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October 1992

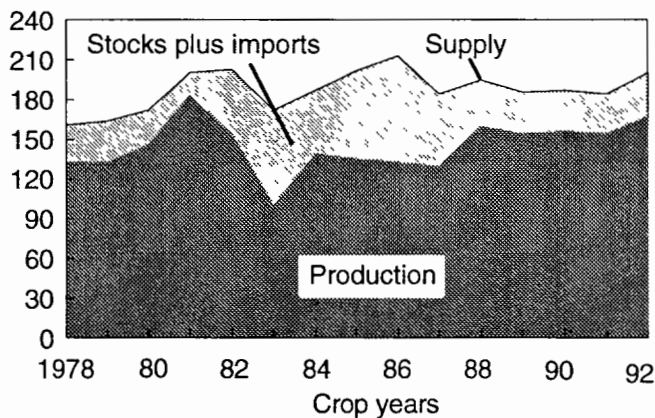
Rice

Situation and Outlook Report

R. MANN LIBRA_k
NOV 03 1992

U.S. Rice Supply

Million cwt



1992 forecast

1992 NEAR-RECORD
PRODUCTION BOOSTS
SUPPLIES

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Rice Conversions

1 cwt = 100 pounds = 2.22 bushels = .0454 metric tons
1 metric ton = 2,204.6 pounds = 22.046 cwt = 48.992 bu.
1 cwt rough rice = .032 metric ton milled
1 metric ton milled = 31 cwt rough

Summary

U.S. 1992 rice production is forecast to increase 8 percent from a year earlier to 166.7 million cwt. This is the largest U.S. rice crop since 1981 when record acreage boosted output to 183 million cwt.

The forecast gain in output is caused by a projected 8 percent rise in harvested acreage. Contributing factors include a 0 percent acreage reduction program (ARP), compared to 5 percent in 1991; favorable weather and relatively high prices at planting time; and increased water availability in California.

National average yields, forecast at 5,615 pounds per acre, almost equal last year's 5,617. Over the last 6 years, yields averaged 5,603 pounds per acre and ranged between 5,514 pounds per acre in 1988 and the record of 5,749 pounds in 1989.

Although U.S. yields are not record high, California is forecast to set a State high of 8,300 pounds per acre, well above last year's yield of 7,800 and the previous record of 7,900 pounds per acre set in 1989. Record yields are not expected for other States, but yields in Arkansas and Missouri are forecast higher than last year. Cool, damp weather in Texas and Louisiana reduced yield prospects for those States and Hurricane Andrew caused some damage to the Louisiana crop. Mississippi yields are also forecast lower than in 1991.

U.S. 1992/93 rice supplies are projected up 8 percent from a year ago to 199.6 million cwt. This is the highest since 1986/87 when record stocks contributed significantly to record supply. Nearly 80 percent of the expected increase is attributed to the forecast rise in production. Higher beginning stocks and imports make up the remaining increase in supply.

The forecast increase in supplies and recent lowering of international prices and the USDA's announced world rice price is putting downward pressure on U.S. prices. Rice prices at the farm level are forecast to range between \$6.50 and \$7.00 per cwt in 1992/93, compared with an estimated \$7.53 for the 1991/92 marketing year.

With 1992/93 supplies expected to be higher and prices lower, U.S. exports are projected up 11.5 percent from last

year. Increased supplies and lower prices are expected to improve U.S. competitiveness in the high-quality markets in Europe, the Middle East, and Latin America and also are likely to lead to more rice for the P.L. 480 Program, potentially boosting exports to Latin America and Africa.

U.S. domestic use continues to grow, but slower than in the late 1980's. Food use for 1992/93 is forecast up 3.5 percent based on a growth rate projected from results of recent Economic Research Service distribution surveys and reports by the Rice Millers' Association. Brewer's use is projected at the same level as 1991/92.

With growth in supplies forecast to exceed growth in use, 1992/93 carryout stocks are expected to increase to 31.6 million cwt, 16 percent above 1991/92. The stocks-to-use ratio for 1992/93 is expected to be 18.8 percent, slightly up from 17.4 for the previous year, and 3.7 percentage points above 1990/91.

Foreign rice production in 1992/93 is forecast up marginally from a year earlier. Area is projected up slightly, due to increases in China, India, Indonesia, and Japan, and yields should rise marginally.

Foreign consumption is also forecast up marginally and is expected to exceed production. As a result, ending stocks are projected to be drawn down and the stocks-to-use ratio to decline from 16 percent to 15.

Abundant supplies in major exporting countries, combined with higher production in major importing countries, suggests a tightening of world trade, greater pressure on declining world prices, and increased competitiveness in the global rice market.

World rice trade in calendar 1993 is expected to decline 4 percent to 13.6 million tons. Forecast lower Indonesian imports account for the majority of the decline.

Fierce price competition is expected to dominate world trade in 1993. A second large crop in as many years and lower prices should permit Vietnam to make inroads into Thailand's market share of the low-quality long-grain rice market.

U.S. Outlook for 1992/93

U.S. Production Up Because of Higher Acreage

U.S. 1992 rice production is forecast to increase 8 percent from a year earlier to 166.7 million cwt, based on USDA's Crop Production report released October 8. This is the second largest U.S. rice crop in history, surpassing 1988's output of 160 million cwt, but falling significantly from 1981's record 183 million cwt. Long grain production is expected up 9 percent and medium grain up 6 percent. Short grain production continues to plummet and now makes up less than 0.5 percent of the total.

This forecast gain in output is caused by a projected 8 percent rise in harvested acreage. Contributing factors include a 0 percent acreage reduction program (ARP), compared to 5 percent in 1991; favorable weather and relatively high prices at planting time; and increased water availability in California.

Harvest Completed Early in Most Areas

Harvest moved ahead of schedule in all States except Texas. By October 11, 92 percent of the crop was harvested, compared with a historic average of 82 percent.

Favorable weather during the planting season in most areas allowed seeding to proceed ahead of schedule and be completed by June. Rice crop development progressed faster than usual, leading to an early harvest. Rains in southern Louisiana slowed harvest there somewhat.

The Texas rice harvest was later than usual because some plantings were delayed due to heavy rain. In addition, cold wet weather during the growing season slowed crop development.

Yields Nearly Equal Year Earlier

National average yields, forecast at 5,615 pounds per acre, about equal last year's 5,617. Over the last 6 years, yields averaged 5,603 pounds per acre and ranged between 5,514 pounds per acre in 1988 and the record of 5,749 pounds in 1989.

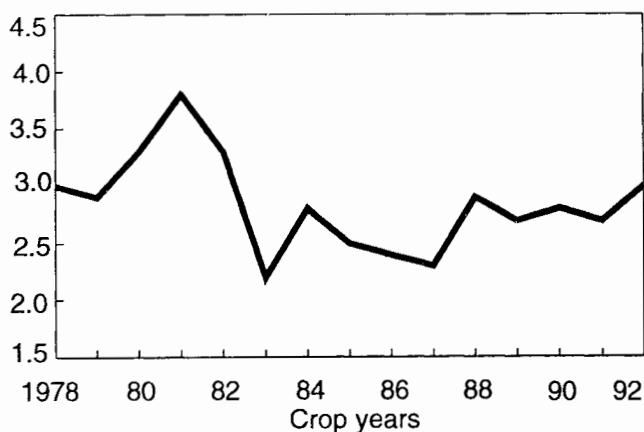
Although U.S. yields are not record high, California is forecast to set a record of 8,300 pounds per acre, well above the average of the last 6 years (7,612) and 1991 (7,800). California yields benefited from consistently warm weather during the planting season, which allowed producers to get the crop in early. Continued warm weather through the growing season helped the crop to move quickly to maturity. In other years, cool nights have slowed planting and development of the crop. Good weather combined with greater use of shorter-season varieties helped California farmers to finish harvest early and to avoid yield loss associated with changing weather conditions in the fall.

Records are not expected for other States, but yields in Arkansas and Missouri are forecast higher than last year. Cool, damp weather in Texas, Louisiana, and Mississippi reduced yield prospects for those States and Hurricane Andrew caused some damage to the Louisiana crop. Ratoon (second) crop prospects in Texas and Louisiana have deteriorated because of the cool, wet weather.

Hurricane Andrew moved through part of the rice-growing area in Louisiana, but did not do significant damage to the rice crop. Most of the rice in southern Louisiana had already been harvested when the hurricane hit and most is grown west of where the hurricane moved inland. Heavy rains associated with the hurricane may have slightly reduced yield

Figure 1
U.S. Rice Acreage

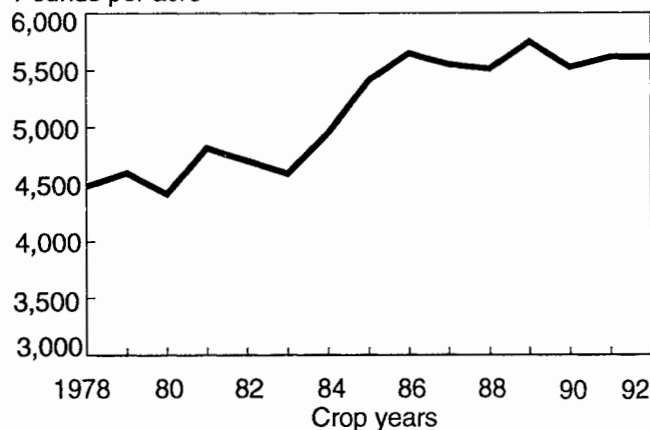
Million acres



1992 forecast

Figure 2
U.S. Rice Yields

Pounds per acre



1992 forecast

prospects in northeastern Louisiana and Mississippi where harvest had just begun.

Supplies Forecast Above Last Year

Total 1992/93 rice supplies are projected up 8 percent from a year ago to 199.6 million cwt. This is the highest level since 1986/87 when record stocks contributed significantly to record supply. In 1992/93, nearly 80 percent of the expected increase is attributed to the forecast rise in production. Higher beginning stocks and imports make up the remaining increase in supply.

Domestic Use Continues To Increase

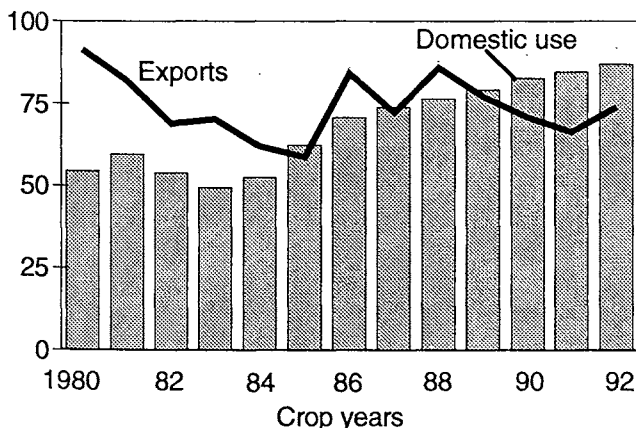
Food use for 1992/93 is forecast up 3.5 percent based on the growth rate projected from results of recent Economic Research Service distribution surveys and reports by the Rice Millers' Association. However, brewers' use is projected at the same level as 1991/92. Rice is used mostly in premium beers for which sales have declined, but is not used in light/dry beers for which sales have been increasing. Brewers' use currently accounts for 17 percent of total domestic use.

Exports Projected To Rebound

U.S. exports in 1992/93 are projected at 74 million cwt, up 11.5 percent from last year's reduced level. Increased supplies and lower prices are expected to improve the competitiveness of U.S. rice in the high-quality markets, particularly in Europe, the Middle East, and Latin America. Lower prices are also likely to increase the quantity of rice shipped under the P.L. 480 Program, potentially boosting exports to Latin America and Africa.

Figure 3
U.S. Rice Use

Million cwt



1992 forecast. Residual not included.

U.S. Market Share To Rise

U.S. exports are off to a fast start in the 1992/93 marketing year (August/July). According to the October 8 Export Sales Report, sales are running over 150,000 tons ahead of last year's pace. Traditionally U.S. exports pick up during the first half of the marketing year as supplies increase after harvest and prices become more competitive. Current commitments are the highest since 1989/90 when the U.S. exported 77.2 million cwt of rice. U.S. market share of world trade in calendar 1993 is forecast to increase.

U.S. rice has traditionally sold at a premium on the world market. In light of the increasing competitiveness of the world rice market, high U.S. prices relative to other exporting countries will increase the importance of U.S. export programs. The principal export programs for rice include the Export Enhancement Program (EEP), government credit programs, PL 480 sales, and food aid.

During August-September 1992 38,370 tons of EEP sales were made to Algeria, the FSU, and Eastern Europe. This compares with only 2,440 tons during the same period in 1991. This suggests the increasing importance of EEP rice sales as a part of U.S. exports, and that EEP is contributing to stronger exports in 1992/93 compared to 1991/92.

As of October 9, government short-term credit (GSM-102) allocations for rice purchases for fiscal year 1993 totaled \$61.4 million. Mexico (\$20 million), Senegal (\$17 million), and Trinidad/Tobago (\$10 million) are the major recipients with the remainder going to Columbia, South Africa, the Ivory Coast, and Czechoslovakia. Subsequent allocations may be added through the course of the year. Last year on October 4 GSM-102 allocations were only \$40.5 million, about half of the final total.

The fiscal year 1993 PL 480 program for rice has not yet been announced. However, on October 9 the U.S. Government announced \$24 million in food aid to Russia for rice purchases.

Key market factors to watch for during the 1992/93 marketing year are further Iranian purchases of U.S. rice, increased price competition, particularly in Latin American markets, and the growing importance of U.S. government export programs for rice.

Stocks Expected To Grow

Despite the forecast resurgence of U.S. exports, growth in supplies is forecast to exceed growth in use. Carryout stocks for 1992/93 are forecast to increase to 31.6 million cwt, 16 percent above 1991/92. The stocks-to-use ratio for 1992/93 is expected to be 18.8 percent, slightly up from 17.4 percent

for the previous year, and 3.7 percentage points above 1990/91.

U.S. Prices Forecast Lower Than Last Year

Rice prices at the farm level are forecast to range between \$6.50 and \$7.00 per cwt in 1992/93, compared with an estimated \$7.53 for the 1991/92 marketing year. The forecast boost in U.S. supplies and recent lowering of international prices and USDA's announced world rice price is putting downward pressure on U.S. prices.

Summary of 1991/92

U.S. Production Down Slightly

U.S. 1991 rice production decreased an estimated 1 percent from 1990 to 154.5 million cwt. Harvested area was down 2.5 percent from the previous year, due largely to weather-related problems. Reductions in California, Louisiana, and Texas more than offset increased acreage in Arkansas and Missouri. Average yield was above the 1990 average, but below the record high of 1989. Growers in southern Louisiana and along the upper coast of Texas benefited from good second crops.

Nearly 147,000 acres of rice land were categorized as "prevented plantings" in 1991. Many California farmers had water allocations reduced because of the drought, while some Delta farmers were unable to plant because of too much rain.

U.S. 1991/92 rice supply was down 1.5 percent from 1990/91. Carryin stocks and production were down 3.4 million cwt and imports were up .5 million cwt.

Domestic Use Continued To Grow, But Rate Slowed

Overall domestic use for 1991/92 was estimated up 2.4 percent from 1990/91. Food use was estimated up 2.9 percent based in part on reports from the Rice Millers' Association. Brewers' and seed use changed little from 1990/91.

