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EVALUATION OF THE 1990/1991 AGRO-PASTORAL SEASON
AND
FOOD SITUATION PROSPECTS FOR 1990/1991

PERMANENT DIAGNOSIS PROJECT

F O R E W O R D

The document "Evaluation of the 1990-1991 Agro-pastoral Season and 1990-1991 Food Situation Prospects" follows the bulletins for monitoring the food situation in the Sahel in May, August and September 1990.

The document "Evaluation of the 1990-1991 Agro-pastoral Season" attempts to give the production prospects of the 1990-1991 agro-pastoral season based on season monitoring data : rainfall, hydrology, crop phenological evolution, phytosanitary monitoring, state of pasture lands and first production estimates resulting from permanent agricultural surveys.

This document is a follow-up to the bulletins on the food situation in the Sahel for the months of August and September 1990.

The information that served for preparing this bulletin comes from :

- the decadal and monthly bulletins of the Pluridisciplinary Working Groups (P.W.G.) of the AGRHYMET Programme in the countries.
- the bulletins of the AGRHYMET Centre of Niamey.
- the publications of national meteorology services.
- the reports of the FAO World Information and Early Warning System.
- the reports of missions sent by CILSS/FAO in October 1990 to evaluate the agro-pastoral season.
- the Experts' meeting on the evaluation of the 1989/1990 food situation and the 1990/1991 food prospects held in Bissau (12-15 November 1990).

The prospects of the 1990-1991 food sitiuation are made on the basis of the estimated cereals balances for 1990-1991. Furthermore, the analysis of indicators of market and information on risk prone populations makes it possible to assess the degree of accessibility of populations to cereals.

The information that served for the analysis of the food situation prospects for 1990-1991 comes from :

- the publications of the cereals boards
- the bulletins of the Early Warning Systems of the sahelian countries
- the CILSS/FAO missions to evaluate the season
- the Experts' meeting on the evaluation of the 1989-1990 food situation and the prospects for 1990-1991 held in Bissau (12-15 November 1990).

1. REGIONAL ANALYSIS

1.1. AGRO-PASTORAL SITUATION IN THE CILSS COUNTRIES

1.1.1. Rainfall

In general, the rainfall was good at the beginning of the 1990/1991 season. The first rains were recorded as early as mid-April/early May in the sudanian zone of Burkina Faso, Mali, Niger and Chad.

Elwhere the first rains were recorded in late May/early June.

Until late July/early August, there were intense rainfalls in all CILSS countries in both sudanian and pastoral zones.

Generally speaking, however, the rainfall pattern in the countries of Western Sahel has been different from that of the countries of Eastern Sahel.

* The rains came quite late in The Gambia, in Guinea Bissau and Senegal. They came exceptionnally early in Cape Verde. From June onwards, they have been generally regular with some recess in August and September. On the whole, rainfall showed a slight deficit in these countries.

* In Burkina Faso, Mali, Mauritania, Niger and Chad, the rains came early in general especially in the sudanian and sudano-sahelian zones. After the beginning of the season in April/May, the rains settled almost everywhere in June. From June to July, the rains have been abundant and regular in the main production zones except the sahelian zones that have undergone drought spells.

In August, however, in nearly all the countries, the rains noticeably decreased during a more or less long period depending on the countries, ranging rom 10 to 20 days.

The rains resumed slightly in September. Rains in September generally ranged from good to average in the sudania zone, average in the sudano-sahelian zone and poor in the sahelian zone. Early October, a few isolated rains were recorded. At the end of the first decade, in nearly all the CILSS countries, the rainy season had ended.

* Generally speaking, the rainfall has been inferior to that of 1989/1990 and inferior to the normal of the 1951/1980 period in all the CILSS countries. Deficits of 100 mm and more are very frequent in all the countries. These deficits are particularly important in the sahelan zones of Burkina Faso, Niger and Chad, and in all the agricultural zone of Mauritania.

1.1.2. Phytosanitary situation

The pilgrim locust was hardly seen during this season. Grasshoppers infestations occured rather early (June-July) in Burkina Faso, The Gambia, Senegal, Mauritania, Mali, Niger and Chad. However, the decrease in rainfall in August, intense and efficient ground control, the advanced vegetative state of plants have been factors that considerably curbed these infestations.

However, with the long drought spells of August, there appeared a greater number of depredators : blister-flies, borers, tree-dwelling locusts, grain eating birds.

