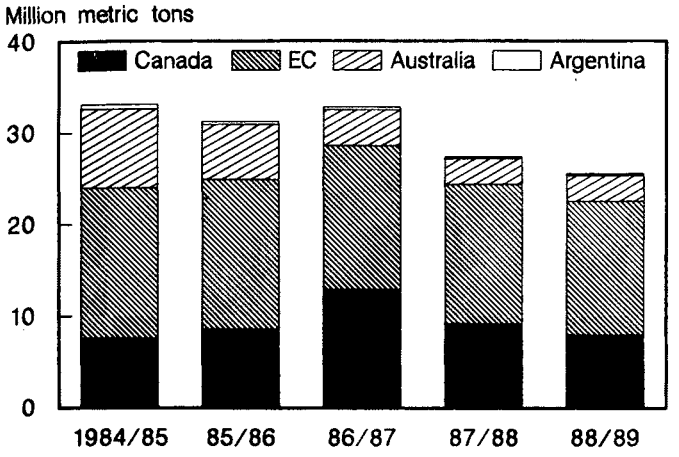
World wheat trade: Major exporters and importers, marketing years (July-June) 1983/84-1988/89

Country	1983/84	1984/85	1985/86	1986/87	1987/88 (Forecast)	1988/89 (Projected)
	Million metric tons					
EXPORTERS						
United States	38.9	38.1	25.0	28.4	43.5	41.0
Major Competitors	57.6	61.7	54.5	56.3	54.5	53.0
Canada	21.8	19.4	16.8	20.8	22.5	21.0
EC 12	15.5	18.5	15.6	16.4	14.5	16.0
Argentina	9.7	8.0	6.1	4.3	5.0	5.5
Australia	10.6	15.8	16.0	14.8	12.5	10.5
Others	5.5	7.2	5.5	6.0	6.7	6.1
Total foreign	63.1	68.9	60.0	62.3	61.2	59.1
IMPORTERS						
USSR	20.5	28.1	15.7	16.0	22.0	15.0
E. Europe	3.8	2.6	3.4	3.7	3.5	3.0
N. Africa	13.1	13.1	12.2	13.1	14.3	14.0
Algeria	2.8	2.8	2.8	3.4	3.8	4.0
Morocco	2.1	2.5	2.0	1.5	2.3	1.5
Tunisia	1.0	0.9	0.6	1.1	0.9	1.2
Egypt	6.7	6.6	6.3	6.5	6.7	6.7
Asia	30.0	25.8	24.2	26.8	33.1	36.3
China	9.6	7.4	6.6	8.5	13.5	13.5
India	2.5	0.2	0.0	0.0	0.4	2.6
Pakistan	0.4	1.0	1.5	0.4	0.5	1.8
Bangladesh	1.9	1.9	1.2	1.5	2.2	1.7
Japan	5.9	5.6	5.5	5.8	5.4	5.4
S. Korea	2.4	3.1	3.0	3.9	3.9	3.9
Taiwan	0.7	0.8	0.7	0.9	1.0	0.9
Middle East	10.7	11.5	8.5	9.5	10.3	10.1
Iran	3.7	3.2	2.2	2.5	3.8	3.5
Iraq	3.0	3.0	1.7	2.8	2.8	2.8
Latin America (Excl. Argentina)	11.6	12.8	9.2	10.1	9.7	10.2
Brazil	3.9	5.4	2.5	2.8	2.0	1.8
Venezuela	0.9	1.0	1.0	1.1	1.1	1.1
Mexico	0.6	0.5	0.1	0.5	0.7	1.2
Subsaharan Africa	4.6	6.3	5.2	5.2	4.5	4.4
Nigeria	1.6	1.8	1.2	1.0	0.2	0.3
Sudan	0.5	0.6	0.6	0.6	0.6	0.6
Ethiopia	0.4	0.8	0.9	0.6	0.7	0.7
World total	102.0	107.0	85.0	90.7	104.7	100.1

Australian farmers may bring more land into wheat production in 1988/89 in response to higher export prices. The Guaranteed Minimum Price, based on the estimated market return for the current crop and the two smallest market returns for the previous three crops, is expected to increase over last year. The relative price of wool and legumes is still high enough to prevent farmers who shifted area out of wheat in 1987/88 from bringing much of the land back into wheat production. This is especially true in the East where production options are more plentiful than in the West. The most important factor for western farmers will be soil moisture conditions in May and June when the crop is planted.

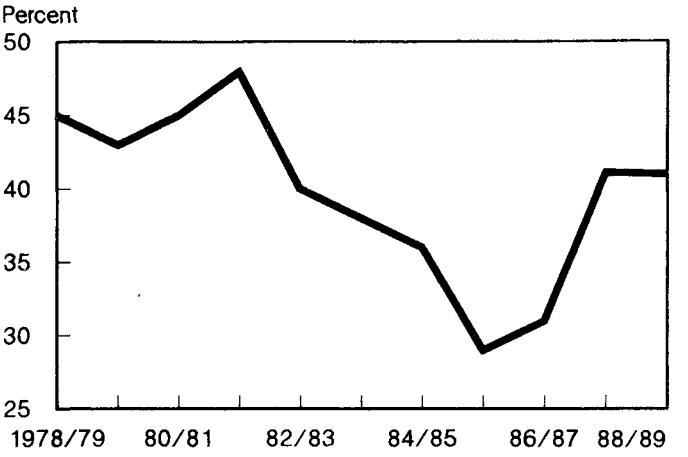
Assuming normal weather and average yields, total wheat area in Australia is forecast up 7 percent to 9.5 million hectares, and production is expected to increase 8

Major Competitors' Ending Stocks[1]



1988/89 projected. 1987/88 forecast. 1/ Aggregate local marketing years.

U.S. Share of World Wheat Trade[1]



1988 projected. 1987 forecast. 1/ July-June trade years.

percent to 13 million tons. However, production could move up even further than projected if farmers anticipate higher prices and plant more area to wheat than forecast. Area may also increase if favorable moisture conditions exist at planting time.

The crop will not be harvested until November/December, and Australia will be entering the year with reduced stocks. The small 1987 crop is expected to limit exports during the 1988/89 (July/June) trade year. Australian exports are not expected to exceed 10.5 million tons, 16 percent below 1987/88.

U.S. Market Share To Remain at 41 Percent, But Total Exports Projected Down

U.S. exports in 1988/89 are projected at 41 million tons, down 6 percent from the previous year. Despite the overall decline, the United States in 1988/89 is expected to retain 41 percent of the world market forecast for 1987/88. Even though market share is not expanding this still represents a considerable turnaround from 1985/86, when the United States exported only 25 million tons and held only 29 percent of the market.

Several factors could alter this early forecast. Weather conditions in all major competing countries could greatly change production outcomes. Adequate soil moisture at planting is critical for the Canadian, Australian, and Argentine crops. All three countries have drawn down stocks, and 1988/89 production will be the major determinant of the quantity and quality of exportable supplies. A larger than expected wheat crop in the EC could lead to a further buildup of stocks and increase pressure to raise exports. However, the cost of export subsidies and reduced import demand may limit exports.

The United States will still face strong price competition from the EC, particularly in North Africa, the Soviet Union, and Eastern Europe in 1988/89. Reduced global imports and a projected increase in EC exports mean that the EEP and other Government programs will continue to play an important role in maintaining U.S. market share. An aggressive EEP policy in 1988/89 should keep U.S. wheat prices competitive.

The competitive price environment, especially when combined with guaranteed credit programs such as the GSM-102, should continue to buoy world import demand by allowing the centrally planned economies and those of developing countries to maximize their use of foreign exchange earnings while maintaining adequate domestic wheat supplies.

Projected 1988/89 Ending Stocks Lowest Since 1974/75

Stocks on June 1, 1989, are projected to fall below 800 million bushels, as total use exceeds production for the third consecutive year. This would drive the ending

stocks-to-use ratio down to 30 percent, the lowest since 1974/75, and in a range where prices are very sensitive to stock changes. The projected stock reduction in 1988/89 of 425 million bushels would be less than the 590-million decline forecast for 1987/88, but a slightly larger percentage drop.

Half of the June 1, 1989, stocks could be isolated from the market in the FOR, as farmers would be somewhat reluctant to remove wheat from the reserve as long as prices continued to increase. Even if prices rise enough to trigger suspension of storage payments, it is not clear how quickly farmers would remove wheat from the FOR. The legal minimum for the FOR was reduced to 300 million bushels.

The CCC needs about 200 million bushels to maintain the food reserve and support other programs. Potentially, that leaves sharply lower free stocks at a time when holding stocks for speculation might seem reasonable, depending on production prospects for 1989/90.

Wheat Prices Likely To Increase in 1988/89

The 1988/89 season average market price (price to the producer) is forecast to average between $2.80-$3.20 per bushel, up from a forecast $2.55 in 1987/88, and $2.42 in 1986/87.

Harvest prices are normally pressured by large new crop supplies, and 1988/89 will likely exhibit the same seasonal price pattern. However, prices received by farmers during harvest are not likely to fall significantly from the $2.74 and $2.81 per bushel prices of March and April.

While some farmers will sell directly from the fields, most are unlikely to be eager sellers at harvest because:

- Storage is more readily available;
- Farmers are in better shape financially -- farm income has improved in 1987/88, farm debt has been reduced, and Government payments have provided cash flow; and
- Higher prices are expected later in the season.

Strong export movement is expected to continue for summer 1988. If not, prices could experience a stronger seasonal decline at harvest. However, prices will likely be well above the loan rate ($2.21) or above July and August 1987 prices ($2.32 and $2.36, respectively). If production falls significantly short of present expectations (2.1-2.2 billion bushels), prices could increase dramatically, even during harvest.

Prices during the last three quarters of 1988/89 may trend upward as stocks dwindle. However, several factors may be different than in 1987/88. CCC auctions are not likely to be as large a price factor because of limited CCC inventory. Since domestic demand is stable and not very price sensitive, exports and prospects for the 1989/90 crop will be the key determinants of wheat prices during the latter part of 1988/89. U.S. export policy and foreign supply and demand may have a strong influence on demand for U.S. wheat exports in 1988/89.

Toward the end of 1988/89, prices may be particularly sensitive to 1989 production prospects. A lower ARP and higher prices could increase production dramatically, but with very low stocks, weather scares could cause strong price rallies.

1987/88 WHEAT SITUATION

Wheat Auctions Free-up CCC Stocks

From November 6, 1987, through May 18, 1988, 383.1 million bushels of wheat were auctioned. This reflects $1 billion of generic certificates and an average bid price of $2.65 a bushel. About 48 percent of the wheat was auctioned during December and January. Over 73 percent (281.4 million bushels) has been for Hard Red Winter wheat (HRW), with an additional 18 percent (68.9 million bushels) for Hard Red Spring (HRS).

The wheat auctions have changed the pattern of exchanges for generic certificate holders. Prior to the auctions, the majority of certificate exchanges for wheat were for crops held as loan collateral. Since the auctions began, over 86 percent of wheat

CCC wheat auctions

By month	Amount (mil. bu.)
November	37.9
December	93.1
January	88.7
February	69.3
March	65.0
April	27.4
Total	381.4
By class	
Hard Red Winter	281.4
Hard Red Spring	68.9
Soft Red Winter	11.4
Soft White	12.5
Hard Amber Durum	8.9
Total (through May 18)	383.1

Source: ASCS

exchanges have been for CCC-owned wheat. Exchanges for wheat have composed about 25 percent of total exchanges since the auction began, 5 percent more than prior to the auctions.

USDA has not announced whether auctions will continue into the 1988 crop year. With an expected deficit of 430 million bushels between forecast U.S. production and total use for 1988/89, auctions or regular certificate exchanges could make CCC stocks available to meet some of this shortfall. The availability of CCC wheat will partially depend on the quantity of wheat acquired through forfeitures from the FOR and the Special Producer Storage Loan Program. Legal commitments to the Food Security Reserve include 147 million bushels of CCC wheat. As CCC stocks have been reduced, the CCC has acted to designate specific lots to long-term storage for the Food Security Reserve.

Record Freight Car Demand Causes a Crunch

From May to June 1987, rail car grain loadings rose 28 percent to 32,788 cars per week, surpassing the record 32,558 cars of November 1979. The new record was exceeded in October, setting a near record for the year. March 1988 saw another record grain loading, 34,240 cars. Many shippers have experienced delays of 2 weeks or more in obtaining rail cars. In April 1988, the Association of American Railroads stated that the average daily shortage was 8,000 cars.

High freight car demand over the last 11 months is likely to continue through 1988. During the first 4 months of 1988 grain car loadings averaged 32,813 cars per week. In view of the large total U.S. grain disappearance anticipated this year, 318 million metric tons, demand for rail service promises to remain high for the coming months. Total rail car grain loadings for 1988 are now estimated at 1.7 million cars, 14 percent above 1987.

A shortage of rail cars during wheat harvest could reduce wheat exports as insufficient stocks are now held at terminal points to meet anticipated demand.

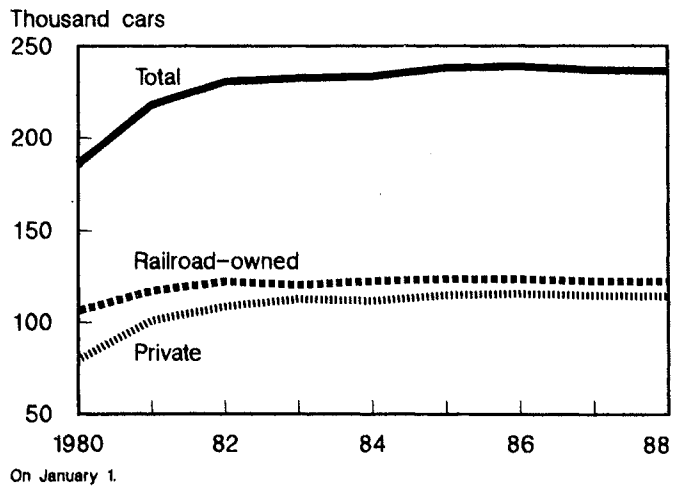
Freight Car Inventory Remains Stable

Part of the problem lies in the number of jumbo covered hopper cars available for use. These cars each carry about 96 tons of grain and predominate in rail shipments of grains and oilseed.

Between 1980 and 1986, the jumbo covered hopper car fleet rose from 186,000 to 239,000 cars, but the increases were small in the later years. Scrapping of overage and damaged cars reduced the fleet to 236,000 cars by 1988. Further, non-railroad firms own nearly half of the jumbo cars. While some of these cars are leased to railroads, many cars are controlled by grain marketing firms.

Only 2,000 jumbo grain cars are known to be on order, but delivery will not commence until September 1988. It appears that the supply of jumbo cars will not increase

Inventory of Jumbo Covered Hopper Cars



significantly in the next 2 years because railroads are unwilling to further increase their fleet when continued record demand is in doubt.

Since the previous record year for grain loadings, 1980, the jumbo car fleet has increased 27 percent. Loadings in 1988 are now estimated to be only 12 percent above the 1980 level. Seemingly no problem should exist. However, other factors affect rail car supply. For a given shipment, the demand for cars is best measured in car days (the number of cars needed multiplied by the number of days required to complete the shipment and return the cars for loading). The quantity of tractive power, essentially the number of locomotives needed to pull the train and the time required to make a roundtrip, is also a factor.

Increased Exports a Factor

Much of the expected increase in demand for rail cars results from larger grain exports. In 1986, exports accounted for 26 percent of railed grain, but in 1988, the figure is expected to jump to 42 percent.

Car supply could be increased by reducing the time spent awaiting unloading at ports. However, it appears that any such gains have already been realized. In the first 4 months of 1987, 73 percent of all cars delivered to a port were unloaded within 7 days. During the same period this year, 80 percent of all grain cars were unloaded within 7 days, despite a 68-percent increase in arrivals at ports.

Overall in 1986, each hopper car was loaded slightly more than five times per year. In 1987, loadings per car increased nearly 21 percent to more than six per year. Further improvement appears unlikely.

Shifts in Distribution Patterns A Solution

Between 1986 and 1987, rail unloadings of grain at Pacific coast ports increased 35 percent to 141,000 cars. Current trends indicate that 199,000 cars may be unloaded at these ports this year, 14 percent above 1987. A reduction in the number of cars dispatched to the Pacific coast could result in a disproportionate increase in availability of cars to other shippers.

Favorable rail and ocean rates to Pacific Northwest ports have attracted corn and wheat from Nebraska and Kansas for export to Asian markets. These exports could be filled instead by shipments from Texas and Oklahoma through Texas ports. Such shipments would involve much shorter overland hauls and avoid mountainous terrain. Fewer car days and tractive power would be consumed.