U.S. Exports Down in Marketing Year 1991/92

U.S. exports for the 1991/92 marketing year (August/July) are forecast at 66.4 million cwt, down 6 percent from 1990/91 and the lowest since 1985/86. U.S. prices were high much of the year, but around May they began to fall and late season sales picked up. Much of the late season export activity involved P.L. 480 program rice and credit sales.

The EC reduced its imports of U.S. rice by 24 percent in 1991/92 due to higher U.S. prices relative to Thai prices. U.S. exports to Brazil fell by 35 percent, partly due to increased Brazilian production and greater competition from

Argentina and Uruguay. Total U.S. rice exports to the Middle East were down 11 percent despite higher exports to Turkey.

Increases in U.S. rice exports were observed for the former Soviet Union, Eastern Europe, and Central America. Much of this gain is attributable to U.S. Government credit guarantees, EEP, and food aid.

The Export Enhancement Program (EEP) for the rice marketing year 1991/92 totaled 322,180 tons. This represents a dramatic increase from 1990/91 when EEP rice sales totaled only 73,120 tons. Bonuses averaged about \$72.87 per ton in 1991/92, up from the 1990/91 average bonus of \$52.34 per ton. The largest purchaser of rice under EEP in 1991/92 was Turkey (about 200,000 tons or 56 percent of all EEP rice sales). Other active EEP purchasers have been Eastern European countries, the former Soviet Republics, Algeria, Israel, and Jordan.

GSM-102 rice credit guarantee allocations for fiscal year 1992 were \$80.1 million. Of this, \$64.6 million were approved. About 58 percent of the approvals were for sales to Mexico and Senegal. Algeria and the former Soviet Union were also major recipients of the guaranteed credit. Only Jordan was allocated a long term guarantee (GSM-103) for rice purchases of \$5 million, however, none of this money was used.

Fiscal 1992 total P.L. 480 rice allocations were 350,000 tons, down 15 percent from 1991. Title I rice allocations reached 85,300 tons of rice, valued at \$26 million compared with 118,000 tons in fiscal 1991. Primary recipients were the Congo, Ivory Coast, Jamaica, and Sierra Leone. In addition, about 188,000 tons of rice were allocated under Title II and 75,000 tons were allocated under Title III.

Ending Stocks Increased

With total supplies just slightly below last year and exports substantially down, ending stocks rose nearly 11 percent in 1991/92 to 27.3 million cwt. This was the first year since 1985/86 that stocks increased.

Between 1985/86 and 1988/89 stocks plummeted from 77.3 million to 26.7 million cwt. Stocks remained between 24 and 27 million cwt from 1988/89 through 1990/91. Larger carryout stocks for 1991/92 eased the still tight stocks-to-use situation, boosting the ratio 2.3 percentage points to 17.4 percent. This was the first year since 1987/88 that the ratio exceeded 17 percent.

Reduced 1991/92 exports, the slight build-up of stocks, and an expected larger U.S. rice crop in 1992/93 caused U.S. prices to slide during the last half of the marketing year.

U.S. Rice Prices Escalate Early in 1991/92, Then Plummet

The U.S. season-average-farm price for rough rice is estimated at \$7.53 per cwt for 1991/92, up from \$6.70 in 1990/91 and the highest price since the marketing loan went into effect in 1985/86. In 1984/85, just before the 1985 Farm Bill was implemented and the marketing loan went into effect, U.S. rice prices averaged \$8.04 per cwt. Between 1987/88 and 1991/92, season-average prices ranged between \$6.70 and \$7.53 per cwt.

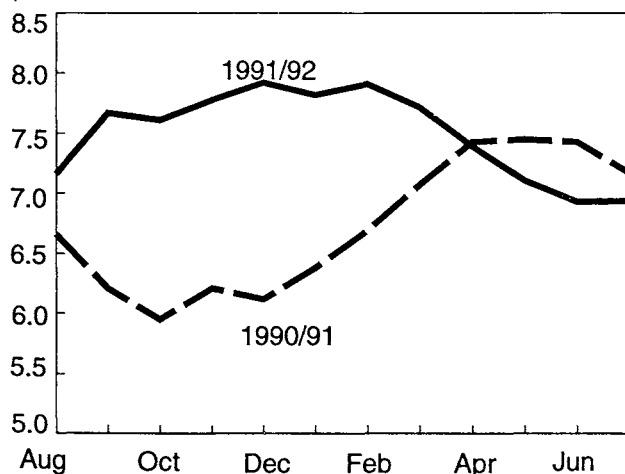
Higher world prices and a high U.S. premium early in the 1991/92 marketing year pushed U.S. prices up. Heavy purchases of U.S. rough rice by Brazil and Mexico added strength to farm prices. Reduced 1991/92 U.S. supplies and expectations that strong demand in the domestic and export markets would further strengthen prices later in the marketing year convinced farmers to delay selling a large portion of their rice. When these expectations were not realized and exports faltered, prices fell precipitously. Eventually farmers sold their 1991/92 crop with prospects for even lower prices with the harvest of the 1992/93 crop. Also, production by Asian exporters in 1992/93 was up sharply, further weakening U.S. competitiveness.

In 1990/91 a much different price pattern developed. World and U.S. prices rose during the second half of the marketing year, in part because of tight exportable supplies in the United States and Thailand, the world's two largest exporters. Thailand's 1990/91 crop was the lowest since 1982/83 because of adverse weather and pests during the main growing season. Vietnam's exports were also down because of a reduced crop and government pressure to distribute a larger proportion of the crop within the country.

Figure 4

U.S. Rough Rice Prices Plummet in 1992

\$/cwt



International Outlook for 1992/93

World Production Up Slightly

World rice production in 1992/93 is forecast at 349.7 million tons (milled), slightly above 1991/92, and second only to the 1990/91 record output of 351.2 million tons. Increases in China, India, Indonesia, and Japan account for much of the increase as near-normal monsoon rains in South and Southeast Asia contributed to larger crops for most of the major producers. Global consumption for 1992/93 is forecast up at 353.2 million tons for the fifth consecutive year of growth. World ending stocks are projected down 5 percent from 1991/92.

World trade is forecast at 13.6 million tons in 1992/93, down 4 percent. Increasing competition for a declining import market is expected to drive world rice prices lower into 1993.

Asian Production Estimates Rise with Near-Normal Monsoon Rains

Despite a late arrival, the 1992 monsoon brought abundant rains to most of the major rice growing countries of South and Southeast Asia. Only crops in Pakistan, the Philippines, and Sri Lanka are forecast lower.

USDA's forecast of China's rice production for 1992/93 is 185 million tons rough basis or 129.5 million tons milled basis, up slightly from the flood-damaged crop of 1991/92. This would be China's largest rice crop behind the 1990/91 record crop. China has announced that its total grain harvest will be a record 440 million tons. Although China has not announced a rice crop, the record grain crop would imply a large rice crop. Beneficial rains with only minor flooding are expected to improve yields to near record levels in most of the country. The lowest projected acreage in 4 years prevents a record crop. Area is forecast down as farmers begin to respond to China's new market policies by switching from rice to more profitable crops.

Rice area is dropping because policy changes in China are leading to market liberalization of the grain sector. Free markets are producing important product differentiation and price variation. Northern Chinese rice farmers grow predominantly Japonica rice while rice farmers in southern provinces concentrate on Indica. Recently numerous specialty rices such as black rice, glutinous rice, and fragrant rices that were traditionally produced for home-consumption under the old marketing structure have begun to appear in greater quantities in local markets. These specialty rices are trading at important price premiums to the standard Indica and Japonica varieties. In addition, freshness of marketed rice is generating price differentiation with new crop and freshly milled rices capturing price premiums relative to old crop and other old stock rices. However, to date, market signals appear to be localized and largely unrecorded. China still has large

grain stocks (including rice) that may have some effect on markets although much of the stocks are of low quality and would probably sell at a discount to other rice. Rice stocks for 1992/93 are estimated to represent over 21 percent of annual consumption needs.

Rice quality has become an important issue in China. Rising incomes and reduced consumer subsidies for rice have resulted in increased demand for high quality rice. Farmers are finding it increasingly difficult to market much low quality rice. As a result, rural areas have been feeding much of their low quality rice to pigs. This phenomenon, largely unrecorded, appears particularly acute in southern "early rice" growing provinces where the predominantly low quality indica production regularly fed to pigs may exceed 30 percent.

Farmers appear anxious to switch to higher quality, but lower yielding varieties to meet urban demand. National and provincial agricultural officials have begun devoting more resources to expanding the output of high quality rice seed. Some rice producing regions are beginning to buy seed for new varieties from Thailand in order to improve production quality. Such shifts to higher quality rice varieties are expected to produce lower national yields in the future.

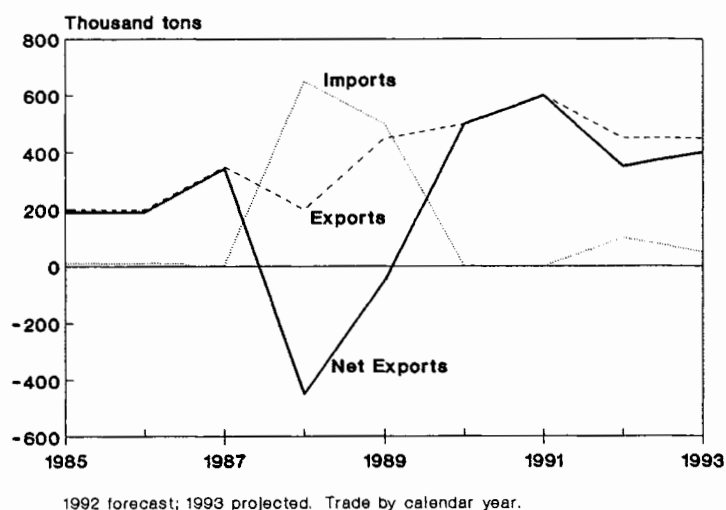
Current high stocks of rice coupled with the large 1992/93 crop should produce abundant rice supplies. However, China's exports are projected to decline to 700,000 tons in calendar 1993, down 7 percent from forecast calendar 1992. High quality rice commands a premium in the domestic market and is not likely to be exported. Most of China's rice exports consist of low quality rice that are sold to poor countries at low prices. Through June, Cuba was the principal recipient of China's rice exports, taking 85,000 tons or 22 percent of exports. However, exports are projected down for 1992/93 because new policies require that export companies be profitable while low world prices relative to domestic prices are likely to discourage some exports.

China will continue to import high quality rice for urban consumption. Calendar 1993 imports are projected to match 1992 at 100,000 tons. Most of China's imports will come from Thailand, although imports from Vietnam are expected to increase.

Monsoon rains began in India about 1 week later in 1992 than normal and were intermittent in the early part of the season. Since mid-July however, the monsoon has provided abundant rains throughout the major rice growing regions, except the northern State of Bihar where dry conditions continue to prevail.

India's 1992/93 production is forecast at 73 million tons, up slightly from 1991/92. However, expected higher domestic consumption suggests that usage will exceed production for

Figure 5
India's Rice Trade

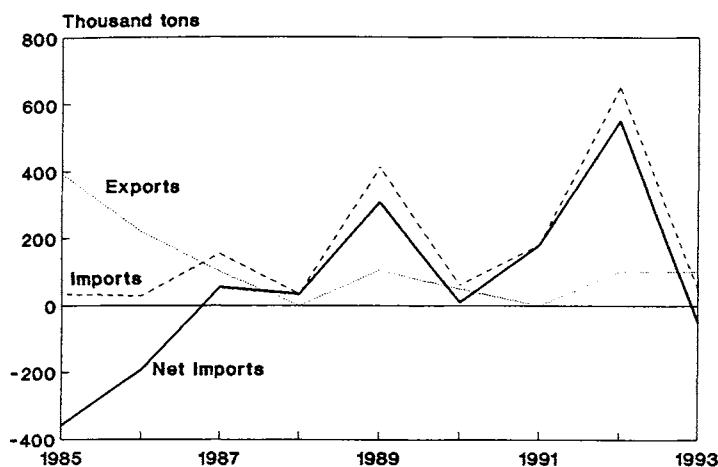


the second consecutive year and draw down stocks to 12 percent of consumption, their lowest total since 1987. India's government is expected to import some rice, principally as a loan repayment from Vietnam, to insure adequate supplies. Through September of 1992 India has imported only 14,000 tons but total calendar year imports are expected to reach 100,000 tons. Some of these imports could be deferred until calendar 1993. A return to a more adequate stock situation is expected to lower forecast calendar 1993 import needs to 50,000 tons. Calendar 1993 exports are forecast at 450,000 tons, including both basmati and ordinary rice, unchanged from calendar 1992 exports.

Indonesia is projected to harvest a record rice crop for 1992/93. Rice production is estimated at 29.8 million tons, up 3.5 percent from last year's drought reduced crop. Adequate rainfall is expected to permit greater harvested acreage and slightly higher yields from last year.

Indonesia's National Logistics Agency (BULOG) has obtained domestic procurements of 2.6 million tons of rice stocks through July, greatly in excess of planned procurement. As a result, calendar 1993 imports are forecast to decline to 50,000 tons, the lowest import level since 1987, and compares with a forecast 650,000 tons imported during calendar 1992. The surplus stocks have permitted the Indonesian government to undertake rice export sales of 200,000 tons on a commercial basis to be shipped at a rate of 100,000 tons each for calendar years 1992 and 1993. Commercial exports are a departure from the government's policy of "loaning" rice during seasons of surplus production. Rice self-sufficiency is a very sensitive issue in Indonesia. To avoid the appearance of importing rice, making loans in surplus years permits receiving rice repayments in deficit years. The Philippines still has 175,000 tons of outstanding loans to repay to

Figure 6
Indonesia's Rice Trade



1991/92 forecast; 1992/93 projected. Trade by calendar year.

Indonesia. The repayment of the debt is projected to occur towards the end of calendar 1993.

Recently BULOG has suggested that Indonesian rice exports may reach 600,000 tons in 1993. Although this is an unlikely figure, such comments, along with the decision to export rice commercially, suggest that the Indonesian government is comfortable with its rice security situation. This confidence is due in part to the diminishing importance of rice as a percentage of the average consumer's market basket in Indonesia. Rice currently represents 6 to 7 percent of the average consumer budget compared with 30 to 35 percent in the 1960's, making changes in rice prices less sensitive. Indonesia is a pivotal country with respect to world trade. A switch from importing 650,000 tons to exporting 100,000 tons in a single year would put added downward pressure on world prices and heighten the already competitive nature of world rice trade.

The Philippine's rice production for 1992/93 is projected at 5.9 million tons unchanged from the 1991/92 drought-reduced level. Recent monsoon-induced mud flows and flooding in the provinces surrounding the heavily ash-laden slopes of Mt. Pinatubo appear to have significantly damaged rice crop areas. The Philippine's rice imports are forecast at 200,000 tons for calendar 1993 in light of projected low rice stock levels. These imports are expected to take the form of new rice loans from Indonesia. Meanwhile, the Philippine's National Food Authority is expected to delay repayment of 175,000 tons of earlier in-kind rice loans to Indonesia until the end of calendar 1993. This would probably come out of the Philippine's 1993/94 crop.

