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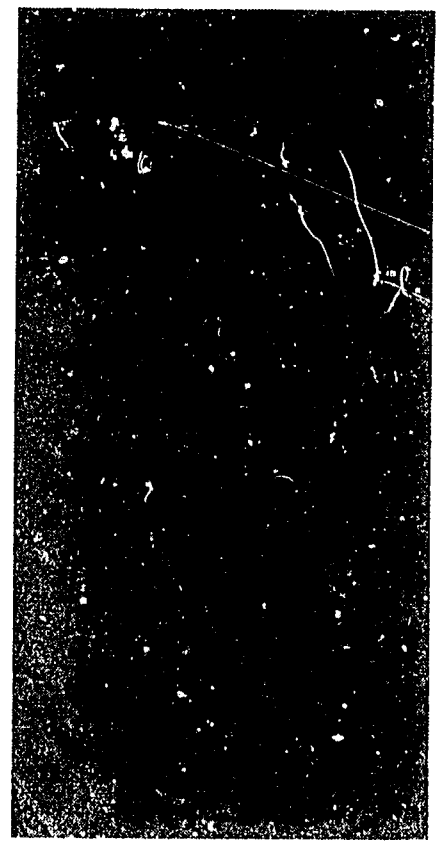
FOOD NEEDS ASSESSMENT: GHANA

March 1989



GHANA FOOD NEEDS ASSESSMENT

Michele McNabb

March 21, 1989

SUMMARY

The food needs assessment for calendar year 1989 showed food deficits for rice, wheat and vegetable oil, while surpluses of maize, sorghum/millet, cassava, yams, plantain and cocoyam are likely to exist (see Table 1). The deficits were estimated before food aid; when expected food aid for 1989 is deducted, the food deficit for rice is reduced and the vegetable oil deficit disappears. These results were calculated using status quo (five-year historical average) per capita consumption. When recent trends in consumption are reflected (i.e., increasing wheat and rice consumption), the deficits for rice and wheat increase substantially and the surpluses of non-cereals decrease (see Table 2).

Data for several key variables were not available during the seven-day TDY (February 21-March 1, 1989). For this reason, food needs identified on Tables 1 and 2 should be viewed as preliminary. In general terms, the missing data (on stocks and private commercial imports) are likely to bias food availability upwards; for this reason, the actual deficits are likely to be somewhat smaller than those shown on Tables 1 and 2.

HIGHLIGHTS OF THE ASSESSMENT

A. The Per Capita Consumption Requirement. The food needs assessment calculated the apparent consumption of nine commodities (maize, rice, wheat, sorghum, vegoil, cassava, yams, plantain and cocoyams) for a five-year base period (1984-1988). Food balance sheets for each of the historical years are included as Appendix A.

The FVA Food Needs Assessment methodology uses data on the apparent per capita consumption during the base period to calculate per capita requirements for the current year assessment. In most cases, the per capita requirement for the current year is based on the average amount of each commodity consumed during the base period, i.e. status quo consumption. In other words, the assessment is usually based on the assumption that this year, the population will require an amount of food equal to the average amount it consumed over the previous five years.

However, sometimes the per capita consumption of a specific commodity will appear to be increasing or decreasing annually. If the assessment of requirements is based on a five-year average, the upward or downward trend will be masked. In Ghana, the per capita consumption of wheat and rice appear to be moving in a generally upward direction. As Graphs 1 and 2 demonstrate, the use of a five-year average hides this trend. In this case, estimating current year requirements based on a linear trend may be more accurate (see Table 2).

B. Commercial Imports. The most important data missing from the assessment

are estimates of private commercial imports for 1989. The levels of commercial imports included on Tables 1 and 2 include only expected commercial imports of the Government of Ghana (100,000 tons of wheat and 15,873 tons of rice - unmilled equivalents).

In the past two years, private traders have imported significant quantities of rice and wheat flour. In 1988, 16,000 tons of milled rice (25,400 tons paddy equivalent) and 7,000 tons of wheat flour (9,700 tons wheat equivalent) were imported privately. In 1987, even greater amounts were imported by private traders: 38,000 tons of milled rice (60,300 tons paddy equivalent) and 15,000 tons of wheat flour (20,800 wheat equivalent).

It was not possible to estimate private commercial imports of wheat and rice during the TDY because the effects of two major changes have yet to be determined. First, the Special Unnumbered Licenses (SUL's) have been abolished. Now private traders must secure import declarations from the Ministry of Trade or designated banks. Partially because of the new and reportedly more complicated regulations, private traders have not yet importing large quantities this year. Another change in the system is reportedly an even more significant constraint on private imports: all back income taxes must be paid before an individual can bring imports into the country.

Second, the introduction of the foreign exchange bureaus has caused an effective devaluation of the cedi. Foreign exchange now costs more, so the profit margins on commercial wheat and rice imports have probably been reduced. Furthermore, rumors of the imminent arrival of rice food aid from Japan (4000 tons expected in April) have undoubtedly made some private commercial traders hesitant to import rice, despite the fact that prices are currently very high in Accra.

USAID/Accra is strongly encouraged to monitor private commercial imports of wheat and rice during the year. Private importers have played an important role in the food supply in the past few years and should be expected to do the same this year given the currently high market prices, if the uncertainty surrounding the new regulations clears. Any private imports would cause a direct reduction in the stated deficit.

C. Stock Data. The second important data missing from the assessment are stock levels. The food needs assessment attempts to secure data on opening and closing stock levels for the government (working stocks and reserve/security stocks), private traders, donors and on-farm. Private stocks and on-farm stock data are usually difficult and must be estimated, but data are usually available on government and donor stocks. In Ghana, no relevant data on stocks of any sort were available. Because every ton of food available for consumption from stocks would mean a direct ton-for-ton reduction in the deficit, this information is critical.

USAID/Accra is encouraged to attempt to collect stock data, at least from the government and ideally, estimates from private traders, donors (PVOs) and on-farm as well. Absolute stock levels at any point during the year are not relevant - the key is to determine the net change in stocks (i.e., the difference between stock levels at the end of the year and stock levels at the beginning of the year). For example, if the government held 10,000 tons of rice at the beginning of 1989 and plans to hold 10,000 tons on December 31, government rice stocks are basically irrelevant to the food needs assessment for 1989. However, if the government held 20,000 tons of rice stocks at the beginning of the year, but only plans to have 5,000 tons at the end of the year, 15,000

CURRENT YEAR FOOD BALANCE -- WITH STATUS QUO PER CAPITA CONSUMPTION

Current Year: 1989

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL NCE
Per capita consumption (UNMILLED kg/yr)	30.7	11.8	8.5	16.4	67.4	2.0	242.9	66.2	70.0	65.9	447.1	269.7
x Population (thousands)	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700
= Total consumption requirement	420,418	161,770	116,922	224,446	923,557	27,814	3,327,781	907,602	958,495	903,421	6,125,113	3,695,282
Gross domestic food production	660,000	105,000	0	330,000	1,095,000	22,400	3,600,000	1,320,000	1,400,000	1,270,000	8,707,400	4,580,548
- Total non-food use	198,000	21,000	0	99,000	318,000	0	180,000	66,000	0	63,500	627,500	452,811
= Net domestic food production	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
Total consumption requirement (from above)	420,418	161,770	116,922	224,446	923,557	27,814	3,327,781	907,602	958,495	903,421	6,125,113	3,695,282
- Domestic food supply (from above)	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
= Import requirement	(41,582)	77,770	116,922	(6,554)	146,557	5,414	(92,219)	(346,398)	(441,505)	(303,079)	(1,954,787)	(432,455)
- Total commercial food imports	0	15,873	100,000	0	115,873	735	0	0	0	0	116,608	108,367
= FOOD DEFICIT (UNMILLED)	(41,582)	61,897	16,922	(6,554)	30,684	4,679	(92,219)	(346,398)	(441,505)	(303,079)	(2,071,395)	(540,821)
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= FOOD DEFICIT (MILLED)	(37,423)	38,995	12,184	(5,899)	7,857	4,679	(87,608)	(329,078)	(410,600)	(287,925)	(1,102,675)	(528,491)

(all data in unmilled metric tons, unless noted)

Table 1

tons of additional rice would be available for consumption during the year.

It will be difficult to obtain good data on stocks from all sources, especially for the historical years. But because stock data are so critical for an understanding of the food system, USAID/Accra should begin the effort to improve data for this important variable.

D. Expected Food Aid for 1989. As of March 1, 1989, planned food aid arrivals for 1989 included 4000 tons of rice from Japan, scheduled to arrive in April; 7000 tons of rice from WFP; and 5186 tons of PL480 vegoil, which has already been delivered. WFP originally had planned to import 15,000 tons of rice, but some of its program is now expected to be reallocated to local purchases of surplus maize. Canada is supplying 100,000 tons of wheat under a partially concessional program, but this is included as GOG commercial imports.

When planned food aid is deducted from the deficit shown on Table 1 (using Status Quo Consumption), the uncovered deficits for food aid commodities are:

Rice (Milled)	27,995 tons
Wheat (Unmilled)	16,922 tons
VegOil	(527 tons) (surplus)

The uncovered deficits, calculated using the linear trend for consumption requirements, are larger:

Rice (Milled)	70,580 tons
Wheat (Unmilled)	81,326 tons
VegOil	5,929 tons

Again, it is important to point out that these uncovered deficits are calculated without data on private commercial imports and possible contributions from stocks. As a hypothetical example, if private traders import quantities of rice and wheat flour in 1989 equal to the average amount imported in 1987 and 1988, the wheat and rice deficits calculated using the status quo consumption would virtually disappear.

E. Maize. As a result of a very good harvest, Ghana is expected to meet its entire consumption requirement for maize from domestic production. The Government of Ghana is projecting 1989 maize production to be a record 660,000 tons due to favorable growing conditions in the south and average conditions in the north. In four of the past five years, commercial imports of maize and/or maize food aid have been needed to meet the country's requirements (see Table 3). The Food Needs Assessment shows a 42,000 ton maize surplus for the year when per capita requirements are calculated using the five-year average. Some of this surplus is expected to be available for domestic purchase by donors for use in food for work and other development projects. As mentioned in the section on food aid, WFP is planning on purchasing some quantity of maize to replace imported rice for its programs in the country.