1.1.3. Pastoral situation

In the countries of western Sahel (Gambia, Guinea Bissau, Mauritania and Senegal), due to the delayed arrival of the rainy season, the vegetation started late. The herbaceous cover then developed in satisfactory conditions, except in the North of Senegal and Mauritania, where fodder production has significantly decreased as compared to previous seasons.

In the countries of eastern Sahel (Mali, Burkina Faso, Niger and Chad), the herbaceous vegetation started normally. But, later on, the development of the hervaceous cover suffered from the shortage of rains in August and also from their bad distribution particularly in the sahelian stretches of those countries. The fodder production is mediocre especially in the pastoral zones of Mopti, Douentza, Timbuctu in Mali, in all the sahelian zone of Niger and in the north of the sahelian zone of Chad.

The level of filling up of ponds was below that of last year in all the pastoral zones, especially in Senegal and Mali.

On the zoosanitary level, a few minor problems were reported particularly in Mali (peripneumonia) and in Chad (trypanosomiasis).

1.1.4. Crops situation

The picture at the beginning of the season shows an increase in cultivated land areas as compared to the previous season except in Senegal. Sowing of rainfed crops that was generalized in June ended on the whole around mid-July, except for resowing part of which occured in August in the North of Burkina Faso, Niger and in the North-East of Mali.

The stopping of the rains in early August, caused more or less serious wilts according to the zones. The sahelian zone recorded crop drying with crop losses and field abandonment.

In the sudano-sahelian and sahelian zones, slight wilts on millet and sorghum did not cause too serious damage and crops on the whole resumed their growth when the rains resumed in September. Regarding maize, however, the lack of rains in August often caused drying or noticeable yield decrease especially in the high lands of the sudano-sahelian zone.

1.2. PROSPECTS IN CILSS COUNTRIES FOR 1990-1991

1.2.1. Harvest prospects

Harvest prospects are not quite good. It is expected that millet, sorghum and maize yields will decrease; this decrease will not be compensated by the increase in cultivated land area.

Forecasts based on data collected in August-September show a production of 7,551,000 tons, that is a 5.7% decrease as compared to last year. (See Table in annex).

The decrease is more marked in Mauritania (21.3%), in Senegal (9.6%) and in Burkina Faso (8.4%). Only Cape Verde and Guinea Bissau show production increases.

1.2.2. Food prospects

The consolidated estimated cereals evaluation for all the CILLS countries shows an available production of 6,135,200 tons representing 88.3% of resources prior to imports.

Resources prior to imports cover 79.2% of the estimated needs identified that amount to 8,775,650 tons.

Therefore there appears a gross deficit prior to imports of 1,827,400 tons (20.8% of total needs).

The consolidated imports programme of the countries of 1,381,300 tons would not suffice to make up for this deficit.

The rice and wheat deficits are nearly absorbed whereas there is still a 417,700 ton deficit of dry cereals.

It is believed that some imports programmes need to be revised namely those of Burkina Faso, Mauritania, Niger and Chad by facilitating commercial and non commercial imports of dry cereals. But it is also true that this deficit cannot be absorbed integrally. For that reason we expect a set-back if not a reduction of the level of local cereals consumption in those countries.

Guinea Bissau and Mali show a slight surplus inferior to on-farm outset stocks. Therefore we expect a reduction of the level of these stocks at the end of the exercise.

Besides the assumption resulting from this aggregation of data, we must point out that in all the CILSS countries except Cap Verde, Guinea Bissau and The Gambia, there are populations mainly in the sahelian zones whose food situation is highly precarious.

What needs to be done is to urgently identify these populations and determine the level of their needs.

2. SITUATION BY COUNTRY

2.1. BURKINA FASO

2.1.1. Rainfall

Rainfall has been very much constrasted in all the country.

After the scarce rains of April in the Centre and East, rainfall events generalized in early May in all the country but with a bad distribution in space. The South, the South-West and the West were relatively better watered tha the East and the North.

In June, the rainfall has been poor with a bad distribution in space during the first and the third decades, it has been good with a better distribution in space of the rains during the second decade.

In July, there was a slight improvement of the rainfall situation namely during the first and third decades despite frequent droughts recorded at some places in late July. The cumulation of rains since April 1st is normal in the South and in the West, showing a slight deficit in the Centre and a huge deficit in North and East of the country.

