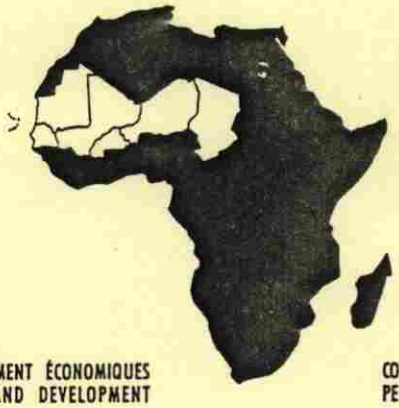

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THE WORLD GRAIN SITUATION: IMPLICATIONS FOR FOOD POLICY IN THE SAHEL

by

Charles Hanrahan

COLLOQUE SUR LES POLITIQUES CEREALIERES DANS LES PAYS SAHELIENS

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THE WORLD GRAIN SITUATION:

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IN THE SAHEL

Preliminary Draft

by

Charles Hanrahan
Abt Associates

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THE WORLD GRAIN SITUATION: IMPLICATIONS FOR FOOD POLICY IN THE SAHEL

Introduction

The world grain situation in the 1980s is markedly different from that in the 1970s. Grain shortages and high, unstable prices characterized the 1970s. By contrast global surpluses and low, stable prices characterize the world grain market in the 1980s. The major exception to this situation of abundance and depressed prices is sub-Saharan Africa, but even in Africa grain production has shown a remarkable recovery in many countries in 1985 and 1986.

Both the United States and the European Community (EC) have recently made significant changes in their agricultural policies. These changes in U.S. and EC agricultural policies have fundamentally altered the outlook for world grain prices for the rest of the 1980s.

National grain policies based on the experience of the 1970s are likely to be inadequate for dealing with grain production, consumption, trade and food security during the 1980s.

The Sahelian countries as producers and importers of grains need to be aware of the changes in the world grain market. Greater availability of grains on the world market and changes in both grain price levels and in relative prices make it necessary for Sahelian countries to reexamine their agricultural policies so as to promote efficient resource use and accelerate agricultural and economic growth.

Historical Overview of the World Grain Situation

The world grain situation in the 1980s has been markedly different from that in the 1970s. At the beginning of the decade of the 1970s, world grain supplies were in surplus and world grain prices were low and stable. An unprecedented combination of circumstances beginning in 1972 ushered in nearly a decade of fluctuating supplies, volatile prices, and rapid growth in world grain trade. Those circumstances included:

- Adverse weather in the Soviet Union, the Sahelian countries and elsewhere which resulted in 1972 in a 3 percent decline in world grain production.
- Rapid economic growth in the developing countries, especially the middle income developing countries which lead to a large increase in the demand for grains especially for animal feedstuffs.
- The 1973 oil price increase by the OPEC countries which resulted over the decade of the 70s in a substantial increase in the availability of loanable funds (petrodollars) to developing countries to finance imports not only of grains but other commodities as well.
- The devaluation of the dollar by the United States vis-a-vis the currencies of its major trading partners which resulted in lower prices for its principal grain exports, wheat, corn, and other coarse grains.

The experience in world grain markets during the 1970s created expectations that these trends in the world economy would continue into the 1980s. These expectations included the following notions:

- The world economy would continue to grow in real terms. The developing countries, especially, would continue to show significant economic growth.
- The high inflation rates of the seventies would persist and these high rates would continue to be reflected in commodity prices.

- World demand for grains would continue to put pressure on productive resources and force grain prices ever higher.
- World grain trade would continue to expand rapidly and indefinitely.

Grain Production, Consumption, and Stocks

The expectations based on the experience of the 1970s proved, however, to be erroneous. In the first half of the 1980s, production, consumption and stocks of grain have all increased. A sharp decline in world grain production did occur in 1983/84, but this was due almost entirely to government programs and poor weather in the United States. Drought severely reduced the U.S. corn crop that year and the so-called PIK or payment-in-kind program in which farmers were offered surplus grain in exchange for removing land from production resulted in the withdrawal of millions of acres from grain production. Despite the drop in global production grain stocks in that year were still large enough to permit growth in world consumption. By 1985/86 world grain stocks were at their highest historical level at 314 million metric tons or 20 percent of consumption. (Table and Chart)

Grain Trade

One major difference between the 1970s and 1980s is a noticeable decline in world grain trade. (Table and Chart) Abundant supplies relative to world demand, particularly in the developing countries, where the pressure to import has been reduced by reason of increased domestic production, have slowed perceptibly the growth in world grain trade. During the seventies world grain trade increased by 96 percent or 7 percent per year (1970/71-1980/81). In the 1980/81-1985/86 period, on the other hand, world grain trade has declined by 12 percent or 2.5 percent a year.

Table 1

World Grain Situation[1/]

