About 87 percent of the 1987/88 wheat base was in compliance with the 27.5-percent acreage reduction program (table 16). Participation across regions was fairly typical for wheat: highest in the Great Plains (93.3 percent) and Northwest (92.8 percent) and lowest in the Northeast (53.5 percent) and South (70.8 percent).

Taxpayers

Under the 1985 Act, farmers receive direct payments to ease the transition toward a market-oriented agricultural policy. Program support costs have consequently risen dramatically. Although Government expenditures for wheat have trended downward since 1986, net price support and related expenditures for wheat averaged $3.2 billion from 1986 through 1988. This is 78 percent above the 1983-85 average and about four times the 1981-82 average (see table 13).

Other factors indicate the importance of taxpayer contributions. Net expenditures amounted to about $1.60 per bushel of wheat (nominal $) produced during 1986-88. At the same time, taxpayer expenditures averaged 58 percent of the market value of production and 35 percent of total farm income from wheat.

Taxpayers are indirectly affected by generic certificates, wheat auctions, and the export enhancement program. Although these instruments are not line items in the USDA budget, they may, however, entail some costs or savings that indirectly affect taxpayers. They affect taxpayers primarily through their effect on stocks and market prices, and hence, on deficiency payments.

Strong pressure to cut domestic spending forces lawmakers to scrutinize farm program costs. Cost-cutting proposals have included further reductions in target prices, setting target prices to reflect the costs of production, and establishing more flexible acreage bases.

The "triple-base" concept, which many believe would increase the flexibility of farm programs, has received considerable interest in 1989. The proposed program, introduced in 1985 by Rep. Charles Stenholm (D-TX), would continue to divide a producer's base acreage into conserving use and permitted acres. Permitted acres would be further divided into those which would be planted to program crops (which would continue to receive program payments) and flexible acres. The "triple-base" phrase is derived from the three types of acres: permitted acres (divided into program acres and flexible acres) and conserving use acres.

Crops produced on flexible acres would not be eligible for deficiency payments. The ratio of permitted acres to flexible acres, as well as any limitations on what could be planted on flexible acres, would be determined by law or by the Secretary. Proponents hope the triple-base concept would decrease Federal expenses by cutting the number of acres receiving payments, while giving farmers greater flexibility.

Consumers

The fall in the loan rate under the 1985 Act had little effect on the retail prices of baked goods, pastas, and other wheat products because the marketing margin between farm and retail levels is wide. Wheat prices are typically low compared with the prices of packaging, distribution, and other inputs. The amount of wheat used to produce a loaf of bread usually costs less than 15 percent of the retail price. In contrast, distribution can account for 40 percent of the retail price.

The effect of the wheat program on consumers has also been small because the quantity of wheat consumed per capita, although rising, is relatively low. Consumers used 128 pounds of flour per capita in 1988, up from 123 pounds in 1985 and 111 pounds in 1970. The 128 pounds used in 1988 is the equivalent of 2.9 bushels of wheat. The farm value of this wheat in 1988 was about $10.85.

Higher prices for certain wheat products since passage of the 1985 Act appear to be demand-driven. Overall, retail prices of baked goods have been relatively stable, even though the prices of popular items have risen substantially. The retail price of white pan bread, for instance, rose by 18 percent between 1980 and 1988, although it actually fell between 1986 and 1987. The prices of two of the more popular items, french bread and whole wheat bread, have increased at the most rapid rates between 1980-88, 40 and 29 percent.

Table 16--Distribution of wheat acreage base and deficiency payments by region, 1987/88

Region	Base	Participation base	Participation rate	Deficiency payments	Share of payments
	--Million acres--		Percent	Million dollars	Percent
Great Plains 1/	59.56	55.60	93.3	2.163	65.0
North Central 2/	11.52	8.13	71.0	.414	12.4
South 3/	7.69	5.44	70.8	.246	7.4
Northwest 4/	5.98	5.55	92.8	.396	11.9
Southwest 5/	2.26	1.60	70.9	.093	2.8
Northeast 6/	.54	.29	53.5	.015	.5
Total	87.55	76.61	87.5	3.327	100.0

1/ CO, KS, MT, NE, ND, OK, SD, TX, and WY. 2/ IL, IN, IA, MI, MN, MO, OH, and WI. 3/ AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, and WV. 4/ ID, OR, and WA. 5/ AZ, CA, NV, NM, and UT. 6/ DE, MD, NJ, NY, PA, and New England States.

Supply

Since 1962, the Federal Government has attempted to reduce wheat production by offering diversion, set-aside, and/or acreage reduction programs in all marketing years except 1967-68, 1973-77, and 1980-81. These diversion programs were 67 percent effective, on average, in reducing harvested acreage between 1962 and 1985. That is, a 1-million-acre increase in diverted acres led to an average 670,000-acre reduction in harvested area (see app. table 1).

As seen from this example, the effect of acreage reduction programs has not historically reduced wheat acreage by the full desired amount. This reduced program effectiveness is known as "acreage slippage." It occurs when harvested acres change by less than the change in idled acres. Slippage can refer to acreage in all crops or specific crops. Slippage varies by crop, region, and year, and by the type of acreage control program in effect and the program rules. Acreage slippage can result from nonparticipants in the program who plant more acres, from inflated acreage bases, and from the designation of fallow land as diverted acres.