The market mechanisms to increase efficient car utilization are in place. Railroads are allowed to change their rates without approval or review by the Interstate Commerce Commission. Wheat shippers in Oklahoma and Texas (the group most affected by the wheat harvest) can attract rail cars from other shippers by offering to pay higher transportation charges. While this would tend to increase the delivered cost of wheat at ports, it would not create a widespread transportation shortage. Corn exports, in particular, should remain unaffected.

Grain cars unloaded at Atlantic, Gulf & Pacific Ports, and total, 1982-1988

Year	Port group								U.S. total	
	North Atlantic		S. Atl. & Gulf		Pacific		Total export			
	1,000 cars	Pct	1,000 cars	Pct	1,000 cars	Pct	1,000 cars	Pct	1,000 cars	Pct
1982	140.9	10.9	238.1	18.4	120.5	9.3	499.6	38.6	1,292.7	100.0
1983	91.4	6.7	211.7	15.6	151.5	11.2	454.6	33.5	1,357.7	100.0
1984	79.0	5.6	258.3	18.2	201.6	14.2	538.9	38.1	1,415.8	100.0
1985	83.7	7.0	152.0	12.8	136.3	11.5	371.9	31.3	1,189.0	100.0
1986	44.6	3.5	177.0	13.9	104.8	8.2	326.4	25.7	1,271.2	100.0
1987	32.1	2.1	265.6	17.6	141.4	9.4	439.1	29.0	1,511.9	100.0
1988E	38.8	2.3	471.8	27.7	199.0	11.7	709.7	41.7	1,703.6	100.0

E = estimated
SOURCE: Association of American Railroads

During 1987, the Illinois and Mississippi Rivers carried nearly 35 million metric tons of grain, about 80 percent of their demonstrated capacity. The 8 million metric tons of unused capacity represent about one-half of the estimated rail receipts of grain at Pacific Coast ports this year. A shift of wheat shipments from the Pacific Coast ports to Texas ports accompanied by a shift of export corn traffic from rail to barge would free a large number of rail cars for use in other growing areas.

There are institutional barriers to sharp shifts in rail distribution patterns, thus rail car supply likely will tighten as the wheat harvest commences. It is just as possible that the total distribution system will prove adequate, and that domestic and export commitments will be met.

1987/88 International Situation

Buoyant Trade and Strong Competition

Adverse weather in Europe and the Soviet Union, and relatively low wheat export prices early in 1987/88, kept competitor production down and import demand up. The situation, combined with an expanded EEP and credit guarantee programs, created excellent opportunities for U.S. wheat exports. U.S. exports are now expected to reach 43.5 million tons by the end of the 1987/88 trade year (July-June), the highest volume since 1981, and more than 15 million tons above 1986/87.

World wheat trade is forecast up 15 percent over 1986/87 to 105 million tons, led by sharp increases in imports by the USSR and China. Due to poor weather, Soviet wheat production in 1987/88 fell 10 percent to an estimated 83.3 million tons, and the quality of much of the crop may have been poor. Soviet imports are forecast to expand 38 percent to an estimated 22 million tons. In China, strong domestic demand and low prices are encouraging the country to increase wheat imports almost 60 percent over 1986/87 to 13.5 million tons, despite a crop of 88 million tons, the second highest on record. The United States, with the help of the EEP, is forecast to capture over half the Soviet market and a third of the Chinese market in 1987/88.

Imports by the Middle East and North Africa are expected to be up 9 percent over 1986/87. To support its wartime economy, Iran is expected to raise imports to 3.8 million tons, over 50 percent above 1986/87, despite foreign exchange constraints that have hindered trade with Argentina. North African imports are forecast up 9 percent to 14.3 million tons, in part because of the 1987 drought in Algeria and Morocco, and because of prospects for a poor 1988 crop in Tunesia and Algeria. Strong competition between the EC and the United States, particularly for the Egyptian and Algerian markets, kept prices low and credit terms favorable.

East Asian wheat imports, while forecast down slightly from 1986/87, continued strong at 10.5 million tons. South Korea is continuing to import large quantities of feed wheat, about 2 million tons, and Taiwan relaxed procedures for importing wheat under its quota, which is expected to result in a 10-percent increase in wheat imports over 1986/87.

South Asian imports rose nearly 50 percent in 1987/88, in part because of the drought in India and flooding in Bangladesh. However, the major consequences of the poor weather may translate into heavy imports in 1988/89.

Brazil produced 6.1 million tons of wheat, setting a record for the second consecutive year. Large stocks and slightly reduced consumption are leading to a sharp reduction in wheat imports. Brazil honored long-term agreements with Argentina, and Canada is expected to limit total imports to 2 million tons, a 29-percent decline from 1986/87.

U.S. Market Share Recovers

The United States has been in a particularly good position to take advantage of the strong import demand. Australia had reduced 1987/88 wheat area in response to sharply lower wheat prices. The production decline has severely restricted Australia's ability to meet the needs of the expanded market.

Area in Australia dropped an estimated 20 percent, production fell 25 percent, and July-June exports are forecast to decline 16 percent to 12.5 million tons. Excellent

weather in Argentina increased yields, allowing production to rise an estimated 12 percent above 1986/87 to 10 million tons, despite a 4-percent decline in area. While exports increased and estimated 16 percent to 5 million tons, exporters have had to turn away customers due to inadequate supplies.

Canadian farmers also reduced wheat area an estimated 5 percent from the 1986/87 record. Estimated yields declined and total production fell 16 percent to 26.3 million tons. However, Canada entered the marketing year with stocks estimated at almost 13 million tons and is expected to draw them down to slightly over 9 million tons in response to strong world demand. Canada is expected to achieve record exports of 22.5 million tons in 1987/88 (July-June), exceeding 1986/87 sales by 8 percent. As in previous years, Canadian sales to the Soviet Union and China are forecast to compose nearly 50 percent of the total.

In 1987/88, EC wheat-producing countries suffered through the same dry autumn and cold, wet winter and spring that kept Soviet wheat production down. The wet harvest conditions brought total EC wheat production down slightly; but, more importantly, the quality was poor in many parts of the Community, limiting the export availability of EC bread quality wheat. In addition, EC budget pressures increased. EC exports are forecast at 14.5 million tons, 12 percent below 1986/87.

The United States is forecast to export nearly 42 million tons of wheat (excluding flour) in 1987/88. Over 60 percent of the wheat was sold under the EEP, much of which was financed by GSM-102. 1/ The three top customers were the USSR, China, and Japan---Japan was ineligible for the EEP. Strong exports are contributing to a domestic stock drawdown in the United States which, in turn, is contributing to increased export prices. The December 1987 average f.o.b. gulf price for HRW wheat was 10 percent higher than in September 1987, and the April average was 11 percent higher than a year ago.

1/ See special article on the role of export programs in the world wheat and flour trade.

At the same time, the lack of competitor supply and strong import demand gave the United States enough flexibility to reduce EEP bonus levels despite the higher export price. The monthly average bonuses have declined for 3 consecutive months since January. The April 1988 average was 40 percent below the average bonus offered in December and 31 percent below that offered a year ago.

WHEAT BY CLASS

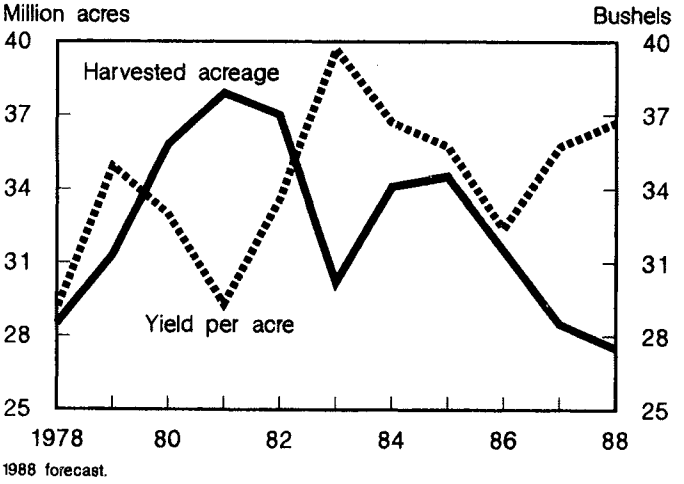
Record HRW Exports In 1987/88, Production Forecast Down 1 Percent

U.S. HRW exports in 1987/88 are forecast to more than double, reaching 930 million bushels. Limited soft wheat supplies and more attractive HRW prices than those of soft wheat caused foreign demand (notably from China) to turn to HRW. Large exports to the USSR, which always prefers HRW, are also pushing exports to record levels. Increased HRW exports to the USSR (forecast over 11 million tons) and to China (almost 3 million tons) account for most of this increase.

Estimated March 1, 1988, HRW wheat stocks were down 20 percent from a year earlier. June 1 stocks are forecast down over 40 percent to 569 million bushels. That would leave 1987/88 ending stocks-to-use at 40 percent, down from 92 percent in 1986/87.

Reduced stocks focus additional attention on production prospects. Early USDA forecasts put 1988 HRW production at 1,010

Hard Red Winter Wheat: Harvested Acreage and Yield



million bushels, down 1 percent from 1987. Based on the May Crop Report, area planted is estimated down 1.9 million acres, but area harvested may fall only 1.0 million acres to 27.5 million. This would be the lowest HRW area harvested in over 15 years. The lower area is largely offset by higher projected yields, at 36.7 bushels per acre, equaling the second highest yield ever.

Several factors could cause the yield estimate to change in coming months. For instance, winter weather was favorable for wheat, limiting winter kill and reducing area abandonment. In many HRW areas, moisture was ample and wheat stooled profusely, becoming well established in most fields. However, the mild winter weather allowed insect pests, like the Russian wheat aphid, and disease vectors, such as those that spread the wheat streak mosaic, to winter over. Further, volunteer wheat on land idled under conservation programs provides good alternative hosts for these insects.

The combination of reported unusually severe disease problems and abnormally high numbers of tillers in many areas make it especially difficult to forecast the crop, which has greater potential yield but also more problems. Most of the HRW area has good subsoil moisture, but in some areas dry topsoils may be enough to stress plants weakened by disease.

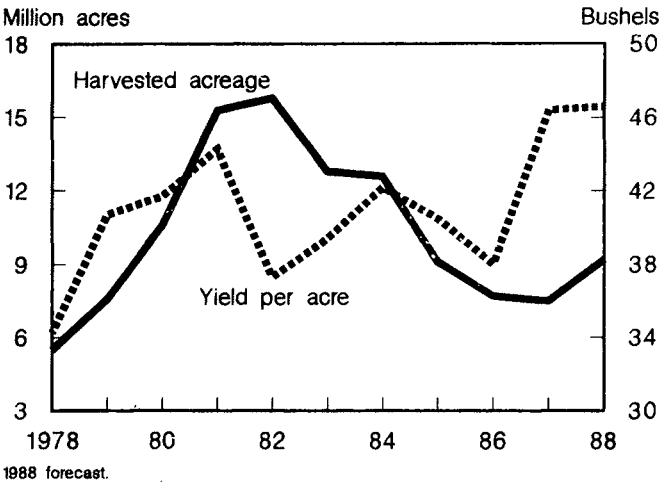
HRW prices increased by more than 20 percent between July 1987 and January 1988. If export demand continues to favor HRW in 1988/89, and supplies continue to be reduced, HRW prices may increase relative to the price of other wheat classes.

SRW Stocks Forecast Lower in 1987/88, Record Yields Raise Production in 1988/89

Minimal stocks of Soft Red Winter (SRW) wheat are often carried over from year to year because storage is limited, especially after the corn harvest. Due to a relatively short supply in 1987/88, SRW prices moved above other wheats, in order to ration supplies through the year. Estimated ending stocks of 55 million bushels are less than 15 percent of total use.

The strong prices for SRW encouraged an 18-percent or 1.6-million-acre increase in

Soft Red Winter Wheat: Harvested Acreage and Yield



1988 forecast.

planted acreage for 1988. Missouri did not face the unfavorable planting conditions of a year ago, and contributed the largest increase, but Illinois and Ohio had large area expansions as well. Average abandonment leaves SRW harvested area at 9.2 million acres. However, favorable winter weather and adequate moisture have improved yield prospects to 46.6 bushels per acre, above last year's record level. The May estimate of SRW production in 1988 is 426.5 million bushels, more than 20 percent above 1987.

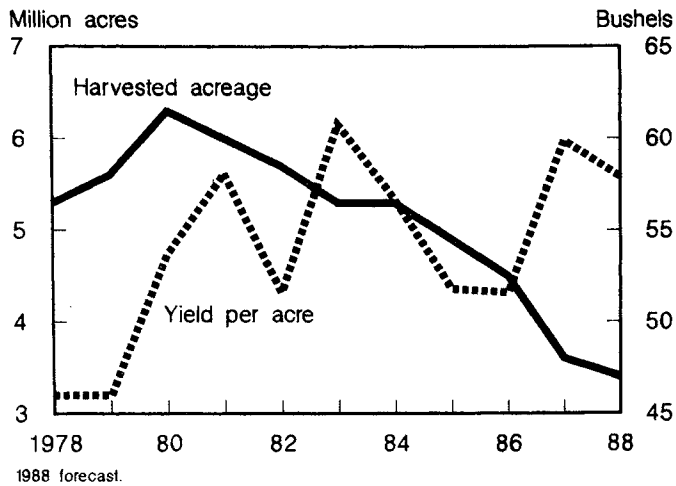
SRW supplies in 1988/89 will likely be greater than any year since 1984/85. SRW prices may increase during 1988/89 as all wheat prices increase, but price rises may be limited relative to most other wheat classes.

White Wheat Use Up in 1987/88, White Winter Wheat Production Down 6 Percent

White wheat has been in chronic oversupply for several years because of strong foreign competition. In 1987/88, use is forecast to increase and stocks are likely to be drawn down. Carefully cultivated foreign importers, such as Egypt, Korea, and Japan, were joined by Pakistan and India, countries with a preference for White wheat. During much of 1987/88, ocean freight rates were lower out of the Pacific Northwest than out of the Gulf, encouraging White wheat exports. High SRW prices also encouraged White wheat use.

Drought in the fall of 1987 limited White wheat area planted in the Pacific Northwest.

White Wheat: Harvested Acreage and Yield



This was partially offset by increased planting in Michigan, where White wheat area increased to almost 500,000 acres. However, U.S. White wheat area harvested may be the lowest in decades. Nevertheless, spring rains have been above normal in the Pacific Northwest, and yields, though down from last year's near-record levels, are expected to be nearly 58 bushels per acre.

When potential White Spring wheat, based on the Prospective Plantings report, is added to the Winter wheat, total White wheat production in 1988/89 is likely to be about 200 million bushels, the sixth straight year of decline, and the lowest since 1973/74. Total supplies in 1988/89 may be the lowest this decade. However, the ending stocks-to-use ratio of over 46 percent in 1987/88 indicates that White wheat supply is not as tight as for several other wheat classes.

Durum Stocks Lowest Since 1980/81, Planted Area Up 12 Percent in 1988

Durum exports will decline in 1987/88 because of high prices and shortages of high quality Durum. However, use is forecast to exceed production, driving Durum ending stocks down to a forecast 68 million bushels. Given 1987/88 use of only 125 million bushels, 68 million appears to be ample carryover, but some of the Durum stocks may be unsuitable for milling for pasta.

Strong prices for milling quality Hard Amber Durum have encouraged farmers to expand area in 1988. Some farmers in the Northern Plains can simply switch from Hard Red Spring (HRS) wheat to Durum. Planting intentions for 1988/89 of 3.73 million acres are 12 percent above 1987.

HRS Supplies Remain Large, Planted Area Down 7 Percent

HRS is the class of wheat in greatest supply relative to use. This normally premium high protein wheat has been selling at a price discount relative to other wheat classes, especially the 13-percent protein and below. In 1987/88, exports are forecast to increase 50 million bushels. (Although neither China nor the USSR is a traditional HRS buyer, the Soviets purchased over a million tons in 1987/88, and China made some minor purchases.)

New processes for extracting gluten and adding it to weak flour to improve its baking characteristics have reduced the demand in many countries for high gluten HRS for blending with low protein local production. Moreover, the Northern Plains are further from major ports, especially during the winter, and transport costs for export are higher.

Ending stocks in 1987/88 are forecast at 410 million bushels, down 16 percent from a year earlier. The ending stocks-to-use ratio of nearly 80 percent illustrates the relative oversupply of HRS compared to other wheat classes.

Planting intentions for 1988 reflect relatively large HRS supplies. Part of the 7-percent area decline in HRS reflects a shift to Durum, but the majority of the decrease is due to a shift out of wheat, probably largely into Government conservation programs.

