

PRE-HARVEST ASSESSMENT OF THE 2009/2010 CROPPING SEASON **CONSULTANT'S REPORT (GHANA)**

1.0 INTRODUCTION

This report has been prepared to assist the CILSS mission in assessing the food situation and progress of the current cropping season. The consultant met with the relevant institutions, experts and individuals, reviewed reports and undertook field visits to put up the report which discusses the progress of the 2009/2010 cropping season, the 2009/2010 cereal and other food production forecast, the cereal balance sheet, the food situation and identified the risk zones.

2.0 PROGRESS OF THE 2009/2010 CROPPING SEASON

2.1 Rainfall Situation

- The global atmosphere circulation patterns behaved abnormally during the year.
- This affected the pattern of rainfall over the country especially the southern sector.
 - The start of the rains delayed in most parts of the country.
 - Though the overall rainfall amounts recorded can be described as normal, the distribution was uneven.

Rainfall Situation in the Southern Sector

Compared to the normal rainfall, the actual rainfall experienced from March to September 2009 in the southern sector regions seems to be normal to below normal. The Greater Accra, Central and Ashanti Regions recorded about normal rainfall while the rest of the regions (Eastern, Western, Volta and Brong Ahafo) experienced below average rainfall.

The rainfall in Greater Accra Region was above the normal by 6.8%, Central Region recorded 1.4% below the normal while the Ashanti Region recorded marginal decline of 0.3%. The Eastern, Western, Volta and Brong Ahafo Regions recorded below average rainfall of 14.9%, 11.8%, 6.8% and 13.1% respectively.

The table 1A indicates the actual, 30-year average (normal) and the estimated percentage change of the rainfall in the southern sector regions.

Table 1A: Total Monthly (March – September 2009) and 30yr Average Rainfall in the Southern Sector

Region	Type of Rainfall	Total Rainfall (mm)
Greater Accra	Actual	706
	30yr Average	662
	% Change	6.8
Eastern	Actual	883
	30yr Average	1038
	% Change	-14.9
Central	Actual	942
	30yr Average	955
	% Change	-1.4
Western	Actual	1086
	30yr Average	1231
	% Change	-11.8
Volta	Actual	886
	30yr Average	950
	% Change	-6.8
Ashanti	Actual	1048
	30yr Average	1052
	% Change	-0.3
Brong Ahafo	Actual	847
	30yr Average	975
	% Change	-13.1
Total	Actual	6398
	30yr Average	6862
	% Change	-6.8

Source: Ghana Meteorological Agency

Rainfall Situation in the Northern Sector

In the northern sector the actual rainfall recorded in March – September 2009 is below the normal average 30 year rainfall by about 8.6%.

The Northern region of Ghana experienced above average rainfall during the period of March to September. The Upper East Region recorded about normal rainfall while the Upper West experienced significant below rainfall over the same period as shown in table 1B below.

Table 1B: Total Monthly (March–September 2009) and 30-year Average Rainfall in the Northern Sector

Region	Type of Rainfall	Total Rainfall (March - September)
Northern	Actual	1134
	30yr Average	1029
	% Change	10.2
Upper East	Actual	935
	30yr Average	969
	% Change	-3.5
Upper West	Actual	607
	30yr Average	929
	% Change	-34.7
Total	Actual	2676
	30yr Average	2927
	% Change	-8.6

Source: Ghana Meteorological Agency

Detail recorded monthly rainfall for the various Agromet Stations, March–September 2009, are attached in Appendices 1 and 2.

2.2 Hydrological Situation

The country abounds in quite a number of water resources. The major ones include:

- **Lakes and Lagoons:** the Volta and Bosumtwi Lakes; Keta and Korle Lagoons
- **Waterfalls:** the Boti, Kintampo and Wli.
- **Dams:** Vea, Tono, Weija and Kpong
- **Rivers:** White and Black Volta, Oti, Densu and Pra.

Due to the intensive rains and frequency, the level of water rose significantly in the water bodies and has remained high especially for those in the Northern Sector regions.

There is therefore indication that there will be enough water in rivers, dams and dugouts to support irrigation activities and for use by livestock.

2.3 Crop Situation

The crop performance has generally been satisfactory although fell below expectation. The early drought in April and May, 2009 affected the growth of early cereal (maize and early millet) plantings especially those at the tasselling stage of the crop growth. Cereal fields in some districts in the Ashanti and Eastern regions were affected.