Unlike earlier years, however, acreage slippage was not apparent after 1985. Harvested acreage declined more rapidly than the increase in diverted acreage between 1985-88. Several factors are responsible for this occurrence. With program participation at 73-87 percent, fewer producers were outside the program to increase their planted acres. In addition, the conservation reserve took a considerable amount of marginal land out of production. The change in base acreage calculation has also had an effect, as has limited cross-compliance, where participants in wheat, corn, sorghum, barley, and upland cotton programs cannot plant more acres of other program crops than their base acres.

Further, low wheat prices relative to corn prices contributed to sizable declines in harvested acreage. As the price of wheat fell relative to corn between 1985 and 1987, many Southeastern and Delta farmers stopped double-cropping soybeans and wheat. Corn Belt farmers who previously planted wheat more often concentrated on corn and soybeans. However, as wheat prices rose relative to corn prices in the late 1980's, double-cropping increased in 1988 and 1989.

Exports

The U.S. share of the world wheat market increased substantially in 1987 and 1988. U.S. wheat exports rose from 915 million bushels in 1985 to 1.6 billion in 1987, but are projected to decline in 1989 because of production shortfalls. The U.S. share of the world wheat market likewise expanded, from 27 percent in 1985 to about 41 percent in 1987 and 1988.

The 1985 Act assisted U.S. wheat exports through a variety of means. Recent USDA research indicates that 25 percent of the expansion in U.S. wheat exports between 1986 and 1988 was due to

subsidized exports (primarily through the export enhancement program) and 25 percent was due to the lower loan rate. About 40 percent was due to expanded imports by the USSR and China, and 10 percent was due to lower yields by competing exporters. The depreciation of the dollar was also a factor.

Prior to the act, export merchants were restrained from lowering export prices below the loan rate despite world market conditions because they could not do so profitably. With the export enhancement program, however, bonuses are provided to exporters who sell to markets targeted by USDA. The program uses a two-step, competitive bid process that helps exporters compete, while minimizing bonuses awarded from CCC stocks (see earlier discussion).

The export enhancement program has been among the most important provisions helping U.S. exporters compete with other countries' subsidies. Over 60 million tons of wheat and flour (wheat equivalent) were sold under the program between May 1985 (the start of the program) and July 1989. By value, about 85 percent of EEP-assisted sales have moved wheat into the world market. Major purchasers include the Soviet Union, North Africa, and China. Since May 1985, wheat bonuses have averaged about $30 per metric ton, or about 25 percent of U.S. wheat export prices.

The use of generic certificates and wheat auctions have also contributed to export expansion. Prior to the 1985 Act, the CCC could not sell stocks in commercial markets unless farm prices reached a specified CCC release price. Between 1986 and 1988, however, generic certificates and wheat auctions were used to release CCC stocks onto the market to meet strong export demand, despite farm prices well below the CCC release price.

Stocks-to-Use Ratio

Given the small stocks-to-use ratio in 1989, there is a risk of shortage and high prices if additional production shortfalls and demand increases occur in the near future. Supply and demand forces in 1989 similar to those existing in 1973, for instance, would imply a nominal U.S. wheat price of about $11 per bushel. Small stocks-to-use ratios also imply greater price variability.

To increase 1990 supplies, the Secretary announced on September 13 that participating farmers have the option of planting up to 105 percent of their wheat base acres. For every acre of wheat planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. For instance, if a producer planted 105 percent of his or her base, only 85 percent would be used to compute deficiency payments. Farmers who plant the extra wheat on corn or other program crop base acres will not lose that base, although the increase in plantings will not increase their future wheat base. Moreover, farmers still retain the option of holding to the 5-percent acreage reduction announced earlier, with the usual deficiency payment computations.

The decreased role of the United States as a world wheat stockholder (through wheat auctions, generic certificates, and the export enhancement program) has increased the likelihood of shortrun year-to-year variations in wheat supply, increasing price variability. Even so, significant amounts of excess land capacity exist for many crops, some of which could be brought into wheat production.

Indirect

Wheat programs also have had some indirect, but significant, effects on land values, resource use, and other crop and livestock production.

In particular, studies have shown that a portion of program benefits, particularly those associated with a base or allotment, are capitalized into land values. The result is that landowners who acquired land before bases or allotments were created earn windfall capital gains when they sell their land. When subsequent landowners pay higher prices for land with program bases, part of the higher price is from the program benefits that accompany the land. Their total production costs are higher and, thus, the net returns from the land are lower than if program benefits had not been capitalized.

Wheat production also has important indirect effects on environmental quality. Pesticides and fertilizers are contained in agricultural runoff and affect water quality. Limiting the use of these inputs, however, will tend to raise production costs or restrict yields. Because of concerns about environmental quality, expansion of the conservation reserve to environmentally sensitive areas has been debated. The long-term gains to society from limiting wheat production in certain areas to enhance environmental quality may exceed the costs of foregone wheat production.

Wheat programs also affect other agricultural sectors. Limited substitution can occur between grains, especially for livestock feed. Programs that tend to raise wheat prices may also lead to cost increases for livestock and poultry producers.

Additional Readings

Ackerman, K. "Program Boosted Wheat Exports," Agricultural Outlook. AO-155. August 1989.

Bailey, K. Why Did U.S. Wheat Exports Expand?. AIB-564. U.S. Dept. Agr., Econ. Res. Serv., May 1989.

Evans, S. Wheat: Background for 1985 Farm Legislation. AIB-467. U.S. Dept. Agr., Econ. Res. Serv., Sept. 1984.

Glaser, L. K. Provisions of the Food Security Act of 1985. AIB-498. U.S. Dept. Agr., Econ. Res. Serv., Apr. 1986.

Glauber, J. W. Generic Certificates. AER-594. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1988.