MARKETING AND PRICING METHODS USED BY SELECTED U.S. WHEAT PRODUCERS

by

Linwood A. Hoffman, Joy L. Harwood, and Mack N. Leath [1/]

ABSTRACT: The 1983 Cost of Production Survey provided information on the marketing and pricing methods used by wheat producers during the 1983 crop year. Predominant marketing methods cited by winter wheat producers were harvest-time deliveries to off-farm buyers or storage facilities. In contrast, most spring wheat producers delivered a major share of their wheat to on-farm storage. The largest share of sales for both winter and spring wheat was priced with a cash market offer. Wheat producers' direct use of the futures market was minimal. Country elevators were the most important market outlet in the major producing States.

Keywords: Wheat marketing, pricing methods, futures markets, and marketing channels

Changing Government programs, uncertain yields, and fluctuating export demand have contributed to wheat price variability. This variation rose significantly in the seventies but subsided in the mid-eighties. Wheat price variability could again rise significantly, in part because of lower stock levels and higher market prices. Producer interest in alternative marketing and pricing methods heightens with a rise in price variance, because of the potential for greater revenue risk and gain. 2/

The U.S. grain industry provides a variety of marketing and pricing alternatives for U.S. wheat producers. In the past, the marketing of grain usually meant that delivery, title transfer, and pricing would occur at the same time. However, several trading arrangements have developed that permit producers to separate the three aspects of marketing.

1/ The authors are agricultural economists with the Commodity Economics Division, Economic Research Service.

2/ Price variance is measured by the coefficient of variation (standard deviation divided by the mean). This coefficient is computed from the monthly average prices received by farmers for each marketing year.

The successful use of pricing arrangements, other than cash, requires an active futures market and producer knowledge of local cash-futures price relationships. The intent of this article is to describe: (1) marketing methods, (2) pricing practices, including farmers' direct use of the futures market, and (3) marketing channels used by winter and spring wheat producers.

Information for the article pertains to the 1983 marketing year (June-May). Factors specific to each marketing year may influence marketing and pricing decisions for that year. Therefore, these results should be viewed as more year-specific than representative of a general time period.

Factors affecting producers' marketing decisions for 1983 include, in part, heavy Government program participation, burdensome stocks, and price expectations near the loan rate of $3.65 a bushel. Wheat production dropped in 1983, due mostly to acreage reduction programs, but yearend stocks were expected to remain record high because carryin stocks were large and total wheat use was anticipated to be about equal to 1983 production (5). The average farm price was expected to be only slightly higher than 1982's $3.45 per bushel.

A 78-percent participation rate in Government programs made a good share of 1983's crop eligible for the $3.65 loan. A program feature whereby the CCC would pay

up to 5 months of storage costs on Payment-in-Kind (PIK) grain was expected to allow orderly marketing, thereby softening the price-depressing effect.

Methodology

Data presented in this article were collected in the 1983 Cost of Production Survey of field crop producers. This survey was conducted for the Economic Research Service by the National Agricultural Statistics Service (formerly the Statistical Reporting Service). The survey of 1983 practices was conducted in the spring of 1984.

The wheat marketing and pricing strategies reported in this survey relate to practices in the Northeast (New York and Pennsylvania), Corn Belt (Illinois, Indiana, and Ohio), Lake States (Michigan, Minnesota, and Wisconsin), Southeast (Kentucky), and the Northern Plains (Nebraska, North Dakota, South Dakota, Kansas, and Colorado).

The "probability-proportionate-to-size" technique was used to sample each State. The sample drawn by this method was representative of acreage and production because larger farms were sampled at a higher rate. Therefore, survey results focus on the proportion of the production marketed or priced by a particular method rather than the proportion of producers using each pricing alternative.

Table 1--Number and size of wheat farms surveyed, and importance of wheat on survey farms, selected States, 1983 crop

Wheat type/ State	Farms in survey	Average acres of cropland	Average acres of wheat	Wheat's share of cropland
	Number		Acres	Percent
Winter				
Colorado	111	2,337	986	42
Illinois	61	623	110	18
Indiana	55	568	86	15
Kansas	280	1,761	702	40
Kentucky	44	1,043	232	22
Michigan	44	588	97	16
Missouri	91	590	154	26
Nebraska	154	1,217	412	34
New York	44	870	141	16
Ohio	57	582	108	19
Penn.	45	480	64	13
S. Dakota	97	1,472	481	33
Spring				
Minnesota	60	1,238	341	28
N. Dakota	195	1,371	505	37
S. Dakota	144	1,017	285	28

The number of wheat farms surveyed in each State and the relative importance of wheat are shown in table 1. Average acres of cropland per farm ranged from 2,337 for Colorado to 480 for Pennsylvania. Wheat's share of total cropland ranged from a high of 42 percent in Colorado to a low of 13 in Pennsylvania. The survey States accounted for about 52 percent of the winter wheat and 71 percent of the spring wheat produced in the United States during 1983 (4).

Marketing Methods

Survey participants were asked to report their marketing methods from three choices: (1) volume sold directly to a buyer who provided transportation from the field, (2) volume delivered to off-farm destinations and the disposition of those deliveries, and (3) volume delivered to farm storage facilities and the disposition of those deliveries.

Disposition of Wheat at Harvest

For most winter wheat States, the most important disposition method was delivery to off-farm destinations, followed by delivery to on-farm storage. The least important method was the direct field sale (table 2). Exceptions were reported in Kentucky, New York, and South Dakota, where the largest shares of the 1983 harvest (49 to 67 percent) were hauled to on-farm storage.

In contrast, respondents in the spring wheat-producing States reported that 60 percent or more of their 1983 harvest was hauled to on-farm storage.

Disposition of Off-Farm Wheat Deliveries

Producers were offered three choices for reporting the disposition of their off-farm wheat deliveries. They could dry and return it to the farm, sell it, or place it in commercial storage.

Respondents in many winter wheat States reported that most of their off-farm deliveries at harvest were sold (table 3). The remainder was placed in commercial storage,

Table 2—Proportion of wheat production handled by alternative marketing methods, selected States, 1983 crop

Wheat type/ State	Number of producers responding	Marketing method: Sold direct from field	Delivered to off-farm destination	Hauled to on-farm storage
	Number	Percent of production		
Winter				
Colorado	111	3.5 (4)*	58.2 (86)*	38.3 (69)*
Illinois	61	0.0 (0)	64.9 (45)	35.1 (30)
Indiana	55	1.8 (1)	52.8 (33)	45.4 (29)
Kansas	280	0.1 (2)	71.0(254)	28.9(209)
Kentucky	44	2.3 (1)	48.3 (26)	49.4 (29)
Michigan	44	4.5 (2)	67.3 (34)	28.2 (21)
Missouri	91	1.1 (1)	60.6 (62)	38.3 (46)
Nebraska	153	0.0 (0)	61.5(130)	38.5(101)
New York	44	2.3 (1)	41.5 (21)	56.2 (31)
Ohio	57	0.0 (0)	73.4 (46)	26.6 (25)
Pennsylvania	45	8.6 (5)	63.2 (32)	28.2 (20)
S. Dakota	97	1.6 (2)	31.5 (46)	66.9 (77)
Spring:				
Minnesota	60	0.0 (0)	30.8 (32)	69.2 (48)
N. Dakota	195	0.5 (1)	25.4(112)	74.1(174)
S. Dakota	144	0.3 (1)	37.1 (86)	62.6(115)

* Number of producers who reported using method.

Table 3—Disposition of wheat delivered to off-farm destinations at harvest, selected States, 1983 crop

Wheat type/ State	Numbers of producers responding	Disposition method: Dried and returned to farm	Sold to buyer	Placed in commercial storage
	Number	Percent of production		
Winter				
Colorado	86	0.1 (1)*	24.8 (24)*	75.1 (71)*
Illinois	45	0.8 (1)	76.5 (35)	22.7 (11)
Indiana	33	0.0 (0)	94.2 (32)	5.8 (2)
Kansas	254	0.5 (9)	17.3 (70)	82.2(220)
Kentucky	26	4.0 (1)	88.2 (25)	7.8 (3)
Michigan	34	0.7 (1)	72.4 (27)	26.9 (9)
Missouri	62	0.0 (0)	83.8 (53)	16.2 (11)
Nebraska	130	0.2 (2)	37.2 (58)	62.6 (86)
New York	21	0.0 (0)	96.3 (20)	3.7 (1)
Ohio	46	0.0 (0)	87.9 (44)	12.1 (8)
Pennsylvania	32	0.2 (1)	89.0 (28)	10.8 (4)
S. Dakota	46	0.0 (0)	80.4 (39)	19.6 (10)
Spring				
Minnesota	32	0.0 (0)	83.4 (27)	16.6 (6)
N. Dakota	112	0.0 (0)	85.1(102)	14.9 (16)
S. Dakota	86	0.3 (1)	81.5 (70)	18.2 (19)

* Number of producers who reported using method.

with very little being dried and returned to the farm.

However, respondents in Colorado, Kansas, and Nebraska, important Hard Red Winter wheat-producing States, placed most of their wheat in commercial storage facilities rather than selling it. This reflects, in part, heavy participation in the Government price support program.

Spring wheat producers reported harvest-time sales of at least 80 percent of their off-farm deliveries. However, these deliveries represented only 22 to 30 percent of the 1983 wheat harvest, since most of the wheat was stored on the farm.

Disposition of On-Farm Stored Wheat

Producers were asked about the disposition of their wheat that was stored on-farm after harvest. Responses were limited to four categories: delivered to the CCC, fed to livestock, kept in storage, and sold.

Many winter wheat States reported that the largest share of their farm-stored wheat was sold, with the second largest share remaining in storage (table 4). Much less wheat was reported fed or delivered to the CCC. Exceptions were found, however. In Kansas and South Dakota, the largest share of farm-stored wheat remained in storage, and most of Pennsylvania's wheat was fed to livestock.

The largest share of spring wheat stored on-farm remained in storage and the next largest share was sold. A very small percentage of farm-stored spring wheat was fed to livestock or delivered to the CCC.

Pricing Methods

Producers were asked to identify the pricing arrangement used to establish their price received for each sales method. Producer sales could occur directly from the field, after delivery to an off-farm destination, or from farm storage. For each sales method, producers could select from three different pricing arrangements: forward contracting, cash market offers, or price-later contracts.

The forward contract is an arrangement in which the price and quantity are fixed prior to delivery. A cash sale at time of delivery means that the buyer's offer price is accepted upon delivery. The price-later contract transfers the title to the buyer upon delivery of the wheat, but establishment of price is deferred.

Price-later contracts consist of two general types: a "deferred price" and a "basis" contract. Contracts are usually made between

Table 4--Disposition of wheat stored on-farm following harvest, selected States, 1983 crop

Wheat type/ State	Number of producers responding	Disposition method: Delivered to CCC	Fed to livestock	Remains in storage	Sold
	Number	Percent of production			
Winter					
Colorado	69	0.0 (0)*	13.4 (31)*	39.7 (41)*	46.9 (38)*
Illinois	30	0.0 (0)	13.5 (13)	11.2 (6)	75.3 (33)
Indiana	29	0.0 (0)	7.2 (11)	14.0 (5)	78.8 (23)
Kansas	209	5.5 (3)	9.0(132)	48.9(101)	36.6 (96)
Kentucky	29	0.0 (0)	7.5 (10)	9.0 (5)	83.5 (24)
Michigan	21	0.0 (0)	9.8 (9)	41.7 (7)	48.5 (10)
Missouri	46	6.7 (4)	14.2 (21)	36.4 (19)	42.7 (22)
Nebraska	101	0.0 (0)	5.6 (49)	46.4 (55)	48.0 (47)
New York	31	0.0 (0)	4.6 (10)	23.4 (10)	72.0 (20)
Ohio	25	0.0 (0)	15.4 (14)	34.2 (10)	50.4 (12)
Pennsylvania	20	0.0 (0)	63.1 (18)	8.7 (6)	28.2 (7)
S. Dakota	77	0.1 (1)	2.9 (16)	76.0 (60)	21.0 (27)
Spring					
Minnesota	48	1.2 (1)	2.1 (7)	50.4 (34)	46.3 (30)
N. Dakota	174	1.0 (0)	0.8 (18)	60.3(143)	37.9 (97)
S. Dakota	115	0.0 (0)	1.5 (9)	67.9 (95)	30.6 (46)

* Number of producers who reported using method.

a producer and local grain buyer or grain elevator. With a deferred price contract, the price will be established by the cash bid price posted by the buyer on a date selected by the seller. When the seller decides to sell, the buyer is informed and the seller is then paid the price quoted that day by the buyer less a small service charge. The basis contract involves a certain "basis" or differential relative to a specific futures contract. This basis may be below or above the futures price.

Pricing Off-Farm Sales at Harvest

Respondents in the selected winter wheat-producing States priced between 63 and 98 percent of their off-farm sales at harvest through the cash market (table 5). Forward contracts were used to price from 3 to 30 percent of off-farm sales. Respondents in Indiana, Kentucky, Pennsylvania, Missouri, New York, South Dakota, and Missouri priced 10 percent or more of their off-farm sales with forward-price contracts. Forward contracts were used to price the second largest share of off-farm sales in Illinois, Ohio, Indiana, Pennsylvania, Kentucky, Missouri, New York, South Dakota, and Missouri. Price-later contracts were used to price from 0 to 24 percent of off-farm sales. Respondents in Colorado and Kansas reported the largest use of these contracts.

Table 5--Methods used to price wheat sold off-farm at harvest, selected States, 1983 crop

Wheat type/ State	Number of producers responding	Pricing method: Forward contract	Cash market offer	Price-later contract
	Number	Percent of production		
Winter				
Colorado	24	7.8 (2)*	68.1 (17)*	24.1 (5)*
Illinois	35	2.5 (3)	97.5 (35)	0.0 (0)
Indiana	32	9.7 (6)	80.9 (27)	9.4 (4)
Kansas	70	6.9 (8)	79.6 (56)	13.5 (12)
Kentucky	25	30.2(11)	63.1 (21)	6.7 (3)
Michigan	27	6.1 (2)	86.8 (25)	7.1 (2)
Missouri	53	11.6 (7)	88.4 (50)	0.0 (0)
Nebraska	58	6.2 (6)	85.1 (50)	8.7 (5)
New York	20	12.5 (3)	87.5 (17)	0.0 (0)
Ohio	44	8.8 (7)	91.2 (42)	0.0 (0)
Pennsylvania	28	10.3 (3)	83.8 (24)	5.9 (2)
S. Dakota	39	15.9 (5)	75.7 (33)	8.4 (6)
Spring				
Minnesota	27	8.0 (6)	89.7 (24)	2.3 (3)
N. Dakota	102	11.5 (18)	86.0 (95)	2.5 (2)
S. Dakota	70	12.1 (9)	84.4 (62)	3.5 (2)

* Number of producers who reported using method.

Spring wheat producers relied mostly on cash sales for pricing their off-farm sales at harvest. Forward contracts were used to price the next largest volume of sales, ranging from 8 to 12 percent. Price-later contracts were used infrequently.

Pricing Sales from Farm Storage

Winter wheat producers in all reporting States used the cash market to price the largest share of their sales from farm storage,

Table 6—Methods used to price wheat sold from on-farm storage, selected States, 1983 crop

Wheat type/ State	Number of producers responding	Pricing method: Forward contract	Cash market offer	Price-later contract
	Number	Percent of production		
Winter				
Colorado	38	13.2 (8)*	75.3 (30)*	11.5 (5)*
Illinois	23	41.6 (8)	49.9 (15)	8.5 (2)
Indiana	23	7.6 (2)	69.6 (18)	22.8 (6)
Kansas	98	7.8 (6)	84.7 (90)	7.5 (8)
Kentucky	24	24.3 (9)	71.0 (20)	4.7 (3)
Michigan	10	10.6 (3)	76.1 (8)	13.3 (2)
Missouri	22	25.1 (6)	74.9 (19)	0.0 (0)
Nebraska	47	41.9(16)	55.5 (35)	2.6 (6)
New York	20	23.6 (6)	73.7 (16)	2.7 (1)
Ohio	12	21.3 (5)	69.3 (9)	9.4 (2)
Pennsylvania	8	0.0 (0)	100.0 (8)	0.0 (0)
S. Dakota	27	0.7 (1)	76.7 (21)	22.6 (7)
Spring				
Minnesota	30	47.8(16)	43.1 (16)	9.1 (2)
N. Dakota	97	13.8(16)	85.0 (90)	1.2 (3)
S. Dakota	73	10.5 (6)	79.6 (60)	9.9 (10)

* Number of producers who reported using method.

ranging from 50 to 100 percent (table 6). Forward contracts were used to price from 0 to 42 percent of farm sales. These contracts priced the second largest share of farm sales for Colorado, Illinois, Kansas, Kentucky, Missouri, Nebraska, New York, and Ohio. Price-later contracts were used to price anywhere from 0 to 23 percent of farm sales. Producers in Indiana, Michigan, and South Dakota used this method to price the second largest share of their sales.

