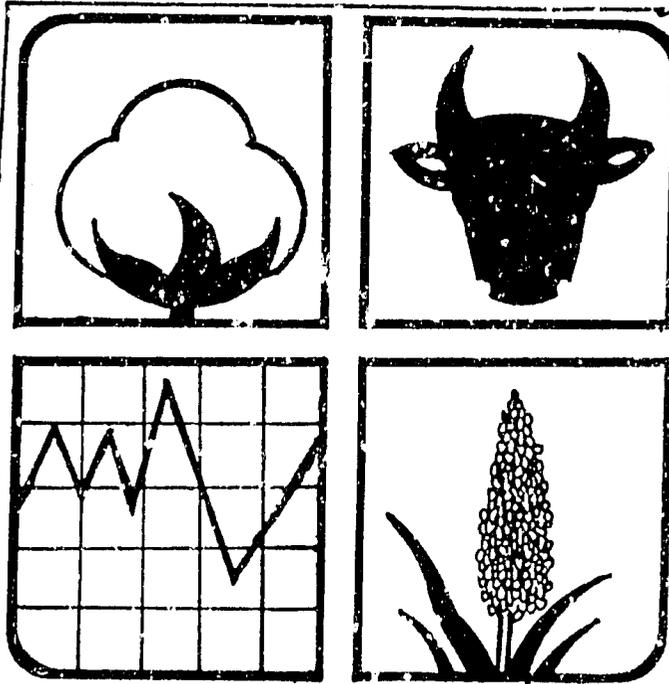


AGRICULTURAL SITUATION & OUTLOOK

ANNUAL REPORT
1985/1986



August 25, 1986

Khartoum
SUDAN



Department of Agricultural Economics
Planning and Agricultural Economics Administration
Ministry of Agriculture and Natural Resources

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Measures and Equivalents

Item	Type of Measure	Equivalents
One feddan	Area of Land	4,200 Sq. Meters or 1.0379 Acres
One Sack	Volume	Sorghum: Feterita 91.500 Kg. Mugud 88.730 Kg. Safra 94.350 Kg. Deber 94.350 Kg. Aker 91.500 Kg.
		Millet 94.350 Kg.
One Kantar	Weight	Small Kantar, Cotton 44.928 Kg. Large Kantar, Cotton 141.523 Kg. Sesame 44.928 Kg. Groundnuts 44.928 Kg. Karkadah 44.928 Kg. Gum Arabic 44.928 Kg.
One Kilogram	Weight	2.20462 U.S. Pounds 2.22580 Sudanes Pounds (Rottles)
One M. Ton	Weight	1,000 Kilograms
One Bushel		Wheat 27.2156 Kg.
Hunderedweight	Weight (U.S.)	Sorghum, Maize, etc. 45.3593 kg.
One Inch	Linear	25.40 Millimeters
One Millimeter	"	00.0397 Inch

1985/86 WORLD FOOD SITUATION AND 1986/87 OUTLOOK

According to a July, 1986 FAO report, world's production of cereals in 1985/86 is estimated at 1,836 million metric tons, an increase of 32 million tons from 1984/85. This is a record production and is more than 2% above the previous record crop in 1984/85. Total wheat output is estimated at 509 million metric tons, while coarse grains and paddy rice are estimated at 860 million and 467 million metric tons, respectively, Table 1.

Total carryover of cereal stocks in 1985 is estimated at 316 million metric tons, while forecasted 1986 stocks are 395 million tons, an increase of 25%. The 1985 carryover stocks consist of 143 million tons of wheat, 121 million tons of coarse grains, and 52 million tons of milled rice. World stocks of coarse grains in 1985 were higher than in 1984, by 74 million tons, while wheat stocks were 7 million tons higher. On the other hand, milled rice stocks were estimated at a lower level than in 1984, as shown in Table 1.

The current outlook for 1986/87 crop is reported to be favorable. With the record carryover stocks from 1985/86 season, world's supply of cereal are expected to exceed demand. The global prospects for 1986/87 is forecast at 1,830 million metric tons, only 6 million tons below the 1985/86 record production. Wheat production is forecast to increase in 1986/87 to 520 million tons, while paddy rice is forecast to increase by two percent, to 478 million tons. At this time, FAO is forecasting a 3.3% decrease in the world's production of coarse grains in 1986/87 compared to previous season (from 860 to 832 million tons).

Total world cereal supplies for 1986/87 are forecasted at a record 2,066 million tons, an increase of 69 million tons over the estimated 1985/86 level. This increase consists of a 46 million tons increase of coarse grains, 18 million tons of wheat, and 5 million tons of rice.

The first forecast of world's cereal trade for 1986/87 indicates an increase of 5 million tons over 1985/86. This is a reflection of larger imports of wheat and coarse grain, while no change is forecast in rice trade. The relatively small increase in volume of trade suggests that the world trade is still under restraint, due mainly to financial constraints in a number of developing countries, lower oil and commodity prices which, in turn, led to lower foreign exchange earnings of many importing countries, and to excess supply among exporters.

World sugar production in 1985/86 is estimated at 96.5 million tons. FAO reports suggest that production in 1986/87 might be higher.

FAO reports that inspite of favorable supplies in most of the African countries, six countries (Angola, Botswana, Cape Verde, Ethiopia, Mozambique and Sudan) still facing food emergencies. Most of the food aid requirements are covered by donors. Total food aid in cereals during 1985/86 is estimated by FAO at 11 million tons.

Table 1: Estimated World Cereal Production, Imports and Stocks, 1984/85 and 1985/1986 and 1986/87 Forecast

	1984/85	1985/86	1986/87	Change
		Estimate	Forecast	1986/87 over 1985/86
	(Million	Metric	Tons)	(Percent)
WORLD PRODUCTION <u>1/</u>				
Rice (Paddy)	470.0	467.0	478.0	+ 2.4
Wheat	524.0	509.0	520.0	+ 2.2
Coarse Grains	810.0	860.0	832.0	- 3.3
All Cereals	1,804.0	1,836.0	1,830.0	- 0.3
Developing Countries	921.0	921.0	952.0	+ 3.4
Developed Countries	883.0	915.0	878.0	- 4.0
WORLD IMPORTS <u>2/</u>				
Rice (Milled)	11.0	12.0	12.0	0.0
Wheat	106.0	86.0	89.0	+ 3.5
Coarse Grains	102.0	84.0	86.0	+ 2.4
All Cereals	219.0	182.0	187.0	+ 2.7
Developing Countries	110.0	97.0	99.0	+ 2.0
Developed Countries	109.0	85.0	87.0	+ 2.3
FOOD AID IN CEREALS <u>3/</u>				
	12.5	11.0		
WORLD STOCKS <u>4/</u>				
Rice (Milled)	52.0	50.0		
Wheat	143.0	150.0		
Coarse Grains	121.0	195.0		
All Cereals	316.0	395.0		
Developing Countries	131.0	127.0		
Developed Countries	185.0	268.0		
Stocks as % of world consumption	Percent
	20.0	24.0		

Source: FAO, Food Outlook, Number 6. Rome, July, 1986.

1/ Data refer to the calendar year of the first year shown.

2/ July/June except for rice which is reported for calendar years.

3/ July/June.

4/ Stock data are based on aggregate of national carryover levels at the end of national crop years.

1985/86 SUDAN CROP SITUATION

C R O P P R O D U C T I O N

Favorable rainfall in terms of quantity and distribution, as well as exceptionally high prices in 1984/85 have contributed to this season's large area planted and the high production. In spite of some pest and weather-related problems in some areas, production of all crops, except groundnuts, were larger than in 1984/85. Table 2 summarizes the total cultivated area in Sudan, by subsector, for 1985/86 and during the previous five seasons. Table 3 summarizes the estimated area, production and yield for cereals and oilseeds for 1985/86 with comparison with 1984/85 season and the 1979/80-1983/84 five-year average. As shown in Table 3, the increase in area occurred in cereals while area under oilseeds has actually decreased.

CEREALS

The cultivated area of cereal -- sorghum, millet and wheat -- in 1985/86 is estimated at 17.623 million feddans, a 57% increase from 1984/85 estimated 11.228 million feddans and 61% increase from the 1979/80-1984/84 5-year average of 10.975 million feddans. Of the total area, 16.1 million feddans (about 91.3%) were in rainfed areas. Total cereal production in 1985/86 is estimated at 4.22 million metric tons, compared with 1.33 million tons in 1984/85 and an average of 2.70 million tons during the 1979/80-1983/84 5-year period.

SORGHUM (Dura)

Table 4 shows the estimated area, production and yield of sorghum in 1985/86 along with 1984/85 and the 1979/80-1983/84 5-year estimates. Table 5 summarizes the information and also presents the percentages change in 1985/86 from both the 1984/85 and from the average. Figure 1 presents the area and production estimates for the same periods, by type of irrigation.

The estimated area in 1985/86 is 13.2 million feddans distributed as follows: 8.5 million in the mechanized rainfed subsector, 3.5 million in the traditional rainfed subsector and 1.1 million feddans in the irrigated subsector. The data indicate a 65% increase in area under sorghum from the previous season and 67% from the 5-year average. Although area planted increased in all subsectors, the increase was especially significant in the mechanized rainfed subsector (88% above 1984/85 and 94% above the 5-year average -- Table 5).

Estimated sorghum yields in 1985/86 season were generally higher than the previous season. Data in Tables 4 and 5 indicate that average yield in Sudan in 1985/86 was twice as large as in 1984/85, but only 1 percent above the 269 Kilograms/feddan 5-year average. The largest increase in yield during 1985/86 season occurred in the mechanized rainfed areas where it was 217% above the previous season's, compared with an increase

of only 3% and 72% in the irrigated and traditional rainfed subsectors, respectively (Table 5). While yield in the irrigated subsector was 36% above the 5-year average, yields in both the mechanized and traditional rainfed subsectors remained below the average, by 5% and 16%, respectively.

Total production of sorghum in Sudan in 1985/86 is estimated at 3.6 million metric tons, compared with 1.1 million tons in the 1984/85 drought season and an average of 2.1 million tons during the 1979/80-1983/84 5-year period. Of the 3.6 million tons produced in 1985/86, 2.3 million tons were produced in the mechanized rainfed subsector, 0.6 million tons in the traditional rainfed subsector, and the remaining 0.70 million tons were produced in the irrigated subsector. Gedaref was the largest producing region in the mechanized rainfed subsector, producing 44% of the total in this subsector, followed by Damazin which accounted for 36% of the production. In the traditional rainfed subsector, South Kordofan produced 0.15 million tons whereas Blue Nile and South Darfur produced 0.11 million tons each. In the irrigated subsector, Gezira and Managil scheme produced 0.40 million tons -- about 61% of the irrigated subsector's and approximately 11% of total Sudan production (Table 5).

MILLET (Dukhn)

The area of millet in 1985/86 is estimated at 4.1 million feddans (Tables 6 and 7). In comparison with 1984/85 and the 1979/80-1983/84 5-year average, area increased by 31% and 50%, respectively. As the data indicate, millet is produced primarily in the traditional rainfed subsector, particularly in Darfur and Kordofan. North Kordofan was the dominant region with 2 million feddans. South and North Darfur cultivated 0.9 and 0.8 million feddans, respectively. The overall average yield was 28% below the 5-year average, but was more than double the low yield in the 1984/85 drought season (Table 7). Millet production in 1985/86 is estimated at 428,000 metric tons, a 171% increase over the 1984/85 level (Table 7 and Figure 2). In spite of the 50% increase in area from the 5-year average, production was only 9% above the average, primarily because of the sharp decrease in yield (Table 7).

WHEAT

Tables 8 and 9, and Figure 3 summarize the wheat situation in 1985/86 compared with 1984/85 season and the 1979/80-1983/84 5-year average. The data indicate no change in area from the 5-year average but there was a substantial increase (213%) from the 1984/85 season when no wheat was planted in Gezira and New Halfa schemes. Two-thirds of the 360,000 feddans under wheat in 1985/86 were in Gezira and Managil, whereas 50,000 feddans were in the Northern province and 30,000 in each of New Halfa and White Nile corporations (Table 8). Sudan's average yield in 1985/86 was 20% below the previous season's but 11% above the 5-year average (Table 9). Average yield was higher in the Northern province, 800 kilograms/feddan, compared with an overall Sudan average of 553 kilograms. Total wheat production is estimated at 199,000 metric tons which is 11% above the 179,000 tons average but 152% above the 1984/85 low production level of 79,000 tons.

OILSEEDS

The estimated area of oilseeds -- groundnuts, sesame and cotton -- in 1985/86 is 4.24 million feddans, a 6 percent decrease from the 4.53 million feddans in 1984/85, and much lower than the 5.14 million feddans during the 1979/80-1983/84 5-year average (Table 3). Most of the decrease in area was due to the drastic decrease in area cultivated with groundnuts in 1985/86 (Table 10).

Groundnuts

Tables 10 and 11, and Figure 4 summarize the groundnuts situation in 1985/86 along with comparison with the previous season and the 1979/80-1983/84 5-year average. Total groundnuts area in 1985/86 is estimated at 951,000 feddans, 44% lower than the 1.7 million feddan in 1984/85 and 55% below the 2.1 million feddans' 5-year average. The decline in area was in both the irrigated and the traditional rainfed subsectors. For the country as a whole, area declined by 44% from the previous season's, but decreased proportionally more in the irrigated subsector (55%) than in the traditional rainfed subsector (42%). The average yield showed a little change from the 5-year average (Table 11), whereas it was 30% above last season's. The increase in average yield this season was due to a substantial increase in the traditional rainfed subsector (155% above 1984/85). Yield in the irrigated subsector has actually declined, by 18% from 1984/85 level and by 20% from the 5-year average. The considerable decline in area had significant impact on production (Table 11). Total production is estimated at 274,000 metric tons, a decrease of 28% from previous season's level and of 59% from the average of 663,000 tons during the 1979/80-1983/84 5-year period. Although total production decreased for the country as a whole, production actually increased by 49% in the traditional rainfed subsector compared to 1984/85, though it remained 57% below the 5-year average.

Sesame

Tables 12 and 13, and Figure 5 show the 1985/86 situation for sesame along with comparisons with 1984/85 season and the 1979/80-1983/84 5-year average. The data indicate that sesame area increased by 21% from the 5-year average and by 35% from the previous season's. Most of the increase was in the mechanized rainfed subsector where area increased by 88% from 1984/85 and was more than double the 5-year average (Table 13). Within the mechanized rainfed subsector, it is estimated that 655,000 feddans were in Damazin region compared with 200,000 feddans in 1984/85 and the 202,000 feddans 5-year average. Gedaref region cultivated 430,000 feddans of sesame in 1985/86 (87,000 feddans more than in 1984/85). Almost 50% of the sesame area in the traditional rainfed subsector was in North Kordofan. The substantial decrease in yield in the mechanized areas (by 58% from 1984/85 and by 61% from the 5-year average) more than offset the 16% increase in yield in the traditional rainfed subsector, resulting in an overall decrease of 25% and 49% compared to 1984/85 and the 5-year average, respectively.

Although Damazin cultivated the largest area, yield there was lower than in Gedaref or Dilling (Table 12). Total sesame production in 1985/86 is estimated at 131,000 metric tons, nearly the same as in 1984/85, but 38% below the 210,000 tons 5-year average (Table 12 and Figure 5). It should be pointed out that sesame production in mechanized rainfed areas has actually decreased (by 21%) from previous season, but the decrease was offset by the 27% increase in production in the traditional rainfed subsector.

Cotton

The estimated area of cotton in 1985/86 was 816,000 feddans compared with 993,000 feddans in 1984/85 and an average of 985,000 feddans during the 1979/80-1983/84 5-year period (Table 15 and Figure 6). Almost 60% of the area in 1985/86 was under long staple cotton (Egyptian) where the area under medium staple cotton (Acala) dropped from 465,000 feddans in 1984/85 to 272,000 feddans in 1985/86 season. This was mainly due to the fact that Acala was not cultivated in Gezira in 1985/86. The yield per feddan of long staple varieties declined by 29% from the previous season's, compared to only 12% drop in Acala type and an increase of 18% in the American (short staple) type (Table 15). Total 1985/86 production of all varieties is estimated at 2,989,000 big kantars (423,000 metric tons), a decrease of 34% from 1984/85 and of 8% from the 5-year average (Table 15 and Figure 6).

RAINFALL DURING 1985/86

The 1985/86 season was characterized by high and early rainfall. Since rainfed areas constituted about 87% of the total area in crops the nation's production increased considerably compared to the 1984/85 drought season. Tables 16 through 22 and Figures 7 through 9 show the recorded amounts of rain in the most important locations in the mechanized rainfed subsector and at selected stations in traditional rainfed subsector.

Mechanized Rainfed Subsector

Gedaref Region

The rainy season started earlier than normal in this region, especially in the northern part, i.e., Gadambalia and Um Sinat. Table 16 and Figure 7 show the rainfall situation in Gedaref region during June-October, 1986 and for the 1980 through 1984 period. Table 17 presents monthly rainfall statistics during the rainy season (June-October) 1984 and 1985, while Table 18 shows rainfall in 1980 through 1985 as a percentage of 1980-83 average. The data indicate that rainfall during 1985 was 116% of the average recorded during the 1980-83 4-year period and 147% above the 1984 drought season. It should be pointed out that data were not available in 1985 from four stations: El Kaifai, Hillat Arkoma, Galaa El Nahal and El Guresha.

Damazin Region

Both the quantity and distribution of rainfall were good and sufficient for growing sorghum, millet and sesame. Rainfall started from May and continued until October. Unlike the 1984/85 season, when data from only two stations were available, data from six stations were obtained for 1985/86. Table 19 and Figures 8-A and 8-B indicate that the average rainfall during May-October, 1985 in Damazin and East Agadi stations (504 millimeters) was 17% above the 1984 average at the same stations. For the six stations reporting in 1985, the average was 562 millimeters, or 31% above the 1984 two-station (Damazin and Eastern Agadi) average.

Renk Region

Data were available only from the Renk and the Farm stations. Table 20 and Figures 9-A and 9-B summarize the rainfall situation in the Renk region for the May-October period during 1984 and 1985. The data suggest that rainfall was early and sufficient during the growing season. The two-stations average in 1985 was 113% higher than during the same months in 1984. In comparison, rainfall at the Farm station during 1985 was 220% above the 1984 level while in the Renk station it was only 35% above the 1984 level.

Dilling Region

Table 21 shows rainfall data during 1985, by month, at the State Farm and Habila stations, and the 1984 and 1985 totals. The data indicate that there was sufficient and well-distribution rainfall during the growing season, especially in comparison with the previous season. The amount of rainfall during May-October encouraged cultivation of larger area and had a positive impact on land productivity. The average rainfall in the region was 140% above the 1984 average.

Rainfall in the Traditional Rainfed Subsector

There are no rainfall data that cover the entire traditional rainfed subsector. However, Table 22 presents data for a few selected stations. The data indicate that rainfall was higher at all reporting stations than in 1984, with some stations reporting substantially higher levels. For example, the percentage increase from 1984 ranged from 37% in El Obeied to 275% in Kosti, while in El Fasher and Li Nahood the increases above 1984 were 142% and 131%, respectively.