Hadwiger, D. F. Federal Wheat Commodity Programs. Ames: Iowa State Univ. Press, 1970.

Harwood, J.L. "Liberalizing World Trade in Wheat," Agricultural Outlook. AO-154. July 1989.

Heid, W. G. U.S. Wheat Industry. AER-432. U.S. Dept. Agr., Econ. Res. Serv., Apr. 1980.

Johnson, J. and others. Provisions of the Agriculture and Food Act of 1981. Staff Rpt. AGES811228. U.S. Dept. Agr., Econ. Res. Serv., Jan. 1982.

Knutson, R.D., J.B. Penn, and W.T. Boehm. Agricultural and Food Policy. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1983.

Martin, M. and others. "The Impacts of the CRP on Rural Communities: The Case of 3 Oregon Counties," Western Journal of Agricultural Economics 13 (2): 225-232.

Parlett, R., M. Matsumoto, and D. Smallwood. How the Food Security Act of 1985 Affects Consumers. AIB-527. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1987.

Pollack, S. L. "Agriculture and the 101st Congress," Agricultural Outlook. AO-154. July 1989.

U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service. ASCS Commodity Factsheets. Various issues.

_____, Economic Research Service. Agricultural-Food Policy Review: Commodity Program Perspectives. AER-530. July 1985.

_____, Wheat Situation and Outlook. Various issues.

Westcott, P. and M. Hanthorn. "Generic Certificates Help Meet Goals of 1985 Farm Act," Agricultural Outlook. AO-129. April 1987.

Zellner, J. A. and R. M. Morrison. How do Government Programs and Policies Influence Consumers' Food Choices? AIB-553. U.S. Dept. Agr., Econ. Res. Serv., Nov. 1988.

Glossary

Acreage allotment -- An individual farm's share of the national acreage that the Secretary of Agriculture determines is needed to produce sufficient supplies of a particular crop. The farm's share is based on its previous production.

Acreage reduction program (ARP) -- A voluntary land retirement system in which participating farmers idle a prescribed portion of their crop acreage base of wheat, feed grains, cotton, or rice. The base is the average of the acreage planted for harvest and considered to be planted for harvest. Acreage considered to be planted includes any acreage not planted because of acreage reduction and diversion programs during a period specified by law. Farmers are not given a direct payment for ARP participation, although they must participate to be eligible for benefits such as Commodity Credit Corporation loans and deficiency payments. Participating producers are sometimes offered the option of idling additional land under a paid land diversion program, which gives them a specific payment for each idled acre.

Acreage slippage -- A measure of the effectiveness of acreage reduction programs. Slippage occurs when harvested acres change by less than the change in idled acres.

Advance deficiency payments -- The Secretary is required to make advance deficiency payments to producers of crops when an acreage limitation program is in effect and deficiency payments are expected to be paid. Advance deficiency payments can range from 30 to 50 percent of expected payments.

Commodity Credit Corporation (CCC) -- A federally owned and operated corporation within the U.S. Department of Agriculture created to stabilize, support, and protect farm income and prices through loans, purchases, payments, and other operations. All money transactions for agricultural price and income support and related programs are handled through the CCC; the CCC also helps maintain balanced, adequate supplies of agricultural commodities and helps in their orderly distribution.

Common Agricultural Policy (CAP) -- A set of regulations by which member states of the European Community (EC) seek to merge their individual agricultural programs into a unified effort to promote regional agricultural development and achieve other goals. The variable levy and export subsidies are the two main elements of the CAP.

Concessional sales -- Credit sales of a commodity in which the buyer is allowed more favorable payment terms than those on the open market (such as low-interest, long-term credit).

Conservation reserve program (CRP) -- A major provision of the Food Security Act of 1985 designed to reduce erosion on 40-45 million acres of farmland. Under the program, producers who sign contracts agree to convert highly erodible cropland to approved

conservation uses for 10 years. In exchange, participating producers receive annual rental payments and cash or inkind payments to share up to 50 percent of the cost of establishing permanent vegetative cover.

Conserving uses -- Land idled from production and planted in annual, biennial, or perennial grasses, or other soil conserving crop.

Crop year -- The year in which a crop is planted; used interchangeably with marketing year.

Deficiency payment -- A Government payment made to farmers who participate in wheat, feed grain, rice, or cotton programs. The payment rate is per bushel, pound, or hundredweight, based on the difference between the price level established by law (target price) and the higher of the market price during a period specified by law or the price per unit at which the Government will provide loans to farmers to enable them to hold their crops for later sale (loan rate). The payment is equal to the payment rate multiplied by the acreage planted for harvest and then by the program yield established for the particular farm.

Direct payments -- Payments in the form of cash or commodity certificates made directly to producers for such purposes as deficiency payments, annual land diversion, or conservation reserve payments.

Disaster payments -- Federal aid provided to farmers for feed grains, wheat, rice, and upland cotton who have crop insurance (when available), when either planting is prevented or crop yields are abnormally low because of adverse weather and related conditions. Payments also may be made under special legislation enacted after an extensive natural disaster.

European Community (EC) -- Established by the Treaty of Rome in 1957, also known as the European Economic Community and the Common Market. Originally composed of six European nations, it has expanded to 12. The EC attempts to unify and integrate member economies by establishing a customs union and common economic policies, including the Common Agricultural Policy (CAP).

Export credit guarantee program (GSM-102) -- The largest U.S. agricultural export promotion program, functioning since 1982; guarantees repayment of private, short-term credit for up to 3 years.