Spring wheat producers in North and South Dakota relied on cash sales at harvest to price 80 to 85 percent of their wheat sold from farm storage. Forward and price-later contracts were used less frequently. In contrast, Minnesota producers used forward contracts to price the largest share of their sales (48 percent), followed by cash sales at 43 percent and price-later contracts at 9 percent.

Sales Direct from the Field

Very few producers reported making direct sales from the field. However, both winter and spring wheat producers relied mostly on the cash market to establish their price received when selling directly from the field.

Producers' Direct Use of Futures Markets

If producers made direct use of futures trading in pricing their 1983 crop, the percent of crop priced by this method was requested. Producers indicating direct use of futures were asked if the price was established by: (1) selling futures contracts before planting, (2) selling futures contracts during the growing season, (3) selling futures contracts during the storage season, or (4) purchasing futures contracts to keep a position even after sale of stored grain (special trading).

Table 7—Number of farms directly trading futures contracts by method, selected regions, 1983 crop

Wheat type/ Regions	Total farms	Planning method: Hedge before planting	Hedge during season	Hedge stored grain	Special trading
	Number of farms				
Winter					
Corn Belt	18	5	14	4	6
Lake States	1	-	1	-	-
Plains	16	5	9	6	6
Northeast	3	2	2	-	-
Spring					
Lake States	8	1	5	3	2
Plains	6	1	2	2	2

Using futures markets is one way farmers can reduce price risks over limited time periods. However, despite the advantage of hedging, only a small proportion of farmers sell their crops forward in the futures market (1, 2, 3).

For the few respondents who did report a direct use of futures trading, their average volume of production traded was low. The winter wheat respondents reported a range of 0 to an average of 10 percent of their production priced in this manner. Illinois growers, an exception, reported pricing an average of 21 percent of their crop with futures. Spring wheat production traded with futures ranged from 0 for South Dakota to an average of 16 percent for Minnesota.

The most common way winter or spring wheat producers used futures markets was to hedge a portion of their crop during the growing season (table 7). In the Corn Belt, Lake States, and Plains, futures markets were used in other ways, such as hedging before planting, hedging stored grain, or special trading.

Marketing Channels

The marketing channels used by wheat producers reflect the diversity of buyers in the market. The predominant outlet for winter wheat sales was the country elevator (table 8). This outlet accounted for shares ranging from 15 percent of New York's total marketings to 85 percent of Nebraska's. Exceptions to the predominance of the country elevator occurred in Ohio, where terminal elevators accounted for the largest share of marketings (45 percent), and in New York and Pennsylvania, where grain dealers accounted for the largest share (36 and 32 percent, respectively).

Despite the importance of the country elevator, river elevators were a vital outlet in Illinois, Kentucky, Missouri, and Ohio, all of which are located on a segment of the inland waterway system. Grain dealers and processors appear more significant in the Northeast than in the Plains or Corn Belt.

For spring wheat producers, the country elevator was the most important marketing channel. This outlet accounted for 77 to 89 percent of spring wheat marketings.

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Table 8--Marketing channels used by wheat producers, selected States, 1983 crop

Wheat type/ State	Marketing channel						
	Country elevators	Terminal elevators	River elevators	Other farmers	Grain dealers	Feed-lots	Proces-sors
	Percent of sales						
Winter							
Co. (45)*	51.1	14.9	0.0	0.0	28.9	1.1	4.0
Ill. (23)	39.8	11.4	35.5	5.8	7.5	0.0	0.0
Ind. (24)	45.0	17.5	8.8	0.2	24.1	0.0	4.4
Ks. (128)	70.6	11.7	0.0	4.3	1.6	8.9	2.9
Ky. (25)	38.6	15.4	33.6	0.0	2.5	0.0	9.9
Mich. (14)	75.8	24.2	0.0	0.0	0.0	0.0	0.0
Mo. (27)	56.5	1.3	33.8	0.6	4.8	0.0	3.0
Nebr. (52)	85.0	9.2	0.0	2.9	2.9	0.0	0.0
N.Y. (21)	14.9	12.7	5.3	0.0	36.4	0.0	30.7
Ohio (13)	15.9	44.9	34.6	2.2	0.0	0.0	2.4
Penn. (12)	31.0	0.0	0.0	8.9	32.4	0.0	27.7
S.D. (28)	84.3	0.8	0.0	13.0	0.0	0.0	1.9
Spring							
Minn. (32)	77.1	6.7	0.0	1.2	9.8	0.0	5.2
N.D (101)	89.1	9.4	0.0	0.0	1.5	0.0	0.0
S.D. (75)	87.6	1.9	2.1	5.1	2.5	0.0	0.8

* Number of producers responding in each State.

THE ROLE OF EXPORT PROGRAMS BY MAJOR EXPORTERS IN WORLD WHEAT AND FLOUR TRADE

by

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ABSTRACT: The role of government involvement by major exporters in world wheat and flour trade has increased markedly since 1980. In the July 1986-June 1987 trade year, about half of world wheat and flour trade occurred under some form of export program, up from about 30 percent in 1980/81. Exporting countries often assist their sales not only in terms of price competition, but also by facilitating export credit arrangements. The role of food aid has declined slightly since the African famine, but food aid still comprises a significant or growing share of specific exporters' shipments. With the implementation of the Export Enhancement Program, the level of export program involvement in U.S. wheat and flour exports has risen dramatically. The value of U.S. and EC export price subsidies for wheat and flour amounted to about $2.6 billion in 1987, approaching the value of all food aid transfers from all OECD countries. The effects of these programs provide resource transfers between different groups in exporting countries and between exporting and importing countries.

Keywords: Wheat, flour, export subsidies, export credit, food aid

A combination of forces affecting world wheat supply and demand has led to expanded government involvement in world wheat and flour trade. This article discusses export programs of the United States and other major exporters, their importance in world wheat and flour trade, and some implications of such involvement.

Many nations seek self-sufficiency in wheat, and production has increased not only in developed countries, but in many developing countries as well. In their attempt to become self-sufficient in this staple, though, some countries have overshot their goal. A prime example of this is the European Community (EC). Through its use of high internal prices coupled with export subsidies, the EC joined Argentina, Australia, Canada, and the United States in 1978 as a net wheat exporter. Saudi Arabia, which exports its surplus wheat at highly subsidized prices, is another example. With large wheat supplies in developed countries and greater production in some developing countries, price competition, including price subsidization, has intensified in world wheat and flour trade.

Some importing markets face tight foreign exchange constraints. Even with fierce price competition among exporters, heavy debt burdens force some debtor countries to choose between importing food or capital goods. Major wheat exporters (excluding the EC, but including some member countries such as France) provide export credit programs to assist their exports by helping alleviate such constraints on importers. Just as price competition has intensified, so has competition in terms of credit. Analysts suspect that credit terms offered by the French in specific markets are more favorable than those of other exporters.

Many countries cannot produce or purchase enough food to meet their needs. Under the Food Aid Convention (FAC), part of the International Wheat Agreement, donor countries have together pledged to provide a minimum of about 7.5 million tons of cereal aid annually. The United States has pledged nearly 60 percent of the minimum, while the EC and member States have pledged slightly more than 20 percent, followed by Canada with less than 10 percent, and Australia with less than 5 percent.

The following is an overview of export programs of major wheat and flour exporters.

U.S. Export Programs

The United States operates a spectrum of export programs. These include the Export Enhancement Program (EEP), the Commodity Credit Corporation (CCC) export credit guarantee programs, Cooperator programs, the Targeted Export Assistance (TEA) program, and food aid.

EEP Helps Combat Subsidized Competition

The EEP was announced in May 1985, to help U.S. exporters meet price competition from subsidizing exporters in specific markets. From the beginning of the program through May 6, 1988, about 42.6 million tons of wheat and flour (wheat equivalent) were sold, with more than 20 million sold since October 1, 1987. Major purchasers since program inception have been the Soviet Union, North African countries, and China.

The EEP generally operates by way of a two-step, competitive bid process to help U.S. exporters compete, while minimizing bonuses awarded from CCC stocks. Initially, the CCC targets a country for a specific quantity of a commodity. Then U.S. exporters compete for sales to the targeted market. Knowing they might have the opportunity to obtain a CCC bonus enables U.S. exporters to offer competitive prices to that market.

Having made sales contingent on receiving a CCC bonus, the U.S. exporters then bid against each other for the bonus. The CCC evaluates both the sales price to the foreign purchaser and the bids for the bonuses. The bonuses are awarded to the exporter(s) whose sales price and bonus offer fall within a predetermined range.

The selected exporter or exporters then completes the sale, presents proof of arrival of the commodities at their destination, and receives the CCC bonus in terms of generic certificates exchangeable for CCC commodities. The exporter may either sell the generic certificates or exchange them for CCC stocks.

CCC Export Credit Guarantees Help U.S. Sales to Debt-Burdened Importers

The CCC currently operates two export credit guarantee programs. Under GSM-102, the CCC guarantees repayment of the private credit extended to importers in specified countries for the purchase of designated U.S. agricultural commodities. GSM-102 covers credit extended for up to 3 years. The Intermediate Export Credit Guarantee Program (GSM-103), authorized by the Food Security Act of 1985, is similar to GSM-102 except that it covers private credit extended for more than 3 and up to 10 years. These programs help importers in some food-aid recipient countries purchase through commercial channels.

TEA Program Helps Offset Adverse Foreign Government Policies

Authorized by the Food Security Act of 1985, the TEA program helps finance export promotion programs of U.S. producers disadvantaged by a foreign government's policies. Priority is given to those producer groups who have been found, under Sec. 301 of the Trade Act of 1974, to have been adversely affected. Under the program, the CCC provides generic commodity certificates to the producer groups, which then may exchange them for CCC commodities or sell them to help finance market promotion schemes such as trade fairs or demonstration projects in a targeted market. In fiscal 1988, U.S. Wheat Associates was allocated $1.2 million under the program for use over a multiyear period.

A key difference between the TEA program and the EEP is that while the EEP involves an export price subsidy, the TEA program assists exports through subsidizing market development projects. Further, while the EEP's benefits (in the form of bonuses) are associated with a specific sale, the market promotion benefits of the TEA program cover a market for a commodity or commodity brand and so are not restricted to an individual sale.

The Cooperator Program Helps Build Markets

A related program is the long-standing Cooperator program. This market-development program is a joint effort by the

U.S. Government and producer groups involved in export promotion. Much of the activity involves trade fairs and demonstration projects similar to the TEA program, but the Cooperator program is not designed in response to specific unfair foreign policies. The U.S. Wheat Associates was allocated $5.3 million under this program in fiscal 1988.

Food Aid Programs Assist Developing Countries

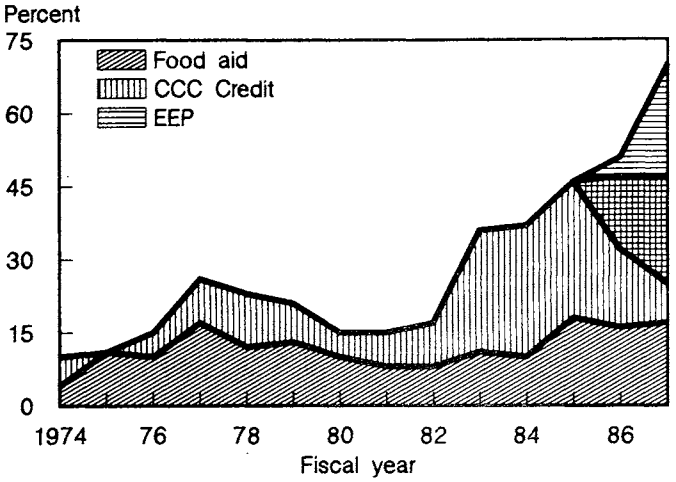
U.S. food aid is distributed mainly through the P.L. 480 program, with lesser amounts shipped under authority of Section 416(b) of the Agricultural Act of 1949, as amended. Under P.L. 480 Title I, the U.S. Government provides long-term concessional credit to the recipient government for the purchase of U.S. commodities. The Food Security Act of 1985 reinstated sales of U.S. farm products for the recipients' local currencies. Under P.L. 480 Title II, U.S. commodities are donated through government-to- government channels, private voluntary organizations, and the United Nations/Food and Agriculture Organization's World Food Program. Under P.L. 480 Title III, the Food for Development program, a Title I loan may be forgiven if the recipient government achieves specified development measures.

Under Sec. 416, the Secretary of Agriculture may donate surplus CCC stocks overseas. In fiscal 1988, 1 million tons of CCC wheat have been made available for programming.

Foreign Assistance Programs Sometimes Ship Wheat and Flour

Outside the food aid programs, the Agency for International Development (AID) operates foreign assistance programs that sometimes involve shipment of U.S. wheat and flour. For example, under the Commodity Import Program (CIP), U.S. commodities (agricultural and nonagricultural) may be provided on a grant basis or on concessional credit terms. The CIP is not dependent on the availability of uncommitted CCC stocks; CIP commodities are purchased on the U.S. market and are not from CCC stocks. Eighteen percent of CIP funds are to be used for the export of U.S. agricultural commodities. Wheat shipments were about 466,000 tons in fiscal 1986, declining to only about 800 tons in fiscal 1987.

Figure 1
Composition of U.S. Wheat and Flour Exports



Programs of Growing Importance in U.S. Trade

Shipments under U.S. agricultural export programs have accounted for a growing share of U.S. wheat and flour trade (see figure 1). This is due both to a decline in U.S. total wheat and flour exports in some years, and increased shipments under these programs in some years. The discussion below excludes exports due to the TEA and Cooperator programs (since it is difficult to quantify the amount of such exports), and the relatively small amounts of exports under the AID foreign assistance programs.

In fiscal 1987, about 70 percent of the volume of U.S. wheat and flour exports were made under some form of export program. Close to 25 percent were shipped under the EEP alone, mostly to the USSR and China. More than 20 percent were shipped under the EEP in conjunction with the CCC export credit guarantee programs. Chief markets that purchased under this combination of programs were in North Africa. Less than 10 percent of U.S. wheat and flour shipments were made under the export credit guarantee programs without the EEP; Korean importers were the chief purchasers. Another 15-20 percent of U.S. wheat and flour was shipped through food aid programs. Chief recipients were Egypt, Bangladesh, and Sudan.

Export Programs of Other Major Exporters

Other exporters may operate export subsidy, export credit, or food aid programs.*

Argentina

Argentina does not operate an export credit program specific to wheat and flour. However, direct, government-to-government credit programs have involved wheat shipments in recent years. Such credit is extended to other Latin American countries and recently has not exceeded 1-year periods. Peru and Cuba are chief markets under the export credit program.

Argentina has pledged 35,000 tons of cereal aid under the FAC, but has often failed to meet that commitment since the July 1980- June 1981 trade year. Chief food aid destinations in 1986/87 were mostly in Latin America. Peru and Mauritania were the largest individual recipients.

Australia

While the Government of Australia does not extend credit directly for the export sales of cereals, credit is extended by the Australian Wheat Board (AWB) for up to 3 years. Egypt and Iraq have been regular recipients. In 1986/87, about 25 percent of Australian wheat and flour exports were sold on credit terms. The Government, through the Export Finance and Insurance Corporation (EFIC), guarantees repayment of the credit, although concerns have been raised about potential liabilities. Currently, the EFIC guarantees 85 percent of the 3-year credit, down from 95 percent prior to November 1987. However, the guarantees for sales to Egypt and Iraq cover only 80 percent. Also in November 1987, the premiums for such guarantees were increased significantly for all markets, and raised even more for Egypt and Iraq.

Australia pledged 300,000 tons of cereal aid under the FAC, down from its previous pledge of 400,000. In 1986/87, aid shipments comprised about 2 percent of all Australian wheat and flour exports. Food aid is provided in grant form, and much has been distributed through the World Food Program. In 1986/87, Asian and African countries received all of Australian wheat and flour aid, with principal recipients being Bangladesh, Egypt, and Ethiopia.

Canada

Similar to the AWB, the Canadian Wheat Board (CWB) provides credit for up to 3 years, while the Government guarantees repayment of the loan. Usually, a 10-percent downpayment is required on a 3-year loan. Through the Economic Development Corporation (EDC), the Government may provide concessional credit for terms of 3-10 years, and otherwise subsidize credit for grains and products not marketed by the CWB. This has not been used since 1972. However, since 1986, the EDC has been able to provide guarantees on 3-year credit for the export of non-CWB commodities. In 1986/87, about 10 percent of Canada's wheat exports were shipped under credit arrangements.