Table 2 : Crop Summary: Area Cultivated 1980/81 Through 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80 1983/84 Average	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1985/86 Change from: Average	1984/85
<u>IRRIGATED</u>									
Nile Province	25	35	23	13	15	20	50	100	150
North. Prov.	29	40	28	17	36	55	75	159	36
Blue Nile	56	55	60	52	53	42	51	(9)	21
Gezira	797	752	855	625	824	633	923	16	46
Rahad	88	63	93	102	116	135	130	48	(4)
Suki	16	15	15	7	12	33	36	125	9
White Nile	46	32	41	57	64	95	90	96	(5)
Gash	30	20	37	27	54	65	62	107	(5)
New Halfa	123	100	145	127	139	94	172	40	83
Toker	33	38	37	27	42	55	62	88	13
Subtotal	1,243	1,150	1,334	1,054	1,355	1,227	1,651	33	35
<u>MECHANIZED RAINFED</u>									
Damazin	1,143	540	1,720	1,539	1,578	1,371	3,405	198	148
Kosti	225	230	260	241	230	237	1,160	416	389
Gedaref	2,862	2,513	3,216	3,184	3,379	2,856	3,850	35	35
Dilling	355	302	275	529	464	280	652	84	133
Renk	378	324	500	361	435	404	700	85	73
S. Darfur	11	20	10	5	0	0	7	(36)	1/
Subtotal	4,974	3,929	5,981	5,859	6,086	5,148	9,774	97	90
<u>TRADITIONAL RAINFED</u>									
Blue Nile	932	1,075	1,095	813	609	583	810	(13)	39
Gezira	160	206	228	121	121	131	175	9	34
White Nile	309	320	350	338	315	250	505	63	102
N. Kordofan	2,877	2,825	3,235	2,783	2,839	2,852	2,980	4	4
S. Kordofan	559	540	575	587	660	848	1,200	115	42
N. Darfur	559	611	617	537	462	475	1,005	80	112
S. Darfur ²	2,228	2,175	2,185	2,275	2,475	2,080	1,940	(13)	(7)
S. Region ²	1,251	1,300	1,305	1,175	1,245	1,170	1,005	(20)	(14)
Subtotal	8,875	9,052	9,590	8,629	8,726	8,389	9,620	8	15
TOTAL SUDAN	15,092	14,131	16,905	15,542	16,167	14,764	21,045	39	43

^{1/} NA = Not Applicable.

^{2/} Revised estimate for 1985/86 season.

Table 3 : Crop Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>CEREALS</u> ^{1/}						
Area	1,000 Feddans	10,975	11,222	17,623	+ 61%	+ 57%
Prod.	1,000 M. Tons	2,693	1,334	4,222	+ 57%	+216%
Yield	Kg./Feddan	245	119	240	- 2%	+102%
<u>OILSEEDS</u> ^{2/}						
Area	1,000 Feddans	5,136	4,529	4,241	- 17%	- 6%
Prod.	1,000 M. Tons	1,180	939	688	- 42%	- 27%
Yield	Kg./Feddan	230	207	162	- 30%	- 22%
<u>TOTAL</u>						
Area	1,000 Feddans	16,111	15,757	21,864	+ 36%	+ 39%
Prod.	1,000 M. Tons	3,873	2,273	4,910	+ 27%	+116%
Yield	Kg./Feddan	240	144	225	- 6%	+ 56%

^{1/} Cereals include sorghum, millet and wheat.

^{2/} Oilseeds include groundnuts, sesame and cottonseed. Cottonseed is estimated at 67% of cotton.

Table 4 : Sorghum (Dura): Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86			Record Yield Kg/Fed
	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	
<u>IRRIGATED</u>										
Nile Province	18	9	500	15	8	500	40	20	500	615
North. Prov.	9	4	444	10	8	750	25	15	600	750
Blue Nile	55	22	400	40	16	400	51	22	425	500
Gezira & Man.	331	143	432	420	264	630	580	400	690	630
Rahad	25	15	600	70	49	700	90	57	630	778
Suki	15	6	400	21	9	450	35	21	610	NA ^{1/}
White Nile	40	15	375	30	12	400	60	27	450	485
Gash	30	8	257	65	26	400	62	27	440	438
New Halfa	40	16	400	60	30	500	140	53	380	500
Toker	19	6	316	35	14	400	40	16	400	674
Subtotal	582	250	430	766	436	569	1,123	658	586	---
<u>MECHANIZED RAINFED</u>										
Damazin	941	278	295	1,171	116	99	2,665	839	315	453
Kosti	225	59	262	237	21	90	1,160	174	150	639
Gedaref	2,546	735	289	2,502	195	78	3,400	1,020	300	400
Dilling	333	88	264	250	23	92	625	172	275	445
Renk	342	107	313	374	34	90	680	122	180	541
S. Darfur	11	3	273	-	-	-	7	1	180	400
Subtotal	4,398	1,270	288	4,534	389	86	8,537	2,328	273	---
<u>TRADITIONAL RAINFED</u>										
Blue Nile	602	162	269	450	55	122	600	108	180	350
Gezira	154	38	247	70	4	57	170	26	150	400
White Nile	149	28	188	160	10	63	430	52	120	371
N. Kordofan	436	58	133	303	8	25	200	18	90	300
S. Kordofan	370	89	241	609	54	89	800	152	190	397
N. Darfur	48	5	104	45	1	22	115	21	180	380
S. Darfur	362	84	232	300	40	134	480	106	220	427
S. Region	762	137	180	750	100	133	700	126	180	520
Subtotal	2,883	601	208	2,687	272	101	3,495	609	174	---
TOTAL SUDAN	7,863	2,121	269	7,987	1,097	137	13,155	3,595	273	---

1/ NA = Not Available.

Figure 1: Sorghum Area & Production 85/86

Compared with 84/85 and 79/80-83/84 Avg

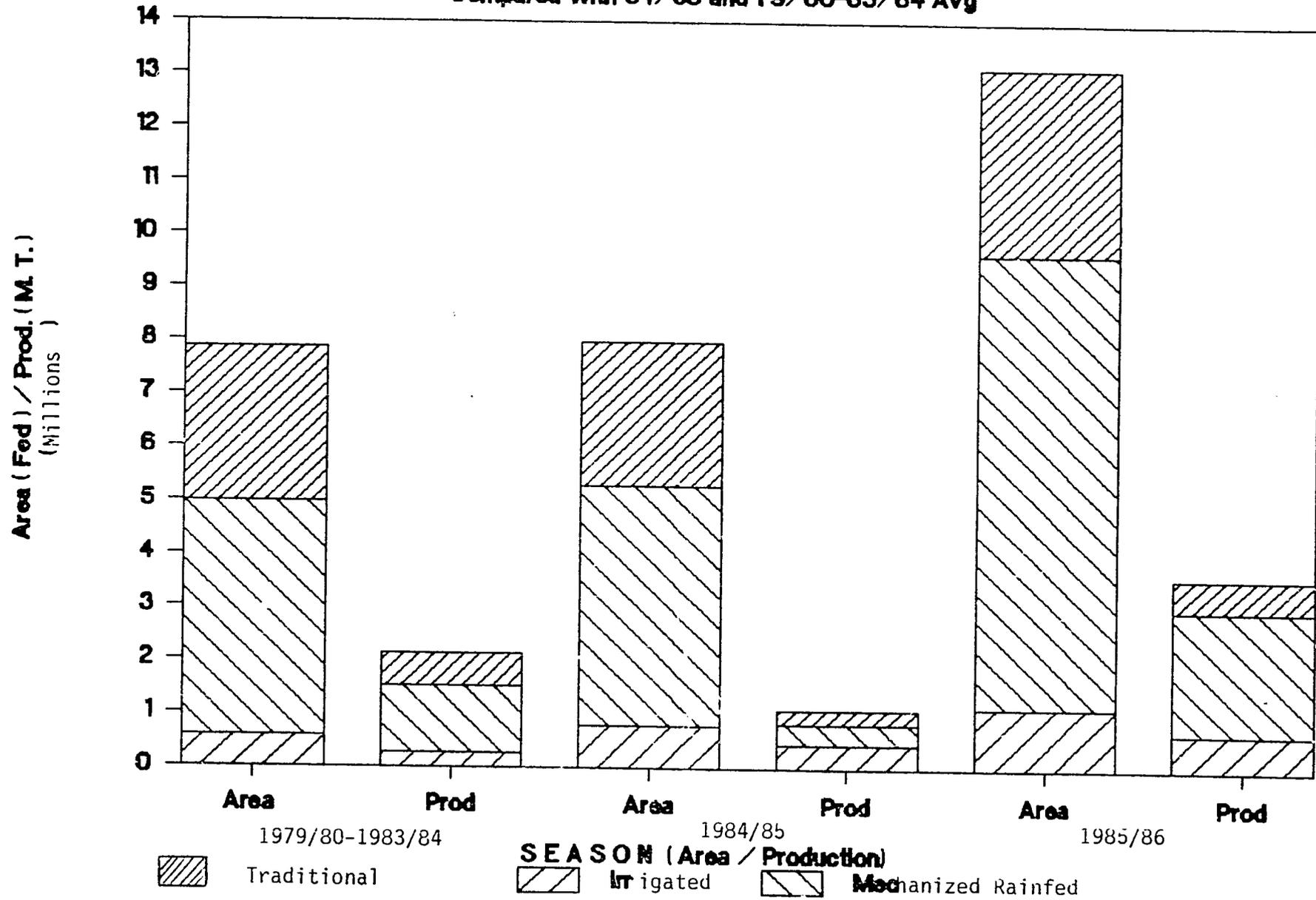


Table 5 : Sorghum (Dura) Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 Average	Change in from: 1984/85
<u>IRRIGATED</u>						
Area	1,000 Feddans	582	766	1,123	+ 93%	+ 47%
Prod.	1,000 M. Tons	250	436	658	+ 63%	+ 51%
Yield	Kg./Feddan	430	569	586	+ 36%	+ 3%
<u>MECHANIZED RAINFED</u>						
Area	1,000 Feddans	4,398	4,534	8,537	+ 94%	+ 88%
Prod.	1,000 M. Tons	1,270	389	2,328	+ 83%	+498%
Yield	Kg./Feddan	288	85	273	- 5%	+217%
<u>TRADITIONAL RAINFED</u>						
Area	1,000 Feddans	2,883	2,687	3,495	+ 21%	+ 30%
Prod.	1,000 M. Tons	601	272	609	+ 1%	+124%
Yield	Kg./Feddan	208	101	174	- 16%	+ 72%
<u>TOTAL</u>						
Area	1,000 Feddans	7,863	7,987	13,155	+ 67%	+ 65%
Prod.	1,000 M. Tons	2,121	1,097	3,595	+ 69%	+228%
Yield	Kg./Feddan	269	137	273	+ 1%	+ 99%

Table 6 : Millet: Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86		
	Area 000 Fed	Prod 000 Mt	Yield Kg/Fed	Area 000 Fed	Prod 000 Mt	Yield Kg/Fed	Area 000 Fed	Prod 000 Mt	Yield Kg/Fed
<u>IRRIGATED</u>									
Toker (Flood)	14	5	357	20	10	500	22	7	318
Subtotal	<u>14</u>	<u>5</u>	<u>357</u>	<u>20</u>	<u>10</u>	<u>500</u>	<u>22</u>	<u>7</u>	<u>318</u>
<u>MECHANIZED RAINFED</u>									
Damazin	0	0	0	0	0	0	85	17	200
Gedaref	5	1	200	11	1	91	20		100
Dilling	0	0	0	0	0	0	1	<u>1/3</u>	200
Subtotal	<u>5</u>	<u>1</u>	<u>200</u>	<u>11</u>	<u>1</u>	<u>91</u>	<u>106</u>	<u>20</u>	<u>189</u>
<u>TRADITIONAL RAINFED</u>									
Blue Nile	64	10	156	50	4	80	30	4	150
Gezira	6	1	167	61	1	16	5	1	150
White Nile	77	14	182	60	4	67	40	6	150
N. Kordofan	1,045	103	99	1,534	20	13	2,000	140	70
S. Kordofan	41	8	195	50	4	80	120	22	180
N. Darfur	410	56	137	360	13	36	800	80	100
S. Darfur	984	180	183	900	90	100	900	135	150
S. Region	84	14	167	80	11	138	85	13	150
Subtotal	<u>2,711</u>	<u>386</u>	<u>142</u>	<u>3,095</u>	<u>147</u>	<u>47</u>	<u>3,980</u>	<u>401</u>	<u>101</u>
TOTAL SUDAN	2,730	392	144	3,126	158	51	4,108	428	104

1/ Production less than 1,000 Metric Tons.

Fig.2 : Millet Area & Production 85/86

Compared with 84/85 and 79/80-83/84 Average

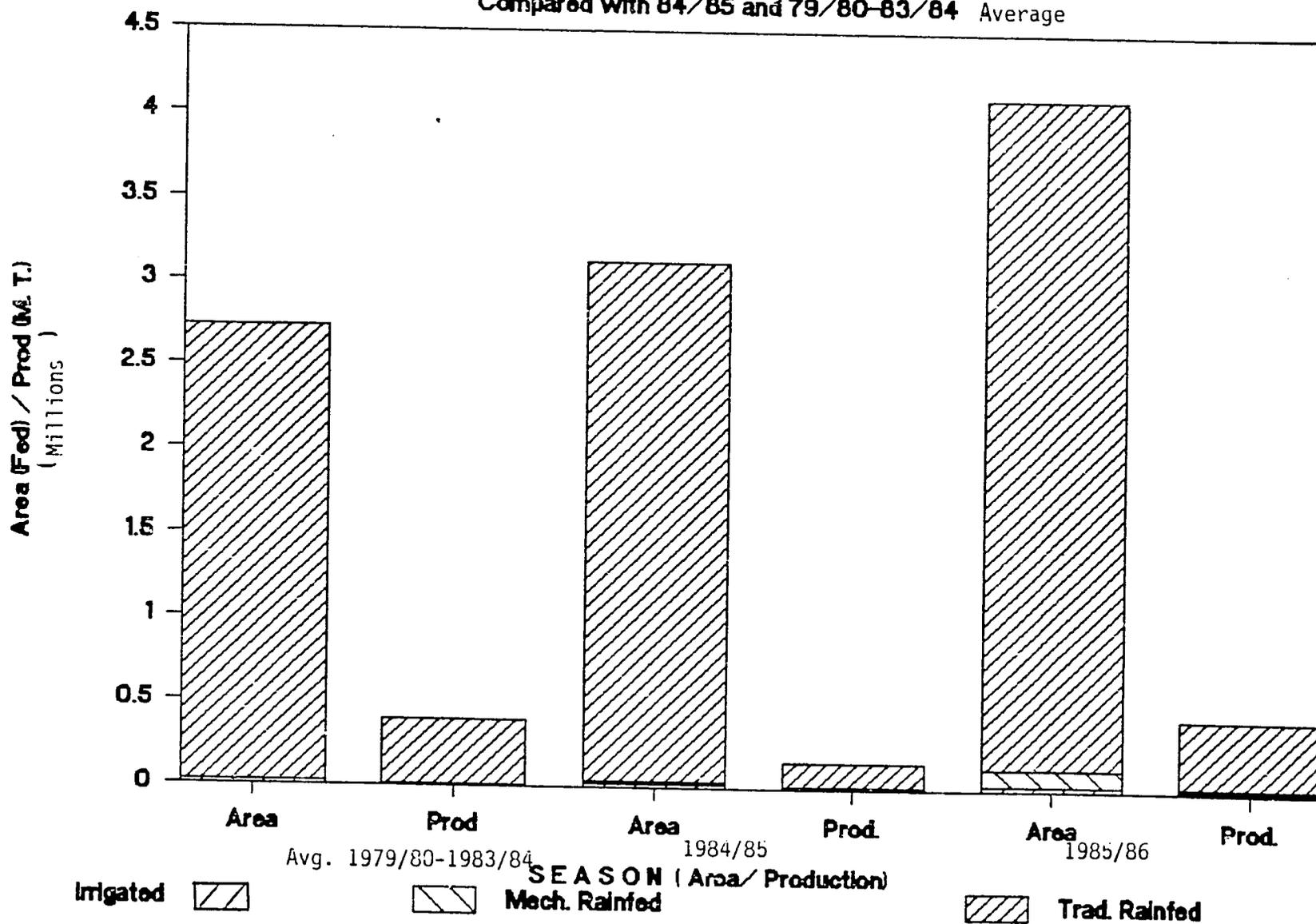


Table 7 : Millet Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>IRRIGATED</u>						
Area	1,000 Feddans	14	20	22	+ 57%	+ 10%
Prod.	1,000 M. Tons	5	10	7	+ 40%	- 30%
Yield	Kg./Feddan	357	500	318	- 11%	- 36%
<u>MECHANIZED RAINFED</u>						
Area	1,000 Feddans	5	11	106	+2020%	+864%
Prod.	1,000 M. Tons	1	1	20	+1900%	+1900%
Yield	Kg./Feddan	200	91	189	- 5%	+108%
<u>PRADITIONAL RAINFED</u>						
Area	1,000 Feddans	2,711	3,095	3,980	+ 47%	+ 29%
Prod.	1,000 M. Tons	386	147	401	+ 4%	+173%
Yield	Kg./Feddan	142	47	101	- 29%	+115%
<u>TOTAL</u>						
Area	1,000 Feddans	2,730	3,126	4,108	+ 50%	+ 31%
Prod.	1,000 M. Tons	392	158	428	+ 9%	+171%
Yield	Kg./Feddan	144	51	104	- 28%	+104%

Table 8 : Wheat: Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86		
	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed
<u>IRRIGATED</u>									
Nile Province	7	4	571	5	3	600	10	6	600
Northern Province	20	16	800	45	31	700	50	40	800
Gezira & Managil	284	137	482	-	-	-	240	120	500
White Nile	6	2	333	65	45	600	30	15	500
New Halfa	45	20	444	-	-	-	30	18	600
Subtotal	<u>362</u>	<u>179</u>	<u>500</u>	<u>115</u>	<u>79</u>	<u>687</u>	<u>360</u>	<u>199</u>	<u>553</u>
TOTAL SUDAN	362	179	500	115	79	687	36	199	553

