

***ASSESSMENT OF FOOD IMPORT AND
FOOD AID AGAINST SUPPORT FOR
AGRICULTURAL DEVELOPMENT***

THE CASE OF GHANA

FOR

***FOOD AND AGRICULTURE
ORGANIZATION REGIONAL OFFICE
ACCRA - GHANA***

DRAFT REPORT

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EXECUTIVE SUMMARY

Ghana has remained a food deficit country for the past fifteen years. This deficit is mainly in cereals, meat, fish and fats and oils.

The production of root and tubers, industrial crops, fruits and vegetables have shown improvement in supply. Importation of cereals and food aid continue to feature in the total food supply.

The trend of support provided to the development of agriculture has not been adequate for the last fifteen years. However Ghana has potential to increase food production and becomes food secure in most of its food requirements if the right policies are put in place.

Commercial food imports and food aid imports are about 4.7% of national food consumption. Food aid distribution creates disincentive in production in the vulnerable areas therefore in the long run it should be discontinued to encourage production.

There are signs of policy initiative being pursued by the government that have proven effective on the agricultural growth front. This improvement is in the stabilization of the macroeconomic front.

Government through MOFA has also initiated Food & Agriculture Sector Development Policy (FASDEP) that seeks to address the major constraints facing agricultural sector. These are

- a) Promotion of selected products through improved access to markets
- b) Development of, and improved access to technology of sustainable natural resource management
- c) Improved access to agricultural financial services
- d) Improved rural infrastructure
- e) Enhanced human resource and institutional capacity.

The promotion of FASDEP and GPRS is meant to increase investment to improve choices and incentives to farmers to increase production.

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|---------|--|
| ADRA | Adventist Relief Agency |
| AFD | Agency Francais de Development |
| AFDB | African Development Bank |
| Ag SSIP | Agricultural Service Sub-sector Development Programme |
| CSIR | Council for Scientific and Industrial Research |
| DEP | Dependence |
| FAC | Food Assisted Child Survival |
| FNI | Food and Nutrition Intervention |
| FOB | Free on Board |
| FRO | Food and Agriculture Organization of the United Nation |
| GDP | Gross Domestic Project |
| GEPC | Ghana Export Promotion Council |
| GIDA | Ghana Irrigation Development Authourity |
| GLSS 4 | Ghana Living Standard Survey |
| GPRS | Ghana Poverty Reduction Strategy |

| | |
|-------|---|
| ISSER | Institute of Statistical Social and Economic Research |
| MCH | Maternal Child Care |
| MOFA | Ministry of Food and Agriculture |
| MOTI | Ministry of Trade and Industry |
| MTADP | Medium Form Agricultural Development Programme |
| PPMED | Policy Planning Monitoring and Evaluation Department |
| PS | Pre-School Feeding |
| SC | School Lunch Feeding |
| SN | Safety Net |
| SRID | Statistic, Research and Information Directorate |
| U.A | Unit of Account |
| US \$ | United State dollar |
| WFP | World Food Programme |

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1.0 Introduction

Ghana has an area of about 240,000 km² with a population of 20,485,690 in 2003 at an annual population growth rate of 2.7%. The population density is 85 persons per square meter. Land suitable for agriculture is about 13,629,000 or 57% of the total land area of Ghana. Land under cultivation in 2002 for the major crops was estimated at about 3.92 million hectares or 28.8% of total agricultural land. There is therefore no scarcity of agricultural land.

Ghana is well endowed with natural and human resources. The per capita Gross Domestic Product (GDP) was USD 447 in 2003. Ghana is classified as a low income, food-deficit country. The economy depends to a great degree on primary production and exports, mainly cocoa (22.5%) minerals (36.6%) and timber (8.8%). Agriculture accounts for about 36% of the Gross Domestic Product in 2002, 35.5% of foreign exchange earnings and directly employs 50.6% of the total labour force. The sector contributes 4.6% of tax revenue and 4.3% of total revenue.

The annual rainfall varies between 800 and 2400 mm generally decreasing from South to North and from West to East. Most lands are covered by poor fertility soils with poor physical properties with low organic matter content.

Ghana's overall performance in terms of agricultural production and productivity remains inadequate and Ghana has failed to make progress on the food security front. Average yields have remained stagnant. Commercial food imports and food aid constitute about 4.7% of food needs in the last fifteen years. The slow growth of agriculture is due to a combination of factors that reduce farmers' incentives to invest and produce. These include inappropriate policies, lack of technological change and poor basic infrastructure

Food security is defined as access by all people at all times to enough food for an active, healthy life.

1.1 Background

Descriptive and Explorative approaches were used in the assessment of food imports and food aid against support for Agricultural Development in Ghana.

Two methods of data collection were used

1 Literature Review- Literature in the form of Government Policy Statements, Budget Statements, The State of the Ghanaian Economy (1990-2002), GPRS, AGSSIP Document, FASDEP, A Handbook of Development, Trade, and the WTO, MTADP (1991-2000)

2 Secondary Data- Secondary data were collected from MOFA, MOTI, CEPS, CBS, NGOs (Catholic Relief Services, ADRA, etc) WFP FAO. Discussions were held with officials of these organizations

2.0 Description and Analysis of the Food Security Situation

2.1 Food Security Situation

The domestic production of food in 2002 overall was in deficit. Ghana was only 63% self sufficient in cereals production, 60% in fish production, 50% in meat production and less than 30% in raw materials for agro-based industries. Employs 47% of the economically active population in the year 2000. Root and tuber crops, the most widely used staple food crops contributed to about 34% of agricultural GDP in 1999. In the year 2002 roots and tubers were in surplus production. In fruits, Industrial crops, pulses and nuts Ghana is net exporter. In some vegetables e.g. Tinda, Pepper, Garden eggs and Condiments Ghana is self-sufficient and net exporters. Whilst in Tomatoes and Onions Ghana is a net importer.

Meat and fish production fall short of estimated national demand. The combined meat and fish production is about 67% of estimated annual demand of 681,000 metric tones (GLSS 4 2000). Fish provides about 20% of the protein requirements of Ghanaians. Annual average production for the last ten years is estimated at 437,000 metric tonnes that is about 60% of the potential demand. Production from traditional sources have steadily decreased because of over-exploitation of the fisheries resources within the 200/300 nautical miles exclusive economic zone. In the case of poultry production, the high import cost of feed and layers and the unrestricted importation of poultry products are the two main constraints restricting the sectors growth.

On the physical supply side of food sometimes inadequate and at times impassable road links between the urban and the rural areas creates situation of rural glut and urban scarcities in food. Also about 20-30% of production is lost due to the poor traditional post harvest management of food crops(MOFA, 2000). Losses of this magnitude have a positive effect on prices which in turn restrict access to food at the household level.

Growing urbanization (43.8% in 2000) has created slums in the cities where unemployment and low incomes appear to be the main constraint to increased calorie consumption. This state of affairs keep worsening with the years and the nutritional status of these city immigrants keep deteriorating each year. The rapid urbanization has increased the demand for imported food (Wheat and Rice) which in turn have helped to change the consumption patterns of urban dwellers from traditional staples to rice and wheat products.

Financial access to food is determined by a combination of income levels, its distribution and the purchasing power of the incomes earned. For example in the three northern regions where the highest malnutrition are recorded, low incomes appear to be the main constraint to increased calorie consumption. Adequate access to foods like meat and fish are restricted to relatively high income groups and households.

Protein energy malnutrition is widespread and serious nutritional disorder amongst children in Ghana. This condition is found to be more severe in the Western, Northern, Upper West and Upper East regions.

The main micro-nutrients malnutrition of importance are Iodine, Vitamin A and iron. Deficiency of these micro-nutrients leads to low productivity and may affect the mental and physical development of the individual. Iodine deficiency is prevalent in the Northern regions. Anemia is prevalent amongst pre-school children, pregnant and lactating women. Vitamin A deficiency is endemic in Northern Ghana. It is also prevalent in school children in Ghana.

2.2 Food Balance Sheet

The table 1 below gives the food balance sheet for the year 2002. Most of the available data gives the per capita supply data and the only available consumption data is found in the Ghana Living standard Survey Fourth Round (GLSS 4).

Table 1 :Domestic Food Supply and Demand Situation (2002)
2002 Population 19,947,118

| Food & Agricultural production | Total ('000Mt) Domestic Production | Available for Consumption ('000Mt) | Per Capita Consumption (kg/An) | National Consumption ('000Mt) | Surplus /Deficit |
|--------------------------------|------------------------------------|------------------------------------|--------------------------------|-------------------------------|------------------|
| Maize | 1,400 | 980 | 59.8 | 1193 | -213 |
| Rice | 168 | 135 | 27 | 539 | -404 |
| Millet | 159 | 111 | 6.2 | 124 | -13 |
| Sorghum | 316 | 221 | 9.3 | 180 | +41 |
| Wheat | - | 266 | 13.3 | 266 | -266 |
| Barley | - | 25 | 0.2 | - | -25 |
| Cassava | 9,730 | 6,810 | 219.4 | 4377 | +2433 |
| Yam | 3,900 | 3,120 | 37.84 | 755 | +2365 |
| Cocoyam | 1,860 | 1,490 | 33 | 658 | +832 |
| Sweet Potato | 90 | 100 | 4.6 | 92 | +8 |
| Plantain | 2,300 | 1,960 | 65.3 | 1302.6 | +998 |
| Banana | 100 | 90 | 4.1 | 82 | +8 |
| Groundnuts | 520 | 416 | 5.4 | 108 | +308 |
| Cowpea | 140 | 112 | 3.6 | 71.8 | +40.2 |
| Oil Palm | 242 | 218 | 10 | 199 | +19 |
| Coconut | 315 | 184 | 9.3 | 185.5 | -1.5 |
| Oils and Fats | 207 | 113 | 5.7 | 113.7 | -0.7 |
| Tomatoes | 217 | 172 | 12.52 | 250 | -78 |
| Pepper | 270 | 216 | 2.2 | 44 | +172 |
| Onion | 38 | 34 | 4.8 | 96 | -62 |
| Pineapples | 95 | 90 | 1.6 | 32 | +58 |
| Citrus | 264.8 | 185 | 6.6 | 132 | +53 |
| Sugar Cane | 140 | 129 | 6.5 | 129.7 | - |
| Okra | 100 | 80 | 3 | 60 | +20 |
| Meat | 74 | 74 | 9.3 | 186 | -112 |
| Fish | 378 | 378 | 24.8 | 495 | -117 |

Source : GLSS 4, MOFA (SRID),

The consumption survey indicates that the most important food consumption sub-groups , in terms of home consumption and cash expenditure are roots and tubers (22%), fish (16%), cereals and cereal products (15%), vegetables (9%) and meat (5%). Prepared meals account for 11% by value of total food consumption. The residents in rural areas consume more roots and tubers, and pulses and nuts than their counterparts in urban areas. Expenditure on alcohol and tobacco is also higher in rural areas. The consumption of meat and prepared meals are much higher in urban areas than in rural areas. Urban residents spend more on cereal and cereal products and poultry than their rural counterparts.

Table 2 : Mean annual per capita food consumption and food budget shares in 1999

| Group | Mean annual per capita expenditure | | | Food value (¢ billion) | Food budget share (%) |
|-------------------|------------------------------------|----------|-----------|---------------------------|--------------------------|
| | Cash (¢) | Home (¢) | Total (¢) | | |
| 1 Food&Beverage | 431,099 | 97,943 | 529,041 | 9,275 | 96.5 |
| Cereals | 66,349 | 14,196 | 80,545 | 1,412 | 14.7 |
| Roots & Tubers | 58,692 | 58,810 | 117,702 | 2,063 | 21.5 |
| Pulses & nuts | 17,386 | 5,189 | 22,575 | 396 | 4.1 |
| Vegetables | 39,353 | 7,068 | 46,421 | 814 | 8.5 |
| Fruits | 5,732 | 1,036 | 6,768 | 119 | 1.2 |
| Oils & Fats | 19,240 | 891 | 20,131 | 353 | 3.7 |
| Meat | 25,217 | 3,448 | 28,665 | 502 | 5.2 |
| Poultry | 14,784 | 2,815 | 17,599 | 309 | 3.2 |
| Fish | 85,201 | 4,480 | 89,680 | 1,572 | 16.4 |
| Milk | 9,363 | 9 | 9,372 | 164 | 1.7 |
| Spices | 8,821 | | 8,821 | 155 | 1.6 |
| Misc, foods | 9,771 | | 9,771 | 171 | 1.8 |
| Prepared meals | 57,380 | 1 | 57,380 | 1,006 | 10.5 |
| Beverages | 13,610 | | 13,611 | 239 | 2.4 |
| 2 Alcohol & Tobac | 18,557 | 444 | 19,001 | 315 | 3.5 |
| Total Food Cons. | 449,656 | 98,387 | 548,042 | 9,590 | 100 |

Source :GLSS4

Based on the food balance sheet in table 1 it is clear that Ghana is deficit in cereals, meat, fish, tomatoes and onions. If the situation does not change for the coming 5-10 years the deficit in cereals will worsen with the current population growth rate of 2.7%

The domestic shortfall of food production is supplemented by commercial food imports and food aid mainly cereals, meat, fish, sugar, oil, tomatoes, milk and alcoholic beverages. Due to the combined effects of local food production, commercial food imports and food aid, average daily calorie intake is about 2600 calories per caput (FAO 2001). The protein intake is about 54 grammas per day. This general picture mask the picture in urban slums and the rural vulnerable areas.

The total food imports (commercial and food aid) has been fluctuating over the years but from 1998 to 2002 the volumes have doubled. At the same time food aid imports in the early 1990's have been reducing by halve during the period 1998 to 2002 as shown in the table 3 below.

Table 3 : Ghana Total Food Supply (Production and Imports) in 000 Metric Tonnes (1988-2002)

| Source/Year | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|--------------|--------|--------|--------|---------|---------|---------|---------|---------|
| Production | 8904.7 | 8986.3 | 7050.0 | 13097.6 | 12262.7 | 13610.9 | 13598.0 | 15330.3 |
| Import | 420.0 | 332.9 | 436.9 | 538.2 | 587.0 | 543.4 | 644.6 | 430.4 |
| Aid | 74.8 | 81.8 | 101.0 | 191.0 | 87.3 | 119.2 | 100.4 | 44.7 |
| Sub-tot Imp. | 494.8 | 414.7 | 537.9 | 729.2 | 674.3 | 662.6 | 745.0 | 475.1 |
| Total | 9399.5 | 9404.7 | 7588.8 | 13826.8 | 12937.0 | 14273.5 | 14343.0 | 15805.4 |
| % of Aid | 0.8 | 0.9 | 1.3 | 1.4 | 0.7 | 0.8 | 0.7 | 0.3 |
| % of Com | 4.5 | 3.5 | 5.8 | 3.9 | 4.5 | 3.8 | 4.5 | 2.7 |
| % of Imp. | 5.3 | 4.4 | 7.1 | 5.3 | 5.2 | 4.6 | 5.2 | 3.0 |

| Source/Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------|---------|---------|---------|---------|---------|---------|-----------|
| Production | 16647.2 | 16663.4 | 17513.5 | 18865.0 | 19077.3 | 20159.3 | 20965.9 |
| Com. Import | 299.6 | 394.0 | 625.7 | 594.8 | 766.8 | 1,029.4 | 1,273.0 |
| Food Aid | 62.7 | 72.0 | 28.1 | 52.7 | 100.8 | 53.1 | 44.6 |
| Sub-tot Imp | 359.3 | 466.0 | 653.8 | 647.5 | 867.6 | 1082.5 | 1317.6 |
| Total | 17009.5 | 17129.4 | 18167.3 | 19512.4 | 19944.4 | 21241.8 | 22283.5 |
| % of Aid | 0.4 | 0.4 | 0.2 | 0.3 | 0.5 | 0.3 | 0.2 (0.6) |
| % of Com | 1.7 | 2.3 | 3.4 | 3.0 | 3.8 | 4.8 | 5.7 (4.0) |
| % of Import | 2.1 | 2.7 | 3.6 | 3.3 | 4.3 | 5.1 | 5.9 (4.7) |

Source: FAO, SRID (MoFA), WFP, ADRA, Catholic Relief, Technoserve
() Average percentage (%) for fifteen years

The capacity of Ghana to meet the ever increasing cost of food import bill is related to its foreign exchange earnings. Ghana's annual imports have generally exceeded US\$2 billion consisting mostly of food, fuel and energy and a variety of capital goods. Ghana's foreign exchange earnings for 2002 was US \$ 2.06 billion and agriculture sector contributed 35.5% whilst non-agriculture sector contributed 64.5% as shown in table 4. From 1988 to 2002 the average rate of growth of the total foreign exchange earnings was 6.7%.

Table 4 : Foreign Exchange Earnings by Agriculture and Non-Traditional Sectors
1988-2002 in Million US \$

| | Cocoa | | Timber | | Non-Traditional | | Non-Agriculture | | Total | |
|------|-------|------|--------|------|-----------------|-----|-----------------|------|-------|-----|
| | Value | % | Value | % | Value | % | Value | % | Value | % |
| 1988 | 462 | 52.4 | 106 | 12.1 | 42 | 4.8 | 270.4 | 30.9 | 881 | 100 |
| 1989 | 408 | 50.5 | 80 | 9.9 | 35 | 4.3 | 285 | 35.3 | 808 | 100 |
| 1990 | 361 | 40.3 | 118 | 13.2 | 29 | 3.2 | 387 | 43.2 | 896 | 100 |
| 1991 | 347 | 34.8 | 124 | 12.4 | 34 | 3.4 | 493 | 49.4 | 995 | 100 |
| 1992 | 303 | 30.7 | 109 | 11.0 | 22 | 2.2 | 526 | 53.3 | 986 | 100 |
| 1993 | 285 | 26.8 | 147 | 13.8 | 26 | 2.4 | 606 | 57.0 | 1064 | 100 |
| 1994 | 320 | 25.8 | 165 | 13.3 | 39 | 3.2 | 714 | 57.7 | 1238 | 100 |
| 1995 | 389 | 27.1 | 191 | 13.3 | 28 | 2.0 | 823 | 57.5 | 1431 | 100 |
| 1996 | 480 | 35.1 | 147 | 9.4 | 50 | 3.2 | 823 | 52.4 | 1570 | 100 |
| 1997 | 385 | 30.9 | 172 | 11.4 | 57 | 3.8 | 817 | 54.1 | 1490 | 100 |
| 1998 | 554 | 30.3 | 170 | 9.3 | 78 | 4.3 | 1028 | 56.2 | 1830 | 100 |
| 1999 | 550 | 26.2 | 174 | 8.3 | 85 | 4.1 | 1290 | 61.5 | 2099 | 100 |
| 2000 | 437 | 22.5 | 175 | 9.0 | 75 | 3.9 | 1254 | 64.6 | 1941 | 100 |
| 2001 | 381 | 20.4 | 169 | 9.1 | 82 | 4.4 | 1235 | 66.1 | 1867 | 100 |
| 2002 | 463 | 22.4 | 183 | 8.9 | 86 | 4.2 | 1335 | 64.5 | 2064 | 100 |

Source : Bank of Ghana Reports, The State of Ghanaian Economy

The foreign exchange earnings are based on Gold, Cocoa, Timber and Non-traditional Exports. The terms of trade for the two major exports Gold and Cocoa can make a lot of difference in the capacity of Ghana to support its imports. The unexploited potential for expansion in non-traditional exports if tapped would also improve the foreign exchange earnings of the country. From 1988 to 2002 the total food imports have been growing at an average rate of 5.25% per annum. On the basis of this the country can support its food import bill with the current rate of growth barring external shocks (prices of cocoa and gold). However the internal transaction cost of transporting food import/aid to reach the vulnerable groups at the household level is a problem due to high transportation and transaction costs. The low purchasing power and the isolation of

The vulnerable groups are mainly located in the northern and the rural coastal regions. The distance from the ports to the north makes the imported food uncompetitive to the local staples except when they are imported cheap. It can only be transported to the urban centers.