CURRENT YEAR FOOD BALANCE -- WITH LINEAR TREND CONSUMPTION

Current Year: 1986 — Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL RCE
Per capita consumption (UNMILLED kg/yr)	29.3	16.7	13.2	14.2	73.6	2.5	188.8	93.0	99.1	88.2	471.5	292.8
x Population (thousands)	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700	13,700
= Total consumption requirement	402,040	229,364	181,326	195,030	1,007,761	33,613	2,586,568	1,273,668	1,357,335	1,208,687	6,459,871	4,011,831
Gross domestic food production	660,000	105,000	0	330,000	1,095,000	22,400	3,600,000	1,320,000	1,400,000	1,270,000	8,707,400	4,580,548
- Total non-food use	198,000	21,000	0	99,000	318,000	0	180,000	66,000	0	63,500	627,500	452,811
= Net domestic food production	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
Total consumption requirement (from above)	402,040	229,364	181,326	195,030	1,007,761	33,613	2,586,568	1,273,668	1,357,335	1,208,687	6,459,871	4,011,831
- Domestic food supply (from above)	462,000	84,000	0	231,000	777,000	22,400	3,420,000	1,254,000	1,400,000	1,206,500	8,079,900	4,127,737
= Import requirement	(59,960)	145,364	181,326	(35,970)	230,761	11,213	(833,432)	19,668	(42,665)	2,187	(1,620,029)	(115,906)
- Total commercial food imports	0	15,873	100,000	0	115,873	735	0	0	0	0	116,608	108,367
= FOOD DEFICIT (UNMILLED)	(59,960)	129,491	81,326	(35,970)	114,886	10,478	(833,432)	19,668	(42,665)	2,187	(1,736,637)	(224,273)
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= FOOD DEFICIT (MILLED)	(53,964)	81,580	58,555	(32,373)	53,798	10,478	(791,760)	18,684	(39,678)	2,078	(746,401)	(262,025)

Table 2

F. Rice. The government is also expecting the rice harvest to be well above the five-year average (see Table 4). However, some combination of commercial imports and food aid will be needed to meet the increasing consumption requirement for rice. Although the government has a stated policy of domestic self-sufficiency in rice, it is reported that domestic rice remains relatively high cost/low quality when compared with Asian imports.

G. Wheat. Ghana produces no wheat, so the annual increases in consumption seen on Graph 2 and Table 5 must be met through commercial imports and food aid. Commercial import levels increased dramatically in 1987 and 1988 with the legalization of private commercial imports of wheat flour. If the new import policies of the government, described in paragraph B, constrain private trade, shortages might occur late in 1989 unless additional government imports or donations are made.

H. Sorghum and Millet. Domestic production of sorghum and millet are also expected to be good, even though an early end to rains reduced some previous production estimates. Unlike wheat and rice, domestic consumption of sorghum and millet has remained relatively steady during the base period (see Table 6).

I. VegOil. Data for domestic production of vegoil includes only commercial production from palm oil, shea butter, groundnut and copra. Some additional quantities of oil are produced and consumed in small quantities for home consumption, but no data are available.

During the past five years, commercial imports have averaged around 1800 tons, while food aid has been approximately 6300 tons (see Table 7). Because of the reported increase in domestic oil production, needs for both commercial imports and food aid appear to decreasing slightly. This year, the government plans to import only 735 tons of vegoil commercially, while the 5186 tons of PL480 vegoil should adequately fill the remaining deficit.

J. The Non-Cereals. According to government data on cassava, yams, plantain and cocoyams, production levels are well above five-year averages (see Tables 8, 9, 10 and 11). It is always very difficult to measure production of non-cereals, especially roots and tubers, and the accuracy of the GOG's figures can not be verified.

TRAINING CONDUCTED

The USAID/Accra Food for Peace Officer, Emmanual Ateku, was trained in the Food Needs Assessment methodology and computer software. Seth Vordzorgbe, USAID/Accra Economist, had been trained on the earlier version of the FNA and

attended the 1986 Abidjan conference. The 1989 assessment and the historical data set were left with the mission and the personnel trained should be able to update and improve the assessment as information becomes available.

Two training sessions were held with personnel from the Ministry of Agriculture, USAID and the US Embassy. One person, N. Neequaye from the Ministry of Agriculture, had previous exposure to the FVA methodology at the Abidjan conference and was the only computer-literate member of the seven-person training group. In the first training session, the general concepts of the food needs assessment methodology were discussed. The second session focused on the computer software.

RECOMMENDED FOLLOW-UP ACTIVITIES FOR USAID/ACCRA

The specific data which USAID should attempt to collect to improve the 1989 food needs assessment include:

1) private commercial imports of rice and wheat flour during 1989. Official government data will not be available for some time (if ever), but the mission could monitor trade informally through contacts with private traders and Ministry of Trade staff.

2) 1989 opening and expected closing stock balances for the government, private sector, donors and farmers. Although it will take some work, it should be possible to get actual opening stock levels from the government and expected closing stock levels. For the private sector, it should be possible to gather enough information to estimate stock levels. On-farm stocks are always the most difficult to estimate, but USAID might want to start a dialogue with the Ministry of Agriculture on possible data collection activities.

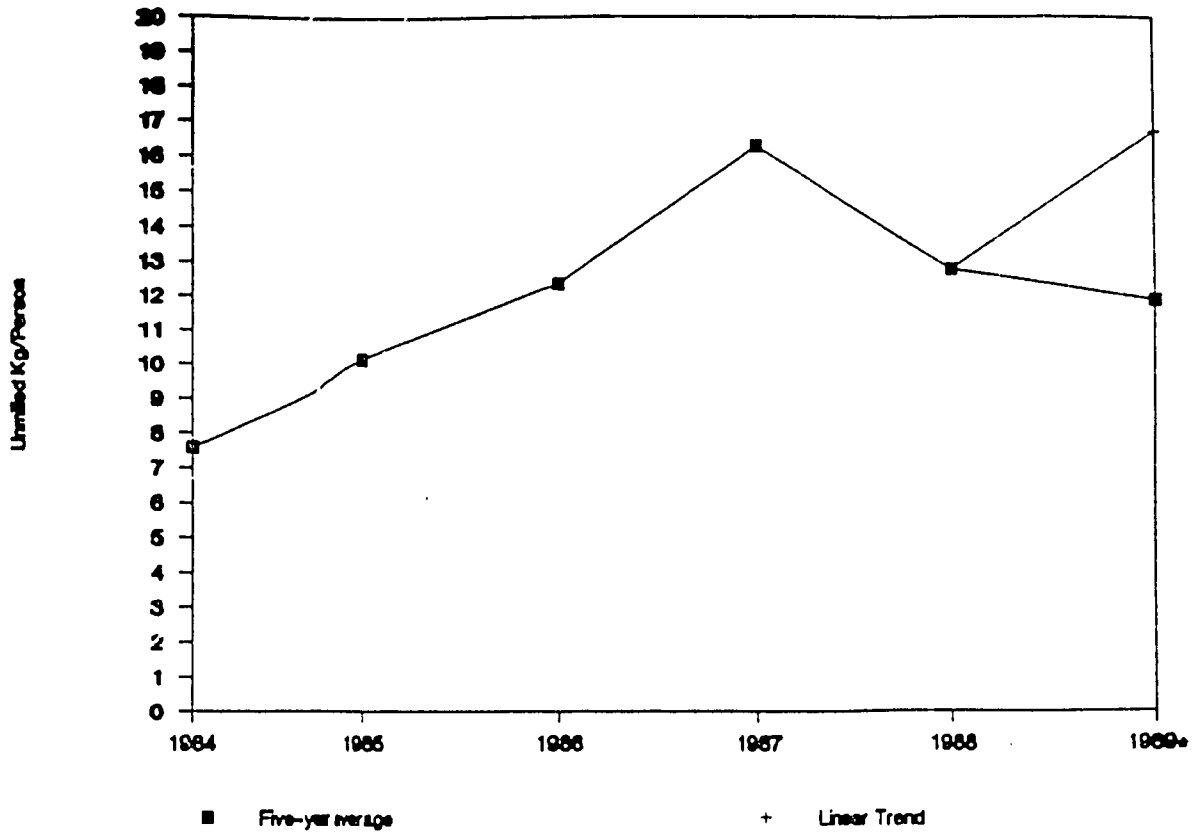
The Ministry of Agriculture is the only source of information on most agriculture-related statistics, but there does not appear to be any effort to compile thorough food balances, with accurate data on commercial and concessional imports, stocks, etc. USAID could follow-up on the activities started during the TDY training exercise and attempt to help the Ministry of Agriculture institutionalize the FVA food needs assessment methodology.