Fig 3 : Wheat Area and Production 85/86

Compared with 84/85 and 79/80-83/84 Avg

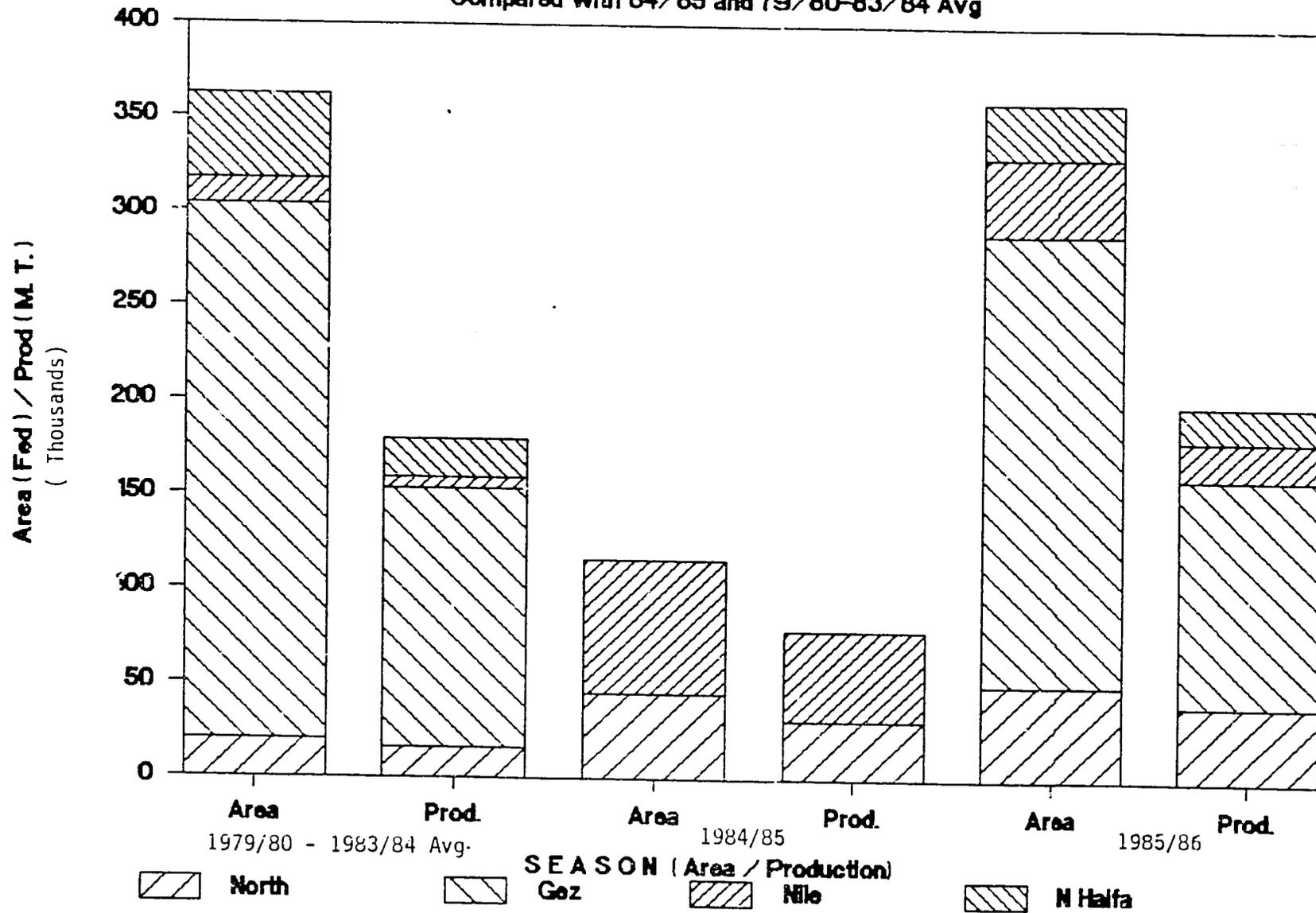


Table 9 : Wheat Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>IRRIGATED</u>						
Area	1,000 Feddans	362	115	360	0	+213%
Prod.	1,000 M. Tons	179	79	199	+ 11%	+152%
Yield	Kg./Feddan	500	687	553	+ 11%	- 20%

Table 10 : Groundnuts: Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86		
	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed
<u>IRRIGATED</u>									
Gezira&Managii	181	140	773	213	170	798	103	77	750
Blue Nile	1	1	1,000	2	1	500	-	-	-
Rahad	63	50	794	65	58	892	40	16	400
Suki	16	16	1,000	12	8	667	1	1/	450
New Halia	38	34	895	34	20	588	2	1	650
Subtotal	<u>299</u>	<u>241</u>	<u>809</u>	<u>326</u>	<u>257</u>	<u>788</u>	<u>146</u>	<u>94</u>	<u>644</u>
<u>TRADITIONAL RAINFED</u>									
Blue Nile	20	9	450	8	2	250	5	1	180
white Nile	49	15	306	15	3	200	10	2	180
N. Kordofan	673	161	239	381	11	29	130	26	200
S. Kordofan	34	8	235	18	1	55	30	8	250
N. Dardur	90	17	189	60	2	33	50	15	300
S. Dardur ^{2/}	704	160	227	700	70	100	460	106	230
S. Region ^{2/}	242	52	215	200	32	160	120	22	180
Subtotal	<u>1,812</u>	<u>422</u>	<u>233</u>	<u>1,382</u>	<u>121</u>	<u>88</u>	<u>805</u>	<u>180</u>	<u>224</u>
TOTAL SUDAN	2,111	663	314	1,708	378	221	951	274	288

^{1/} Less than 1,000 Metric Tons.

^{2/} 1985/86 crop estimate revised.

Fig 4 :Gronuts Area & Production 85/86

Compared with 84/85 and 79/80-83/84 Avg

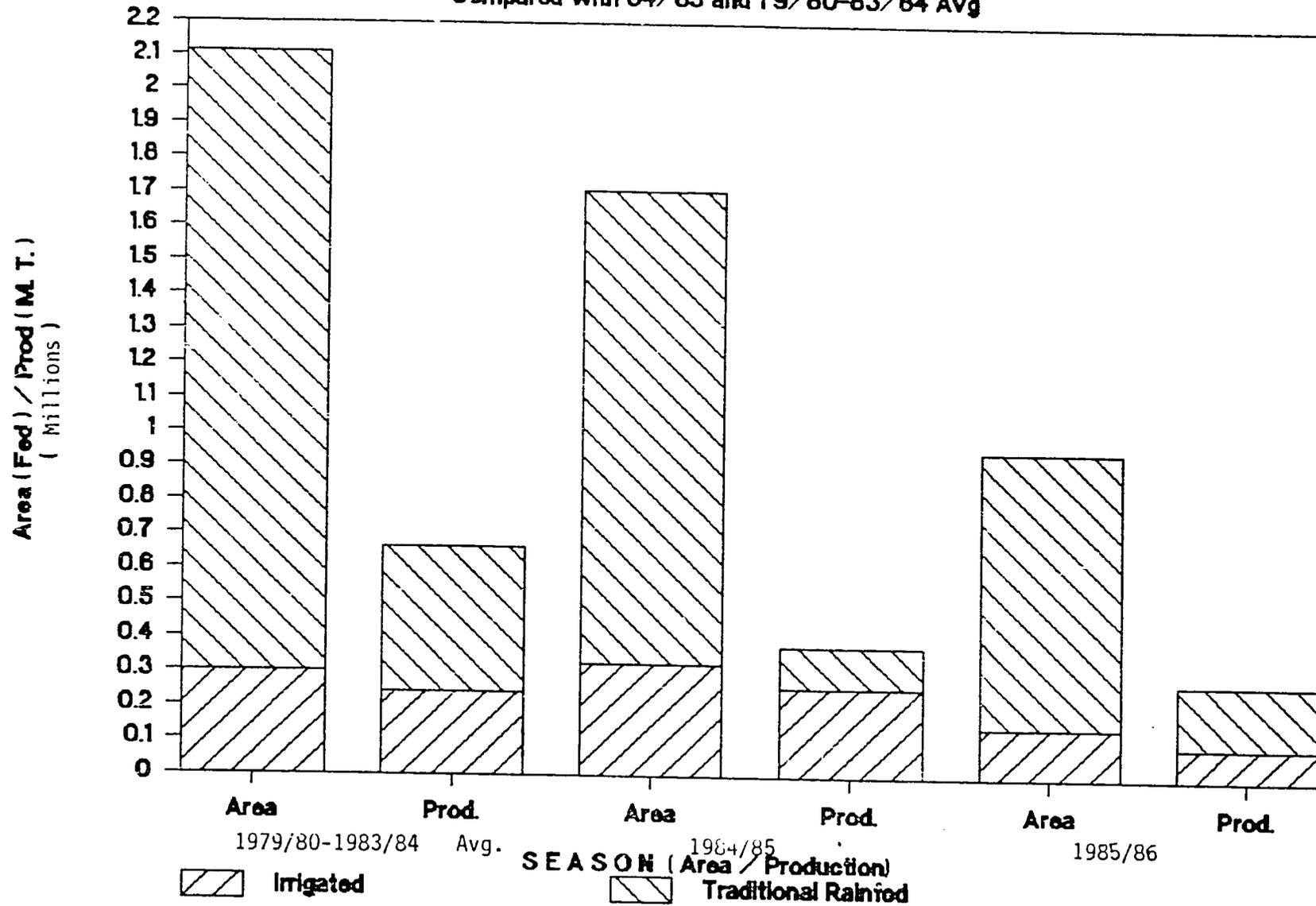


Table 11 : Groundnuts Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>IRRIGATED</u>						
Area	1,000 Feddans	299	326	146	- 51%	- 55%
Prod.	1,000 M. Tons	241	257	94	- 61%	- 63%
Yield	Kg./Feddan	809	788	644	- 20%	- 18%
<u>TRADITIONAL RAINFED</u>						
Area	1,000 Feddans	1,812	1,382	805	- 56%	- 42%
Prod.	1,000 M. Tons	422	121	180	- 57%	+ 49%
Yield	Kg./Feddan	233	88	224	- 4%	+155%
<u>TOTAL</u>						
Area	1,000 Feddans	2,111	1,708	951	- 55%	- 44%
Prod.	1,000 M. Tons	663	378	274	- 59%	- 28%
Yield	Kg./Feddan	314	221	288	- 8%	+ 30%

Table 12: Sesame: Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86		
	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed	Area 000 Fed	Prod 000 MT	Yield Kg/Fed
<u>MECHANIZED RAINFED</u>									
Damazin	202	22	109	200	26	130	655	16	25
Gedaref	311	42	138	343	39	114	430	37	85
Dilling	22	3	136	30	1	33	26	<u>1</u> ²	90
Renk	36	4	111	30	4	133	20	<u>1</u>	25
Kosti	-	-	-	-	-	-	3	<u>1</u>	10
Subtotal	<u>571</u>	<u>71</u>	<u>126</u>	<u>603</u>	<u>70</u>	<u>116</u>	<u>1,134</u>	<u>55</u>	<u>49</u>
<u>TRADITIONAL RAINFED</u>									
Blue Nile	246	31	126	75	7	93	175	11	60
White Nile	34	4	118	15	1	67	25	1	50
N. Kordofan	723	52	72	634	6	10	650	20	30
S. Kordofan	114	15	132	171	7	41	250	23	90
N. Darfur	11	1	91	10	1	100	40	3	80
S. Darfur ²	178	14	79	180	21	117	100	8	80
S. Region	163	22	135	140	17	120	100	10	100
Subtotal	<u>1,469</u>	<u>139</u>	<u>95</u>	<u>1,225</u>	<u>60</u>	<u>49</u>	<u>1,340</u>	<u>76</u>	<u>57</u>
TOTAL SUDAN	2,040	210	103	1,828	130	71	2,474	131	53

^{1/} Production less than 1,000 Metric Tons.

^{2/} Revised 1985/86 estimates.

Fig 5 : Sesame Area & Production 85/86

Comparison with 84/85 and 79/80-83/84 Avg

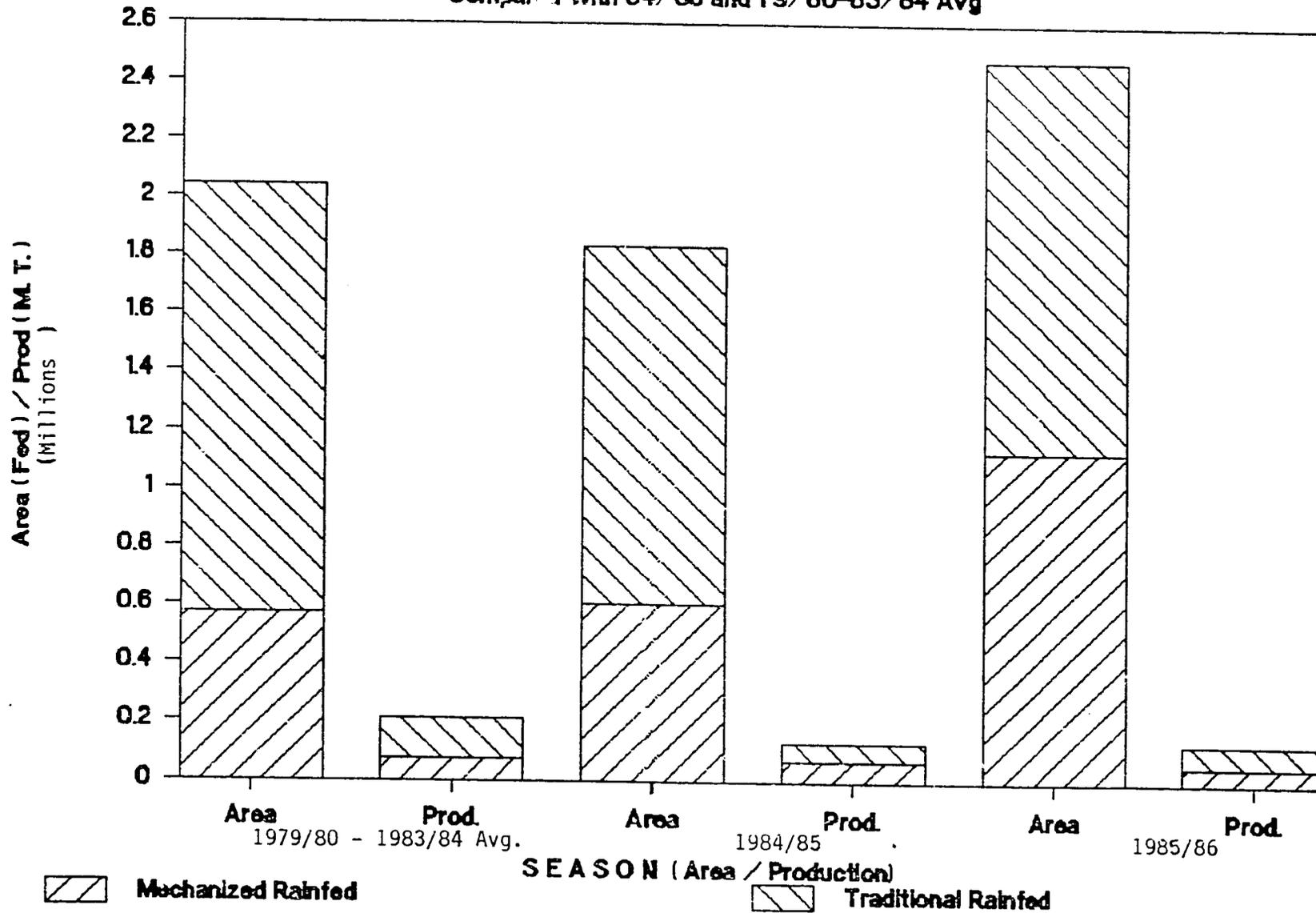


Table 13 : Sesame Summary: Area, Production and Yield in 1985/86 Compared with 84/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>MECHANIZED RAINFED</u>						
Area	1,000 Feddans	571	603	1,134	+ 99%	+ 88%
Prod.	1,000 M. Tons	71	70	55	- 23%	- 21%
Yield	Kg./Feddan	126	116	49	- 61%	- 58%
<u>TRADITIONAL RAINFED</u>						
Area	1,000 Feddans	1,469	1,225	1,340	- 9%	+ 9%
Prod.	1,000 M. Tons	139	60	76	- 45%	+ 27%
Yield	Kg./Feddan	103	49	57	- 45%	+ 16%
<u>TOTAL</u>						
Area	1,000 Feddans	2,040	1,828	2,474	+ 21%	+ 35%
Prod.	1,000 M. Tons	210	130	131	- 38%	+ 1%
Yield	Kg./Feddan	103	71	53	- 49%	- 25%

Table 14 : Cotton: Area, Production, and Yield, 1985/86 , 1984/85 and Average 1979/80-1983/84

Production Region/ Center	1979/80-1983/84			1984/85			1985/86		
	Area 000 Fed	Prod 000 MT	Yield Big Kan/ Feddan	Area 000 Fed	Prod 000 MT	Yield Big Kan/ Feddan	Area 000 Fed	Prod 000 MT	Yield Big Kan/ Feddan
<u>EGYPTIAN</u>									
Gezira&Managil	395	185	3.31	357	240	4.75	401	201	3.54
Blue Nile	45	13	2.04	1/	-	-	-	-	-
White Nile	67	23	2.43	32	20	4.50	53	19	2.50
Tokar	17	3	1.25	10	1	0.76	30	6	1.50
Subtotal	<u>524</u>	<u>224</u>	<u>3.02</u>	<u>399</u>	<u>261</u>	<u>4.62</u>	<u>484</u>	<u>226</u>	<u>3.30</u>
<u>ACALA</u>									
Zeidab ^{2/}	5	2	2.83	6	3	3.50	5	4	5.50
Gezira& Managil	98	70	5.05	123	113	6.50	-	-	-
Blue Nile	14	8	4.04	56	32	4.00	53	25	3.36
Rahad	109	89	5.77	131	130	7.00	118	93	5.54
Suki	27	13	3.40	25	12	3.50	27	9	2.37
White Nile	12	5	2.94	33	16	3.50	-	-	-
New Halta	68	31	3.22	91	52	4.00	69	53	5.49
Subtotal ²	<u>333</u>	<u>218</u>	<u>4.63</u>	<u>465</u>	<u>358</u>	<u>5.44</u>	<u>272</u>	<u>184</u>	<u>4.78</u>
<u>AMERICAN</u>									
Blue Nile	33	6	1.28	7	2	1.50	2	1	3.36
Gedaref	9	1	0.79	2	1	1.20	-	-	-
Nuba Mountains	64	7	0.77	90	19	1.50	33	10	2.03
Equatoria	24	2	0.56	30	2	0.47	25	2	0.60
Subtotal	<u>130</u>	<u>16</u>	<u>0.87</u>	<u>129</u>	<u>24</u>	<u>1.30</u>	<u>60</u>	<u>13</u>	<u>1.53</u>
TOTAL SUDAN	985	458	3.29	993	643	4.58	816	423	3.66

^{1/} Area and production are credited to Acala.

^{2/} Revised 1985/86 estimates.