During periods of scarcity in the north food is normally distributed by the multiplicity of small scale merchants from the southern regions to the north. Normally surpluses of maize, fruits and starchy staples from the middle belt are transferred to the northern regions. Marine fish (local and imported) is generally transferred from the coastal regions to the north.

2.3 Maize

Maize is the most popular food crop in the domestic market. It fills in for other food crops like Sorghum, Millet, Plantain and Cocoyam when they are in short supply. It is the main feedstuff for poultry and other livestock. The responsibility for processing is about 90% by women. Improvement of processing would therefore empower women with income generating activity. Maize production has stabilised around 1 million tones per annum for the last six years as shown in the table 5 below. The average yield is 1.5 Mt per hectare and the potential yield is 5 Mt per hectare. Achievable yields are yields that have been achieved in isolated areas due to the application of technology. The potential to increase production of maize is so high that 50% increase in the present level of yields will eliminate most of the cereal imports. Maize can be processed into animal feed, flour, starch, oil, cornflakes and substitute for barley in brewing process.

Table 5 : Maize Production, Exports & Imports (Mt'000)

| Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------------|-------|-------|------|-------|-------|-------|-------|-------|
| Production | 1,034 | 1,008 | 996 | 1,015 | 1,015 | 1,013 | 938 | 1400 |
| Net Prod | 724 | 706 | 697 | 711 | 711 | 709 | 657 | 980 |
| Imports | 0.9 | 0.03 | 0.07 | 0.44 | 0.2 | 5.05 | 10.59 | 10.47 |
| Food Aid | 3.21 | 5.19 | 0.43 | 1.24 | 1.12 | 1.77 | 8.34 | 0.7 |
| CS Imports | - | - | - | 0.00 | 0.00 | 0.00 | 8.20 | 0.00 |
| Exports | 49.3 | 17.3 | 8.6 | 36.0 | 11.4 | 1.5 | 10.98 | 42.06 |
| Dom supply | 679 | 694 | 689 | 677 | 701 | 714 | 665 | 949 |
| Consumption | 945 | 1012 | 1040 | 1069 | 1099 | 1129 | 1161 | 1193 |
| Deficit/Surplus | -266 | -318 | -351 | -392 | -398 | -415 | -496 | -244 |

Source: SRID (MOFA), GEPC, MOTI, WFP

Ghana is not competitive in the world maize market place dominated by United States primarily because of high marketing costs, which renders a competitive product at the farm-gate, uncompetitive at the wholesale level. This is due to multiplicity and duplication of functions by a large number of small-scale buyers and sellers.

2.4 Other Grains

Sorghum and Millet are produced in the three northern regions and the total production in the year 2002 was 475,000 metric tonnes. Sorghum and millet are the staple foods of the vulnerable groups in the north. Table 8 gives the production and exports of sorghum and millet. The improvement of these grains will affect the food security situation in the northern regions where the vulnerable groups are located. Over the years there has not been any appreciable improvement in the yields of these crops.

Table 6: Sorghum & Millet Production, Imports & Exports (Mt'000)

| Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------|------|-------|-------|-------|-------|-------|-------|------|
| Sorghum | 360 | 353 | 332.5 | 355.4 | 302.0 | 279.8 | 280 | 316 |
| Millet | 209 | 193 | 143.5 | 162.3 | 159.8 | 169.4 | 134 | 159 |
| Total | 569 | 546 | 476.0 | 517.7 | 461.8 | 449.2 | 414 | 475 |
| Net Prod. | 398 | 382 | 333 | 362 | 323 | 314 | 290 | 333 |
| Export | - | 0.23 | 0.04 | 0.05 | 0.08 | 0.02 | 0.002 | 0.88 |
| Import | 1.64 | 2.44 | - | - | - | 0.82 | 4.04 | 5.14 |
| Dom Sup | 400 | 384.2 | 333 | 362 | 323 | 314 | 294 | 338 |
| Consump | 373 | 383 | 394 | 405 | 416 | 427 | 439 | 451 |
| Def/Surp | 27 | 1.2 | -61 | -43 | -93 | -113 | -145 | -113 |

Source: SRID (MOFA), GEPC

Despite the fact that Sorghum and Millet production has been showing a downward trend, small quantities of sorghum/millet are exported each year. The potential for intensive cultivation is not encouraging because average yields and achievable yields are so close (1.1kg. per hectare to 2kg. Per hectare) that the room for improvement is limited.

2.5 Rice

Rice is produced in all the regions except negligible quantities in the Central Region. It is now the third cereal grown in the country after maize and sorghum. Rapid population growth, urbanization, and relative ease of preservation and cooking have influenced the trend for more consumption of rice. However about 60% of the national production of rice is produced in the northern regions. Ghana is a net importer of rice. The rice produced in the country is consumed in the domestic market. Production cannot meet the domestic demand (Table 7).

The large-scale irrigation schemes are not competitive due to high investment costs. However inland valley small scale irrigation schemes are competitive due to lower investment costs.

Women did 92% of the processing responsibility. The processed rice cannot compete effectively with the imported product due to its quality that is mainly broken and stony. However there are few good mills with good quality product.

Table 7: Rice Food Balance ('000 Mt)

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|------|------|------|------|------|------|------|------|
| <i>Paddy</i> | 221 | 216 | 197 | 281 | 210 | 249 | 253 | 280 |

| | | | | | | | | |
|--------------------|------|------|------|------|------|-------|-------|-------|
| <i>Net Prod</i> | 133 | 130 | 118 | 169 | 126 | 129 | 152 | 168 |
| <i>Com Import</i> | 104 | 100 | 76 | 183 | 242 | 187 | 312 | 297 |
| <i>Food Aid</i> | 38 | 5.4 | 5.6 | 6.03 | 3.6 | 7.0 | 8.5 | 15.8 |
| <i>CS Import</i> | - | - | - | 0.0 | 3.6 | 0.63 | 0.0 | 1.7 |
| <i>Exports</i> | 0.0 | 1.8 | 0.22 | 0.14 | 0.7 | 1.42 | 1.58 | 0.25 |
| <i>Dom Supply</i> | 275 | 234 | 199 | 358 | 371 | 321.6 | 470.9 | 480.5 |
| <i>Consumption</i> | 445 | 457 | 470 | 483 | 496 | 510 | 525 | 539 |
| <i>Def/Surplus</i> | -170 | -223 | -271 | -125 | -125 | -188 | -54 | -58 |

Source: SRID (MOFA), GEPC

Rice domestic supply is constrained by low level of varietal support. For example 20 metric tonnes of foundation seed produced in 2002 by Grains and Legumes Development Board (GLDB) could produce 723 metric tonnes of certified seed in 2003. Therefore in the year 2004 the tonnage could plant 8,676 hectares, which is less than 8% of the rice area planted in the year 2002.

Rice yields are constrained by lack of training on rice culture especially in irrigated and valley bottomlands. Land and water management structures need to be incorporated for sustained production instead of the present rain fed production without flood control. About 80% of Ghana's rice is cultivated in the valleys. Expansion of production is also constrained by lack of combine harvesters to harvest the crop at the right time to prevent farms being devastated by bush fires.

There are numbers of development projects being fielded by MOFA to support rice development. These are:

- *Lowland Rice Development Project, MOFA, AFD, 1999-2004, UA\$2.66M*
- *Small Scale Irrigation Project 2590 ha MOFA/GIDA, AfDB, 2000-2005, UA15M*
- *Inland Valley Rice Project, MOFA, AfDB, 2001-2006, UA17M (2500 ha)*
- *Kpong Irrigation Development Project, MOFA/GIDA, AfDB, 1994-2003, UA24.32M*
- *Special Programme for Food Security, MOFA, FAO, 2002-2003*
- *Small Scale Irrigated Agriculture, GIDA, JICA, U\$0.93M*

They are meant to substitute for some of the imports of rice.

2.5 Wheat

Ghana do not produce wheat but imports all the wheat consumed in the country. Wheat which was previously eaten in the urban areas has now spread to the rural areas. It is slowly changing the consumption patterns of the majority of the population especially the educated.

Table 8 : Wheat Food Balance ('000 Mt)

| | | | | | | | | |
|--|------|------|------|------|------|------|------|------|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--|------|------|------|------|------|------|------|------|

| | | | | | | | | |
|-----------------|-------|-------|--------|-------|-------|-------|-------|-------|
| Net Production | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Comm Imports | 30.3 | 97.4 | 219.6 | 484.9 | 181.7 | 196.7 | 168.8 | 182.7 |
| Food Aid | 51.0 | 30.5 | 50.5 | 40.7 | 49.0 | 67.2 | 35.9 | 58.0 |
| Exports | 0.05 | 0.0 | 0.04 | 0.0 | 9.0 | 0.0 | 2.7 | 2.2 |
| Total Supply | 81.35 | 127.9 | 270.14 | 525.6 | 239.7 | 263.9 | 207.4 | 242.9 |
| Consumption | 234 | 238 | 243 | 247 | 250 | 256 | 260 | 266.3 |
| Deficit/Surplus | -152 | -110 | 27 | 279 | 10 | 18 | -53 | 23 |

Source : MOFA (SRID)

2.6 Legumes

In the savannah zone the second major crop after maize in terms of sales is groundnut. Table 9 presents households harvesting legumes, total harvest and sales. Sixty-three percent (63%) of the groundnut households sell unprocessed crop whilst forty-one percent (41%) of bean households sell unprocessed crop. They have industrial potential for oil and livestock feed supplement. They are important as substitutes and supplements for animal protein.

Table 9: Households Harvesting Legumes, Total Harvest & Sales in 1998/99

| Crop | Household (No.) | Harvest (¢b) | Sales (¢b) |
|-----------|-----------------|--------------|------------|
| Groundnut | 604,100 | 146.1 | 60.2 |
| Beans | 463,800 | 43.1 | 18.5 |

Source: GLSS 4, (¢b-¢billion)

Twenty thousand households shelled groundnuts at an estimated cost of ¢14.2 billion yielding a sales value of ¢24.5 billion in 1998/99. The legumes are produced primarily for domestic consumption but minor quantities of beans and soyabeans are exported. Ghana is a net importer of cowpeas. Soya bean meal is imported for livestock feed. In the savannah zone groundnut and soyabeans are grown mainly as cash crops.

Data on soybean production is lacking however in some districts of the eastern corridor of the northern region the cropped area under soybean was more than that of groundnuts. The problem with Soya bean is lack of market. The strategy is to promote the crop in mixed cropping with sorghum and millet to improve productivity. The emphasis will be on processing and marketing.

2.7 Starchy Staples

Starchy staples consisting of Cassava, Yam, Cocoyam and Plantain were produced primarily for consumption as local staples and traded on the local markets. However for the past ten years marketable surpluses have been sold on regional and international markets. Recently sweet potato is increasing in importance as a staple. Table 10 gives an estimated number of households harvesting various starchy staples, value of harvest and sales.

Table 10: Households Harvesting Starchy Staples, Total Harvest & Sales in 1998/99

| Crops | Households (No.) | Harvest (¢billion) | Sales (¢billion) |
|---------|------------------|--------------------|------------------|
| Cassava | 1,517,000 | 562.8 | 120.6 |
| Yam | 945,000 | 223.0 | 51.1 |

| | | | |
|----------|---------|-------|-------|
| Plantain | 942,000 | 401.6 | 173.0 |
| Cocoyam | 866,000 | 159.4 | 39.0 |
| Potatoes | 78,000 | 33.3 | 18.2 |

Source: GLSS 4

Cassava and plantain has even pattern of harvesting with peaks around the end of the year. Yams and Cocoyams display a strong seasonal pattern of harvesting with most Yams and Cocoyams harvested around the end of the year. Cassava production has been stable over the years. Cassava's chief advantage is a source of cheap carbohydrate and grows reasonably well on soils of low fertility where production of other crops would fail. Cassava is the largest agricultural commodity in Ghana and in 2002 production was almost 10 million tones. It represents about 23% of agricultural GDP. Cassava produces a higher amount of food calories per hectare than do most other tropical crops. Cassava is highly versatile and it can be eaten in various forms after processing. For example,

- Fresh for 'Fufu'
- Dried and ground into 'Konkonte' powder or flour.
- Cassava dough for 'Akple' & Banku.
- Grated and roasted into 'Gari'.
- Converted into 'Tapioca' and 'Atseke'
- Processed into chips and dried.
- Processed into starch

Cassava flour and Gari processing is about 90% women responsibility. In 1999 an estimated 114 thousand households processed cassava with an estimated cost of ¢43.6 billion yielding an estimated sales value of ¢65.4 billion. Cassava is susceptible to price collapse at harvest time and often cassava is left in the soil to rot.

The food security role of cassava is widely attributed to its availability during times of food shortage. The crop has increasingly become an important source of cash income as well. Intensification offers a greater scope for increased production and enhancing the financial attractiveness of the crop at the farm level. It will also make exported cassava in the form of chips or pellets and other forms internationally competitive.

Yams dominate the export of vegetables in Ghana. About 13,000 tonnes were exported in 2002. Ghana's yams are considered a high quality origin. There was a marked reduction of yam production in 1999 but production picked up in the year 2000.

Presently with the progress made in improving yields, controlling of pests and diseases and the continuing support to seed technology (minisett), yam production can yield surpluses. The table 11 below gives the trend of production of starchy staples.

Table 11: Production of Starchy Staples in 1995-2000 (Mt'000)

| Crop/Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cassava | 6,611 | 7,111 | 7,000 | 7,172 | 7,845 | 8,107 | 8966 | 9731 |
| Yam | 2,126 | 2,275 | 2,408 | 2,703 | 1,701 | 3,363 | 3547 | 3900 |
| Plantain | 1,637 | 1,823 | 1,818 | 1,913 | 2,046 | 1,933 | 2074 | 2279 |
| Cocoyam | 1,408 | 1,552 | 1,530 | 1,577 | 3,249 | 1,625 | 1688 | 1860 |
| Potatoes | - | 96 | 70 | 92 | 91 | 89 | 87 | 95 |
| Total | 11,772 | 12,857 | 12,826 | 13,457 | 14,932 | 15,217 | 16,299 | 17,865 |

Source: MoFA

These crops are staples in the diet of Ghanaians and ready market thus exist in the country. However limited quantities of plantain and cocoyam are imported from Cote d'Ivoire. The generic problems for the expansion of these staples are;

- Poor state of rural roads network
- Inadequate market facilities and support services
- Weakness of rural financial markets

The table 12 below gives an indication of export of starchy staples from Ghana.

Table 12:Exports of Starchy Staples (Mt'000)

| Crop/Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------|-------|-------|-------|-------|-------|-------|------|-------|
| Yams | 6.87 | 8.09 | 7.08 | 7.42 | 9.76 | 12.46 | 9.63 | 13.03 |
| Cassava fresh | 0.003 | 0.002 | 0.033 | 0.013 | 0.035 | 0.004 | .015 | 0,001 |
| Cassava chips | - | 18.32 | 17.45 | - | 7.25 | - | - | - |
| Cassava dough | - | 0.11 | 0.12 | 0.35 | 0.18 | 0.26 | 0.16 | 0.24 |
| Gari | - | 2.26 | 4.20 | 1.27 | 1.28 | 1.8 | 1.4 | 2.2 |
| Plantain | 1.86 | 3.30 | 4.53 | 0.51 | 0.47 | 0.5 | .59 | .93 |
| Cocoyam | - | - | - | 0.11 | 0.11 | 0.12 | .17 | .22 |
| Sweet Potato | - | - | - | - | - | - | -- | 0.021 |

Source: GEPC

Prospects for yam exports are good. Increasing tonnages of yams have been exported from Ghana to countries like USA, UK, Netherlands, Germany, Italy, Canada and France where large populations of African immigrants live and work.

There is a roots and tubers improvement project, which seeks to improve productivity of root and tuber crops, by priority investment in improved technologies. This coupled with the development and opening up of marketing channels and access to markets would increase supplies of starchy staples. Sweet Potatoes a recent introduction in the Upper East Region is improving considerably from a production level of 58,000 tonnes in 2001 it increased to 76,000 tonnes in 2002. It is therefore helping the food security situation in the region.

2.8 Fruits

Table 13 presents data on households producing various fruits and their total harvest and sales. Fruits have been also produced mainly for consumption however recently they are major contributors to non-traditional exports.

Table 13: Estimated households Harvesting Fruits, Total harvest and Sales in 1998/99

| Crop | Households (no.) | Harvest (¢b) | Sales (¢b) |
|-----------|------------------|--------------|------------|
| Pineapple | 313,000 | 9.9 | 3.5 |
| Pawpaw | 494,000 | 6.6 | 0.5 |
| Banana | 345,000 | 20.4 | 10.0 |
| Oranges | 365,000 | 16.5 | 10.1 |
| Mangoes | 292,000 | 8.7 | 0.9 |
| Kola nut | 52,000 | 4.3 | 3.6 |
| Avocado | 418,000 | 11.2 | 4.1 |

Source: GLSS 4 (¢b= ¢billion)

Pineapple is mainly produced in the five regions of the country that is Central, Eastern, Western, Brong-Ahafo and Greater Accra. The export pull is producing a number of producers from the large-scale growers/exporters to the very small-scale commercial growers.

Table 14 presents estimated production of some of the non-traditional export fruits with MOFA projected production. Production trend is on the increase for all the selected fruits.

Table 14: Production of Selected Non-Traditional Crops (Mt'000)

| Crop/Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|------|------|------|------|------|------|
| Pineapple | 82.4 | 84.9 | 87.4 | 99.0 | 93 | 96 |
| Pawpaw | 64.2 | 66.7 | 69.4 | 72.2 | 75 | 78 |
| Mangoes | 5.8 | 6.7 | 7.7 | 9.0 | 10.4 | 11.9 |
| Cashew | 2.0 | 2.6 | 3.5 | 4.7 | 6.2 | 7.6 |
| Black Pepper | 1.5 | 1.6 | 1.6 | 1.7 | 1.7 | 1.8 |

Source: PPMED, MOFA

Supporting the large-scale growers with market linkages in the U.S and Europe for pineapples, pawpaw, banana, mangoes, can exert a further pull that can help increase the supply base. Table 15 presents exports of fruits from Ghana. The larger exporting enterprises are better able to tackle quality assurance systems mainly aiming for the EurepGAP certification.