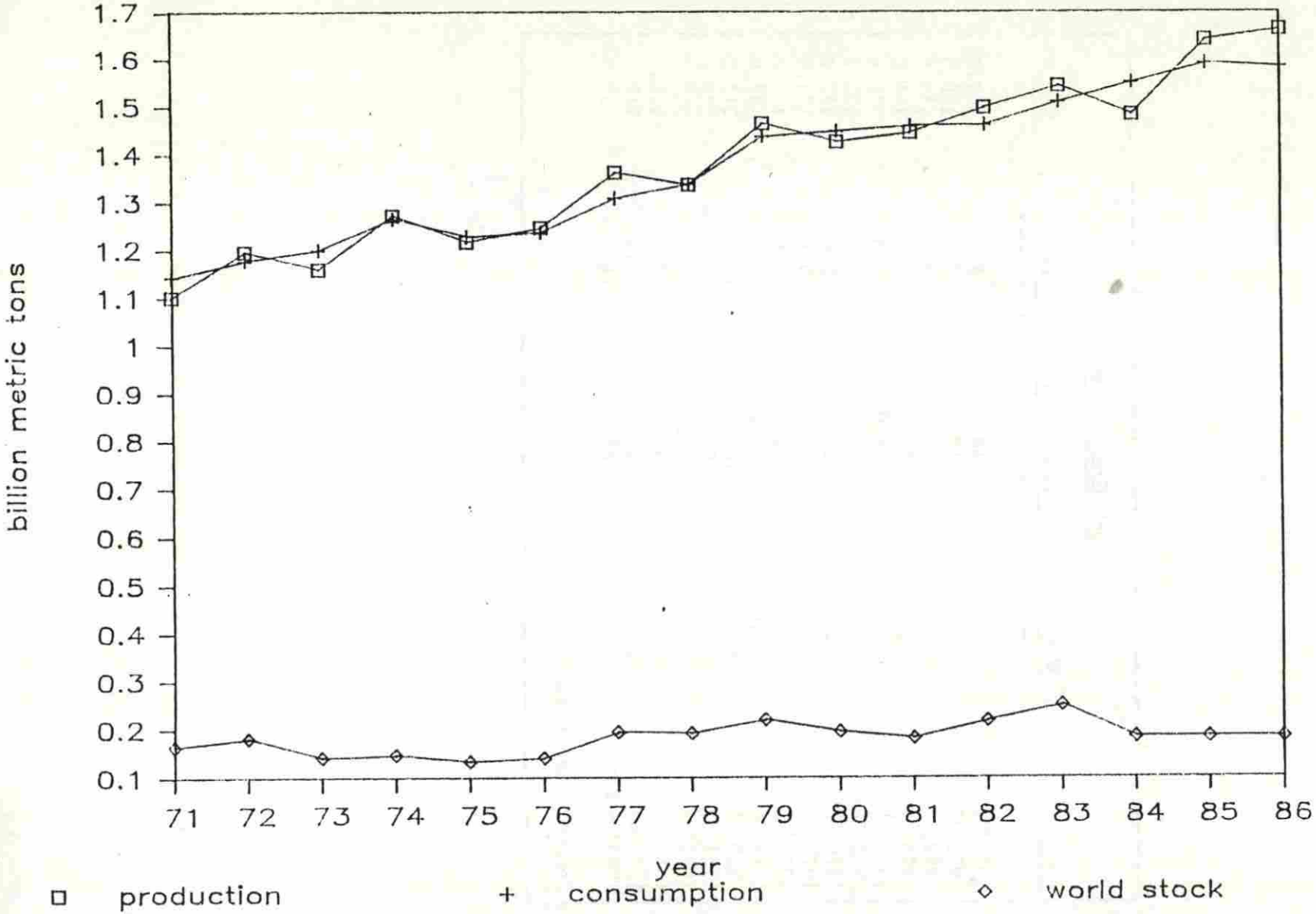
Year	Production	Consumption	Stocks		Ending Stocks as % of Consumption
			World	U.S.	
	mmt				
1970/71	1,102.5	1,143.8	165.2	55.1	14.4
1971/72	1,196.5	1,178.5	183.3	74.0	15.6
1972/73	1,160.9	1,201.2	142.8	48.4	11.9
1973/74	1,272.6	1,266.3	148.5	31.3	11.7
1974/75	1,217.7	1,229.2	135.4	27.6	11.0
1975/76	1,246.7	1,237.8	142.1	35.7	11.5
1976/77	1,363,1	1,309.7	195.8	61.5	15.0
1977/78	1,337.2	1,338.9	193.7	74.8	14.4
1978/79	1,465.7	1,438.2	220.9	72.5	15.5
1979/80	1,426.6	1,450.2	197.2	78.2	13.6
1980/81	1,446.8	1,461.1	183.2	62.4	12.6
1981/82	1,498.9	1.462.8	219.2	100.3	15.0
1982/83	1,544.1	1,511.0	252.2	140.3	16.7
1983/84	1,484.3	1,551.6	185.0	72.1	12.0
1984/85	1,641.5	1,591.9	234.7	90.7	14.0
1985/86 Est.	1,663.2	1,584.4	313.7	169.0	19.8

Source: Grains, Foreign Agiriculture Circular, FAS, USDA, various issues.

1/ Wheat, coarse grains, and rice on milled basis.

WORLD GRAIN SITUATION

1970–71 to 1985–86



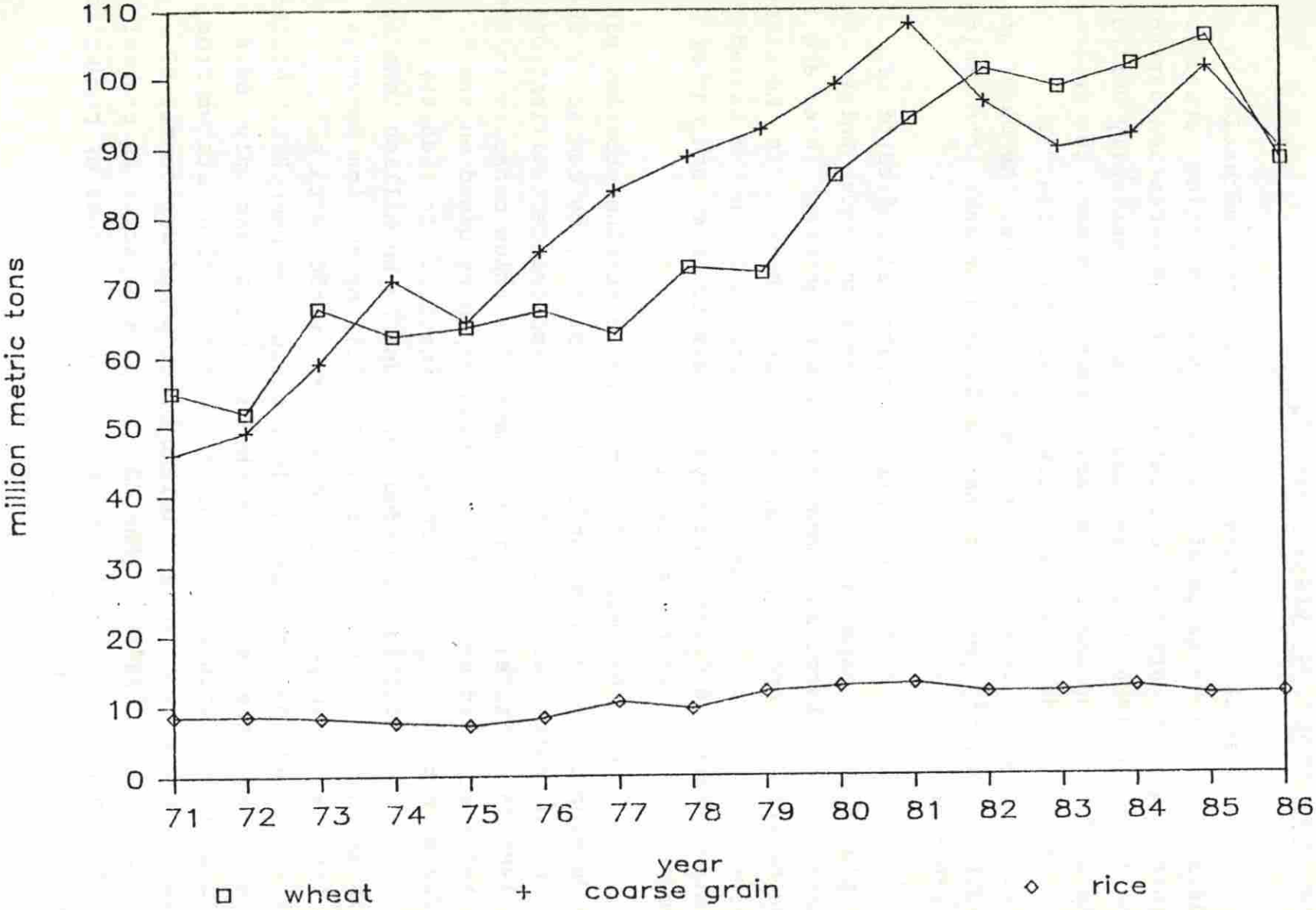
World Grain Trade

Year	Wheat	Coarse Grain	Rice	Total
		mmt		
1970/71	55.0	46.0	8.6	109.6
1971/72	52.0	49.3	8.7	110.0
1972/73	67.0	59.2	8.4	134.6
1973/74	63.0	71.0	7.7	141.6
1974/75	64.3	65.0	7.3	136.6
1975/76	66.7	75.2	8.4	150.3
1976/77	63.3	83.9	10.6	157.7
1977/78	72.8	88.8	9.6	171.2
1978/79	72.0	92.7	12.0	176.7
1979/80	86.0	99.2	12.7	197.9
1980/81	94.1	108.0	13.1	215.2
1981/82	101.3	96.6	11.8	209.8
1982/83	98.6	89.9	11.9	200.5
1983/84	102.0	91.9	12.6	206.5
1984/85	106.1	101.6	11.4	219.1
1985/86 Est.	88.1	89.7	11.6	189.4

Source: See Table 1.