Brazil has been the largest credit recipient for wheat and one of the top five Canadian wheat export markets. Iraq, Egypt, and Algeria were other major credit recipients. The share of Canadian wheat exports shipped under credit arrangements has declined since 1982/83, when a large credit line was extended to the USSR.

Canada provides a minimum of 600,000 tons of cereals under the FAC in grant form. Food aid has comprised a growing share of Canadian wheat and flour shipments, rising from 3 percent in 1980/81 to 7 percent in 1986/87. This is due to a near tripling of the aid volume. In 1986/87, Asia and Africa received most, though not all, of Canadian wheat and flour aid. Top recipients were China, Bangladesh, and Ethiopia.

European Community

All EC wheat and flour exports to third countries benefit from an export price subsidy. Internal EC wheat prices are currently supported at levels high above the

* Much of the following information on export credit programs is based on the International Wheat Council (IWC) report, *Wheat Support Policies and Export Practices in Five Major Exporting Countries*, May 12, 1988.

export price. A principal method to export its surplus production is the granting of export restitutions, set as the difference between the internal and world price. The EC's emergence as a major wheat exporter through these subsidies disrupted earlier trade patterns.

While the EC does not provide credit to promote its exports, individual members of the the EC do. For example, France promotes its exports, both agricultural and nonagricultural, through COFACE (Compagnie Francaise d'Assurance pour le Commerce Exterieur), a quasi-government agency that guarantees repayment of short-term credit. The guarantees cover 85 percent of the credit if the purchaser is a private buyer, and 90 percent if the purchaser is a foreign government. Recently, however, COFACE has covered 95 percent of the credit extended to Egypt, Tunisia, and Morocco.

Unlike other export credit guarantee programs, COFACE apparently also provides guarantees to the importer's bank in the importer's country. This eases the importer's ability to arrange international credit transactions with a bank in the destination country. COFACE may also reimburse exporters for costs incurred in prospecting a potential market and may also provide insurance against losses due to foreign exchange fluctuations. The agency may further cover the costs of French companies participating in international trade shows outside the EC.

Medium- and long-term credit financing for exports may be provided by the Government through the Banque Francaise du Commerce Exterieur.

The IWC estimates that in 1986/87, more than 10 percent of EC wheat and flour exports were made through export credit sales. This would be down from the 1985/86 level of about 20 percent, perhaps because of the loss of sales to the Moroccan market. Chief credit markets in 1986/87 are estimated to have been Egypt, Syria, and Tunisia.

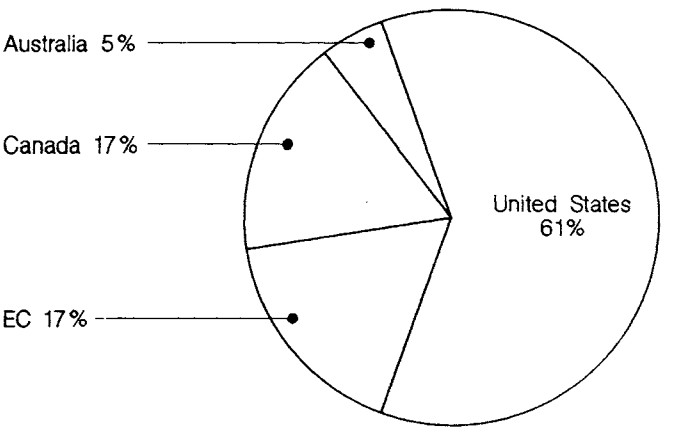
With the accession of Spain, the EC has pledged to provide 1.67 million tons of cereals under the FAC, up from 1.65 million tons. Food aid is provided in grant form. In 1986/87, about 7 percent of EC wheat and flour exports were provided as aid, most shipped to former colonies. Africa received more than half of the shipments, followed by Asia. Top recipients were Egypt, Bangladesh, Ethiopia, and China.

Credit Sales and Food Aid

The United States provides more wheat and flour aid than all other donors combined (see figure 2). Of the top five wheat and flour exporters, the United States has provided close to two-thirds of such aid over 1984/85-1986/87. The EC and Canada trail with 15-20 percent each. Australia has provided less than 5 percent and Argentina supplies only a very small share.

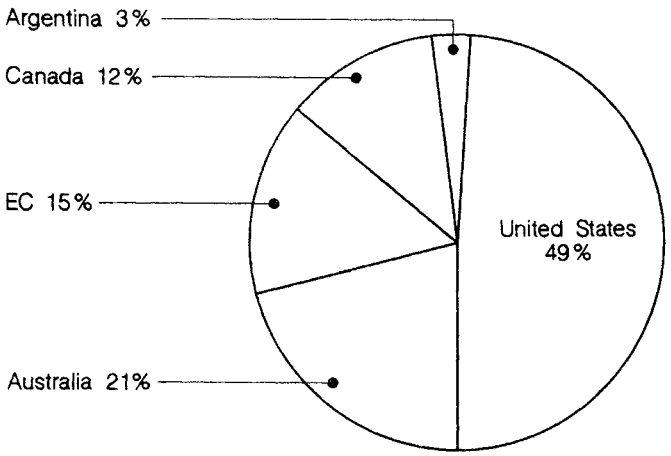
It has been difficult to obtain information on the extent of other exporters' credit shipments. IWC data appear to indicate that the United States has shipped about as much wheat and flour under credit sales as the other major competitors taken together (see figure 3). While Australia is the fourth largest donor of wheat and flour aid, it is the second largest exporter under credit sales. Australia shipped slightly more than 20 percent of all credit shipments from the top five exporters. This places it second to the United States and ahead of the EC and Canada, which are closely ranked. Australian credit sales may be so large because some chief Australian export markets are concentrated among those countries with tight foreign exchange constraints (e.g., Egypt and Iraq).

Figure 2
Source of Wheat and Flour Shipments Under Food Aid Programs



Average for trade years 1984-86. Argentina supplied less than 1%. Source: IWC.

Figure 3
Source of Wheat and Flour Shipments Under Export Credit Program

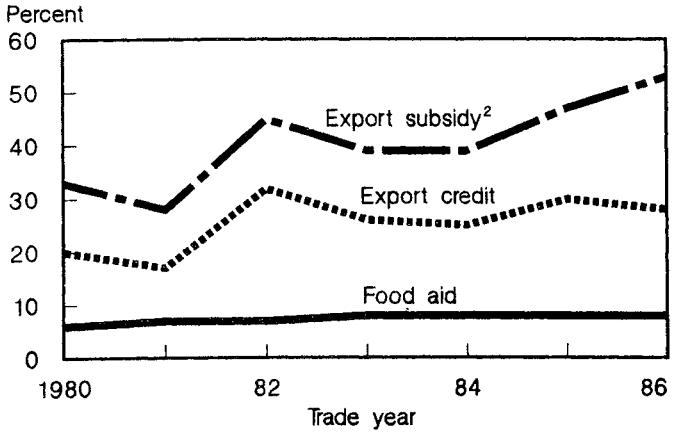


Average for trade years 1984–86. Source: IWC.

Export Programs' Role in Trade

Taken together, the role of export subsidies, export credit, and food aid programs in world wheat and flour trade has increased as competition has intensified (see figure 4). IWC data on the top five wheat and flour exporters (which comprise more than 90 percent of world wheat and flour trade) indicate that more than half of their total wheat and flour trade in 1986/87 was made under some form of export program. In 1981/82, only about 30 percent of their total trade occurred under export programs. About one-quarter of their combined 1986/87 trade was made under an export price subsidy, and another 20 percent was made using export credit. About 5–10 percent of their trade was food aid.

Figure 4
Composition of Wheat and Flour Exports by Program[1]



Source: IWC. 1/ Top five exporters. 2/ Export subsidy includes all EC exports and U.S. EEP shipments.

The role of credit sales varies by exporter. Credit sales are of declining importance in Canadian exports, yet are increasing for Australian shipments. The fact that the Australian Government is reducing its guarantee coverage indicates that the share of such programs may decline unless the AWB is willing to risk higher payments under the export programs. EC credit sales have generally increased, although the share in 1986/87 is significantly below the previous year. A larger share of U.S. exports has been made under credit arrangements since the programs were expanded in 1982/83.

Much of the growth of government involvement in world wheat and flour exports has been in the form of price subsidies, mainly with the advent of the EEP. In some cases, export subsidies have been provided at the same time as credit guarantees. This combination has been an effective tool to help make sales to markets with tight foreign exchange constraints (and the need to borrow in order to purchase), and to those for which there is fierce competition to make a sale.

Implications

The growth of export programs in world wheat and flour trade has important implications for producers, consumers, and taxpayers in both exporting and importing countries. In exporting countries, the effect of these programs is to increase the volume of exports. This should increase domestic prices above what they would have been without the programs, perhaps to the benefit of exporting firms and wheat producers, but at a cost to consumers.

While consumer costs could increase, government expenditures for domestic farm programs could decline. If domestic prices rise above set levels, then government farm support payments (such as U.S. deficiency payments, payments under Canadian income stabilization, or Australian minimum price guarantee programs) would likely decline.

As U.S. export prices increase, as they have lately, then the cost of EC export restitutions could decline as less subsidy would be required to sell its wheat and flour.

The effect on importing countries could be significant. These export programs may

lower import payments, saving foreign exchange and providing balance-of-payments support. These programs provide an income transfer from exporting countries, which are mostly developed, to importing countries, some of which are developing countries and some of which are centrally planned economies.

In calendar year 1987 alone, export subsidies on wheat and flour provided by the EC and the United States amounted to about $2.6 billion, or approaching the value of all food aid recently provided by all countries in the Organization for Economic Cooperation and Development. These programs provide importers an opportunity to use their foreign exchange for other uses, perhaps for development-oriented investments or for debt payments.

However, such opportunities also present risks to the importing governments. Importing inexpensive wheat and flour from the world markets could depress domestic prices for wheat and consumption substitutes, creating disincentives for domestic production and leading consumers to expect inexpensive imported wheat products. This could leave a country chronically dependent on exporters' programs for its wheat and flour imports, and weaken incentives for agricultural reforms. Some food aid programs attempt to avoid these negative effects. Some development theorists believe that a sound agricultural sector is the basis for economic growth, which in turn may lead to a country's regular purchase of commodities through commercial channels.

The environment of world wheat and flour trade is in flux. At a time when many countries recognize the need for trade liberalization, government involvement in world wheat and flour trade is increasing. The ramifications for exporters and importers are complex, and the solutions to problems in world wheat and flour trade are illusive. It is unlikely that any one exporter will unilaterally reduce involvement in its wheat and flour trade significantly, so attention instead has been focused on the outcome of current multilateral trade negotiations.

LIST OF TABLES

Table 1--Wheat: Marketing year supply, disappearance, area, and prices, 1982-88

Item	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (Prel.)	1988/89 (Proj.)
				Thousand bushels			
Supply							
June 1 stocks	1,159	1,515	1,399	1,425	1,905	1,821	1,231
Production	2,765	2,420	2,595	2,425	2,092	2,105	2,170
Imports 1/	8	4	9	16	21	15	15
Total supply	3,932	3,939	4,003	3,866	4,018	3,941	3,416
Disappearance							
Food	616	643	651	683	724	750	775
Seed	97	100	98	93	84	85	95
Feed and residual 2/	195	369	405	270	385	275	250
Total domestic	908	1,112	1,154	1,046	1,193	1,110	1,120
Exports 1/	1,509	1,429	1,424	915	1,004	1,600	1,500
Total disappearance	2,417	2,540	2,578	1,961	2,197	2,710	2,620
May 31 stocks	1,515	1,399	1,425	1,905	1,821	1,231	796
				Million acres			
Area							
Planted	86.2	76.4	79.2	75.6	72.1	65.8	65.1
Harvested	77.9	61.4	66.9	64.7	60.7	55.9	N/A
Set aside and diverted	5.8	29.8	18.5	18.8	20.4	20.1	19.4
Conservation Reserve	--	--	--	--	0.6	3.7	N/A
National base acreage	90.7	90.9	94.0	94.0	92.2	91.7	91.8
				Bushels per acre			
Yield/harvested acre	35.5	39.4	38.8	37.5	34.4	37.6	N/A
				Dollars per bushel			
Prices							
Received by farmers	3.45	3.51	3.39	3.08	2.42	2.55	2.80-3.20
Loan rate	3.55	3.65	3.30	3.30	2.40	2.28	2.21
Target	4.05	4.30	4.38	4.38	4.38	4.38	4.23
				Million dollars			
Value of production	9,813	8,533	8,757	7,374	5,044	5,371	N/A

1/ Imports and exports include flour and other products expressed in wheat equivalent. 2/ Residual, approximates feed use and includes negligible quantities used for alcoholic beverages.

Wheat: Production by major States

State	1982	1983	1984	1985	1986	1987 1/	1988 2/
				Million bushels			
Colorado	85.0	122.1*	115.0	139.3	96.4	97.4	91.7
Kansas	458.5*	448.2	431.2	433.2	336.6	366.3	357.2
Minnesota	126.8	79.0	120.7	142.4*	103.7	102.6	2.0
Montana	180.3	136.9	104.7	50.2	138.5	151.2	57.2
Nebraska	101.5	98.9	81.0	89.7	76.0	85.8	86.1
N. Dakota	324.8	194.1	284.2	323.3	292.3	269.1	5.3
Oklahoma	227.7*	150.5	190.8	165.0	150.8	129.6	181.3
S. Dakota	98.5	89.7	126.0*	111.2	108.7	106.7	46.5
Texas	144.0	161.0	150.0	187.2*	120.0	100.8	92.8
Washington	138.9	172.6*	160.4	128.3	116.9	114.3	89.1

1/ Preliminary. 2/ Winter wheat only. * record production.

Table 2--Wheat classes: Estimated acreage, yield, and production, 1978-88

!53

Year	Planted acreage	Harvested acreage	Yield per acre	Production
	Mil. acres	Mil. acres	Bushels	Million bushels
Hard Red Winter				
1978	36.5	28.5	29.1	829.9
1979	38.2	31.3	34.9	1,091.6
1980	40.7	35.8	33.0	1,181.3
1981	43.4	37.9	29.3	1,112.1
1982	43.2	37.0	33.6	1,243.6
1983	41.3	30.2	39.7	1,197.8
1984	43.6	34.1	36.7	1,250.6
1985	42.5	34.5	35.7	1,230.1
1986	39.4	31.5	32.4	1,017.8
1987	36.3	28.5	35.7	1,018.6
1988 1/	34.4	27.5	36.7	1,009.6
Hard Red Spring				
1978	13.5	13.2	28.8	379.7
1979	14.2	14.0	26.3	368.8
1980	16.3	13.6	22.9	311.4
1981	16.1	15.8	29.4	463.8
1982	15.5	15.2	32.4	492.7
1983	11.1	10.7	30.2	322.7
1984	12.0	11.7	34.9	408.8
1985	14.0	13.1	35.1	460.2
1986	14.6	14.1	32.0	451.4
1987	13.3	13.0	33.1	430.6
1988 1/	12.4			
Durum				
1978	4.1	4.0	33.1	133.3
1979	4.0	3.9	27.1	106.7
1980	5.5	4.8	22.4	108.4
1981	5.8	5.7	32.4	183.0
1982	4.3	4.2	34.9	145.9
1983	2.6	2.5	29.3	73.0
1984	3.3	3.2	32.1	103.4
1985	3.2	3.1	36.4	112.5
1986	3.0	2.9	34.0	97.9
1987	3.3	3.3	28.2	92.6
1988 1/	3.7			
Soft Red Winter				
1978	6.2	5.5	34.3	188.9
1979	8.4	7.6	40.7	309.6
1980	11.7	10.6	41.7	441.8
1981	16.7	15.3	44.3	678.0
1982	17.2	15.8	37.3	588.9
1983	15.6	12.8	39.4	504.2
1984	14.5	12.6	42.2	531.4
1985	10.6	9.1	40.5	368.4
1986	10.1	7.7	38.0	292.5
1987	9.0	7.5	46.4	347.7
1988 1/	10.6	9.2	46.6	426.5
White 2/				
1978	5.7	5.3	46.0	243.7
1979	6.6	5.6	46.0	257.4
1980	6.6	6.3	53.7	338.0
1981	6.2	6.0	58.1	348.5
1982	6.0	5.7	51.6	294.0
1983	5.9	5.3	60.8	322.0
1984	5.8	5.3	56.7	300.6
1985	5.3	4.9	51.8	253.9
1986	4.9	4.5	51.6	232.0
1987	3.9	3.6	59.9	215.7
1988 1/	3.3	3.2 3/	57.9 3/	184.2 3/