Export enhancement program (EEP) -- Begun in May 1985 under a Commodity Credit Corporation charter to help U.S. exporters meet competitors' prices in subsidized markets. Under the EEP, exporters are awarded bonus certificates which are redeemable for CCC-owned commodities, enabling them to sell certain commodities to specified countries at prices below those of the U.S. market.

Export subsidies -- Special incentives, such as cash payments, tax exemptions, preferential exchange rates, and special contracts, extended by governments to encourage increased foreign sales; often used when a nation's domestic price for a good is artificially raised above world market prices.

Farm acreage base -- The annual total of the crop acreage bases (wheat, feed grains, upland cotton, and rice) on a farm, the average acreage planted to soybeans, peanuts, and other approved nonprogram crops, and the average acreage devoted to conserving uses. Conserving uses include all uses of cropland except crop acreage bases, acreage devoted to nonprogram crops, acreage enrolled in annual acreage reduction or limitation programs, and acreage in the conservation reserve program.

Farmer-owned reserve (FOR) -- A program designed to provide protection against wheat and feed grain production shortfalls and provide a buffer against unusually sharp price movements. Farmers can place eligible grain in storage and receive extended loans for 3 years with extensions as warranted by market conditions. The loans are nonrecourse in that farmers can forfeit the commodity held as collateral to the Government without penalty and without paying accumulated interest in full settlement of the loan.

Findley loan rates -- Originally proposed by Representative Paul Findley (R-Ill.), this provision was adopted in the Food Security Act of 1985. It gives the Secretary of Agriculture the discretionary authority to reduce the loan rate (price per unit at which the Government will provide loans to farmers to enable them to hold their crops for later sale) by up to 20 percent, if necessary, to make the commodity more competitive on the world market.

Food Security Act of 1985 (PL 99-198) -- The omnibus food and agriculture legislation signed into law on December 23, 1985, that provides a 5-year framework for the Secretary of Agriculture to administer various agriculture and food programs.

General Agreement on Tariffs and Trade (GATT) -- An agreement originally negotiated in Geneva, Switzerland, in 1947 among 23 countries, including the United States, to increase international trade by reducing tariffs and other trade barriers. The agreement provides a code of conduct for international commerce and a framework for periodic multilateral negotiations on trade liberalization and expansion.

Generic commodity certificates -- Negotiable certificates, which do not specify a certain commodity, that are issued by USDA in lieu of cash payments to commodity program participants and sellers of agricultural products. The certificates, frequently referred to as payment-in-kind (PIK) certificates, can be used to acquire stocks held as collateral on Government loans or owned by the Commodity Credit Corporation.

Intermediate export credit guarantee program (GSM-103) -- Established by the Food Security Act of 1985, this program complements GSM (General Sales Manager)-102 but guarantees repayment of private credit for 3-10 years.

International commodity agreement -- Agreements by a group of countries that contain substantive economic provisions aimed at stabilizing world trade, supplies, and prices, such as quotas, buffer stocks and so forth.

Loan rate -- The price per unit (bushel, bale, or pound) at which the Government will provide loans to farmers to enable them to hold their crops for later sale.

Nonrecourse loans -- The major price support instrument used by the Commodity Credit Corporation (CCC) to support the price of wheat, feed grains, cotton, peanuts, and tobacco. Farmers who agree to comply with all commodity program provisions may pledge a quantity of a commodity as collateral and obtain a loan from the CCC. The borrower may elect either to repay the loan with interest within a specified period and regain control of the collateral commodity or default on the loan. In case of a default, the borrower forfeits without penalty the collateral commodity to the CCC.

Paid land diversion -- If the Secretary of Agriculture determines that planted acres for a program crop should be reduced, producers may be offered a paid voluntary land diversion. Farmers are given a specific payment per acre to idle a percentage of their crop acreage base. The idled acreage is in addition to an acreage reduction program.

Payment-in-kind (PIK) -- A payment made to eligible producers in the form of an equivalent amount of commodities owned by the Commodity Credit Corporation.

Program yield -- The farm commodity yield of record determined by averaging the yield for the 1981-85 crops, dropping the high and low years. Program yields are constant for the 1986-90 crops. The farm program yield applied to eligible acreage determines the level of production eligible for direct payments to producers.

Public Law 480 (PL 480) -- Common name for the Agricultural Trade Development and Assistance Act of 1954, which seeks to expand foreign markets for U.S. agricultural products, combat hunger, and encourage economic development in developing countries.

Set-aside -- A voluntary program to limit production by restricting the use of land. When offered, producers must participate to be eligible for Federal loans, purchases, and other payments.

Target price -- A price level established by law for wheat, feed grains, rice, and cotton. Farmers participating in the Federal commodity programs receive the difference between the target price and the higher of the market price during a period

prescribed by law or the unit price at which the Government will provide loans to farmers to enable them to hold their crops for later sale (the loan rate).

Variable levies -- The difference between the price of a foreign product at the port and the official price at which competitive imports can be sold; levies are effectively a variable tax on imports or a variable subsidy to exports.

0/92 -- An optional acreage diversion program that allows wheat and feed grain producers to devote all or a portion of their permitted acreage to conserving uses and receive deficiency payments on the acreage. The program makes deficiency payments for a maximum of 92 percent of a farm's permitted acreage.