WORLD GRAIN TRADE

1970–71 to 1985–86



The Re-emergence of Surplus Capacity

A striking feature of the world grain situation in the 1980s is the reemergence of surplus grain production capacity. Grain surpluses were the rule rather than the exception during the 1950s and 1960s but were reduced rather drastically during the 1970s in response to the rapid growth in demand for grains. During the decade of the seventies grain stocks reached historically low levels and in the United States, the major grain exporting country, even marginal lands were brought into grain production.

Large grain stocks are the principal indicator of surplus capacity especially in countries such as the United States and the European Community where governments intervene in the market to support grain prices. Idled crop area is the other major indicator of surplus capacity, especially in the United States, where the Government pays farmers to take land out of production in order to reduce grain production.

A good estimate of current world surplus capacity can be developed, in the case of the United States, by comparing full production potential in relation to disappearance (utilization) in 1985/86. (Table) To the estimate of surplus capacity in the United States can be added EC surplus capacity based on the difference between production and utilization. In 1985/86, actual U.S. production exceeded total use by 80 million tons and this amount was added to stocks. The full production potential of the U.S. grain sector, based on trend yields with all available land put into production, would have been 368.5 million tons. Disappearance or utilization in 1985/86 was only 269.6 million tons. Thus surplus capacity in the United States from both stock accumulation and idling of cropland was nearly 99 million tons in 1985/86. The EC's surplus capacity is probably on the order of 2-3 million metric tons, the excess of production over utilization in recent years.

1985/86 U.S. Grain Situation

	Actual	Full Production Potential
Harvested Area (mil. ha.)		
Wheat	26.2	30.5
Coarse grains	45.1	48.0
Rice	1.1	1.5
Total	72.4	80.0
Yield (mt/ha)		
Wheat	2.52	2.59
Coarse grains	6.08	5.85
Rice	6.09	5.83
Total		
Production (mmt)		
Wheat	70.0	79.0
Coarse grains	273.8	280.8
Rice	6.2	8.7
Total	350.0	368.5
Total Disappearance (mmt)		
Wheat	53.8	53.8
Coarse grains	210.5	210.5
Rice	5.3	5.3
Total	269.6	269.6
Stock Increase (mmt)		
Wheat	16.2	25.2
Coarse grains	63.3	70.3
Rice	0.9	3.4
Total	80.4	98.9

This existence of surplus capacity means that the world grain economy can easily accomodate a major increase in world grain trade or major shortfalls in production without serious upward pressure on world grain prices. Grain stocks in the United States and the EC are immediately available to meet shortfalls in production, while the idled land in the United States could be brought back into production with a year's time.

The Current World Grain Situation

World grain supplies reached record levels in 1985/86, as both production and carry-in stocks increased. Increases in production occurred in both the OECD countries and in the developing countries. Particularly large crops were recorded in Africa, and in African regions which were severely affected by drought in 1983 and 1984. Large world harvests in the last two years have surpassed the growth in grain consumption and world stocks are now at record levels. (Tables) .

Global grain production in 1985/86 was 1.66 billion metric tons, an increase of one percent above the previous year. While an increase of 1 percent appears small, it is equal to more than 10 percent of world trade in grains. Beginning stocks in 1985/86 were the second largest on record. Adding these stocks to total world grain production means supplies of more than 1.9 billion tons, 68 million tons more than last year. World grain trade has declined by about 39 million tons from 1984/85. Grain consumption will be about 1 percent less but will be greater than consumption in 1983/84 by about 39 million tons. Larger production and lower consumption in 1985/86 will contribute to a further increase in world grain stocks of about 80 million tons. Currently ending stocks represent about 21 percent of global consumption. In comparison, ending stocks in 1983/84 represented only 12 percent of consumption.

The increase in world grain production of about 1 percent in 1985/86 follows an increase of almost 11 percent in

Total cereals: World production, consumption, and net imports 1/

Region/country	1983/84			1984/85			1985/86			1986/87 2/		
	Production	Consumption	Net imports	Production	Consumption	Net imports	Production	Consumption	Net imports	Production	Consumption	Net imports
	Million metric tons											
Developed countries 4/	459	420	-120	600	439	-127	619	443	-95	580	441	-109
United States	206	182	-97	313	197	-96	345	201	-62	308	201	-78
Canada	47	25	-28	43	24	-21	49	25	-22	50	24	-24
EC-12	139	143	-3	174	147	-14	160	148	-13	156	145	-11
Other Western Europe	16	16	---	18	16	-2	17	16	-3	17	16	-1
South Africa	7	9	2	11	9	---	10	10	-2	12	10	-2
Japan	11	37	26	12	38	26	12	37	26	11	38	27
Oceania	33	7	-20	29	8	-21	26	7	-21	24	7	-20
Centrally planned countries 4/	574	614	43	585	632	55	573	607	32	581	618	35
Eastern Europe	103	106	3	115	114	---	106	113	5	109	109	1
USSR	180	208	32	161	209	54	179	206	27	169	204	32
China	291	300	8	309	310	1	288	288	---	303	304	2
Developing countries 4/	451	511	68	459	521	69	470	535	64	483	551	70
Mexico/Central America	21	29	9	23	30	7	23	30	6	22	31	8
Venezuela	1	4	2	1	4	3	2	4	2	2	4	3
Brazil	30	34	4	30	35	7	31	37	6	34	37	4
Argentina	30	13	-18	32	12	-20	27	11	-16	28	12	-16
Other South America	9	12	4	10	13	3	9	12	3	10	14	3
North Africa/Middle East	52	90	38	50	93	42	58	98	40	60	102	42
Other Africa	37	48	9	40	51	10	49	55	8	49	58	9
South Asia	180	177	6	177	178	4	178	180	3	183	185	2
Southeast Asia	77	77	---	80	78	1	82	79	-2	84	821	-2
East Asia	15	27	12	15	27	13	15	28	13	15	29	13
Rest of world	---	1	---	---	---	---	---	---	---	---	---	---
World total 4/	1,483	1,545	---	1,643	1,591	---	1,662	1,584	---	1,643	1,610	---

1/ Regional totals include some high-income developing countries not treated in this report. 2/ Forecast. 3/ A negative figure indicates net exports. 4/ Totals may not add due to rounding.
Source: USDA/ERS, as of July, 1986.

Cereal carryover stocks

	1969/70-1971/72	1983/84	1984/85	1985/86 Preliminary	1986/87 Forecast
World					
Million tons	185.0	190.8	241.9	320.2	348.1
Percent of consumption	16.3	12.0	15.2	20.2	21.6
U.S.					
Million tons	67.5	77.4	98.8	180.9	209.8

SOURCE: USDA, as of July, 1986

the previous year. Coarse grains production is responsible for all of the current year's increase, with output this year rising 4 percent in comparison to 18 percent in the previous year. The largest increases occured in the United States where record yields and a 4 percent increase in area resulted in a 15 percent increase in production. Globally, wheat and rice production declined. However, both wheat and rice production increased in the developing countries. Despite a 2.5 percent decline in wheat production globally, the world wheat crop in 1985/86 was the second largest crop on record.