APPENDICES

1. Historical Food Balances, 1984/88
2. Food Needs Assessment Graphs
3. List of Persons Contacted
4. 1989 Ghana Food Needs Assessment cable

Graph 1

Per Capita Rice Consumption



Graph 2

Per Capita Wheat Consumption

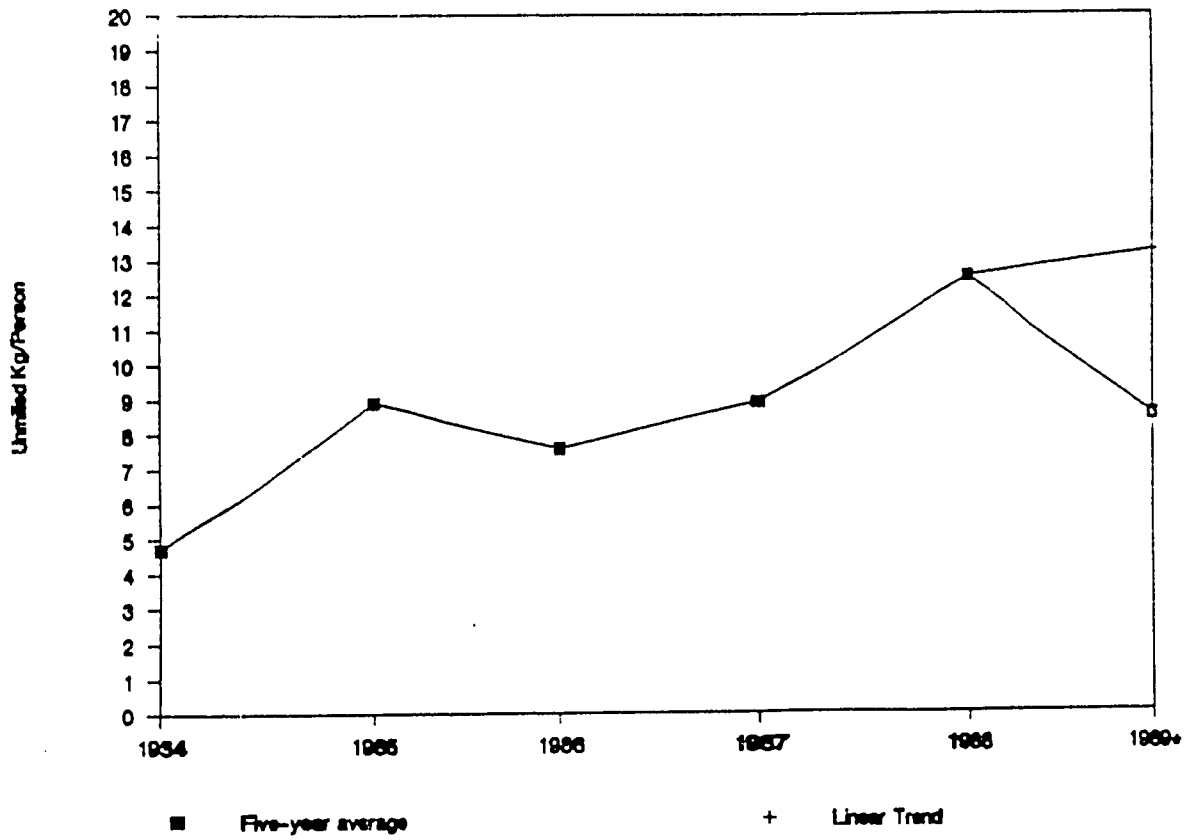


Table 3

COMMODITY: maize (Basic) Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	574,000	394,875	495,000	553,000	600,000	523,375
- Total non-food uses	172,200	118,463	148,500	165,900	180,000	157,013
= Net domestic food production	401,800	276,413	346,500	387,100	420,000	366,363
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	401,800	276,413	346,500	387,100	420,000	366,363
+ Total commercial food imports	38,000	0	0	10,000	0	9,600
+ Food Aid	21,800	37,400	2	0	17,300	15,300
= Total food supply	461,600	313,813	346,502	397,100	437,300	391,263
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	37.8	25.1	27.1	30.5	32.9	30.7
= PER CAPITA CONSUMPTION (MILLED kg/year)	34.1	22.6	24.4	27.5	29.6	27.6

Table 4

COMMODITY: rice Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	66,000	80,040	80,000	81,000	95,000	80,408
- Total non-food uses	13,200	16,008	16,000	16,200	19,000	16,082
= Net domestic food production	52,800	64,032	64,000	64,800	76,000	64,326
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	52,800	64,032	64,000	64,800	76,000	64,326
+ Total commercial food imports	7,357	33,016	17,173	59,775	25,532	28,570
+ Food Aid	32,857	29,048	76,190	87,156	68,011	58,652
= Total food supply	93,014	126,095	157,363	211,730	169,543	151,549
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	7.6	10.1	12.3	16.3	12.7	11.8
= PER CAPITA CONSUMPTION (MILLED kg/year)	4.8	6.4	7.7	10.3	8.0	7.4

Table 5

COMMODITY: wheat

Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	0	0	0	0	0	0
- Total non-food uses	0	0	0	0	0	0
= Net domestic food production	0	0	0	0	0	0
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	0	0	0	0	0	0
+ Total commercial food imports	25,000	71,000	51,347	101,062	134,102	76,502
+ Food Aid	32,400	40,200	46,200	14,961	32,488	33,250
= Total food supply	57,400	111,200	97,547	116,023	166,590	109,752
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	4.7	8.9	7.6	8.9	12.5	8.5
= PER CAPITA CONSUMPTION (MILLED kg/year)	3.4	6.4	5.5	6.4	9.0	6.1

Table 6

COMMODITY: sorghum

Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	315,000	306,800	297,660	271,000	300,000	298,092
- Total non-food uses	94,500	92,040	89,298	81,300	90,000	89,428
= Net domestic food production	220,500	214,760	208,362	189,700	210,000	208,664
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	220,500	214,760	208,362	189,700	210,000	208,664
+ Total commercial food imports	0	0	0	0	0	0
+ Food Aid	0	0	0	0	0	0
= Total food supply	220,500	214,760	208,362	189,700	210,000	208,664
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	18.1	17.2	16.3	14.6	15.8	16.4
= PER CAPITA CONSUMPTION (MILLED kg/year)	16.3	15.5	14.7	13.1	14.2	14.7

Table 7

COMMODITY: vegoil — Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	16,000	16,500	17,000	19,000	20,700	17,840
- Total non-food uses	0	0	0	0	0	0
= Net domestic food production	16,000	16,500	17,000	19,000	20,700	17,840
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	16,000	16,500	17,000	19,000	20,700	17,840
+ Total commercial food imports	842	1,869	1,470	2,500	2,390	1,814
+ Food Aid	6,769	4,038	5,020	5,830	9,972	6,326
= Total food supply	23,611	22,407	23,490	27,330	33,062	25,980
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	1.9	1.8	1.8	2.1	2.5	2.0
= PER CAPITA CONSUMPTION (MILLED kg/year)	1.9	1.8	1.8	2.1	2.5	2.0

Table 8

COMMODITY: cassava — Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	4,065,000	3,075,840	2,875,797	2,943,000	3,300,000	3,251,927
- Total non-food uses	203,250	153,792	143,790	147,150	165,000	162,596
= Net domestic food production	3,861,750	2,922,048	2,732,007	2,795,850	3,135,000	3,089,331
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	3,861,750	2,922,048	2,732,007	2,795,850	3,135,000	3,089,331
+ Total commercial food imports	0	0	0	0	0	0
+ Food Aid	0	0	0	0	0	0
= Total food supply	3,861,750	2,922,048	2,732,007	2,795,850	3,135,000	3,089,331
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	316.5	233.8	213.4	215.1	235.7	242.9
= PER CAPITA CONSUMPTION (MILLED kg/year)	300.7	222.1	202.8	204.3	223.9	230.8

Table 9

COMMODITY: plantain

Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	650,000	677,000	958,000	1,005,000	1,200,000	898,000
- Total non-food uses	0	0	0	0	0	0
= Net domestic food production	650,000	677,000	958,000	1,005,000	1,200,000	898,000
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	650,000	677,000	958,000	1,005,000	1,200,000	898,000
+ Total commercial food imports	0	0	0	0	0	0
+ Food Aid	0	0	0	0	0	0
= Total food supply	650,000	677,000	958,000	1,005,000	1,200,000	898,000
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	53.3	54.2	74.8	77.3	90.2	70.0
= PER CAPITA CONSUMPTION (MILLED kg/year)	49.5	50.4	69.6	71.9	83.9	65.1

Table 10

COMMODITY: cocoyams

Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	730,000	650,000	919,600	1,000,000	1,150,000	889,920
- Total non-food uses	36,500	32,500	45,980	50,000	57,500	44,496
= Net domestic food production	693,500	617,500	873,620	950,000	1,092,500	845,424
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	693,500	617,500	873,620	950,000	1,092,500	845,424
+ Total commercial food imports	0	0	0	0	0	0
+ Food Aid	0	0	0	0	0	0
= Total food supply	693,500	617,500	873,620	950,000	1,092,500	845,424
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	56.8	49.4	68.3	73.1	82.1	65.9
= PER CAPITA CONSUMPTION (MILLED kg/year)	52.9	45.9	63.5	68.0	76.4	61.3

Table 11

COMMODITY: yams

Ghana

	1984	1985	1986	1987	1988	Average
Gross domestic food production	725,000	560,550	987,901	1,001,000	1,200,000	894,890
- Total non-food uses	36,250	28,028	49,395	50,050	60,000	44,745
= Net domestic food production	688,750	532,523	938,506	950,950	1,140,000	850,146
- Net change in stocks	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0
= Domestic food supply	688,750	532,523	938,506	950,950	1,140,000	850,146
+ Total commercial food imports	0	0	0	0	0	0
+ Food Aid	0	0	0	0	0	0
= Total food supply	688,750	532,523	938,506	950,950	1,140,000	850,146
/ Population (thousands)	12,200	12,500	12,800	13,000	13,300	12,760
= PER CAPITA CONSUMPTION (UNMILLED kg/year	56.5	42.6	73.3	73.2	85.7	66.2
= PER CAPITA CONSUMPTION (MILLED kg/year)	53.6	40.5	69.7	69.5	81.4	62.9

APPENDIX 1. Historical Food Balances, 1984/88

HISTORICAL YEAR FOOD BALANCE

Year of Analysis: 1984

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL BCE
Gross domestic food production	574,000	66,000	0	315,000	955,000	16,000	4,065,000	725,000	650,000	730,000	7,141,000	3,687,468
- Total non-food use	172,200	13,200	0	94,500	279,900	0	203,250	36,250	0	36,500	555,900	396,069
= Net domestic food production	401,800	52,800	0	220,500	675,100	16,000	3,861,750	688,750	650,000	693,500	6,585,100	3,291,399
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	401,800	52,800	0	220,500	675,100	16,000	3,861,750	688,750	650,000	693,500	6,585,100	3,291,399
+ Total commercial food imports	38,000	7,357	25,000	0	70,357	842	0	0	0	0	71,199	69,837
+ Food aid	21,800	32,857	32,400	0	87,057	6,769	0	0	0	0	93,826	98,545
= Total food supply	461,600	93,014	57,400	220,500	832,514	23,611	3,861,750	688,750	650,000	693,500	6,750,125	3,459,781
/ Population (thousands)	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200
= PER CAPITA CONSUMPTION (UNMILLED kg/year)	38	8	5	18	68	2	317	56	53	57	553	284
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= PER CAPITA CONSUMPTION (MILLED kg/year)	34	5	3	16	59	2	301	54	50	53	517	263