Fig 6 : Cotton Area & Production 85/86

Compared with 84/85 and 79/80-83/84 Avg

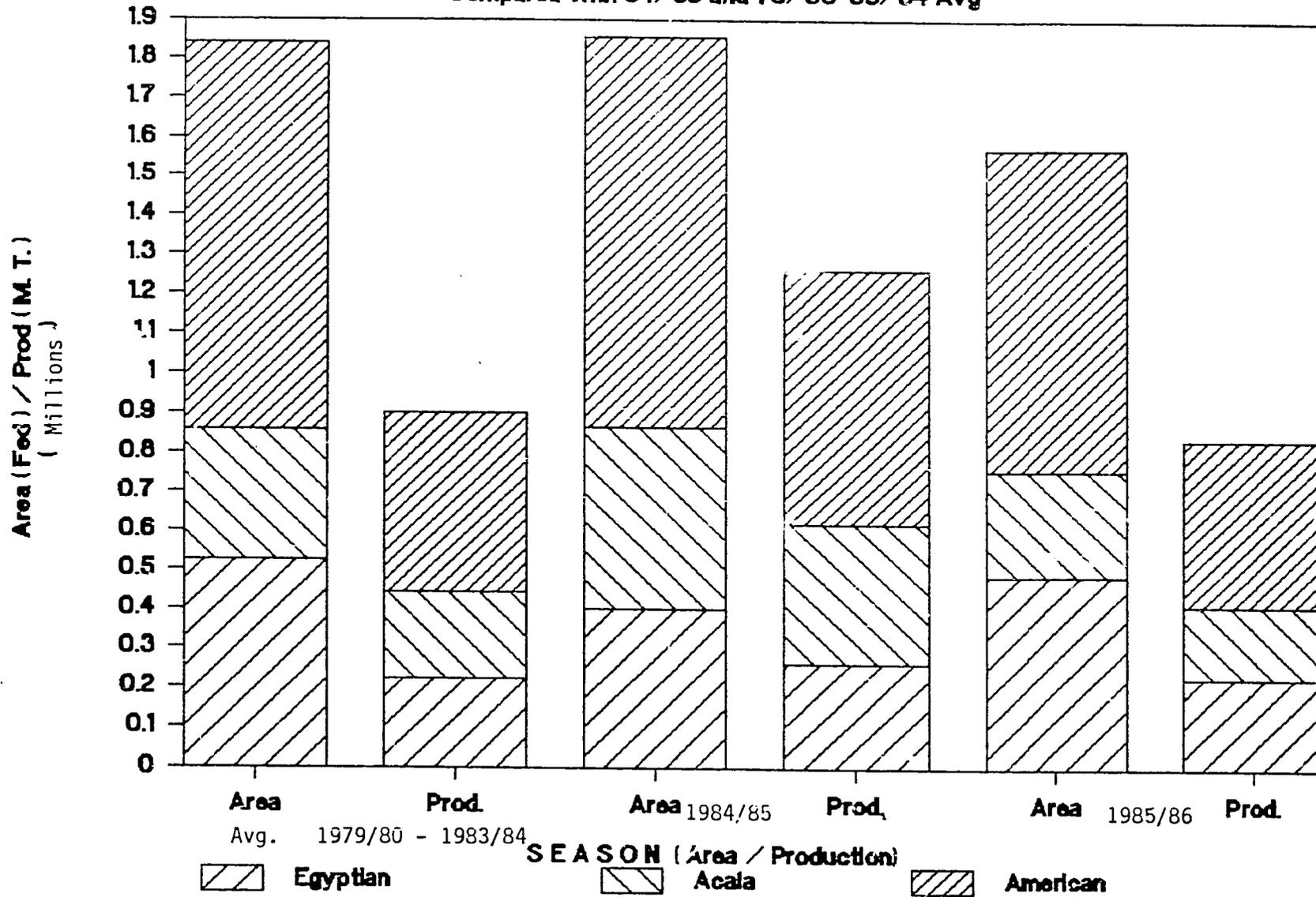


Table 15 : Cotton Summary: Area, Production and Yield in 1985/86 Compared with 1984/85 Season and the 1979/80-1983/84 Five-year Average

Item	Unit	Average 1979/80 1983/84	1984/85	1985/86	Percentage Change in 1985/86 from: Average 1984/85	
<u>EGYPTIAN (Long Staple)</u>						
Area	1,000 Feddans	524	399	484	- 3%	+ 21%
Prod.	1,000 Big kant.	1,583	1,843	1,597	+ 1%	- 13%
Yield	Big Kantar/Fed.	3.02	4.62	3.30	+ 9%	- 29%
<u>ACALA (Medium Staple)</u>						
Area	1,000 Feddans	333	465	272	- 18%	- 42%
Prod.	1,000 Big Kant.	1,540	2,530	1,300	- 16%	- 49%
Yield	Big Kantar/Fed.	4.63	5.44	4.78	+ 3%	- 12%
<u>AMERICAN (Short Staple)</u>						
Area	1,000 Feddans	130	129	60	- 54%	- 53%
Prod.	1,000 Big Kant.	113	168	92	- 19%	- 45%
Yield	Big kantar/Fed.	0.87	1.30	1.53	+ 76%	+ 18%
<u>TOTAL</u>						
Area	1,000 Feddans	985	993	816	- 17%	- 18%
Prod.	1,000 Big Kant.	3,236	4,541	2,989	- 8%	- 34%
Yield	Kg./Feddan	3.29	4.57	3.66	+ 11%	- 20%

Table 16: Estimated Amounts of Rainfall at the Major Stations in Gedaref Region During May-October, 1980 Through 1985

Station	1980	1981	1982	1983	Average 1980/83	1984	1985	1985 As % of 80/83
	(M I L L I M E T E R S)							
Gedaref	638	624	716	482	615	318	735	120
El Huri	477	622	502	295	474	212	560.5	118
Abu Kashma	470	603	421	253	437	249	455	104
Gadambalia	580	475	340	390	446	285	477.5	107
El Hawata	222	510	358	392	371	413	440	119
Camp 4	397	706	314	321	435	323	495	114
Doka	604	487	550	718	590	593	675.5	114
El Dnebat	520	519	460	402	475	319	538	113
Samsam Camp	669	816	756	658	725	660	781	108
Um Sinat	596	670	647	538	613	546	614.5	100
State Farm	471	414	440	602	482	559	818.5	170
Average	<u>513</u>	<u>586</u>	<u>500</u>	<u>459</u>	<u>516</u>	<u>407</u>	<u>599</u>	<u>116</u>

Source: MFC.

Figure 7: Rainfall in Gedaref Region

1980 Through 1985 and 1980-83 Average

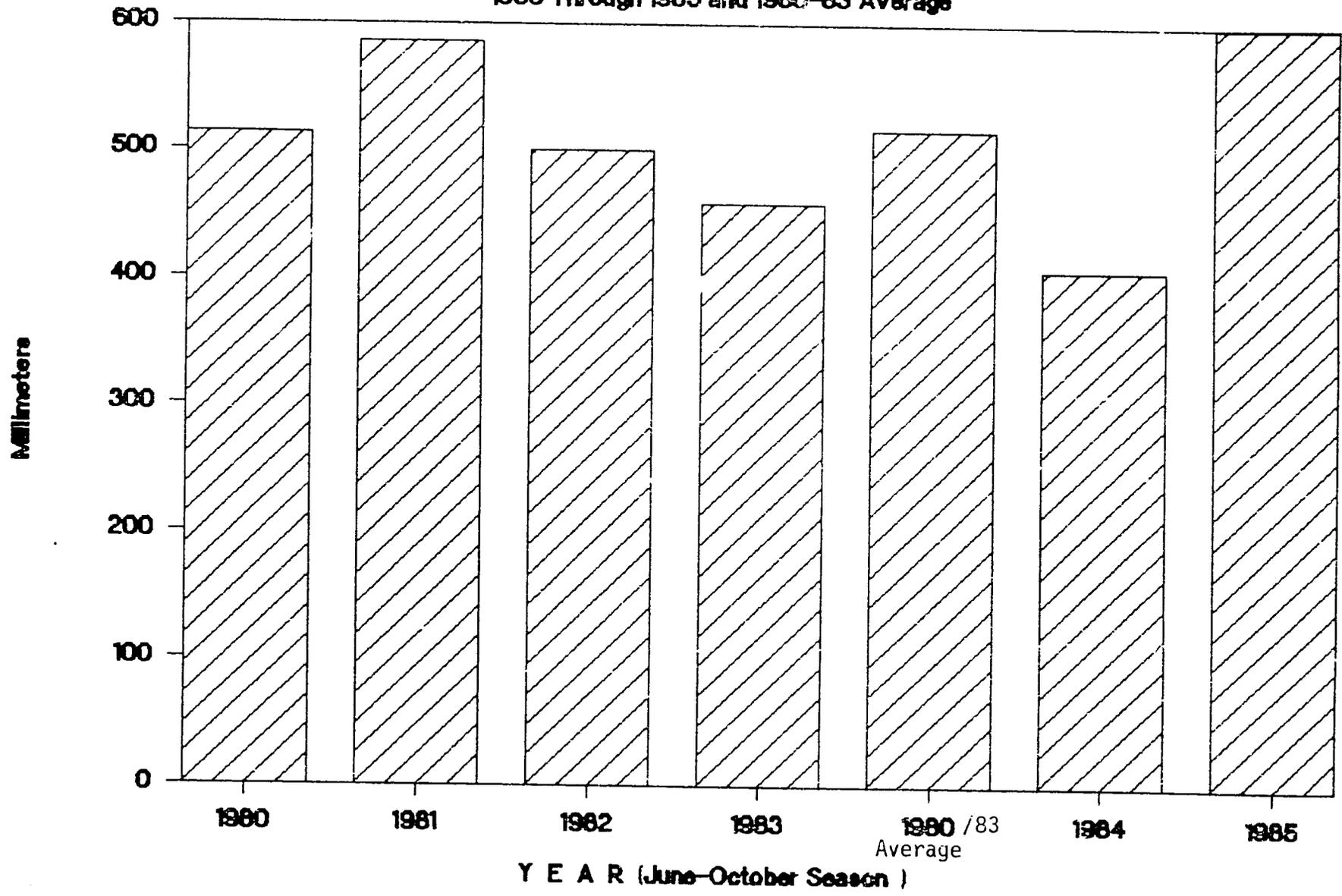


Table 7: Monthly Amounts of Rainfall at the Major Stations in Gedaref Region, May-October, 1984 and 1985

Station	1984							1985							
	May	June	July	Aug.	Sept	Oct.	Total	May	June	July	Aug	Sept.	Oct.	Total	
	(M I L L I M E T E R S)														
Gedaref	2	17	32	136	58	73	318	24.1	81	348	133.5	71.7	76.7	735.00	
El Huri	-	10	111	70	21	-	212	14	54	231.5	179	82	-	560.50	
Abu Kashma	15	40	67	32	95	-	249	55	60	109	154	48	-	455.00	
Gadambalia	8	31	89	119	38	-	285	47	76	141.5	99	110	4	477.50	
El Hawata	-	129	56	108	120	-	413	7	55	191	187	-	-	440.00	
Camp 4	-	-	154	114	55	-	323	19	59	133	182	102	-	495.00	
Doka	75	51	192	124	151	-	593	71.5	95	247	262	-	-	675.50	
El Denebat	-	45	22	77	80	95	319	36	83	-	297	93	29	538.00	
Samsam	12	97	228	227	96	-	660	38	78	262	315	88	-	791.00	
Um Sinat	37	87	238	143	41	-	546	40	66.5	208	153	147	-	614.50	
State Farm	17	96	246	126	74	-	559	30	159	322	156	151.5	-	818.50	
AVERAGE	15	55	131	116	75	15	407	35	81	199	193	81	10	599.00	

Source: MFC.

Table 18: Rainfall at the Major Stations in Gedaref Region During May-October, 1980 Through 1985 As a Percentage of 1980/1983 Average

Rainfall in the Following Years as % of 1980/83 Average:						
Station	1980	1981	1982	1983	1984	1985
(P E R C E N T A G E)						
Gedaref	104	101	116	78	52	120
El Huri	101	131	106	62	45	118
Abu Kashna	108	138	96	58	57	104
Gadambalia	130	107	76	87	64	107
El Hawata	60	137	96	106	111	119
Camp 4	91	162	72	74	74	114
Doka	102	83	93	122	101	114
El Dnebat	109	109	97	85	67	113
Samsan Camp	92	113	104	91	91	108
Um Sinat	97	109	106	88	89	100
State Farm	98	86	91	125	116	170
Average	99	114	97	89	79	116

Source: Calculated by the authors from MFC data.

Table 19 : Estimated Amounts of Rainfall at Selected Stations in Damazin Region During May-October, 1984 and 1985

Month	Station/Year										
	1985			1986					Average		
	Damazin	E. Agadi	Avg.	Damazin	E. Agadi	Avg.	W. Agadi	S. Agadi	Gali	Dindir	All ^{1/}
(M I L L I M E T E R S)											
May	-	26	13	55	73	64	33	39	-	32.5	38.75
June	188	18	103	88	76.5	82	146	125	117	111	110.58
July	-	156	78	140	180	160	203	154	221	91	164.80
August	101	124	113	95	54	74	112	59	61	214	99.17
Sept.	146	60	103	84	111	98	118	191	109	23.5	106.00
Oct.	27	12	20	28	24	25	30	100	57	17	42.70
Total	462	396	430	490	519	504	642	668	586	489	562.00

Source: MFC.

^{1/} Average for all five stations.

Table 20 : Estimated Amounts of Rainfall at Selected Stations in Renk Region During May-October, 1984 and 1985

Month	Station/Year						1985 Percentage Change From 1984		
	Renk	1984 Farm	Avg.	Renk	1985 Farm	Avg.	Renk	Farm	Avg.
. (M i l l i m e t e r s)									
May	57	40	49	35	166	100	- 39	+315	+104
June	40	53	47	100	123	112	+150	+132	+138
July	114	66	90	88	222	155	- 23	+236	+ 72
August	65	68	67	114	60	87	+ 75	- 12	+ 30
Sept.	32	20	26	103	238	171	+222	+1090	+558
Oct.	27	6	17	11	-	6	- 59	-100	- 65
Total	335	253	296	451	809	630	+ 35	+220	+113

Source: MFC. Percentages were calculated and rounded by the authors.

Figure 8-A: Rainfall In Damazin Area

Damazin region - 1983 Through 1985

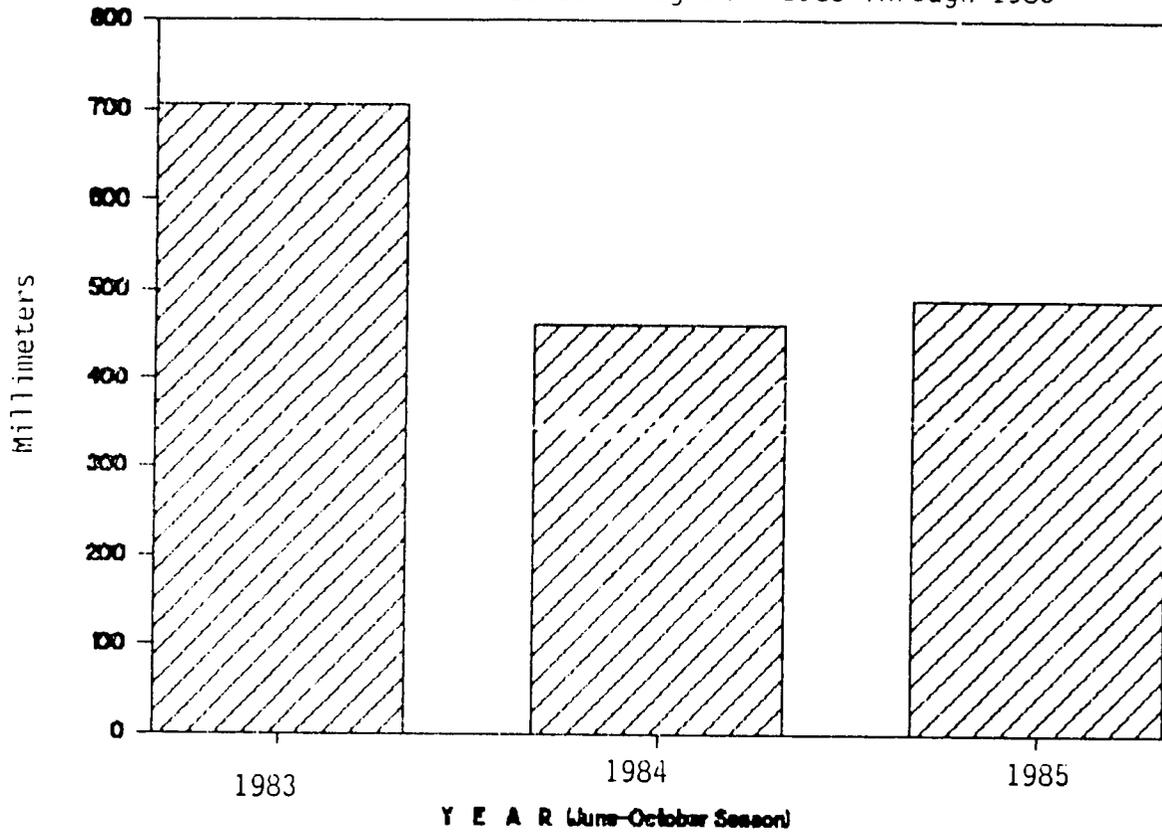


Figure 8-B: Rainfall In Eastern Agadi

Damazin Region - 1983 Through 1985

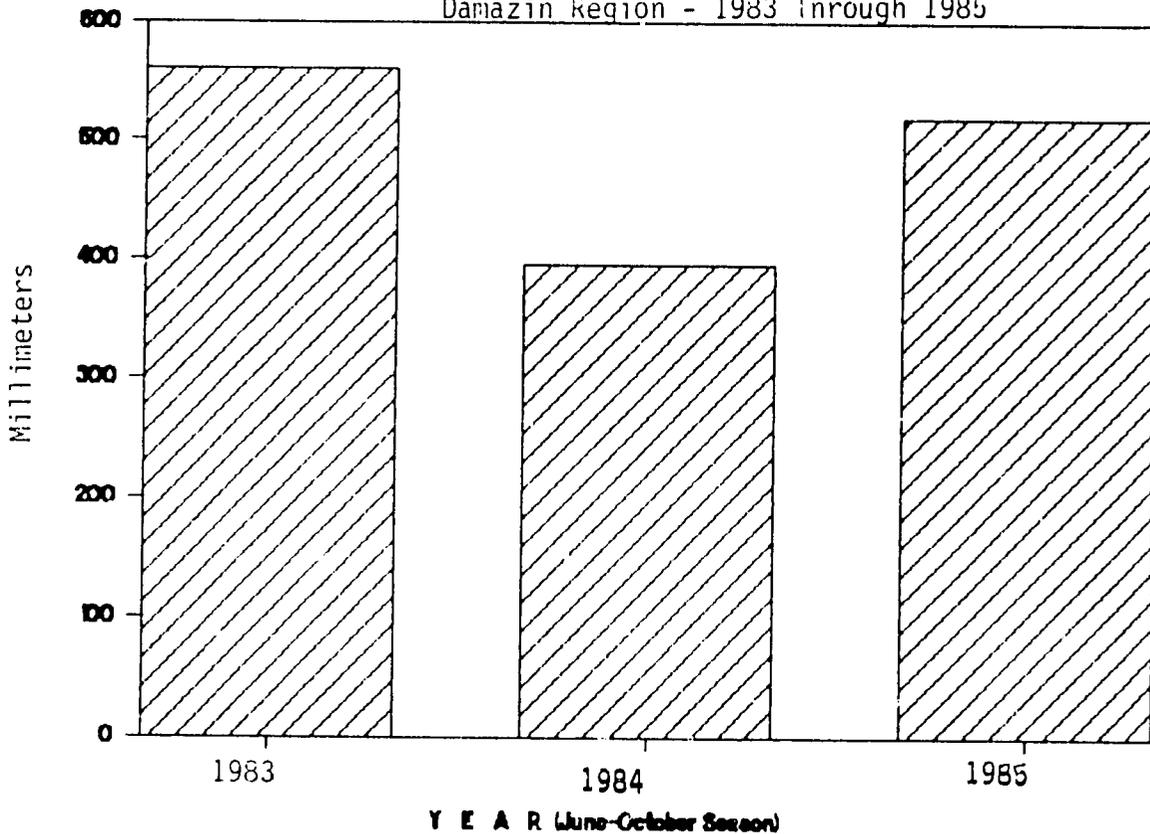


Figure 9 -A: Rainfall in Renk Station

Renk Region — 1983 Through 1985

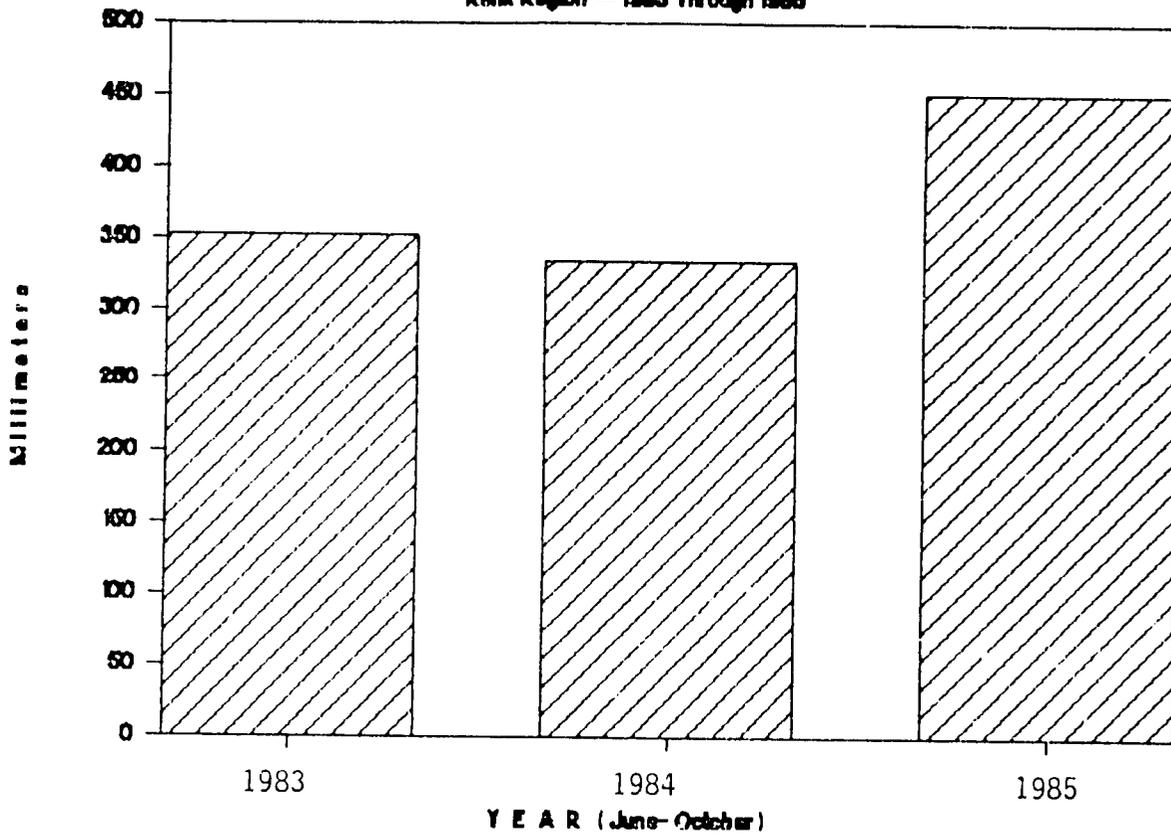


Figure 9 -B: Rainfall in Farm Station

Renk Region — 1983 Through 1985



Table 21: Estimated Amounts of Rainfall at Selected Stations in Dilling Region During May-October, 1985

Station	May	June	July	August	Sept.	Oct.	Total 1985	Total 1984	1985 % Change From
.....(M I L L I M E T E R S)..... (%)									
State Farm	15.5	103.0	227.5	245.5	177.5	-	769.0	280.0	+ 175%
Habila	60.5	126.5	118.5	160.0	115.5	85.0	666.0	320.0	+ 108%
Average	<u>38</u>	<u>115.0</u>	<u>173.0</u>	<u>203.0</u>	<u>146.5</u>	<u>42.0</u>	<u>717.5</u>	<u>300.0</u>	<u>+ 140%</u>

Source: MFC. Percentages were calculated and rounded by the authors.