World trade in grains declined in 1985/86. This decline occurred despite the lower prices for grains brought on by abundant supplies and intense export competition among the major producers. The decline in world grain trade was due mainly to larger supplies in the importing countries, especially the Soviet Union. The continuing large debt service burden and shortages of foreign exchange depressed import demand in the developing countries.

The short-run outlook for grain supplies is quite favorable from the perspective of the importing countries. Grain production, according to both the U.S. Department of Agriculture (USDA) and the United Nations Food and Agricultural Organization (FAO) will decline slightly in 1986/87. However, because of the enormous volume of beginning stocks, there will be record grain supplies in 1986/87.

Large grain supplies together with lower U.S. price supports (loan rates)[1/] will mean that world market prices for grains will be lower in 1986/87. Despite lower prices, some improvement in world economic growth, lower interest rates and the favorable effects of lower oil prices, world trade in grains will show only moderate growth next year. The main factors constraining the expansion of world trade in grains will be

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1/ The relationship between U.S. price supports and world grain prices is discussed below.

production increases in some of the importing countries, notably the South Asian countries and China, and continuing financial difficulties in the developing countries.

Wheat

World wheat production in 1985/86 was 502 million tons, 13 million tons less than the high output attained in 1983/84. Production in the United States fell by 4 million tons as both area harvested and yields declined. Production outside the United States dropped by 9 million tons as production fell in a number of major exporting countries, including Argentina, the European Community, and Australia. These declines were somewhat offset by production gains in the developing countries, especially, North Africa, Pakistan, Brazil, and Iran. Globally, wheat consumption declined by an estimated 1 percent to 1,494 million tons. The decline in consumption occurred in China and in the United States. In the developing countries, wheat consumption continued to increase although by less than the average gains in consumption of the early 1980s. World wheat trade declined by 21 million tons (20 percent) from 1983/84. Reduced imports by the Soviet Union and several developing countries including Brazil and China accounted for much of this drop in world wheat trade.

The world wheat situation in 1986/87 will resemble that of the first half of the decade of the eighties: production exceeding consumption, ending stocks at record high levels, depressed prices, and depressed levels of trade.

World wheat production in 1986/87 is forecast by the USDA to be 504 million tons, with most of the increase coming from outside the United States. Large wheat crops are expected worldwide, with large crops in Brazil, Canada, China, the EC, Pakistan, and India. India, historically an importer of wheat will have exportable supplies of wheat for the second year in a row. World import demand will increase somewhat in 1986/87, but

trade will still be depressed compared to the 100 million ton average of 1981 to 1985. The positive effect of expected lower prices on wheat trade will be counterbalanced by increased production in the importing countries and limited reserves of foreign exchange, especially in the developing countries.

Rice

World rice production in 1985/86 declined nearly 1 percent to about 316 million metric tons (milled). Large beginning stocks however, resulted in supplies that were 2.5 million tons greater than the previous year. Rice production increased in both the importing and exporting countries. Among the importers the major gains were in Indonesia. Production in Thailand, the world's major rice exporter was up by 500,000 tons or about 3 percent.

World trade in rice is expected to be only 800,000 tons greater than the 11.5 million tons exported last year. Competition among the major exporters will be intense because of the slow growth in world import demand and changes in U.S. rice price support policy (see below). Thailand's exports are forecast to be around 3.9 million tons, a decline of about 100,000 tons from calendar year 1985. The decline in Thai exports will be due in part to increased competition from lower-priced rice exports from the United States, from the ban on rice imports recently announced by the Nigerian government, and from increased rice production in the importing countries. World rice stocks are expected to continue increasing.

Coarse Grains

World production of coarse grains increased by 34 million tons in 1985/86, a new record. Most of the increase was in the United States and Canada although the Soviet Union also increased its production of corn. Chinese and European production declined substantially as did production in Mexico,

Brazil, and India. World supplies of coarse grains continue to exceed use.