Crop performance in the Volta, Brong Ahafo and the Northern regions have been good to excellent due to favourable good rainfall and well distribution.

In the Northern region, the area put to cultivation of maize, soybean and cowpea have increased significantly. The increase use of fertilizer due to the subsidy provided by government and good rainfall (in terms of intensity and distribution) has led to good performances of the major cereals of maize, rice, millet, sorghum, soyabean and cowpea.

Similarly, in the Upper West and East Regions, the crop performance has been excellent especially for maize, rice and millet. However, groundnut and sorghum output likely to decline. The drought at the end of June and first week of July affected plantings of groundnut while there was a shift of cultivation of sorghum to maize by farmers who took advantage of the subsidy of fertilizer.

There has been delayed planting in the minor season for the maize crop. However, it is envisaged that continuous rains to end of October may improve on the crop performance, otherwise expected output of maize in the minor season will be reduced.

2.4 Phytosanitary Situation

There were reported incidences of pest and diseases at various parts of the country. These include army worm, fruit flies, black sigatoka and cassava green mite. Table 2 below shows a summary of the phytosanitary situation in the country.

Table 2: Pest Situation in 2009

Crop	Pest Situation in 2009
1. Maize	Armyworm (<i>Spodoptera exempta</i>) outbreak in sixteen districts across three regions, ie. Ashanti, Brong Ahafo and Northern regions. The pest also attacks other crops such as rice, sorghum and millet as well as pasture.
2. Mango	Fruit flies ie. <i>Bactrocera invadens</i> and <i>Ceratitidis</i> sp
3. Citrus	Fruit flies ie. <i>Bactrocera invadens</i> and <i>Ceratitidis</i> sp.
4. Plantain and Banana	Black sigatoka disease
5. Cassava	Cassava Green Mite

Source: PPRSD, MOFA

The outbreak of these pests and diseases would not lead to a significant reduction in overall food production this year. This is because the situation has been effectively dealt with by officials of the Ministry of Food and Agriculture throughout the country.

2.5 Pasture and Livestock Situation

- **Pasture**

As a result of adequate rains in the major season, there has been enough pastures and water for livestock. With the continuous rain in the minor season, it is envisaged that the growth of the grasses and herbage will be sustained beyond the year 2009.

- **Livestock Situation**

The country continues to import both live animals particularly from neighbouring countries and livestock products from the European Union (EU) and the neighbouring countries especially Republic of Togo, Burkina Faso and Cote d'Ivoire.

No livestock survey has been undertaken in current years. Projected livestock population shows increases compared with last year and is shown below:

Table 3: Projected Livestock Population in 2009/2010

Type of Livestock	Cattle	Sheep	Goat	Pig	Poultry
Estimated Livestock Population (2009/2010)	1,425,000	3,523,000	4,417,000	552,000	42,802,000
Estimated Livestock Population (2008/2009)	1,416,000	3,471,000	4,305,000	520,000	39,816,000

Source: Veterinary Services Directorate, MOFA

Outbreaks of Scheduled/Notifiable Diseases of Livestock

Between January and May 2009, the Veterinary field staff reported a total of 375 outbreaks of scheduled diseases in food animals and pets. The reported diseases, the species and animals affected are shown in table 4 below.

Table 4: Outbreaks of Scheduled/Notifiable Diseases (Jan-May 2009)

Disease	Species affected	No. of outbreaks	No. of Animals Affected	Total Loss	Regions Reported
Anthrax	Sheep	1	2	2	NR
Rabies	Dogs	14	16	16	VR, GAR, BAR, ER, AR
Peste des petits ruminants	Small ruminants	13	139	4	VR, NR, WR, CR
Gumboro Disease	Poultry	22	7,727	3,048	AR
Mange	Small ruminants	150	1,743	0	AR, NR, VR, WR, CR, BAR, ER, UWR
Newcastle Disease	Poultry	55	11,118	7,283	AR, VR
Tuberculosis	Cattle	30	60	0	UER, GAR, WR, VR, AR, UWR, NR, ER, CR, BAR
CBPP	Cattle	12	26	0	NR, AR, VR, UER, UWR
Trypanosomiasis	Cattle	3	12	0	UWR, CR, VR
Dermatophilosis	Cattle	7	32	0	GAR, AR, UWR, ER, VR
Foot & Mouth Disease	Cattle	3	161	5	VR, BAR, UWR
Fowl Pox	Poultry	1	80	0	WR, AR
Blackleg	Cattle	1	4	3	UWR
Contagious Ecthyma	Small Ruminants	63	262	0	NR, VR, WR, GAR, CR, AR, BAR