HISTORICAL YEAR FOOD BALANCE

Year of Analysis: 1985

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL RCE
Gross domestic food production	394,875	80,040	0	306,[illegible]	781,715	16,500	3,075,840	560,550	677,000	650,000	5,761,605	2,994,087
- Total non-food use	118,463	16,008	0	92,040	226,511	0	153,792	28,028	0	32,500	440,830	315,876
= Net domestic food production	276,413	64,032	0	214,760	555,205	16,500	2,922,048	532,523	677,000	617,500	5,320,775	2,678,211
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	276,413	64,032	0	214,760	555,205	16,500	2,922,048	532,523	677,000	617,500	5,320,775	2,678,211
+ Total commercial food imports	0	33,016	71,000	0	104,016	1,869	0	0	0	0	105,885	100,308
+ Food aid	37,400	29,048	40,200	0	106,648	4,038	0	0	0	0	110,686	111,078
= Total food supply	313,813	126,095	111,200	214,760	765,868	22,407	2,922,048	532,523	677,000	617,500	,537,345	2,889,596
/ Population (thousands)	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
= PER CAPITA CONSUMPTION (UNMILLED kg/year)	25	10	9	17	61	2	234	43	54	49	443	231
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= PER CAPITA CONSUMPTION (MILLED kg/year)	23	6	6	15	51	2	222	40	50	46	411	212

HISTORICAL YEAR FOOD BALANCE

Year of Analysis: 1986

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL BCE
Gross domestic food production	495,000	80,000	0	297,[illegible]	872,[illegible]	17,000	2,875,797	987,901	958,000	919,600	6,630,958	3,498,154
- Total non-food use	148,500	16,000	0	89,298	253,798	0	143,790	49,395	0	45,980	492,963	357,215
= Net domestic food production	346,500	64,000	0	208,362	618,862	17,000	2,732,007	938,506	958,000	873,620	6,137,995	3,140,940
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	346,500	64,000	0	208,362	618,862	17,000	2,732,007	938,506	958,000	873,620	6,137,995	3,140,940
+ Total commercial food imports	0	17,173	51,347	0	68,520	1,470	0	0	0	0	69,990	66,653
+ Food aid	2	76,190	46,200	0	122,392	5,020	0	0	0	0	127,412	125,079
= Total food supply	346,502	157,363	97,547	208,362	809,774	23,490	2,732,007	938,506	958,000	873,620	6,335,398	3,332,672
/ Population (thousands)	12,800	12,800	12,800	12,800	12,800	12,800	12,800	12,800	12,800	12,800	12,800	12,800
= PER CAPITA CONSUMPTION (UNMILLED kg/year)	27	12	8	16	63	2	213	73	75	68	495	260
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= PER CAPITA CONSUMPTION (MILLED kg/year)	24	8	5	15	52	2	203	70	70	63	460	239

HISTORICAL YEAR FOOD BALANCE

Year of Analysis: 1987

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL RCE
Gross domestic food production	553,000	81,000	0	271,000	905,000	19,000	2,943,000	1,001,000	1,005,000	1,000,000	6,873,000	3,629,827
- Total non-food use	165,900	16,200	0	81,300	263,400	0	147,150	50,050	0	50,000	510,600	370,623
= Net domestic food production	387,100	64,800	0	189,700	641,600	19,000	2,795,850	950,950	1,005,000	950,000	6,362,400	3,259,204
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	387,100	64,800	0	189,700	641,600	19,000	2,795,850	950,950	1,005,000	950,000	6,362,400	3,259,204
+ Total commercial food imports	10,000	59,775	101,062	0	170,837	2,500	0	0	0	0	173,337	164,167
+ Food aid	0	87,156	14,961	0	102,116	5,830	0	0	0	0	107,946	108,466
= Total food supply	397,100	211,730	116,023	189,700	914,553	27,330	2,795,850	950,950	1,005,000	950,000	6,643,683	3,531,837
/ Population (thousands)	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
= PER CAPITA CONSUMPTION (UNMILLED kg/year)	31	16	9	15	70	2	215	73	77	73	511	272
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= PER CAPITA CONSUMPTION (MILLED kg/year)	27	10	6	13	57	2	204	69	72	68	473	248