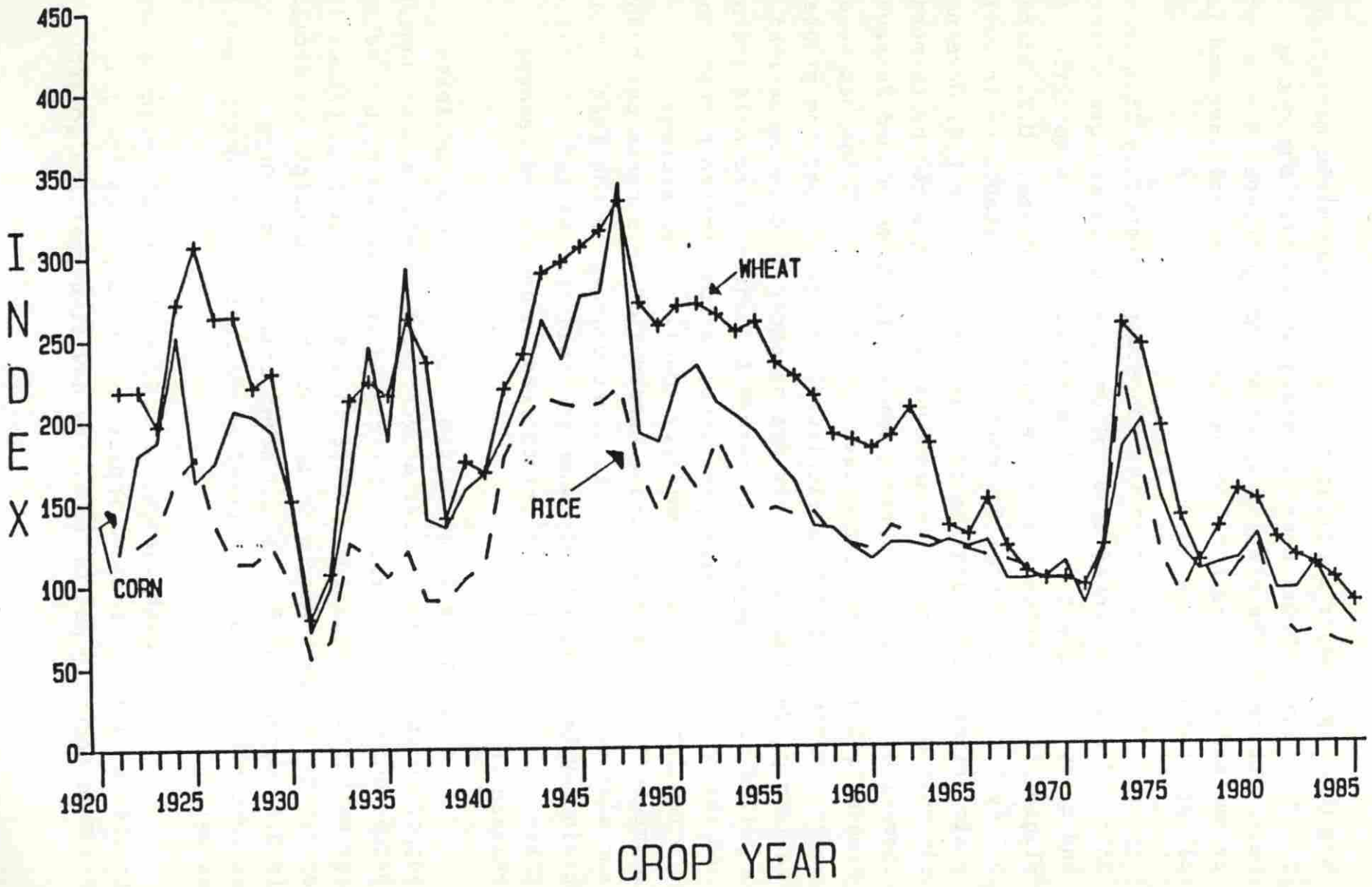
Grain Prices

Prices for grains have been low and relatively stable during the 1980s in contrast to the wide price swings of the 1970s. Both the nominal and real prices of grains have been falling in recent years. (Figure) Real prices for grains (and for other agricultural commodities not shown on the graph) have been trending downward since 1925 and especially since the late 1940s. Nominal grain prices were quite stable during the 1950 to 1970 period while real prices (shown on the chart) declined steadily. Prices increased sharply during the 1970s in response to the combination of circumstances discussed above. It now appears that real prices for agricultural commodities have resumed their long-term downward trend evident since the 1920s.

The Effect of U.S. and EC Policies on World Grain Prices

The United States through its agricultural policies has a major impact on world supply and demand for grains. This is because U.S. policies play a major role in determining the world price of grains and because the United States accounts for major shares of world wheat, rice and coarse grain trade.

Grain prices are supported domestically through the nonrecourse commodity loan. By pledging his crop as collateral, a farmer may obtain a 9 month loan from the Commmodity Credit Corporation (CCC). The "loan rate" expresed as dollars per unit of commodity is announced by the Secretary of Agriculture prior to each planting season. When it makes the loan the CCC agrees to accept delivery of the crop as full repayment if the farmer chooses not to repay the loan with interest by the date of maturity. Thus the loan rate becomes in effect a floor price. Nonrecourse loans are made for all grains. In general, because of the relative openness of the U.S. grain economy and because


DEFLATED COMMODITY PRICE INDICES (1969-79=100)
INDEX
450
400
350
300
250
200
150
100
50
0
WHEAT
RICE
CORN
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985
CROP YEAR

the U.S. is a major supplier of grains to the world market, U.S. policies that support domestic grain prices also support world market prices. (The statistcal relationship between U.S. support prices and world grain prices has been well-established and is illustrated in Figure).

The operation of the nonrecourse commodity loan in the United States is backed by a policy of accumulating grain stocks and/or by programs to set aside grain acreage as a condition for eligibility for price and income support programs. U.S. stock policy has the potential for contributing to stability in world grain prices. Some grain stocks are owned by the U.S. Government but most U.S. grain stocks are owned and maintained by farmers themselves through a program known as the Farmer-Owned Reserve Program (FOR). First authorized in 1977, the FOR has become a major component of U.S. agricultural policy. Under the program, farmers place wheat and other grains under a nonrecourse loan for a period of three years. In return for agreeing to hold grain off the market, the farmer receives: a loan (often higher than the regular nonrecourse commodity loan), annual storage payments (in effect a storage subsidy) of 26.5 cents per bushel, and a waiver of some of the interest charges on the loan. The grain may be marketed only when the loan reaches maturity (after three years) or if market prices reach a designated reserve release level.

During the first half of the 1980s, U.S. policies supported world grain prices at very high levels because domestic price supports (loan rates) for grains were set at high levels in agricultural legislation enacted in 1981. These high prices in combination with a strong dollar resulted in precipitous declines in U.S. exports of grains and other commodities. Other macroeconomic factors discussed above contributed to this decline as well.

Significant changes in U.S. agricultural policy enacted in 1985 will have profound impacts on world prices for grains. The Food Security Act of 1985, the new five-year law governing

U.S. agricultural policy sets the stage for sharp reductions in market price support levels over the 1986/87 to 1990/91 period. These reductions were begun during the 1986/87 crop season. Farmers will receive considerably lower loan rates but will also be compensated for these reductions with increased direct payments. The changes in U.S. price support levels permit a decline in nominal grain prices and provide a basis for changes in relative prices as well. (See Table)

During the 1980/81 to 1985/86 period, the loan rate for wheat was set at a very high level both absolutely and in relation to corn and other feedstuffs. As a result wheat became less competitive in feeding. The level of the loan rate for rice was also increased during the first half of the 1980s, but the ratio of rice to wheat prices declined rather sharply during that period.

The recent changes in U.S. agricultural policies have important implications for grain prices and availability. Under the new agricultural legislation, loan rates will be set at levels so low that they will not determine market prices most of the time. Loan rates and market prices could decline further over the five years of the new farm bill. Further, market forces not administrative decisions will determine relative commodity prices. The price of wheat is likely to be determined by its relative value as a feedstuff for livestock not by its value as a foodstuff. The outlook for the price of rice relative to wheat is less clear. Under effective legislation, the rice support price can decline to $158.73 per metric ton in 1986/87 and to $143.30 in subsequent years. But the law permits farmers to sell their rice under loan for up to 50 percent below the announced loan rate and to be compensated for the difference. Thus, the effective support rate can be as low as 50 percent of the announced loan rate. This program is in effect in 1986/87 and could be used in subsequent years. A major result of the rice program would be a decline in the effective market price for rice relative to wheat, an important development for importers of rice.

U.S. Loan Market Support Rates

Year	Wheat	Corn	Rice	Ratio of: Wheat/Corn	Ratio of: Rice/Wheat
	$/mt				
1960/61	65.40	41.73	97.44	1.57	1.49
1961/62	65.77	47.24	103.84	1.39	1.58
1962/63	73.49	47.24	103.84	1.56	1.41
1963/64	66.87	42.12	103.84	1.58	1.55
1964/65	47.77	43.30	103.84	1.10	2.17
1965/66	45.93	41.34	99.21	1.11	2.16
1966/67	45.93	39.37	99.21	1.17	2.16
1967/68	45.93	41.34	100.31	1.11	2.18
1968/69	45.93	41.34	101.41	1.11	2.21
1969/70	45.93	41.34	104.06	1.11	2.27
1970/71	45.93	41.34	107.14	1.11	2.33
1971/72	45.93	41.34	111.77	1.11	2.43
1972/73	45.93	41.34	116.18	1.11	2.53
1973/74	45.93	41.34	133.82	1.11	2.91
1974/75	50.34	43.30	166.23	1.16	3.30
1975/76	50.34	43.30	187.83	1.16	3.73
1976/77	82.67	59.05	136.46	1.40	1.65
1977/78	82.67	78.74	136.46	1.05	1.65
1978/79	86.35	78.74	141.09	1.10	1.63
1979/80	86.35	82.67	149.69	1.05	1.73
1980/81	110.23	88.58	156.97	1.24	1.42
1981/82	117.58	94.48	176.59	1.24	1.50
1982/83	130.44	100.39	179.45	1.30	1.38
1983/84	134.11	104.32	179.85	1.29	1.34
1984/85	121.25	100.39	176.37	1.21	1.45
1985/86	121.25	100.39	176.37	1.21	1.45
1986/87 1/	88.18	75.59	79.37-158.73	1.17	0.90-1.80

1/ The announced rice loan rate for 1986/87 is $158.73/mt, but producers will be paid the difference between this level and market prices as low as 50 percent of the loan rate (market-payback loan). In future years, the loan rate cannot fall below $143.30/mt, but the market payback loan can still be used and the effective market support level could be as low as $71.65/mt.