Bangladesh is projected to produce a record 18.6 million tons in 1992/93, surpassing the previous record of 18.45 million tons produced in 1991/92. A slight increase in har-

vested area is expected to account for the rise in production. Only 15,000 tons of rice imports are projected in 1993, down from forecast imports of 50,000 tons, which resulted from disaster assistance in early 1992.

Area is projected down 6 percent in Sri Lanka because of continued dry conditions. Production is expected lower for the second year running at 1.5 million tons. Ending stocks are projected to be drawn down to their lowest since 1987 and imports are expected to rise by 14 percent to 250,000 tons for 1993.

Dry weather in 1991/92 reduced Malaysian production. Assuming normal weather in 1992/93, area and yield should both increase, leading to a projected 1.2 million tons of production in 1992/93, up 6 percent from 1991/92. Imports are projected at 400,000 tons, down 6 percent from forecast 1992.

In Japan, rice production is projected to expand 13 percent from 1991/92 to 9.8 million tons. In 1991/92, adverse weather led to the lowest production in nearly 40 years. Despite 1991/92 estimated ending stocks at less than 3 percent of consumption, Japan has not deviated from its strict import ban on all but specialty rice. Instead, the government relaxed its rice land diversion program for one year only to allow for larger area and increased production in 1992/93.

South Korea's production is projected to decline slightly from 1991/92 to 5.3 million tons (milled basis) in 1992/93. Area has been gradually declining since 1987/88 because of government efforts to reduce surpluses of long grain rice. Yields are projected to fall because of dry weather and a shift to lower yielding, higher quality varieties.

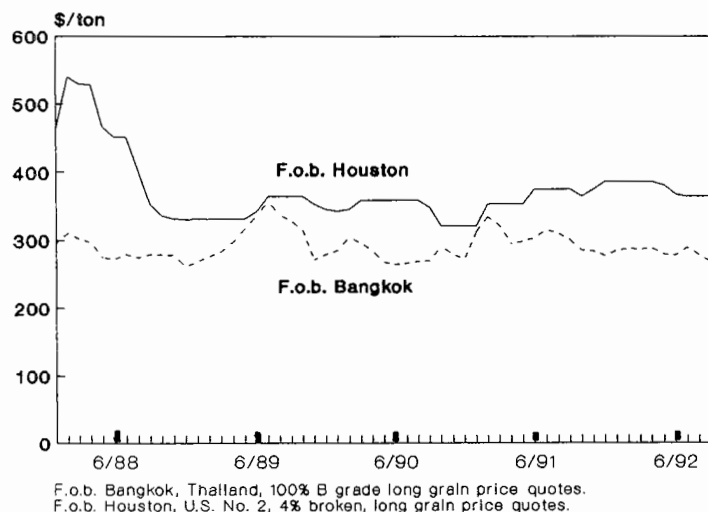
Middle Eastern Imports Hold Steady

Iran is projected to import 800,000 tons of rice in calendar 1993, unchanged from current year expectations. Iran recently returned to the U.S. market to purchase rice directly rather than through a third country, for the first time since 1982. Iran has recently loosened controls on private sector grain trade making it easier for private companies to purchase grain directly from international markets. In addition, non-price factors such as reduced travel restrictions to the United States and the comparatively higher quality of American rice have combined to make U.S. rice purchases more attractive to Iranian companies. According to U.S. Export Sales, Iranian purchases of U.S. rice for the 1992/93 marketing year are at 38,300 tons as of October 8. Further purchases may occur if U.S. prices remain close to Thai prices.

Iraq is forecast to import 500,000 tons of rice during calendar 1993, up 67% percent from 1992 and the highest total since pre-Gulf-war 1989. However, limited foreign exchange and shipment delays add some uncertainty to Iraq's

Figure 7

U.S. and Thai Rice Export Prices



final rice import total. From 1973 through 1987 Iraq's rice imports were increasing at an annual rate of over 7 percent, rising from 210,000 tons to 603,000 tons.

Imports for the other major middle eastern importing countries of Israel, Jordan, Kuwait, Saudi Arabia, Syria, Turkey, and the United Arab Emirates are forecast at 1.4 million tons for 1993, nearly unchanged from 1992.

Egyptian exports for calendar 1992 are projected at 170,000 tons, up 6 percent from 1991. The Egyptian government has reduced subsidies for domestic rice consumption recently, cutting domestic use and freeing up more rice for export. However, higher trending prices could hurt the competitiveness of Egyptian rice in global markets. Czechoslovakia, Finland, Western Europe, and the Gulf Arab States are the main buyers of Egyptian rice.

African Imports Forecast Down

Sub-Saharan Africa is projected to import less rice in calendar 1993 as improved production prospects are expected to dampen import needs. Nigeria is projected to show the largest import decline in calendar 1993 with imports forecast at 70,000 tons less than forecast for 1992. South Africa is projected to show an import decline of 25,000 tons.

Latin American Imports Projected To Remain High

Brazil has recently finished harvesting its 1991/92 rice crop. Late season dry conditions have produced a crop significantly below preliminary expectations. The 1991/92 crop is estimated to be 6.9 million tons. Calendar 1992 imports are projected to be 450,000 tons, down 53 percent from Brazil's 1991 import total. In August official government financing for 1992/93 crop rice was increased by about 4 percent over 1991/92 in real terms. This is projected to push rice acreage

up marginally for the 1992/93 crop which will be harvested in April-May 1993. Assuming no change in crop conditions, output is project to rise marginally to 7.1 million tons in 1992/93. Rice imports are projected to be 22 percent lower at 350,000 tons in calendar 1993.

Argentina recently completed its 1991/92 rice harvest. Improved resource use and good weather boosted yields to record levels and produced an estimated record crop of 425,000 tons, up 42 percent from 1990/91. With domestic consumption holding constant, Argentina is projected to increase its 1992 rice exports to a record 250,000 tons, doubling 1991 exports. Brazil is the primary destination with smaller amounts going to Peru, Bolivia, and Chile.

Lower projected acreage and a return to normal yields for Argentinean rice growers is projected to produce a rice crop of 310,000 tons in 1992/93. Rice exports for calendar 1993 are projected down 30 percent at 175,000 tons. However, this would still be Argentina's second highest export total since 1976.

Adverse weather is likely to reduce Peru's rice crop for the fifth consecutive year. Peru's rice production is projected at a drought-reduced 435,000 tons in 1992/93, down 22 percent from 1991/92. In calendar 1992, Peru is projected to be Latin America's third largest importer behind Brazil and Mexico. Peruvian imports for calendar 1992 are projected to be a record 450,000 tons. Imports are projected to remain at similar levels in calendar 1993.

Mexico's rice production for 1992/93 is projected at 200,000 tons, up 10,000 tons from the 1991/92 crop. From 1980 to 1989 Mexican rice production averaged 343,000 tons annually. However, the past 2 years have seen production average under 200,000 tons due to inclement weather and reduced harvested acreage. Lower production has resulted in larger imports with calendar 1992 imports projected at a record 300,000 tons. Imports for 1993 are projected at 250,000 tons.

EC Net Imports Forecast Down; Former Soviet Union Imports Projected Up

Production in the European Community (EC) is projected up marginally for 1992/93 at 1.4 million tons. Weather related production shortfalls in Spain are expected to be more than offset by production increases in Italy. However, EC exports for 1993 are projected to decline to 900,000 tons, down 13 percent. Imports are also projected down slightly to 1.2 million tons.

Eastern European production has been trending down since 1986, and has fallen sharply since economic reforms were introduced. Imports have been rising with increasing subsidies from the EC and the United States. Production for 1992/93

is projected down 18 percent at 58,000 tons. Imports are projected to be 330,000 tons, up 6 percent.

In the former Soviet Union (FSU), increasing domestic consumption and rising foreign assistance are expected to lead to a continued rise in imports, despite higher domestic production. Imports are projected to reach 825,000 tons in calendar 1993, up 3 percent from 1992. Rice production is projected up by 14 percent for 1992/93 to 1.5 million tons. The United States assisted FSU rice imports for the first time in late 1991. During fiscal year 1992 55,000 tons were sold under EEP while \$7.96 million were allocated under GSM-102 credit guarantees. In addition, 22,400 tons were allocated to the FSU in the form of food aid.

For fiscal 1993 the U.S. government has already announced food aid for rice to Russia of \$24 million. The food aid is expected to reach Russia this winter.

U.S. Export Competitors' Supplies Remain Large

Thailand's 1992/93 rice crop is projected at 13.3 million tons, unchanged from last year. Acreage is expected to increase slightly. However, current growing conditions suggest that yields may be down marginally, offsetting any acreage increases. Thailand's main-season rice crop is harvested between November and February, thus a weather-related yield variation could occur later in the year. Thailand's 1993 exports are forecast at 4.4 million tons, which would maintain Thailand's role as the world's leading exporter.

Vietnam's 1992/93 production is projected to decline to 13.2 million tons, down 5 percent from the 1991/92 record, but still the second largest crop. Area is projected unchanged from 1991/92, while yields are expected to drop from their 1991/92 record. Exports are projected to be 1.5 million tons for calendar 1993, down slightly from 1992's es-

timated 1.6 million tons. However, abundant supplies and low prices could permit Vietnam to compete more fiercely for the reduced world market.

In Burma production in 1992/93 is projected at 7.8 million tons, up 2 percent from 1991/92. Expanded acreage projections account for the projected rise in production. Exports are projected to remain weak at 200,000 tons, matching calendar 1992.

Floods and rain damage are expected to lower harvested acreage and reduce yields in Pakistan, resulting in significantly lower rice production for 1992/93. Production is forecast at 2.8 million tons, the lowest in over 15 years and down over 12 percent from 1991/92. The worst flooding in a century has damaged rice crops throughout the country. However, most of the reduction has occurred in the southern non-Basmati rice growing areas of Sindh province, with only minor flood damage occurring in the Basmati growing areas of the Punjab. As a result, projected Pakistani rice exports for calendar 1993 are forecast at 900,000 tons, down 25 percent from last year. Basmati rice is expected to account for half of Pakistan's 1993 rice exports, compared to calendar 1991 when Basmati made up only 42 percent of Pakistani exports. It is likely that any shortfall in Pakistan's export of low quality, non-Basmati rice will be made up in the world market by increased rice exports from Vietnam and Thailand.

Like other southern hemisphere producers, Australia's rice crop is planted in their spring (September-October) and harvested in their autumn (March-May). 1992/93 area and yields are projected down marginally due to dry conditions. Production is projected at 644,000 tons, down 8 percent from 1991/92. Calendar 1993 exports are projected to fall to 500,000 tons, down 10 percent from forecast 1992.

Figure 8

Thailand's Rice Production and Exports

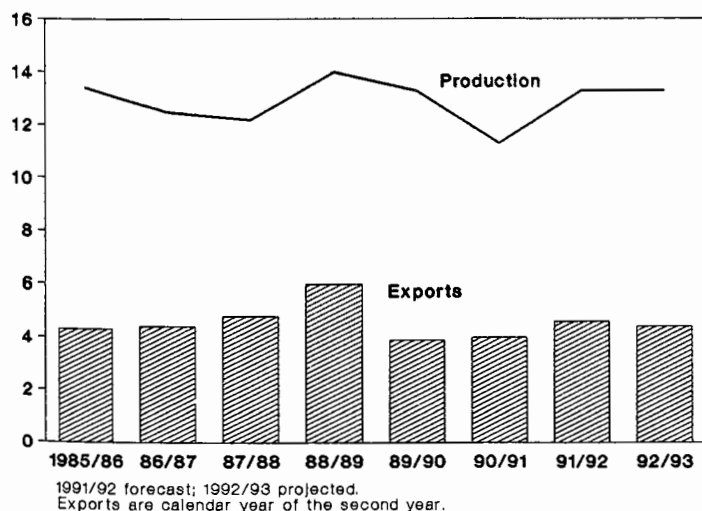
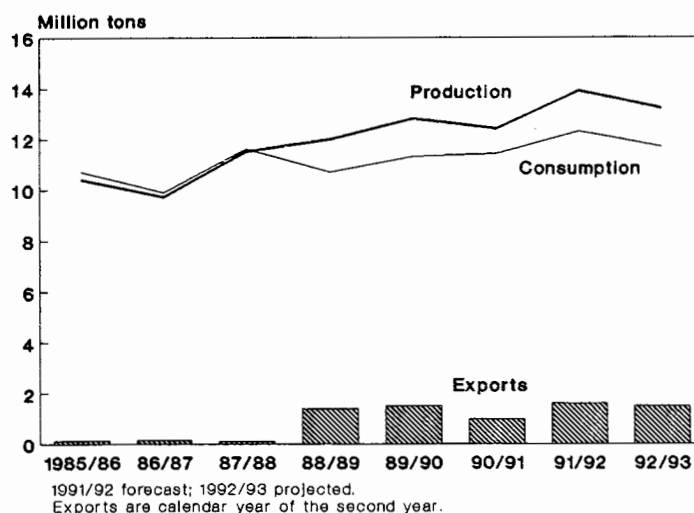


Figure 9

Vietnam's Rice Production and Exports



World Trade Projected Lower in 1992/93

Abundant supplies in major exporting countries, combined with higher production levels for major importing countries, suggests a tightening of world trade, greater pressure on declining world prices, and a higher degree of competitiveness in the global rice market. World rice trade in calendar 1993 is expected to decline 4 percent to 13.6 million tons. Reduced Indonesian imports account for the majority of the decline in world trade.

World ending stocks are projected lower for 1992/93 to 52.1 million tons. The global stocks-to-usage ratio is also projected lower at 14.7 percent, down from 15.8 percent forecast for 1992/93. However, aggregate global rice stocks have little influence on world prices. China and India, together, are projected to account for 71 percent of the world's 1992/93 ending stocks. Between 1990/91 and 1992/93, their combined stock levels are projected to decline by 16 percent falling from 42.7 million tons to a projected 35.9 million tons. Yet, during this same period their combined total imports are projected to be only 350,000 tons. Because China and India account for the majority of global stocks, the supply and demand situation for individual importing and exporting countries more directly affect world trade and prices than do world stocks.

Fierce price competition is expected to dominate world trade in 1993. A second large crop in as many years should permit Vietnam to make inroads on Thailand's market share of the low-quality, long-grain rice market. The possibility of price undercutting in the low quality rice market led Thailand and Vietnam to sign a memorandum of understanding for cooperation in rice production and marketing in August. The agreement calls for an exchange of information on rice export prices via an annual meeting between the two commerce

ministers, quarterly meetings between government rice officials, and regular meetings between Thai rice traders and Vietnamese state export agencies. Previous efforts at cooperation have shown negligible results. In recent years, Vietnam has begun selling rice to India, Malaysia, and other low-quality buyers in Asia, principally at the expense of Thailand. More important for U.S. exporters is Vietnam's growing competitiveness in the Peruvian and Mexican markets.