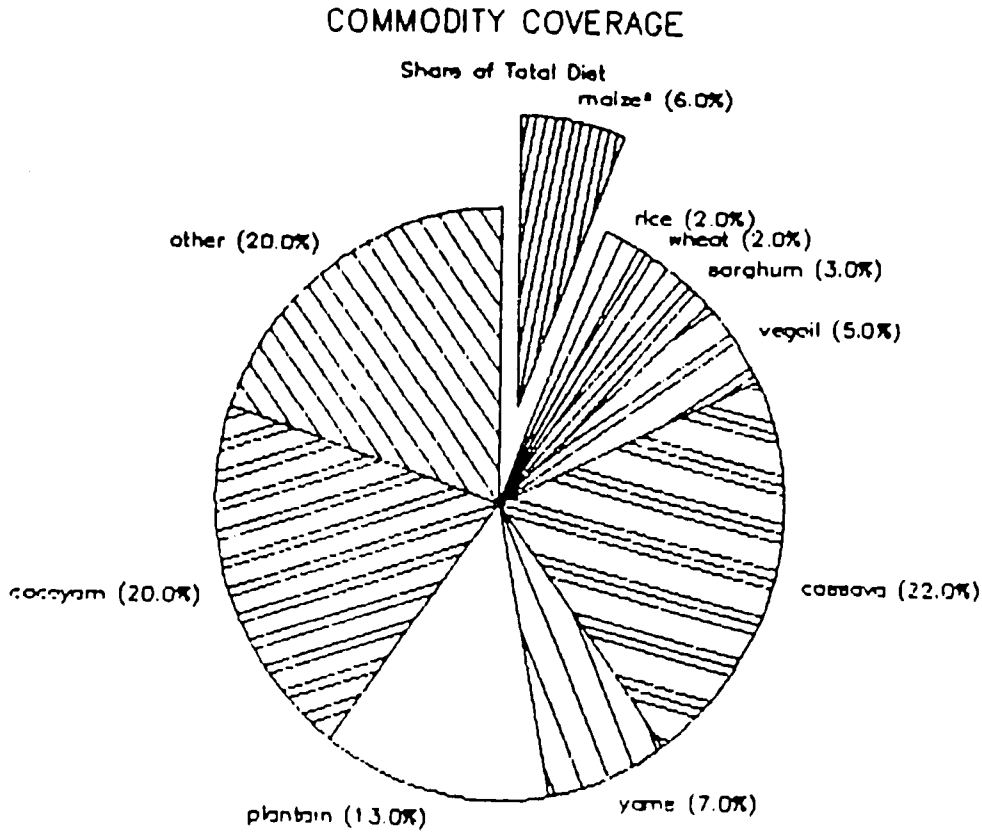
HISTORICAL YEAR FOOD BALANCE

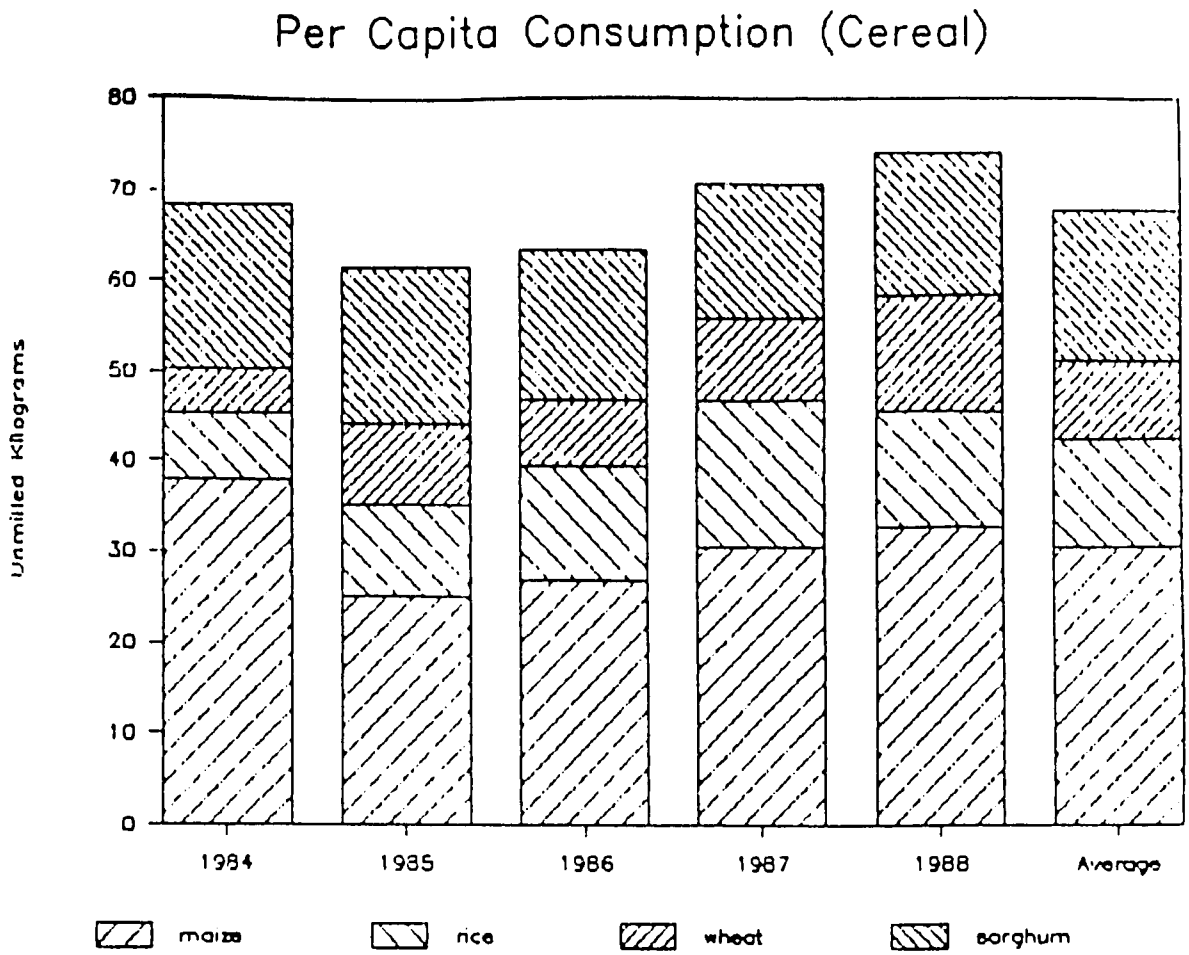
Year of Analysis: 1988

Ghana

Commodity	maize	rice	wheat	sorghum	CEREALS ALL	vegoil	cassava	yams	plantain	cocoyams	TOTAL	TOTAL RCE
Gross domestic food production	600,000	95,000	0	300,000	995,000	20,700	3,300,000	1,200,000	1,200,000	1,150,000	7,865,700	4,139,398
- Total non-food use	180,000	19,000	0	90,000	289,000	0	165,000	60,000	0	57,500	571,500	412,017
= Net domestic food production	420,000	76,000	0	210,000	706,000	20,700	3,135,000	1,140,000	1,200,000	1,092,500	7,294,200	3,727,381
- Net change in stocks	0	0	0	0	0	0	0	0	0	0	0	0
- Total food exports	0	0	0	0	0	0	0	0	0	0	0	0
= Domestic food supply	420,000	76,000	0	210,000	706,000	20,700	3,135,000	1,140,000	1,200,000	1,092,500	7,294,200	3,727,381
+ Total commercial food imports	0	25,532	134,102	0	159,634	2,390	0	0	0	0	162,024	152,695