Appendix table 1--Acreage, yield, and production for wheat, 1955-89

Year	Planted	Harvested	Diverted 1/	Yield	Production
	Million acres			Bushels/acre	Million bushels
1955	58.2	47.3	---	19.8	935
1956	60.7	49.8	---	20.2	1,005
1957	49.8	43.8	---	21.8	956
1958	56.0	53.0	---	27.5	1,457
1959	56.7	51.7	---	21.6	1,118
1960	54.9	51.9	---	26.1	1,355
1961	55.7	51.6	---	23.9	1,232
1962	49.3	43.7	10.7	25.0	1,092
1963	53.4	45.5	7.2	25.2	1,147
1964	55.7	49.8	5.1	25.8	1,283
1965	57.4	49.6	7.2	26.5	1,316
1966	54.1	49.6	8.3	26.3	1,305
1967	67.3	58.4	---	25.8	1,508
1968	61.9	54.8	---	28.4	1,557
1969	53.5	47.1	11.1	30.6	1,443
1970	48.7	43.6	15.7	31.0	1,352
1971	53.8	47.7	13.5	33.9	1,619
1972	54.9	47.3	20.1	32.7	1,546
1973	59.3	54.1	7.4	31.6	1,711
1974	71.0	65.4	---	27.3	1,782
1975	74.9	69.5	---	30.6	2,127
1976	80.4	70.9	---	30.3	2,149
1977	75.4	66.7	---	30.7	2,046
1978	66.0	56.5	9.6	31.4	1,776
1979	71.4	62.5	8.2	34.2	2,134
1980	80.8	71.1	---	33.5	2,381
1981	88.3	80.6	---	34.5	2,785
1982	86.2	77.9	5.8	35.5	2,765
1983	76.4	61.4	29.8	39.4	2,420
1984	79.2	66.9	18.3	38.8	2,595
1985	75.6	64.7	18.8	37.5	2,425
1986	72.1	60.7	21.0	34.4	2,092
1987	65.8	56.0	23.9	37.7	2,107
1988	65.5	53.2	22.5	34.1	1,811
1989 2/	75.3	60.3	9.5	33.6	2,028

--- = Not applicable.

1/ Acreage idled under wheat programs only. For 1986-89, includes acreage reduction program, paid land diversion, 50/92, and 0/92. Does not include acres retired under the conservative reserve program (0.6 million acres in 1986, 4.2 million acres in 1987, 7.1 million acres in 1988, and 9.5 million acres in 1989). 2/ Projected.

Appendix table 2--Use and ending stocks for wheat, 1955-89

Crop year	Food	Feed 1/	Exports 2/	Total use 3/	Ending stocks 4/	Stocks-to-use ratio
	Million bushels					Percent
1955/56	484	51	322	926	1,130	122.0
1956/57	482	58	541	1,140	1,004	88.1
1957/58	484	43	419	1,008	962	95.4
1958/59	497	49	450	1,060	1,368	129.1
1959/60	495	49	502	1,109	1,384	124.8
1960/61	497	30	654	1,245	1,502	120.6
1961/62	504	44	716	1,320	1,421	107.7
1962/63	503	35	649	1,248	1,270	101.8
1963/64	488	29	846	1,427	994	69.7
1964/65	514	55	723	1,358	921	67.8
1965/66	518	146	852	1,577	661	41.9
1966/67	505	101	771	1,454	513	35.3
1967/68	518	37	765	1,391	630	45.3
1968/69	522	157	544	1,284	904	70.4
1969/70	520	188	603	1,367	983	71.9
1970/71	517	193	741	1,513	823	54.4
1971/72	524	262	610	1,459	983	67.4
1972/73	532	200	1,135	1,934	597	30.9
1973/74	544	125	1,217	1,970	340	17.3
1974/75	545	35	1,019	1,690	435	25.7
1975/76	589	37	1,173	1,899	666	35.1
1976/77	588	74	950	1,704	1,113	65.3
1977/78	587	193	1,124	1,983	1,178	59.4
1978/79	592	158	1,194	2,031	924	45.5
1979/80	596	86	1,375	2,158	902	41.8
1980/81	611	59	1,514	2,296	989	43.1
1981/82	602	135	1,771	2,618	1,159	44.3
1982/83	616	195	1,509	2,417	1,515	62.7
1983/84	643	369	1,429	2,540	1,399	55.1
1984/85	651	405	1,424	2,578	1,425	55.3
1985/86	674	279	915	1,961	1,905	97.1
1986/87	696	413	1,004	2,197	1,821	82.9
1987/88	719	288	1,592	2,684	1,261	47.0
1988/89 5/	730	210	1,440	2,480	616	24.8
1989/90 5/	735	175	1,150	2,165	500	23.1

1/ Residual. Approximates feed use and includes negligible quantities used for alcoholic beverages. 2/ Exports include flour and other products expressed in wheat equivalent. 3/ Totals do not add because of seed and industrial use. 4/ Includes Government-owned and privately owned stocks. 5/ Projected.