Source: Veterinary Services Directorate, MOFA

3.0 THE 2009/2010 CEREAL AND OTHER FOOD PRODUCTION FORECASTS

3.1 Reminder of the Methodology

Food production estimates in the country commences with the estimation on district basis, of the total cropped area and the yield by objective measurements of the crop farms and measurement of harvests from established plots on the farms.

The measured farms and yield estimates from individual farms are extrapolated using raising factors from the sampled Enumeration Areas, sampled farmers/holders and sampled fields.

For each district, per crop, the estimated cropped area is multiplied by the estimated yield per unit area to obtain the cropped output.

The district crop output and crop areas are summed to obtain the regional estimates. The sum of the regional estimates then gives the national estimates.

3.2 Cereal Production Estimates

The table 5 indicates the estimated cereals (maize, rice, millet and sorghum) production for the year 2009/2010.

The cereals production showed increases of about 12-20% compared to year 2008/2009. Maize output increased by 12%, rice (paddy) increased by about 18% while millet and sorghum increased by about 20% and 14% respectively in the year 2009/1020. The total cereal output in 2009/2010 is estimated to be about 2.6 million MT, an increase of about 13.6%.

Table 5: Estimated Cropped Area and Production Cereals (2009/2010)

Commodities	Crop Area (HA)			Crop Production (Mt)		
	2008/2009	2009/2010	% Change	2008/2009	2009/2010	% Change
Maize	846,300	1,028,000	21	1,470,000	1,645,000	12
Rice (local)	132,800	137,000	3	301,900	356,000	18
Millet	182,000	193,000	6	194,000	232,000	20
Sorghum	275,800	290,000	5	331,000	377,000	14
Total	1,436,900	1,648,000	14.7	2,296,900	2,610,000	13.6

Source: SRID, MOFA

3.3 Other Food Products Production Estimates

With the exception of cocoyam, all the other major staple crop production showed increases. Preliminary estimates of crop area and production for 2009/2010 as compared to 2008/2009 are shown in table 6 below. Cassava cropped area increased by only 1%, yam by 7% while plantain increased by about 6%. Cocoyam output is estimated to decline by about 13%. The cocoyam commodity mostly grow wild (sprouts by itself). The regeneration is declining due to the destruction of the forests especially in the Eastern, Ashanti and Brong Ahafo Regions and the spraying of chemicals for weeding. Excluding cocoyam, the starchy staples output increased by about 7-21%, yam production increased by 21%, cassava by 11% and plantain by 7%.

The legumes showed increases of 11% for groundnut, 24% for cowpea and 29% for soyabean.

Table 6: Estimated Cropped Area and Production for Other Food Crops (2009)

Commodities	Crop Area (HA)			Crop Production (Mt)		
	2008/2009	2009/2010	% Change	2008/2009	2009/2010	% Change
Cassava	839,000	845,000	1	10,643,000	11,825,400	11
Cocoyam	251,800	219,000	-13	1,688,000	1,486,000	-12
Yam	347,500	371,000	7	4,895,000	5,902,000	21
Plantain	311,800	329,000	6	3,338,000	3,587,000	7
Groundnut	350,600	349,000	0	470,000	524,000	11
Cowpea	161,000	186,000	16	180,000	223,000	24
Soybean	61,800	74,600	21	75,000	97,000	29
Total	2,323,500	2,373,600	14.7	21,289,000	23,644,400	13.6

Source: SRID, MOFA

4.0 CEREAL BALANCE SHEET ITEMS

4.1 Population

The Population and Housing Survey conducted in the year 2000 estimated the population of Ghana as 18.91 million persons with a growth rate of 2.7% per annum.

Based on the 2000 population estimates, the population of Ghana is projected to be 24.03 million in 2009 and 24.68 million in 2010.

4.2 Available Production

In general, the good crop performance has resulted in good crop production in the country. The available domestic production for human consumption is therefore very encouraging.

It is estimated that out of a gross total of 2,610,000MT of cereals, a total of 1,822,184MT of cereals would be available for human consumption.