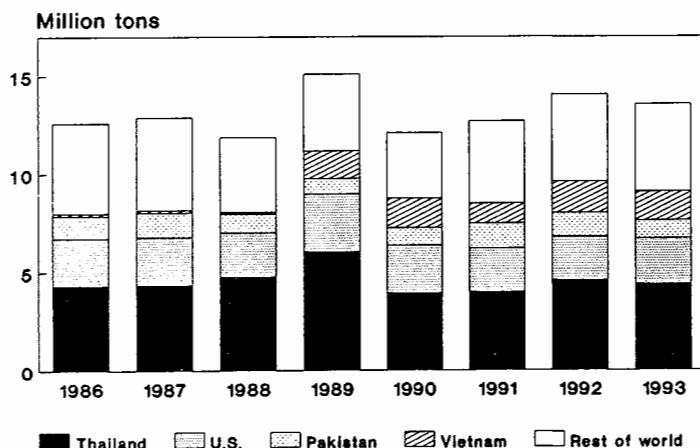
Lower U.S. prices are expected to help increase U.S. exports and market share marginally in calendar 1993. However, U.S. rice is expected to face stiff competition from Asian exporters whose rice is currently entering world markets at a significant discount to U.S. rice prices. In addition, Argentina and Uruguay, with continued large production, appear poised to capture an increasing share of the Brazilian market.

U.S. rice exports are projected up slightly to 2.3 million tons for calendar 1993. Given a projected lower volume of global trade for 1993, this implies a rising market share. U.S. market share of world trade is forecast to increase to 17.0 percent from 15.7 percent in 1992.

With the growing importance of the Latin American rice market, greater interest is being focused on the value-added content of U.S. export rice. Brazil and Mexico import rough rice to support their domestic mills. Both countries enforce stiff tariff penalties on non-rough rice imports. This gives a potential marketing edge to the United States, Uruguay, and Argentina who represent the only countries that do not restrict large exports of rough rice. Most exporting nations limit rough rice exports as a protection for their domestic milling industry. In addition, the North American Free Trade Alliance could give the U.S. an edge on the competition for the Mexican market, particularly for milled rice.

Figure 10

World Rice Exports by Source



1992 forecast; 1993 projected.

1991/92 International Rice Situation

World rice production in 1991/92 is estimated at 346.3 million tons, down slightly from year earlier. Weather related declines in China and India accounted for much of the reduction. Dry weather in Indonesia and the Philippines also contributed.

World trade is forecast to expand nearly 11 percent to 14.1 million tons in calendar 1992. Gains in Indonesia, the former USSR, and Iran account for most of the increase. Indonesia began importing rice in late 1991 and is forecast to import 650,000 tons in 1992 in response to a reduced 1991/92 harvest. Credit from Thailand, the EC, and the United States is allowing the former USSR to more than double imports to 825,000 tons. Iran's imports are also forecast

significantly higher at 800,000, up 42 percent as consumption rises and supplies remain low.

Production in the Asian exporting countries increased sharply in 1991/92. Thailand's area expanded in response to higher prices after the poor 1990/91 harvest. Production is estimated to have increased 17 percent from the pest-damaged 1990/91 crop. Ideal growing conditions in Vietnam produced record yields and production. The large crops in Vietnam and Thailand have contributed to lower farm prices

in both countries, compared to a year ago. The lower export prices are expected to contribute to both countries' maintaining their global market shares at 32 and 11 percent, respectively, during calendar 1992.

U.S. exports for calendar 1992 are forecast to reach 2.2 million tons, unchanged from a year earlier. U.S. market share is expected to fall to 15.7 percent of global trade in rice, from 17.3 percent in 1991.

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Appendix table 1--Estimated supply, disappearance, and price, by type of rice, U.S.
(rough equivalent of rough and milled rice) 1/

Item	Unit	1988/89	1989/90	1990/91	1991/92	1992/93 2/ (as of October 1992)
Total rice:						
Area planted	Mil. acre	2.93	2.73	2.90	2.86	3.03
Area harvested	"	2.90	2.69	2.82	2.75	2.97
Yield	Pounds/acre	5,514	5,749	5,529	5,617	5,615
Beginning stocks 3/	Mil. cwt	31.40	26.70	26.40	24.60	27.30
Production	"	159.90	154.50	156.10	154.50	166.70
Imports	"	3.80	4.40	4.80	5.30	5.70
Total supply	"	195.10	185.60	187.20	184.30	199.60
Domestic & residual 4/	"	82.50	82.10	91.70	90.70	94.00
Exports	"	85.90	77.20	70.90	66.40	74.00
Total use	"	168.40	159.30	162.70	157.10	168.00
Ending stocks	"	26.70	26.40	24.60	27.30	31.60
CCC	"	0.00	0.00	0.00	0.00	0.00
Free	"	26.70	26.40	24.60	27.30	31.60
Average market price 5/	\$/cwt	6.83	7.35	6.70	7.53	(6.50-7.00)
Long:						
Area harvested	Mil. acres	2.23	2.00	2.07	2.02	NA
Yield	Pounds/acre	5,345	5,464	5,221	5,393	NA
Beginning stocks	Mil. cwt	19.10	15.40	13.30	11.50	12.90
Production	"	119.40	109.20	107.80	109.00	118.80
Total supply 6/	"	142.10	128.90	125.40	125.30	136.70
Domestic & residual 4/	"	55.60	54.90	57.80	61.40	61.50
Exports	"	71.20	60.80	56.00	51.00	60.00
Total use	"	126.80	115.70	113.80	112.40	121.50
Ending stocks	"	15.40	13.30	11.50	12.90	15.20
Average market price 5/	\$/cwt	6.96	7.59	6.94	NA	NA
Medium/short:						
Area harvested	Mil. acres	0.67	0.69	0.76	0.73	NA
Yield	Pounds/acre	6,077	6,579	6,370	6,237	NA
Beginning stocks	Mil. cwt	10.80	9.00	11.60	11.70	12.90
Production	"	40.50	45.30	48.30	45.40	47.80
Total supply 6/	"	51.40	54.30	60.40	57.60	61.40
Domestic & residual 4/	"	27.80	26.30	33.80	29.30	32.50
Exports	"	14.70	16.40	14.90	15.40	14.00
Total use	"	42.50	42.70	48.80	44.70	46.50
Ending stocks	"	9.00	11.60	11.70	12.90	14.90
Average market price 5/	\$/cwt	6.47	6.71	6.19	NA	NA

NA = Not available.

Note: Totals might not add because of rounding.

1/ Marketing year beginning August 1. 2/ Projected. 3/ Includes the following quantities of broken kernel rice (type undetermined) not included in estimates of beginning stocks by type (in mil. cwt.): 1988/89, 1.5; 1989/90, 2.4; 1990/91, 1.4; 1991/92, 1.4; 1992/93, 1.4. 4/ Residual: unreported use, processing losses, and estimating errors. Use by type does not add to total rice use because of the difference in broken between beginning and ending stocks. 5/ Marketing year weighted average price received by farmers. 6/ Includes imports.

Appendix table 2--Rough and milled rice (rough equivalent): Marketing year supply and disappearance, 1962/63-1992/93

Year beginning Aug. 1	Supply				Domestic use			Disappearance			Total disap- pearance	Ending stocks--July 31--		
	Begin- ning stocks	Produc- tion	Imports	Total	Food	Seed	Brewers	Total	Exports	Resid- ual		CCC inven- tory	Free	Total
Million cwt														
1962/63	5.4	66.0	0.0	71.4	21.5	2.4	4.1	28.0	35.5	0.2	63.7	1.8	5.9	7.7
1963/64	7.7	70.3	0.0	78.0	22.5	2.4	3.8	28.7	41.8	0.0	70.5	1.4	6.1	7.5
1964/65	7.5	73.2	0.5	81.2	24.2	2.5	4.3	31.0	42.5	0.0	73.5	1.1	6.6	7.7
1965/66	7.7	76.3	0.6	84.6	23.5	2.7	4.7	30.9	43.3	2.2	76.4	0.6	7.6	8.2
1966/67	8.2	85.0	0.1	93.3	23.9	2.7	5.3	32.0	51.6	1.2	84.8	0.2	8.3	8.5
1967/68	8.5	89.4	0.0	97.9	25.0	3.2	5.4	33.6	56.9	0.6	91.1	0.1	6.7	6.8
1968/69	6.8	104.1	0.0	110.9	27.0	2.9	5.8	35.7	56.1	2.9	94.7	5.5	10.7	16.2
1969/70	16.2	90.8	1.3	108.3	23.5	2.5	7.1	33.1	56.9	1.9	91.9	6.4	10.0	16.4
1970/71	16.4	83.8	1.5	101.7	25.1	2.5	6.8	34.4	46.5	2.2	83.1	9.5	9.1	18.6
1971/72	18.6	85.8	1.1	105.5	25.5	2.5	7.4	35.4	56.9	1.8	94.1	2.7	8.7	11.4
1972/73	11.4	85.4	0.6	97.4	25.1	3.0	7.7	35.8	54.0	2.5	92.3	0.1	5.0	5.1
1973/74	5.1	92.8	0.2	98.1	26.1	3.6	8.1	37.8	49.7	2.7	90.2	0.0	7.8	7.8
1974/75	7.8	112.4	0.1	120.3	28.6	4.0	8.4	41.0	69.5	2.7	113.2	0.0	7.1	7.1
1975/76	7.1	128.4	0.0	135.5	27.7	3.5	9.1	40.3	56.5	1.8	98.6	18.7	18.2	36.9
1976/77	36.9	115.6	0.1	152.6	29.2	3.2	10.3	42.7	65.6	3.8	112.1	18.6	21.9	40.5
1977/78	40.5	99.2	0.1	139.8	23.5	4.3	9.9	37.7	72.8	1.9	112.4	10.8	16.6	27.4
1978/79	27.4	133.2	0.1	160.7	33.7	4.3	11.2	49.2	75.7	4.2	129.1	8.3	23.2	31.6
1979/80	31.6	131.9	0.1	163.6	33.2	4.8	11.2	49.2	82.6	6.1	137.9	1.7	24.0	25.7
1980/81	25.7	146.2	0.2	172.1	38.4	5.1	11.0	54.5	91.4	9.7	155.6	0.0	16.5	16.5
1981/82	16.5	182.7	0.4	199.6	42.5	4.4	12.7	59.6	82.0	9.0	150.6	17.5	31.5	49.0
1982/83	49.0	153.6	0.7	203.3	37.6	2.9	13.5	54.0	68.9	8.9	131.8	22.3	49.2	71.5
1983/84	71.5	99.7	0.9	172.1	32.7	3.8	12.8	49.3	70.3	5.6	125.2	25.0	21.9	46.9
1984/85	46.9	138.8	1.6	187.3	35.2	3.4	13.9	52.5	62.1	8.0	122.6	44.3	20.4	64.7
1985/86	64.7	134.9	2.2	201.8	45.2	3.0	14.1	62.3	58.7	3.5	124.5	43.6	33.7	77.3
1986/87	77.3	133.4	2.6	213.3	52.8	2.9	15.0	70.7	84.2	7.0	161.9	8.7	42.7	51.4
1987/88	51.4	129.6	3.0	184.0	54.9	3.6	15.4	73.9	72.2	6.5	152.6	0.2	31.2	31.4
1988/89	31.4	159.9	3.8	195.1	57.4	3.4	15.6	76.4	85.9	6.0	168.4	0.0	26.7	26.7
1989/90	26.7	154.5	4.4	185.6	60.1	3.6	15.4	79.1	77.2	3.0	159.3	0.0	26.4	26.4
1990/91	26.4	156.1	4.8	187.2	63.8	3.6	15.3	82.7	70.9	9.0	162.7	0.0	24.6	24.6
1991/92 1/	24.6	154.5	5.3	184.3	65.6	3.8	15.3	84.7	66.4	6.0	157.1	0.0	27.3	27.3
1992/93 2/	27.3	166.7	5.7	199.6	68.0	3.8	15.2	87.0	74.0	7.0	168.0	0.0	31.6	31.6

1/ Estimated. 2/ Projected as of October 1992.

Appendix table 3--Long grain rough and milled rice (rough equivalent): Marketing year supply and disappearance, 1982/83-1992/93

Year beginning August 1	Supply			Disappearance			Ending stocks
	Beginning stocks	Production	Total 1/	Domestic 2/ and residual	Exports	Total	Total
Million cwt							
1982/83	17.6	93.4	111.0	38.7	47.0	85.7	25.8
1983/84	25.8	64.3	90.7	29.5	44.8	74.3	16.4
1984/85	16.4	96.0	113.3	34.1	42.0	76.1	37.7
1985/86	37.7	100.4	140.1	48.8	42.0	90.8	49.3
1986/87	49.3	96.8	148.6	51.3	69.9	121.2	27.4
1987/88	27.4	89.0	119.4	49.8	50.5	100.3	19.1
1988/89	19.1	119.4	142.1	55.6	71.2	126.8	15.4
1989/90	15.4	109.2	128.9	54.9	60.8	115.7	13.3
1990/91	13.3	107.8	125.4	57.8	56.0	113.8	11.5
1991/92 3/	11.5	109.0	125.3	61.4	51.0	112.4	12.9
1992/93 4/	12.9	118.8	136.7	61.5	60.0	121.5	15.2

1/ Includes imports. 2/ Use by type does not add to total rice use because of the difference in brokens between beginning and ending stocks. 3/ Estimated. 4/ Projected as of October 1992.

Appendix table 4--Medium/short grain rough and milled rice (rough equivalent): Marketing year supply and disappearance, 1982/83-1992/93

Year beginning August 1	Supply			Disappearance			Ending stocks
	Beginning stocks	Production	Total 1/	Domestic 2/ and residual	Exports	Total	Total
Million cwt							
1982/83	30.2	60.2	90.6	24.4	21.9	46.1	44.7
1983/84	44.7	35.4	80.2	26.0	25.4	51.4	28.8
1984/85	28.8	42.8	71.8	26.0	20.1	46.1	25.7
1985/86	25.7	34.5	60.4	17.5	16.7	34.2	26.2
1986/87	26.2	36.6	62.9	27.5	14.3	41.8	21.1
1987/88	21.1	40.6	61.7	29.2	21.7	50.9	10.8
1988/89	10.8	40.5	51.4	27.8	14.7	42.5	9.0
1989/90	9.0	45.3	54.3	26.3	16.4	42.7	11.6
1990/91	11.6	48.3	60.4	33.8	14.9	48.8	11.7
1991/92 3/	11.7	45.4	57.6	29.3	15.4	44.7	12.9
1992/93 4/	12.9	47.8	61.4	32.5	14.0	46.5	14.9

1/ Includes imports. 2/ Use by type does not add to total rice use because of the difference in brokens between beginning and ending stocks. 3/ Estimated. 4/ Projected as of October 1992.

Appendix table 5--Rough rice milled, total milled produced, and milling yields, United States

Year beginning August 1	Rough milled	Total milled produced 1/	Milling yields	Total heads produced 1/	Milling yields
	-----1,000 cwt-----		Lbs./cwt	1,000 cwt	Lbs./cwt
1978/79	117,961	83,427	70.7	68,749	58.3
1979/80	123,993	89,071	71.8	78,327	63.2
1980/81	141,016	102,278	72.5	89,513	63.5
1981/82	131,841	95,129	72.2	82,022	62.2
1982/83	118,726	84,517	71.2	73,713	62.1
1983/84	111,151	79,012	71.1	68,237	61.4
1984/85	107,195	74,580	69.6	64,063	59.8
1985/86	115,542	81,808	70.8	69,347	60.0
1986/87	140,804	100,257	71.2	83,760	59.5
1987/88	130,818	91,481	69.9	76,863	58.8
1988/89	145,639	104,119	71.5	86,820	59.6
1989/90	136,994	99,453	72.6	85,188	62.2
1990/91	132,523	95,431	72.0	79,993	60.4
1991/92	129,796	91,521	70.5	76,685	59.1

1/ Includes brown rice.