Source: Agricultural Statistics, USDA, various issues and 1986 farm program announcements.

The United States will continue to maintain reserve stocks of wheat and coarse grains and these stocks will be large. The reserve release prices will also be reduced, rendering grain in the FOR, the largest of U.S. grain stocks, more readily available to the market. As a result price variability for grains will be reduced. (A higher reserve release price for corn than for wheat could mean that price variability will be less for wheat than for corn.)

The new agricultural legislation also calls for idling large areas of land because of the magnitude of excess capacity relative to the most optimistic projections of export demand over the balance of the decade. Idled land area is another form of grain reserve that can be mobilized to meet surges in demand. Grain crop shortfalls that persist beyond one year could be met with the production from bringing this area back into production. This is a quite different situation from that in the mid-seventies when U.S. land resources were being fully used.

Large U.S. stocks and idled area provide the world grain market with substantial protection against poor crops. As a consequence of U.S. agricultural policies world grain supplies for the rest of the eighties should be more adequate to meet consumption and mean prices less variable than during most of the 1970s.

European Community

The agricultural policies of the EC have become very costly and there is mounting pressure within the Community to reduce the budgetary outlays for support of EC agriculture. The sharp declines in U.S. price support levels and the fall of the U.S. dollar are making it even more costly to maintain the EC's policies of high internal price supports and generous subsidies for grains.

The EC has already begun to make adjustments in its agricultural policies. The general directions of policy change include the following:

- A modest reduction in the levels of grain price supports to bring domestic market prices closer to world market prices.

- Modest increases in programs of support for oilseed production in order to make oilseed production more profitable relative to grain production and to encourage shifts from grain to oilseed production.

- Strengthening of existing policies to reduce dairy and beef surpluses.

- Increased border protection applied against imported grain-substitute feeds to encourage greater use of domestically produced grain and oilseed products.

The impact of these policy changes on the world grain markets will be:

- Little reduction in EC grain production. Further yield increases are likely to offset declines in area.

- Some increase in domestic use of grain for feed by making domestically produced grains cheaper relative to imported grain-substitute feeds. Total EC demand for grain may not increase because of offsetting reduction in cattle numbers if efforts to reduce beef and dairy surpluses are successful.

- Continued substantial exports of grain from the EC. Export subsidies are likely to continue at a high level and grain stocks could also remain fairly high in relation to historical standards.

The Medium Term Outlook for the World Grain Market

The medium term outlook for grain supply and demand, that is the outlook to 1990, is for a continuation of the trends that have thus far been evident in the first half of the 1980s: slow growth in demand, production outpacing demand growth, some acceleration of the growth in grain trade, and continued accumulation of stocks.

The main determinants of these trends are slower population growth worldwide and slower income growth. Over the 1980s, population growth rates are expected to continue falling with the major exception of the African countries. The growth of real incomes in most parts of the world is expected to be slower than in the 1970s but an improvement is expected in the growth rates of income experienced in the early 1980s. Demand for grains will show only small increases in the developed countries. Any additions to global consumption of grain are likely to come from the developing countries. That is because both population and income are expected to grow more rapidly there than in the developed countries.

Grain production is likely to grow more slowly than in the 1970s, but production will still exceed demand growth. Thus the outlook for 1990 is for grain supplies in the world market to be ample in relation to import demand. A major factor at work over the rest of the 1980s is the increase in grain production in a number of large importing countries and regions where production is expected to increase faster than domestic consumption. This situation is likely to occur in the Soviet Union, Eastern Europe, China, India, and the European Community. There are certainly exceptions to this situation and demand will exceed domestic production in a number of countries, particularly in Africa and in the Middle East.

As a result of the global slowdown in demand for grains and the likely continuation of good production in producing and importing countries, world stocks of grains over the rest of the eighties should be adequate to ensure world food security. The idled grain area is the United States represents a further assurance of world food security in the event of a surge in import demand or serious crop failures around the world.

Implications for Grain policy in Sahelian Countries

Expected developments in the world grain situation over the rest of the 1980s have important implications for the Sahelian countries. Of course developments in world grain markets are not the only determinants of a country's grain policies. The full effects of changes in world grain markets need to be evaluated in light of developments in other agricultural commodity sectors of interest to the Sahelian countries such as cotton and oilseeeds, as well as in such nonagricultural commodity sectors as petroleum. Some Sahelian countries may not be able to benefit fully from, say, declining grain prices, because of price declines for other agricultural commodities on which they depend for earnings of foreign exchange. It is nonetheless important for Sahelian countries to take into account the surplus capacity that exists in world grain markets, the lower prices that will substantially affect their import position, and the changes in relative prices among grains and indeed among a wide range of agricultural and nonagricultural commodities.

These implications for Sahelian countries of changes in the world grain market are discussed in terms of food security policy, including trade policy, and policies for promoting agricultural production.

Food Security Policy

Food security policies are those that deal with fluctuations of supplies and prices of major food crops, primarily grains. These policies can include maintaining reserve stocks of grain to meet periodic shortfalls in production or maintaining, as an alternative to physical stocks of grain, financial reserves to be used to purchase grain in the event of need. A food security policy may also simply express the

willingness on the part of a country to rely on imports, including food aid, to augment short domestic supplies. This is a narrow definition of food security because it excludes policies to increase food production either to reduce import dependency or to increase exports of food crops. Policies to increase food production are discussed below.

It is not the purpose of this paper to estimate the costs of different approaches to providing food security. There is an extensive and readily available literature on this subject. It is the purpose of this paper to identify what key aspects of the world grain situation and outlook mean for food security policy in the Sahelian countries.

Surplus grain capacity in terms of large stocks worldwide and area idled under Government programs in the United States will persist for the rest of the 1980s and will lead to much lower grain prices and less price instability than was experienced in the 1970s. As a result the threat of serious world grain shortages has been substantially reduced. Fluctuation in production because of adverse weather will occur in individual countries or regions, but the shortfalls that ensue can be accomodated easily and quickly from existing world stocks. If crop shortfalls persist, idled land, another aspect of global surplus capacity, can be brought back into production within a year.

A main question facing Sahelian countries is how much should each country spend to maintain a satisfactory degree of food security during a period of abundant and available grain supplies. It would be unwise for Sahelian countries to abandon completely policies to maintain reserve stocks of grain, but in view of the current and likely world grain situation, each Sahelian country should look to a least cost approach.