Table 22: Estimated Amounts of Rainfall at Selected Stations in the Traditional Rainfed Subsector During May-October, 1984 and 1985

Station	1984	1985	Percentage Change in 1985 from 1984
.....(M I L L I M E T E R S)..... (%)			
Kadogli	401	605.8	+ 51%
El Obeid	160	218.6	+ 37
Gazala Jawzat	202	483.4	+139
Nyala	188	347.4	+ 85
El Fasner	71	171.6	+142
El Nahood	138.9	320.9	+131
Sennar	209	413.4	+ 98
Kosti	96	360.4	+275

Source: MFC. Percentages were calculated and rounded by the authors.

COST OF PRODUCTION OF MAJOR CROPS IN RAINFED AREAS

COST OF PRODUCTION IN THE TRADITIONAL RAINFED SUBSECTOR

Table 23, 24 and 25 show the cost of production of sorghum, sesame, millet and groundnuts crops in the traditional rainfed subsector. The data shown are based on a special survey carried out during 1984/85. Data are shown for inputs and costs per feddan and per unit produce for North Kordofan, South Kordofan and South Darfur regions. The results of the survey indicate that labor cost per feddan was the major component of the production costs in traditional agriculture, accounting for 83% to 92% of total, depending upon the crop and location.

Family labor was the major source of labor supply to the traditional farms. Male, female and child family labor constituted 44%, 37% and 19%, respectively, of total family labor used per feddan. Wage rates was estimated at L.S. 3.76/day for men and L.S. 3.29/day for women. Wage rates were higher for sesame operations than the average (L.S. 5/day).

COST OF PRODUCTION IN THE MECHANIZED RAINFED SUBSECTOR

Mechanization of agricultural operations in the rainfed areas is only partial, all weeding and harvesting, except for combinable sorghum varieties, are still carried out manually. Rainfed mechanized farms are actually the second most important source of demand for seasonal migrant labor after the irrigated subsector. Labor costs are the largest component of production costs. For example, for sorghum and sesame, labor costs constituted about 33% and 38% of the total costs, respectively. Machinery cost accounted for about 24% of the total for sorghum and 20% for sesame. Bags and strings followed in importance, accounting for 17% and 10% of total costs for sorghum and sesame, respectively. Transport costs accounted for eight percent of total production costs for sorghum and seven percent for sesame.

A 1985/86 survey data indicate that sesame is a more labor intensive crop than sorghum. This is due, in part, to the fact that while the various sesame operations require more labor, sesame threshing is a manual operation whereas power threshers are used for sorghum (Table 26). As a result, cost of production per feddan was 13% higher for sesame than for sorghum. Although the cost of production per feddan for sorghum in the three locations (i.e., Gedaref, Damazin, and Habila) surveyed in 1985/86 were very close, the cost on a per ton basis for sorghum varied widely as a result of yield differences among the three locations (Table 27). On the other hand, production costs per ton for sesame showed small differences among the locations. However, cost of production per ton for sesame was 180% higher than for sorghum, as shown in Table 27.

It is expected that production costs per feddan in 1986/87 will increase only marginally over 1985/86 season. This will depend on the actual increase in the costs of materials and labor. Costs per ton, however, are highly dependent upon yields and can, therefore, increase drastically in case of drought.

COST OF PRODUCTION IN THE IRRIGATED SUBSECTOR

Table 2b presents the cost of production in Gezira, Rahad, and New Halfa for cotton, wheat, groundnuts and sorghum in 1985/86 and for the previous two seasons. As shown, the data indicate that costs for all crops have been increasing over time. Costs are expected to increase in the future but probably at a decreasing rate.

Table 23: Revenue and Cost of Production of Major Crops in the Traditional Rainfed Subsector: North Kordofan, Sudan, 1984/85

Item	Unit	C r o p			
		Sorghum	Sesame	Groundnuts	Millet
<u>REVENUE</u>					
Output	Sack/Feddan	2.40	2.10	6.87	2.15
Price	L.S./Sack	90.78	142.69	43.00	140.93
Value of Crop	L.S./Feddan	217.87	299.65	295.41	303.00
Value of Byproduct	"	24.78	1.18	8.61	11.52
Gross Revenue	L.S./Feddan	242.65	300.83	3404.02	314.52
<u>COSTS</u>					
Labor					
<u>Men</u>					
Workdays	Workdays/Fed.	9.37	7.59	9.71	6.01
Cost	L.S./Feddan	39.07	31.65	40.49	25.06
<u>women</u>					
Workdays	Workdays/Fed.	6.14	5.55	4.01	4.48
Cost	L.S./Feddan	17.74	16.04	11.59	12.95
<u>Children</u>					
Workdays	workdays/Fed.	0.87	1.61	2.85	0.79
Cost	L.S./Feddan	0.91	1.66	2.97	0.82
Total labor Costs	L.S./Fed.	57.72	49.37	55.05	38.83
Equipment	L.S./Fed.	1.50	1.50	1.50	1.50
Materials					
Bags & Strings	L.S./Fed.	6.84	1.74	5.54	1.76
Fungicide	L.S./Fed.	0.01	0.01	0.01	0.01
Seeds	L.S./Fed.	3.23	5.82	2.59	2.10
Transport	L.S./Fed.	6.07	4.58	17.18	4.92
Shelter for Labor	L.S./Fed.	0.63	3.84	2.69	2.32
TOTAL COSTS	L.S./Fed.	76.00	66.86	84.56	51.44
Net Revenue (Gross Revenue - Total Costs)	L.S./Feddan	166.65	233.97	219.46	263.08

Source: 1984/85 Farm Survey.

Table 24: Revenue and Cost of Production of Sorghum and Sesame in the Traditional Rainfed Subsector: South Kordofan, Sudan, 1984/85

Item	Unit	C r o p	
		Sorghum	Sesame
<u>REVENUE</u>			
Output	Sack/Feddan	2.84	3.09
Price	L.S./Sack	50.70	71.67
Value of Crop	L.S./Feddan	143.99	221.46
Value of Byproduct	L.S./Feddan	0.18	0.49
Gross Revenue	L.S./Feddan	144.17	221.95
<u>COSTS</u>			
Labor			
<u>Men</u>			
workdays	Workdays/Fed.	17.86	21.77
Cost	L.S./Feddan	64.83	79.02
<u>women</u>			
workdays	Workdays/Fed.	5.77	7.43
Cost	L.S./Feddan	17.19	22.14
<u>Children</u>			
workdays	Workdays/Fed.	2.62	5.19
Cost	L.S./Feddan	2.38	4.71
Total labor Costs	L.S./Feddan	84.40	105.87
Equipment	L.S./Feddan	4.57	4.57
Materials			
Bags & Strings	L.S./Feddan	4.29	4.50
Fungicide	L.S./Feddan	0.01	-
Seeds	L.S./Feddan	1.14	1.21
Transport	L.S./Feddan	5.37	7.13
Shelter for Labor	L.S./Feddan	1.88	0.10
TOTAL COSTS	L.S./Feddan	101.66	123.38
Net Revenue	L.S./Feddan		
(Gross Revenue			
- Total Costs)		42.51	98.57

Source: 1984/85 Farm Survey.

Table 25: Revenue and Cost of Production of Major Crops in the Traditional Rainfed Subsector: South Darfur, Sudan, 1984/85

Item	Unit	C r o p			
		Sorghum	Sesame	Groundnuts	Millet
<u>REVENUE</u>					
Output	Sack/Feddan	3.74	2.61	4.15	3.59
Price	L.S./Sack	98.29	92.23	53.95	133.00
Value of Crop	L.S./Feddan	367.60	240.98	223.89	477.47
Value of Byproduct	"	1.66	-	0.52	1.43
Gross Revenue	L.S./Feddan	369.26	240.98	224.41	478.90
<u>COSTS</u>					
Labor					
<u>Men</u>					
Workdays	Workdays/Fed.	19.95	29.48	31.23	24.69
Cost	L.S./Feddan	72.83	107.60	113.98	90.12
<u>Women</u>					
Workdays	Workdays/Fed.	10.55	18.77	8.77	16.13
Cost	L.S./Feddan	39.87	70.95	33.15	60.98
<u>Children</u>					
Workdays	workdays/Fed.	4.61	8.77	6.77	7.35
Cost	L.S./Feddan	4.21	8.00	6.18	6.71
Total labor Costs	L.S./Fed.	116.91	186.55	153.31	157.81
Equipment	L.S./Fed.	3.34	3.34	3.34	3.34
Materials					
Bags & Strings	L.S./Fed.	5.70	4.37	10.03	5.44
Fungicide	L.S./Fed.	0.04	0.34	-	-
Seeds	L.S./Fed.	3.86	2.81	5.76	0.59
Transport	L.S./Fed.	7.26	4.96	9.03	6.29
Shelter for Labor	L.S./Fed.	1.97	-	-	0.16
TOTAL COSTS	L.S./Fed.	139.08	202.37	181.47	173.63
Net Revenue	L.S./Feddan				
(Gross Revenue					
- Total Costs)		230.18	38.61	42.94 ^{1/}	305.27

Source: 1984/85 Farm survey.

^{1/} This figure seems very low. This is probably due to the fact that the survey did not cover all the important groundnuts producing areas.

Table 26: Summary of Revenue Cost of Production of Sorghum and Sesame in the Mechanized Rainfed Subsector: Gedaref and Damazin, Sudan, 1985/86

Item	Unit	Sorghum		Sesame	
		Per Fed.	Per Ton	Per Fed.	Per Ton
<u>REVENUE</u>					
Output	Sack/Feddan	3.00		1.80	
Price	L.S./Sack	45.00		95.00	
(S U D A N E S E P O U N D S)					
Gross Revenue	L.S./Feddan	135.00	495.00	171.00	1,282.50
<u>COSTS</u>					
Labor					
Weeding		14.80	45.30	16.80	126.00
Harvesting		8.75	32.10	13.45	100.90
Machinery					
Land Preparation & Sowing		6.10	22.40	10.05	75.40
Spare Parts, Deprec., and Maintenance					
		5.20	19.10	5.20	39.00
Threshing					
Mechanical (Sorghum)		6.00	22.00	-	-
Hand (Sesame)		-	-	10.00	75.00
Seeds					
		4.50	16.50	3.50	26.20
Staff Expenses					
		3.00	11.00	3.00	22.50
Bags & Strings					
		12.20	44.70	8.00	60.00
Land Tax					
		1.00	3.70	1.00	7.50
Transport					
		6.00	22.00	6.00	45.00
Other Costs					
		3.00	11.00	3.00	22.50
TOTAL COSTS		70.55	249.80	80.00	600.00
Net Revenue		64.45	245.20	91.00	682.50

Source: Based on preliminary results from a subsample from the the 1985/86 Farm Survey.

1/ In addition to the L.S. 1.00 land tax per feddan paid to the Government of Sudan, average rental value of land in mechanized areas is L.S. 3.00/Feddan.

Table 27 : Comparison of Costs of Production Per Feddan and Per Metric Ton for Major Crops Produced in Traditional and Mechanized Rainfed Subsectors, 1984/85, Sudan

Province/ Center	Sorghum		Sesame		Groundnuts		Millet	
	L.S./ Fed.	L.S./ M.T.	L.S./ Fed.	L.S./ M.T.	L.S./ Fed.	L.S./ M.T.	L.S./ Fed.	L.S./ M.T.
(S U D A N E S E P O U N D S)								
North Kordofan ^{1/}	76.0	345.5	66.9	432.0	84.7	274.0	51.1	254.0
South Kordofan ^{1/}	101.7	391.0	123.4	541.0	180.5	1,097.0	-	-
South Darfur ^{2/}	139.2	407.0	202.4	1,054.0	181.5	970.0	113.6	512.0
Kassala (Gedaref) ^{2/}	70.0	236.0	91.0	682.5	-	-	-	-
Blue Nile (Damazin) ^{2/}	76.0	236.0	91.0	682.5	-	-	-	-
South Kordofan (Habla) ^{2/}	78.0	237.0	93.0	664.0	-	-	-	-

Source: 1984/85 Farm Survey.

^{1/} Data for North Kordofan, South Kordofan and South Darfur are for the traditional subsector's crops and are based on sample survey data.

^{2/} Data for mechanized subsector's crops of (sorghum and sesame) in Gedaref, Damazin and Habla are preliminary estimates based on subsamples from the 1984/85 survey.

Table 28 : Cost of Production of Major Irrigated Crops in Gezira, Rahad and New Halfa Schemes, 1983/84, 1984/85 and 1985/86

Scheme	Crop	1983/84	1984/85	1985/86
(S U D A N E S E P O U N D S P E R F E D D A N)				
GEZIRA				
	Cotton (Long Staple)	426.20	525.80	680.00
	Cotton (Medium Staple)	480.00	590.00	720.00
	Wheat	139.48	-	212.30
	Groundnuts	135.12	185.40	206.25
	Sorghum	96.89	108.46	114.35
RAHAD				
	Cotton (Medium Staple)	440.00	580.00	720.00
	Groundnuts	178.37	208.42	232.61
	Sorghum	158.84	170.38	198.42
NEW HALFA				
	Cotton (Medium Staple)	436.80	540.75	700.00
	Wheat	141.60	-	-

Source: Respective Schemes.

AGRICULTURAL COMMODITY PRICES AND MARKETING

Agricultural prices are influenced by many economic, climatical, social and political factors. One of the most important factors that influenced prices and marketing in 1985/86 was the favorable weather conditions which, in turn, resulted in normal or near record harvest for most crops. Other factors include government pricing policy, international prices, emergency food assistance programs, storage capacity, and traders' expectation.

SORGHUM AND MILLET PRICES AND MARKETING

Large sorghum (dura) production for 1985/86 (estimated at 3.6 million tons) was probably the most important factor that influenced prices during the season. Table 29 and Figure 10 present the average wholesale monthly selling prices of sorghum in Gedaref, by variety, during July-December, 1985 and January-June, 1986. Similarly, Table 30 and Figure 11 show the situation in El Obeid. In addition to Sorghum, Table 30 also shows millet prices in El Obeid from December, 1985 to June, 1986. The sharp increase in sorghum prices during 1984/85 drought season continued until August 1985. Prices began to drop in anticipation of large production following the favorable planting and rainfall during the first half of the growing season. Prices continued to drop until harvest time after which the drop became sharp (Tables 29 and 30). However, the downward pressure on Feterita prices in Gedaref was checked by the continuing strong demand by international donors for distribution in deficit areas. This, as well as purchases by the Agricultural Bank of Sudan (ABS), constituted a sort of price support for Feterita. Many producers and merchants hedged against possible future drought by storing instead of selling their marketable surplus or stored crop. Commercial movements of sorghum from the surplus areas in Gedaref and Damazin to Kordofan and Darfur have virtually stopped because of the relatively low price and the high transportation cost. Millet prices followed similar pattern as sorghum, but remained higher than sorghum's during each and every month, as shown in the last column of Table 30.

Table 31 and Figures 12-A and 12-B summarize the average monthly wholesale (selling) prices for Feterita and Saïra sorghum varieties in Gedaref and El Obeid markets in 1985/86, by month. Table 31 also shows the price ratio (columns 3 and 6) for the two varieties, i.e., the ratio of the price per sack in El Obeid to the price in Gedaref. The data shows that prices were higher in El Obeid for both varieties during each and every month. The price difference for Feterita became smaller as the season advanced, but remained higher for Saïra variety throughout the season, suggesting that a strong demand for saïra variety in El Obeid in face of limited supply.

With a large carryover of sorghum from 1985/86 harvest it is reasonable to expect that no drastic changes in prices will occur in the immediate future. However, large export and/or sharp increase in donors demand for domestic sorghum for relief efforts may reduce the carryover stocks

and put upward pressure on prices. Many large producers and merchants would likely hold on the stored sorghum until prospects for the 1986/87 rainfall and production are assessed. At this time, there is no sufficient information on the 1986/87 prospects to allow any reasonable forecast of production or price levels.

SESAME, GROUNDNUTS, COTTON AND GUM ARABIC

Sesame, groundnuts and cotton are important oilseed crops and, along with Gum Arabic, are key cash and export commodities in Sudan. While groundnuts and cotton are grown under both rainfed and irrigated conditions, sesame and Gum Arabic are found only in rainfed areas. The government announces procurement prices for cotton and floor prices for sesame, groundnuts, and Gum Arabic before harvesting (Tables 32 and 33). It should be pointed out that, except for cotton, floor prices are effective only at designated wholesale auction markets. Prices actually received by producers may be lower than the floor price. Prices received by producers are more important in their resource allocation decisions, but announced floor prices may influence their price expectation and, thus, their decision making.

PRICES OF SESAME

Table 34 and Figure 13 present the average monthly buying prices of sesame in Gedaref and El Obeid markets during 1985/86 season. The table also shows the difference between actual auction market price and the government announced floor price. Despite the favorable environmental conditions during 1985/86 season sesame production was low in comparison to the average or even to the 1984/85 drought season. This was primarily due to pest (Kaok) infestation in Gedaref, Damazin and Kordofan (especially Gabali variety). Furthermore, the previous season's high sorghum prices encouraged many producers to plant more area in sorghum instead of expanding sesame. Although the government announced floor price for 1985/86 was higher than previous season's floors, auction market prices at both markets showed no significant change during the season (Table 34) or from previous season's prices. As in the past, auction prices remained substantially higher than floor prices throughout the season. The difference was more profound in El Obeid than in Gedaref (Table 34).