1/ Projected. 2/ Winter and Spring. 3/ Spring only

Table 3--Wheat: Quarterly supply and disappearance, 1982-87

Year and periods beginning June 1	Supply				Disappearance						Ending stocks		
					Domestic use								
	Beginning stocks	Production	Imports 1/	Total	Food	Seed	Feed 2/	Total	Exports 1/	Total disappearance	Govt. owned	Privately owned 3/	Total
	Million bushels												
1982/83													
June-Aug.	1,159.4	2,765.0	1.2	3,925.6	152.9	1.0	131.3	285.2	411.1	696.3	193.3	3,036.0	3,229.3
Sept.-Nov.	3,229.3	----	3.0	3,232.3	159.5	74.0	18.8	252.3	337.2	589.5	189.7	2,453.1	2,642.8
Dec.-Feb.	2,642.8	----	2.6	2,645.4	152.4	3.0	24.2	179.6	393.8	573.4	184.6	1,887.4	2,072.0
Mar.-May	2,072.0	----	0.8	2,072.8	151.6	19.0	20.5	191.1	366.6	557.7	192.0	1,323.1	1,515.1
Mkt. year	1,159.4	2,765.0	7.6	3,932.0	616.4	97.0	194.8	908.2	1,508.7	2,416.9	192.0	1,323.1	1,515.1
1983/84													
June-Aug.	1,515.1	2,419.8	1.1	3,936.0	158.7	1.0	196.5	356.2	346.7	702.9	365.0	2,868.1	3,233.1
Sept.-Nov.	3,233.1	----	0.9	3,234.0	163.1	75.0	100.5	338.6	359.7	698.3	375.8	2,159.9	2,535.7
Dec.-Feb.	2,535.7	----	1.0	2,536.7	166.8	3.0	46.4	216.2	369.0	585.2	313.8	1,637.7	1,951.5
Mar.-May	1,951.5	----	1.0	1,952.5	154.0	21.0	25.7	200.7	353.2	553.9	188.0	1,210.6	1,398.6
Mkt. year	1,515.1	2,419.8	4.0	3,938.9	642.6	100.0	369.1	1,111.7	1,428.6	2,540.3	188.0	1,210.6	1,398.6
1984/85													
June-Aug.	1,398.6	2,594.8	4.6	3,998.0	157.8	1.0	279.9	438.7	399.2	837.9	278.1	2,882.0	3,160.1
Sept.-Nov.	3,160.1	----	1.8	3,161.9	168.5	69.0	99.9	337.4	486.0	823.4	359.4	1,979.1	2,338.5
Dec.-Feb.	2,338.5	----	1.2	2,339.7	164.2	4.0	35.5	203.7	335.2	538.9	375.7	1,414.7	1,800.8
Mar.-May	1,800.8	----	1.8	1,802.6	160.5	24.0	(10.8)	173.7	203.7	377.4	377.6	1,047.6	1,425.2
Mkt. year	1,398.6	2,594.8	9.4	4,002.8	651.0	98.0	404.5	1,153.5	1,424.1	2,577.6	377.6	1,047.6	1,425.2
1985/86													
June-Aug.	1,425.2	2,425.1	3.5	3,853.8	165.8	1.0	234.4	401.2	249.1	650.3	406.7	2,796.8	3,203.5
Sept.-Nov.	3,203.5	----	5.1	3,208.6	185.6	63.0	63.7	312.3	252.9	565.2	517.1	2,126.3	2,643.4
Dec.-Feb.	2,643.4	----	2.7	2,646.1	165.5	4.0	(3.6)	165.9	224.4	390.3	526.3	1,729.5	2,255.8
Mar.-May	2,255.8	----	4.4	2,260.2	165.6	25.0	(24.4)	166.2	189.0	355.2	601.7	1,303.3	1,905.0
Mkt. year	1,425.2	2,425.1	15.7	3,866.0	682.5	93.0	270.1	1,045.6	915.4	1,961.0	601.7	1,303.3	1,905.0
1986/87													
June-Aug.	1,905.0	2,091.6	4.3	4,000.9	174.1	1.0	348.7	523.8	320.6	844.4	793.8	2,362.7	3,156.5
Sept.-Nov.	3,156.5	---	3.6	3,160.1	192.2	57.0	(26.0)	223.2	263.4	486.6	863.9	1,809.6	2,673.5
Dec.-Feb.	2,673.5	---	5.9	2,679.4	177.2	3.0	46.1	226.3	202.7	429.0	905.3	1,345.1	2,250.4
Mar.-May	2,250.4	---	7.3	2,257.7	180.3	23.0	16.7	220.0	216.8	436.8	830.1	990.8	1,820.9
Mkt. year	1,905.0	2,091.6	21.1	4,017.7	723.8	84.0	385.5	1,193.3	1,003.5	2,196.8	830.1	990.8	1,820.9
1987/88													
June-Aug.	1,820.9	2,105.2	2.7	3928.8	184.7	1.0	344.5	530.4	409.9	940.3	798.8	2,189.7	2,988.5
Sept.-Nov.	2,988.5	--	4.3	2992.8	196.1	58.0	(75.1)	179.0	308.5	487.5	755.4	1,749.9	2,505.3
Dec.-Feb.	2,505.3	--	3.8	2509.1	170.9	3.0	13.6	187.5	413.1	600.6	450.1	1,458.4	1,908.5
Mar.-May	1,908.5	--	---	---	---	23.0	--	---	---	---	---	---	---
Mkt. year	1,820.9	2,105.2	---	---	---	85.0	--	---	---	---	---	---	---

1/ Imports and exports include flour and other products expressed in wheat equivalent. 2/ Residual; approximates feed use and includes negligible quantities used for distilled spirits. 3/ Includes outstanding and reserve loans. * Totals may not add due to rounding.

Table 4--Wheat classes: Marketing year supply and disappearance, 1982-1987 1/

Year beginning June 1	Supply			Disappearance			Ending stocks May 31
	Beginning stocks	Production	Total 2/	Domestic use	Exports	Total	
	Million bushels						
1982/83							
Hard Winter	538	1,243	1,781	348	679	1,027	754
Hard Spring	346	492	842	195	239	434	408
Soft Red	60	590	650	251	325	576	74
White	109	294	403	53	207	260	143
Durum	106	146	256	61	59	120	136
All classes	1,159	2,765	3,932	908	1,509	2,417	1,515
1983/84							
Hard Winter	754	1,198	1,952	503	704	1,207	745
Hard Spring	408	323	732	197	221	418	314
Soft Red	74	504	578	282	222	504	74
White	143	322	465	78	220	298	167
Durum	136	73	212	51	62	113	99
All classes	1,515	2,420	3,939	1,111	1,429	2,540	1,399
1984/85							
Hard Winter	745	1,251	1,996	562	717	1,279	717
Hard Spring	314	409	728	174	183	357	371
Soft Red	74	531	605	288	253	541	64
White	167	301	469	86	210	296	173
Durum	99	103	205	44	61	105	100
All classes	1,399	2,595	4,003	1,154	1,424	2,578	1,425
1985/86							
Hard Winter	717	1,230	1,947	543	395	938	1,009
Hard Spring	371	460	841	177	166	343	498
Soft Red	64	368	432	204	149	353	79
White	173	254	429	79	152	231	198
Durum	100	113	217	43	53	96	121
All classes	1,425	2,425	3,866	1,046	915	1,961	1,905
1986/87							
Hard Winter	1,009	1,018	2,027	622	432	1,054	973
Hard Spring	498	451	956	266	200	466	490
Soft Red	79	292	371	179	115	294	77
White	198	232	437	77	175	252	185
Durum	121	98	226	49	82	131	95
All classes	1,905	2,092	4,018	1,193	1,004	2,197	1,821
1987/88 3/							
Hard Winter	973	1,019	1,991	492	930	1,422	569
Hard Spring	490	431	928	268	250	518	410
Soft Red	77	348	425	205	165	370	55
White	185	216	404	85	190	275	129
Durum	95	93	193	60	65	125	68
All classes	1,821	2,105	3,941	1,110	1,600	2,710	1,231

1/ Data, except production, are approximations. Imports and exports include flour and products in wheat equivalent. 2/ Total supply includes imports. 3/ Estimated.

Table 5--Wheat: Status of price support loans on specified dates, 1980-87

!14

Crop year	Total stocks	Total CCC inventory	Outstanding CCC loans	Farmer-Owned Reserve 1/	Free stocks
			Million bushels		
1980/81					
Jun. 1	902.0	187.8	99.3	259.9	355.0
Sep. 1	2,714.0	202.1	96.7	211.0	2,204.2
Dec. 1	2,092.3	202.9	128.2	210.5	1,550.7
Mar. 1	1,522.8	203.2	114.3	303.8	901.5
1981/82					
Jun. 1	989.1	199.7	54.6	359.6	375.2
Sep. 1	3,056.0	195.4	147.0	398.6	2,315.0
Dec. 1	2,338.4	190.6	195.4	459.1	1,493.3
Mar. 1	1,777.6	190.2	182.2	515.2	890.0
1982/83					
Jun. 1	1,159.4	190.3	112.0	560.4	296.7
Sep. 1	3,229.3	193.3	77.5	763.3	2,195.2
Dec. 1	2,642.8	189.7	105.6	986.3	1,361.2
Mar. 1	2,072.0	184.6	92.5	1,117.1	677.8
1983/84					
Jun. 1	1,515.1	192.0	65.2	1,060.6	197.3
Sep. 1	3,233.1	365.0	294.1	824.8	1,749.2
Dec. 1	2,535.7	375.8	396.0	736.6	1,027.3
Mar. 1	1,951.5	313.8	443.9	610.7	583.1
1984/85					
Jun. 1	1,398.6	188.0	379.1	611.2	220.3
Sep. 1	3,160.1	278.1	254.9	657.9	1,969.2
Dec. 1	2,338.5	359.4	247.2	674.9	1,057.0
Mar. 1	1,800.8	375.7	218.4	673.8	532.9
1985/86					
Jun. 1	1,425.2	377.6	175.0	657.1	215.5
Sep. 1	3,203.5	406.7	493.7	689.5	1,613.6
Dec. 1	2,643.4	517.1	734.9	653.7	737.7
Mar. 1	2,255.8	526.3	770.8	633.1	325.6
1986/87					
Jun. 1	1,905.0	601.7	677.7	596.4	29.2
Sep. 1	3,156.5	793.8	455.8	629.9	1,277.0
Dec. 1	2,673.5	863.9	527.6	657.7	624.3
Mar. 1	2,250.4	905.3	419.8	662.6	262.7
1987/88					
June 1	1,820.9	830.1	235.6	631.8	123.4
Sept.1	2,988.5	798.8	245.1	597.5	1,347.1
Dec. 1	2,505.3	755.4	383.1	553.4	814.0
Mar. 1	1,908.5	450.1	293.8	517.9	646.7

1/ Includes any quantity in the Special Producer Storage Loan Program.

Source: Agricultural Stabilization and Conservation Service.

Table 6--U.S. wheat exports: Grain, flour, and products, by months, 1980-87

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
						Thousand bushels*							
						Wheat (grain only)							
1980/81	96,193	123,598	141,415	137,325	116,948	112,199	132,048	129,981	124,397	128,770	127,652	78,030	1,448,558
1981/82	124,521	138,168	145,428	194,148	156,993	127,495	137,757	124,163	138,719	159,078	148,181	116,496	1,711,147
1982/83	156,914	117,914	124,336	130,992	98,520	94,638	88,457	143,141	146,594	131,134	112,451	96,235	1,441,326
1983/84	113,506	116,701	87,823	119,263	114,810	102,880	128,887	118,357	111,096	118,713	97,132	112,813	1,341,981
1984/85	105,356	133,276	146,187	242,694	137,290	97,283	131,941	106,430	85,493	57,924	67,811	56,588	1,368,272
1985/86	84,264	63,930	86,862	72,206	85,650	82,384	61,857	69,656	70,869	67,393	56,438	46,399	847,905
1986/87	79,416	104,457	114,691	98,059	84,459	59,289	51,043	65,240	67,764	65,529	65,426	64,603	919,980
1987/88	119,769	158,648	112,758	119,945	101,679	71,166	113,402	139,900	143,333	149,148			
						Flour (grain equivalent) 1/							
1980/81	4,230	2,082	5,057	3,774	2,785	2,165	1,739	2,658	5,217	6,353	7,347	4,803	48,209
1981/82	5,794	2,779	3,438	2,496	668	411	902	1,767	8,068	5,775	6,955	5,983	45,036
1982/83	4,577	1,364	3,488	2,508	3,904	2,483	999	3,998	8,865	6,532	10,530	7,521	56,769
1983/84	9,611	8,198	7,849	8,801	8,473	3,504	1,245	2,301	3,337	7,438	7,311	8,149	76,217
1984/85	6,828	4,136	1,288	1,693	3,260	1,778	948	403	6,422	5,778	6,563	4,022	43,118
1985/86	3,640	3,072	1,638	3,213	1,303	2,909	8,497	3,756	5,561	5,172	6,582	2,382	47,724
1986/87	5,108	4,795	8,831	4,731	6,002	8,488	6,415	6,681	3,677	6,174	6,735	6,789	74,425
1987/88	5,450	6,816	4,749	4,085	3,418	6,722	4,316	7,269	3,460	823			
						Wheat products (grain equivalent) 2/							
1980/81	912	1,222	711	1,849	1,284	1,005	1,230	890	1,010	1,114	4,433	1,406	17,067
1581/82	1,827	1,150	1,009	1,037	1,171	1,406	572	1,211	1,875	351	2,246	692	14,547
1982/83	971	465	1,073	984	529	2,604	472	796	492	586	630	935	10,537
1983/84	633	1,075	1,300	578	502	904	1,346	600	1,789	780	363	503	10,373
1984/85	881	670	587	1,076	429	497	824	1,831	935	916	1,956	2,164	12,765
1985/86	1,984	2,472	1,258	2,097	1,683	1,476	1,542	1,449	1,170	1,103	1,590	1,903	19,726
1986/87	1,052	1,563	685	1,149	896	370	642	670	611	447	542	463	9,091
1987/88	447	751	549	234	364	901	743	423	277	551			
						Total wheat, flour, and products							
1980/81	101,335	126,902	147,183	142,949	121,017	115,369	135,017	133,529	130,624	136,238	139,432	84,239	1,513,834
1981/82	132,142	142,097	149,875	197,681	158,832	129,312	139,231	127,141	148,662	165,204	157,382	123,171	1,770,730
1982/83	162,462	119,743	128,897	134,485	102,952	99,726	89,928	147,935	155,950	138,252	123,611	104,691	1,508,632
1983/84	123,750	125,974	96,972	128,642	123,785	107,288	131,478	121,258	116,222	126,931	104,806	121,465	1,428,571
1984/85	113,065	138,082	148,062	245,463	140,979	99,558	133,713	108,664	92,851	64,618	76,330	62,774	1,424,159
1985/86	89,888	69,472	89,757	77,516	88,635	86,770	71,896	74,861	77,599	73,667	64,609	50,684	915,355
1986/87	85,576	110,815	124,207	103,943	91,357	68,147	58,100	72,591	72,052	72,150	72,703	71,854	1,003,496
1987/88	125,666	166,215	118,056	124,263	105,461	78,789	118,461	147,592	147,070	150,522			

1/Includes meal and groats and Durum. 2/Includes macaroni, rolled wheat, and bulgar. *Totals may not add because of independent rounding.

Source: Bureau of the Census.