+ Food aid	17,300	68,011	32,488	0	117,799	9,972	0	0	0	0	127,771	134,425
= Total food supply	437,300	169,543	166,590	210,000	983,433	33,062	3,135,000	1,140,000	1,200,000	1,092,500	7,583,995	4,014,501
/ Population (thousands)	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300	13,300
= PER CAPITA CONSUMPTION (UNMILLED kg/year)	33	13	13	16	74	2	236	86	90	82	570	302
x Milling extraction rate (m.e.r.)	90%	63%	72%	90%		100%	95%	95%	93%	95%		
= PER CAPITA CONSUMPTION (MILLED kg/year)	30	8	9	14	61	2	224	81	84	76	529	277

APPENDIX 2. Food Needs Assessment Graphs

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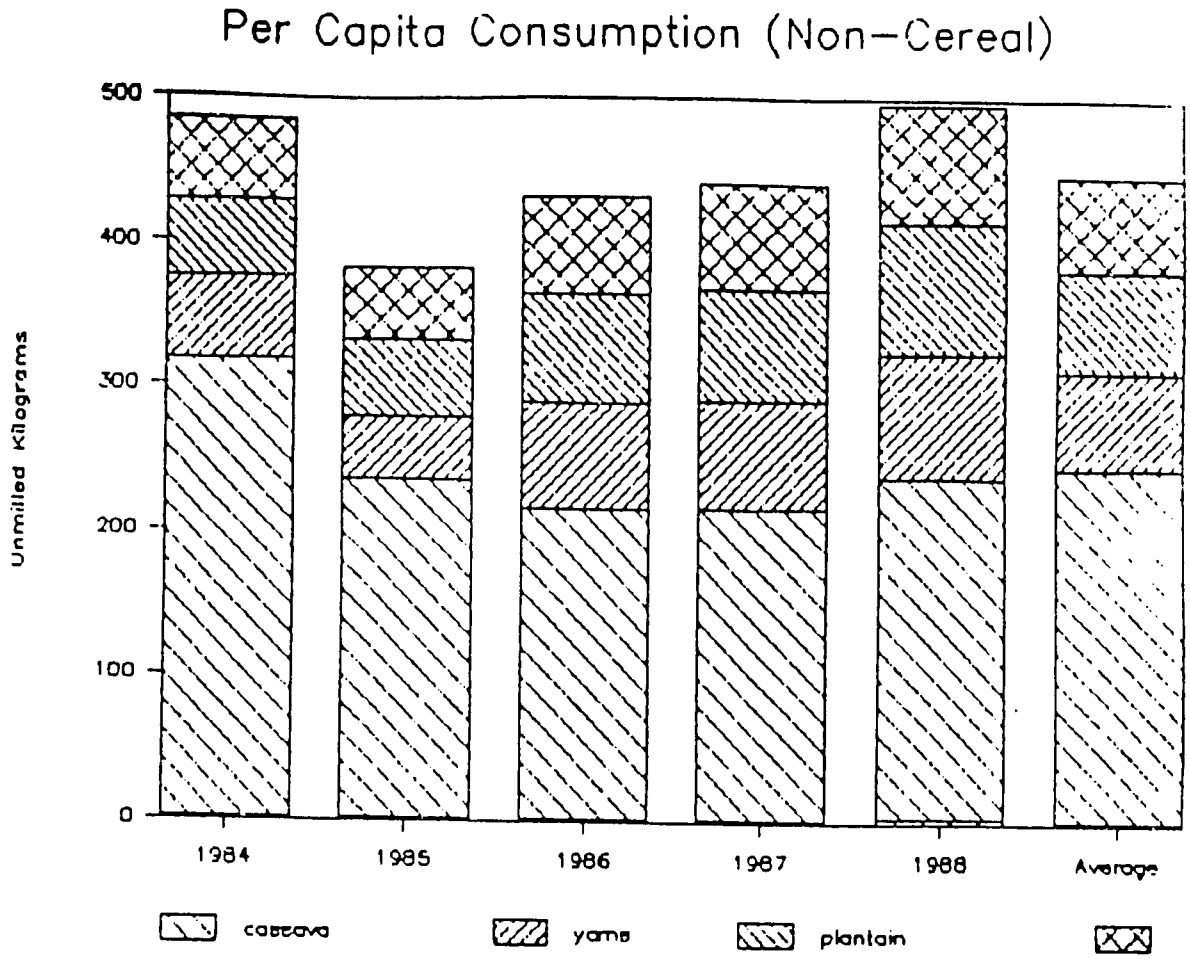
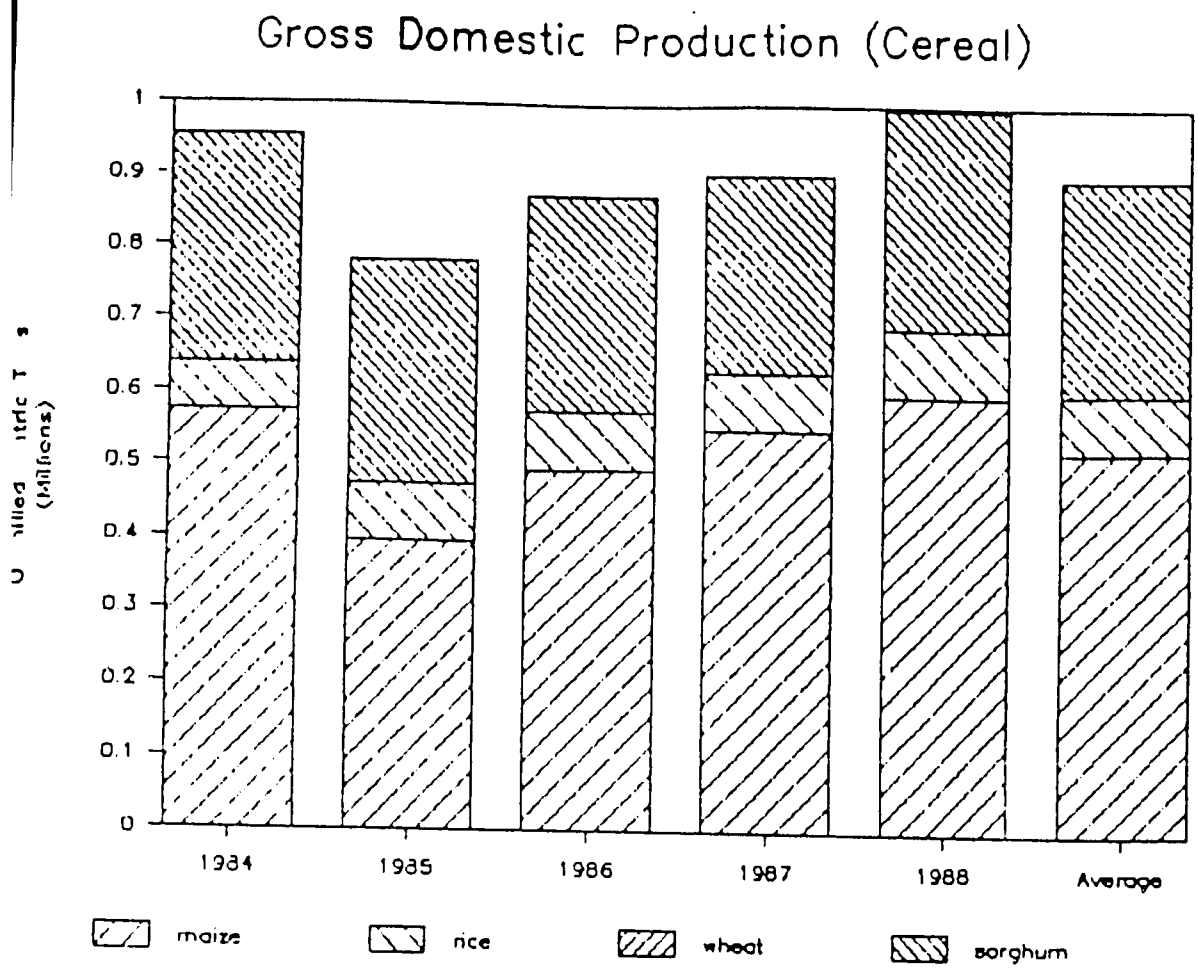
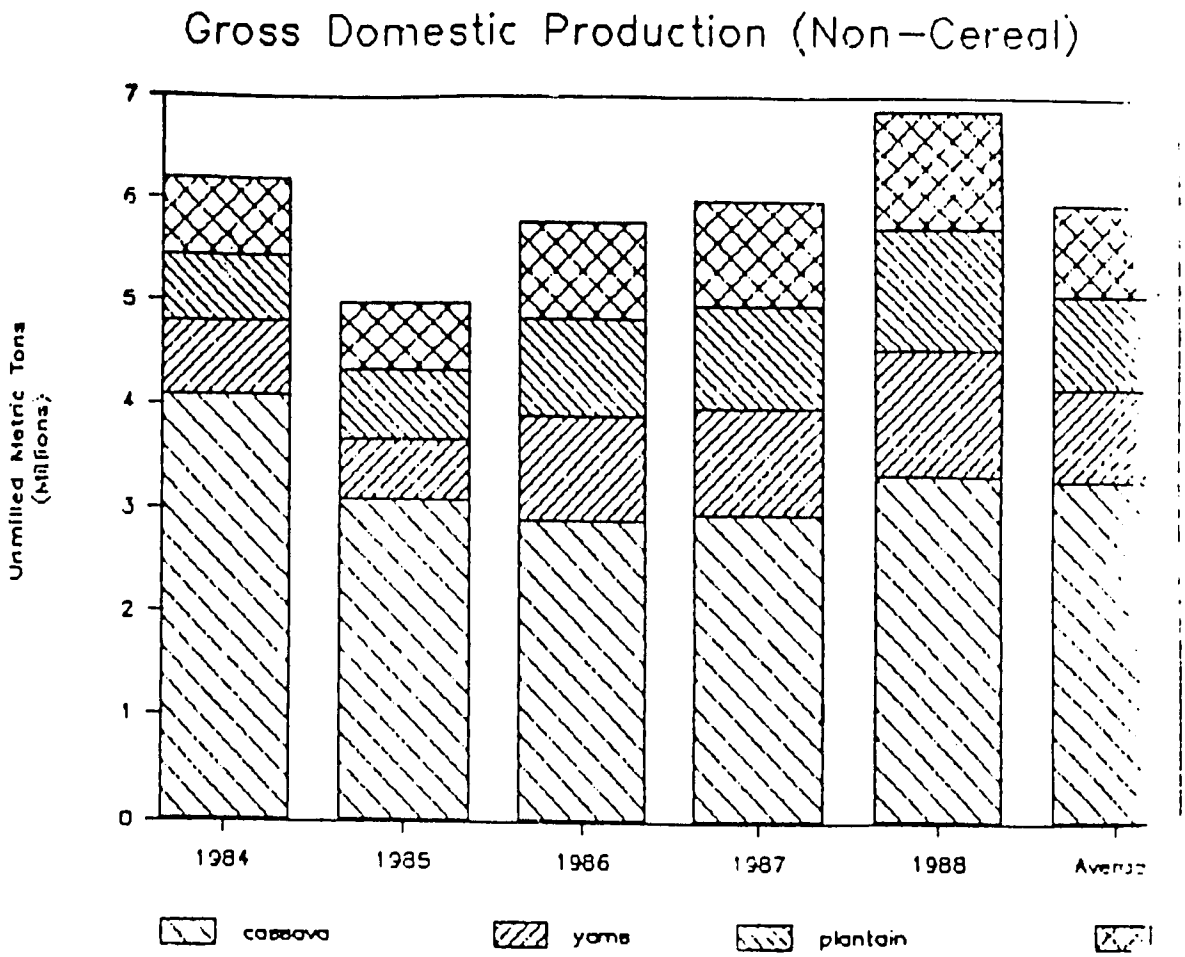
Unmilled Kilograms
80
70
60
50
40
30
20
10
0
1984
1985
1986
1987
1988
Average
maize
rice
wheat
sorghum