In August, rains decreased mainly in the Northern and Eastern parst of the country. As from the first decade of August that was relatively rainy, small quantities of rains are recorded as well as a bad distribution in a major part of the country and especially in the East, North and Centre.

The rainfall situation in August has been good only in the South-West, in the South and locally in the Centre.

The resumption of rains in September, due to its limited scope, did not compensate the deficits cumulated in most of the agricultural zones of the Eastern, Central and Northern parts of the country.

Poor and scattered rains during the first decade of October marked the end of the season.

Over the period from April 1st to October 10, nearly all the stations show a rainfall deficit as compared to the 1951-1980 average. This deficit is very acute in the East (Fada N'Gourma) and North of the country (Ouahigouya).

2.1.1.2. Phytosanitary situation

The phytosanitary situation in late June mid-August was dominated by acridian problems. Although pilgrim locusts were absent, as early as late June, pullulations of senegalese locusts and skunk locusts were recorded in North, North-East (Oudalan, Séno, Soum, Yatenga, Bam, Sanmatenga, Gnagna) and in the North-West (Sourou). The drought periods of late July early August have

caused a hight mortality of larvae and the departure of alates. Also, in August, the surface areas infested estimated in late July at more than 200,000 ha are evaluated at 75,000 ha including 36,000 ha of crops.

From late August to October, a low pullulation of senegalese locusts is recorded.

Other depredators appeared with the drought spells. These were : blister flies (all the northern part of the country), borers (North and Centre-East), termites on maize (very located foci), hygrophile locusts in low-lands, tree-dwelling locusts on crops.

In October, it is deemed that the phytosanitary situation has not been very alarming throughout the season.

2.1.1.3. Pastoral situation

The reconstitution of pasture lands was satisfactory in June and July in the zones of the Centre, East, West and South-West of the country, less satisfactory later on.

In the North of the country, on the other hand, the state of the herbaceous cover ranged from mediocre to little satisfactory in June and July. It was little satisfactory in October. However, the aerial pasture remained abundant.

The sanitary state of cattle remained satisfactroy throughout the season.

2.1.1.4. Evolution of crops

Humid sowing was generalized in late May in the Western, Southern and South-western parts of the country and elsewere during the second decade of June except in Ouahigouya where the lack of efficient rains led the farmers to proceed to dry sowing in late June. The northern and central parts of the country witnessed numerous cases of resowing. In mid-July, most of sowing and resowing work was completed in nearly all the agricultural zones.

In the Centre, resowing disturbed agricultural work thus putting the crops under grass.

The sequences of drought in July and especially in August had a very negative effect on crops mainly in the North, East and Centre.

During the first decade of September, cases of wilting are recorded in the North and Centre (Mossi Highland) where water soil reserves were low if not non-existent.

The rains of the second decade were not abundant enough to allow for a resumption of the normal development of plants, in the North. An improvement was recorded in the Centre.

The third decade of September having been dry in the North and East, the situation degraded in these zones.

The decrease in water reserves continued in October, the month during which they were estimated non-existent in all the country except in Bobo-Dioulasso and Gaoua. Cases of advanced wiltings occured here and there. The shortage of rains in October did not facilitate maturation.

2.1.2. Prospects for 1990-1991

2.1.2.1. Crops estimates

The socio-economic conditions of the rural areas having been good at the beginning of the season, it is estimated that the surface areas cultivated could be of the same order of magnitude as for the previous year.

But one expects a decrease in the yields of millet, sorghum and maize nearly everywhere except in the South, the West and in the low-lands

In the North, the East and Centre, maize harvest will be very mediocre.

The harvest of 120 day white sorghum will probably be average. Millet and 90 sorghum have a better chance of success.

In the South and West (Bobo-Dioulasso, Gaoua, Boromo) where good yields are expected, the harvest will be quite good.

Harvest estimates made, on the basis of data collected in August-September, are the following :

- production of millet : 596,900 tons
- production of sorghum : 916,700 tons
- production of maize : 216,800 tons
- production of rice : 43,100 tons
- production of fonio : 14, 100 tons

that is a total production of 1,787,600 tons of cereals.

This production has decreased by 8.4% as compared to that of the 1989-1990 season.