Sources: Rice Miller's Association Monthly Statistical Statements.
Rice Market News, Agricultural Marketing Service, USDA.

Appendix table 6--Rice program provisions, 1985-92

Item	Unit	Crop year							
		1985	1986	1987	1988	1989	1990	1991	1992
Target price	\$/cwt	11.90	11.90	11.66	11.15	10.80	10.71	10.71	10.71
Statutory loan rate	"	8.00	7.20	6.84	6.63	6.50	6.50	6.50	6.50
Acreage reduction/paid diversion	Pct.	20/15	35	35	25	25	20	5	0
Participation rate	"	90	94	96	94	94	94	95	93

NA = Not available.

Appendix table 7--Class loan rates and differentials, 1984-92

Item	Crop year								
	1984	1985	1986	1987	1988	1989	1990	1991	1992
	\$/cwt								
Milled rice:									
Long whole kernels	14.96	14.53	12.44	11.36	10.89	10.81	10.84	10.74	10.74
Medium and short whole kernels	10.81	10.50	10.44	10.36	9.89	9.81	9.84	9.74	9.74
Broken kernels	6.20	6.02	4.98	5.68	5.45	5.41	5.42	5.37	5.37
Differential (milled basis) 1/	4.15	4.03	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Rough rice 2/:									
Average, all classes	8.00	8.00	7.20	6.84	6.63	6.50	6.50	6.50	6.50
Average, long grain	8.71	8.68	7.52	7.03	6.75	6.68	6.68	6.65	6.66
Average, medium grain	6.67	6.49	6.36	6.54	6.33	6.13	6.21	6.11	6.13
Average, short grain	6.65	6.49	6.44	6.39	5.98	5.98	6.12	6.07	6.13

1/ The loan differential (milled basis) is the difference between the class whole kernel loan rates. 2/ The rough rice loan rate for each class of rice is the sum of the whole kernels' loan rate weighted by its milling yield (average 56 percent) and the broken kernel's loan rate weighted by its milling yield (average 12 percent).

Appendix table 8--State and U.S. rice acreage, yield, and production, by class

State	Area harvested			Yield			Production		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
	Indicated			Indicated			Indicated		
	-----1,000 acres-----			-----Pounds/acre-----			-----1,000 cwt-----		
Long grain:									
Arkansas	1,071	1,111		4,950	5,250		53,034	58,328	
California	18	15		7,300	7,200		1,314	1,080	
Louisiana	304	250		4,870	5,000		14,805	12,500	
Mississippi	250	220		5,700	5,600		14,250	12,320	
Missouri	79	91		4,700	5,100		3,713	4,641	
Texas	343	335		6,030	6,024		20,690	20,180	
United States	2,065	2,022	NA	5,221	5,393	NA	107,806	109,049	118,831
Medium grain:									
Arkansas	128	148		5,400	5,670		6,912	8,392	
California	365	300		7,730	7,837		28,215	23,510	
Louisiana	241	260		4,840	4,706		11,664	12,235	
Mississippi	1/	1/		1/	1/		1/	1/	
Missouri	1	1		4,700	5,100		47	51	
Texas	10	8		4,900	5,000		490	400	
United States	745	717	NA	6,353	6,219	NA	47,328	44,589	47,165
Short grain:									
Arkansas	1	1		5,400	6,000		54	60	
California	12	10		7,500	7,600		900	760	
United States	13	11	NA	7,338	7,455	NA	954	820	666
Total:									
Arkansas	1,200	1,260	1,320	5,000	5,300	5,400	60,000	66,780	71,280
California	395	325	370	7,700	7,800	8,300	30,429	25,350	30,710
Louisiana	545	510	590	4,860	4,850	4,700	26,469	24,735	27,730
Mississippi	250	220	235	5,700	5,600	5,400	14,250	12,320	12,690
Missouri	80	92	105	4,700	5,100	5,200	3,760	4,692	5,460
Texas	353	343	348	6,000	6,000	5,400	21,180	20,580	18,792
United States	2,823	2,750	2,968	5,529	5,617	5,615	156,088	154,457	166,662

NA = Not available.

1/ No medium grain estimated.

Source: Annual Crop Production 1991 Summary, and October 1992 issue, National Agricultural Statistics Service, USDA.

Appendix table 9--State and U.S. rice area planted, by class

	Area planted						
State	1987	1988	1989	1990	1991	1992 1/	1992/91
	-----1,000 acres-----						Percent
Long grain:							
Arkansas	885	1,084	1,039	1,110	1,149	1,199	104
California	36	60	30	18	15	16	107
Louisiana	265	395	310	310	290	360	124
Mississippi	200	255	240	255	225	240	107
Missouri	64	81	80	91	96	109	114
Texas	264	382	332	345	337	335	99
United States	1,714	2,257	2,031	2,129	2,112	2,259	107.0
Medium grain:							
Arkansas	133	135	110	129	150	150	100
California	299	320	335	370	305	351	115
Louisiana	160	150	195	245	270	240	89
Mississippi	2/	10	2/	2/	2/	2/	2/
Missouri	3	2	1	1	1	1	100
Texas	6	8	8	10	8	15	188
United States	601	625	649	755	734	757	103.1
Short grain:							
Arkansas	2	1	1	1	1	1	100
California	39	50	50	12	10	8	80
United States	41	51	51	13	11	9	81.8
Total:							
Arkansas	1,020	1,220	1,150	1,240	1,300	1,350	104
California	374	430	415	400	330	375	114
Louisiana	425	545	505	555	560	600	107
Mississippi	200	265	240	255	225	240	107
Missouri	67	83	81	92	97	110	113
Texas	270	390	340	355	345	350	101
United States	2,356	2,933	2,731	2,897	2,857	3,025	105.9

1/ Intended plantings in 1992 as indicated by reports from farmers. 2/ No medium grain estimated.

Source: Crop Production and Prospective Plantings, March 1992.
National Agricultural Statistics Service, USDA.
Acreage, June 1992, National Agricultural Statistics Service, USDA.

Appendix table 10--Rice stocks: Rough and milled 1/

Date	Rough					Milled			
	On farms or in farm warehouses	At mills and in attached warehouses	In ware- houses (not attached to mills)	In ports or in transit	Total all positions	At mills and in attached warehouses	In ware- houses (not attached to mills)	In ports or in transit	Total all positions
1,000 cwt									
January 1:									
1980	31,021	15,038	57,278	581	103,918	3,137	810	2,123	6,070
1981	26,179	21,111	48,817	6	96,113	3,055	929	2,556	6,540
1982	48,404	22,952	59,117	911	131,384	2,735	907	1,414	5,056
1983	34,551	24,151	76,070	200	134,972	2,960	858	2,401	6,219
1984	30,681	19,541	64,143	344	114,709	3,867	456	1,395	5,718
1985	32,426	19,535	74,514	797	127,272	3,343	524	2,058	5,925
1986	36,737	23,768	81,967	514	142,986	3,674	461	465	4,600
December 1:									
1986	36,264	18,739	90,153	384	145,540	4,578	461	650	5,689
1987	29,789	13,648	71,902	81	115,420	4,841	617	1,232	6,690
1988	39,581	12,741	79,245	121	131,688	4,813	550	915	6,278
1989	40,040	10,084	66,166	83	116,373	4,254	782	720	5,756
1990	37,662	9,548	65,905	52	113,167	4,046	605	1,180	5,831
1991	37,249	9,630	66,857	54	113,790	3,564	495	351	4,410
April 1:									
1980	12,030	15,581	39,224	563	67,398	3,500	402	2,888	6,790
1981	5,977	15,078	28,673	64	49,792	3,499	1,099	3,214	7,812
1982	26,807	21,289	41,773	411	90,280	4,371	725	1,689	6,785
1983	23,778	22,307	62,649	299	109,033	3,295	492	3,165	6,952
1984	15,802	17,432	46,515	17	79,766	3,838	464	2,999	7,301
1985	18,709	16,438	60,188	707	96,042	3,538	481	2,101	6,120
1986	22,232	19,371	73,700	914	116,217	2,818	425	208	3,451
March 1:									
1987	19,561	15,962	70,780	483	106,786	3,881	561	117	4,559
1988	10,104	28,905	39,464	125	75,598	5,680	1,233	1,059	7,972
1989	27,266	12,704	49,439	641	90,050	5,589	189	1,502	7,280
1990	15,965	10,390	51,381	218	77,954	5,259	327	410	5,996
1991	19,345	9,404	43,554	124	72,427	4,002	408	858	5,268
1992 2/	20,658	8,283	46,631	211	75,783	3,888	837	952	5,677
August 1:									
1980	563	9,248	9,940	342	20,093	2,128	403	1,504	4,035
1981	208	5,417	4,206	9	9,840	2,744	446	1,665	4,855
1982	4,453	12,544	23,906	484	41,387	3,191	409	1,877	5,477
1983	6,032	11,190	45,899	36	63,157	2,843	223	2,830	5,896
1984	1,250	11,017	27,425	14	39,706	3,976	50	1,095	5,121
1985	697	13,398	44,402	653	59,150	3,023	304	515	3,842
1986	2,031	15,432	52,476	1,008	70,947	3,033	398	1,099	4,530
1987	984	9,986	30,718	115	41,803	5,044	632	1,168	6,844
1988	1,242	7,714	14,789	3	23,748	4,461	189	679	5,329
1989	1,176	7,296	10,084	31	18,587	4,178	752	902	5,832
1990	599	5,370	13,133	51	19,153	3,650	548	998	5,196
1991	852	5,149	12,636	58	18,695	3,569	217	457	4,243
1992 2/	1,109	6,166	12,914	34	20,387	3,833	486	529	4,848

1/ These estimates do not include stocks located in States outside the major producing states of Missouri, Mississippi, Arkansas, Louisiana, Texas, and California. 2/ Preliminary.

Appendix table 11--World market rice prices, loan rate basis 1/

Date	Milled kernel rates				Rough rates		
	Long	Medium	Short	Broken	Long	Medium	Short
	-----Cents/lb.-----				-----\$/cwt-----		
1986:							
April 11	6.78	7.36	7.36	3.40	4.19	4.47	4.53
April 18	6.78	5.86	5.86	3.39	4.18	3.65	3.70
April 29 - May 6	6.68	5.73	5.74	3.34	4.13	3.58	3.62
May 13	5.90	4.99	5.00	2.95	3.65	3.12	3.06
May 20	5.83	4.89	4.89	2.91	3.60	3.06	3.10
May 27 - June 24	5.78	4.79	4.79	2.89	3.57	3.00	3.04
July 1 - July 22	5.89	4.79	4.79	2.94	3.63	3.01	3.05
July 29 - August 5	6.07	4.96	4.96	3.04	3.75	3.11	3.15
August 12 - September 2	6.15	5.04	5.04	3.08	3.80	3.16	3.21
September 9 - September 30	5.90	4.81	4.81	2.95	3.64	3.02	3.06
October 7 - October 14	5.84	4.91	4.92	2.92	3.60	3.07	3.11
October 21 - November 18	5.85	5.06	5.07	2.93	3.62	3.15	3.20
November 25 - December 9	5.69	5.06	5.07	2.85	3.52	3.15	3.19
December 16 - December 30	5.57	4.95	4.95	2.78	3.44	3.07	3.12
1987:							
January 20 - March 31	5.70	5.12	5.06	2.85	3.53	3.23	3.13
April 7 - April 21	5.87	5.28	5.22	2.94	3.63	3.34	3.23
April 28	5.98	5.28	5.21	2.99	3.70	3.34	3.23
May 5 - May 19	5.98	5.38	5.31	2.99	3.70	3.40	3.29
May 26 - June 23	6.11	5.52	5.45	3.06	3.78	3.49	3.37
June 30	6.00	5.39	5.32	3.00	3.71	3.41	3.30
July 7 - July 21	5.89	5.29	5.22	2.95	3.65	3.35	3.23
July 28	6.02	5.45	5.38	3.01	3.73	3.44	3.33
August 4	6.15	5.58	5.51	3.07	3.81	3.52	3.41
August 11	6.27	5.69	5.62	3.13	3.88	3.59	3.48
August 18	6.39	5.69	5.62	3.19	3.95	3.60	3.48
August 25	6.51	5.84	5.76	3.25	4.03	3.69	3.57
September 1	6.76	6.11	6.03	3.38	4.18	3.86	3.73
September 8	7.28	6.56	6.49	3.64	4.51	4.15	4.02
September 15	7.90	7.22	7.14	3.95	4.89	4.56	4.41
September 22	8.66	7.95	7.87	4.33	5.36	5.01	4.86
September 29 - October 6	9.54	8.80	8.73	4.77	5.91	5.55	5.39
October 13 - October 27	10.21	9.42	9.35	5.10	6.32	5.94	5.77
November 3 - November 10	9.88	9.05	8.99	4.94	6.12	5.71	5.55
November 17 - November 24	9.81	9.04	8.93	4.91	5.90	5.63	5.43
December 1 - December 8	9.42	8.57	8.47	4.71	5.66	5.35	5.16
December 15 - December 29	9.42	8.43	8.32	4.71	5.66	5.27	5.08
1988:							
January 5	9.42	8.43	8.32	4.71	5.66	5.27	5.08
January 12	9.90	8.84	8.73	4.95	5.95	5.52	5.34
January 19 - January 26	11.22	9.72	9.61	5.61	6.74	6.10	5.90
February 2 - March 22	11.66	10.24	10.14	5.83	7.01	6.41	6.21
March 29	11.61	10.25	10.15	5.80	6.98	6.41	6.22
April 5 - April 19	11.83	10.46	10.36	5.92	7.12	6.54	6.35
April 26	11.56	10.31	10.21	5.78	6.95	6.44	6.25
May 3 - May 10	11.02	9.97	9.88	5.51	6.63	6.22	6.03
May 17 - May 31	10.58	9.72	9.62	5.29	6.37	6.05	5.86
June 7	10.09	9.28	9.18	5.04	6.07	5.78	5.59
June 14	10.28	9.44	9.34	5.14	6.19	5.88	5.69
June 21-28	10.69	9.87	9.77	5.35	6.43	6.14	5.95
July 5-12	10.98	10.17	10.08	5.49	6.61	6.32	6.13
July 19 - August 2	11.13	10.33	10.25	5.56	6.69	6.42	6.23
August 9	10.85	9.99	9.91	5.42	6.52	6.22	6.03
August 16	10.55	9.72	9.64	5.27	6.34	6.05	5.87
August 23 - September 6	10.68	9.82	9.74	5.34	6.42	6.11	5.93
September 13	10.43	9.57	9.48	5.22	6.28	5.96	5.78
September 20 - October 4	10.30	9.43	9.34	5.15	6.19	5.87	5.69
October 11 - October 25	10.13	9.30	9.21	5.07	6.10	5.79	5.61
November 1	10.03	9.23	9.16	5.01	6.18	5.78	5.53
November 8 - December 13	9.87	9.08	9.01	4.94	6.10	5.69	5.44
December 20 - December 27	9.55	8.80	8.74	4.77	5.90	5.51	5.27

See footnote at end of table.