Per Capita Consumption (Non-Cereal)
Unmilled Kilograms
500
400
300
200
100
0
1984
1985
1986
1987
1988
Average
cassava
yams
plantain


Gross Domestic Production (Cereal)
(Millions)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1984
1985
1986
1987
1988
Average
maize
rice
wheat
sorghum


Gross Domestic Production (Non-Cereal)
Unmilled Metric Tons (Millions)
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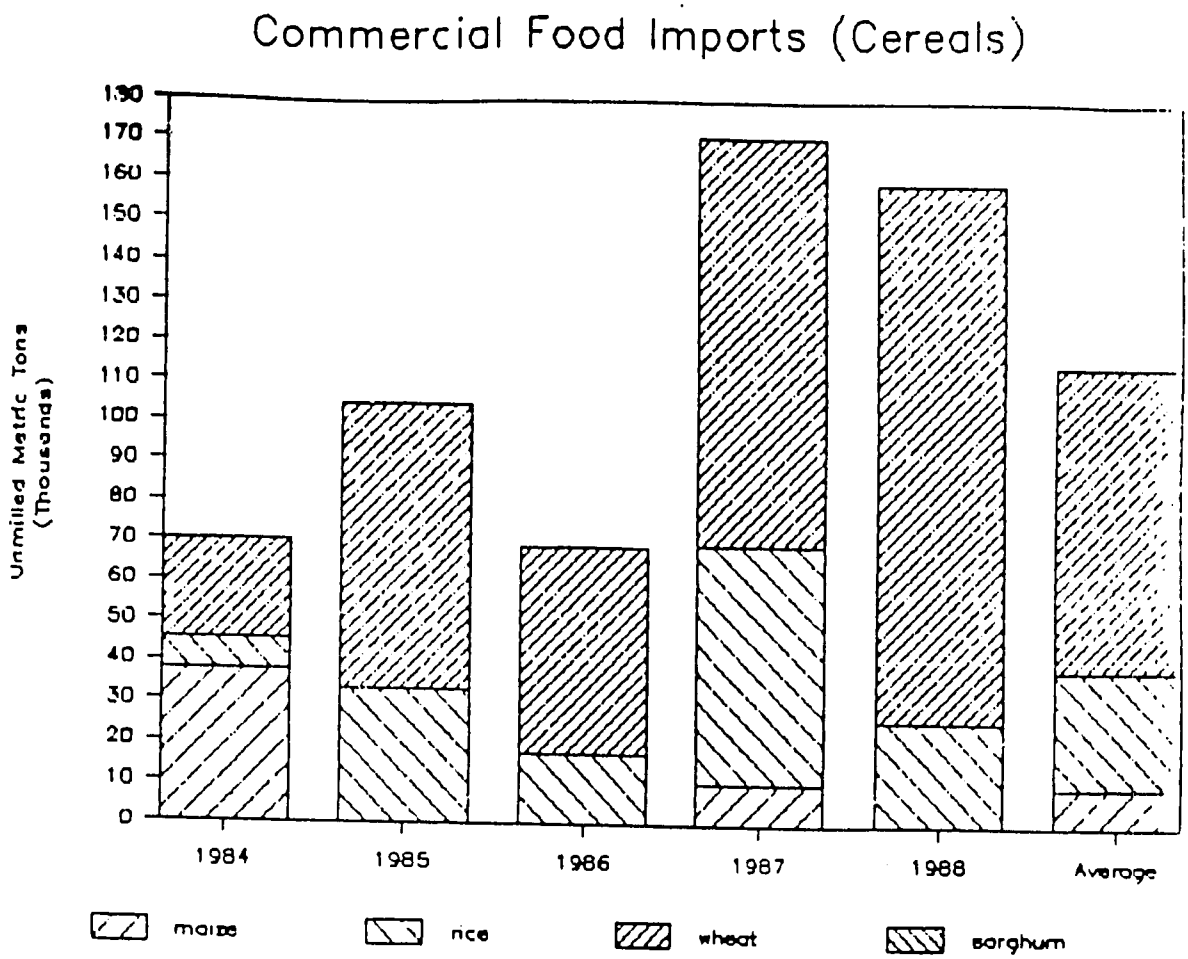
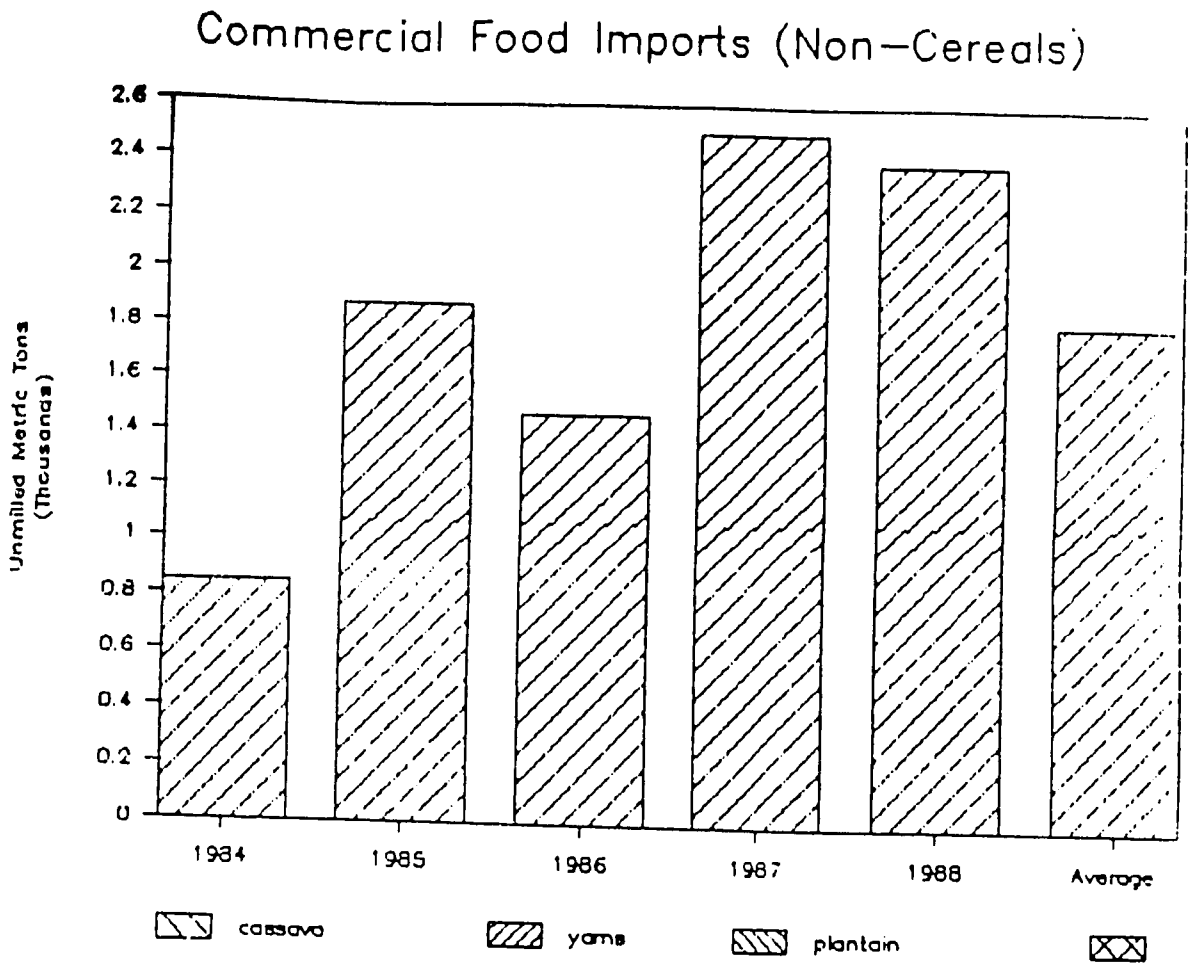
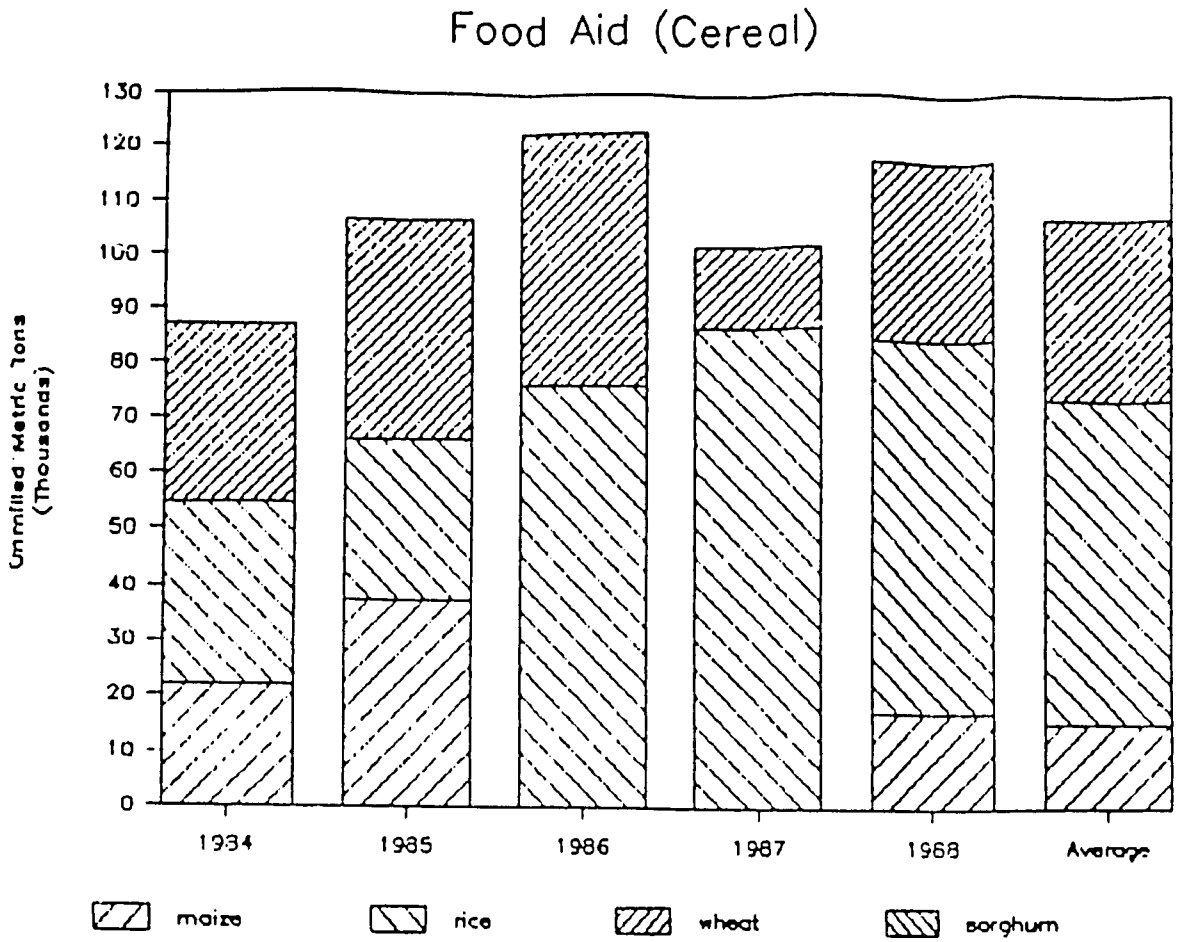
6
5
4
3
2
1
0
1984
1985
1986
1987
1988
cassava
yams
plantain


Commercial Food Imports (Cereals)
Unmilled Metric Tons (Thousands)
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1984
1985
1986
1987
1988
Average
maize
rice
wheat
sorghum


Commercial Food Imports (Non-Cereals)
Unmilled Metric Tons (Thousands)
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1984
1985
1986
1987
1988
Average
cassava
yams
plantain


Food Aid (Cereal)
Unmilled Metric Tons (Thousands)
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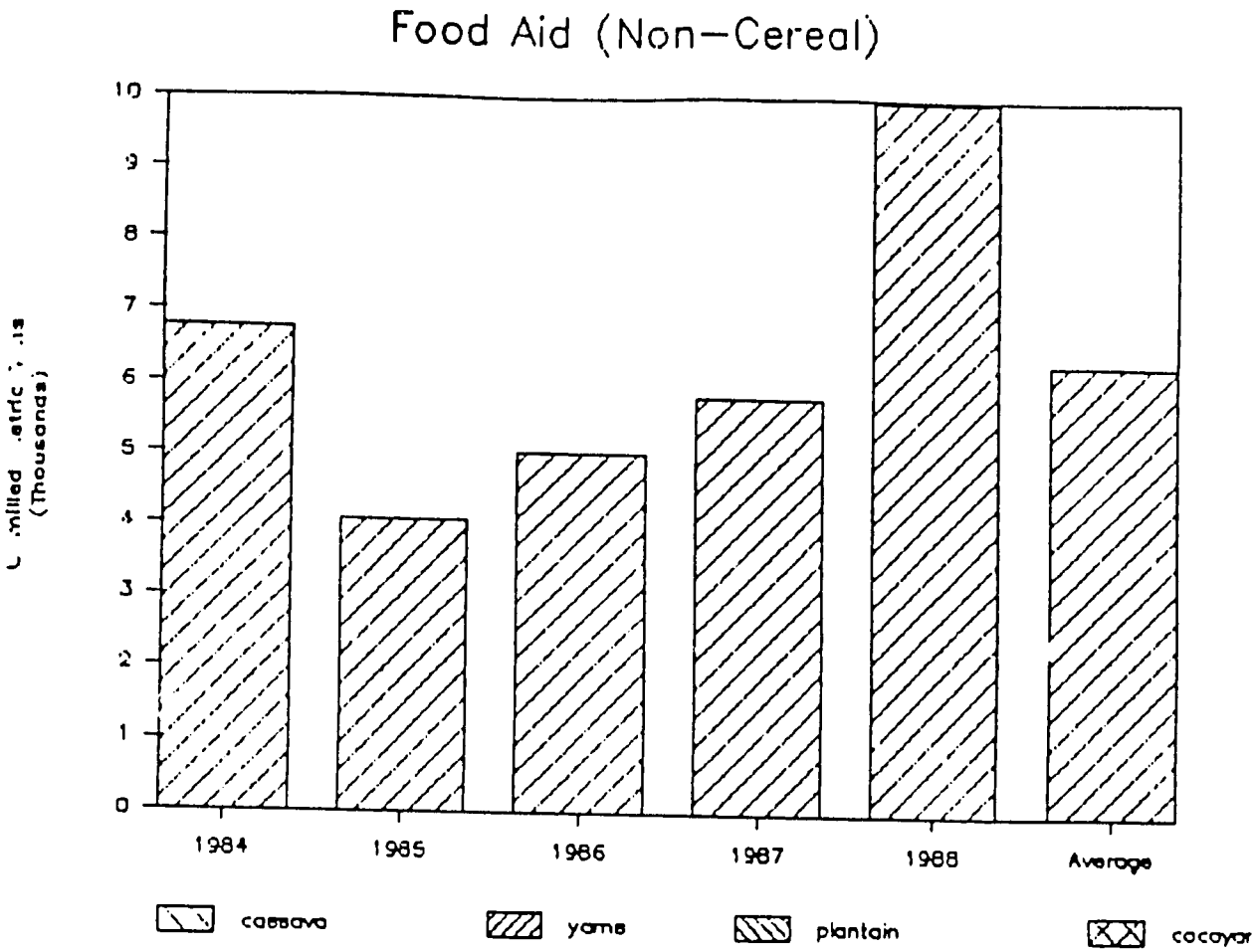
120
110
100
90
80
70
60
50
40
30
20
10
0
1984
1985
1986
1987
1988
Average
maize
rice
wheat
sorghum