Table 15: Fruits Export From 1995 to 1999 (MT'000)

| Crop/year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Pineapple | 15.76 | 27.60 | 25.12 | 21.94 | 33.44 | 28.51 | 34.93 | 46.39 |
| Cut Pineapple | - | - | - | - | - | 1.4 | 2.5 | 3.2 |
| Pawpaw | N.A | 0.95 | 1.44 | 0.94 | 1.78 | 1.75 | 1.79 | 1.47 |
| Banana | N.A | N.A | N.A | 2.91 | 3.38 | 3.88 | 3.25 | 3.23 |
| Oranges | 0.15 | 0.56 | 0.33 | 0.45 | 0.71 | 1.24 | 1.34 | 15.21 |
| Mangoes | 0.03 | 0.04 | 0.08 | 0.14 | 0.17 | 0.27 | 0.23 | 0.13 |
| Cashew | 0.29 | 0.54 | 3.57 | 1.18 | 5.57 | 3.56 | 0.42 | 3.89 |
| Lime/Lemon | 0.01 | 0.03 | 0.22 | 0.24 | 0.07 | 0.73 | 0.78 | 1.3 |
| Kola nut | 9.92 | 10.94 | 7.67 | 5.75 | 9.34 | 6.41 | 6.44 | 11.56 |

Source: GEPC

Production and marketing of banana in Ghana is not well developed. Volta River Estates limited (VREL) is the only company that produce banana in commercial quantities. The company supplies the domestic, regional as well as the international markets. The export trend is on the increase.

Cashew is being supported by NGO's such as World Vision International, AMEX, ADRA, Ricerca, Cooprazione and TechnoServe and the crop has shown tremendous progress in both production and exports. The potential of the crop as a good, environmental friendly agro-forestry crop is tremendous. There is an on-going Cashew development project which seeks to double the present plantation of 18,000 ha to 36,000 ha.

The fresh orange market has been expanding recently particularly to the West African sub region. The market is highly seasonal and the producers are at the mercy of the few exporters. Citrus is a crop that is coming up in the Eastern and Central regions. An innovative area is to determine the factories capacity to cover the plantations in the area and develop a new facility for processing of the crop

Kola nuts are grown in the forest regions of Ghana. The domestic demand is limited by the fact that the Muslim population who constitute about 12% of the population mainly uses it. Kola is therefore an export crop. The West African market is the biggest market for Ghana's fresh kola. Saudi Arabia is a major market for fresh Kola. The U.S and other European markets are for dry Kola. The export trend seems to be increasing, however supply is constrained by a number of factors, which are as follows,

- It is a buyers market where traders determine prices.
- Fresh Kola cannot be transported by sea. Sub-Regional exports are by road and exports to Saudi Arabia from Nigeria are by air.
- Lack of standard prices and measures.
- The bulk of Ghana's export about 90% is channeled through Nigeria in transit to Saudi Arabia. Transit duties and countless barriers are physical and financial limitations.

2.9 Vegetables

Table 16 presents households production, market supply and value of sales of vegetables. The cultivation of pepper is by about 50% of households operating a farm. The crop is harvested extensively in all the ecological zones. It is grown basically for domestic consumption and the marketable surplus is about 22% of annual production. The exports of pepper are increasing annually. There is the potential for export and paprika is the latest introduction.

Table 16: Estimated households Harvesting Vegetables, Total Harvest & Sales in 1999

| Crops | Households (No.) | Harvest (¢b) | Sales (¢b) |
|-------------|------------------|--------------|------------|
| Pepper | 1,264,000 | 75.2 | 16.8 |
| Onion | 153,000 | 104.0 | 84.2 |
| Okro | 814,000 | 34.3 | 11.6 |
| Tomatoes | 730,000 | 61.5 | 31.3 |
| Garden Eggs | 407,000 | 60.4 | 11.8 |
| Leafy Veg. | 696,000 | 15.1 | 3.7 |

Source: GLSS 4 (¢b=¢billion)

Onion production is concentrated in the savannah and forest zones and the marketable surplus is about 80% of production. Ghana is a net importer of onions mainly from the Sahel region. Conversely smaller quantities of onions are exported each year. The potential to increase production is in the upper east region.

Okra, Tomatoes and Garden eggs are also primarily concentrated in the forest and the savannah zones. Okras marketable surplus is about 34% of annual production. Okras exports have declined since 1997 however the potential to export more is still there.

About 50% of tomatoes annual production is marketed and Ghana is a net importer of tomatoes. The imports are mainly processed products (puree, canned etc.) whilst Ghana exports fresh tomatoes. The fresh tomatoes exports have also declined since 1996.

The marketable surplus for garden eggs is about 20% of the annual production. Garden eggs exports are on the ascendancy as shown in table 17.

Table 17: Vegetable Exports From 1995 to 1999 (tonnes)

| Crops/Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|------------|------|------|------|------|------|------|------|------|
| Pepper | 121 | 732 | 1420 | 2088 | 2420 | 2819 | 5281 | 4687 |
| Onion | - | 29 | 25 | 75 | 39 | 58 | 46 | 58 |
| Okra | - | 44 | 392 | 38 | 56 | 64 | 67 | 65 |

| | | | | | | | | |
|------------|------|------|------|------|------|------|------|------|
| Tomatoes | 130 | 1814 | 817 | 534 | 471 | 2033 | 4539 | 4961 |
| Egg Plant | - | 513 | 1018 | 1184 | 1338 | 1080 | 1295 | 1512 |
| Tinda | - | - | 822 | 879 | 878 | 1126 | 1256 | 1137 |
| Condiments | 1741 | 2319 | 625 | 495 | 389 | 980 | 988 | 1548 |

Source: GEPC

Tinda is a green leafy vegetable that is produced primarily for export. Tinda is produced in the irrigated areas around Accra. Exports of Tinda has stabilised in the last three years.

Most of the non-traditional exports have comparative advantage in production but they are constrained by poor product quality, price undercutting and poor timing of harvest. There is the need for an improved export-driven support for all non-traditional export vegetables. These include watermelon, green beans, ginger, cucumber and lettuce.

2.10 Industrial Crops

Table 18 presents the production of industrial crops. The trend is a general increase in production, however Coffee is showing a decline of production.

The priority crops in the forest belts are tree crops. Cocoa is the first priority followed by oil palm, citrus, coconut and coffee. The area for innovative intervention is in cocoa purchasing. The policy now is open market purchases. Few farmers requested that they could be organized to form equity groups to purchase their own produce and sell to cocoa marketing board.

Table 18: Production of Industrial Crops 1995 to 1999 (Mt'000)

| Crop/Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|----------------|-------|-------|-------|--------|--------|--------|--------|
| Cocoa | 403.0 | 322.5 | 409.4 | 397.7 | 436.6 | 389.6 | 340.6 |
| Coffee | 6.3 | 2.9 | 8.4 | 4.0 | 2.0 | 1.4 | 1.5 |
| Seed Cotton | 17.7 | 25.0 | 33.8 | 38.1 | 35.5 | 17.5 | 18.3 |
| Tobacco | 2.0 | 2.0 | 2.4 | 2.6 | 2.5 | 1.2 | 2.2 |
| Oil Palm (FFB) | 901.2 | 984.4 | 955.5 | 1022.0 | 1031.9 | 1066.4 | 1102.1 |
| Sheanut | 22.7 | 21.5 | 34.9 | 17.5 | 30.8 | 19.9 | 27.2 |

Source: PPMD, MOFA

Table 19 presents the exports of industrial crops. Cocoa, Coffee and Cotton shows an expanding trend. Sheanut exports show a stable trend. Sheanut collection is market driven and is a factor of the number of purchasing agents. Oil palm exports have been reducing over the last two years mainly through the products from the large-scale mills.

Table 19: Exports of Industrial Crops (Mt'000)

| Crop/Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------|-------|-------|-------|-------|-------|------|------|-------|
| Cocoa | 154.5 | 373.7 | 261.3 | 327.3 | 346.8 | 348 | 310 | 350 |
| Coffee | 0.96 | 0.87 | 3.14 | 6.81 | 6.65 | 6.74 | 3.04 | 1.33 |
| Cotton Seed | 5.51 | 5.72 | 6.66 | 4.40 | 17.70 | 6.41 | 6.44 | 11.56 |
| Palm Oil | 12 | 14.9 | 16.8 | 29.4 | 22.0 | 24.6 | 7.5 | 7.7 |
| Sheanut | 14.6 | 21.5 | 32.2 | 32.8 | 32.1 | 36.0 | 45.3 | 27.6 |

Source: GEPC, The State of National Economy

The horticultural export sector has progressed in a number of areas over the last ten years. There are success stories in the development of :

- Sea freighted pineapples from 16,000 t in 1995 to 46,000 t in 2002
- Sales to Europe of asian vegetables
- Fresh produce processing (fresh-cut fruits and juicing)
- Fresh produce sales in local and regional markets (Oranges).

The positioning of Ghanaian products in the European markets is weak. The competitive strategy is dictated by others in the market. Success to date is dependent on low comparative costs. The role of government to support and co-ordinate investment in the industry is critical.

2.11 LIVESTOCK

It is estimated that about 1.5 million households in Ghana during 1999 own livestock. Livestock are concentrated predominantly in the rural savannah followed by rural forest. The combined total value of all these livestock is about ₵3,574 billion, sales of livestock in the year was about ₵257.5 billion, and purchases amounted to about ₵37.8 billion table 20.

Table 20: Households Raising Livestock, Estimated Value, Sales and Purchases in 1998/99

| Type | Household (No.) | Value (₵m) | Sales (₵m) | Purchases (₵) |
|---------------|-----------------|------------|------------|---------------|
| Draught | 75,000 | 62,200 | 2,700 | 4,200 |
| Cattle | 176,000 | 470,000 | 19,700 | 11,500 |
| Sheep | 502,000 | 171,000 | 18,400 | 3,300 |
| Goat | 812,000 | 172800 | 21,500 | 3,200 |
| Pigs | 168,000 | 78.700 | 9,400 | 1,900 |
| Rabbit | 8,000 | 600 | 70 | 30 |
| Chicken | 1.164,000 | 2,410,100 | 66,900 | 12,300 |
| Other poultry | 291,000 | 20,000 | 5,000 | 300 |
| Fish | 51,000 | 186,600 | 113,300 | 1,00 |
| Crab | 11,000 | 300 | 300 | - |
| Milk | 1,000 | 100 | - | - |
| Milk products | 7,000 | 1,500 | - | - |
| Eggs | 121,000 | 4,000 | - | - |
| Hides, Skin | 2,000 | 300 | - | - |
| Others | 25,000 | 1,100 | 90 | 24 |
| Total | 1,541,000 | 3,574,000 | 257,500 | 37,800 |

Source: GLSS 4

The dominant livestock are cattle, sheep, goats and poultry. Ghana imports live animals to supplement the domestic production. Table 21 shows live animal imports in 1998 and 1999. Ghana imports significant quantities of meat to supplement domestic production.

Table 21: Number of Live Animal Imports in 1998 and 1999

| Livestock | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|-----------|------|--------|--------|--------|--------|--------|--------|
| Cattle | 252 | 16,105 | 57,411 | 71,377 | 55,681 | 72,468 | 74,551 |
| Sheep | 99 | 4,989 | 8,082 | 12,648 | 9,545 | 26,406 | 25,483 |
| Goats | 17 | 5,212 | 9,176 | 16,522 | 10,709 | 58,265 | 38,259 |

| | | | | | | | |
|---------|---|---|---|--------|--------|-----------|---|
| Pigs | 1 | 0 | 0 | 0 | 100 | 1,830 | 0 |
| Poultry | | 0 | 0 | 48,816 | 47,700 | 2,419,039 | 0 |

Source: LPIU, MOFA

Table 22 gives an indication of meat imports in 1998-2002. Pork and chicken imports are rising while all other meat imports are declining. This indicates that there is a big gap in the supply and demand of meat on the domestic market.

Table 22: Meat and Milk Imports in 1998 and 1999 (Mt.)

| Meat Type | 1998 | 1999 | 2000 | 2001 | 2002 |
|----------------|--------|--------|--------|----------|----------|
| Beef | 1,442 | 2,568 | 869.5 | 154.2 | 1063.5 |
| Chicken | 7,291 | 10,766 | 9162.1 | 30,263 | 19,986 |
| Milk products | 10,101 | 7,407 | 1880.8 | 1548.5 | 865.5 |
| Turkey meat | 2,241 | 1,491 | 385.9 | 74.1 | 766.3 |
| Pork | 758 | 772 | 358.1 | 1,166.1 | 7,737.5 |
| Others | 1,215 | 696 | 301.8 | 478.2 | 1285.0 |
| Processed meat | - | - | 106.8 | 80.4 | 133.9 |
| Total | 23,048 | 23,700 | 13,065 | 33,764.5 | 31,837.7 |

Source: LPIU, MOFA

The main constraints for increasing supply are the low level of technology, lack of improved breeding stock, poor nutrition, lack of capital and poor marketing systems. Addressing these constraints will increase the supply base.

Table 23: Meat Availability ('000 Mt)

| Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Production | 56.4 | 55.3 | 60.4 | 62.7 | 66.9 | 66.3 | 68.1 | 73.9 |
| Others | 28.2 | 27.7 | 30.2 | 31.1 | 33.5 | 33.2 | 33.3 | 33.4 |
| Import Meat | 20.0 | 20.0 | 22.4 | 13.7 | 32.1 | 30.0 | 33.8 | 31.8 |
| Import Live | 0.03 | 2.2 | 7.4 | 9.4 | 7.3 | 12.7 | 10.2 | - |
| Total | 104.6 | 105.2 | 120.0 | 117.2 | 139.8 | 142.2 | 121.5 | 137.8 |
| Per Capita Supply(kg/h | 6.5 | 6.2 | 6.6 | 6.2 | 7.4 | 7.0 | 6.0 | 7.0 |

Source : LPIU, MOFA (SRID)

Milk and milk products are mainly produced for home consumption, very little goes into sales. The demand for milk and milk products has increased recently around the urban centres. In the Ashanti Region, milk production has proved so popular that three milk producer associations are operating. In the Greater Accra Region cattle farmers have also showed interest in milk production. FAO is supporting MOFA in hygienic milk production in the peri-urban areas of Accra.

2.12 FISH

Fish production in Ghana is primarily dependent on a large number of artisanal and canoe fishermen who operate about 10,000 canoes. They are responsible for 80% of marine fish landings and practically all of the lake fish landings. The rest is by industrial vessels. Tuna fishing is increasing in importance. Aquaculture is of recent introduction but it is catching up around dams, lakes and ponds. Marine fishing has been declining as a result of over exploitation of the small pelagics, resulting in significant reduction in spawning stock biomass. Table 24 gives the production, imports and exports of fish.

Table 24: Fish Production, Imports and Exports (MT'000)

| Source/Yr. | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|------------|-------|-------|-------|-------|-------|------|------|------|
| Marine | 336 | 378 | 377 | 336 | 384 | 380 | 366 | 290 |
| Inland | 65.5 | 74 | 94.4 | 116.2 | 75 | 88 | 88 | 88 |
| Total | 482 | 452 | 481.4 | 452.2 | 459 | 460 | 454 | 378 |
| Imports | 2,2 | 1.0 | - | 17.1 | 74.6 | 186 | 186 | 190 |
| Exports | 8.8 | 13.5 | 12.5 | 16.4 | 24.5 | 88 | 52 | 60 |
| Dom Supply | 475.4 | 439.5 | 468.9 | 452.9 | 509.1 | 558 | 588 | 628 |

Source: Fisheries Directorate, MOFA, and GEPC

Fish processing is the primary responsibility of women. Seventy one thousand (71,000) households processed fish in 1999 with an estimated annual cost of ¢135.5 billion yielding ¢386 billion in annual sales. Fish processing is the most important processing activity in terms of value of sales in all the agricultural processing activities.

Ghana has seen strong growth in non-traditional crops, especially tropical fruits and vegetables in the last five years. Fish exports has also seen strong growth in the last five years. Making better use of Ghana's agricultural potential would require giving its farmers more options and better incentives to develop crops and aquaculture that have emerged in the last ten years and others with potential for growth.

Access to infrastructure, technology, regional and international markets and quality control systems will be critical. This would improve storage, enhance processing and marketing of agricultural commodities, increase the volume of non-traditional exports, improve land use and increase intensity of production.

3.0: Evolution and Trends of Support Provided to Agriculture

The agricultural sector is made up of five sub-sectors which are crops other than cocoa (60%of Agriculture GDP), Cocoa (14%), Livestock (4%), Fisheries (5%) and Forestry. The non-cocoa sector includes: cereals (maize, rice, sorghum and millet); roots and tubers (cassava, yams, cocoyam and sweet potatoes); industrial crops (tobacco, cotton, kola nuts, oil palm, rubber, groundnuts, copra, cashew, soybean, groundnuts and sugar cane; horticultural crops (pineapples, mangoes, peppers, onions, ginger, lime, oranges and exotic vegetables) and other crops (plantain, banana, beans, tomatoes, pawpaw etc.). The cocoa sector includes cocoa, coffee and sheanuts. The fisheries sub-sector includes marine and fresh water products (tuna, shrimps, tilapia, mudfish, lobsters, herrings etc.). The livestock sub-sector includes cattle, sheep, goats, pigs and poultry. The forestry sub-sector includes well-known tropical species (odum, mahogany etc) and lesser-known secondary species.

Table 25 : Contribution of Sub-sectors to Agriculture

| Crop Group | Annual value | % |
|------------------|--------------|------|
| Cereals | 769.1 | 18.8 |
| Roots & Tubers | 1380.1 | 33.8 |
| Cocoa | 809.4 | 19.8 |
| Vegetables | 352.9 | 8.7 |
| Pulses & Nuts | 203.1 | 5 |
| Fruits | 169 | 4 |
| Hunting, Wine | 71.5 | 1.8 |
| Industrial Crops | 68.6 | 1.7 |
| Livestock | 143.9 | 3.5 |
| Fisheries | 113.6 | 2.8 |
| Total | 4081.2 | 100 |

Source :GLSS4

Agriculture is predominantly on a smallholder basis on family-operated farms using rudimentary technology to produce about 80% of the total agricultural production. It is estimated that about 2.74 million households operate a farm or keep livestock. In the year 2000, out of a population of 18.9 million the rural population was 10.64 million (56.2%). The total labour force in the same year was 8.3 million and agriculture accounted for 4.2 million (50.6%). About 90% of farm holdings are less than 2 hectares in size. There are some large scale farms and plantations especially for oil palm, rubber and coconut and to a lesser extent, maize, rice and pineapples. Agricultural production is dependent on the amount and distribution of rainfall. Most food crop farms are intercropped. Mono cropping is mostly associated with large scale commercial farms.