Continued--

Appendix table 11--World market rice prices, loan rate basis 1/--Continued

Date	Milled kernel rates				Rough rates		
	Long	Medium	Short	Broken	Long	Medium	Short
	-----Cents/lb.-----				-----\$/cwt-----		
1989:							
January 3 - January 10	9.55	8.80	8.74	4.77	5.90	5.51	5.27
January 17 - January 24	9.79	9.12	9.07	4.89	6.05	5.71	5.46
January 31 - February 21	9.97	9.29	9.23	4.98	6.16	5.82	5.55
February 28 - March 7	10.11	9.46	9.38	5.06	6.25	5.92	5.64
March 14 - April 4	10.33	9.69	9.62	5.17	6.39	6.06	5.78
April 11	10.56	9.85	9.78	5.28	6.53	6.17	5.88
April 18	10.64	9.93	9.86	5.32	6.58	6.22	5.93
April 25 - May 2	11.17	10.36	10.28	5.59	6.91	6.49	6.19
May 9 - May 16	11.41	10.69	10.60	5.71	7.05	6.69	6.37
May 23	11.60	10.83	10.74	5.80	7.17	6.78	6.46
May 30	11.91	11.09	11.00	5.96	7.36	6.94	6.62
June 6 - June 20	12.20	11.33	11.24	6.10	7.54	7.10	6.76
June 27	13.20	12.07	11.98	6.60	8.16	7.57	7.22
July 5	13.78	12.79	12.69	6.89	8.51	8.01	7.64
July 11 - August 1	14.41	13.39	13.30	7.21	8.91	8.39	8.00
August 8	14.15	12.91	12.82	7.07	8.74	8.10	7.73
August 15	13.00	11.82	11.74	6.50	8.04	7.42	7.08
August 22 - September 5	12.46	11.23	11.11	6.23	7.70	7.02	6.76
September 12	12.23	11.08	10.96	6.12	7.56	6.92	6.68
September 19 - October 10	11.74	10.57	10.45	5.87	7.26	6.61	6.38
October 17 - October 24	11.43	10.29	10.17	5.72	7.07	6.43	6.21
October 31	10.55	9.67	9.55	5.27	6.52	6.03	5.81
November 7 - November 14	10.16	9.37	9.25	5.08	6.28	5.84	5.63
November 21 - December 26	9.76	9.06	8.94	4.88	6.03	5.64	5.43
1990:							
January 2 - February 13	9.76	9.06	8.94	4.88	6.03	5.64	5.43
February 20	9.54	8.70	8.59	4.77	5.90	5.43	5.23
February 27-March 27	9.41	8.46	8.35	4.70	5.81	5.29	5.10
April 3 - April 17	9.31	8.25	8.14	4.66	5.75	5.17	4.98
April 24	9.11	8.10	7.99	4.56	5.63	5.07	4.89
May 1	8.87	7.95	7.84	4.43	5.48	4.97	4.79
May 8 - May 22	8.63	7.77	7.66	4.32	5.34	4.86	4.68
May 29	8.53	7.66	7.60	4.26	5.36	4.93	4.91
June 5 - June 19	8.45	7.58	7.52	4.22	5.31	4.88	4.86
June 26 - August 7	8.36	7.48	7.41	4.18	5.25	4.82	4.79
August 14 - August 21	8.31	7.38	7.31	4.16	5.22	4.75	4.73
August 28 - September 25	8.18	7.22	7.16	4.09	5.14	4.65	4.63
October 2 - December 18	8.28	7.32	7.27	4.14	5.20	4.72	4.70
1991:							
December 26 - January 22	8.30	7.23	7.24	4.15	5.09	4.47	4.40
January 29 - February 5	9.38	8.30	8.33	4.69	5.75	5.12	5.05
February 12 - March 5	9.39	8.36	8.37	4.70	5.76	5.15	5.07
March 12 - March 19	9.56	8.56	8.57	4.78	5.86	5.27	5.19
March 26 - April 9	9.66	8.69	8.70	4.83	5.92	5.35	5.26
April 16 - May 14	9.45	8.49	8.50	4.73	5.80	5.23	5.15
May 21 - July 30	9.63	8.64	8.65	4.81	5.90	5.32	5.24
August 6 - August 13	9.69	8.78	8.73	4.85	6.00	5.51	5.44
August 20 - November 19	9.74	8.80	8.75	4.87	6.03	5.52	5.45
November 26 - January 14	9.71	8.76	8.72	4.85	6.01	5.50	5.44
1992:							
January 21 - January 28	9.81	8.82	8.76	4.91	6.05	5.57	5.21
February 4 - March 24	9.98	9.03	8.95	4.99	6.15	5.70	5.32
March 31 - May 5	9.62	8.70	8.57	4.81	5.93	5.49	5.10
May 12 - July 14	9.43	8.46	8.32	4.71	5.81	5.34	4.96
July 21 - July 28	9.53	8.64	8.50	4.76	5.87	5.45	5.06
August 4 - August 11	9.65	8.76	8.74	4.82	5.98	5.51	5.50
August 18	9.50	8.64	8.63	4.75	5.89	5.44	5.42
August 25 - September 8	9.34	8.46	8.45	4.67	5.79	5.33	5.31
September 15 - September 22	9.15	8.25	8.24	4.57	5.67	5.20	5.18
September 29 - October 6	9.04	8.16	8.14	4.52	5.60	5.14	5.12
October 13	8.88	7.96	7.93	4.44	5.50	5.02	4.99

1/ Repayment rates for 1985-crop loans are the world price for the specified class of rice. Repayment rates specified class of rice. Repayment rates for 1986 crop loans and 1987 crop loans are the higher of the world price or 50 percent of the loan rate for the specified class of rice. Repayment rates for 1988-crop loans are the higher of the world price or 60 percent of the loan rate for the specified class of rice. Repayment rates for 1989-1992 crop loans are the higher of the world price or 70 percent of the loan rate for the specified class of rice.

Appendix table 12--Rough rice: Average price received by farmers by month and marketing year 1/

Item	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
	\$/cwt										
Month:											
August	11.80	7.31	8.41	8.22	7.86	4.02	3.82	7.49	7.41	6.66	7.16
September	10.70	7.75	8.48	8.17	7.55	3.86	4.34	6.97	7.59	6.21	7.67
October	10.20	7.73	8.80	8.08	7.73	3.83	6.25	6.85	7.41	5.95	7.61
November	9.86	7.78	8.80	8.13	7.84	3.90	7.53	6.81	7.03	6.21	7.78
December	9.34	8.06	8.66	8.08	7.71	3.74	7.64	6.68	7.05	6.12	7.92
January	9.34	8.05	8.57	8.09	7.90	3.55	7.93	6.58	7.44	6.38	7.82
February	9.46	8.26	8.85	7.72	7.86	3.84	9.37	6.67	7.57	6.69	7.91
March	8.99	7.99	8.63	8.17	7.60	3.62	9.22	6.60	7.55	7.07	7.72
April	8.54	8.23	8.49	8.20	5.32	3.63	8.92	6.74	7.41	7.43	7.39
May	8.55	8.23	8.24	7.91	4.52	3.71	7.97	6.78	7.28	7.45	7.11
June	8.54	7.88	8.20	7.83	4.04	3.62	7.69	7.05	7.18	7.43	6.93
July	8.25	7.95	8.18	7.54	3.86	3.49	7.94	7.45	7.05	7.18	6.94
Season average price:											
12 months 1/	9.05	7.91	8.57	8.04	6.53	3.75	7.27	6.83	7.35	6.70	4/ 7.53
5 months 2/	10.40	7.69	8.63	8.14	7.73	3.87	5.71	6.84	7.24	6.25	
State: 3/											
Arkansas	9.37	8.61	9.18	8.51	6.70	3.68	7.60	6.90	7.46	6.75	NA
California	7.35	6.65	6.96	6.43	5.33	3.18	6.72	6.15	6.27	5.93	NA
Louisiana	9.36	8.05	8.90	8.20	7.24	4.03	7.65	6.90	7.81	6.73	NA
Mississippi	9.14	8.66	9.53	8.88	7.10	3.91	7.90	7.02	7.57	6.99	NA
Missouri	9.50	8.65	9.49	8.70	7.05	3.57	7.41	7.22	7.54	7.21	NA
Texas	10.40	8.94	9.97	8.90	7.38	4.22	8.07	7.24	8.02	7.41	NA
Type:											
Long grain	9.70	8.56	9.36	8.66	6.75	3.82	7.77	6.96	7.59	6.94	NA
Medium and short grain	8.06	6.91	7.13	6.66	5.87	3.55	6.36	6.47	6.71	6.19	NA

NA = Not available.

1/ Marketing year--August-July. 2/ First 5 months of marketing year--August-December. 3/ Marketing year for; Arkansas and Mississippi--August-July, California--October-September, Louisiana and Texas--July-June. 4/ Preliminary.

Source: Crop Values and Agricultural Prices, National Agricultural Statistics Service, USDA.

Appendix table 13--Milled rice: Average price, f.o.b. mills, at selected milling centers

Year and type	Aug.	Sept. 1/	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
	\$/cwt, bagged												
Long 2/:	Southwest Louisiana												
1982/83	17.50	17.40	17.50	17.55	18.40	18.35	17.50	17.50	18.50	18.50	18.60	18.75	18.00
1983/84	19.40	19.75	19.35	19.50	19.50	19.50	19.25	19.25	19.25	19.25	19.25	19.25	19.40
1984/85	18.25	18.25	17.60	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	17.70	18.00
1985/86	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	15.50	12.70	12.75	12.42	16.10
1986/87	10.60	10.25	10.25	9.90	10.10	10.10	9.95	9.90	10.40	10.40	10.50	10.50	10.25
1987/88	10.70	12.05	17.70	19.75	19.70	20.60	24.45	24.50	24.00	20.75	18.85	17.90	19.25
1988/89	16.80	16.10	14.50	14.50	14.10	14.00	14.20	13.80	13.50	15.40	15.50	15.60	14.85
1989/90	16.40	15.90	15.60	15.00	14.65	15.40	15.65	15.40	15.65	15.80	15.65	15.30	15.55
1990/91	14.65	13.95	13.75	14.00	14.00	14.15	15.45	15.75	16.40	16.50	17.25	16.95	15.25
1991/92	16.40	16.55	16.60	17.15	17.35	17.30	17.30	16.60	16.45	15.70	15.10	15.20	16.48
1992/93	15.00	14.75											
	Houston, Texas												
1982/83	18.25	18.75	18.00	18.00	18.00	19.00	19.00	19.00	19.00	19.00	19.10	19.40	18.70
1983/84	19.50	19.65	20.00	20.00	20.00	20.25	20.25	20.25	20.10	19.50	19.50	19.50	19.90
1984/85	19.40	18.70	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	17.40	18.70
1985/86	18.70	18.30	18.30	18.30	18.30	18.70	17.90	17.50	17.30	17.25	13.75	13.50	16.85
1986/87	13.00	13.00	13.00	13.00	13.00	11.15	10.50	10.50	10.50	10.50	10.50	10.50	11.60
1987/88	10.50	11.25	19.00	21.00	21.00	21.00	23.65	24.05	24.00	21.70	20.50	20.50	19.85
1988/89	18.20	16.00	15.25	15.00	15.00	15.00	15.00	15.00	15.00	15.15	15.50	16.50	15.55
1989/90	16.50	16.50	16.50	16.00	15.70	15.50	16.25	16.25	16.25	16.25	16.25	16.25	16.20
1990/91	15.80	14.50	14.50	14.50	14.50	14.50	16.00	16.00	16.00	16.35	17.00	17.00	15.55
1991/92	17.00	17.00	16.65	17.00	17.50	17.50	17.50	17.50	17.50	17.25	16.70	16.50	17.15
1992/93	16.50	16.50											
	Arkansas												
1982/83	17.10	17.00	17.00	17.55	18.40	18.35	17.50	17.50	18.00	18.40	18.50	18.50	17.80
1983/84	18.50	18.50	18.85	19.00	19.00	19.00	18.50	18.50	18.50	18.50	18.50	18.50	18.65
1984/85	18.40	18.25	18.25	18.25	18.00	18.00	18.00	17.94	17.75	17.80	17.95	17.75	18.00
1985/86	17.75	17.50	17.40	17.25	17.25	17.25	17.25	17.25	15.50	13.25	13.00	13.00	16.15
1986/87	11.90	11.55	11.75	11.90	11.90	11.90	11.90	11.90	11.65	11.50	11.75	11.75	11.80
1987/88	11.90	13.25	18.50	20.50	20.20	21.20	24.05	24.05	24.00	22.50	21.15	19.00	20.00
1988/89	18.30	16.90	15.10	14.75	15.10	14.80	14.75	14.75	14.75	15.60	15.85	16.95	15.65
1989/90	17.20	16.65	15.95	15.70	15.75	15.90	16.00	16.00	16.00	16.00	16.00	16.00	16.10
1990/91	15.50	15.00	14.50	14.50	14.75	14.75	15.75	15.75	15.95	16.75	17.25	17.25	15.65
1991/92	16.85	16.55	16.50	17.40	17.30	17.25	17.25	17.00	16.90	16.20	15.70	15.50	16.70
1992/93	15.65	15.45											
Medium 2/:	Southwest Louisiana												
1982/83	16.50	16.50	16.45	16.65	17.75	17.30	16.50	16.50	16.50	17.10	17.50	17.50	16.90
1983/84	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50
1984/85	16.00	16.00	15.50	15.50	15.50	15.50	15.50	16.00	16.20	16.30	18.00	16.20	16.00
1985/86	16.00	16.00	16.00	16.00	16.00	16.00	15.70	15.50	14.60	11.90	12.00	11.35	14.75
1986/87	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.50	11.25	11.15	11.20	11.20	10.45
1987/88	11.10	11.95	16.60	17.25	16.75	18.50	19.80	20.15	20.00	18.00	17.40	16.70	17.00
1988/89	16.40	16.20	14.50	14.50	14.00	13.90	13.75	13.50	13.50	14.60	14.65	15.75	14.60
1989/90	15.55	15.30	14.80	14.30	14.04	14.80	15.13	15.13	15.50	15.75	15.65	15.30	15.10
1990/91	14.75	13.90	13.50	13.50	13.50	14.90	14.90	15.05	16.05	16.15	16.50	16.35	14.90
1991/92	15.85	16.00	16.00	16.00	16.00	16.00	15.90	15.50	15.50	15.15	14.50	14.50	15.60
1992/93	14.50	14.00											
	Arkansas												
1982/83	16.10	16.50	16.10	16.65	17.75	17.10	16.50	16.50	16.60	17.10	17.50	17.50	16.80
1983/84	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.20	17.00	17.00	17.00	17.35
1984/85	16.90	16.70	16.35	16.20	16.00	15.75	16.25	15.95	16.30	16.25	16.25	15.90	16.25
1985/86	16.00	16.00	16.20	16.50	16.50	16.50	16.50	16.25	14.80	12.35	12.50	12.50	15.20
1986/87	12.25	11.60	12.00	12.00	12.00	12.00	12.65	12.65	12.65	12.35	12.25	12.25	12.20
1987/88	12.25	12.65	16.70	18.00	17.85	18.70	20.50	20.50	20.50	19.00	18.90	18.00	17.80
1988/89	17.30	16.25	14.75	15.00	15.00	14.70	14.75	14.75	15.25	15.40	15.40	16.75	15.45
1989/90	17.20	16.65	15.95	15.45	15.25	15.40	15.50	15.50	15.50	15.50	15.50	15.50	15.75
1990/91	15.25	14.75	14.50	14.65	14.75	14.75	15.75	15.75	15.90	16.60	17.00	17.00	15.55
1991/92	16.60	16.10	16.10	16.70	16.65	16.65	16.65	16.35	16.40	15.65	15.35	15.25	16.20
1992/93	15.50	15.45											
Medium 3/:	California												
1982/83	16.25	16.10	15.55	15.50	15.50	16.50	16.00	16.00	16.00	15.90	15.95	15.75	15.90
1983/84	15.65	15.50	15.70	15.50	15.50	15.50	15.50	15.40	15.25	15.25	15.25	15.25	15.45
1984/85	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25
1985/86	15.25	15.60	16.00	15.95	15.90	16.00	15.75	15.75	15.25	15.59	15.25	15.25	15.65
1986/87	15.00	14.50	13.75	12.65	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	13.00
1987/88	12.50	13.00	16.15	17.00	17.00	16.85	18.50	18.50	18.50	18.00	18.00	18.00	16.85
1988/89	17.85	17.75	16.25	15.75	15.75	15.50	15.50	16.45	17.25	17.25	17.25	17.90	16.70
1989/90	18.45	18.25	17.50	16.55	16.00	15.75	15.75	15.70	15.50	14.90	15.00	15.25	16.20
1990/91	14.80	14.90	14.25	15.25	15.25	15.60	16.25	16.25	16.25	18.10	18.25	17.90	16.10
1991/92	17.65	17.50	17.00	17.80	18.00	18.00	18.05	18.25	18.25	18.25	18.35	18.50	17.95
1992/93	18.25	18.25											
Short 3/:													
1982/83	17.20	16.70	15.55	15.50	15.50	16.90	16.00	16.00	16.00	16.00	16.00	16.00	16.10
1983/84	15.80	15.50	15.70	15.50	15.50	15.50	15.50	15.38	15.25	15.25	15.25	15.25	15.45
1984/85	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25
1985/86	15.25	15.60	16.00	15.95	15.90	16.00	15.75	15.75	15.75	15.60	15.25	15.15	15.65
1986/87	15.00	14.50	13.75	12.80	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	13.00
1987/88	12.50	13.00	16.15	17.00	17.00	16.85	18.50	18.50	18.50	18.00	18.00	18.00	16.85
1988/89	17.85	17.75	16.25	15.75	15.75	15.50	15.50	16.40	17.25	17.25	17.25	17.90	16.70
1989/90	18.20	18.25	17.50	16.55	16.00	15.60	15.75	15.70	15.50	14.90	15.00	15.25	16.20
1990/91	14.80	14.90	14.25	15.25	15.25	15.60	16.25	16.25	16.25	18.10	18.25	17.90	16.10
1991/92	17.65	17.40	17.00	17.80	18.00	18.00	18.05	18.25	18.25	18.25	18.25	18.25	17.95
1992/93	18.25	18.25											