2.1.2.2. Food prospects

Available estimated production amounts to 1,506,500 tons of cereals including 23 700 tons of rice. Thus the production has decreased by 8.5% as compared to the previous year whereas the population will grow by about 2.7%.

The needs are estimated at 1,828,500 tons including 95.3% of human consumption needs. They exceed estimated resources by 12.2%.

Identified imports are essentially made up with rice and wheat commercial imports and planned maize flour food aids.

Therefore there is a dry cereals deficit of about 118,000 tons. This means that the dry cereals imports must be revised and increased in order to reduce this deficit partly by commercial imports, partly by aids. On the other hand the rice imports programme could be revised and decreased without any risk of shortage at global level.

It is reported that some populations in the North and East of the country might undergo a precarious food situation during the interseason. These are the populations of the provinces of Yatenga, Passoré, Soum, Sourou, Ouadalan and Gnagna.

2.2. CAPE VERDE

2.2.1. Agro-pastoral situation

2.2.1.1. Rainfall

The first rains fell on the Fogo island at the end of June, but the first significant rains came only during the second fortnight of July.

In all the country, there were very poor rains in August except in some zones of the islands of Santiago, Fogo and Brava.

At the end of August, rain deficits were very important.

Generalized rains fell on all the islands during the first two decades of September. After a recess during the third decade on the "less agricultural" islands however, the rains resumed in October in all the country.

2.2.1.2. Phytosanitary situation

On the whole the phytosanitary situation has been calm.

The absence of pilgrim locusts has been recorded throughout the season.

A few grasshopper pullulations were reported on the different islands in August and September; but the damage on crops was low. There were also a few problems with green bugs and millepedes on the San Antao island.

2.2.1.3. Pastoral situation

Thanks to the rains of September and October, the development of the herbaceous cover was satisfactory although delayed as compared to previous seasons.

At the end of October, the state of natural pasture lands is good and fodder resources although limited in this country will be sizeable.

The health state of animals on the whole is satisfactory except for a few problems with poultry.

2.2.1.4. Evolution of crops

The first sowing of maize was carried out only on the islands of Santiago and Fogo during the third decade of July and was generalized gradualllly on all the other islands.

Following the shortage of rain in August, there were many resowings especially in the arid and semi-arid zones.

As from the first decade of September, the conditions were met for a good development of maize. However, it was necessary that the rains should continue until early November in order for maize to complete its vegetative cycle in satisfactory conditions.

2.2.2. Prospects for 1990-1991

2.2.2.1. Crops estimates

On condition that rains should continue until November, the crops estimates for the 1990/1991 season amount to 15,500 tons of maize.

This estimate, although superior to the harvest of the previous season, is inferior to those of the 1987-1988 and 1988-1989 seasons.

2.2.2.2. Food prospects

Taking into account the stocks, availability prior to imports represents 35.0% of consumption needs which is a situation equivalent to that of the previous years.

The total needs of 119,000 tons has clearly increased as compared to the needs of previous years, mainly due to a high estimated level in maize stock for the end of the exercise, (33.4% of total needs). This increase in the stocks of dry cereals instead of rice meets a security requirement if one takes into account the structure of resources on the one hand and of the structure of consumption on the other hand. The creation of a security stock, however, requires means and materials that do not yet seem to be available. The imports programme makes it possible to reduce the gross deficit of 91,300 tons. This programme, contrary to that of previous years, emphasizes the commercial import of dry cereals (25,000 tons out of 35,000 tons of commercial imports) because of the needs arising from the creation of the security stock. The food aid programme has increased as compared to that of 1989/1990 (+ 40.3%) but is about the same size as that of 1988/89. It is believed that it can be carried out.

The appareant availability in cereals that is obtained by considering all the cereal resources amount to 309 kg per inhabitant. For that reason, even if the imports programme is not carried out due to lack of resources for rebuilding the security stock, the availability in cereals remains superior to the ex-post consumption ratio of 1989/90 and even to the consumption standard of 206 kg/inh./year.

2.3. THE GAMBIA

2.3.1. Agro-pastoral situation

2.3.1.1. Rainfall

The rainy season started very late in The Gambia.

The first rains fell at the end of the second decade of June whereas they generally start during the second decade of May.

The rains in July and August were relatively abundant but they did not resorb the important rain deficit.

At August 31, the cumulation of rains was far below the normal situation of 1951-1980 except for the station of Jenoi.

In September, the rains were unevenly distributed in space.