Food Aid (Non-Cereal)
(Thousands)
10
9
8
7
6
5
4
3
2
1
0
1984
1985
1986
1987
1988
Average
cassava
yams
plantain
cocoyar

APPENDIX 3. List of Persons Contacted

Mr. E.H.K. Amankwah, General Manager, Ghana National Food Distribution Corporation

Mr. Kwane Asafu-Adjaye, Ministry of Agriculture

Mr. Edward Cadjoe, Ministry of Agriculture

FAO representative

Mr. Ghosa, WFP

Mr. Manenne Maetz, Ministry of Agriculture

Mr. N. Neequaye, Ministry of Agriculture

Mr. Charles Owusa, Ghana National Procurement Agency

Ms. Cynthia Prah, private rice trader

Mr. Kofi Sekyiamah, Assistant Chief Director, Ministry of Trade

Mr. Suka-Brahimah, US Embassy

ACTION COPY

UNCLASSIFIED

INCOMING TELEGRAM

Department of State

PAGE 01 OF 02 ACCRA 01983 00 OF 02 140952Z 4542 024025 A103226
ACTION AID-00

ACTION OFFICE FFP-09
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AMEMBASSY LAGOS

UNCLAS ACCRA 01983

AIDAC

AID/W FOR FVA/FFP/AFR
ABIDJAN FOR REDSO/FFP
LAGOS FOR AGATT

E.O. 12356: N/A

SUBJECT: 1989 GHANA FOOD NEEDS ASSESSMENT

1. A FOOD NEEDS ASSESSMENT WAS CARRIED OUT IN ACCRA FROM 21 FEB-1 MARCH BY MS. MICHELLE MINABB WITH ASSISTANCE FROM MISSION PERSONNEL, USING THE FVA METHODOLOGY. THIS ASSESSMENT SHOULD BE CONSIDERED PRELIMINARY, AS DATA ON SEVERAL KEY VARIABLES, SUCH AS STOCKS, WERE NOT AVAILABLE. USAID/ACCRA WILL CABLE UPDATED INFORMATION AS IT BECOMES AVAILABLE.

2. FOR CALENDAR YEAR 1989, THE ASSESSMENT FOUND A SIGNIFICANT FOOD DEFICIT FOR RICE, A SMALLER DEFICIT FOR WHEAT AND A SMALL VEGOIL DEFICIT (WHICH HAS BEEN FILLED WITH US FOOD AID.) THE CALCULATIONS WERE BASED ON MAINTAINING CONSUMPTION AT FIVE-YEAR AVERAGE (STATUS QUO) LEVELS. SURPLUSES OF MAIZE, SORGHUM AND ALL ROOT CROPS ARE LIKELY, MEANING THAT AVAILABILITY WILL BE GREATER THAN THE AVERAGE AVAILABILITY IN THE PAST FIVE YEARS. PARAGRAPH 3 SUMMARIZES THE 1989 FOOD NEEDS ASSESSMENT FOR CEREALS AND VEGOIL. CASSAVA, YAMS, PLANTAINS AND COCOYAMS WERE ALSO INCLUDED IN THE ASSESSMENT BECAUSE OF THEIR IMPORTANCE IN THE GHANAIAN DIET, BUT ARE NOT INCLUDED IN THIS CABLE.

3. CALENDAR YEAR 1989 FOOD NEEDS ASSESSMENT. ALL DATA IN UNMILLED THOUSANDS TONS, UNLESS NOTED.

	MAIZE	RICE	WHEAT	SORG.	VEGOIL
A. PER CAP. REQ'T (KG)	38.7	11.8	8.5	15.4	2.0
B. X POPULATION	13700	13700	13700	13700	13700
C. - TOTAL REQ'T	428.4	161.8	116.9	224.4	27.3
D. GROSS DOM. PROD.	662.0	185.0	0	330.0	22.4
E. - NON-FOOD USES	198.0	21.0	0	99.0	0
F. - NET DOM. PROD.	462.0	84.0	0	231.0	22.4
G. - NET CHANGE IN STOCK	NA	NA	NA	NA	NA
H. - TOTAL EXPORTS	NA	NA	NA	NA	NA
I. - DOMESTIC SUPPLY	426.0	84.0	0	231.0	22.4
J. TOTAL REQ'T (ABOVE)	428.4	161.8	116.9	224.4	27.3
K. - DOMESTIC SUPPLY	462.0	84.0	0	231.0	22.4
L. - IMPORT REQ'T	(41.0)	77.8	116.9	(6.6)	5.4
M. - COMMERCIAL IMPORTS	0	15.9	100.0	0	.7
N. - FOOD DEFICIT	41.6)	61.9	16.9	(6.6)	4.7
O. FOOD DEFICIT-MILLED	(37.4)	39.0	12.2	(5.8)	4.7
P. - PLANNED FOOD AID	0	11.0	NA	0	5.2
Q. - UNCOVERED DEFICIT (MILLED)	37.4)	28.0	12.2	(6.6)	(0.5)

4. COMMENTS ON THE ASSESSMENT. LINE A, THE PER CAPITA REQUIREMENT, IS BASED ON A CALCULATION OF THE AVERAGE AMOUNT OF EACH COMMODITY CONSUMED PER CAPITA DURING THE BASE PERIOD, 1984-1988. HOWEVER, PER CAPITA CONSUMPTION OF WHEAT, AND TO A LESSER EXTENT, RICE, APPEARS TO BE INCREASING STEADILY. AS SEEN IN THE TABLE BELOW, A FIVE-YEAR AVERAGE WOULD MEAN THAT PER CAPITA CONSUMPTION OF WHEAT AND RICE WOULD ACTUALLY DECREASE FROM THE LEVELS IN THE PAST 2-3 YEARS.

	WHEAT	RICE
1984	4.7	7.6
1985	8.9	10.1
1986	[illegible]	[illegible]
1987	8.6	8.8
1988	12.5	12.7
FIVE YR. AVA.	8.5	11.8
LINEAR TREND	16.7	13.2

WHEN THE DEFICIT FOR WHEAT AND RICE IS CALCULATED USING THE LINEAR TREND FOR PER CAPITA CONSUMPTION (I.E. ASSUMING CONSUMPTION WILL AND SHOULD EXPAND ON THE SAME SCALE AS IN THE PAST FIVE YEARS), THE DEFICIT INCREASES SIGNIFICANTLY. THE RICE DEFICIT BECOMES 129,000 TONS (81,000 TONS IN MILLED TERMS) AND THE WHEAT DEFICIT BECOMES 81,000 TONS.

NOTE: PER CAPITA REQUIREMENT IS ONLY AN ESTIMATE OF CONSUMPTION, WHICH DOES NOT ACCOUNT FOR LOSSES IN THE MARKETING CHAIN AND CHANGES IN ON-FARM AND OFF-FARM STOCKS (FOR WHICH DATA ARE NOT AVAILABLE.)

LINE D. GROSS DOMESTIC PRODUCTION - 1989 TARGETS OF THE GOG. THE GOG IS THE ONLY SOURCE OF PRODUCTION DATA. VEGOIL PRODUCTION INCLUDES PALM OIL, SHEA BUTTER, GROUNDNUT AND COPRA

LINE G. NO DATA ON OPENING OR CLOSING STOCK BALANCES WERE AVAILABLE AT THIS TIME. ALTHOUGH THIS MEANS THAT THE REAL DEFICIT IS PROBABLY LOWER THAN REPORTED ABOVE, STOCK CONTRIBUTIONS WERE ALSO EXCLUDED FROM THE HISTORICAL ANALYSIS, SO AT THE LEAST, THE BIAS IS CONSISTENTLY CARRIED THROUGH.

LINE M. THE COMMERCIAL IMPORTS INCLUDE ONLY PLANNED OFFICIAL GOG PURCHASES. IN THE PAST FEW YEARS, PRIVATE TRADERS HAVE IMPORTED SIGNIFICANT AMOUNTS OF RICE AND WHEAT (IN 1987, 38,000 MT MILLED RICE AND 15,000 MT WHEAT FLOUR; IN 1988, 16,000 MT MILLED RICE AND 7,000 MT WHEAT FLOUR.)

LEVELS OF COMMERCIAL IMPORTS BY PRIVATE TRADERS REMAIN UNCERTAIN FOR 1989. THE SPECIAL UNNUMBERED LICENSES HAVE BEEN ABOLISHED AND TRADERS NOW MUST SECURE IMPORT DECLARATIONS FROM THE MINISTRY OF TRADE OR DESIGNATED BANKS. IN THEORY, THIS WOULD FACILITATE PRIVATE COMMERCIAL IMPORTS. HOWEVER, IT APPEARS THAT STRICT CONTROLS ON PAYMENT OF BACK INCOME TAXES COULD MADE

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PRIVATE IMPORTS MORE DIFFICULT. RICE PRICES ARE CURRENTLY VERY HIGH, BUT PRIVATE TRADERS ARE NOT RESPONDING DUE TO THE NEW IMPORT REGULATIONS, LOWER VALUE OF THE CEDI AND RUMORS OF THE IMMINENT ARRIVAL OF RICE FOOD AID FROM JAPAN (EXPECTED IN APRIL)

LINE P. PLANNED FOOD AID INCLUDES 4000 MT OF RICE FROM JAPAN, 7000 MT OF RICE FROM WFP AND 5125 MT OF VEGOIL FROM AID. WFP ORIGINALLY PLANNED TO IMPORT NEARLY 15,000 MT OF RICE, BUT SOME OF THIS IS EXPECTED TO BE REALLOCATED TO LOCAL PURCHASES OF MAIZE. LINE