The GLSS4 survey indicated that an estimated 6000 out of approximately 2,740,000 farm-households nation-wide used irrigation in 1999. It also revealed that 20% of households use fertilizer and about 10% purchase seeds for planting. It is estimated that fertilizer use is about 8kg per hectare which is very low. Estimates indicate that average yields of crops are about 20 % of achievable yields in the major crops.

Generally increases in production have been achieved primarily by farmers using extensive methods (land and labour) and only secondarily by intensive farming methods (seeds, fertilizer, etc.). Fertilizer usage for the whole country which averages 34,000 metric tones per annum for the last ten years is one of the lowest in Africa. Total area under irrigation is around 11,000 hectares in 2002 while the area under inland waters is 1.1 million hectares. GIDA identified 12,820 hectares of under- developed inland valleys throughout the country.

3.1 Agricultural Performance

During 1988-2002, Agricultural growth rate averaged 3.1 percent and during the same period population growth rate was 2.7 % per annum which meant that the real growth rate was only 0.4 percent. The average growth of agriculture was less than other sectors of the economy, industry was 4.4 percent whilst services was 6 percent (Table 26).

Table 26 : Agricultural and Other Sectorial Growth 1988-2002

| Year | Agriculture | Services | Industry | All |
|---------|-------------|----------|----------|-----|
| 1988 | 3.6 | 7.8 | 7.3 | 5.6 |
| 1989 | 4.2 | 5.8 | 4.1 | 5.1 |
| 1990 | (2.0) | 8.8 | 5.4 | 3.3 |
| 1991 | 4.7 | 6.3 | 3.7 | 5.3 |
| 1992 | (0.6) | 7.7 | 5.8 | 3.9 |
| 1993 | 2.5 | 7.2 | 4.3 | 5.0 |
| 1994 | 1.0 | 5.0 | 1.3 | 3.8 |
| 1995 | 4.2 | 4.9 | 3.3 | 4.5 |
| 1996 | 5.2 | 4.2 | 4.8 | 4.6 |
| 1997 | 4.3 | 6.5 | 6.4 | 4.2 |
| 1998 | 5.1 | 6.0 | 3.2 | 4.7 |
| 1999 | 3.9 | 5.0 | 4.9 | 4.4 |
| 2000 | 2.1 | 5.4 | 3.8 | 3.7 |
| 2001 | 4.0 | 5.1 | 2.9 | 4.2 |
| 2002 | 4.4 | 4.7 | 4.7 | 4.5 |
| Average | 3.1 | 6.0 | 4.4 | 4.5 |

Sources :Budget Statement and Economic Policy of the Government of Ghana Annual Series
 Ministry of Agriculture End of Year Report 1988-1991
 World Bank, Ghana Progress in Adjustment 1991,
 Ministry of Finance, Budget Statements 1990-1997

During the same period the contribution of agriculture to GDP reduced from 42% in 1988 to 35.8%in 2002 ((Table 27). The GLSS4 survey indicated that an estimated 6000 out of approximately 2,740,000 farm-households nation-wide used irrigation in 1999.

Table 27: Percentage Contribution to GDP by Sectors at 1993 Constant Prices

| Year | Agriculture | Services | Industry | Total |
|------|-------------|----------|----------|-------|
| 1988 | 42.1 | 22.9 | 35.0 | 100 |
| 1989 | 41.7 | 22.8 | 35.5 | 100 |
| 1990 | 39.3 | 23.5 | 37.2 | 100 |
| 1991 | 39.5 | 23.7 | 36.8 | 100 |
| 1992 | 37.7 | 24.5 | 37.8 | 100 |
| 1993 | 36.9 | 24.8 | 38.3 | 100 |
| 1994 | 36.4 | 24.9 | 38.7 | 100 |
| 1995 | 36.3 | 24.9 | 38.8 | 100 |
| 1996 | 36.5 | 25.0 | 38.5 | 100 |
| 1997 | 36.5 | 25.4 | 38.0 | 100 |
| 1998 | 36.7 | 25.1 | 38.2 | 100 |
| 1999 | 36.5 | 25.2 | 38.3 | 100 |
| 2000 | 36.0 | 25.2 | 38.8 | 100 |

| | | | | |
|------|------|------|------|-----|
| 2001 | 36.0 | 24.8 | 39.2 | 100 |
| 2002 | 35.8 | 25.0 | 39.2 | 100 |

Productivity in the livestock sector is also very low. Output of livestock is only about 4% of the agricultural GDP. It is estimated that average production of milk from a cow in Ghana is only about 4 litres a day as compared to about 30 litres internationally. The carcass yield of local breeds of livestock is estimated to be about 20% of that of exotic breeds.

3.2 Poverty and Food Security

According to the Development Strategy for Poverty Reduction published in March 2000 by the Ministry of Finance, poverty is widespread in the country, with 42.6% living below the poverty line. The incidence of poverty and extreme poverty is indicated to have declined in Ghana during the 1990s, taking the country as a whole. Nation-wide, poverty has fallen from about 52% in 1992 to about 40% in 1999. The declines were not uniform across the country, however poverty is widespread and needs to be addressed in all regions. Extreme poverty rose in the savannah and rural coastal regions and 58% of those identified as poor are among households for which food crop production is the main activity.

Food and cash crop agriculture is predominantly rain-fed. Food production fluctuates both quantitatively and qualitatively, from year to year due to frequent occurrence of climatic stresses during the growing seasons. Sometimes fluctuations of heavy rains within and between agricultural seasons destroy both crops and livestock. Rainfall whose control is beyond the capability of the small scale farmer is thus a major determinant of the annual fluctuations of total household and national food output. This situation creates food insecurity at household levels which can be transitory in poverty areas and chronic in extreme poverty areas. It is frequent and more severe in areas with high population densities for example in the upper east region.

Gender is also an important dimension of poverty, especially in northern regions where there is a sharp distinctions between the income earning roles of women and men.

3.3 Support to Agriculture

Since the 1980s, Ghana's economic reform programme has addressed major structural problems that were facing the economy. The MTADP provided a focus for policy and institutional reforms in the agricultural sector. Most of the policy reforms and structural adjustments necessary to remove distortions in the market place have been made. Administered prices have been eliminated except for cocoa. Even in cocoa the percentage of f.o.b prices allocated to producers have increased to 69%. The public sector has virtually moved out of production and marketing operations. The procurement and distribution of inputs are privatized.

Until recently the taxation of agricultural exports has been one of the governments important source of revenue. This taxation has been primarily on cocoa producers, and had occurred through paying farmers less than the world price adjusted for domestic marketing costs and government levies. Part of the explanation for the higher level of taxation of cocoa farmers is the operational cost of cocobod. This taxation contributed greatly to the incentive structure of the crop leading to farmers inability to increase production. This was due to farmers lack of long –term resources to acquire various farm implements and machinery, and short-term financial resources to meet cash input purchases (pesticides, improved seeds, farm maintenance etc.).

The research and extension infrastructure has been rehabilitated and research /extension /farmer linkages are strong and functional. The decentralization of MOFA to the districts have been completed. AgSSIP have improved the capacity of MOFA, CSIR, Cooperative department and farmer groups but inflation is still around 20%. The extension agent farmer ratio is about 2500 farmers per extension agent.

The structure of government expenditure over the period gives cause for concern. Public service employment as a percentage of population in 2000 was 3%. The government wage bill as a percentage of GDP (5.6%) is very high. At the same time the emoluments in the public service represent unacceptably low conditions of service. Expenditure has continued to be biased against development of the rural environment. Statutory expenditure represents approximately 41% of total government spending in 2003. Education and health account for about 90% of social sector spending with the remaining sub-sectors each receiving a small proportion of expenditure. Multilateral and bilateral donors make a significant contribution to development expenditure in favour of health and education.

In the year 2002 donors contributed about 40% of discretionary expenditure. Donor aid to economic services and infrastructure represents a substantial proportion of discretionary expenditure in these two areas ,for 2002, as follows :

| | |
|-------------|-----|
| Agriculture | 71% |
| Energy | 96% |
| Industry | 73% |
| Water | 92% |
| Roads | 83% |

This level of donor support for growth is unsustainable in the long term.

Government expenditure on the agricultural sector is managed by about five ministries and the Cocoa Marketing Board (Cocobod). The main part comes under the Ministry of agriculture, agricultural research comes under the umbrella of the Council for Scientific and Industrial Research (CSIR), which is overseen by the Ministry of Environment, Science and Technology (MEST). Forestry expenditure is the responsibility of Ministry of Lands and Forestry. Presidential initiative on Oil Palm budget is under the Ministry of Trade and Industry (MTI). Feeder roads is under the Ministry of Roads and Transport. Cocobod's recurrent budget is separate from the official government budget, however its investment expenditure is summarized in the public investment programme.

A major difficulty faced by MOFA in implementing its programmes exist outside its sphere of influence. Energy, roads, industry and water are all outside its sphere of influence which impact directly on agricultural productivity. Implementation requires a synergy of all the ministries mentioned.

The direct budgetary support to agriculture has dwindled from 3.5% of total Government expenditure in 1990 to 0.82% of the total Government expenditure in 2002 (table 28).

Table 28 : Share of Agricultural Sector in Government Budget (Billion Cedis)

| Year/Expend | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|--------------|--------|--------|--------|--------|--------|-------|--------|
| Gov't Expend | 239.33 | 313.80 | 277.03 | 650.10 | 658.41 | 864.1 | 2169.6 |
| Agric Expend | 8.27 | 9.5 | 8.08 | 14.02 | 14.38 | 20 | 26.4 |
| Agric(%) | 3.5 | 3.0 | 2.9 | 2.1 | 2.2 | 2.3 | 1.2 |
| Dev. Expend | 2.87 | 2.46 | 3.01 | 3.92 | 5.15 | 6.5 | 7.8 |
| Recur Expend | 5.4 | 7.05 | 5.07 | 10.1 | 9.23 | 13.7 | 18.6 |

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|-------------------|--------|--------|--------|--------|----------|----------|
| Gov't Expenditure | 3816.1 | 5005 | 2717.6 | 3295.4 | 13,073.8 | 15,447.0 |
| Agric Expenditure | 29.65 | 35.12 | 43.59 | 62.23 | 62.46 | 127.02 |
| Agric(%) | 0.78 | 0.7 | 1.6 | 1.89 | 0.48 | 0.82 |
| Dev Expenditure | 9.13 | 11.15 | 15.37 | 22.3 | 18.45 | 61.42 |
| Recurrent Expend | 20.52 | 23..93 | 28.22 | 35.52 | 44.01 | 65.6 |

Sources :MoFA, Budget Division, Ghana Statistical Service

The proportion of discretionary expenditure in the year 2002 is as shown in the table 29 below.

Table 29 : Functional Classification of Discretionary Expenditure (in millions of cedis)

| Function/Donor | GOG | Donor | Total | % |
|----------------|-----------|-----------|-----------|-----|
| Administration | 1,170,585 | 305,335 | 1,476,920 | 20 |
| Economic | 309,205 | 1,033,424 | 1,342,709 | 18 |
| Infrastructure | 165,717 | 1,116,490 | 1,282,207 | 17 |
| Social | 2,150,083 | 437,884 | 2,587,968 | 35 |
| Public Safety | 681,583 | 29,067 | 720,650 | 10 |
| Contingency | 46,347 | 0 | 46,347 | |
| Total | 4,533,601 | 2,922,200 | 7,455,801 | 100 |
| Percentage (%) | 61 | 39 | 100 | |

Source :2002 Budget statement

The proportion of agriculture and forestry in the discretionary expenditure in 2002 was 6% of the total discretionary budget. All these shows that government support to agriculture over the years has been woefully inadequate. This situation is caused by high share of wages and interest payments in total budgetary expenditure which is now about 70% of total budgetary revenue including grants. Subsidies to Tema Oil Refinery (TOR) presented a significant burden on the budget. At the same time the central government owns greater shares in about 50 companies, many of which are operating less than satisfactory. The governments privatization programme is slow. Macro-economic instability over the years have resulted in budget deficits leading to debt monetization and the sale of treasury bills. This contributed to high interest rates and inflation.

Commercial banks credit support to agriculture and forestry was only 2.1% in 2002 whilst secondary banks support to agriculture and forestry was 8.6% of total loans and advances. This was also woefully inadequate and cannot support increase production for food security.

For the government to implement Maputo Declaration on Agriculture, it must allocate at least 10% of its budgetary resources to the agricultural sector. With the present trends the government is far from the Maputo Declaration.

The action needed to reduce inflation is to increase the competitiveness of Ghana's agriculture to meet the changing demands in the domestic, regional and international markets. The ministry of agriculture's new policy thrust of Food and Agriculture Sector Development Policy (FASDEP) and the Accelerated Agricultural Growth and Development Strategy (AAGDS) is meant to address the major constraints and challenges.

Major challenges/constraints and opportunities

Challenges

- a Increasing and sustaining agricultural growth at 6% per annum
- b achieving and sustaining food security at the household and national levels
- c contributing significantly to poverty reduction.
- d increasing access to long term capital at affordable interest rates
- e attracting foreign investment to the agricultural sector

Problems

- 1 Inadequate access to appropriate technology
- 2 Underdeveloped infrastructure
- 3 Inadequate financial services and the high cost of capital

- 4 Lack of integration of agriculture with industry
- 5 Limited access to regional and international markets
- 6 Lack of effective land laws

4.0 : Assessing the Impact of food import/Aid Dependence

The food import/aid covers a whole range of food items in order of importance. The food aid that is imported into the country are fully monetized, costs reflecting world prices and handling. Monetized food aid pays the relevant import duties and VAT and does not undermine the trade taxation that is applied. Monetized food aid is comparable to commercial food imports except that foreign exchange is saved.

The primary foods that are used for these programmes are Rice, Vegetable oils, Canned fish, Wheat and fortified wheat flours (Table 30). In rice, oils and fish the quantities are significant relative to domestic production and therefore serve as disincentive to increased production. The total quantity of food aid imports has been fluctuating over the years. On the average food aid imports represent about 0.6% of total food supply (Table 3).

Table 30 : Food Aid Imports (Mt)

| Product/Year | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|---------------|--------|--------|---------|---------|--------|---------|---------|--------|
| Bulgur | - | 694 | 443 | - | 414 | - | - | - |
| Rice | 29,099 | 20,608 | 34,265 | 59,385 | 17,700 | 56,237 | 40,186 | 2,590 |
| Blended Food | 6,482 | 9,728 | 12,463 | 11,268 | 6,654 | 6,628 | 3,862 | 8,068 |
| Skim Milk | 1,576 | 723 | 730 | 315 | 15 | 571 | 120 | 210 |
| Other Foods | 904 | 866 | 782 | 1,161 | 4,070 | 1,182 | 3,258 | 586 |
| Pulses | - | 72 | - | 445 | 331 | 1,284 | 1,160 | - |
| Meat | - | - | 129 | - | 204 | - | - | - |
| Oils | 9,890 | 7,126 | 2,446 | 1,760 | 667 | 1,170 | 78 | 1,497 |
| Other Dairy | - | - | 9 | 20 | 19 | 19 | 22 | 22 |
| Fish | 2,624 | 2,622 | 814 | 1,586 | 682 | 1,607 | 727 | 236 |
| Sugar | 904 | 866 | 782 | 1,161 | 4,070 | 1,182 | 3,182 | 533 |
| Butter Oil | 300 | 15 | - | - | - | - | - | - |
| Wheat & Flour | 21,838 | 38,393 | 47,095 | 115,072 | 49,312 | 40,709 | 51,007 | 30,600 |
| Coarse Grains | 2,125 | 951 | 1,814 | - | 7,200 | 9,779 | - | 857 |
| Cereals | 59,544 | 70,376 | 96,080 | 185,725 | 81,280 | 113,353 | 95,055 | 42,116 |
| Non-Cereals | 15,293 | 11,424 | 4,910 | 5,287 | 5,287 | 5,833 | 5,364 | 2,551 |
| Total | 74,837 | 81,800 | 100,990 | 191,012 | 87,268 | 119,186 | 100,419 | 44,667 |

| Product/Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| Bulgur | - | - | 1,484 | - | - | 3,300 | - |
| Rice | 10,670 | 5,819 | 2326 | 9,835 | 10,762 | 11,794 | 4,980 |
| Blended Food | 6,208 | 7,759 | 3,734 | 1,509 | 1,492 | 16,629 | 9,120 |
| Skim Milk | 18 | 29 | 14 | - | 20 | 20 | 20 |
| Other Foods | 150 | 1,606 | 194 | 108 | 280 | - | - |
| Pulses | 100 | 806 | 195 | 382 | 354 | 428 | 267 |
| Meat | - | - | - | - | - | - | - |
| Oils | 60 | 1,652 | 1,340 | 2,199 | 3,384 | 3,583 | 1,065 |
| Other Dairy | - | - | - | 22 | - | - | - |
| Fish | - | - | - | - | - | - | - |
| Sugar | 150 | 1,606 | 194 | 108 | 280 | - | - |
| Butter Oil | - | - | - | - | - | - | - |
| Wheat & Flour | 45,470 | 54,346 | 16,960 | 29,714 | 67,030 | 17,331 | 29,102 |
| Coarse Grains | - | - | 1,800 | 8,910 | 17,432 | - | - |
| Cereals Total | 62,348 | 67,924 | 26,304 | 49,968 | 96,716 | 49,055 | 43,202 |

| | | | | | | | |
|-------------|--------|--------|--------|--------|---------|--------|--------|
| Non-Cereals | 328 | 4,093 | 1,741 | 2,710 | 4,037 | 4,030 | 1,352 |
| Total | 62,676 | 72,017 | 28,045 | 52,678 | 100,753 | 53,085 | 44,554 |

Source: MOFA, WFP

Most of the food aid programmes are distributed through NGO's e.g. Catholic Relief Services, ADRA, Technoserve . The primary means of distribution of food aid in Ghana is through food-for-work and nutritional programmes. Some of the nutritional programmes are Safety Net (SN), Food Assisted Child Survival (FAC), Focus Nutrition Intervention (FNI), Pre-school feeding (PS), School Lunch feeding (SL), Maternal Child Health (MCH) and Dependence (DEP).

However these nutritional programmes lower prices in the vulnerable groups, distort household consumption patterns, affects farm production decisions and leads to misallocation of farm household labour resources which in turn decrease farm household incomes. In the northern regions the staple foods are sorghum and millet however in periods of scarcity maize and rice are normally transferred to the north from the south. This have led to widespread use of maize in the staple food (Tuo Zafi) instead of millet changing the consumption pattern.

Commercial and food aid imports of rice, which are considerable, reach the southern consumption centers, and sever the market links to the northern producing areas for much of the year. This lower rice prices and limits the desired pull for increased production.

Food aid imports barely contributes to the total rice supplies in Ghana and therefore cannot affect price structure of rice in the country.

Wheat which is also imported as commercial and food aid to feed urban consumers during times of food scarcities has now become the normal food replacing millet, sorghum and starchy staples. From the table 30 above it is clear that food aid has increased the supply of food in the Ghanaian market over the last fifteen years. Food aid therefore needs to be managed now to reduce some of the disincentives to production. In the long run food aid should eventually be discontinued.