Similarly, out of a gross total of 22,800,400MT of starchy staples, a total of 17,237,130MT starchy staples would be available for human consumption.

For the legumes, out of a gross total of 844,000MT, a total of 717,400MT would be available for human consumption.

Excluding international trade and stock positions, the table 6 below shows the preliminary estimates of the domestic food supply and demand position of the major commodities. The National Consumption estimates are based on projected 2009/2010 population and the per capita consumption.

It is estimated that all the cereals will have surpluses except the rice commodity that showed a deficit of 405.8MT. The maize commodity showed a positive level of 172,500MT, while millet and sorghum showed surpluses of 138,400MT and 251,900MT respectively.

Table 7 further shows surpluses of 157,000MT, 69,350MT and 10,400MT for groundnut, cowpea and soyabean respectively.

With the exception of cocoyam, all the starchy staples showed net surpluses. Cassava and yam showed surpluses of 4.6 million MT and 3.7 million MT respectively while plantain recorded 1.0 million MT of surplus.

Table 7: Preliminary Domestic Food Supply and Demand Position – 2009/2010

Commodity	Gross Domestic Production (MT)	Available Total Domestic Production for Human Consumption (MT)	Per Capita Consumption (kg/annum)	Estimated National Consumption ('000 MT)	Domestic Net Deficit/ Surplus ('000 MT)
CEREALS					
Maize	1,645,000	1,225,004	43.8	1,052.5	172.5
Rice (Paddy)	356,000	0	0	0	0
Rice (Milled)		170,880	24.0	576.0	-405.8
Millet	232,000	162,400	1.0	24.0	138.4
Sorghum	377,000	263,900	0.5	12.0	251.9
Total	2,610,000	1,822,184		1,664.50	157.0
STARCHY STAPLES					
Cassava	11,825,400	8,277,780	152.9	3,674.2	4,603.6
Yam	5,902,000	4,721,600	41.9	1,006.9	3,714.7
Cocoyam	1,486,000	1,188,800	57.1	1,372.1	-183.3
Plantain	3,587,000	3,048,950	84.8	2,037.7	1,011.3
Total	22,800,400	17,237,130		8,090.90	9,146.30
LEGUMES					
Groundnut	524,000	445,400	12.0	288.4	157
Cowpea	223,000	189,550	5.0	120.2	69
Soyabean	97,000	82,450	3.0	72.1	10.4
Total	844,000	717,400		480.7	236.4

Source: SRID, MOFA

Population (2009) = 24.03 million

Carry-over maize = 5% of 1.47 million MT (2008)

4.3 Commercial Imports and Food Aids

Commercial imports of cereal from January to May 2009 were maize 17,849MT, rice 55,831MT, millet 1,895MT, sorghum 0.1MT. Within the same period, commercial exports of maize seed 20.9MT, rice 4.4MT, millet 3.6MT and other cereals 11.8MT was recorded. The commercial cereal trade including the import and export values is indicated in table 8 below.

Food aid imports by the World Food Programme (WFP) are largely made up of rice, maize, vegetable oil, beans, corn, soya blend and sugar. Statistics on the total food aid imports for 2009/2010 are yet to be established by the WFP.

Table 8: Cereal Trade (January-May, 2009)

Commodity	Imports		Exports	
	Value (GH¢)	Net Weight (wt)	Value (GH¢)	Net Weight (wt)
Maize	5,890,134	17,849	-	-
Maize (Seed)	-	-	45,052	20.9
Rice	42,249,885	55,831	132,562	4.4
Millet	322,892	1,895	1,379	3.6
Sorghum	306	0.1	-	-
Wheat	3,294,710	6,294	-	-
Cereal (nes)	4,209	10.9	6,130	11.8

nes = not elsewhere specified

Meat and Other Livestock Products Imports

Ghana is a net importer of frozen meat and livestock products largely from the European Union (EU). Meat consumption is largely based on availability, market price and tradition. The total quantities of meat and livestock products imported through Tema Port are indicated in table 9 below.