An important factor to consider is that countries such as the United States and the European Community will maintain

large grain stocks or area reserves for reasons of domestic agricultural policy. Despite mounting budgetary outlays for these Government programs and growing political opposition, both the United States and the EC give every indication that they are willing to spend substantial amounts of money to protect the incomes of farmers. Thus surplus grain capacity is likely to persist for the remainder of this decade. The existence and availability of this surplus capacity (in stocks and idled area) provides Sahelian countries with an opportunity to spend less of their scarce resources on maintaining large grain stocks and to rely on imports of grain to meet periodic shortfalls in domestic production. Countries that are frequently subject to crop shortfalls and heavily dependent on emergency food supplies to overcome crop shortfalls may want to carry some stocks to use during the inevitable delays that accompany food shipments from abroad. The size of such emergency food reserves can be smaller because of the greater availability of global grain supplies.

The extent to which a country should rely on imports to meet food security objectives is a complicated issue. While grain prices will be significantly lower over the balance of the decade, thus making it less expensive to import wheat and rice, prices of the main agricultural exports of the Sahelian countries, notably, cotton and groundnuts, are also likely to be lower. Thus it remains to be seen if lower grain prices will improve the foreign exchange position of Sahelian countries. Foreign exchange considerations may impede a shift in policy to rely more on the world market to meet food security objectives.

The composition of the world's surplus grain capacity will have an effect on a country's decision to rely more on trade to meet food security needs. Most of the world's surplus grain capacity is in wheat and coarse grains, the commodities in which international trade is large relative to world production and consumption. Conversely, stocks and world trade of rice are

much smaller in relation to world production and consumption. Countries that depend heavily on rice consumption, as some Sahelian countries do, may be less willing to follow a food security policy based on trade compared to countries less dependent on rice and more dependent on wheat and coarse grains or where wheat could be readily substituted for rice.

Grain Production Policy

Grain production policy needs to be based in part on consideration of such factors as the existence of surplus grain capacity and the absolute and relative prices of grains in world markets. A country must also determine where its comparative advantage lies between agricultural and industrial production and over a range of agricultural commodities (food crops and industrial crops).

The return to the long-term declining trend in real grain prices, and the likelihood that this trend will hold for other agricultural commodities as well, means that from a world market standpoint the sectoral terms of trade are shifting against agriculture and toward industry. Countries that already have a good or promising industrial base relative to agriculture might want to emphasize industrial development at the expense of agriculture. But in most other developing countries, and this is the case in the Sahelian countries, the agricultural sector should receive high priority because that is where the potential to increase output, employment, and income is greater.

Within agriculture, relative world prices are a key to deciding which commodities to emphasize in production or in trade. The price of wheat will be lower relative to coarse grains during the rest of the 1980s. The outlook for rice prices in relation to wheat prices is less clear, but it is likely that rice will become cheaper relative to wheat and to coarse

grains. Relative world grain prices need also to be looked at in relation to prices of other agricultural commodities, especially cotton and groundnuts for Sahelian countries, and other nonagricultural commodities, for example petroleum or uranium. Sahelian countries should be mindful of these developments in world commodity prices as they make production policy for the agricultural sector. The production mix determined as between the different grains and between grains and other agricultural commodities will depend on these relative world commodity prices, but also on a country's resource and climate endowment and the prospects for technological improvement among various commodities.

World Coarse Grain Production, Consumption, Trade, and Stocks

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
	mmt					
Production						
United States	198.3	246.6	250.7	137.1	237.7	274.3
Canada 2/	11.3	13.7	14.0	10.2	10.3	12.2
Australia 3/	3.6	4.7	3.3	5.8	7.4	6.4
Argentina 4/	9.4	10.0	17.6	16.6	16.4	17.4
EC-10	69.7	67.8	71.6	63.9	75.0	72.5
Eastern Europe	62.3	64.5	72.0	67.1	73.0	69.3
USSR	80.5	72.0	86.0	99.0	86.0	94.0
China	84.2	80.8	82.4	92.6	95.4	83.9
Thailand 5/	3.2	4.4	3.4	4.0	4.4	5.2
South Africa 6/	10.8	14.6	8.4	4.1	4.4	7.8
Others	199.6	190.7	169.7	185.2	198.0	201.0
Total	732.9	769.8	779.1	685.6	808.0	844.0
Imports 1/						
EC-10	11.1	8.3	6.0	5.5	4.0	2.7
Eastern Europe	10.2	6.1	4.9	4.2	3.4	5.4
USSR	18.0	25.5	11.3	11.5	26.9	13.0
China	0.9	1.3	2.7	0.2	0.1	0.3
Others	67.8	55.4	65.0	70.5	67.3	68.3
Total	108.0	96.6	89.9	91.9	101.7	89.7
Exports 1/						
United States	69.5	58.6	54.0	55.7	56.0	43.8
Canada 2/	4.0	5.5	6.1	4.2	2.5	3.5
Australia 3/	2.0	2.9	0.9	5.1	6.8	5.6
Argentina 4/	13.9	10.1	11.4	10.7	10.5	11.7
EC-10	5.2	4.0	4.3	4.2	8.0	7.0
Eastern Europe	2.1	2.1	3.3	3.0	3.0	1.9
China	0.2	0.2	0.1	0.5	5.7	4.7
Thailand 5/	2.1	3.3	2.1	3.0	3.0	3.5
South Africa 6/	3.9	4.7	2.3	0.1	0.5	0.9
Others	5.1	5.2	5.4	5.4	5.7	7.1
Total	108.0	96.6	89.9	91.9	101.7	89.7
Domestic Use						
United States	147.1	154.8	167.9	147.8	163.8	166.8
Canada 2/	6.8	7.0	7.3	7.9	7.7	7.5
Australia 3/	1.2	1.7	1.4	1.5	1.5	1.2
Argentina 4/	4.6	5.8	5.6	5.9	6.9	6.3
EC-10	57.5	55.4	53.7	50.2	50.1	49.4
Eastern Europe	72.5	69.1	71.6	68.5	72.0	73.8
USSR	99.5	98.5	98.3	109.5	110.9	107.0
China	85.0	81.9	85.0	92.4	89.9	79.4
Thailand 5/	1.1	1.0	1.2	1.3	1.3	1.4
South Africa 6/	6.8	7.1	7.7	7.5	6.2	6.8
Others	260.9	257.5	253.7	265.0	267.4	279.3
Total	743.0	739.8	753.4	757.5	777.7	778.9
Ending Stocks (Stock Change)						
United States	34.7	68.2	97.5	31.8	50.5	114.8
Canada 2/	3.2	4.2	5.2	2.0	2.0	3.5
Australia 3/	0.3	0.1	0.1	0.1	0.3	0.2
Argentina 4/	0.1	0.3	1.0	0.5	0.3	1.1
EC-10	6.7	6.1	7.4	4.7	8.1	8.8
Eastern Europe	(-0.5)	(0.3)	(1.2)	(-0.5)	(1.9)	(-1.1)
USSR	(-1.0)	(-1.0)	(-1.0)	(1.0)	(2.0)	(0)
China	NA	NA	NA	NA	NA	NA
Thailand 5/	0.1	0.1	0.3	0.1	0.1	0.4
South Africa 6/	2.0	4.5	1.3	-	0.3	1.1
Others	35.7	29.4	25.8	27.5	35.4	32.2
Total	82.8	112.9	138.6	66.7	97.0	162.1

1/ July-June year or trade year
2/ Barley
3/ Barley and sorghum
4/ Corn and sorghum
5/ Corn
6/ Corn

World Wheat Production, Consumption, Trade, and Stocks [1/]