Food aid affects balance of payments and the supply of foreign exchange positively because most donors use the food aid proceeds to finance projects e.g. CIDA. Total cost of wheat and rice imports in 2002 was about US \$150 M. Rice contributes about US \$70 M of total food imports out of which part can be substituted with local production from the programmed projects.

5.0 : Support Needed in order to Propel the Agricultural Sector

The government did set up key macroeconomic targets to sustain economic growth and at the same time ensure effective implementation of the poverty reduction programmes of the GPRS.

MOFA's strategy to make the country food secure on sustainable basis is based on the Accelerated Agricultural Growth and Development Strategy. This strategy is designed to increase agriculture's growth rate from the present 4.4% to 6% by the year 2020. The strategy will be demand-driven, enhance productivity and promote competitiveness in domestic, regional and global markets. This is consistent with Ghana's principle of open market economy, which require that the market and domestic food consumption specialities drive agricultural production and growth. The governments performance in implementing the GPRS is shown in the major micro-economic indicators as shown in the table 31.

Table 31: Key Macro-Economic Performance in % (2002-2004)

| Indicators | 2002 | 2003 | 2004 |
|----------------|------|------|------|
| GDP Growth | 4.7 | 5.2 | 5.2 |
| Inflation | 22 | 23.6 | 10 |
| Budget Deficit | 3.3 | 3.4 | 1.7 |
| Budget Surplus | 3.0 | 2.5 | 1.7 |

| | | | |
|--------------------------------|------------|------------|------------|
| Gross Reserves | 2.3 | 3.9 | 3 |
| Interest Rates | | 21.5 | |
| Poverty Reduction | 50 | - | 40 |
| Agriculture | 4.4 | 6.1 | 6.0 |
| Crops& livestock | 5.2 | 5.3 | 5.4 |
| Cocoa | -0.5 | 16.4 | 13.1 |
| Forestry | 5.0 | 6.1 | 6.3 |
| Fishing | 2.8 | 3.0 | 3.5 |
| Industry | 4.7 | 5.1 | 5.2 |
| Mining & Quarry | 4.5 | 4.7 | 4.9 |
| Manufacture | 4.8 | 4.6 | 4.7 |
| Electricity & Water | 4.1 | 4.2 | 4.3 |
| Construction | 5.0 | 6.1 | 6.2 |
| Services | 4.7 | 4.7 | 4.7 |
| Transport | 5.7 | 5.8 | 5.7 |
| Finance & Insurance | 5.6 | 5.0 | 4.8 |
| Trade& Retail | 5.5 | 5.2 | 4.6 |
| Gov. Services | 3.6 | 4.0 | 4.4 |
| Social Services | 4.4 | 4.1 | 4.8 |
| Private Services | 3.1 | 3.3 | 4.8 |

This development of positive macroeconomic environment has set the stage for promotion of private sector investment in Ghana. In order to achieve an annual agricultural growth rate of 6% a significant increase in the growth of merchandise exports over the rates achieved in the past with non-traditional exports playing a leading role.

5.1 Policy Reorientation and Investment

Ghana's ministry of food and agriculture, document of Food and Agriculture sector Development Policy outlines the following production interventions as new policy reorientation.

- a) Human resource development and institutional capacity building.
- b) Access to agricultural financial services
- c) Technology development and dissemination
- d) Infrastructural and Rural services development
- e) Promotion of selected commodities and improved access to markets.

5.1.1 Human Resource Development and Institutional Capacity Building

This intervention is to develop agricultural producer association to become a viable producer unit, which can take decisions on their farming operations. The development of agro processing and trade associations. Training of community workers on gender, health and physically challenged. Training of research, extension and management staff at farm level for the development of improved technology.

In the institutional capacity building, the local universities, agricultural colleges, farm institutions and co-operative colleges are to be strengthened. The ministry of food and agriculture and private sector are to collaborate with the universities and others to modify the agricultural curricula to reflect agro-business. The ministry of food and agriculture in conjunction with NGO's and Donors are to finance the components of the intervention. Improve extension agent/farmer ratio from 2500 to 1500. Most of the projects financed by donors have components of human resource development and capacity building. Summary of interventions in the human resource development is shown in table 32.

Table 32: Summary of Interventions in the Area of Human Resource Development and Institutional Capacity Building

| INTERVENTIONS | STATUS | IMPLEMENTING INSTITUTIONS | FUNDING | REMARKS |
|--|----------------------|---|--|--|
| Development of agricultural producer associations | On-going | MOFA, NGOs, District assemblies, Ghana co-operative council | AGSSIP NGOs others | Private sector to be sensitized |
| Development of Agro-processing sub-sector | On-going but limited | ITTU, GRATIS, NGOs, MOFA, MOTI, CSIR, District assemblies | Financial institutions, private sector, AGSSIP. EDIF, ADF (proposed) | Establishment of the ADF to be given a serious thought |
| Development of trade association | On-going | MOTI, MOFA, DOC, GCC, NGOs, private sector | AGSSIP, NGOs, private sector, others | Poor co-ordination and poor collaboration |
| Training of community workers in issue relating to gender health and physically challenged | On-going but limited | MOFA, NGOs, Department of Community, Development MOWCA MOH, MLGRD | AGSSIP, NGOs, DAS, others | Inter-agency collaboration to be enhanced |
| Strengthening of front line extension workers | On-going | MOFA, NGOs, research Institutions, universities | AGSSIP, NGOs others | |
| Management staff | On- going | MOFA | AgSSIP, Others | MOFA to collaborate with Universities |
| Research staff | On-going | CSIR, BNARI, Universities | AgSSIP, MEST | |
| Agric. Educational Institutions | On-going | MOE, MOFA, DOC | MOE, AgSSIP | MOFA & Private sector collaborate with institutions |
| Rural banks & Micro finance | On-going | RFP, BOG | World Bank, IFAD, AfDB, Others | |
| Strengthening District | | | | |

SOURCE : MOFA

5.1.2 Access to Agricultural Financial Services

Access to agricultural credits and loans by small scale farmers has not been easy task for them because of high interest rate on credits, poor spatial distribution of banks in the rural areas, lack of documented assets for use as collateral and poor records keeping by small scale farmers.

These barriers are preventing them to access credit and loans from the banks. The farmers will be encouraged to store their produce especially cereals in identifiable warehouses. The product will be treated as inventory credit, which could be used as collateral in granting loans to farmers. Development of domestic savings in Grameen bank approach or “susu” association is one of innovative approaches in making funds available for farmers to increase farm production. There is

a proposal to set up an Agricultural Development Fund to take care of long- term funding. Some of the financial services intervention are as given in the table 33 below.

Table 33 : Summary of Interventions in Access to Agricultural Financial Services..

| Intervention | Status | Implementations Institutions | Funding Agency | Remarks |
|---|----------|------------------------------|------------------|---------------------------------|
| Capital leasing | Limited | Private | Private sector | Private sector to be sensitized |
| Micro-financing | Limited | Public/Private | IFAD, AfDB, NGOs | Additional resources required |
| Inventory Credit | Limited | Private/NGOs | IFAD, AfDB, NGOs | Additional resources required |
| Export financing | Limited | Private, Public | Commercial banks | High interest rate |
| Establishment of Agricultural Development Funds ADF | New | To be Identified | To be identified | Legislation required |
| Strengthening of rural financial institutions | On-going | Public | Various donors | No credit facilities |

5.1.3 Infrastructure and Rural Services

Therefore the following infrastructures have been selected for development to support agricultural sector in the country.

- Irrigation and water management (dugouts, boreholes, wells, etc.)
- Agricultural land
- Transport system
- Rehabilitation of hatcheries, research laboratories and quarantine stations
- Energy, machinery, equipment and tools

Table 34: Summary of Interventions in Improved Rural Infrastructure

| Intervention | Status | Implementing Institution | Funding | Remarks |
|--|----------|----------------------------------|------------------|---------------------------|
| Constructional/rehabilitation of irrigation facilities | On-going | Public/NGOs | Various Donor | Additional funding needed |
| Establishment of land banks | New | Public / Traditional Authorities | To be identified | |
| Construction/rehabilitation of storage facilities | | | | |
| a) Assembly points | New | Public/Private | To be identified | |
| b) Ware houses | On-going | Public/Private | To be | |

| | | | | |
|---|-------------------|----------------|------------------|------------------------------|
| | | | identified | |
| c) Cold storage | | Public/Private | To be identified | Poorly managed |
| Construction/rehabilitation of fish landing site | Limited | Public | To be identified | |
| Construction/rehabilitation of hatcheries | Limited | Public/Private | To be identified | |
| Rehabilitation of research lab | Limited/Staked | Public | AgSSIP | |
| Construction/rehabilitations of roads and access tracks | Limited | Public | VIP | Additional resource required |
| Manufacturer of machinery and equipment | Limited | Public/Private | VIP/AgSSIP | Additional resource required |
| Rehabilitation of quarters Station | Poorly maintained | Public | AgSSIP | |

5.1.4 Promotion of Selected Commodities and Improved Access to Markets

The following commodities have been selected as strategic crops for production in terms of their importance in ensuring food security, foreign exchange earnings and processing capacity. In a short run the outlining commodities are to be developed.

Short-term

Production emphasis

- Cereals - maize, rice, sorghum and millet
- Starchy crop - yam, cassava, cocoyam, sweet potatoes, plantain
- Legumes - cowpea
- Vegetable - tomatoes, pepper, onion etc.
- Livestock and poultry - grasscutter, pigs and chicken

While in the medium and long term the concentration will be on:

- Legumes - soyabean
- Vegetables - exotic vegetables
- Livestock - small ruminants and cattle
- Fats and oil - coconut, groundnuts, soya,
- Fruits and others – mango, citrus, pawpaw, banana

The successful development of these crops signifies a structural transformation of subsistence nature of agricultural production to the medium level of production, which will guarantee a stable food security and poverty reduction among the rural households.

5.1.5 Technology Development and Dissemination

Dependency of Ghana's agriculture sector on rainfall, coupled with limited availability of farm land in some parts of farming communities in the country; poor planting materials and land degradation caused by soil erosion, deforestation, uncontrolled bush burning, soil nutrient mining and poor farm management have been the major obstacles in increasing productivity in the crop sub-sector.

In livestock sub- sector, poor breeds, absence of quality feed and uncontrolled disease of various kinds also play a major role in reducing productivity.

Fisheries sub-sector is not an exception. The sector is confronted with low productivity due to over fishing in both marine and inland waters and unscientific methods of fishing which give rise to depleting the young fishes.

The application of science and technology becomes important option for Ghana to increase overall productivity in the agricultural sector.

The intervention is to create awareness among the farming communities by training the farmer through extension staff to adopt proper cultural practice (mixed farming, agro-chemicals, agro forestry and the use of organic and inorganic fertilizers) to increase productivity of small-scale farmers. Incorporate IPM (Intergrated Pest Management) method into extension message delivery to farmers. Encourage private sector participation in extension.

Develop and introduce appropriate equipments for harvesting and post-harvest handling of roots and tubers, grains and fruits. Develop agro-processing, which adds value to agricultural produce, and extends the shelf life of the produce for the expansion of demand for agricultural produce is vital component in increasing farmer's incomes and direct reduction of poverty among smallholder. Support the private sector to invest in the technologies, which can hasten the processing of agricultural raw materials in order to reduce the post harvest losses.

Develop suitable storage facilities available to store agricultural produce, support the farmers by facilitating access to credit from the banks to construct farm level storage facilities and support research to develop appropriate farm and village level storage facilities for the adoption by the farmers.

The major components of technology dissemination are:

- Strengthening of farmer based organisations
- Private sector participation in extension
- Research and extension farmer linkages
- HIV/AIDS, gender advocacy.

5.1.6 The Market Environment Affecting Agricultural Development

Agricultural inputs are imported at world market prices with no subsidy however the inputs are not competitive due to lack of economy of scale. The pesticide market is distorted by a black-market trade in chemicals often of unknown composition. Seed availability is fairly limited and most exporters rely on their own multiplication, on their own import channel or on the production of the research stations. Fertilizers are controlled by a few importers and the supply is limited and uncompetitive compared to Cote d'Ivoire with a fertilizer plant. Labour costs are the lowest among its competitors that is US \$1.25 per day.

The inland transport costs in Ghana are expensive, this is explained by inadequate inland road network and an inefficient utilization of capacity.

There is no export subsidy for Ghana's exports. The Export Development Investment Fund (EDIF) has been created to promote exports. MOFA will create awareness of opportunities within the agricultural sector for the exploitation of EDIF facility.

Ghana is committed to the full implementation of the ECOWAS protocol for the free movement of goods and services. Agricultural and rural export trade will be developed to benefit from the African Growth and Opportunities Act (AGOA) of the US. This will target textiles, garments, cassava, cashew and specific market niches in the U.S.

5.1.7 WTO Agreement and Agriculture

Ghana's trade will be pursued in the context of the World Trade Organisation (WTO) protocol. The complexity of WTO trade regime could provide challenges and also opportunities to Ghana after the year 2004. The argument is based on the following four simple rules: a) Tariff protection, b) Tariff binding c) Most favored nation (MFN) principles and d) National treatment.

a) Tariff Protection

While WTO principles forbid protectionism it allows some sort of domestic support (green box and transitional issues) to member countries to protect their domestic industry from foreign competition under the following conditions, that the protection should come through tariff only. Complete ban or quantitative restrictions on imports are prohibited except member country or countries is or are facing balance of payment difficulties.

A major limitation of these rules is that by December 31st 2004 these opportunities may be no longer in force. Ghana has increased the tariff on rice from 20% to 25%

b) Tariff Binding

Member countries were required to reduce their previous existing tariffs, and the reduced tariffs are binding for any future increases. Tariffs on products are subject to negotiations between member countries. Each country however has separate schedule and is obliged not to impose tariff which has been agreed upon during the negotiations. The tariff rate, which was agreed upon during the negotiations, is binding tariff rate.

c) Most-Favored Nations (MFN) Principles

The principle of MFN is that trade must not be discriminatory, that is if a member country grants a concession or tariff reduction to another country, that country, which received the concession, must also grant same to other member countries when it comes to trade transactions. By agreeing to give or receive the MFN treatment, member countries had to undertake not to discriminate among themselves or to treat a fellow country less favorable than another in the matters of foreign trade.

d) National Treatment

The principle behind National Treatment is that imported products which custom duties and other changes have been paid to the appropriate authorities should not receive treatment that is less than the domestic produced product. In other words, the principle requires member countries to treat imported products on the same way as domestically produced product. National Treatment is a complement to Most-Favored Nation (MFN) Principle.

In the WTO, quality becomes the focus, and International Standard Organization (ISO) also shares the same ideas. The main objective of the Organization is to encourage other organizations providing services or products, adopt management system, which can achieve quality living standards of human beings by improving production environment.

In Ghana, however, the government has put in place institutional arrangements (Ghana Standard Board and Food and Drugs Board) that provide quality standards and protect health and safety of producers and consumers. Ghana is yet to achieve the required standards for all the non-traditional exports.

5.1.8 Estimated Costs of Agricultural Investment Opportunities

The estimated costs of proposed interventions is about US \$M 966 to be implemented over a period of ten years. Annual expenditure of US \$ M 96.6 is envisaged to support the phased intervention. The period of ten years is meant to substitute the imports with local production by intensifying production. The objective of the investment is to achieve high production levels and profitability at all scales of production. This will be particularly true of maize where yields can be increased by 50%. The increase of production from year five can substitute for rice and feedstuff imports. An incremental production of 300 tonnes is expected at the end of the investment period. The second objective is to expand agricultural non-traditional exports from the present US \$86m to US\$300 by year five with increase production and adding value through processing.

The level of annual investment of US\$100m in agriculture is only about 2.3% of Ghana's 2003 annual budget of 2.4 billion US \$. This level of support is less than the Maputo declaration of 10%. Initially the country do not have the capacity to meet the budgetary outlay from its own resources it has to be supported with external development assistance. The production increase in maize and non-traditional exports can support the investment needed to improve the choices of farmers to increase production. The detailed cost estimates are presented below.

1 Human Resource Development and Capacity Building

| | | | |
|-----|-------------------------------|---------|-------|
| 1.1 | Farmers Association | U S \$M | 10.0 |
| 1.2 | Processing | | 40.0 |
| 1.3 | Trade Association | | 10.0 |
| 1.4 | Training of community workers | | 20.0 |
| 1.5 | Extension and Research | | 30.0 |
| 1.6 | Universities, Colleges etc | | 30.0 |
| 1.7 | Banks and Micro- finance | | 30.0 |
| 1.8 | District Assemblies | | 55.0 |
| | Sub Total | | 225.0 |

2 Access to Agricultural Financial Services

| | | |
|-----|--|-------|
| 2.1 | Capital Leasing | 50.0 |
| 2.2 | Establishment of Agricultural Development Fund (ADF) | 50.0 |
| 2.3 | Export Financing | 50.0 |
| 2.4 | Inventory Credit, Rural Finance | 20.0 |
| | Sub Total | 170.0 |

3 Infrastructure and Rural Services

| | | |
|------|--|-------|
| 3.1 | Irrigation Facilities (10,000* \$6000) | 100.0 |
| 3.2 | Land Banks | 10.0 |
| 3.3 | Storage Facilities | 40.0 |
| 3.4 | Fish landing Sites | 10.0 |
| 3.5 | Hatcheries | 2.0 |
| 3.6 | Research Laboratories | 2.0 |
| 3.7 | Access Tracks and Roads | 100.0 |
| 3.8 | Machinery and Equipment manufacture | 10.0 |
| 3.9 | Rehabilitation of quarantine Stations | 2.0 |
| 3.10 | Livestock watering | 5.0 |
| 3.11 | Energy supply | 2.0 |
| | Sub Total | 283.0 |

4 Promoting of Commodities and Improved Access to Markets

| | | |
|-----|--------------------------------|------|
| 4.1 | Product Development | 5.0 |
| 4.2 | Market Information | 2.0 |
| 4.3 | Pilot Processing Plants | 5.0 |
| 4.4 | Packaging and Labeling | 2.0 |
| 4.5 | Specialized Haulage Systems | 10.0 |
| 4.6 | Licensed Warehouse Operators | 10.0 |
| 4.7 | National Buffer Stock | 10.0 |
| 4.8 | Standardisation and Quality | 5.0 |
| 4.9 | Trade and Investment Promotion | 2.0 |
| | Sub Total | 51.0 |

5 Technology Development and Dissemination

| | | |
|-----|-----------|-------|
| 5.1 | Crops | 60.0 |
| 5.2 | Livestock | 20.0 |
| 5.3 | Fisheries | 20.0 |
| 5.4 | Extension | 60.0 |
| | Sub Total | 160.0 |

| | |
|-----------------|--------------|
| Total | 878.0 |
| Contingency 10% | 88.0 |

Grand Total

966.0

6.0 CONCLUSION

Ghana which is endowed with natural resources is a low income and a food deficit country. This situation is caused mainly by macro economic instability created by unstable prices of traditional exports of Gold and Cocoa. The food deficit is mainly in cereals, sugar, fish and meat. The food requirement is met by commercial and food aid imports. The deficit is widespread nationally for total food availability but is chronic in the very poor areas of northern, rural coastal regions and

those for which food crop production is their main activity. Access to food is also a factor of income, marketing and distribution of produce. Malnutrition is also widespread among children in Ghana. Ghana's annual imports is in excess of US \$ 2 Billion whilst foreign exchange earnings is around US \$ 2 Billion. The unexploited potential is in non traditional exports.