The relatively stable prices, i.e., lower in real terms, may be attributed to several factors. For example, it is believed that due to Kaok damage the quality was negatively affected, and sesame was being discounted for poor quality. In addition, relatively low and constant international prices, together with relatively low domestic demand for sesame oil, put downward pressure on auction market prices. As shown in Table 34 prices were generally higher in El Obeid than in Gedaref. This price differential may be a reflection of a higher level of demand by processors in Kordofan, where more processing facilities are located, than in Gedaref. Also, unlike Gedaref prices, some of the reported prices from El Obeid included production taxes, resulting in a relatively higher weighted averages.

PRICES OF GROUNDNUITS

Table 35 and Figure 14 present the wholesale (buying) prices of groundnuts at the auction market in El Obeid for 1985/86 season, by month. The relatively low groundnuts production was readily reflected in higher auction market prices. Throughout the season, auction prices were substantially higher than floor prices (last column of Table 35). The impact of low production in 1985/86, as well as a strong demand by local oil processors continued to put an upward pressure on prices.

GUM ARABIC PRICES

Gum Arabic is produced exclusively for export by the Gum Arabic Company, a parastatal with monopoly power over export. Table 36 and Figure 15 show the wholesale (buying) prices of Gum Arabic in El Obeid and Gedaref in 1985/86, by month. Since a relatively high floor price was announced by the government for 1985/86 season, the average monthly price remained above U.S. 100.00 at both markets, then dropped to nearly the floor price in Gedaref since April (Table 36). In response to the higher prices, deliveries to the Gum Arabic Company's facility in Port Sudan were reported to have recovered to 15,000 metric tons in 1985/86 from the all-time low of 11,313 tons in 1984/85. The average annual delivery of Hashab variety to Port Sudan in the period between 1969/70 and 1983/84 was about 30,000 metric tons. The very low delivery in 1984/85 was due to the drought of 1984. The low delivery in 1985/86 is thought by some observers to be due to the effect of drought and to the fact that the real (inflation compensated) price paid by the Gum Arabic Company is below the long term average.

International demand for Gum Arabic is reported to have been well in excess of supply despite an increase in the FOB price from \$1600/Mt in 1984/85 to over \$1,900/Mt in 1985/86.

LIVESTOCK PRICES

Tables 37 and 38 present the average monthly prices for cows, bulls, calves, sheep, goats, and camels in Gedaref and El Obeid in 1985/86, by month. Tables 39 through 43 present similar information for nine other important markets during the same period. Livestock prices remained high compared to the 1984/85 drought season. They are expected to remain high due to the relatively high consumer prices and the continuing tight supplies associated with the herd buildup which started in response to favorable prices and climatic conditions. Furthermore, export demand, particularly from Saudi Arabia, will continue to support prices of sheep at high levels. It should be pointed out that differences in prices among markets are a reflection of differences in age, sex, quality of animals, and geographical location. The use of such data for comparison may be misleading and should be approached with extreme caution.

INTERNATIONAL PRICES OF SELECTED COMMODITIES

Export prices of U.S. wheat, sorghum and maize, and Thailand's rice are shown in Table 44 for 1983/84 and 1984/85 seasons and for 1985/86, by month.

wheat prices declined during August, 1985 but increased slightly in September and October, then increased sharply during the last two months in 1985. However, they dropped from \$142/MT in December, 1985 to \$135/MT in January, 1986, due primarily to the U.S. government farm programs, including the sharp reduction of the 1986 loan rate. Wheat prices continued to drop reaching \$106/MT in June, 1986 (Table 44 and Figure 16-A). wheat prices are likely to remain low in the foreseeable future because of the reported large carryover stocks and the continuing competition among exporting countries.

Export prices of sorghum and maize also decreased during the season, due in part to the same reasons as with wheat, and in response to relatively abundant supplies in the U.S. and other major producers. The drop in Sorghum prices was particularly severe during June, 1986 when it dropped by \$20.00/MT from a high of \$106/MT in May (Table 44 and Figure 16-B). The sharp decrease in sorghum prices was due, in part, to the sharp decrease in prices of wheat, a major substitute for animal feed.

Export prices of rice rose from \$210.00/MT during the early part of the season reaching \$244/MT in February, 1986, but dropped to \$218/MT in June (Table 44). Compared with 1983/84 and 1984/85 averages, and considering the impact of inflation, rice prices during 1985/86 were relatively low.

Table 45 shows the ocean freight rates for 1985/86, by month, along with the 1983/84 and 1984/85 averages. The data indicate that, in general, freight rates remained below the past two season's averages with a slight decline during the second half of the 1985/86 season.

Table 46 presents the export prices of selected fertilizers during selected months in 1985/86. Prices dropped, or remained unchanged, during these months. The most noticeable drop occurred in the price of Ammonium Sulphate which dropped by almost 50% from September, 1985 to June, 1986.

One of the most dramatic changes in the price of any international commodity during 1985/86 season was the sharp decrease in crude oil prices. For example, Arab Light crude prices were above \$27/barrel at the end of 1985. Other crudes showed similar trend. Oil prices began to drop in February, 1986 and continued to drop until June when they were below the \$10 barrel mark. This drastic change was due to the worldwide oil glut which was magnified by OPEC inability to control production quotas among its members, and thus its failure to control market prices.

Table 29: Average 1985/86 Monthly Prices of Sorghum (Dura) in Gedaref Market, by Variety, July Through June

Year/ Month	Feterita	Mugud	Variety Safra	Aker	Deber	.11
(S u d a n e s e P o u n d s / S a c k)						
<u>1985</u>						
July	108.90	115.20	115.63	69.17	119.30	112.72
August	93.00	84.85	83.14	70.53	90.00	87.48
September	75.43	62.44	62.53	NA ^{1/}	74.30	69.66
October	58.48	48.73	54.01	45.00	70.78	56.70
November	33.60	52.70	48.53	30.38	48.38	41.50
December	30.30	31.42	33.13	25.22	36.55	32.41
<u>1986</u>						
January	33.00	31.35	32.50	28.35	37.70	33.50
February	33.42	28.88	31.71	27.00	39.00	33.20
March	32.11	27.35	29.96	26.24	35.09	31.31
April	33.99	28.64	30.70	26.59	34.53	32.27
May	30.78	26.59	24.93	23.51	32.09	28.59
June	30.05	25.27	25.89	24.73	30.89	28.00

Source: Marketing Section, Department of Agricultural Economics.
Prices are weighted averages based on daily samples.

^{1/} NA = Not Available. However, during this month a price of L.S. 19/sack for American sorghum (believed to be similar to aker variety) was quoted. It appears that "relief" sorghum was being discounted against the expected new crop.

Figure 10: Monthly Sorghum Prices in

Godaref, 1985/86 (July - June)

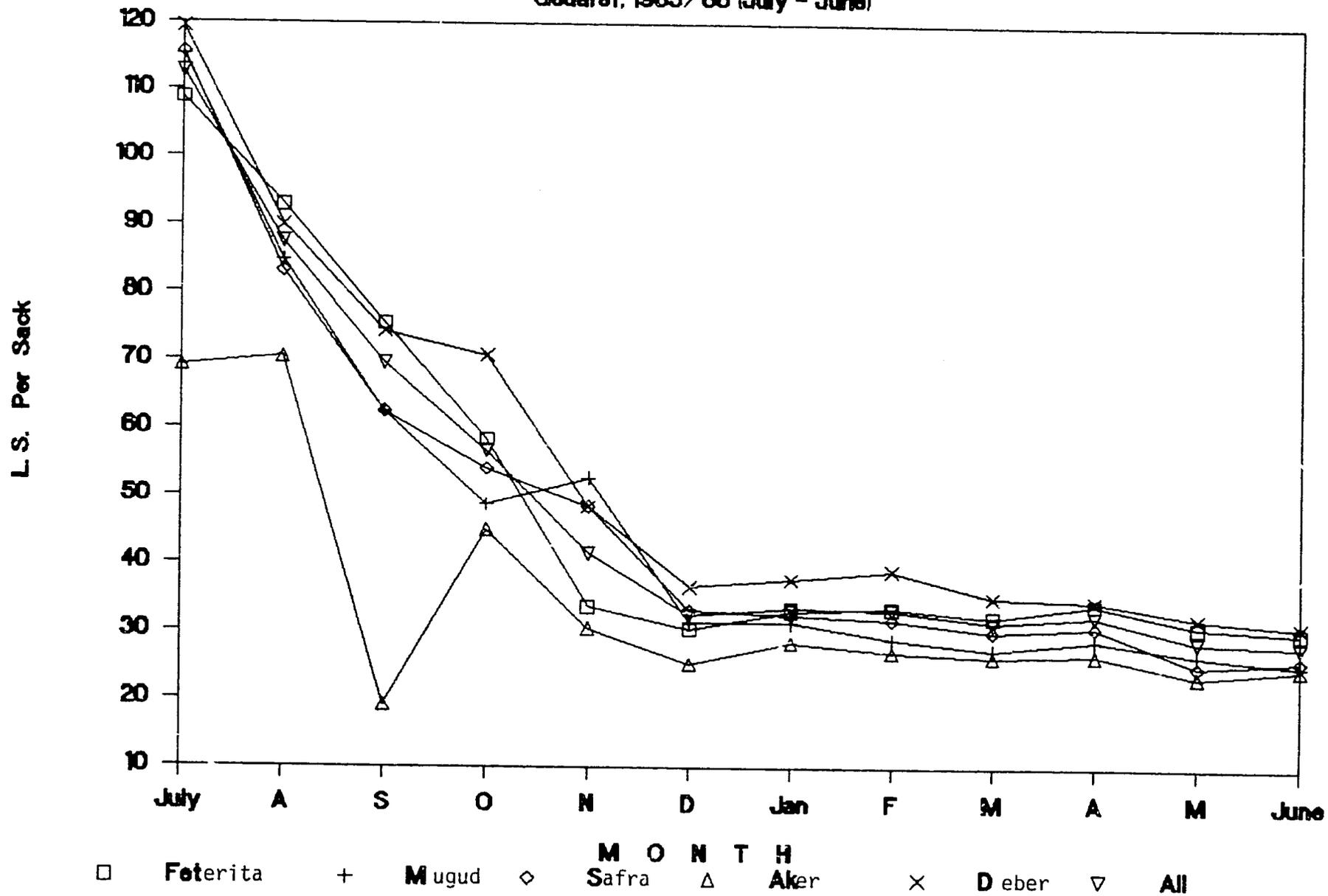


Table 30: Average 1985/86 Monthly Prices of Sorghum (Dura) in El Obeid Market, by Variety, and of Millet, July Through June

Year/ Month	Sorghum			Millet
	Feterita	Satra	All	
(Sudanese Pounds / Sack)				
<u>1985</u>				
July	138.19	144.67	141.32	NA ^{1/}
August	123.18	142.42	129.47	NA
September	114.76	139.07	121.61	NA
October	94.45	132.34	106.97	NA
November	44.84	99.09	69.75	NA
December	34.55	48.16	40.84	75.08
<u>1986</u>				
January	37.10	58.91	45.32	68.81
February	34.92	59.96	47.13	62.72
March	34.29	56.47	43.91	60.43
April	34.52	57.50	46.93	60.92
May	35.04	57.73	46.79	61.49
June	35.08	41.80	38.33	51.63

Source: Marketing Section, Department of Agricultural Economics.
Prices are weighted averages based on daily samples.

^{1/} NA = Not Available.

Figure 11: Monthly Sorghum Prices in

El Obeld, 1985/86 (July - June)

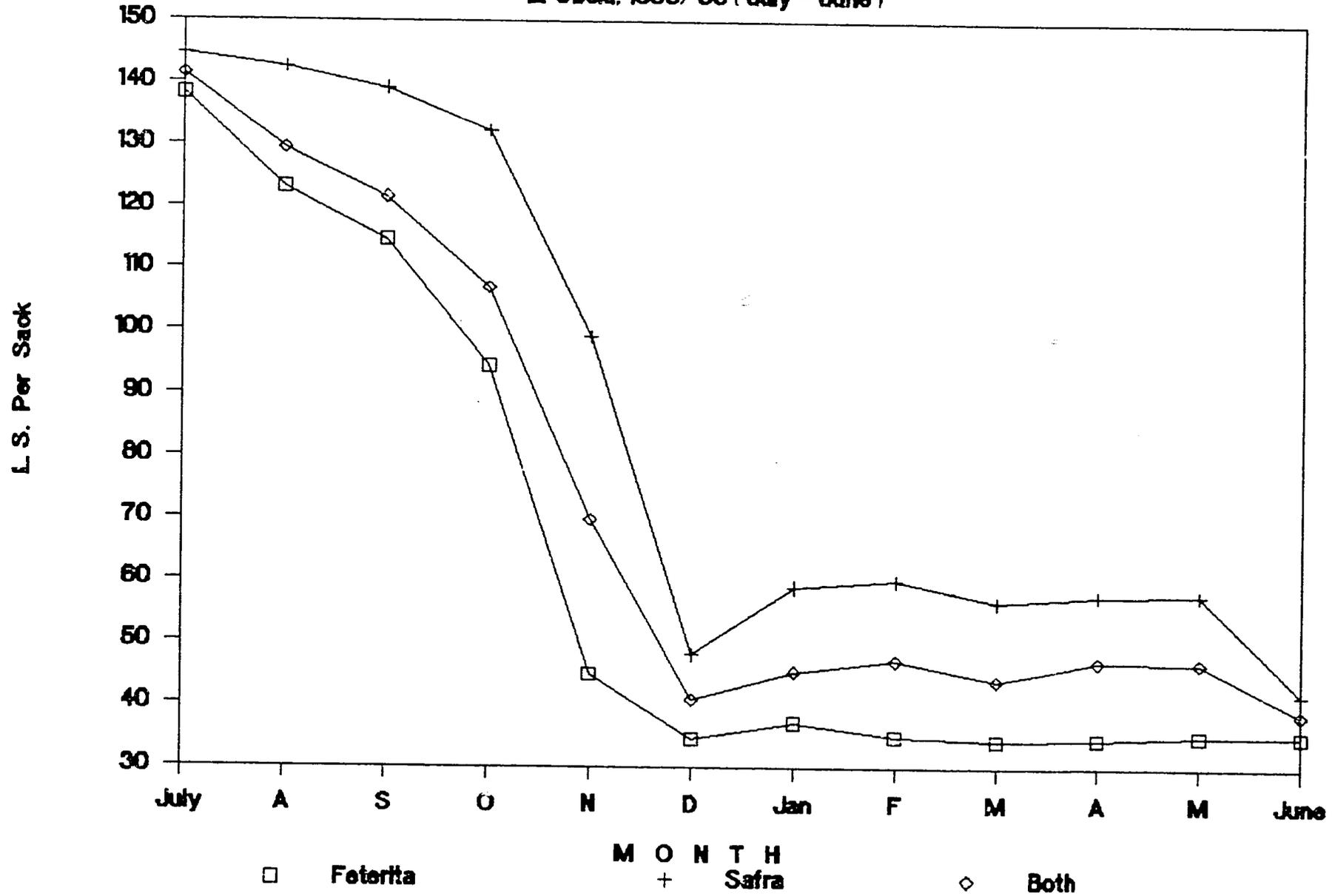


Table 31 : Comparison of 1985/86 Average Monthly Prices of Feterita and Safra Sorghum varieties in Gedaref and El Obeid, July Through June

Year/ Month	Variety/Market					
	Feterita			Safra		
	Gedaref	El Obeid	E/G ^{1/}	Gedaref	El Obeid	E/G
(Sudanese pounds Per Sack)						
<u>1985</u>						
July	108.90	138.19	1.27	115.63	144.67	1.25
August	93.00	123.18	1.32	83.14	142.42	1.71
September	75.43	114.76	1.52	62.53	139.07	2.22
October	58.48	94.45	1.62	54.01	132.34	2.45
November	33.60	44.84	1.33	48.53	99.09	2.04
December	30.03	34.55	1.15	33.13	48.16	1.45
<u>1986</u>						
January	33.00	37.10	1.12	32.50	58.91	1.81
February	33.42	34.92	1.04	31.71	59.96	1.89
March	32.11	34.29	1.07	29.96	56.47	1.88
April	33.99	34.52	1.02	30.70	57.50	1.87
May	30.78	35.04	1.14	24.93	57.73	2.32
June	30.05	34.96	1.16	25.89	44.24	1.71

Source: Marketing Section, Department of Agricultural Economics.
Prices are weighted averages based on daily samples.

^{1/} E/G = ratio of price in El Obeid (E) and Gedaref (G).