Appendix table 3--Prices and ending stocks for wheat, 1960-89

Crop year	Ending stocks CCC	FOR 1/	Free	Total 2/	Price received	Loan rate	Target price	Direct payment
	Million bushels				Dollars/bushel			
1960/61	1,225	---	278	1,502	1.74	1.78	---	---
1961/62	1,074	---	346	1,421	1.83	1.79	---	---
1962/63	1,102	---	168	1,270	2.04	2.00	---	---
1963/64	800	---	194	994	1.85	1.82	---	0.18 3/
1964/65	635	---	286	921	1.37	1.30	---	.70 4/
1965/66	299	---	361	661	1.35	1.25	---	.75
1966/67	122	---	391	513	1.63	1.25	---	1.32
1967/68	100	---	530	630	1.39	1.25	---	1.36
1968/69	140	---	765	904	1.24	1.25	---	1.38
1969/70	277	---	705	983	1.25	1.25	---	1.52
1970/71	353	---	470	823	1.33	1.25	---	1.57
1971/72	355	---	628	983	1.34	1.25	---	1.63
1972/73	6	---	591	597	1.76	1.25	---	1.34
1973/74	1	---	340	340	3.95	1.25	---	.68
1974/75	---	---	435	435	4.09	1.37	2.05	---
1975/76	---	---	666	666	3.56	1.37	2.05	---
1976/77	---	---	1,113	1,113	2.73	2.25	2.29	---
1977/78	48	342	788	1,178	2.33	2.25	2.90	.65
1978/79	50	393	481	924	2.97	2.35	3.40	.52
1979/80	188	260	454	902	3.80	2.50	3.40	---
1980/81	200	360	429	989	3.99	3.00	3.63 5/	---
1981/82	190 6/	562	407	1,159	3.69	3.20	3.81	.15 7/
1982/83	192 6/	1,061	262	1,515	3.45	3.55	4.05	.50
1983/84	188 6/	611	600	1,399	3.51	3.65	4.30	.65
1984/85	378 6/	654 8/	393	1,425	3.39	3.30	4.38	1.00
1985/86	602 6/	433 8/	870	1,905	3.08	3.30	4.38	1.08
1986/87	830 6/	463 8/	528	1,821	2.42	2.40	4.38	1.98
1987/88	283 6/	467	511	1,261	2.57	2.28	4.38	1.81
1988/89 9/	190 6/	287	139	616	3.74	2.21	4.23	0.69
1989/90 10/	100 6/	100	300	500	4.00	2.06	4.10	0.10

--- = Not applicable.

1/ Farmer-owned reserve. 2/ Totals may not add because of rounding. 3/ Price support payment. 4/ Value of domestic marketing certificate, 1964/65-1973/74. 5/ Growers who planted in excess of their normal crop acreage were eligible for a target price of $3.08 per bushel. 6/ Includes 147 million bushels in the food security reserve. 7/ Deficiency payment, 1981/82 to date. 8/ Does not include special producer storage loan program. 9/ Estimated. 10/ Projected.

Appendix table 4--Program costs for wheat and products, 1970-87 1/

Fiscal year 2/	Outlays: Deficiency payment	Outlays: Acreage diversion 3/	Outlays: Set-aside and/or disaster 4/	Outlays: Exports 5/	Outlays: Reseal loan or producer storage 6/	Loan operations: Outlays	Loan operations: Repayments	Other 7/	Net price support and related expenditures 8/
				Million dollars					
1970	0	47.4	0	55.6	48.9	519.0	325.5	420.4	765.8
1971	0	0	62.6	126.8	39.4	280.4	412.2	333.7	430.7
1972	0	0	0	63.5	27.0	544.0	316.1	512.5	830.9
1973	0	0	132.2	297.9	28.3	160.1	510.7	-71.9	35.9
1974	0	0	98.5	43.2	4.3	74.7	141.6	129.5	208.6
1975	0	0	101.5	0	0	42.7	48.7	-70.0	25.5
19760	0	0	52.8	0	0	64.8	44.9	-2.5	70.2
1976TQ	0	0	71.3	0	0	64.8	10.6	-1.8	123.7
1977	0	---	136.9	0	.4	1,940.0	181.1	2.7	1,898.9
1978	996.4	---	122.3	0	109.3	827.0	1,231.4	16.7	840.3
1979	617.4	---	105.3	0	66.5	367.9	867.3	10.4	300.2
1980	-.1	---	96.9	0	18.0	587.3	565.2	729.0	865.9
1981	0	---	320.6	0	110.5	1,594.5	559.4	70.3	1,536.5
1982	414.5	---	79.2	0	230.2	2,033.5	556.0	28.6	2,230.0
1983	820.8	---	146.6	0	200.9	2,583.3	1,705.3	1,363.7	3,410.0
1984	423.9	---	657.2	0	176.9	1,605.3	1,709.6	1,368.4	2,522.1
1985	1,739.5	---	651.6	0	167.6	2,277.8	404.2	213.3	4,645.6
1986	1,674.0	---	14.8	0	172.3	1,570.3	550.7	509.8	3,390.5
1987	1,547.3	---	-.5	0	171.9	1,170.4	1,373.9	1,293.5	2,808.7

1/ Excludes PL 480 commodity costs. Payments or receipts less than $50,000 are recorded as "0." 2/ Includes July/September 1976 to allow for shift from July/June to October/September fiscal year. 3/ Included in set-aside and/or disaster payments column from 1977 to present. 4/ Additional set-aside in 1971 and 1972; additional set-aside or disaster from 1973-75; disaster in 1976; disaster or diversion from 1977-87. 5/ Commodity export payments. 6/ Reseal storage payments ended in 1975. Producer storage payments began in 1977. 7/ Other outlays include: storage, handling, transportaton, processing, and packaging costs; net certificate operations; purchases; and other items. Receipts include sales and other items. Negative indicates net receipts. 8/ Direct price support or deficiency, diversion, disaster, certificate, export, and producer storage payments plus Government expenditures for storage and handling, transportation, processing and packaging, loan collateral settlements, loans, purchases, and other expenses less sales proceeds, loan repayments, certificates sold, and other receipts. Totals may not add because of rounding.