Ghana's agriculture grew by 3.1% on the average in the last fifteen years. It contributes 36% of the GDP, employs 50.6% of the active population, accounts for 35.5% of foreign exchange, 4.6% of tax revenue and 4.3% of total revenue. Ghanaian agriculture is predominantly small holder using rudimentary technology to produce about 80% of the total agricultural production. Overall performance of agricultural production and productivity has been inadequate and Ghana has failed to make progress on the food security front. Average yields have remained stagnant. The slow growth of agriculture has been due to a combination of factors that reduce farmers incentives to invest in production. The constraints include inappropriate policies, lack of technological change and poor basic infrastructure. The support to agriculture in terms of government budget and credit has been very low. This is due to high wages and interest rates which covers about 70% of government budget.

Commercial food imports and food aid represents about 4.7% on the average of the total annual food consumption. Food aid was about 0.6% of total food consumption. Food aid imports are fully monetized and therefore reflect world prices. Due to high transaction cost within the country food aid distribution within the country is done through programmes. These programmes serve the vulnerable groups who are isolated and poor and therefore serve as welfare benefits to them. In the long run these food aid programmes should be discontinued to eliminate its disincentive to production.

Progress has been made in the microeconomic environment to promote private sector investment in agriculture. Barring any slippages in the budgetary control if the present trends of 5% growth continue then the stage is set for further expansion of the economy. Both cocoa and non traditional export crops have performed very well. For the country to be food secure on sustainable basis Ghana's agricultural potential would require giving it's farmers more options and better incentives to develop crops that have emerged in the last decade with potential for growth. The government is pursuing this agenda through the GPRS and FASDEP by provision of access to technology, infrastructure, finance, markets, human resource development and capacity building. This is meant to improve production, storage, processing, marketing of agricultural commodities .

APPENDIX

APPENDIX

Table 1: Per Capita Food Supply Sources from MoFA and FAO and Consumption per Capita Data from GLSS 4

| | MoFA | FAO (2001) | GLSS4 (1999) |
|--------------|-------|------------|--------------|
| Wheat | | 10.4 | |
| Maize | 42.5 | 40.2 | 100 |
| Rice | 14.5 | 26.4 | 24 |
| Sorghum | 14.8 | 9.4 | 5.3 |
| Millet | 9.0 | 6.2 | 4.2 |
| Cassava | 151.4 | 214 | 274 |
| Yam | 42.3 | 121 | 38 |
| Cocoyam | 56.0 | | 33 |
| Plantain | 84.0 | 104 | 65.3 |
| Groundnuts | | 3.8 | 5.4 |
| Peas & Bean | | 0.2 | 4.9 |
| Palm Nuts | | 0.2 | |
| Oils & Fats | | 5.7 | 5.7 |
| Tomatoes | | 11.8 | 13 |
| Onions | | 1.8 | 5 |
| Pepper | | 1.1 | 2.4 |
| Other Veg | | 18.2 | |
| Banana | | 0.3 | 4 |
| Oranges | | 12.9 | 6.6 |
| Pineapple | | 1.6 | 2.1 |
| Limes | | 1.3 | |
| Other Fruits | | 2.8 | |
| Meat | 6.7 | 9.3 | 5.4 |
| Fish | 27 | 27.5 | 25 |
| Milk | | | |
| Coconut | | 9.3 | 9.3 |
| Wheat | | 10.4 | |
| Sugar Cane | | 6.5 | |
| Sugar | | 7.0 | |

Source: MOFA, FAO, GLSS4

Table 2: Agriculture Sector Contribution to Government Tax

And Resource %

| <u>YEAR</u> | <u>TAX RESOURCE</u> | <u>TOTAL RESOURCE</u> |
|-------------|---------------------|-----------------------|
| 1988 | | 17 |
| 1989 | | 16 |
| 1990 | 12.2 | 9.8 |
| 1991 | 10.3 | 7.6 |
| 1992 | 11.2 | 9.5 |
| 1993 | 7.0 | 5.4 |
| 1994 | 16.1 | 10.6 |
| 1995 | 13.8 | 8.8 |

| | | |
|------|------|------|
| 1996 | 16.1 | 12.2 |
| 1997 | 12.8 | 10.9 |
| 1998 | 14.7 | 12.6 |
| 1999 | 7.5 | 6.9 |
| 2000 | 4.1 | 3.7 |
| 2001 | 4.6 | 4.3 |
| 2002 | N/A | N/A |

SOURCE: Ghana statistical /Budget statement and Economic Policy for 2002. (1996-2001)

From 199 -1995 –Ghana Statistical Service (series)
Quarterly Digest of statistical /Budget statement 1997

Table 3: COMMERCIAL BANKS LENCHINGS RATE – MINIMUM AND MAXIMUM %

| YEAR | AGRIC SECTOR | EXPORT SECTOR | MANUFACTURING SECTOR |
|------|---------------|---------------|----------------------|
| 1990 | 22.50 – 29.50 | 20.00 – 30.25 | 22.50 – 30.25 |
| 1991 | 19.50 – 31.50 | 22.50 – 31.50 | 18.25 – 31.50 |
| 1992 | 19.75 – 26.50 | 19.75 – 26.50 | 21.50 – 36.50 |
| 1993 | 24.00 – 39.00 | 23.00 – 39.00 | 26.00 – 39.00 |
| 1994 | 22.00 – 35.50 | 20.38 – 35.50 | 26.00 – 35.50 |
| 1995 | 28.00 – 47.00 | 34.25 – 47.00 | 33.00 – 47.00 |
| 1996 | 30.00 – 47.00 | 35.00 – 49.00 | 36.00 – 47.00 |
| 1997 | 35.00 – 49.00 | 31.00 – 45.00 | 39.00 – 49.00 |
| 1998 | 30.00 – 42.00 | 31.00 – 39.75 | 32.00 – 45.00 |
| 1999 | 30.00 – 39.75 | 31.00 – 51.80 | 32.00 – 40.00 |
| 2000 | 33.60 – 51.80 | 33.40 – 54.80 | 33.60 – 51.80 |
| 2001 | 38.80 – 54.80 | 38.40 – 54.80 | 38.80 – 55.00 |
| 2002 | 27.00 – 50.00 | 27.00 – 50.00 | 27.00 – 50.00 |

Table 4: Functional Classification of Discretionary Expenditure (in million cedis)2002

| | <u>GoG</u> | <u>Donor</u> | <u>Total</u> |
|--|------------------|----------------|------------------|
| <u>Administration</u> | 1,170,585 | 305,335 | 1,475,920 |
| Ministry of Local Gov. Rural Development | 75,937 | 99,605 | 175,542 |
| Office of Government Machinery | 183,347 | 0 | 183,347 |
| Ministry of Foreign Affairs | 200,503 | 0 | 200,503 |
| Ministry of Finance | 181,216 | 53,453 | 234,669 |
| Ministry of Government Business | 1,270 | 0 | 1,270 |
| Audit Service | 25,919 | 0 | 25,919 |
| Public Services Commission | 1,705 | 0 | 1,705 |
| Electoral Commission | 27,164 | 0 | 27,164 |
| Office of Parliament | 39,191 | 0 | 39,191 |
| General Government Services | 363,904 | 152,277 | 516,181 |
| District Assem. Comm. Fund Administ. | 471 | 0 | 471 |
| Ministry of Econ. Plan. & Regional Co-op. | 20,965 | 0 | 20,965 |
| Ministry of Information & Presidential Affairs | 48,992 | 0 | 48,992 |

| | | | |
|---|------------------|------------------|------------------|
| <u>Economic</u> | 309,285 | 1,033,424 | 1,342,709 |
| Ministry of Food & Agriculture | 102,688 | 247,298 | 349,986 |
| Ministry of Lands & Forestry | 39,008 | 63,682 | 102,690 |
| Ministry of Energy | 24,287 | 627,662 | 651,949 |
| Ministry of Trade & Industry | 23,277 | 63,677 | 86,954 |
| Ministry of Tourism | 11,751 | 0 | 11,751 |
| Ministry of Environment & Science | 93,163 | 31,105 | 124,269 |
| Ministry of Private Sector & Development | 3,300 | 0 | 3,300 |
| Ministry of Mines | 11,810 | 0 | 11,810 |
| Infrastructure | 165,717 | 1,116,490 | 1,282,207 |
| Ministry of Works & Housing | 49,104 | 574,134 | 623,238 |
| Ministry of Roads & Transport | 105,698 | 498,451 | 604,149 |
| Ministry of Communication & Technology | 10,916 | 43,905 | 54,820 |
| <u>Social</u> | 2,150,083 | 437,884 | 2,587,968 |
| Ministry of Education | 1,600,473 | 199,555 | 1,800,028 |
| Ministry of Manpower Development & Emplo. | 22,231 | 5,510 | 27,741 |
| Ministry of Youth & Sports | 23,312 | 0 | 23,312 |
| National Commission for Civic Education | 16,965 | 0 | 16,965 |
| National Commission on Culture | 12,813 | 0 | 12,813 |
| Ministry of Health | 466,636 | 232,819 | 699,455 |
| National Media Commission | 945 | 0 | 945 |
| Ministry of Women Affair | 6,709 | 0 | 6,709 |
| <u>Public Safety</u> | 691,583 | 29,067 | 720,650 |
| Ministry of Justice | 22,049 | 2,487 | 24,536 |
| Ministry of Defence | 285,345 | 0 | 285,345 |
| CHRAJ | 12,486 | 0 | 12,487 |
| Judicial service | 49,721 | 0 | 49,721 |
| Ministry of Interior | 321,982 | 26,580 | 348,562 |
| <u>Contingency</u> | 46,347 | 0 | 46,347 |
| Contingency | 46,347 | 0 | 46,347 |
| <u>Total</u> | 4,533,601 | 2,922,200 | 7,455,801 |
| | | | |

Table 5: Total Recurrent & Development Expenditures Functional Classification (million Cedis)

| | 1987 | 1988 | 1989 | 1990 | 1991 |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| GENERAL SERVICES | | | | | |
| General Public Services | 9,949.2 | 19,474.2 | 25,788.5 | 33,375.6 | 41,731.6 |
| Defence | 4,275.2 | 4,602.6 | 6,105.5 | 9,005.8 | 15,230.3 |
| Public Order & Safety | 6,117.6 | 8,580.8 | 10,170.9 | 13,470.4 | 17,155.1 |
| Total | 20,342.0 | 32,657.6 | 42,064.9 | 55,851.8 | 74,117.0 |
| COMMUNITY & SOCIAL SERV. | | | | | |
| Education | 27,043.8 | 36,994.7 | 47,691.5 | 64,834.6 | 78,801.0 |
| Health | 9,501.5 | 12,879.5 | 19,852.9 | 25,705.9 | 28,654.3 |
| Social Security & Welfare Services | 6,553.6 | 9,904.4 | 14,378.6 | 18,389.4 | 23,884.3 |

| | | | | | |
|------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Housing & Community Amenities | 811.1 | 5,002.0 | 5,170.3 | 6,607.0 | 7,480.8 |
| Recreational, Cultural & Religious | 2,245.2 | 2,195.1 | 3,856.9 | 6,872.2 | 7,809.9 |
| Total | 46,155.2 | 66,975.7 | 90,950.2 | 122,409.1 | 146,630.3 |
| ECONOMIC SERVICES | | | | | |
| Fuel & Energy | 588.1 | 323 | 14.0 | 1,048.3 | 1,102.3 |
| Agriculture, Forestry & Fishing | 4,695.4 | 5,003.5 | 9,141.5 | 10,437.8 | 12,378.1 |
| Mining, Manufacturing & Constr. | 1,883.9 | 1,616.7 | 2,184.4 | 2,625.0 | 3,185.6 |
| Roads & Waterways | 8,588.9 | 12,443.6 | 14,883.3 | 16,088.6 | 28,168.2 |
| Other Transport & Communi. | 2,744.8 | 2,535.2 | 2,352.0 | 3,248.2 | 4,325.2 |
| Other economic services | 1,236.1 | 3,830.9 | 4,548.5 | 4,833.7 | 5,613.4 |
| Total | 19,737.2 | 25,753.0 | 33,123.7 | 38,281.6 | 54,772.8 |
| OTHER PURPOSES | | | | | |
| Interest on Public Debt | 10,587.0 | 11,961.0 | 18,744.0 | 27,318.0 | 42,828.0 |
| Transfer to Other Levels of Gov. | 2,313.6 | 3,542.7 | 1,960.2 | 2,632.5 | 6,150.9 |
| NAM Capital Expenditure | - | - | - | - | 6,447.0 |
| Other | 3,000.0 | 3,007.0 | 9,623.0 | 7,980.0 | 9,320.0 |
| Total | 15,900.6 | 18,510.7 | 30,327.2 | 37,930 | 64,741.9 |
| Grand Total | 102,135.0 | 143,897.0 | 196,466.0 | 254,473.0 | 340,262.0 |

- Provisional

Table 6: Total Recurrent & Development Expenditures Functional Classification (million)

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|----------------|----------------|------------------|------------------|------------------|
| GENERAL SERVICES | | | | | |
| General Public Services | 60,710 | 78,116 | 168,188 | 214,340 | 340,469 |
| Defence | 18,201 | 26,600 | 36,147 | 58,823 | 87,562 |
| Public Order & Safety | 25,717 | 35,718 | 50,448 | 64,235 | 97,403 |
| Total | 104,628 | 140,434 | 254,784 | 337,397 | 523,434 |
| COMMUNITY & SOCIAL SERVICES | | | | | |
| Education | 119,383 | 158,119 | 213,901 | 330,394 | 463,872 |
| Health | 38,893 | 59,674 | 55,802, | 111,545 | 126,845 |
| Social Security & Welfare Services | 34,674 | 68,424 | 82,587 | 141,119 | 173,770 |
| Housing & Community Amenities | 9,424 | 11,136 | 33,326 | 24,700 | 39,084 |
| Recreational,Cultural & Religious Serv. | 9,648 | 16,151 | 17,343 | 23,834 | 38,938 |
| Total | 211,839 | 313,504 | 402,959 | 631,592 | 842,509 |
| ECONOMIC SERVICES | | | | | |
| Fuel & Energy | 1,380 | 1,450 | 1,525 | 585 | 10,744 |
| Agriculture, Forestry & Fishing | 15,667 | 21,150 | 18,950 | 28,679 | 35,539 |
| Mining, Manufacturing & Construction | 4,950 | 8,123 | 29,761 | 13,296 | 21,939 |
| Roads & waterway | 51,150 | 69,481 | 81,331 | 189,838 | 270,610 |
| Other Transport & Communicatio | 4,074 | 6,049 | 6,321 | 4,658 | 6,360 |
| Other Economic Services | 7,541 | 15,674 | 19,778 | 25,915 | 39,972 |
| Total | 84,761 | 121,927 | 157,667 | 262,969 | 385,164 |
| OTHER PURPOSES | | | | | |
| Interest on Public Debt | 61,004 | 135,904 | 230,146 | 328,781 | 579,276 |
| Transfer to Other Levels of Gov. | 9,475 | 6,138 | 44,759 | 65,282 | 87,304 |
| NAM Capital Expenditure | - | - | - | - | - |
| Emergency Fund | - | - | - | 21,255 | - |
| Other-Special Efficiency Fund | 27,106 | 43,004 | 50,998 | 51,423 | 26,592 |
| Total | 97,585 | 185,046 | 325,998 | 466,741 | 693,172 |
| Grand Total | 498,813 | 760,911 | 1,141,312 | 1,698,700 | 2,446,279 |

Table 7: Development Expenditure (1)- Functional Classification (million Cedis)

| | 1994 | 1995 | 1996 | 1997 | 1998 |
|--|----------------|----------------|----------------|----------------|----------------|
| GENERAL SERVICES | | | | | |
| General Public Services | 33,310 | 39,738 | 90,876 | 100,461 | 131,720 |
| Defence | 4,264 | 14,694 | 17,351 | 19,243 | 42,469 |
| Public Order & Safety | 6,006 | 8,824 | 15,997 | 13,729 | 29,391 |
| Total | 43,580 | 63,256 | 124,224 | 133,433 | 203,580 |
| COMMUNITY & SOCIAL SERV. | | | | | |
| Education | 5,037 | 32,367 | 18,116 | 17,155 | 40,922 |
| Health | 5,895 | 37,123 | 18,938 | 16,375 | 39,269 |
| Social Security & Welfare Services | 1,092 | 1,208 | 2,247 | 1,876 | 15,247 |
| Housing & Community Amenities (3) | 30,193 | 13,114 | 20,829 | 30,194 | 16,169 |
| Recreational, Cultural & Religious. Ser. | 4,622 | 7,116 | 14,821 | 16,730 | 85,767 |
| Total | 46,839 | 90,928 | 74,951 | 32,330 | 192,374 |
| ECONOMIC SERVICES | | | | | |
| Fuel & Energy | 1,484 | 158 | 10,168 | 11,364 | 15,537 |
| Agricul. Forestry & Fishing | 5,737 | 8,781 | 9,863 | 11,447 | 16,708 |
| Mining, Manufacturing & Constr (4) | 26,872 | 7,690 | 12,044 | 8,559 | 8,750 |
| Roads & Waterways | 72,340 | 179,700 | 248,500 | 243,900 | 316,000 |
| Other Transport & Communication | 3,236 | 1,542 | 1,746 | 1,782 | 5,041 |
| Other Economic Services | 12,965 | 16,463 | 25,317 | 19,877 | 41,842 |
| Total | 122,634 | 214,334 | 387,638 | 296,929 | 403,878 |
| OTHER PURPOSES | | | | | |
| Interest on Public Debt | - | - | - | - | - |
| Transfer to Other Levels of Gov. | 38,299 | 58,739 | 78,366 | 105,807 | 90,126 |
| Other (2) | 50,998 | 51,423 | 26,592 | 3,992 | 764 |
| Total | 89,297 | 110,162 | 110,162 | 109,799 | 90,890 |
| Grand Total | 302,350 | 478,680 | 478,680 | 622,491 | 890,722 |

(1) Includes Current Expenditure Elements. See Table 36.

(2) Special Efficiency Fund

(3) The Figure for 1994 includes Environment Fund Arreas Clearance & Emergency Fund.

(4) The Figure for 1994 includes Business Assistance Fund and Transfer to A.G.C share.