Table 7--Wheat flour: Supply and disappearance, United States, 1960-87

Calendar year	Wheat ground	Millfeed production	Flour production 1/	Flour and product imports 2/	Total supply	Exports		Domestic disappearance	Total population July 1	Per capita disappearance
						Flour	Products 2/			
	Thous. bu.	Thous. tons		- - - Thous. cwt - - -		Million	Pounds		Million	Pounds
1960	582,719	4,827	255,596	141	255,737	42,135	58	213,544	180.7	118
1961	591,999	4,858	260,709	131	260,840	43,528	42	217,270	183.7	118
1962	595,353	4,876	262,403	132	262,535	47,719	22	214,794	186.5	115
1963	589,245	4,794	260,291	136	260,427	44,498	19	215,910	189.2	114
1964	591,654	2,890	261,905	142	262,047	42,328	26	219,693	191.8	115
1965	564,724	4,645	250,591	145	250,736	30,597	194	219,945	194.2	113
1966	568,673	4,619	253,176	179	253,355	33,091	178	220,086	196.5	112
1967	549,801	4,423	245,390	222	245,612	21,056	16	224,540	198.6	113
1968	569,649	4,511	254,310	233	254,543	28,068	133	226,342	200.6	113
1969	567,956	4,458	254,194	274	254,468	26,333	158	227,977	202.6	113
1970	563,714	4,409	253,094	325	253,419	26,054	14	227,351	205.1	111
1971	555,092	4,279	249,810	341	250,151	20,685	15	229,451	207.7	110
1972	557,801	4,303	250,441	477	250,918	20,335	19	230,564	209.9	110
1973	567,287	4,395	254,661	550	255,211	16,107	26	239,078	211.9	113
1974	562,962	4,483	251,097	665	251,762	14,453	33	237,276	213.9	111
1975	582,675	4,701	258,985	621	259,606	12,364	22	247,220	216.0	114
1976	618,284	4,920	275,077	604	275,681	16,064	44	259,573	218.0	119
1977	618,125	4,787	275,784	604	276,388	22,053	37	254,298	220.2	115
1978	621,321	4,860	277,950	773	278,723	22,170	43	256,510	222.6	115
1979	636,375	4,945	284,051	823	284,874	20,927	86	263,861	225.1	117
1980	628,559	4,866	282,655	904	283,559	17,378	54	266,127	227.7	117
1981	634,381	5,045	283,966	1,166	285,132	18,655	84	266,393	229.8	116
1982	653,206	5,228	290,907	1,496	292,403	20,926	154	271,323	232.1	117
1983	689,951	5,655	311,587	1,590	313,177	37,315	150	275,712	234.3	118
1984	674,665	5,426	299,832	2,005	301,837	21,752	160	279,925	236.7	118
1985	700,151	5,556	313,815	2,064	315,879	20,766	141	294,972	239.3	123
1986	737,537	5,808	326,316	2,179	328,495	29,735	123	298,637	241.5	124
1987	760,459	6,134	338,484	2,562	341,046	28,710	142	312,194	243.7	128

1/ Commercial production of wheat flour, whole wheat, industrial, and Durum flour and farina reported by Bureau of Census. Production prior to 1970 includes estimate for noncommercial wheat milled. 2/ Imports and exports of macaroni and noodle products (flour equivalent).

Table 8--Wheat and flour price relationships at milling centers, annual and by periods, 1982-87

Year and period	At Kansas City					At Minneapolis				
	Cost of wheat to produce 100 lb. of flour 1/	Wholesale price of				Cost of wheat to produce 100 lb. of flour 1/	Wholesale price of			
		Bakery flour per 100 lb. 2/	Byprod-ucts obtained 100 lb. flour 3/	Total products			Bakery flour per 100 lb. 2/	Byprod-ucts obtained 100 lb. flour 3/	Total products	
				Actual	Over cost of wheat				Actual	Over cost of wheat
	Dollars									
1982/83										
June-Sept.	9.24	10.14	1.39	11.53	2.29	9.31	10.43	1.25	11.68	2.37
Oct.-Dec.	9.22	10.06	1.58	11.64	2.42	9.22	10.43	1.29	11.72	2.50
Jan.-Mar.	9.60	10.40	1.47	11.87	2.27	9.15	10.41	1.10	11.51	2.36
Apr.-May	9.77	10.26	1.65	11.91	2.14	10.11	10.88	1.40	12.28	2.17
Mkt. year	9.46	10.22	1.52	11.74	2.28	9.45	10.54	1.26	11.80	2.35
1983/84										
June-Sept.	9.54	10.36	1.72	12.08	2.54	9.97	11.17	1.47	12.64	2.67
Oct.-Dec.	9.48	10.00	2.16	12.16	2.68	9.76	10.79	1.90	12.69	2.93
Jan.-Mar.	9.22	9.52	1.83	11.35	2.13	9.56	10.28	1.49	11.77	2.21
Apr.-May	9.57	10.06	1.62	11.17	2.11	10.08	10.74	1.49	12.23	2.15
Mkt. year	9.45	9.99	1.83	11.69	2.37	9.80	10.75	1.59	12.34	2.54
1984/85										
June-Sept.	9.21	9.78	1.47	11.26	2.05	9.64	10.31	1.21	11.52	1.89
Oct.-Dec.	9.05	9.85	1.47	11.32	2.27	9.16	10.56	1.11	11.67	2.50
Jan.-Mar.	8.77	9.90	1.16	11.06	2.29	9.09	11.27	.83	12.11	3.01
Apr.-May	8.62	9.58	1.16	10.74	2.12	9.34	11.22	.88	12.11	2.77
Mkt. year	8.96	9.78	1.32	11.09	2.13	9.27	10.84	1.01	11.85	2.58
1985/86										
June-Sept.	7.99	8.94	1.10	10.04	2.05	8.60	10.96	.77	11.73	3.13
Oct.-Dec.	8.37	9.07	1.38	10.45	2.08	9.24	11.65	1.09	12.74	3.50
Jan.-Mar.	8.37	9.38	1.10	10.48	2.11	9.02	11.95	.83	12.78	3.76
Apr.-May	8.38	9.73	1.21	10.94	2.56	9.35	11.05	.95	12.00	2.65
Mkt. year	8.25	9.21	1.19	10.40	2.15	8.98	11.39	.90	12.29	3.31
1986/87										
June-Aug.	6.19	7.90	.79	8.69	2.50	6.86	9.70	.62	10.32	3.46
Sept.-Nov.	6.27	8.18	.85	9.02	2.75	6.78	9.52	.64	10.16	3.38
Dec.-Feb.	6.70	7.97	.99	8.96	2.26	7.03	8.55	.66	9.21	2.18
Mar.-May	7.00	8.35	.74	8.92	1.92	7.30	9.10	.58	9.68	2.38
Mkt. year	6.54	8.10	.84	8.90	2.36	7.00	9.22	.63	9.85	2.85
1987/88										
June-Aug.	6.62	7.85	.72	8.57	1.95	6.80	8.63	.51	9.14	2.52
Sept.-Nov.	7.04	7.85	1.19	9.04	2.00	7.07	8.98	.90	9.88	2.84
Dec.-Feb.	7.52	7.97	1.53	9.50	1.98	7.36	9.77	1.18	10.95	3.43

1/ Based on 73-percent extraction rate, cost of 2.28 bushels: At Kansas City, No. 1 Hard Winter, 13-percent protein; and at Minneapolis, No. 1 Dark Northern Spring, 14-percent protein. 2/ Quoted as 95-percent patent at Kansas City and standard patent at Minneapolis, bulk basis. 3/ Assumed 50-50 millfeed distribution between bran and shorts or middlings, bulk basis.

Source: Compiled from reports of Agricultural Marketing Service and Department of Labor.

Table 9--Wheat farm prices for leading classes and major feed grains in U.S. regions, 1983-87 1/

Commodity and year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average	Loan rate
							All prices for 60 pounds							
							Central and So. Plains (Hard Winter)							
Wheat: 2/														
1983/84	3.49	3.34	3.54	3.59	3.56	3.49	3.45	3.48	3.41	3.48	3.62	3.63	3.51	3.56
1984/85	3.46	3.30	3.42	3.45	3.43	3.41	3.36	3.34	3.34	3.34	3.39	3.25	3.37	3.23
1985/86	3.06	2.90	2.85	3.00	3.07	3.21	3.24	3.16	3.10	3.21	3.33	2.92	3.09	3.23
1986/87	2.38	2.19	2.23	2.26	2.25	2.39	2.43	2.45	2.50	2.49	2.82	2.59	2.39	2.35
1987/88	2.39	2.26	2.29	2.42	2.51	2.58	2.65	2.68	2.74	2.71	2.77*			
Sorghum 3/														
1983/84	3.02	3.00	3.14	3.14	3.02	3.02	2.97	2.96	2.87	2.94	3.02	3.10	3.02	2.68
1984/85	3.01	2.89	2.77	2.57	2.49	2.48	2.51	2.52	2.51	2.59	2.68	2.76	2.65	3.32
1985/86	2.71	2.58	2.24	2.06	2.05	2.13	2.25	2.23	2.16	2.25	2.36	2.33	2.28	3.32
1986/87	2.16	1.97	1.67	1.50	1.54	1.51	1.51	1.51	1.47	1.53	1.61	1.71	1.64	3.24
1987/88	1.73	1.62	1.53	1.52	1.58	1.67	1.69	1.70	1.83	1.80*				
							Corn Belt (Soft Red Winter)							
Wheat: 2/														
1983/84	3.25	3.25	3.54	3.49	3.36	3.33	3.43	3.46	3.26	3.38	3.54	3.44	3.39	3.66
1984/85	3.26	3.22	3.29	3.29	3.29	3.40	3.42	3.44	3.39	3.42	3.44	3.19	3.34	3.32
1985/86	3.01	2.94	2.74	2.66	2.77	3.10	3.22	3.18	3.24	3.37	3.42	2.87	3.04	3.32
1986/87	2.40	2.30	2.28	2.27	2.57	2.65	2.74	2.71	2.77	2.85	2.75	2.65	2.58	2.36
1987/88	2.42	2.37	2.41	2.51	2.66	2.74	2.90	3.02	3.07	2.85	N/A			
Corn: 4/														
1983/84	3.39	3.43	3.81	3.68	3.46	3.54	3.52	3.48	3.45	3.56	3.74	3.75	3.57	2.87
1984/85	3.80	3.66	3.50	3.17	2.83	2.76	2.76	2.84	2.85	2.91	2.95	2.91	3.08	2.76
1985/86	2.89	2.85	2.65	2.38	2.21	2.38	2.47	2.48	2.49	2.48	2.50	2.59	2.53	2.76
1986/87	2.56	2.19	1.84	1.54	1.46	1.56	1.61	1.59	1.57	1.60	1.67	1.85	1.76	1.94
1987/88	1.88	1.74	1.61	1.62	1.68	1.79	1.82	1.95	2.02	2.03	1.91*			
							Northern Plains (Spring and Durum)							
Other spring 2/														
1983/84	3.81	3.80	3.78	3.69	3.68	3.66	3.59	3.62	3.59	3.68	3.78	3.87	3.72	3.68
1984/85	3.86	3.69	3.52	3.49	3.47	3.46	3.41	3.45	3.46	3.49	3.57	3.56	3.53	3.34
1985/86	3.50	3.30	3.05	3.18	3.36	3.49	3.58	3.51	3.47	3.51	3.57	3.48	3.38	3.34
1986/87	2.81	2.41	2.38	2.34	2.29	2.51	2.58	2.69	2.66	2.63	2.65	2.68	2.55	2.44
1987/88	2.50	2.36	2.37	2.55	2.62	2.65	2.70	2.76	2.77	2.74	2.79*			
Durum: 2/														
1983/84	4.01	3.96	4.11	4.07	4.04	3.97	3.83	3.84	3.67	3.88	3.91	4.07	3.98	3.68
1984/85	3.96	3.73	3.84	3.78	3.75	3.77	3.69	3.63	3.61	3.55	3.60	3.55	3.75	3.34
1985/86	3.53	3.34	3.18	3.08	3.01	3.07	3.16	3.17	3.17	3.21	3.29	3.41	3.22	3.34
1986/87	3.30	2.38	2.24	2.29	2.36	2.54	2.64	2.88	2.93	3.05	3.12	3.14	2.49	2.44
1987/88	3.15	3.06	2.87	3.19	3.30	3.33	3.20	3.21	3.29	2.93	3.14*			
							Pacific Northwest (White)							
Wheat: 2/														
1983/84	3.78	3.61	3.68	3.70	3.62	3.59	3.51	3.49	3.31	3.48	3.57	3.64	3.58	3.75
1984/85	3.71	3.26	3.32	3.31	3.38	3.38	3.35	3.43	3.45	3.53	3.57	3.54	3.44	3.43
1985/86	3.35	2.97	3.05	3.16	3.29	3.39	3.44	3.40	3.41	3.52	3.60	3.49	3.34	3.43
1986/87	2.97	2.44	2.36	2.35	2.40	2.48	2.56	2.61	2.69	2.67	2.74	2.73	2.58	2.50
1987/88	2.60	2.54	2.48	2.57	2.70	2.62	2.73	2.88	2.89	2.79	N/A			
Barley: 5/														
1983/84	3.06	2.97	3.19	3.33	3.35	3.38	3.48	3.45	3.36	3.39	3.58	3.42	3.33	2.81
1984/85	3.50	3.15	2.98	2.98	2.92	2.98	3.02	3.00	2.98	2.99	2.95	2.87	3.03	2.74
1985/86	2.68	2.73	2.63	2.55	2.52	2.69	2.77	2.73	2.65	2.53	2.48	2.54	2.62	2.74
1986/87	2.19	2.14	2.31	2.19	2.29	2.24	2.26	2.29	2.35	2.28	2.32	2.37	2.27	1.67
1987/88	2.43	2.64	2.53	2.48	2.36	2.45	2.53	2.56	2.55	2.25	2.25*			
							U.S. average							
Wheat:														
1983/84	3.50	3.34	3.61	3.65	3.60	3.54	3.48	3.50	3.40	3.49	3.63	3.66	3.51	3.65
1984/85	3.46	3.29	3.43	3.43	3.43	3.45	3.38	3.38	3.38	3.38	3.43	3.30	3.39	3.30
1985/86	3.09	2.93	2.89	3.01	3.10	3.22	3.25	3.19	3.16	3.28	3.37	3.01	3.08	3.30
1986/87	2.47	2.25	2.26	2.28	2.30	2.43	2.49	2.53	2.58	2.58	2.62	2.66	2.42	2.40
1987/88	2.44	2.32	2.36	2.53	2.62	2.69	2.70	2.75	2.79	2.74	2.81*		2.61	2.28

1/ To adjust price to relative feed value, multiply: corn 1.00, wheat 1.05, barley .90, sorghum .95; reported in Consumption of Feed by Livestock, Report No. 79, ERS, USDA. 2/ Wheat prices by class represent averages for the entire United States. 3/ Kansas, Nebraska, Texas, Oklahoma, and Arkansas. 4/ Ohio, Indiana, Illinois, and Missouri. 5/ Washington, Oregon, and Idaho. * - preliminary