Appendix table 5--Value comparisons for wheat, 1960-88

Year	Loan value per acre		Market value per acre		Gross value of production	
	Nominal 1/	Real 2/	Nominal 3/	Real 2/	Nominal 4/	Real 2/
	Dollars				Billion dollars	
1960	46.46	150.35	45.41	146.97	2.36	7.63
1961	42.78	137.12	43.74	140.18	2.26	7.23
1962	50.00	156.74	51.00	159.87	2.23	6.98
1963	45.86	141.56	46.62	143.89	2.12	6.55
1964	33.54	101.95	35.35	107.43	1.76	5.34
1965	33.13	98.00	35.78	105.84	1.78	5.25
1966	32.88	93.93	42.87	122.48	2.13	6.08
1967	32.25	89.83	35.86	99.89	2.10	5.84
1968	35.50	94.16	35.22	93.41	1.93	5.12
1969	38.25	96.11	38.25	96.11	1.80	4.53
1970	38.75	92.26	41.23	98.17	1.80	4.28
1971	42.38	95.44	45.43	102.31	2.17	4.89
1972	40.88	87.90	57.55	123.77	2.72	5.85
1973	39.50	79.80	124.82	252.16	6.76	13.65
1974	37.40	69.26	111.66	206.77	7.29	13.50
1975	41.92	70.69	108.94	183.70	7.57	12.77
1976	68.18	108.04	82.72	131.09	5.87	9.30
1977	69.08	102.64	71.53	106.29	4.77	7.08
1978	73.79	102.20	93.26	129.17	5.27	7.30
1979	85.50	108.78	129.96	165.34	8.11	10.32
1980	100.50	117.27	133.67	155.97	9.50	11.09
1981	110.40	117.45	127.31	135.43	10.28	10.93
1982	126.03	126.03	122.48	122.48	9.54	9.54
1983	143.81	138.41	138.29	133.10	8.49	8.17
1984	128.04	118.89	131.53	122.13	8.80	8.17
1985	123.75	111.59	115.50	104.15	7.47	6.74
1986	82.56	72.48	83.25	73.09	5.06	4.44
1987	85.96	73.03	96.89	82.32	5.42	4.60
1988	75.36	61.92	127.53	104.79	6.77	5.57

1/ Loan rate times yield per harvested acre. Loan rate includes allowance for unredeemed loans and purchases by the Government valued at the average loan and purchase rate, by State. 2/ Nominal dollars deflated by the GNP implicit price deflator (1982 = 1.00). 3/ Season average price received by farmers times yield per harvested acre. Season average price received by farmers is obtained by weighting State prices by quantities sold. 4/ U.S. production times season average price received by farmers.

Appendix table 6--World production, consumption, and ending stocks for wheat, 1960-89

Crop year 1/	Production	Consumption 2/	Ending stocks 3/	Ending stocks-to-consumption ratio
	Million metric tons			Percent
1960/61	238.4	235.8	82.8	35.1
1961/62	224.8	237.9	69.9	29.4
1962/63	251.8	245.8	75.8	30.9
1963/64	233.9	239.4	70.3	29.4
1964/65	270.4	262.3	78.5	29.9
1965/66	263.3	281.1	60.7	21.6
1966/67	306.7	279.8	87.6	31.3
1967/68	297.6	287.5	97.7	34.0
1968/69	330.8	307.2	121.3	39.5
1969/70	310.0	327.8	103.6	31.6
1970/71	313.7	336.7	80.6	23.9
1971/72	350.9	342.2	89.3	26.1
1972/73	343.4	357.7	74.9	20.9
1973/74	373.1	365.3	82.7	22.6
1974/75	360.1	361.5	81.4	22.5
1975/76	356.5	351.2	86.6	24.7
1976/77	421.4	380.8	127.2	33.4
1977/78	384.1	402.4	108.9	27.1
1978/79	446.9	421.2	134.6	31.9
1979/80	424.5	438.3	120.7	27.5
1980/81	443.0	450.9	112.9	25.0
1981/82	449.3	449.5	112.7	25.1
1982/83	477.3	460.2	129.9	28.2
1983/84	489.3	474.0	145.1	30.6
1984/85	511.9	493.0	164.0	33.3
1985/86	500.1	496.2	167.9	33.8
1986/87	530.7	522.4	176.1	33.7
1987/88 4/	503.7	533.5	146.3	27.4
1988/89 5/	501.0	534.3	112.9	21.1
1989/90 5/	531.1	535.1	108.9	20.3

1/ July-June year. 2/ Consumption data are based on an aggregate of differing local marketing years. For countries for which stocks are not available (excluding the USSR), consumption estimates represent apparent utilization. 3/ Ending stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time. Stock data are not available for all countries and exclude parts of Eastern Europe and parts of Asia. Stock levels have been adjusted for estimated year-to-year changes in USSR grain stocks, but do not purport to include the entire level of USSR stocks. 4/ Preliminary. 5/ Projected.