- Provisional

Table 8: 1995 GOG BUDGETARY ALLOCATIONS (C)

| SECTOR | RECURRENT** | | DEVELOPMENT | | TOTAL | |
|--------------------------------|-----------------|---------|----------------|---------|-----------------|---------|
| | Absolute | % Share | Absolute | % Share | Absolute | % Share |
| 1. Food & Agricul. | 13,883,487,000 | 1.98 | 6,500,000,000 | 3.12 | 20,383,487,000 | 2.24 |
| 2. Lands & Forestry | 6,910,119,000 | 0.98 | 5,561,000,000 | 2.67 | 12,471,119,000 | 1.37 |
| 3. Mines & Energy | 457,669,000 | 0.07 | 1,454,700,000 | 0.70 | 1,912,369,000 | 0.21 |
| 4. Trade & Industry | 2,618,656,000 | 0.37 | 1,391,000,000 | 0.67 | 4,009,656,000 | 0.44 |
| 5. Tourism | 572,860,000 | 0.08 | 734,000,000 | 0.35 | 1,306,860,000 | 0.14 |
| 6. Env. Sc & Tech. | 10,837,204,000 | 1.54 | 5,875,000,000 | 2.82 | 16,712,204,000 | 1.84 |
| 7. Works & Housing | 3,851,694,000 | 0.55 | 19,000,000,000 | 9.12 | 22,851,694,000 | 2.51 |
| 8. Roads & High. | 10,878,958,000 | 1.55 | 84,500,000,000 | 40.56 | 95,378,958,000 | 10.47 |
| 9. Transport & Com | 4,092,702,000 | 0.58 | 1,942,000,000 | 0.93 | 6,034,702,000 | 0.66 |
| 10. Education | 256,220,346,000 | 36.48 | 6,000,000,000 | 2.88 | 262,220,346,000 | 28.79 |
| 11. Youth & Sports | 3,228,286,000 | 0.46 | 851,000,000 | 0.41 | 4,079,286,000 | 0.45 |
| 12. Health | 65,448,995,000 | 9.32 | 8,440,000,000 | 4.05 | 73,888,995,000 | 8.11 |
| 13. Employment | 4,411,168,000 | 0.63 | 1,040,000,000 | 0.05 | 5,451,168,000 | 0.60 |
| 14. Interior | 42,970,311,000 | 6.12 | 5,800,000,000 | 2.78 | 48,770,311,000 | 5.3 |
| 15. Local Gov | 8,998,748,000 | 1.28 | 4,770,000,000 | 2.29 | 13,768,748,000 | 1.5 |
| 16. Gov Machinery | 37,293,355,000 | 5.31 | 8,300,000,000 | 3.98 | 45,593,355,000 | 5.0 |
| 17. Information | 8,850,180,000 | 1.26 | 3,100,000,000 | 1.49 | 11,950,180,000 | 1.3 |
| 18. Justice | 1,718,971,000 | 0.24 | 1,553,000,000 | 0.75 | 3,271,971,000 | 0.3 |
| 19. Foreign | 31,433,933,000 | 4.48 | 6,519,700,000 | 3.13 | 37,953,633,000 | 4.1 |
| 20. Finance | 48,071,476,000 | 6.84 | 8,400,000,000 | 4.03 | 56,471,476,000 | 6.2 |
| 21. Defence | 34,569,173,000 | 4.92 | 13,497,000,000 | 6.48 | 48,066,173,000 | 5.2 |
| 22. Palmtry Affairs | 22,000,000 | 0.00 | 0 | 0.00 | 22,000,000 | 0.00 |
| 23. Extra Ministeri. | 24,885,400,000 | 3.54 | 4,531,000,000 | 2.18 | 29,416,400,000 | 3.2 |
| 24. GGS | 80,106,309,000 | 11.41 | 1,000,000,000 | 0.48 | 81,106,309,000 | 8.9 |

| | | | | | | |
|---------------------------|------------------------|---------------|------------------------|---------------|------------------------|--------------|
| 25. Pamscad | 0 | 0.00 | 288,000,000 | 0.14 | 288,000,000 | 0.0 |
| 26. NCC | 0 | 0.00 | 1,548,000,000 | 0.74 | 1,548,000,000 | 0.1 |
| 27. Multi-Sectoral | 0 | 0.00 | 5,721,600,000 | 2.75 | 5,721,600,000 | 0.6 |
| TOTAL | 702,332,000,000 | 100.00 | 208,317,000,000 | 100.00 | 910,649,000,000 | 100.0 |

****Recurrent figures include provision for Personal Emoluments, items 2-5, Subventions and Social Security Contributions**

| Table 8 : GDP AT 1993 PRICE (Billion Cedis) | | | | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ITEM | 1988 | 1989 | 1990 | 1991 | 1992 | 1993* | 1994* | 1995* |
| AGRICULTURE | 1,314.1 | 1,366.7 | 1,338.2 | 1,402.0 | 1,394.5 | 1,430.0 | 1,456.7 | 1,511.2 |
| 1.1 Agric. & Livestock | 920 | 967.3 | 927.3 | 971.9 | 965.0 | 994.0 | 1,003.0 | 1,038.4 |
| 1.2 Cocoa Pro. & Mark. | 96.1 | 99.2 | 102.2 | 116.4 | 108.0 | 108.1 | 121.3 | 134.7 |
| 1.3 Forestry & Logging | 96.1 | 97.3 | 100.9 | 103.1 | 106.4 | 107.7 | 109.6 | 111.8 |
| 1.4 Fishing | 201.8 | 202.9 | 207.8 | 210.7 | 215.0 | 220.2 | 222.8 | 226.3 |
| INDUSTRY | 716.9 | 745.9 | 799.3 | 840.4 | 905.1 | 961.1 | 994.5 | 1,035.3 |
| 2.1 Mining & Quarrying | 140.6 | 154.6 | 164.5 | 175.6 | 193.8 | 211.4 | 222.1 | 234.3 |
| 2.2 Manufacturing | 313.6 | 315.5 | 334.0 | 337.5 | 349.3 | 363.3 | 368.7 | 375.4 |
| 2.3 Electricity & Water | 61.7 | 66.5 | 76.2 | 82.2 | 92.1 | 99.6 | 104.9 | 111.2 |
| 2.4 Construction | 201.0 | 209.3 | 224.6 | 245.2 | 269.9 | 286.8 | 298.8 | 314.4 |
| SERVICES | 778.5 | 829.4 | 889.0 | 926.0 | 997.3 | 1,065.8 | 1,118.6 | 1,170.8 |
| 3.1 Transport & Commun | 110.7 | 119.4 | 134.0 | 142.6 | 154.7 | 166.0 | 176.1 | 183.5 |
| 3.2 Trade & Hotels | 143.2 | 156.7 | 173.8 | 188.6 | 207.7 | 224.7 | 237.1 | 252.5 |
| 3.3 Finance & Insurance | 119.6 | 124.3 | 133.3 | 140.7 | 149.8 | 158.8 | 165.2 | 170.1 |
| 3.4 Government Services | 320.3 | 335.8 | 348.5 | 353.1 | 381.3 | 409.5 | 430.4 | 451.9 |
| 3.5 Comm. & Social Serv. | 56.8 | 62.2 | 65.8 | 67.0 | 68.6 | 70.8 | 72.9 | 74.8 |
| 3.6 Private non Profit Ser. | 28.0 | 31.0 | 33.4 | 34.1 | 35.1 | 36.0 | 36.9 | 38.0 |
| SUB-TOTAL | 2,809.5 | 2,942.0 | 3,026.4 | 3,168.4 | 3,296.8 | 3,456.9 | 3,569.8 | 3,717.3 |
| Net Indirect Taxes | 311.1 | 335.9 | 377.1 | 384.0 | 400.3 | 415.6 | 429.3 | 442.7 |
| EQUALS: | | | | | | | | |
| GDP in Purchaser's Value | 3,120.7 | 3,278.0 | 3,403.5 | 3,552.4 | 3,697.2 | 3,872.5 | 3,999.1 | 4,160.0 |

| Table 8 : GDP AT 1993 PRICE (Billion Cedis) | | | | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ITEM | 1996 | 1997 | 1998 | 1999 | 2000 | 2001* | 2002* | 2003** |
| AGRICULTURE | 1,590.1 | 1,658.4 | 1,743.2 | 1,810.8 | 1,849.1 | 1,923.4 | 2,007.2 | 2,096.8 |
| 1.1 Agric. & Livestock | 1,103.5 | 1132.7 | 1182.5 | 1238.1 | 1251.7 | 1314.3 | 1382.6 | 1449.0 |
| 1.2 Cocoa Prod. & Mark. | 138.6 | 151.5 | 168.3 | 167.5 | 177.9 | 176.1 | 175.2 | 178.7 |
| 1.3 Forestry & Logging | 114.8 | 139.5 | 153.5 | 163.9 | 182.1 | 190.8 | 200.4 | 212.8 |
| 1.4 Fishing | 233.2 | 234.7 | 238.9 | 241.3 | 237.4 | 242.2 | 249.0 | 256.4 |
| INDUSTRY | 1,084.4 | 1,153.3 | 1,190.1 | 1,248.4 | 1,295.2 | 1,333.1 | 1,396.2 | 1,466.8 |
| 2.1 Mining & Quarrying | 244.2 | 257.8 | 273.5 | 281.7 | 285.9 | 281.4 | 294.0 | 307.8 |
| 2.2 Manufacturing | 388.4 | 416.9 | 433.6 | 454.4 | 471.7 | 489.1 | 512.6 | 536.2 |
| 2.3 Electricity & Water | 118.3 | 130.4 | 117.4 | 126.6 | 132.3 | 137.9 | 143.5 | 149.5 |
| 2.4 Construction | 333.5 | 348.2 | 365.6 | 385.7 | 405.4 | 424.8 | 446.1 | 473.3 |
| SERVICES | 1,220.3 | 1,300.2 | 1,378.7 | 1,447.8 | 1,525.3 | 1,602.7 | 1,678.1 | 1,759.5 |
| 3.1 Transport & Comm. | 192.7 | 206.6 | 218.0 | 231.0 | 244.9 | 258.4 | 273.1 | 288.7 |

| | | | | | | | | |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 3.2 Trade & Hotels | 273.4 | 299.4 | 317.4 | 338.0 | 315.5 | 369.4 | 390.1 | 412.0 |
| 3.3 Finance & Insurance | 177.3 | 189.2 | 201.5 | 209.6 | 220.0 | 229.9 | 242.5 | 255.9 |
| 3.4 Government Services | 462.6 | 482.4 | 512.3 | 532.8 | 564.8 | 593.0 | 614.4 | 639.0 |
| 3.5 Community & Soc Ser | 75.6 | 81.1 | 85.9 | 91.0 | 97.3 | 103.6 | 108.2 | 112.6 |
| 3.6 Private non-Profit Ser | 38.7 | 41.5 | 43.6 | 45.4 | 46.8 | 48.3 | 49.8 | 51.4 |
| SUB-TOTAL | 3,894.8 | 4,111.9 | 4,312.0 | 4,507.0 | 4,669.7 | 4,859.2 | 5,081.5 | 5,323.1 |
| Net Indirect Taxes | 456.4 | 422.0 | 434.7 | 449.9 | 472.4 | 497.9 | 519.3 | 542.2 |
| EQUALS | | | | | | | | |
| GDP in Purchaser's Val. | 4,351.2 | 4,533.9 | 4,746.7 | 4,956.9 | 5,142.1 | 5,357.1 | 5,600.8 | 5,865.3 |

*Provisional

**Projection

SOURCE: Statistical Service

Table 9 : FUNCTIONAL CLASSIFICATION OF DISCRETIONARY EXPENDITURES 2001 (in Billion cedis)

| MDA | 2001 | | |
|---|------------------|----------------|------------------|
| | GOG | DONOR | TOTAL |
| ADMINISTRATION | | | |
| Ministry of Local Gov & Rural Dev | 108,749 | 100,730 | 209,479 |
| Government Machinery | 142,708 | 9,969 | 152,677 |
| Ministry of Foreign Affairs | 165,404 | 0 | 165,404 |
| Ministry of Finance | 130,895 | 8,269 | 139,165 |
| Ministry of Government Business | 448 | 0 | 448 |
| Audit Service | 17,794.5 | 0 | 17,795 |
| Public Service Commission | 1,178 | 0 | 1,178 |
| Electoral Commission | 15,139 | 0 | 15,139 |
| Office of Parliament | 15,865 | 95,000 | 110,865 |
| General Government Services | 1,274,133 | 66,855 | 1,340,988 |
| Office of District Assem. Comm. Fund Administr. | 437 | 0 | 437 |
| Ministry of Economic Planning & Co-operation | 16,732 | 25,325 | 42,057 |
| Ministry of Media Relations | 10,552 | 0 | 10,552 |
| Sub-total Administration | 1,900,036 | 306,148 | 2,206,184 |
| ECONOMIC SERVICES | | | |
| Ministry of Food & Agriculture | 62,996 | 390,753 | 453,748 |
| Ministry of Lands & Forestry | 67,332 | 55,705 | 123,036 |
| Ministry of Enrgy | 19,933 | 186,592 | 206,526 |
| Ministry of Trade & Industry | 20,153 | 51,887 | 72,040 |
| Ministry of Tourism | 6,979 | 0 | 6,979 |
| Ministry of Environment, Science & Technology | 64,749 | 20,327 | 85,076 |
| Ministry of Private Sector Development | 1,562 | 0 | 1,562 |
| Sub-total Economic Services | 243,704 | 705,264 | 948,968 |
| INFRASTRCTURE | | | |
| Ministry of Works & Housing | 76,559 | 248,977 | 325,536 |
| Ministry of Roads & Highways | 87,740 | 286,210 | 373,950 |

| | | | |
|--|------------------|------------------|------------------|
| Ministry of Transport & Communication | 37,012 | 0 | 37,012 |
| Sub-total Infrastructure | 201,311 | 535,187 | 736,498 |
| SOCIAL SERVICES | | | |
| Ministry of Education | 1,299,755 | 120,460 | 1,420,215 |
| Ministry of Manpower Development & Employ. . | 19,954 | 0 | 19,954 |
| Ministry of Youth & Sports | 16,949 | 0 | 16,949 |
| National Commission for Civic Education | 13,509 | 0 | 13,509 |
| National Commission for Culture | 9,820 | 0 | 9,820 |
| Ministry of Health | 336,665 | 85,558 | 422,222 |
| National Media Commission | 539 | 0 | 539 |
| Ministry of Women Affairs | 6,999 | 0 | 6,999 |
| Sub-total Social Services | 1,704,189 | 206,018 | 1,910,207 |
| PUBLIC SAFETY | | | |
| Ministry of Justice | 23,070 | 0 | 23,070 |
| Ministry of Defence | 231,740 | 0 | 231,740 |
| CHRAJ | 5,905 | 0 | 5,905 |
| Judicial Service | 38,063 | 0 | 38,063 |
| Ministry of Interior | 203,822 | 0 | 203,822 |
| Sub-total Public Safety | 502,600 | 0 | 502,600 |
| Contingency | 25,000 | 0 | 25,000 |
| Total Discretionary Expenditure | 4,576,839 | 1,752,617 | 6,329,456 |

Table 10: FUNCTIONAL CLASSIFICATION OF DISCRETIONARY EXPENDITURES, 1999-2001(in Billions of cedis)

| MDA | 1999 | | | 2000 Proposed Amount | 2001 Proposed Amount |
|--|----------------|----------------|------------------|----------------------------|----------------------------|
| | GOG | Donor | Total | | |
| GENERAL ADMINISTRATION | | | | | |
| Ministry of Local Gov & Rural Dev. | 42.255 | 43.475 | 85.730 | 143.405 | 151.242 |
| Office of Government Machinery | 124.251 | 0.000 | 124.251 | 128.040 | 135.296 |
| Ministry of Foreign Affairs | 85.052 | 0.000 | 85.052 | 85.360 | 86.976 |
| Ministry of Finance | 113.005 | 7.787 | 120.792 | 128.040 | 144.960 |
| Ministry of Parliamentary Affairs | 0.386 | 0.190 | 0.576 | 0.662 | 0.834 |
| Audit Service | 11.503 | 0.000 | 11.503 | 13.954 | 14.759 |
| Public Services Commission | 1.327 | 0.000 | 1.327 | 1.450 | 1.477 |
| National Electoral Commission | 15.456 | 0.000 | 15.456 | 37.519 | 18.599 |
| Office of Parliament | 11.958 | 0.000 | 11.958 | 17.072 | 19.328 |
| General Government Services | 370.604 | 210.606 | 581.210 | 393.400 | 326.280 |
| Office of the Dist. Assem. Com.Fu. Ad. | 0.308 | 0.000 | 0.308 | 0.337 | 0.389 |
| Sub-total Administration | 776.105 | 262.058 | 1,038.163 | 949.239 | 900.140 |
| ECONOMIC SERVICES | | | | | |
| Ministry of Food & Agriculture | 43.593 | 90.101 | 133.694 | 136.060 | 141.000 |
| Ministry of Lands and Forestry | 29.842 | 13.712 | 43.554 | 48.350 | 55.400 |

| | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|
| Ministry of Mines & Energy | 26.000 | 107.266 | 133.266 | 140.000 | 145.279 |
| Ministry of Trade & Industry | 11.496 | 5.025 | 16.521 | 14.926 | 16.187 |
| Ministry of Tourism | 5.060 | 0.000 | 5.060 | 5.819 | 6.692 |
| Ministry of Env, Science & Tech. | 52.742 | 14.239 | 66.981 | 75.020 | 85.023 |
| Sub- total Economic Services | 168.733 | 230.343 | 399.076 | 420.175 | 449.581 |
| INFRASTRUCTURE | | | | | |
| Ministry of Works & Housing | 65.465 | 149.969 | 215.434 | 247.562 | 256.250 |
| Ministry of Roads & Transport | 302.000 | 301.468 | 603.468 | 832.686 | 863.867 |
| Sub-total Infrastructure | 367.465 | 451.437 | 818.902 | 1,080.248 | 1,120.117 |
| SOCIAL SERVICES | | | | | |
| Ministry of Education | 678.550 | 90.340 | 768.890 | 813.054 | 899.290 |
| Ministry of Employment & Soc. Welf. | 14.524 | 0.000 | 14.524 | 14.938 | 16.328 |
| Ministry of Youth & Sports | 22.450 | 0.000 | 22.456 | 17.072 | 19.328 |
| Ministry of Communication | 22.643 | 0.000 | 22.643 | 29.876 | 24.160 |
| National Commission for Civic Educ. | 7.728 | 0.000 | 7.728 | 8.836 | 9.664 |
| National Commission for Culture | 11.593 | 0.000 | 11.593 | 6.878 | 7.367 |
| Ministry of Health | 218.090 | 106.807 | 324.897 | 426.800 | 436.200 |
| National Media Commission | 0.734 | 0.000 | 0.734 | 0.666 | 0.598 |
| Sub-total Social Services | 976.318 | 197.147 | 1,173.465 | 1,317.820 | 1,412.935 |
| PUBLIC SAFETY | | | | | |
| Ministry of Justice | 11.59 | 0.000 | 11.592 | 42.680 | 36.656 |
| Ministry of Defence | 158.060 | 0.000 | 158.060 | 170.720 | 183.280 |
| CHRAJ | 6.182 | 0.000 | 6.182 | 6.876 | 8.467 |
| Judicial Service | 21.351 | 0.000 | 21.351 | 36.200 | 40.080 |
| Ministry of Interior | 193.189 | 0.000 | 193.189 | 213.390 | 231.576 |
| Sub-total Public Safety | 390.374 | 0.000 | 390.374 | 469.866 | 500.059 |
| Contingency | 38.640 | 0.000 | 38.640 | 42.680 | 48.320 |
| Total Discretionary Expenditure | 2,717.635 | 1,140.985 | 3,858.620 | 4,280.028 | 4,431.152 |
| | | | | | |