Table 10--Wheat cash prices for leading classes at major markets, 1982-87

Simple Year average	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
							Dollars per bushel						
KANSAS CITY, NO. 1 HARD RED WINTER (ORDINARY PROTEIN)													
1982/83	4.06	3.74	3.70	3.75	3.61	3.86	3.98	4.00	4.08	4.18	4.21	4.05	3.94
1983/84	3.92	3.71	3.88	3.90	3.84	3.82	3.85	3.81	3.71	3.85	3.93	3.89	3.84
1984/85	3.80	3.67	3.80	3.89	3.86	3.85	3.76	3.76	3.74	3.67	3.62	3.42	3.74
1985/86	3.38	3.17	3.03	3.07	3.15	3.35	3.42	3.32	3.30	3.36	3.45	3.40	3.28
1986/87	2.80	2.50	2.48	2.53	2.60	2.68	2.68	2.70	2.80	2.90	2.90	3.02	2.72
1987/88	2.70	2.59	2.65	2.78	2.90	2.90	3.10	3.20	3.28	3.10	3.14		
13% PROTEIN													
1982/83	4.15	4.12	4.00	3.94	3.80	4.09	4.24	4.19	4.17	4.27	4.35	4.22	4.13
1983/84	4.22	4.15	4.16	4.21	4.20	4.17	4.11	4.06	3.95	4.12	4.22	4.17	4.14
1984/85	4.15	3.99	3.98	4.03	4.01	3.99	3.91	3.87	3.87	3.80	3.84	3.72	3.93
1985/86	3.72	3.53	3.36	3.41	3.50	3.70	3.81	3.69	3.65	3.67	3.70	3.65	3.62
1986/87	2.90	2.70	2.55	2.66	2.75	2.84	2.89	2.95	2.98	3.00	3.05	3.17	2.87
1987/88	2.95	2.86	2.90	3.01	3.10	3.15	3.20	3.30	3.38	3.21	3.26		
CHICAGO, NO. 2 SOFT RED WINTER													
1982/83	3.31	3.36	3.35	3.18	2.98	3.33	3.23	3.32	3.40	3.36	3.51	3.55	3.32
1983/84	3.53	3.59	3.71	3.62	3.56	3.42	3.55	3.47	3.34	3.57	3.65	3.65	3.56
1984/85	3.51	3.44	3.49	3.47	3.51	3.62	3.49	3.51	3.55	3.58	3.63	3.34	3.51
1985/86	3.27	3.09	2.87	2.83	3.04	3.33	3.46	3.34	3.37	3.40	3.39	3.25	3.22
1986/87	2.52	2.58	2.44	2.36	2.57	2.73	2.76	2.87	2.91	3.11	3.16	3.08	2.76
1987/88	2.63	2.54	2.61	2.77	2.82	2.80	3.00	3.23	3.23	2.94	3.02		
ST. LOUIS, NO. 2 SOFT RED WINTER													
1982/83	3.25	3.27	3.14	3.06	3.06	3.38	3.28	3.33	3.41	3.43	3.58	3.61	3.32
1983/84	3.46	3.51	3.79	3.70	3.62	3.58	3.67	3.62	3.46	3.71	3.82	3.51	3.62
1984/85	3.45	3.44	3.50	3.52	3.60	3.72	3.67	3.69	3.65	3.67	3.65	3.24	3.57
1985/86	3.29	3.07	2.84	2.85	3.10	3.42	3.58	3.48	3.49	3.64	3.66	2.74	3.26
1986/87	2.61	2.60	2.54	2.55	2.88	3.05	3.06	3.08	3.05	3.09	2.88	3.03	2.87
1987/88	2.63	2.58	2.59	2.77	2.95	2.97	3.22	3.24	3.18	2.98	3.10		
TOLEDO, NO. 2 SOFT RED WINTER													
1982/83	3.35	3.36	3.28	3.09	2.84	3.19	3.23	3.28	3.32	3.29	3.45	3.47	3.26
1983/84	3.42	3.48	3.69	3.54	3.43	3.37	3.46	3.43	3.26	3.50	3.61	3.60	3.48
1984/85	3.50	3.44	3.44	3.44	3.43	3.53	3.43	3.52	3.56	3.54	3.58	3.30	3.48
1985/86	3.22	3.02	2.77	2.74	2.90	3.18	3.39	3.32	3.34	3.47	3.30	3.22	3.16
1986/87	2.58	2.55	2.45	2.33	2.61	2.75	2.81	2.92	2.93	3.06	2.99	3.07	2.75
1987/88	2.60	2.55	2.54	2.69	2.86	2.82	3.10	3.21	3.20	2.92	2.99		
TOLEDO, NO. 2 SOFT WHITE													
1982/83	3.35	3.49	3.42	3.22	2.92	3.22	3.29	3.25	3.39	3.43	3.49	3.48	3.33
1983/84	3.42	3.51	3.71	3.56	3.42	3.36	3.46	3.43	3.25	3.50	3.62	3.49	3.48
1984/85	3.35	3.37	3.42	3.42	3.41	3.51	3.41	3.50	3.53	3.48	3.48	3.18	3.42
1985/86	3.13	3.02	2.89	2.89	3.12	3.30	3.41	3.26	3.26	3.31	2.89	2.93	3.12
1986/87	2.50	2.52	2.48	2.29	2.54	2.69	2.73	2.80	2.84	2.87	2.79	2.89	2.66
1987/88	2.63	2.57	2.69	2.81	2.88	2.95	3.14	3.28	3.27	2.96	3.02		
PORTLAND, NO. 1 SOFT WHITE													
1982/83	4.18	4.13	4.16	4.29	4.29	4.44	4.45	4.52	4.59	4.68	4.62	4.35	4.39
1983/84	4.15	4.08	4.06	4.12	4.03	3.90	3.81	3.79	3.69	3.73	4.03	4.05	3.95
1984/85	4.03	3.73	3.74	3.70	3.73	3.78	3.76	3.77	3.83	3.93	3.94	3.91	3.82
1985/86	3.73	3.57	3.45	3.57	3.72	3.77	3.80	3.75	3.74	3.85	3.88	3.78	3.72
1986/87	3.03	2.75	2.68	2.70	2.78	2.84	2.86	2.93	3.07	3.07	2.99	3.09	2.90
1987/88	2.87	2.79	2.73	2.94	3.08	2.97	3.05	3.26	3.21	3.10	3.32		
MINNEAPOLIS, NO. 1 DARK NO. SPRING (ORDINARY PROTEIN)													
1982/83	4.08	4.08	3.78	3.79	3.78	3.85	3.76	3.80	3.82	4.01	4.34	4.25	3.94
1983/84	4.15	4.07	4.21	4.30	4.33	4.23	4.20	4.15	4.06	4.20	4.28	4.39	4.21
1984/85	4.40	4.21	3.72	3.57	3.64	3.64	3.48	3.47	3.52	3.55	3.64	3.55	3.70
1985/86	3.54	3.29	2.87	2.97	3.01	3.42	3.45	3.38	3.32	3.33	3.42	3.05	3.25
1986/87	2.51	2.17	2.39	2.64	2.70	2.81	2.77	2.82	2.65	2.61	2.60	2.76	2.62
1987/88	2.66	2.52	2.60	2.74	2.85	2.81	2.96	3.12	3.26	3.05	3.19		
14% PROTEIN													
1982/83	4.13	4.16	3.96	4.02	4.00	4.08	3.96	3.93	3.92	4.08	4.40	4.40	4.09
1983/84	4.39	4.38	4.34	4.33	4.33	4.25	4.21	4.17	4.08	4.24	4.37	4.45	4.30
1984/85	4.45	4.34	4.07	3.97	4.03	4.02	3.92	3.90	3.92	3.94	4.36	4.02	4.06
1985/86	3.99	3.77	3.56	3.76	3.91	4.09	4.16	3.97	3.90	4.00	4.17	4.03	3.94
1986/87	3.17	3.00	2.86	2.85	2.98	3.09	3.04	3.08	3.13	3.19	3.17	3.24	3.07
1987/88	3.07	2.94	2.94	3.04	3.15	3.11	3.13	3.24	3.32	3.15	3.30		
HARD AMBER DURUM, (MILLING)													
1982/83	4.38	4.26	4.07	4.02	4.11	4.17	4.07	4.06	4.12	4.28	4.54	4.90	4.25
1983/84	4.76	4.74	5.04	5.10	4.99	4.91	4.82	4.81	4.69	4.70	4.74	4.71	4.83
1984/85	4.68	4.57	4.65	4.43	4.47	4.46	4.43	4.34	3.37	4.33	4.36	4.32	4.44
1985/86	4.16	4.05	3.99	4.07	4.03	4.08	4.09	4.01	4.01	3.99	4.07	4.24	4.07
1986/87	3.79	3.08	3.04	3.21	3.31	3.49	3.60	3.68	3.78	3.89	3.93	4.03	3.57
1987/88	3.91	3.66	3.80	4.30	4.31	4.33	4.22	4.19	4.22	4.02	4.21		

Source: Grain Market News, Agricultural Marketing Service.

Table 11--Domestic and foreign wheat prices, 1980-87

Year and month	United States				Foreign		
	Farm 1/	Kansas City 2/	Gulf ports 3/	Rotterdam 4/	Argentina 5/	Canada 6/	Australia 7/
	Dollars per metric ton						
Calendar year							
1980	143	159	176	213	203	192	176
1981	142	160	176	210	190	194	175
1982	129	147	161	187	166	165	160
1983	132	145	158	185	138	169	161
1984	127	140	153	180	135	166	153
1985	117	125	137	169	106	173	141
1986	97	107	117	148	88	161	120
1987	91	104	114	141	89	134	115
1987							
January	89	100	110	141	82	136	110
February	90	103	114	145	92	138	112
March	91	107	116	140	90	139	115
April	91	107	115	138	88	134	115
May	93	111	120	146	88	136	119
June	87	100	110	144	86	130	111
July	83	95	106	134	84	126	107
August	85	97	108	134	84	124	109
September	90	103	114	139	89	130	115
October	92	105	116	139	95	134	118
November	94	105	116	140	95	134	118
December	100	114	126	148	95	142	126
1988							
January	101	118	130	158	94	148	127
February	103	120	132	155	106	151	135
March	101	114	126	149	107	143	131
April	103	115	128	156	108	145	133

NA = Not available.
1/ Hard Red Winter wheat. 2/ No. 1, Hard Winter, ordinary protein. 3/ No. 2, Hard Winter, ordinary protein, f.o.b vessel. 4/ U.S., No. 2 Dark Northern Spring, 14 percent, c.i.f. 5/ F.o.b Buenos Aires. 6/ No. 1, CWRS, 13.5 percent, in-store, St. Lawrence. 7/ ASW, f.o.b.

Table 12--Wheat and wheat flour: World trade, production, stocks, and use 1984-88 1/

Country or region	1984/85	1985/86	1986/87	1987/88 as of May 10	1988/89 projected
			Million metric tons		
Exports					
Canada	19.4	16.8	20.8	22.5	21.0
Australia	15.8	16.0	14.8	12.5	10.5
Argentina	8.0	6.1	4.3	5.0	5.5
EC-12	18.5	15.6	16.4	14.5	16.0
USSR	0.5	0.5	0.5	0.5	1.0
All others	6.6	4.9	5.5	6.2	5.1
Total non-U.S.	68.9	60.0	62.3	61.2	59.1
USA 2/	38.1	25.0	28.4	43.5	41.0
World total	107.0	85.0	90.7	104.7	100.1
Imports					
EC-12	3.4	2.8	2.4	2.5	2.4
USSR	28.1	15.7	16.0	22.0	15.0
Japan	5.6	5.5	5.8	5.4	5.4
E. Europe	2.6	3.4	3.7	3.5	3.0
China	7.4	6.6	8.5	13.5	13.5
All others	59.8	50.9	54.3	57.8	60.9
World total	107.0	85.0	90.7	104.7	100.1
Production 3/					
Canada	21.2	24.3	31.4	26.3	25.4
Australia	18.7	16.2	16.2	12.0	13.0
Argentina	13.2	8.5	8.9	10.0	10.0
EC-12	82.9	71.6	71.9	71.3	74.1
USSR 3/	68.6	78.1	92.3	83.3	92.0
E. Europe	42.1	37.1	39.1	39.0	41.3
China	87.8	85.8	90.0	87.7	91.0
India	45.5	44.1	47.1	45.6	44.0
All other foreign	61.3	68.1	75.9	72.3	70.9
USA	70.6	66.0	56.9	57.3	59.1
World total	511.8	499.8	529.7	504.9	520.7
Utilization 4/					
USA	31.4	28.5	32.5	30.2	30.5
USSR 5/	91.2	91.6	102.8	100.5	102.0
China	92.2	100.4	101.5	105.2	105.0
All others	278.0	275.2	284.9	297.9	298.8
World total	492.8	495.7	521.7	533.9	536.3
Stocks, ending 6/	164.2	168.2	176.1	147.2	131.5

1/ July-June years. 2/ Includes transshipments through Canadian ports; excludes products other than flour. 3/ Production data include all harvests occurring within the July-June year shown, except that small grain crops from the early harvesting Northern Hemisphere areas are moved forward; i.e., the May 1984 harvests in areas such as India, North Africa, and Southern United States are included in the 1984/85 accounting period, which begins July 1, 1984. 4/ Utilization data are based on an aggregate of different local marketing years. For countries where stock data are unavailable (excluding the USSR), utilization estimates represent apparent utilization, i.e., they are inclusive of annual stock level adjustments. 5/ "Bunker weight" basis: not discounted for excess moisture and foreign material. 6/ Stocks data are based on an aggregate of different local marketing years. They are unavailable for some countries including parts of Eastern Europe. World stock levels have been adjusted for estimated year-to-year changes in USSR grain stocks, but do not purport to include the entire absolute level of USSR stocks.

Source: World Grain Situation and Outlook, USDA, Foreign Agricultural Service.

Table 13 -- Rye: Supply, disappearance, area, and price, 1981-88

171

Item	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (prel.)	1988/89 (proj.)
				Million acres				
Area								
Planted	2,566	2,533	2,707	2,971	2,563	2,384	2,498	2,533
Harvested	685	677	896	981	717	677	683	700
				Bushels per acre				
Yield/harvested acre	26.6	28.9	30.3	33.1	28.8	28.8	28.9	29.0
				Million bushels				
Supply								
Beginning stocks	4.0	3.0	5.8	11.3	19.8	21.9	19.6	20.8
Production	18.2	19.5	27.1	32.5	20.6	19.5	19.7	20.3
Imports	0.4	3.0	1.6	0.6	2.2	1.0	2.0	1.0
Total supply	22.6	25.6	34.5	44.4	42.6	42.5	41.3	42.1
Disappearance								
Food	3.5	3.3	3.5	3.5	3.5	3.5	3.5	3.5
Feed and residual	8.2	9.6	11.9	14.6	11.1	13.2	10.8	12.5
Seed	4.2	4.3	4.7	4.1	3.8	3.7	3.8	3.8
Industry	2.2	2.3	2.1	2.0	2.1	2.0	2.0	2.0
Total domestic	18.1	19.5	22.2	24.2	20.5	22.4	19.2	21.8
Exports	1.5	0.2	1.0	0.4	0.2	0.5	0.4	0.5
Total disappearance	19.6	19.7	23.2	24.6	20.7	22.9	20.5	22.3
Ending stocks	3.0	5.9	11.3	19.8	21.9	19.6	20.8	19.8
				Dollars per bushel				
Prices								
Loan rate	2.04	2.17	2.25	2.17	2.17	1.63	1.55	1.50
Season average price	3.00	2.40	2.17	2.08	2.03	1.49	1.51	1.45
				Thousand dollars				
Value of production	54,004	47,460	60,074	68,828	43,251	27,438	28,891	29,435

Table 14.--Rye: Production by major States, 1980-87

State	1980	1981	1982	1983	1984	1985	1986	1987
				Thousand bushels				
Georgia	1,995	2,730	1,470	1,470	1,760	2,070	1,785	1,540
Michigan	504	448	522	600	588	651	713	640
Minnesota	1,900	2,883	3,300	4,960	6,650	3,300	1,600	1,200
Nebraska	666	924	1,269	1,265	1,392	1,242	1,035	1,050
N. Carolina	420	400	525	440	550	665	595	720
N. Dakota	1,050	2,170	2,400	4,320	5,400	2,640	4,250	5,115
Oklahoma	816	680	736	780	704	828	840	360
Pennsylvania	434	363	408	578	578	740	630	630
S. Carolina	616	726	621	320	546	532	391	528
S. Dakota	4,030	3,220	4,680	8,740	10,800	4,440	4,440	5,040

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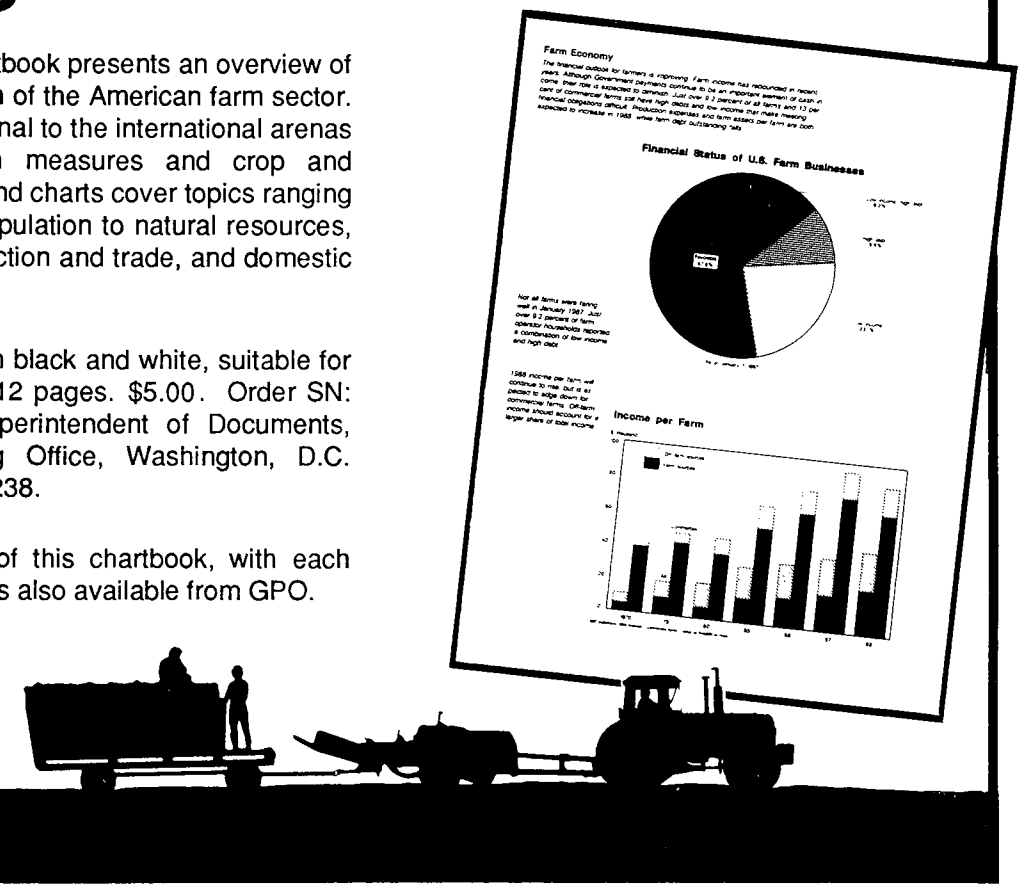

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