Table 9: Meat and Other Livestock Products Imported (January-June 2009)

Type of Imports	Quantity Imported in MT		
	Jan-Mar 2009	Apr-Jun 2009	Jan-Jun 2009
Beef	2,535.95	3,461.56	5,997.51
Buffalo	3,645.08	656.49	4,301.57
Chicken	19,695.78	15,602.69	35,298.47
Mutton	2,552.37	1,971.89	4,524.26
Pork	782.23	470.37	1,252.60
Turkey	443.19	700.14	1,143.33
Milk Products	1,809.54	1,971.59	3,781.13
Total	31,464.14	24,834.73	56,298.87

Source: Veterinary Services Directorate, MOFA

Imports of Live Animals

The country is a net importer of live animals from neighbouring countries especially Burkina Faso, Mali and Niger. Live animals imported in 2009 are indicated in table 10 below.

Table 10: Import of Live Animals

Type of Imports	Quantity Imported (No.)		
	Jan-Mar 2009	Apr-Jun 2009	Jan-Jun 2009
Cattle	3,469	1,569	5,038
Sheep	1,830	1,405	3,235
Goat	1,872	1,530	3,402
Horse	18	0	18

Source: Veterinary Services Directorate, MOFA

4.4 Stocks

Cereal stock levels with the private traders, wholesalers and farmers are not readily available. However, official stock levels at the Ministry of Food and Agriculture showed only the stock of maize at three (3) districts (Sunyani, Wenchi and Ejura).

As at September, 2009, the total stock of maize is 1,056MT.

Table 11: MOFA Stock Levels as at September 2009

District	No. of Mini Bags of Maize (50kg)	Stock Levels in MT
Sunyani	7,548	377.4
Wenchi	5,298	264.9
Ejura	8,274	413.7
Total	21,120	1,056.0

Source: MOFA RADUs

The Ministry of Food and Agriculture also estimates an annual carry over stock of maize at end of 5% of the previous production. Hence for the year 2009, a carry-over stock of 73,504MT is added to the domestic production to obtain the national maize domestic supply for 2009.

5.0 FOOD SITUATION AND THE RISK ZONES

5.1 Food Situation

The food supply on the market is generally considered to be very good. The cereal, starchy staples and the legumes are all in good supply in the major markets.

The output of commodities for 2009 are forecasted to increase for all the major crops due to the favourable weather conditions, intensive rains and well distribution and the Government/MOFA various support to the farmers.

The Northern Sector food production and supplies prospects are very encouraging. Compared to 2008/2009 food production have increased in all the three (3) Northern regions especially for the cereals of maize, rice and soyabean that were cropped under the block farming interventions.

The Southern Sector, though experienced adverse environmental conditions such as the drought and army worm attack, is likely to record increases in food production in most districts and regions. The maize output may only record marginal increases especially in the areas that experienced the adverse environmental conditions.

Table 12: Preliminary Food Production Estimates for 2009/2010 as Compared to 2008/2009

Commodities	Crop Area (HA)			Crop Production (Mt)		
	2008/2009	2009/2010	% Change	2008/2009	2009/2010	% Change
Maize	846,300	1,028,000	21	1,470,000	1,645,000	12
Rice (Local)	132,800	137,000	3	301,900	356,000	18
Millet	182,000	193,000	6	194,000	232,000	20
Sorghum	275,800	290,000	5	331,000	377,000	14
Cassava	839,000	845,000	1	10,643,000	11,825,400	11
Cocoyam	251,800	219,000	-13	1,688,000	1,486,000	-12
Yam	347,500	371,000	7	4,895,000	5,902,000	21
Plantain	311,800	329,000	6	3,338,000	3,587,000	7
Groundnut	350,600	349,000	0	470,000	524,000	11
Cowpea	161,000	186,000	16	180,000	223,000	24
Soybean	61,800	74,600	21	75,000	97,000	29

Source: SRID, MOFA

5.2 Market Situation

There is an abundant food supply on the market in both the northern and southern sectors of Ghana, but the prices of the food commodities remain high in the first and second quarters of the year. Some food commodities prices declined in the third quarter of the year as indicated in the table 13 below. It is envisaged that majority of the food commodities will decline in the fourth quarter when the crops are harvested in that period.

Maize prices increased from GH¢55.4 in the first quarter to GH¢64.6 in the second quarter of the year but declined to GH¢55.0 in the third quarter. Yam commodity prices also increased from GH¢116.9 in the first quarter to GH¢138.2 in the second quarter but has declined to GH¢121.0 in the third quarter. Cowpea, groundnut and tomato commodities also showed similar trend as indicated in the table 13 below.