Figure 12-A: Comparison of Feterita

Prices in Gedaref and El Obeld 1985/86

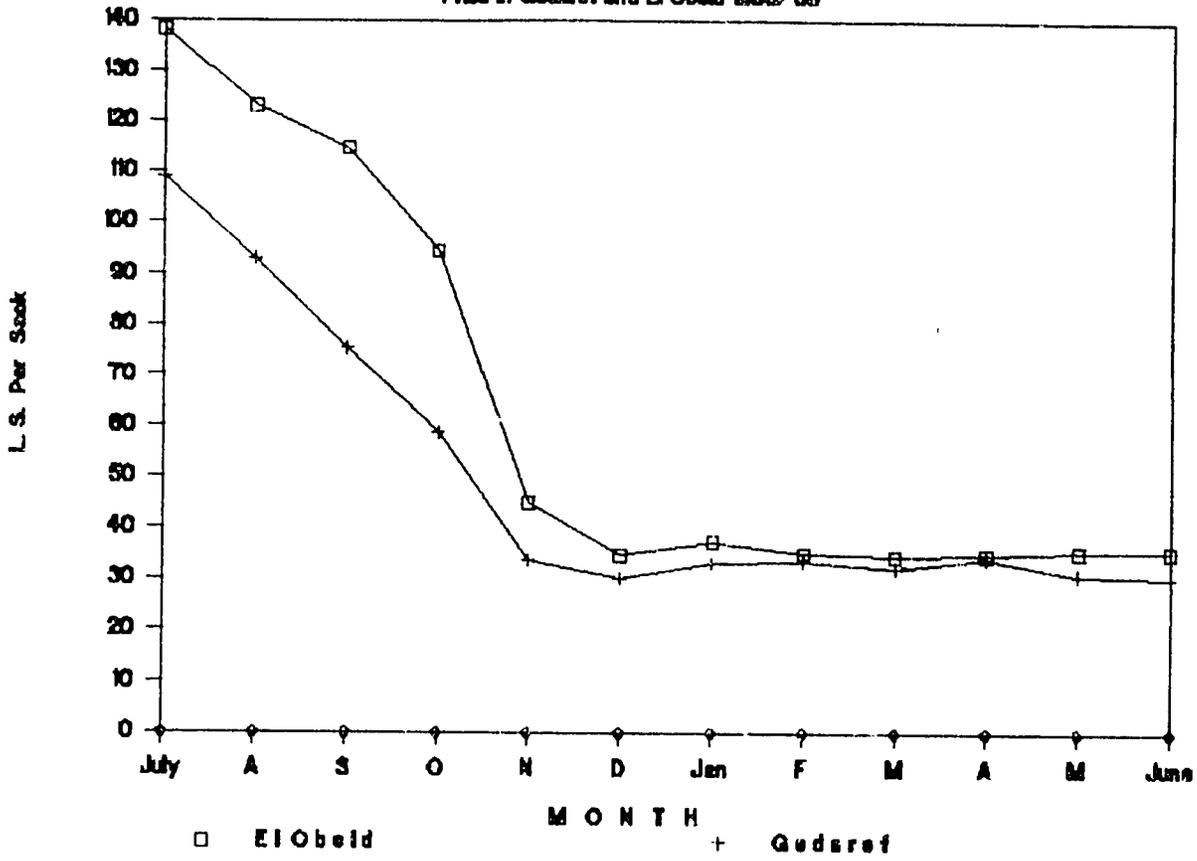


Figure 12-B: Comparison of Safra Prices

In Gedaref and El Obeld 1985/86

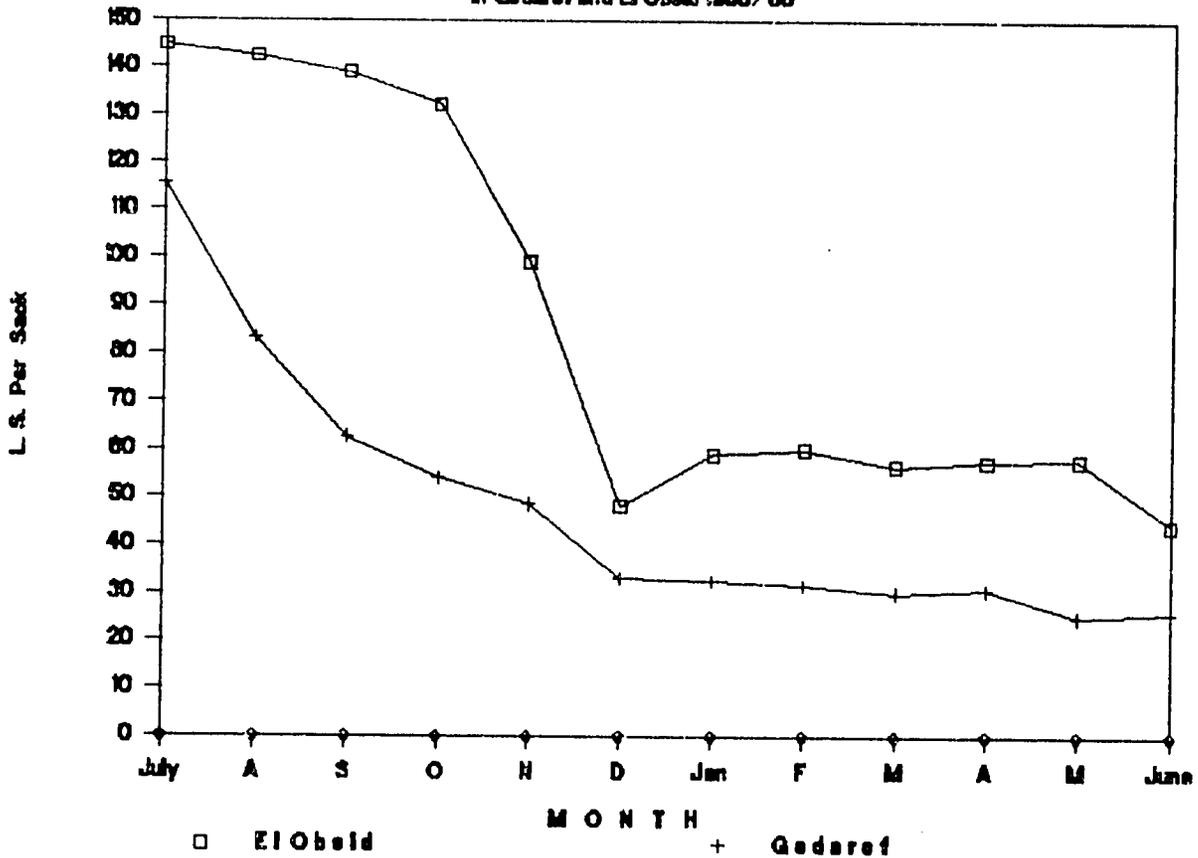


Table 32: 1985/86 Ginning Factory Delivery Prices of Cotton, By Variety

Grade	Variety		
	Barakat	Shambat	Akala
. Sudanese Pounds Per Big Kantar			
1	235	210	160
2	230	205	156
3	225	200	152
4	220	195	152
5	215	190	148
6	210	185	144
7	205	180	-
8	200	175	-
9	195	170	-

Source: Committee formed by the Minister of Agriculture for setting procurement prices for cotton and water and land use rates.

Table 33: 1985/86 Floor Prices for Groundnuts, Sesame, and Gum Arabic in the Sudan.

Market	Groundnuts	Sesame	Gum Arabic
 Sudanese Pounds Per Kantar		
El Obeid	21.40	45.40	92.00
El Rahad	21.65	45.60	92.25
Um Ruwaba	21.75	46.00	92.65
Tendelti	21.85	NA ^{1/}	92.85
Kosti	22.10	46.60	92.40
El Doein	20.40	43.50	NA
Nyala	19.90	42.90	89.50
Al Nahood	20.70	NA	89.00
Gezira	21.35	NA	NA
New Halfa	21.95	NA	NA
Rahad Scheme	21.25	NA	NA
Gedaref	NA	48.00	92.00
Suki	NA	47.00	NA
Singa	NA	46.80	91.55
Damazin	NA	46.20	NA
Kalnahal	NA	NA	92.00
Al Hawatah	NA	NA	92.00

Source: Ministry of Commerce, Cooperation and Supply, the Sudan.

^{1/} NA = Not Applicable because either this commodity is not commonly traded at the market shown, or no floor price is established for 1985/86.

Table 34 : Average 1985/86 Monthly Prices of Sesame in Gedaref and El Obeid, July Through June

Year/ Month	El Obeid			Gedaref		
	Auction	Floor	DIF ^{1/}	Auction	Floor	DIF
(Sudanese pounds Per Kantar)						
<u>1985</u>						
July	83.85	33.13	50.72	NA ^{2/}	33.95	-
August	83.63	33.13	50.50	NA	33.95	-
September	80.80	33.13	47.67	NA	33.95	-
October	84.05	33.13	38.65	61.08	33.95	13.08
November	82.32	45.40	36.92	67.05	48.00	19.05
December	85.37	45.40	39.97	73.68	48.00	25.68
<u>1986</u>						
January	86.24	45.40	40.84	71.88	48.00	23.88
February	84.70	45.40	39.30	70.36	48.00	22.36
March	78.76	45.40	33.36	74.23	48.00	26.23
April	82.90	45.40	37.50	78.28	48.00	30.28
May	83.19	45.40	37.79	74.95	48.00	26.95
June	82.53	45.40	37.13	68.06	48.00	20.06

Source: Marketing Section, Department of Agricultural Economics.

^{1/} DIF = auction price - floor price.

^{2/} NA = Not Available.

Figure 13: Monthly Sesame Prices

In Godaref and El Obeid 1985/86

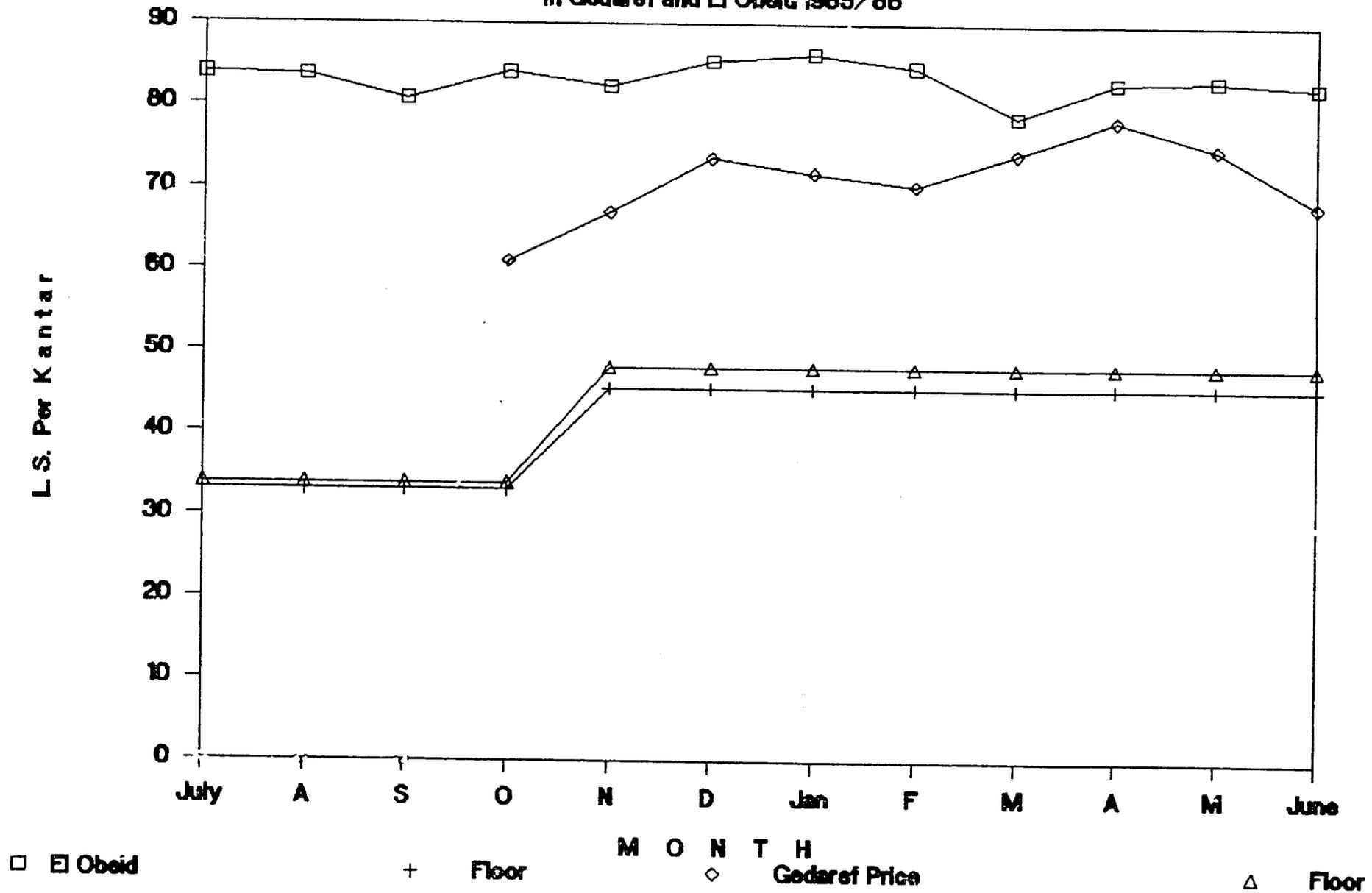


Table 35 : Average 1985/86 Monthly Prices of Groundnuts in El Obeid, July Through June

Year/ Month	Auction	Floor	Difference (Auction - Floor)	
	L.S./Kantar	L.S./Kantar	L.S./Kantar	%
<u>1985</u>				
July	46.47	17.50	28.97	+ 166%
August	NA ^{1/}	NA	-	-
September	43.35	17.50	25.85	+ 148%
October	43.36	17.50	25.86	+ 148%
November	59.12	21.40	37.72	+ 176%
December	66.43	21.40	45.03	+ 210%
<u>1986</u>				
January	64.81	21.40	43.41	+ 203%
February	66.98	21.40	45.58	+ 213%
March	61.88	21.40	40.48	+ 189%
April	65.92	21.40	44.52	+ 208%
May	62.43	21.40	41.03	+ 192%
June	58.28	21.40	36.88	+ 172%

Source: Marketing Section, Department of Agricultural Economics.

^{1/} NA = Not Available due to lack of trading or lack of data.

Figure 14: Monthly Groundnuts Prices

In El Obeid, 1985/86 (July - June)

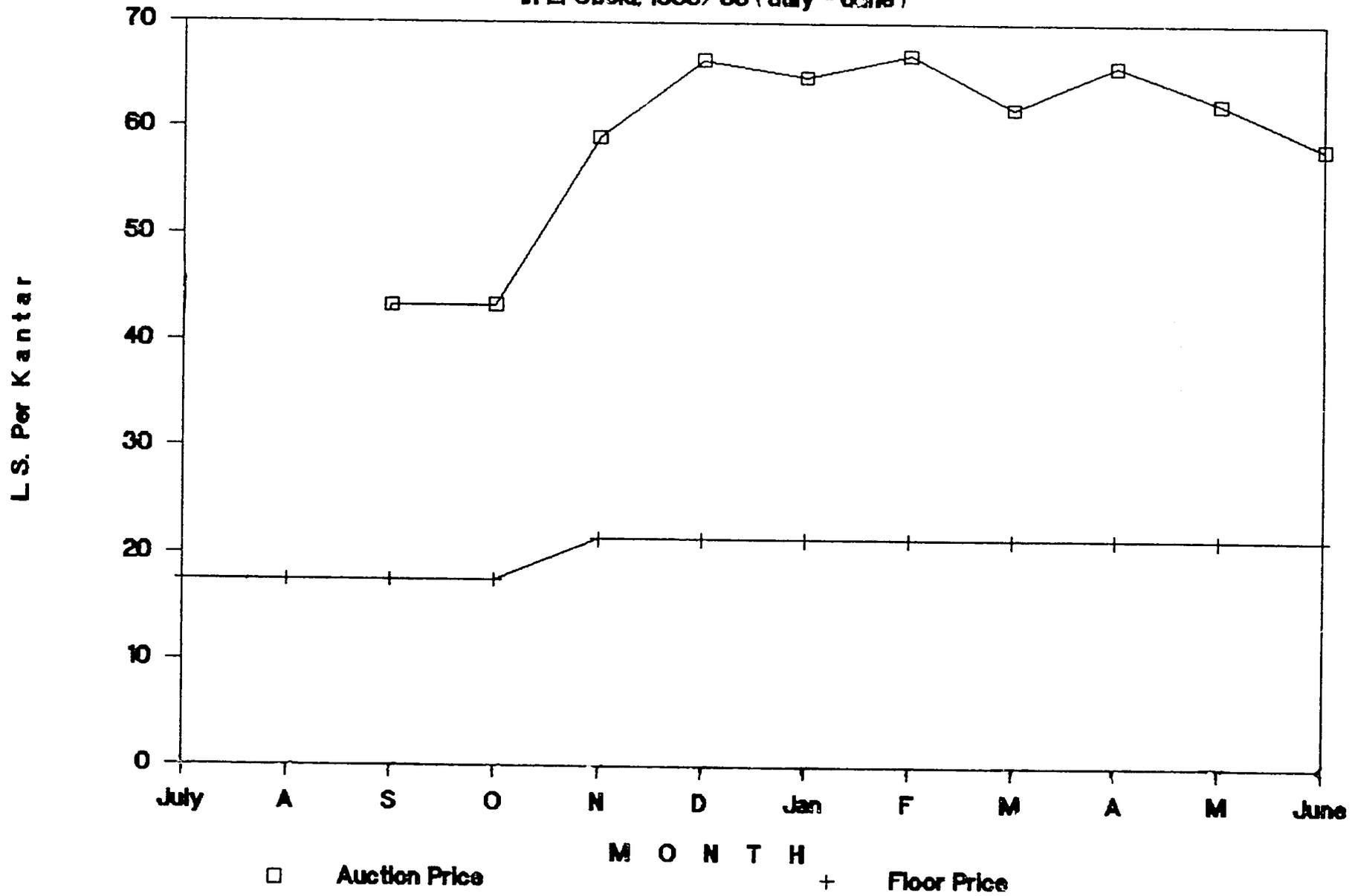


Table 36: Average 1985/86 Monthly Prices of Gum Arabic in Gedaref and El Obeid, July Through June

Year/ Month	El Obeid			Gedaref		
	Auction	Floor	DIF ^{1/}	Auction	Floor	DIF
(Sudanese pounds Per Kantar)						
<u>1985</u>						
July	51.00	52.00	1.0	NA ^{2/}	52.00	-
August	NA	52.00	-	NA	52.00	-
September	NA	52.00	-	NA	52.00	-
October	83.96	52.00	31.96	NA	52.00	-
November	106.86	92.00	14.86	103.70	92.00	11.70
December	102.25	92.00	10.25	101.10	92.00	9.10
<u>1986</u>						
January	102.00	92.00	10.00	100.43	92.00	8.43
February	106.03	92.00	14.03	105.66	92.00	13.66
March	106.71	92.00	14.71	109.69	92.00	17.69
April	107.00	92.00	15.00	92.50	92.00	0.50
May	107.51	92.00	15.51	92.51	92.00	0.51
June	105.74	92.00	13.74	92.00	92.00	0.00

Source: Marketing Section, Department of Agricultural Economics.

^{1/} DIF = auction price - floor price.

^{2/} NA = Not Available.

Figure 15: Monthly Gum Arabic Prices

In \square Obeld and Godaref, 1985/86

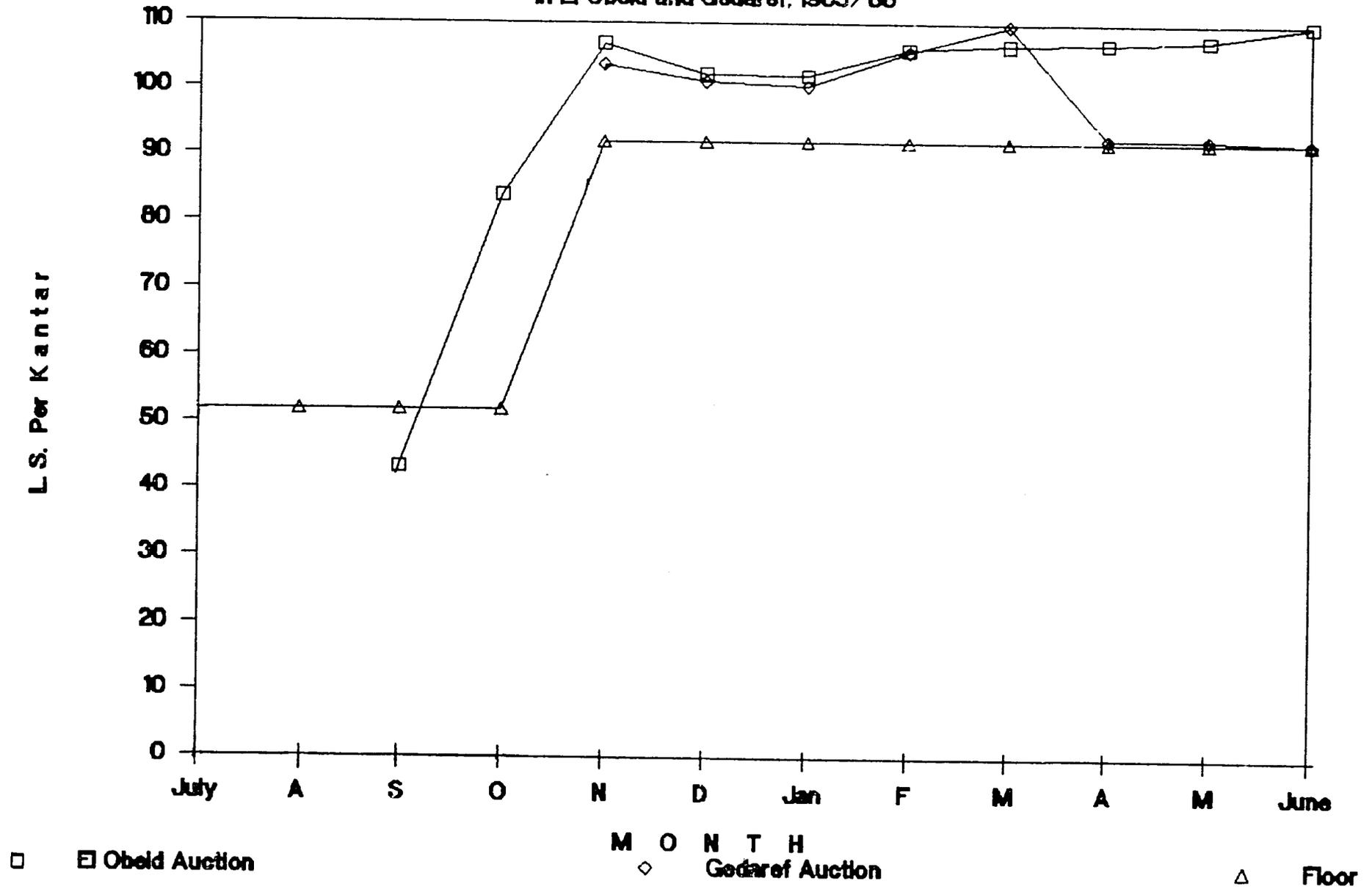


Table 37 : Average 1985/86 Monthly Prices for Livestock in El Obeid, July Through June

Month/ Year	S p e c i e s					
	Cows	Bulls	Calves	Sheep	Goats	Camels
(S u d a n e s e P o u n d s P e r H e a d)						
<u>1985</u>						
July	176.80	318.20	132.10	65.80	36.30	480.10
August	244.90	278.30	259.90	72.30	52.30	563.70
September	334.90	351.60	207.40	92.20	37.80	705.90
October	383.20	465.62	259.60	128.75	61.90	773.73
November	527.60	527.40	263.51	132.31	86.65	737.06
December	579.03	650.87	342.02	181.72	77.50	770.14
<u>1986</u>						
January	434.84	708.19	356.44	165.69	143.90	810.63
February	435.60	792.20	382.90	180.90	73.00	880.50
March	530.50	746.40	447.10	191.30	69.60	831.00
April	514.40	723.70	462.60	187.20	76.00	840.00
May	409.40	680.10	375.00	188.00	79.00	880.00
June	816.00	1,066.30	679.30	224.50	115.00	1,228.10

Source: The Marketing Section, Department of Agricultural Economics. Prices are weighted averages based on daily samples.