1/ September 1992 data are preliminary. 2/ U.S. No. 2--broken not to exceed 4 percent. 3/ U.S. No. 1.

Source: Rice Market News, Agricultural Marketing Service, USDA.

Appendix table 14--Rice byproducts: Monthly average price, Southwest Louisiana

Year and type	Aug.	Sept. 1/	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
Milled second head:													
\$/cwt, bagged 2/													
1982/83	10.00	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75
1983/84	9.75	10.25	10.25	10.25	10.25	10.25	10.25	10.80	10.20	10.00	10.00	10.00	10.20
1984/85	8.50	8.75	8.80	8.00	8.00	8.00	9.00	9.20	9.25	10.00	10.25	10.25	9.00
1985/86	10.25	10.25	10.17	10.00	10.00	10.00	10.25	10.25	8.80	7.75	7.75	7.75	9.45
1986/87	7.75	7.75	7.75	7.65	7.75	7.75	7.75	7.70	7.60	7.60	5.85	5.65	7.40
1987/88	5.75	6.00	6.90	7.50	7.50	7.75	7.70	7.75	7.75	7.75	7.85	8.25	7.40
1988/89	8.15	8.10	8.50	8.00	8.00	8.00	10.05	9.70	9.70	10.70	10.60	10.45	9.15
1989/90	9.95	9.65	9.00	8.10	8.00	8.00	8.50	8.50	8.50	8.50	8.50	8.40	8.65
1990/91	7.75	7.50	7.50	7.50	7.50	7.50	7.90	7.50	8.50	8.60	9.00	9.15	8.00
1991/92	8.65	8.50	9.20	9.50	9.50	9.50	9.15	8.75	8.80	8.75	9.00	9.00	9.05
1992/93	9.00	9.00											
Rice bran, f.o.b. mills:													
\$/ton 3/													
1982/83	52.80	53.00	54.00	77.65	85.00	77.50	52.15	47.25	59.65	70.30	61.25	NQ	62.80
1983/84	62.15	70.00	94.00	108.35	120.85	98.50	57.50	50.00	67.50	60.00	NQ	59.00	77.10
1984/85	69.15	49.50	45.15	53.75	69.15	85.00	77.50	53.25	40.50	45.67	45.00	47.50	56.75
1985/86	43.35	40.00	20.00	42.50	62.50	86.00	65.00	51.65	NQ	25.75	20.00	18.35	43.20
1986/87	16.25	23.80	26.50	34.00	53.15	50.00	36.70	28.40	23.50	20.65	18.80	17.00	29.05
1987/88	19.50	27.40	46.70	54.50	54.20	68.35	49.65	47.25	60.00	45.00	44.20	85.00	50.15
1988/89	64.00	58.10	64.00	64.00	70.65	71.40	52.25	64.10	65.00	45.85	46.65	48.75	59.55
1989/90	55.75	55.40	60.25	69.00	76.20	84.40	51.00	49.65	51.50	71.50	75.35	75.90	64.65
1990/91	72.25	52.40	50.75	52.00	56.00	66.40	51.75	48.65	57.65	47.35	50.25	57.50	55.25
1991/92	42.85	36.80	43.00	54.50	72.00	75.00	56.50	44.65	41.40	40.90	42.25	45.40	49.60
1992/93	43.75	38.40											
Rice millfeed, f.o.b. mills:													
\$/ton 3/													
1982/83	16.00	16.75	15.25	26.15	35.00	45.00	13.50	15.25	19.35	23.60	22.10	23.00	22.60
1983/84	24.00	25.40	33.30	42.10	61.65	53.00	22.50	24.75	31.20	21.25	25.00	27.75	32.65
1984/85	23.50	18.75	18.65	19.40	24.50	31.75	34.70	22.00	17.00	16.90	15.00	14.50	21.40
1985/86	13.00	13.00	8.00	15.40	19.50	34.10	NQ	19.50	20.85	8.50	5.00	4.50	14.65
1986/87	5.15	10.00	10.00	11.25	15.00	13.75	8.15	6.15	4.50	3.50	3.65	4.25	7.95
1987/88	8.50	9.50	21.35	22.70	21.50	28.35	17.40	18.85	22.50	16.00	19.50	40.00	20.50
1988/89	21.50	17.90	18.00	21.50	24.00	23.60	20.00	19.00	20.00	15.00	15.65	16.00	19.35
1989/90	17.15	16.75	14.00	22.65	23.70	27.70	14.20	14.65	16.50	22.40	25.00	25.00	19.95
1990/91	28.75	19.00	19.25	19.00	21.50	25.25	17.15	18.50	17.50	13.85	14.25	16.30	19.20
1991/92	12.15	11.20	13.40	19.90	39.50	37.15	17.50	14.65	14.75	14.15	15.00	16.15	18.80
1992/93	14.75	13.50											

NQ = Not quoted.

1/ September 1992 data are preliminary. 2/ U.S. No. 4 or better. 3/ Prices quoted as bulk.

Source: Rice Market News, Agricultural Marketing Service, USDA.

Appendix table 15--Brewers' prices: Monthly average price for Arkansas brewers' rice and New York brewers' corn grits

Year and state	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
Arkansas 1/:													
\$/cwt													
1982/83	6.55	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
1983/84	6.50	6.75	7.00	7.00	6.90	6.76	6.63	6.50	6.62	6.70	6.90	7.10	6.80
1984/85	7.25	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.15	7.00	6.80	6.75	7.15
1985/86	6.75	6.70	6.50	6.50	6.50	6.30	6.00	6.00	5.75	5.50	5.50	5.50	6.15
1986/87	5.20	5.00	4.75	4.75	4.65	4.45	4.20	4.20	4.20	4.20	4.10	3.75	4.45
1987/88	4.00	4.15	6.00	6.20	6.10	6.10	6.95	7.25	7.25	6.90	7.40	8.35	6.40
1988/89	8.50	8.70	8.75	8.75	8.75	8.60	10.45	10.20	10.20	11.00	11.00	10.65	9.65
1989/90	9.65	9.00	8.50	8.00	7.75	7.75	7.75	7.45	6.85	6.60	6.60	7.05	7.75
1990/91	7.00	6.10	6.20	6.50	6.25	6.05	6.65	7.10	8.00	8.00	8.00	8.00	7.00
1991/92	8.00	8.40	8.70	9.00	9.00	8.90	8.50	8.65	8.25	8.25	8.25	8.25	8.50
1992/93	8.25	8.25											
New York 2/:													
1982/83	9.91	9.75	9.60	9.74	9.78	10.07	10.52	10.82	11.35	11.32	11.58	12.06	10.54
1983/84	12.85	13.06	12.77	12.64	11.96	11.81	11.95	12.58	12.99	12.95	13.19	13.01	12.65
1984/85	12.90	12.64	11.49	11.33	11.03	11.20	11.50	11.86	11.42	11.45	11.54	11.46	11.65
1985/86	11.40	11.59	10.62	10.83	11.11	10.91	10.71	10.81	10.75	11.12	11.26	10.98	11.01
1986/87	10.30	9.84	9.85	9.84	9.46	9.40	9.20	9.42	9.60	10.02	9.97	9.48	9.70
1987/88	9.22	9.34	9.51	9.56	9.52	9.66	9.76	9.78	9.81	9.82	11.42	12.23	9.97
1988/89	11.67	11.50	11.56	11.37	11.54	11.47	11.32	11.56	11.37	11.99	11.47	11.54	11.53
1989/90	11.23	11.35	11.50	11.55	11.47	11.49	11.51	11.66	12.01	12.19	12.17	12.09	11.69
1990/91	11.83	11.61	11.62	11.63	11.60	11.61	11.71	11.70	11.78	11.52	11.39	11.29	11.61
1991/92	11.71	11.50	11.55	11.41	11.45	11.44	11.75	11.77	11.51	11.56	11.84	11.48	11.58
1992/93	11.25	11.30											

September 1992 data are preliminary.

Sources: 1/ Rice Market News, Agricultural Marketing Service, USDA.
2/ Milling and Baking News.

Appendix table 16--Thailand milled rice prices, f.o.b. Bangkok 1/

Type	1988/89		1989/90		1990/91		1991/92		1992/93	
\$/metric ton										
100% 1st grade:	BOT 2/	NPQ 3/	BOT	NPQ	BOT	NPQ	BOT	NPQ	BOT	NPQ
August	355	NA	504	NA	315	NA	353	NA	328	NA
September	355	NA	390	NA	312	NA	350	NA	322	NA
October	355	NA	374	NA	318	NA	340	NA		
November	355	NA	356	NA	314	NA	339	NA		
December	340	NA	355	NA	310	NA	328	NA		
January	335	NA	355	NA	361	NA	325	NA		
February	NA	NA	355	NA	378	NA	325	NA		
March	324	NA	343	NA	371	NA	325	NA		
April	348	NA	341	NA	343	NA	327	NA		
May	357	NA	332	NA	341	NA	327	NA		
June	383	NA	318	NA	344	NA	329	NA		
July	410	NA	310	NA	350	NA	330	NA		
Average	356	NA	361	NA	338	NA	333	NA		
100% 2nd grade:										
August	315	274	373	337	285	268	325	309	303	278
September	315	279	360	328	282	269	325	300	297	267
October	315	279	344	314	288	290	315	284		
November	315	278	326	271	287	279	314	283		
December	300	265	325	279	285	272	303	277		
January	290	268	325	284	336	312	300	284		
February	285	276	325	307	353	336	300	287		
March	294	282	313	297	346	321	300	286		
April	318	302	311	284	318	295	302	287		
May	327	316	304	267	328	298	302	284		
June	353	337	288	264	319	302	304	278		
July	380	357	280	NA	325	315	305	289		
Average	317	293	323	NA	313	296	308	287		
5% broken:										
August	305	269	363	332	274	260	315	298	293	269
September	305	274	350	320	272	259	315	290	287	256
October	305	273	334	304	278	281	305	277		
November	305	272	316	264	276	271	304	274		
December	290	260	315	272	275	264	293	270		
January	280	264	315	277	326	305	290	276		
February	275	269	315	300	343	326	290	278		
March	284	277	303	289	336	311	290	277		
April	308	298	301	276	308	286	291	279		
May	317	310	290	260	306	288	292	275		
June	343	331	278	NA	309	292	294	268		
July	370	351	270	NA	315	306	295	279		
Average	307	287	312	NA	301	287	298	278		

NA = Not available.

1/ Includes export premium, export tax, and cost of bags. Packed in bags of 100 kg net. 2/ Thailand's posted Board of Trade prices. 3/ Nominal price quotes, Bangkok. In mid-1984, price quotes began to vary significantly from the posted Board of Trade prices. Since then, the nominal quotes have appeared to be more representative of known actual prices than those posted by the Board of Trade for most grades of rice.

Appendix table 17--Milled rice: Average C & F ARAG quotations 1/

Type	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93 4/
\$/metric ton							
U.S. no. 2 milled, 4%, container, FAS 2/:							
August	299	316	325	354	306	364	332
September	285	349	303	357	287	373	336
October	305	NQ	303	324	284	379	
November	303	415	310	314	314	381	
December	249	413	300	312	325	380	
January	224	442	292	338	333	379	
February	224	496	290	356	349	378	
March	224	493	290	348	364	363	
April	224	455	292	342	372	343	
May	240	420	317	338	380	333	
June	267	329	356	336	389	313	
July	277	355	368	333	378	322	
Average	260	408	312	338	340	359	
Thai SWR 100% Grade A, bulk 3/:							
August	303	300	380	448	401	415	408
September	297	312	380	433	395	413	400
October	292	349	378	407	402	401	
November	275	341	375	384	395	388	
December	260	338	375	376	400	382	
January	260	365	360	379	418	379	
February	262	395	360	395	439	385	
March	276	396	360	394	428	388	
April	282	383	365	371	398	397	
May	275	377	400	379	398	399	
June	273	366	412	396	391	402	
July	268	383	437	399	395	408	
Average	279	359	382	397	405	396	
Thai SWR 100% Grade B, bulk 3/:							
August	243	250	322	386	311	357	328
September	230	280	320	369	310	341	319
October	225	316	320	359	330	323	
November	219	303	320	331	321	320	
December	215	304	320	322	304	319	
January	218	328	315	328	359	322	
February	236	357	320	350	386	325	
March	244	359	325	343	365	326	
April	246	340	328	326	335	325	
May	241	340	360	309	344	327	
June	238	311	389	308	347	320	
July	235	324	402	307	350	328	
Average	232	318	337	336	339	328	

NQ = Not quoted.