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
	mmt					
Production						
United States	64.8	75.8	75.3	65.9	70.6	66.0
Canada	19.3	24.8	26.7	26.5	21.2	23.9
Australia	10.9	16.4	8.9	22.0	18.3	16.5
Argentina	7.8	8.3	15.0	12.8	13.2	8.5
EC-10	55.1	54.4	59.8	59.2	76.6	65.9
Eastern Europe	34.6	30.6	34.7	35.4	42.1	38.2
USSR	98.2	80.0	86.0	79.0	73.0	83.0
China	55.2	59.6	68.4	81.4	87.8	86.0
Others	97.1	98.5	104.3	108.7	111.9	115.8
Total	443.0	448.4	479.1	490.9	514.7	503.5
Imports [2/]						
EC-10	4.5	4.7	3.9	3.6	2.2	2.2
Eastern Europe	5.8	6.2	4.5	3.8	2.6	3.6
USSR	16.0	19.5	20.2	20.5	28.1	17.0
China	13.8	13.2	13.0	9.6	7.4	6.0
Others	54.0	57.7	57.0	64.4	65.8	59.3
Total	94.1	101.3	98.6	101.9	106.1	88.1
Exports [2/]						
United States	41.9	48.8	39.9	38.9	38.1	26.0
Canada	17.0	17.6	21.4	21.8	19.4	17.5
Australia	10.6	11.0	8.1	10.6	15.3	15.7
Argentina	3.9	4.3	7.5	9.7	8.0	6.1
EC-10	14.7	15.5	15.6	15.4	17.5	16.5
Eastern Europe	2.5	1.9	2.4	2.3	4.1	2.6
USSR	0.5	0.5	0.5	0.5	1.0	1.0
Others	3.0	1.7	3.2	2.7	2.7	2.7
Total	94.1	101.3	98.6	101.9	106.1	88.1
Domestic Use						
United States	21.3	23.1	24.7	30.2	31.4	29.3
Canada	5.2	5.2	5.1	5.6	5.4	5.9
Australia	3.5	2.6	4.1	3.4	3.3	3.0
Argentina	3.9	4.3	4.8	4.7	4.6	4.4
EC-10	43.9	44.5	44.7	49.6	52.7	53.2
Eastern Europe	38.5	35.1	36.9	37.1	39.9	38.7
USSR	114.7	102.0	105.7	97.0	96.1	97.0
China	69.0	72.8	81.4	91.0	95.2	92.0
Others	145.8	151.9	160.5	167.7	171.1	168.6
Total	445.8	441.5	467.9	486.3	499.7	492.1
Ending Stocks (Stock Change) [3/]						
United States	26.9	31.5	41.2	38.1	38.8	51.4
Canada	8.6	9.8	10.0	9.2	7.5	7.5
Australia	2.0	4.8	2.3	7.6	8.6	6.6
Argentina	0.4	0.8	1.1	1.3	0.5	0.4
EC-10	8.8	7.8	11.2	8.0	16.1	14.9
Eastern Europe	(0.1)	(-0.1)	(-0.1)	(-0.3)	(0.5)	(0.1)
USSR	(-0.1)	(-3.0)	(0)	(2.0)	(4.0)	(2.0)
China	NA	NA	NA	NA	NA	NA
Others	31.5	30.3	30.5	36.8	44.5	46.9
Total	78.2	85.0	96.3	101.0	116.0	127.7

1/ Includes flour
2/ July-June Year
3/ Crop Year
Source: See Table 1

World Rice Production, Consumption, Trade, and Stocks

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
	mmt					
Production 1/						
Argentina	0.3	0.4	0.3	0.5	0.4	0.4
Australia	0.7	0.9	0.5	0.6	0.9	0.7
Bangladesh	20.8	20.5	21.3	21.8	21.9	23.1
Brazil	8.6	9.2	7.8	9.0	9.0	8.8
Burma	13.3	14.1	14.4	14.4	14.8	14.9
China	139.9	144.0	161.2	168.9	178.3	167.0
EC-10	1.1	1.1	1.1	1.1	1.1	1.3
India	80.5	80.0	70.7	90.2	88.0	91.5
Indonesia	29.7	32.8	33.6	35.3	38.1	39.0
Japan	12.2	12.8	12.8	13.0	14.8	14.6
South Korea	6.0	7.1	7.3	7.6	8.0	7.9
Pakistan	4.7	5.1	5.2	5.0	5.0	4.4
Thailand	17.4	17.8	16.9	19.5	18.7	19.8
U.S.	6.6	8.3	7.0	4.5	6.3	6.2
Others	57.0	58.3	59.4	61.4	62.7	63.8
Total	398.8	412.7	419.5	452.7	468.0	463.3
Imports 2/ 3/						
EC-10	1.3	1.2	1.0	1.1	1.1	1.2
Indonesia	0.5	0.3	1.2	0.4	0.0	0.0
Iran	0.6	0.6	0.7	0.7	0.6	0.8
Iraq	0.3	0.4	0.5	0.5	0.5	0.5
South Korea	2.3	0.2	0.2	0.0	0.0	0.0
Nigeria	0.7	0.7	0.7	0.4	0.5	0.5
Saudi Arabia	0.4	0.5	0.5	0.5	0.5	0.5
Others	7.0	8.0	7.2	8.9	8.2	8.0
Total	13.1	11.8	11.9	12.6	11.4	11.6
Exports 2/ 3/						
Burma	0.7	0.7	0.8	0.7	0.4	0.5
China	0.6	0.5	0.6	1.2	1.0	0.9
Japan	0.8	0.3	0.3	0.1	0.0	0.0
Pakistan	1.1	0.8	1.3	1.0	1.0	0.9
Thailand	3.0	3.6	3.7	4.5	4.0	4.3
U.S.	3.0	2.5	2.3	2.1	1.9	1.8
Others	3.9	3.4	2.9	2.9	3.1	3.2
Total	13.1	11.8	11.9	12.6	11.4	11.6
Utilization 2/						
Bangladesh	13.6	14.1	14.6	14.9	14.9	15.8
China	97.5	100.5	112.4	117.1	123.9	116.1
India	53.3	54.1	48.5	58.2	57.0	60.3
Indonesia	21.3	22.3	23.7	25.3	25.2	26.2
South Korea	5.4	5.4	5.3	5.5	5.5	5.6
U.S.	2.1	2.2	2.0	1.8	1.9	1.9
Others	79.1	82.8	83.2	85.2	85.6	87.3
Total	272.2	281.5	289.6	308.1	314.0	313.3
Ending Stocks 2/ 4/						
Bangladesh	0.7	0.3	0.3	0.1	0.5	0.3
India	6.5	5.0	3.5	6.0	7.5	8.0
Indonesia	1.8	2.3	1.8	1.6	2.8	2.7
South Korea	1.5	1.4	1.5	1.3	1.4	1.5
Thailand	1.1	1.3	0.8	1.1	1.3	1.7
U.S.	0.5	1.6	2.3	1.5	2.1	2.8
Others	10.0	9.4	7.1	5.7	6.3	6.9
Total	22.1	21.3	17.3	17.3	21.9	23.9

1/ Rough basis
2/ Milled basis
3/ Trade on calendar year basis
4/ Excludes a number of countries, especially China
Source: See Table 1