Table 38: Average 1985/86 Monthly Prices for Livestock in Gedaref, July Through June

Month/ Year	S p e c i e s					
	Cows	Bulls	Calves	Sheep	Goats	Camels
(S u d a n e s e P o u n d s P e r H e a d)						
<u>1985</u>						
July	343.50	568.60	220.40	85.40	71.00	488.60
August	362.10	483.30	243.10	110.30	70.70	634.10
September	550.70	557.50	349.20	136.10	88.00	697.00
October	547.40	643.60	258.60	128.80	123.50	1,061.70
November	430.10	549.40	256.70	141.11	113.90	859.40
December	543.60	536.80	256.90	171.10	137.00	1,176.10
<u>1986</u>						
January	696.70	709.60	346.00	168.70	134.70	110.30
February	723.20	668.80	454.70	202.20	140.60	1,232.50
March	707.50	773.80	490.30	199.80	149.40	1,254.00
April	1,066.90	663.00	429.00	218.00	169.00	1,259.00
May	1,014.70	940.80	591.00	216.00	146.00	1,366.00
June	1,104.10	920.40	502.20	250.40	155.10	1,638.60

Source: The Marketing Section, Department of Agricultural Economics. Prices are weighted averages based on daily samples.

Table 39 : Average 1985/86 Monthly Cattle Prices at Selected markets in Sudan, July Through May

Year/ Month	M a r k e t								
	Ondumar	Wad Madeni	Rubak	Kosti	El Deim	Nyala	El Fasher	Maaleet	Port Sudan
(S U D A N E S E P O U N D S P E R H E A D)									
<u>1985</u>									
July	788	641	314	274	235	185	169	191	620
August	758	520	311	266	400	226	343	276	809
Sept.	794	456	374	292	400	235	310	236	806
Oct.	576	479	464	350	440	395	299	338	648
Nov.	528	526	542	485	575	565	627	506	700
Dec.	836	681	659	540	716	606	317	497	559
<u>1986</u>									
Jan.	840	810	672	675	830	787	578	751	678
Feb.	1,018	824	809	776	787	976	780	803	914
March	845	850	859	806	673	1,032	957	625	1,003
April	951	976	863	958	715	1,032	1,197	NA ^{1/}	1,409
May	1,208	1,041	862	817	633	1,025	962	822	NA

Source: Livestock and Meat Marketing Corporation (LMC), Sudan.

^{1/} NA = Not Available.

Table 40 : Average 1985/86 Monthly Calves Prices at Selected markets in Sudan, July Through May

Year/ Month	M a r k e t								
	Omdurman	wad Madeni	Rubak	Kosti	El Deim	Nyala	El Fasher	Maaleet	Port Sudan
(S U D A N E S E P O U N D S P E R H E A D)									
<u>1985</u>									
July	418	273	170	177	108	113	196	111	224
August	355	281	184	188	110	115	132	NA ^{1/}	294
Sept.	284	267	203	216	180	150	144	198	300
Oct.	283	291	202	255	210	230	114	205	314
Nov.	368	316	305	336	285	347	216	300	377
Dec.	439	382	326	346	330	314	296	398	427
<u>1986</u>									
Jan.	552	436	354	461	370	514	336	225	619
Feb.	580	468	421	479	322	508	NA	NA	450
March	595	482	482	521	430	515	625	NA	458
April	721	519	519	495	465	524	650	650	482
May	885	522	472	482	389	630	825	513	NA

Source: Livestock and Meat Marketing Corporation (IMMC), Sudan.

^{1/} NA = Not Available.

Table 41 : Average 1985/86 Monthly Sheep Prices at Selected markets in Sudan, July Through May

Year/ Month	M a r k e t								
	Omdurman	Wad Madeni	Rubak	Kosti	El Deim	Nyala	El Fasher	Maaleet	Port Sudan
(S U D A N E S E P O U N D S P E R H E A D)									
<u>1985</u>									
July	208	95	89	59	120	43	65	64	100
August	208	121	100	67	133	56	66	101	172
Sept.	210	148	110	72	128	58	67	105	127
Oct.	240	124	105	71	112	71	90	132	131
Nov.	240	128	99	76	137	98	100	187	141
Dec.	240	152	125	81	121	102	109	224	144
<u>1986</u>									
Jan.	230	169	142	122	96	122	142	209	139
Feb.	184	188	144	129	137	126	154	207	148
March	230	184	154	132	113	138	156	209	191
April	250	203	167	157	162	165	156	216	195
May	250	275	165	151	186	136	185	339	NA ^{1/}

Source: Livestock and Meat Marketing Corporation (LMC), Sudan.

^{1/} NA = Not Available.

Table 42 : Average 1985/86 Monthly Goat Prices at Selected markets in Sudan, July Through May

Year/ Month	M a r k e t								
	Omdurman	Wad Madeni	Rubak	Kosti	El Deim	Nyala	El Fasher	Maaleet	Port Sudan
	(S U D A N E S E P O U N D S P E R H E A D)								
<u>1985</u>									
July	58	44	47	38	33	18	32	38	58
August	64	45	58	47	23	27	43	43	63
Sept.	42	50	59	52	27	23	38	40	63
Oct.	70	49	59	51	32	56	37	66	NA ^{1/}
Nov.	85	104	76	64	62	52	47	60	NA
Dec.	88	59	82	69	60	59	62	80	90
<u>1986</u>									
Jan.	106	61	90	91	75	83	91	92	55
Feb.	118	129	92	79	70	83	92	105	76
March	114	149	100	76	48	91	95	104	83
April	52	135	90	95	85	94	98	135	86
May	124	132	83	85	63	91	103	115	NA

Source: Livestock and Meat Marketing Corporation (LMC), Sudan.

^{1/} NA = Not Available.

Table 43: Average 1985/86 Monthly Camel Prices at Selected markets in Sudan, July Through May

Year/ Month	M a r k e t								
	Ondurman	Wad Madeni	Rubak	Kosti	El Deim	Nyala	El Fasher	Maaleet	Port Sudan
(S U D A N E S E P O U N D S P E R H E A D)									
<u>1985</u>									
July	463	420	277	450	575	389	433	100	348
August	425	420	481	450	475	437	922	152	457
Sept.	225	450	608	565	500	217	886	150	406
Oct.	775	450	620	590	600	574	951	240	NA ^{1/}
Nov.	758	1,013	705	620	850	680	892	225	NA
Dec.	720	550	750	590	843	822	768	260	670
<u>1986</u>									
Jan.	950	805	1,064	1,105	609	895	777	958	784
Feb.	780	1,087	1,105	1,154	800	1,038	895	1,035	658
March	1,101	1,420	1,100	935	770	1,088	958	1,358	721
April	1,100	1,277	1,355	1,200	850	1,059	977	1,350	886
May	1,114	1,030	1,307	1,303	738	1,026	1,133	1,128	NA

Source: Livestock and Meat Marketing Corporation (IMMC), Sudan.

^{1/} NA = Not Available.

Table 44: International Prices of Cereals, July-June, 1983/84 and 1984/85 Seasons^{1/}, and 1985/86 by Month

Season/ Month	U. S. Wheat ^{2/}		Commodity		
	No.2 Hard Winter	No.1 Hard Winter	Maize ^{3/} U.S. No.2 Yellow	Sorghum ^{3/} U.S. No. 2 ^{3/}	Rice ^{4/} Thailand
..... U.S. \$ per Metric Ton					
<u>PREVIOUS TWO SEASONS</u>					
1983/84	154	153	146	131	300
1984/85	148	148	123	111	229
<u>1985/86 SEASON</u>					
<u>1985</u>					
July	130	129	115	99	210
August	124	123	105	89	210
September	128	126	102	83	210
October	130	129	98	88	210
November	137	133	106	96	212
December	142	137	108	100	220
<u>1986</u>					
January	135	133	107	99	225
February	132	130	104	95	244
March	136	135	100	94	233
April	126	134	101	99	216
May	115	121	105	106	215
June	106	106	103	86	218

Source: FAO, Food Outlook, Number 7 Rome, August, 1986 and earlier issues.

^{1/} A Season is defined as a 12-month period from July 1, in one year to June 30 of next year.

^{2/} Export prices F.O.B. United States Gulf Ports.

^{3/} Export prices delivered to U.S. Gulf ports.

^{4/} White rice, 5%, F.O.B. Bangkok.

Figure 16-A: International Wheat Prices
1985/86, by Month, and Averages for 1983/84 and 1984/85

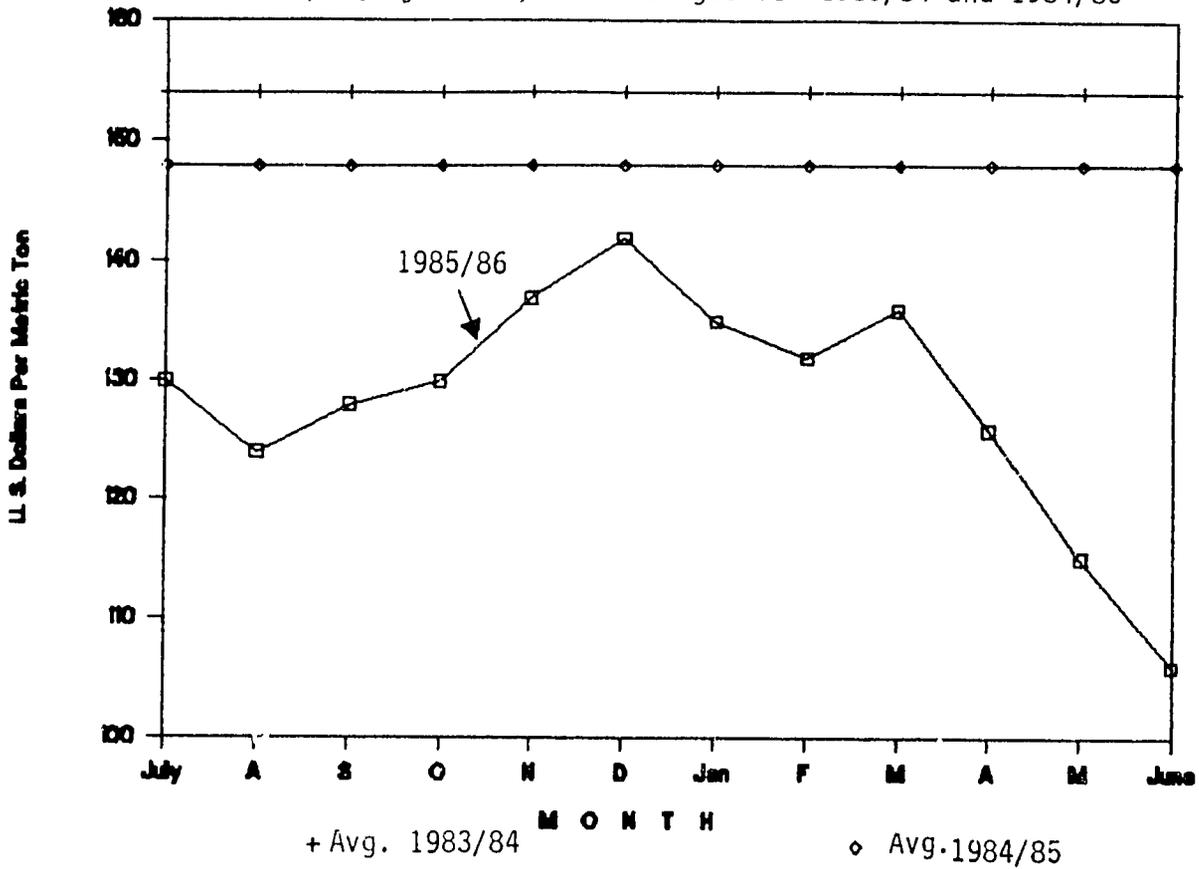


Figure 16-B: Int'l Sorghum Prices

1985/86, by Month, and 1983/84 and 1984/85 Averages

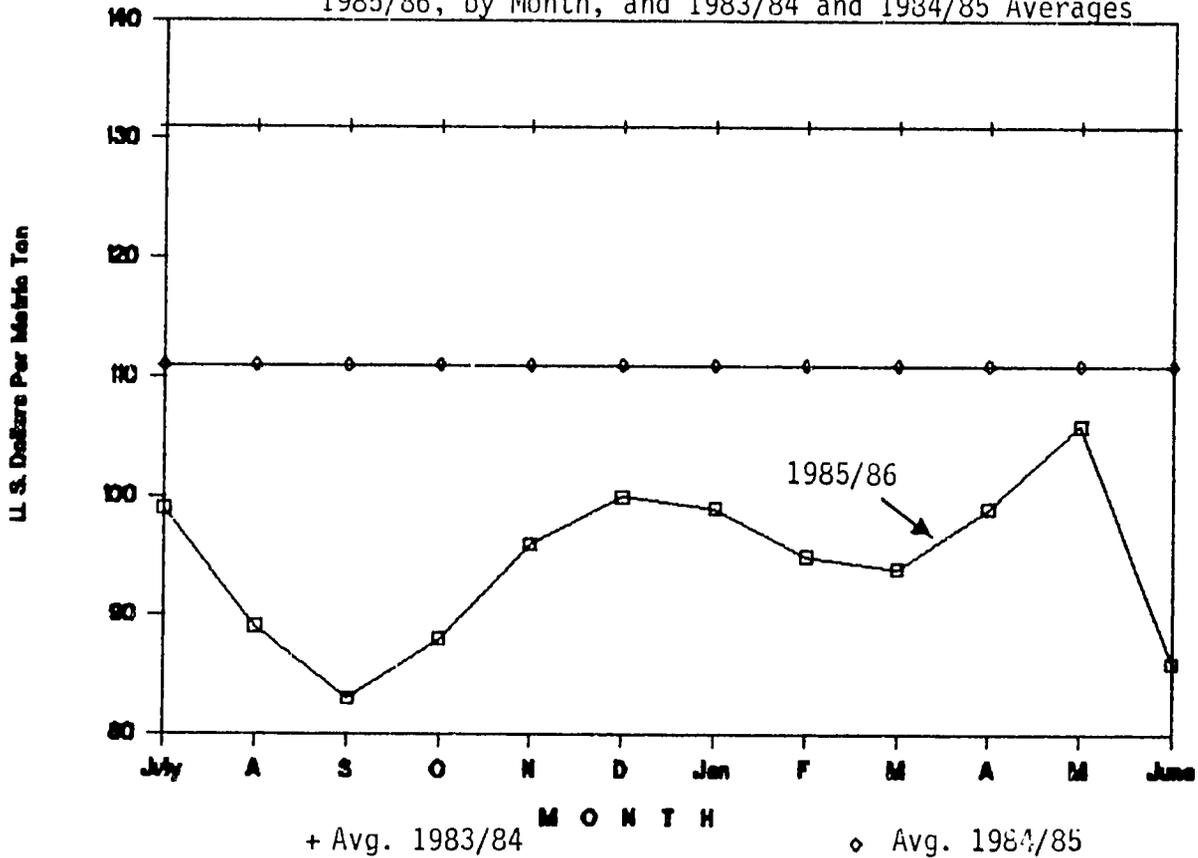


Table 45: Ocean Freight for Wheat, Average 1983/84 and 1984/85 Seasons, and 1985/86, by Month^{1/}

Season/Month	Rotterdam	From U.S. Gulf to: Egypt ^{2/} (Alexandria)	East Africa ^{2/}
..... U. S. \$ Per Metric Ton			
<u>PREVIOUS TWO SEASONS</u>			
1983/84	9.04	21.44	37.04
1984/85	10.48	23.31	38.25
<u>1985/86 SEASON</u>			
<u>1985</u>			
July	9.50	23.00	39.00
August	9.50	23.00	39.00
September	7.70	21.00	37.00
October	8.45	21.50	37.00
November	8.45	21.50	37.00
December	9.00	21.50	37.00
<u>1986</u>			
January	9.25	21.50	37.00
February	8.75	20.50	36.00
March	8.75	20.50	36.00
April	8.25	20.50	36.00
May	8.25	20.50	36.00
June	8.25	20.50	36.00

Source: International Wheat Council. Reported in FAO, Food Outlook Number 6. Rome, July, 1986, and earlier issues.

^{1/} Estimated mid-month rates based on current chartering practices for vessels ready to load three to four weeks ahead. A Season is defined as a 12-month period from July 1, in one year to June 30 of next year.

^{2/} Size of vessels: Rotterdam 30-50,000 tons (tankers and/or ore/bulk/oil carriers); Egypt 18-30,000 tons; East Africa 14-25,000 tons.

Table 46: International Prices of Selected Fertilizers, Selected Months, 1985/1986

Type/Terms	Year/Month						
	September	1985 October	December	January	1986 March	May	June
(U.S. Dollars Per Metric Ton)							
<u>Urea (Bagged)</u>							
F.O.B. W. Europe	NA ^{1/}	110-115	102-112	102-112	112	108-160	108-110
F.O.B. Near East	90-100	100-105	98-123	95-103	93-95	80-85	80-83
<u>Ammonium Sulphate</u>							
F.O.B. W. Europe	50-60	55-60	43-48	43-46	43-46	39-45	29-32
F.O.B. Near East	75-80	75-80	75-80	65-70	50-55	50-55	35-40
<u>Diammonium Phosphate</u>							
F.O.B. U.S. Gulf	171-175	172-175	170-172	169-172	178-180	159-165	152-156
F.O.B. N. Africa	190-195	185-195	203-211	190-198	195-200	195-200	195-200
<u>Triple Superphosphate</u>							
F.O.B. U.S. Gulf	124-128	130-135	135-139	132-134	138-140	125-129	117-120
F.O.B. N. Africa	137-140	137-140	135-138	140-145	140-145	140-145	140-145

Source: FAO, Food Outlook, Number 7. Rome, August, 1986 and earlier issues.

^{1/} NA = Not Available.