1/ ARAG = composite of ports near Rotterdam. 2/ FAS, container, gulf port quote. All other prices are C & F ARAG.

3/ Thailand prices changed to bulk quote on May 15, 1985. Prior to this date Thai prices were quoted by the bag.

4/ September 1992 data are preliminary.

Source: Rice Market News, Agricultural Marketing Service, USDA.

Appendix table 18--World rice supply and utilization

Year	Area harvested	Yield 1/	--Production 2/-- Rough	Milled	Exports 3/	Total use 4/	Ending stocks 5/	Stocks-to-use ratio 6/
	Million hectares	MT/ha	-----Million metric tons-----					Percent
1961/62	115.7	1.86	215.7	147.3	6.3	149.2	8.5	5.7
1962/63	119.6	1.91	228.2	155.2	7.3	151.3	12.4	8.2
1963/64	121.5	2.04	248.4	169.1	7.7	165.2	16.2	9.8
1964/65	125.4	2.12	265.6	180.8	8.2	179.8	17.3	9.6
1965/66	124.0	2.05	253.7	173.0	7.9	172.3	18.0	10.4
1966/67	125.7	2.08	261.9	178.9	7.8	178.3	18.6	10.4
1967/68	127.0	2.18	276.8	188.8	7.2	186.5	20.9	11.2
1968/69	128.6	2.23	286.2	195.1	7.5	191.3	24.8	13.0
1969/70	131.4	2.25	295.2	201.1	8.2	199.7	26.1	13.1
1970/71	132.7	2.36	312.6	213.1	8.6	210.4	28.8	13.7
1971/72	134.8	2.35	316.5	215.7	8.7	216.1	28.4	13.1
1972/73	132.7	2.31	306.5	209.1	8.4	214.1	23.4	10.9
1973/74	136.3	2.45	333.9	227.6	7.7	222.5	28.5	12.8
1974/75	137.8	2.40	331.2	225.7	7.3	226.1	28.2	12.5
1975/76	142.9	2.50	357.5	243.2	8.4	232.5	38.9	16.7
1976/77	141.4	2.45	346.9	235.9	10.6	237.0	37.8	16.0
1977/78	143.4	2.57	368.6	250.5	9.6	244.4	43.9	18.0
1978/79	143.6	2.68	385.5	262.4	11.9	252.2	54.1	21.5
1979/80	141.2	2.66	376.2	256.6	12.6	257.9	52.8	20.5
1980/81	144.2	2.75	396.8	269.7	13.1	274.5	48.0	17.5
1981/82	144.9	2.84	411.1	279.6	11.8	283.6	44.0	15.5
1982/83	140.4	2.99	419.6	285.8	11.9	285.9	43.8	15.3
1983/84	144.1	3.13	451.4	307.1	12.3	303.7	47.2	15.6
1984/85	144.0	3.24	466.6	317.8	11.3	309.0	56.0	18.1
1985/86	144.8	3.23	467.0	317.8	12.6	318.4	55.4	17.4
1986/87	145.1	3.21	465.3	316.5	12.9	320.5	51.4	16.0
1987/88	141.7	3.27	463.6	314.4	11.9	319.9	45.9	14.3
1988/89	145.4	3.35	487.5	330.0	15.1	327.6	48.3	14.8
1989/90	146.8	3.44	505.5	342.4	12.1	335.6	55.1	16.4
1990/91	147.1	3.52	518.3	351.2	12.7	345.9	60.4	17.5
1991/92 7/	145.3	3.52	511.6	346.3	14.1	351.1	55.6	15.8
1992/93 8/	146.8	3.52	516.5	349.7	13.6	353.2	52.1	14.7

NA = Not available.

1/ Yields are based on rough production. 2/ Production is expressed on both rough and milled basis; stocks, exports, and utilization are expressed on a milled basis. 3/ Exports quoted on calendar year basis. 4/ For countries for which stock data are not available, utilization estimates represent "apparent" utilization, i.e., they include annual stock level adjustments. 5/ Stocks data are based on an aggregate of different market years and should not be construed as representing world stock levels at a fixed point in time. Stocks data are not available for all countries and exclude the former USSR, North Korea, and parts of Eastern Europe. 6/ Stocks-to-use represents the ratio of marketing year ending stocks to total utilization. 7/ Preliminary. 8/ Forecast as of October 1992.

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

Appendix table 19--World rice production and stocks: Selected countries or regions 1/

Country or region	Crop year 2/							
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93 (as of October 1992)
Million metric tons								
Production:								
Bangladesh	22.6	23.1	23.1	23.3	26.8	26.8	27.7	27.9
Burma	11.5	11.8	11.4	12.5	13.5	13.7	12.8	13.0
China	168.6	172.2	173.9	169.1	180.1	189.3	183.8	185.0
India	95.7	90.6	85.3	105.7	110.4	111.9	108.8	109.5
Indonesia	39.0	39.0	41.5	42.3	44.7	45.2	44.3	45.8
Japan	14.6	14.6	13.3	12.4	12.9	13.1	12.0	13.5
South Korea	7.9	7.9	7.6	8.4	8.1	7.7	7.4	7.3
Pakistan	4.4	5.2	4.9	4.8	4.8	4.9	4.8	4.2
Thailand	20.3	18.9	18.4	21.3	20.2	17.2	20.2	20.2
Subtotal	384.6	383.3	379.4	399.8	421.5	429.8	421.8	426.4
Australia	0.7	0.6	0.8	0.8	0.8	0.8	1.1	1.0
Brazil	9.8	10.6	11.8	11.0	7.2	10.0	10.1	10.5
EC-12	2.0	1.9	1.9	2.0	2.1	2.4	2.2	2.2
All others	63.8	62.9	63.8	66.6	66.9	68.2	69.5	68.8
Total non-U.S.	460.9	459.3	457.7	480.2	498.5	511.2	504.6	508.9
United States	6.1	6.0	5.9	7.3	7.0	7.1	7.0	7.6
World total	467.0	465.3	463.6	487.5	505.5	518.3	511.6	516.5
Ending stocks 3/:								
Total foreign	52.9	49.7	44.9	47.5	54.2	59.6	54.7	51.1
United States	2.5	1.7	1.0	0.9	0.9	0.8	0.9	1.0
World total	55.4	51.4	45.9	48.3	55.1	60.4	55.6	52.1

1/ Production is rough basis, but ending stocks are milled basis. 2/ World rice harvest stretches over 6-8 months and varies widely across countries and hemispheres. 3/ Stocks are based on an aggregate of different local marketing years, and should not be construed as representing world stock levels at a fixed point in time. In addition, stocks data are not available for all countries.

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

Appendix table 20--World rice trade (milled basis): Exports and imports of selected countries or regions

Country or region	Calendar year						
	1987	1988	1989	1990	1991	1992 1/	1993 (as of October 1992) 2/
Exports:							
United States	2,444	2,241	2,967	2,420	2,197	2,200	2,300
Argentina	150	160	130	70	125	250	175
Australia	338	417	450	470	400	550	500
Burma	493	368	456	186	300	200	200
China	1,020	698	320	300	689	750	700
Taiwan	240	104	68	50	200	200	200
EC-12	981	920	963	990	1,090	1,040	900
Egypt	105	108	100	32	85	160	170
Guyana	69	56	26	30	53	55	75
India	350	200	450	500	600	450	450
Indonesia	100	0	104	50	0	100	100
North Korea	154	199	175	75	0	0	0
Pakistan	1,226	950	779	904	1,297	1,200	900
Thailand	4,355	4,791	6,036	3,937	3,993	4,600	4,400
Uruguay	190	244	251	250	262	300	350
Vietnam	153	97	1,400	1,500	1,000	1,600	1,500
Other	560	355	419	362	408	402	647
World total	12,928	11,908	15,094	12,126	12,699	14,057	13,567
Imports:							
Bangladesh	746	187	400	100	50	50	15
Brazil	200	64	180	405	965	450	350
Canada	85	135	148	130	160	170	180
China	554	310	1,200	142	142	100	100
Cuba	150	200	200	200	150	150	150
Eastern Europe	320	290	273	261	286	310	330
EC-12	1,198	1,215	1,261	1,235	1,250	1,270	1,230
India	5	650	500	0	0	100	50
Indonesia	155	33	412	60	180	650	50
Iran	1,000	400	1,000	850	565	800	800
Iraq	524	603	542	360	250	300	500
Ivory Coast	445	212	305	303	398	290	315
North Korea	0	0	0	0	200	200	200
Kuwait	90	90	90	90	90	90	100
Madagascar	125	70	130	155	60	100	100
Malaysia	280	350	360	360	400	425	400
Mexico	0	0	189	130	175	300	250
Nigeria	400	240	300	220	210	270	200
Peru	211	17	162	246	300	450	450
Philippines	0	181	195	630	0	0	200
Saudi Arabia	500	431	525	525	525	550	525
Senegal	355	360	400	390	430	400	400
South Africa	268	237	280	300	346	375	350
Sri Lanka	102	180	292	132	133	220	250
Syria	120	120	140	140	135	140	140
Turkey	110	170	200	210	200	250	250
U.A. Emirates	222	220	300	335	200	220	250
Former USSR	598	498	600	400	400	800	825
Vietnam	344	175	50	0	0	0	0
Other	3,436	3,855	3,845	3,727	4,081	3,965	3,857
Unaccounted 3/	385	415	615	90	418	662	750
World total	12,928	11,908	15,094	12,126	12,699	14,057	13,567

1/ Forecast. 2/ Projected. 3/ This represents exports not accounted for in reports from importing countries. Because this is recurring, it is taken into account in the assessment of the year ahead.

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

Appendix table 21--U.S. rice exports by type 1/

Crop year	Regular milled 2/	Brown	Parboiled	Rough	Broken	Total
1,000 metric tons						
1977/78	1,478.8	244.9	502.5	46.4	43.2	2,315.8
1978/79	1,416.5	276.0	627.3	90.5	20.8	2,431.1
1979/80	1,537.5	475.3	598.4	54.5	40.1	2,705.8
1980/81	1,011.7	1,202.5	781.7	13.5	18.0	3,027.4
1981/82	976.8	502.5	1,000.9	188.9	12.7	2,681.8
1982/83	993.2	354.3	846.5	18.7	5.9	2,218.6
1983/84	972.3	334.2	821.8	105.7	37.6	2,271.6
1984/85	1,009.3	169.6	630.8	103.1	46.8	1,959.6
1985/86	950.3	272.0	523.8	53.4	80.1	1,879.6
1986/87	1,541.2	245.1	659.7	264.0	5.7	2,715.7
1987/88	1,279.7	178.0	642.9	37.3	152.9	2,290.8
1988/89	1,421.6	319.5	834.4	127.3	81.4	2,784.2
1989/90	1,164.8	311.4	948.6	51.3	65.3	2,541.4

1/ Categories have not been converted to the same basis. 2/ Total minus sum of other categories.

Source: U.S. Bureau of the Census.

Appendix table 22--U.S. rice exports by export program

Fiscal year	PL 480	Section 416	CCC credit programs 1/	CCC African relief exports	EEP 2/	Export programs	Exports outside specified export programs	Total U.S. rice exports	Export programs as a share of total exports
1,000 metric tons									Percent
1975	747	0	48	0	0	795	1,419	2,217	36
1976	509	0	101	0	0	610	1,340	1,953	31
1977	691	0	15	0	0	705	1,614	2,317	30
1978	530	0	50	0	0	580	1,696	2,276	25
1979	486	0	42	0	0	528	1,868	2,396	22
1980	540	0	168	0	0	708	2,247	2,955	24
1981	360	0	452	0	0	812	2,360	3,172	26
1982	374	0	14	0	0	388	2,523	2,911	13
1983	475	0	328	0	0	803	1,473	2,276	35
1984	464	0	571	49	0	1,084	1,209	2,293	47
1985	577	0	359	3/ 180	0	3/ 1,116	3/ 856	1,972	3/ 56
1986	313	0	477	0	23	813	1,569	2,382	34
1987	426	60	636	0	28	1,150	1,304	2,454	47
1988	321	29	443	0	120	913	1,220	2,173	42
1989	408	0	826	0	20	1,254	1,787	3,041	41
1990	350	0	663	0	0	1,013	1,484	2,497	41
1991 3/	411	0	183	0	76	670	1,748	2,418	28

1/ Quantities and values shown are based on reports supplied by the export trade and may not completely reflect exports made under these programs. 2/ Sales calculated from Foreign Agricultural Service Press Releases. 3/ Estimated.

Sources: Agricultural Stabilization and Conservation Service, and Foreign Agricultural Service, USDA. Table provided by Mark Smith, ERS-CED, (202) 219-0821.

Appendix table 23--Top-10 U.S. rice export markets

Rank	Country	FY 1991 % of total exports 1/	Country	FY 1990 % of total exports	Country	FY 1989 % of total exports	Country	FY 1988 % of total exports	Country	FY 1987 % of total exports	Country	FY 1986 % of total exports
1	Saudi Arabia	11.1	Iraq	12.1	Iraq	18.8	Iraq	21.4	Iraq	22.1	Iraq	22.2
2	Brazil	8.2	Saudi Arabia	9.5	Saudi Arabia	8.7	Saudi Arabia	14.2	Saudi Arabia	13.1	Brazil	14.4
3	Canada	6.8	Mexico	7.5	Belgium- Luxembourg	5.1	Belgium- Luxembourg	6.3	Belgium- Luxembourg	6.0	Saudi Arabia	12.8
4	Haiti	6.1	Peru	6.3	Turkey	4.4	Philippines	5.9	Haiti	4.7	Belgium- Luxembourg	6.2
5	Turkey	5.7	Canada	5.4	Spain	4.3	Canada	5.3	Canada	4.4	Canada	4.9
6	Republic of South Africa	4.9	Turkey	5.3	Mexico	3.8	Republic of South Africa	4.5	Republic of South Africa	3.4	Liberia	3.2
7	Switzerland	4.1	Haiti	4.3	Canada	3.5	Haiti	3.3	Guinea	2.7	Republic of South Africa	2.8
8	Liberia	3.9	Republic of South Africa	4.1	Switzerland	3.2	Switzerland	3.0	Netherlands	2.5	Switzerland	2.2
9	Netherlands	3.5	Belgium- Luxembourg	4.1	Haiti	3.1	Jamaica	2.9	Liberia	2.4	Jamaica	2.0
10	Mexico	3.5	Jordan	3.7	Republic of South Africa	3.1	Bangladesh	2.7	Turkey	2.4	Dominican Republic	1.9
	Sub-total	57.8		62.4		58.1		69.3		63.7		72.5

-----Million dollars-----												
Value of U.S. rice exports	749		829		955		734		551		648	

1/ Percent calculated as proportion of total value of U.S. rice exports.

Sources: U.S. Bureau of the Census.
FATUS, Foreign Agricultural Trade of the U.S., USDA, various issues.

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