Source: Ministry of Finance

Table 11 : Ghana's External Partners & Their Activities

| Partners | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------------|---------|------|-----|---------|---------|---------|---------|---------|---------|---------|----|----|---------|----|-----|-----|---------|
| EU | 2002 | 60 | 180 | F/ N | F/ N | F/ N | | F/ N | F/ N | F/ N | N | | F/ N | | F/N | F/N | F/ N |
| AFDB | 1999-05 | NA | NA | L | L | | F | L | | L | | | L | | F | | |
| Canada | 1995-05 | 15 | 55 | F/ N | F/ N | F/ N | | | F/ N | | | | | | N | N | |
| Belgium | NA | 15 | NA | | | | N | N | N | | | | N | | | | |
| Denmark | 2004-08 | 58 | 290 | | F | F | | F | F | F | | | F | N | | F | F |
| Fr (Co-op) | 2004 | 5 | 7.5 | F | | F | | | F | F | | | F | F | | | |
| Fr (AFD) | 2004 | NA | NA | F | | F | F/ N | | F | F | | | F | F | | | |
| German (GTZ) | NA | 10.2 | NA | N | N | N | F/ N | N | N | N | | | N | | N | | |
| German | 2003 | 18. | NA | F | | F | | | F | F | | | F | | F | F | |

| | | | | | | | | | | | | | | | | | |
|-----------------|---------|------|--------|---|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|
| (KfW) | | 5 | | | | | | | | | | | | | | | |
| JICA | 2004 | 0.9 | NA | N | N | N | F/N | N | N | N | N | | N | N | N | | N |
| Italy | 2004 | 13 | NA | N | | | | | | | | | F | | F | | |
| Netherlands | NA | 21.6 | 21.6pa | | F | | | F | | | | | | | F | F | |
| Norway | NA | NA | NA | | | | N | | | | | | | | | | |
| Nordic Dev Fund | NA | 2.5 | NA | | | | | | | N | | | | | | | |
| Sweden | NA | 2.5 | NA | | | | | F | F | | | | F | | F | | |
| Spain | NA | 17.5 | 81 | | | | F | F | F | | | | | F | | | |
| Swiss | 2004 | 14 | NA | | N | | | | | | | | N | | | | F |
| DFID | 2003-06 | 125 | 384 | N | N | | F/N | N | | F/N | F/N | N | N | | N | F/N | F/N |
| USAID | 2004-10 | 59 | 228 | N | N | N | F/N | N | N | | N | N | N | N | N | | |
| UN | | | | | | | | | | | | | | | | | |
| UNESCO | 2004 | 0.3 | NA | N | N | N | N | | | | | | | | | | |
| UNICEF | 2001-05 | 12 | NA | | F | F/N | F/N | F/N | F/N | | | | | | | | F/N |
| UNDP | NA | 6.8 | NA | | N | N | | N | | | | | N | N | N | | |
| WHO | 2004-05 | NA | NA | | | | | N | N | | | | | | | | |
| FAO | NA | NA | NA | F | | | | N | F | | | | | | | | |
| IFAD | 2004-08 | 7 | 35 | F | | F | | | F | F | F | F | F | | F | | F |
| World Bank | 2004-07 | 250 | 1055 | F | F/N | F/N | F/N | F/N | F | F | F/N | | F/N | F/N | F/N | F/N | F/N |
| ILO | 2004-05 | NA | NA | | N | N | N | | | N | | | N | | | | N |

Note: F represents Financing while N indicates Non Financing activities

1. Most recent assisting Strategy (year)
2. Committed funding 2004 (US \$ Millions)
3. Planned funding 2004-2007 (US m\$)
4. Agriculture
5. Governance
6. Decentralization
7. Education
8. Health
9. Water
10. Roads
11. Public Finance
12. Public Sector Reform
13. Private Sector Development
14. Energy
15. Natural Resources
16. Multi Donor Budget Support

Development Expenditure (1)- Functional Classification (million Cedis)

| | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|
| GENERAL SREVICES | | | | | |
| General Public Services | 33,310 | 39,738 | 90,876 | 100,451 | 131,720 |
| Defence | 4,264 | 14,694 | 17,351 | 19,243 | 42,469 |
| Public Order & Safety | 6,006 | 8,824 | 15,997 | 13,729 | 29,391 |
| Total | 43,580 | 63,256 | 124,224 | 133,433 | 203,580 |
| COMMUNITY & SOCIAL SERV. | | | | | |
| Education | 5,037 | 32,367 | 13,116 | 17,155 | 40,922 |
| Health | 5,895 | 37,123 | 18,938 | 16,375 | 39,269 |
| Social Security & Welfare Services | 1,092 | 1,208 | 2,247 | 1,876 | 15,247 |
| Housing & Communities Amenit. (3) | 30,193 | 13,114 | 20,829 | 30,194 | 61,169 |
| Recreational,Culture &Religious Ser. | 4,622 | 7,116 | 14,821 | 16,730 | 35,767 |
| Total | 46,839 | 90,928 | 74,951 | 82,330 | 192,374 |
| ECONOMIC SERVICES | | | | | |
| Fuel & Energy | 1,484 | 158 | 10,168 | 11,364 | 15,537 |
| Agriculture, Forestry & Fishing | 5,737 | 8,781 | 9,863 | 11,447 | 16,708 |
| Mining, Manufacturing & Const. (4) | 26,872 | 7,690 | 12,044 | 8,559 | 8,750 |
| Roads & Waterways | 72,340 | 179,700 | 248,500 | 243,900 | 316,000 |
| Other Transport & Communication | 3,236 | 1,542 | 1,746 | 1,782 | 5,041 |
| Other Economic Services | 12,965 | 16,463 | 25,371 | 19,877 | 41,842 |
| Total | 122,634 | 214,334 | 307,638 | 196,929 | 403,878 |
| OTHER PURPOSES | | | | | |
| Interest on Public Debt | - | - | - | - | - |
| Transfer to Other Levels of Govern. | 38,299 | 58,739 | 78,366 | 105,807 | 90,126 |
| Other (2) | 50,998 | 51,423 | 26,592 | 3,992 | 764 |
| Total | 89,297 | 110,163 | 104,958 | 109,799 | 90,890 |
| Grand Total | 302,350 | 478,680 | 611,771 | 622,491 | 890,722 |

(1) Includes Current Expenditure Elements. See Table 36

(2) Special Efficiency Fund

(3) The figure for 1994 includes Environment Fund Arreas Clearance & Emergency Fund.

(4) The figure for 1994 includes Business Assistance Fund & Transfer to A.G.C Share.

- Provisional.

Development Expenditure (1)-Functional Classification

| | 1987 | 1988 | 1989 | 1990 |
|---|-----------------|-----------------|-----------------|-----------------|
| GENERAL SERVICES | | | | |
| General Public Debt | 3,157.6 | 4,532.4 | 4,812.9 | 5,589.4 |
| Defence | - | 141.5 | 572.9 | 671.5 |
| Public Order & Safety | - | 222.5 | 469.0 | 564.8 |
| Total | 3,157.6 | 4,896.4 | 5,854.8 | 6,825.7 |
| COMMUNITY & SOCIAL SERVICES | | | | |
| Education | 1,686.0 | 2,358.8 | 3,149.0 | 6,696.3 |
| Health | 2,153.0 | 2,119.6 | 3,566.6 | 5,121.6 |
| Social Security & Welfare Services | 109.0 | - | 125.7 | 347.8 |
| Housing & Community Amenities | 428.2 | 3,931.7 | 3,995.8 | 5,090.7 |
| Recreational, Cultural & Religious services | - | 248.2 | 563.7 | 2,818.1 |
| Total | 4,376.5 | 8,658.3 | 11,400.8 | 20,074.5 |
| ECONOMIC SERVICES | | | | |
| Fuel & Energy | 574.0 | 311.2 | 0.4 | 1,028.1 |
| Agriculture, Forestry & Fishing | 1,226.5 | 1,619.2 | 3,499.6 | 3,249.6 |
| Mining, Manufacturing & Construction | 748.1 | 475.9 | 865.2 | 673.3 |
| Roads & Waterways | 6,869.1 | 9,943.1 | 12,214.5 | 12,290.2 |
| Other Transport & Communication | 1,550.0 | 1,491.0 | 1,397.3 | 159.9 |
| Other Economic Services | 50.2 | 2,490.0 | 2,967.4 | 2,567.7 |
| Total | 11,017.9 | 16,331.3 | 20,944.4 | 21,399.8 |
| OTHER PURPOSES | | | | |
| Interest on Public Debt | - | - | - | - |
| Transfer to Other Levels of Government | - | - | - | - |
| NAM Capital Expenditure | - | - | - | - |
| Other (2) | 3,000.0 | 3,007.0 | 9,623.0 | 7,980.0 |
| Total | 3,000.0 | 3,007.0 | 9,623.0 | 7,980.0 |
| Grand Total | 21,552.0 | 32,893.0 | 47,823 | 56,280.0 |

(1) Includes Current Expenditure Elements. See Table 36

(2) Special Efficiency Fund.

*Provisional

Growth Rate in Agricultural Sub-Sectors (%)

| Year/Sector | Crops/Livestock | Cocoa | Forestry/logging | Fisheries | All |
|-------------|-----------------|-------|------------------|-----------|------|
| 1988 | 6.0 | -6.3 | 3.3 | 2.2 | 3.6 |
| 1989 | 5.1 | 3.2 | 1.2 | 2.8 | 4.2 |
| 1990 | -4.1 | 2.9 | 3.0 | 2.8 | -2.0 |
| 1991 | 6.8 | -1.9 | 2.0 | 1.8 | 4.7 |
| 1992 | -1.9 | 2.2 | 3.4 | 1.8 | -0.7 |
| 1993 | 3.0 | 0.09 | 1.2 | 2.4 | 2.5 |
| 1994 | 0.9 | 12.2 | 1.8 | 1.2 | 1.0 |
| 1995 | 3.1 | 11.0 | 2.0 | 1.6 | 4.2 |
| 1996 | 3.9 | 6.0 | 2.3 | 2.0 | 5.2 |
| 1997 | 4.5 | 4.0 | 5.6 | 1.0 | 4.3 |
| 1998 | 4.4 | 11.0 | 10.0 | 1.9 | 5.1 |
| 1999 | 4.7 | -0.5 | 6.8 | 1.0 | 3.9 |
| 2000 | 1.1 | 6.2 | 11.1 | 1.6 | 2.1 |
| 2001 | 4.6 | -1.0 | 4.8 | 2.0 | 4.0 |
| 2002 | 5.2 | -0.5 | 5.0 | 2.8 | 4.4 |
| Average | 3.2 | 3.2 | 4.3 | 1.8 | 3.1 |

Table : Production of Selected Food Crops 1988-2002 in (000 Mt)

| Year/Crop | Cassava | Cocoyam | Yam | Plantain | Sweetpotato | Maize | Rice | Millet | Sorghum | G'nut | Cowpea | Pineapple |
|-----------|---------|---------|------|----------|-------------|-------|------|--------|---------|-------|--------|-----------|
| 1988 | 3300 | 1115 | 1200 | 1200 | - | 600 | 63 | 192 | 177 | 220 | 146 | 9.0 |
| 1989 | 3230 | 1200 | 1200 | 1040 | - | 714 | 40 | 180 | 215 | 200 | 146 | 10.0 |
| 1990 | 2717 | 814 | 876 | 798 | - | 552 | 48 | 74 | 136 | 113 | - | 10.0 |
| 1991 | 5701 | 1296 | 2631 | 1478 | - | 931 | 90 | 112 | 241 | - | - | 11 |
| 1992 | 5662 | 1202 | 2331 | 1082 | - | 731 | 79 | 133 | 259 | 80 | - | 12 |

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|------|
| 1993 | 5973 | 1236 | 2720 | 1322 | - | 961 | 94 | 198 | 328 | 98 | - | 15 |
| 1994 | 6025 | 1148 | 1700 | 1475 | - | 940 | 97 | 168 | 324 | 123 | - | 18 |
| 1995 | 6611 | 1408 | 2126 | 1637 | - | 1034 | 133 | 209 | 360 | - | - | 42.0 |
| 1996 | 7111 | 1552 | 2275 | 1823 | 96.1 | 1008 | 130 | 193 | 353 | 113 | - | 35 |
| 1997 | 7000 | 1530 | 2408 | 1818 | 69.8 | 996 | 118 | 144 | 333 | 108 | - | 82.4 |
| 1998 | 7172 | 1577 | 2703 | 1913 | 92.4 | 1015 | 169 | 162 | 355 | 149 | - | 84.9 |
| 1999 | 7845 | 1707 | 3249 | 2046 | 90.6 | 1015 | 126 | 160 | 302 | 135 | - | 87.4 |
| 2000 | 8107 | 1625 | 3363 | 1932 | 88.7 | 1013 | 129 | 169 | 80 | 209 | 63 | 90.0 |
| 2001 | 8966 | 1688 | 3547 | 2074 | 86.8 | 938 | 152 | 134 | 280 | 255 | 102 | 92.9 |
| 2002 | 9731 | 1860 | 3900 | 2279 | 95 | 1400 | 168 | 159 | 316 | 520 | 181 | 95 |

| Year/ Crop | Oil Palm | Tom atoes | Onio ns | Other veget . | Citru s | Bana na | Pawp aw | Mang oes | Meat | FISH | Growth rate |
|---------------|-------------|--------------|------------|---------------------|------------|------------|------------|-------------|------|-------|----------------|
| 1988 | - | 79.4 | 33.9 | 182 | 90 | 4 | - | - | 57.8 | 347 | |
| 1989 | - | 96.0 | 32.1 | 317 | 85 | 4 | - | - | 61.5 | 347 | |
| 1990 | - | 86.4 | 32.1 | 285 | 57 | 4 | - | - | 57.5 | 377 | |
| 1991 | - | 115.1 | 32.1 | 281 | 55 | | - | - | 57.7 | 347 | |
| 1992 | - | 124.6 | 30.2 | 278 | 53 | | - | - | 56.1 | 428 | -6.4 |
| 1993 | - | 124.6 | 30.2 | 266 | 80 | 4 | - | - | 56.1 | 371 | 11.0 |
| 1994 | 879.3 | 194.5 | 24.5 | 256 | 80 | 4 | - | - | 56.7 | 341 | 0.1 |
| 1995 | 901.2 | 228.5 | 28.3 | 258 | 196 | | - | - | 56.4 | 401.5 | 12.7 |
| 1996 | 984.4 | 177.6 | 28.3 | 424 | 248 | 13 | - | - | 55.3 | 452 | 8.6 |
| 1997 | 955.5 | 211.6 | 34.0 | 396 | 242 | 15 | 64.2 | 5.8 | 60.4 | 468 | 0.1 |
| 1998 | 1022.0 | 209.8 | 35.9 | 473 | 250 | 15 | 66.7 | 6.7 | 62.7 | 452.9 | 5.1 |
| 1999 | 1032 | 226.9 | 34.0 | 443 | 244 | 12 | 69.4 | 7.7 | 66.9 | 422 | 7.7 |
| 2000 | 1066.4 | 217.9 | 34.0 | 396 | 265 | 10 | 72.2 | 9.0 | 66.3 | 468 | 1.1 |
| 2001 | 1102.1 | 200.0 | 35.0 | 386 | 300 | 10 | 75 | 10.4 | 68.1 | 454 | 5.7 |
| 2002 | | | | | | | | | 73.9 | 378 | 4.0 |
| | | | | | | | | | | | 4.5 |

Table : Agricultural and Other Sectorial Growth 1988-2002

| Year | Agriculture | Services | Industry | All |
|---------|-------------|----------|----------|-----|
| 1988 | 3.6 | 7.8 | 7.3 | 5.6 |
| 1989 | 4.2 | 5.8 | 4.1 | 5.1 |
| 1990 | (2.0) | 8.8 | 5.4 | 3.3 |
| 1991 | 4.7 | 6.3 | 3.7 | 5.3 |
| 1992 | (0.6) | 7.7 | 5.8 | 3.9 |
| 1993 | 2.5 | 7.2 | 4.3 | 5.0 |
| 1994 | 1.0 | 5.0 | 1.3 | 3.8 |
| 1995 | 4.2 | 4.9 | 3.3 | 4.5 |
| 1996 | 5.2 | 4.2 | 4.8 | 4.6 |
| 1997 | 4.3 | 6.5 | 6.4 | 4.2 |
| 1998 | 5.1 | 6.0 | 3.2 | 4.7 |
| 1999 | 3.9 | 5.0 | 4.9 | 4.4 |
| 2000 | 2.1 | 5.4 | 3.8 | 3.7 |
| 2001 | 4.0 | 5.1 | 2.9 | 4.2 |
| 2002 | 4.4 | 4.7 | 4.7 | 4.5 |
| Average | 3.1 | 6.0 | 4.4 | 4.5 |

Sources :Budget Statement and Economic Policy of the Government of Ghana Annual Series
Ministry of Agriculture End of Year Report 1988-1991

World Bank, Ghana Progress in Adjustment 1991,
Ministry of Finance, Budget Statements 1990-1997

Table : Percentage Contribution to GDP by Sectors at 1993 Constant Prices

| Year | Agriculture | Services | Industry | Total |
|------|-------------|----------|----------|-------|
| 1988 | 42.1 | 22.9 | 35.0 | 100 |
| 1989 | 41.7 | 22.8 | 35.5 | 100 |
| 1990 | 39.3 | 23.5 | 37.2 | 100 |
| 1991 | 39.5 | 23.7 | 36.8 | 100 |
| 1992 | 37.7 | 24.5 | 37.8 | 100 |
| 1993 | 36.9 | 24.8 | 38.3 | 100 |
| 1994 | 36.4 | 24.9 | 38.7 | 100 |
| 1995 | 36.3 | 24.9 | 38.8 | 100 |
| 1996 | 36.5 | 25.0 | 38.5 | 100 |
| 1997 | 36.5 | 25.4 | 38.0 | 100 |
| 1998 | 36.7 | 25.1 | 38.2 | 100 |
| 1999 | 36.5 | 25.2 | 38.3 | 100 |
| 2000 | 36.0 | 25.2 | 38.8 | 100 |
| 2001 | 36.0 | 24.8 | 39.2 | 100 |
| 2002 | 35.8 | 25.0 | 39.2 | 100 |

Source : The State of Ghanaian Economy 1992, 1997, 2002, ISSER