Appendix table 7--Wheat production, trade, and stocks, world and United States, 1965-89

Year 1/	Production			Exports			Ending stocks		
	World	United States	U.S. share	World 2/	United States	U.S. share	World 3/	United States	U.S. share
	Million bushels		Percent	Million bushels		Percent	Million bushels		Percent
1965	9,675	1,316	14	2,308	852	37	2,232	661	30
1966	11,270	1,305	12	2,028	771	38	3,220	513	16
1967	10,935	1,508	14	1,914	765	40	3,589	630	18
1968	12,157	1,557	13	1,712	544	32	4,457	904	20
1969	11,390	1,443	13	1,848	603	33	3,805	983	26
1970	11,525	1,352	12	1,947	741	38	2,960	823	28
1971	12,895	1,619	13	1,988	610	31	3,280	983	30
1972	12,618	1,546	12	2,524	1,135	45	2,753	597	22
1973	13,711	1,711	12	2,330	1,217	52	3,040	340	11
1974	13,232	1,782	13	2,289	1,019	44	2,989	435	15
1975	13,100	2,127	16	2,517	1,173	47	3,183	666	21
1976	15,483	2,149	14	2,289	950	41	4,674	1,113	24
1977	14,114	2,046	14	2,730	1,124	41	4,002	1,178	29
1978	16,419	1,776	11	2,612	1,194	46	4,944	924	19
1979	15,597	2,134	14	3,142	1,375	44	4,437	902	20
1980	16,278	2,381	15	3,472	1,514	44	4,147	989	24
1981	16,510	2,785	17	3,741	1,771	47	4,142	1,159	28
1982	17,538	2,765	16	3,605	1,509	42	4,771	1,515	32
1983	17,977	2,420	13	3,737	1,429	38	5,330	1,399	26
1984	18,810	2,595	14	3,987	1,424	36	6,026	1,425	24
1985	18,376	2,425	13	3,333	915	27	6,169	1,905	31
1986	19,499	2,092	11	3,289	1,004	31	6,472	1,821	28
1987	18,507	2,107	11	3,899	1,592	41	5,374	1,261	23
1988 4/	18,408	1,811	10	3,465	1,440	42	4,149	616	15
1989 4/	19,514	2,028	10	3,575	1,150	32	4,000	500	12

1/ World data based on a July/June year. U.S. data based on a June/May year. 2/ Excludes intra-EC trade. 3/ Stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time. Stock data are not available for all countries and exclude parts of Eastern Europe and parts of Asia. Stock levels have been adjusted for estimated year-to-year changes in USSR grain stocks, but do not purport to include the entire level of USSR stocks. 4/ Projected.

Appendix table 8--World wheat trade as a share of production, world stocks as a share of consumption, and U.S. exports as a share of consumption, 1960-89

Year 1/	World trade 2/ to world production	World stocks to world consumption	U.S. exports to foreign consumption
		Percent	
1960	18	35	8
1961	21	29	8
1962	17	31	7
1963	24	29	10
1964	19	30	7
1965	24	22	8
1966	18	31	8
1967	18	34	7
1968	14	39	5
1969	16	32	5
1970	17	24	6
1971	15	26	5
1972	20	21	9
1973	17	23	9
1974	17	23	8
1975	19	25	9
1976	15	33	7
1977	19	27	8
1978	16	32	8
1979	20	28	9
1980	21	25	9
1981	23	25	11
1982	21	28	9
1983	21	31	8
1984	21	33	8
1985	18	34	5
1986	17	34	5
1987	21	27	8
1988 3/	19	21	7
1989 3/	18	20	6

1/ July/June year. 2/ Excludes intra-EC trade. 3/ Projected.

Appendix table 9--Wheat production and exports, major foreign exporters and total foreign, 1960-89

Year 3/	Australia		Canada		Argentina		EC 1/		Foreign 2/	
	Prod.	Exports	Prod.	Exports	Prod.	Exports	Prod.	Exports	Prod.	Exports
	Million bushels									
1960	274	237	518	353	146	40	1,239	96	7,405	957
1961	247	182	283	358	210	100	1,179	121	7,026	1,009
1962	307	226	566	331	209	66	1,538	158	8,161	1,050
1963	328	257	723	595	328	127	1,297	162	7,448	1,295
1964	369	269	601	400	414	231	1,487	229	8,653	1,293
1965	260	172	649	585	223	205	1,575	241	8,392	1,392
1966	467	312	827	515	230	82	1,386	205	9,955	1,375
1967	277	208	593	336	269	81	1,624	269	9,428	1,203
1968	544	234	650	306	211	92	1,631	339	10,600	1,303
1969	387	296	671	346	258	85	1,562	383	9,947	1,448
1970	290	336	332	435	181	36	1,517	214	10,173	1,334
1971	316	286	530	504	209	60	1,776	331	11,276	1,461
1972	242	157	533	577	254	117	1,778	444	11,071	1,515
1973	440	258	594	419	241	58	1,752	433	12,000	1,465
1974	417	315	489	395	219	66	1,938	452	11,450	1,496
1975	440	318	628	450	315	116	1,657	533	10,973	1,545
1976	434	349	867	494	404	217	1,711	402	13,334	1,652
1977	344	298	730	588	209	65	1,635	465	12,068	1,651
1978	665	430	777	480	298	150	2,033	564	14,643	1,893
1979	595	485	631	584	298	175	1,954	655	13,463	2,053
1980	399	352	709	598	286	141	2,261	796	13,897	2,046
1981	601	404	911	678	305	134	2,135	821	13,725	2,190
1982	326	267	982	785	551	363	2,376	805	14,773	2,423
1983	809	490	972	800	468	288	2,344	821	15,557	2,612
1984	686	539	779	645	485	346	3,055	1,043	16,215	2,832
1985	594	589	891	650	312	158	2,632	1,020	15,951	2,622
1986	592	575	1,153	764	328	163	2,647	1,030	17,407	2,746
1987	457	366	953	863	323	136	2,624	1,024	16,399	2,650
1988 4/	531	397	575	448	279	129	2,745	1,177	16,597	2,537
1989 4/	551	423	955	735	367	198	2,860	1,110	17,486	2,728

1/ Includes intra-EC trade. 2/ Aggregate of differing local marketing years. 3/ July/June year. 4/ Projected.