Both the local rice and imported rice prices have remained high with the average price increasing from the first quarter of the year to the third quarter of the year. Millet and sorghum prices have also remained high from GH¢70.5 and GH¢69.9 in the 1st quarter to GH¢77.9 and GH¢76.6 in the 3rd quarter respectively. It is expected that in the coming few months the prices of millet and sorghum will decline significantly when majority of the late millet and sorghum fields would have been harvested.

Plantain (apentu and apem), palm oil and palm fruits, fresh and dried pepper prices remained high as indicated in the table below. Tomato price declined from the 2nd quarter and likely to continue the downward trend till the end of the year. The price of tomato declined from GH¢121.6 in the 2nd quarter to GH¢101.4 in the third quarter while groundnut prices have remained stable in the 2nd and 3rd quarters.

Table 13: Quarterly Average Wholesale Price for Major Markets in Ghana – 2009

Commodity	Unit of Sale	Average Wholesale Price for 1 st Quarter of year GH¢	Average Wholesale Price for 2 nd Quarter of year GH¢	Average Wholesale Price for 3 rd Quarter of year GH¢	Average Wholesale Price for 1 st – 3 rd Quarter of year GH¢
Maize	100kg	55.4	64.6	55.0	58.34
Rice (local)	50kg	49.5	51.0	53.8	51.5
Rice (imported)	50kg	62.0	62.0	64.7	62.9
Millet	93kg	70.5	73.0	77.9	73.8
Sorghum	109kg	69.9	71.9	76.6	72.8
Cassava	91kg	17.9	19.5	20.4	19.3
Yam	100 Av.Tub.	116.9	138.2	121.0	125.4
Cocoyam	91kg	36.0	37.6	41.4	38.3
Plantain – Apentu	Av. Bunch	3.8	5.4	6.1	5.13
Plantain – Apem	Av. Bunch	5.5	7.0	8.5	7.0
Palm Oil	18 lit./4gal	25.2	23.1	25.2	24.5
Dried Pepper	52 kg/crate	102.9	148.1	162.5	137.8
Tomatoes	16kg	81.1	121.6	101.4	101.4
Fresh Pepper	20kg	53.1	79.4	87.1	73.2
Cowpea	109kg	101.2	111.6	106.5	106.5
Groundnut	82kg	116.7	120	120.0	118.9
Palm Fruits	Mini bag	14.0	13.9	17.6	15.2

Source: MOFA (SRID), Accra

5.3 Nutrition Situation

Protein Energy Malnutrition (PEM) especially undernutrition is the most widespread and serious nutritional disorder in Ghana : Children and women are the most affected and the malnutrition is manifested as mild to severe, stunting, wasting and underweight.

The problem of PEM is compounded by problems of micro nutrient deficiency disease and an increasing incidence of diet related non communicable disease.

Child Nutrition

Data from Comprehensive Food Security and Vulnerability Analysis (CFSVA) Ghana, May 2009 indicated that:

- Overall, 7.1% of children were wasted (2% severely wasted) and 22.1% were stunted.
- About 12% of children were considered underweight. In terms of child nutrition by sex.
 - *Male children are shorter and generally more underweight on average than female children.
 - * Female children, however, appear slightly thinner than male children and have a higher rate of severe wasting.

The rate of chronic malnutrition (stunting) are more prevalent in rural areas than in urban areas while rate of acute malnutrition were similar in the rural and urban areas.

In terms of agro-ecological zones; the savannah and forest zones have high percentage of children underweight and stunted as compared to the coastal zone. Severe acute malnutrition is highest in the savannah as compared to the coastal and forest zones.

According to officials of the Nutrition Division of the Ghana Health Services, malnutrition with its associated disorders may not be due to unavailability of food in the country but to bad eating habits of Ghanaians. The service in collaboration with the Directorate of Women in Agricultural Development (WIAD) of MOFA, UNICEF and other NGOs, are making efforts to educate households to change their eating habits.

Table 14: Malnutrition Rate of Children 0-59 Months of Age

Characteristics	Severe Acute Malnutrition	Stunting	Underweight
Sex			
Male	1.5	24.1	12.5
Female	2.5	20.1	10.7
Place of Residence			
Urban	2.5	14.6	8.6
Rural	1.7	26.5	13.3
Agro-Ecological Zone			
Coastal	1.5	13.6	7.4
Forest	1.9	26.3	12.6
Savannah	2.8	24.2	14.2
Regions			
Western	0.8	23.2	8.8
Central	1.3	21.9	14.9
Greater Accra	1.9	10.6	6.6
Volta	1.1	18.3	10.1
Eastern	1.7	18.6	7.7
Ashanti	1.8	27.6	13.8
Brong Ahafo	3.0	21.7	10.6
Northern	3.3	30.3	17.5
Upper East	3.1	26.8	15.8
Upper West	4.8	25.5	16.8
Total	2.0	22.1	11.6

Source: CFSVA, May 2009

Maternal Nutrition

Using the Body Mass Index (BMI) as a measure of Maternal underweight shows a low BMI among women 15-49 years of age. In general about 8.3% of women recorded low BMI of less than the normal BMI (18.5-24.99).

In particular, the CFSVA, May 2009 reported that:

- Rural women have almost three (3) times the prevalence of urban women (11.3 versus 4.6).
- The southern coastal areas of the country have the lowest prevalence of low BMI, the middle part and forest areas have a slightly higher prevalence and the northern part of the country have the higher prevalence.

- The highest prevalence (of about 12%) were recorded in the Northern, Volta and Upper East Regions. The Ashanti, Brong Ahafo and Western Regions showed low prevalence of BMI with Greater Accra having the lowest prevalence.

Table 15 below indicates the percentage of women with low BMI by place of residence, Agro-ecological zone and by regions.

Table 15: Percentage of Women with Low BMI

Characteristics	Prevalence of Women with Low BMI <18.5 (Women 15-49, non pregnant)
Place of Residence	
Urban	4,6
Rural	11,3
Agro Ecological Zone	
Coastal	6,1
Forest	8,2
Savannah	11,5
Regions	
Western	7,7
Central	8,9
Greater Accra	4,9
Volta	11,8
Eastern	10,1
Ashanti	6,2
Brong Ahafo	6,7
Northern	12,1
Upper East	12,0
Upper West	9,7
Total	8,3

Source: CVFSA, May 2009

6.0 IDENTIFICATION OF RISK ZONES

6.1 Situation in Terms of Flooding and other Damage

The risk zones in Ghana are examined under household food insecurity and the effect of environmental hazards (natural and man-made) on the population.

Food Insecurity

Ghana seems to be food secured in all the major staples. The food self-sufficiency ratio shows the starchy staples recording over 150%, while with the exception of rice, the cereals of maize, millet and sorghum have self-sufficiency over 80%. The rice self-sufficiency is about 40%.

At the household levels, however, there are rural communities that have households that experienced food insecurity especially in the three Northern Regions and the Central Region. The food insecurity of households resulted mainly from high food prices, reduced income, loss of employment etc.

Flooding And Other Damage

Parts of the country have suffered from flooding and other damages resulting from pests and diseases invasion.

African Army Worm

The African armyworm, a migrating pest, attacked grasses, maize and rice fields in four regions of Brong Ahafo, Ashanti, Northern and Eastern Regions. Some districts affected included Nkoranza North and South districts, Sunyani West, Kintampo North and South, Wenchi, Berekum, Sunyani and Techiman Municipalities and Districts.

The Ministry of Food and Agriculture put in control measures by spraying fields with chemicals and the situation is now under control and will not have any significant negative impact on food production in the country.

Flooding

As a result of intensive rains experienced in parts of the country during the major season, a number of districts were flooded. The effects of this on crop fields were not significant in the southern sector regions. In the northern sector, the intensive rains and frequency resulted in loss of lives and properties and damage to crop fields.

In addition, the opening of the Bagre Dam Spillway in Burkina Faso caused flooding of cereal fields (maize, rice and groundnuts) in some districts in the Upper East Region (Zebilla, Bawku, Talensi-Nabdam), the Upper West Region (Sissala West, Wa, Sissala East and Lawra Districts) and the Northern Region. The destruction of these crop fields will affect food supplies in some communities in the affected districts.

6.2 Estimation of Risk Zone and Affected Population

Food Insecurity: It is estimated that 5% of households (a total of 1.2 million people) in Ghana are food insecure. Most affected households are in rural areas of the Northern Savannah Zone. In total, 34% of households in Upper West, 15% in Upper East and 10% in Northern Regions are food insecure (CFSVA Report, May 2009).

Army Worm: Reports from the MOFA Regional Directorates indicate that at Ejura about 16 hectares of maize and at Nkoranza South and North Districts, about 100 hectares of maize fields have been destroyed by army worm.

Flooding: The National Disaster Management Organization (NADMO) assessment of the extent of damage caused by the flooding in the Northern Sector is shown in the table 16 below.

Table 16: Summary of extent of damage due to flooding

No.	Affected Entities	Total Affected
1.	No. of Districts	26
2.	No. of Communities	924
3.	Farms Destroyed (acres)	28,264.5
4.	No. of Collapsed Houses	5,104
5.	Schools Destroyed	13
6.	No. of Affected Persons:	
	- Children	31,521
	- Pregnant Women	170
	- Other Women	17,934
	- Physically Challenged	1
	- Dead	8
	- All Others	
	Total No. of Affected Persons	121,044

7.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 This paper has been prepared to assist the Joint CILSS/FEWS-NET Mission to assess the food situation and progress of the cropping season. The report has been prepared after review of relevant reports, field visits and consultations with officers of Ministry of Food and Agriculture (MOFA), Ghana Meteorological Agency (GMA), Ministry of Health (Nutrition Division), National Disaster Management Organization (NADMO), Hydrological Division of the Ministry of Water Works and Housing.

7.2 The overall rainfall amounts recorded seems to be normal to below normal. The rainfall intensity and distribution has been more favourable in the northern sector than in the southern sector of the country.

7.3 The crop performance has generally been satisfactory although fell below expectation especially in the southern sector regions. Crop performance in the Volta, Brong Ahafo and the Northern Regions have been good to excellent due to favourable good rainfall and well distribution.

7.4 As a result of adequate rains in the major season, there has been enough pasture and water for livestock. With the continuous rain in the minor season, it is envisaged that the growth of the grasses and herbage will be sustained beyond the year 2009. Projected livestock population shows increases in all types of livestock.

7.5 The good crop performance has resulted in good crop production for all the major commodities. The available domestic production for human consumption is encouraging and is estimated as 1,822,184MT for cereals, 717,400MT for legumes and 17,237,130MT for starchy staples.

7.6 Preliminary estimates of demand and supply, excluding international trade and stock level factors, indicate:

- Net surpluses of cereals except rice
- Net surpluses of legumes
- Net surpluses of starchy staples except cocoyam.

7.7 The food supply on the market is generally considered to be very good for all commodities: the cereals, legumes and starchy staples. The market prices, however, remained high in the first and 2nd quarters of the year. Some of the commodities prices declined in the third quarter. It is envisaged that majority of the food commodities will decline in the fourth quarter when the crops are harvested in that period.

7.8 Protein Energy Malnutrition (PEM) especially undernutrition is most widespread and serious nutritional disorders in Ghana. The PEM mostly affects children and women and manifests as mild to severe stunting, wasting and underweight. It is estimated that 7.1% of children were wasted, 22.1% were stunted and 12% were underweight. About 8.3% of women have low Body Mass Index (maternal underweight) of less than the normal BMI (18.5 – 24.99).

7.9 The risk zones are identified by household food insecurity and environmental hazards on the population. The nation seems to be food secured in all the major staples except rice. However, at the household level, there are rural communities that have households experiencing

food insecurity especially in the three Northern Regions. In total, about 34% of households in Upper West, 15% in Upper East and 10% in Northern Regions are food insecure.

Intensive rains and frequency and also the opening of the Bagre Dam (Burkina Faso) caused flooding in the northern sector regions. This resulted in loss of lives and properties and damage to crop fields. It is estimated that about 26 districts, 11,536 ha of farms, 5,104 collapsed houses and 121,000 people were affected by the floods.

The African Army Worm, a migrating pest, attacked grasses, maize and rice fields in four regions of Brong Ahafo, Ashanti, Northern and Eastern Regions. In the Brong Ahafo Region, about 100 ha maize fields were destroyed by the army worm.

7.10 Ghana has got well established institutions (NADMO, PPRSD) for dealing with disasters in the agricultural sector as they occur. There is however, the need for setting up an early warning system for the country. A national early warning committee would be responsible for the promotion of a holistic diagnosis of food security and nutrition issues and to facilitate appropriate and timely decision-making that diminishes the risk to and impacts of malnutrition and food insecurity. It is therefore recommended that CILSS/AGHRYMET assist the country to establish an Early Warning System (EWS) whose activities will be coordinated by the Statistics Research and Information Directorate of MOFA.