At September 30, except for the region of Jenoi where cumulation is slightly higher than normal, the other regions have rain cumulations 10 to 40% below normal. However, these cumulations are superior to 500 mm everywhere.

The rains have been abundant in early October especially in the West of the country.

Generally, the rains have been not only late but also unevenly distributed in time and space, nevertheless without making the situation an exceptional one.

2.3.1.2 Phytosanitary situation

The phytosanitary situation has been calm during this season.

A few infestations of grasshoppers were, however, reported locally in September in Mac Carthy Island, Upper River Division and Western Division. The damage on crops, however, has been low.

2.3.1.3. Pastoral situation

Due to the delayed arrival of the rainy season, the vegetation appeared only during the first decade of July.

The herbaceous cover then developed normally and completed its vegetative cycle in early October.

Fodder reserves are satisfactory, particularly in East and Centre of the country.

2.3.1.4. Evolution of crops

Sowing was very much delayed this year.

It was only in the second decade of July that sowing became possible throughtout the territory.

Due to the delayed arrival of the rainy season many resowings were required in most of the regions of the country, particularly in the West.

In August and September, the crops grew in satisfactory conditions.

At October 10, the indices for meeting cumulated water needs ranged from 60% (Georgetown) to 90% (Sapu) and the indices during maturation improved with the october rains. Expected millet yields vary from 300 kg/ha in Georgetown for 120 cycle millet up to 900 kg at Jenoi and Sapu for short cycle millet.

Sowed surface areas, compared to the 1989-1990 season, were less important in millet, rainfed rice, equivalent in low-land rice and irrigated rice but more important in sorghum and maize.

2.3.2. Prospects for 1990-1991

2.3.2.1. Crops estimates

Estimates made in October show the following results

- production of millet : 46,300 tons
- production of sorghum : 9,900 tons
- production of maize : 14,700 tons
- production of rice : 20,600 tons

that is a total of 91,500 tons of cereals.

This production is the lowest of the last ten seasons. It is 5.2% lower than that of the past season.

This production decrease is mainly felt for millet and sorghum.

2.3.2.2. Food prospects

The availability prior to imports represent only 53.3% of the total needs for the year 1990/91.

Estimated imports amount to 72,430 tons including 70.6% of commercial imports 60.8% of which is rice and the rest is wheat flour. This programme

does not seem to take due account of the decrease in imports noted since 1987/88. If it is carried out the part of imports in resources will increase to 56.0% instead of 43.8% in 1989/90. Similarly this programme in terms of re-exports is equivalent to that of last year.

The estimated deficit for all cereals is only 11,400 tons, which appears rather as a balanced situation in this country even if apparent availability in cereals per capita is only 151.65 kg against an official consumption standard of 165 kg.

2.4. GUINEA-BISSAU

2.4.1. Agor-pastoral situation

2.4.1.1. Rainfall

The first rains fell in a limited manner during the second and third decades of May.

But the rains of the first and second decades of June were so poor that the rainy season started really only at the third decade of June.

This is a very delayed start as compared to the other agricultural seasons.

The the rains have been relatively abundant in July (200 to 500 mm, and 9 to 24 days of rains according to the stations).

The rains have been even more abundant in August (250 to 600 mm and 10 to 29 days of rains according to the stations) August 1990 has been rainier than August 1989 in all the country except in the zones of Bissau, Bolama and Fulacunda.

However, in late August, the rain cumulation was everywhere lower that the normal of 1951-1980.

Then the rains have been abundant during the first two decades of Septeaber, a little less abundant during the third and resumed in October.

At October 10, the rain cumulation was higher than 900 mm in all the country with a maximum of about 1500 mm at Guinhamel. This cumulation, however, is lower than the normal of 1951-1980.

2.4.1.2. Phytosanitary situation

The phytosanitary situation has been relatively calm.

In the East of the country, the presence of grasshoppers has been reported but with little damage on crops. There was some damage on rice caused by caterpilars and termites in the North-West and South.

2.4.1.3. Pastoral situation

Due to the delayed arrival of the rainy season, the vegetation only started in the second decade of June.

The herbaceous cover then developed normally until October.

The state of pasturelands is therefore satisfactory.

No significant zoosanitary problem was reported in the country as a whole throughout the season except anthrax smut in the South of the country.

2.4.1.4. Evolution of crops

The delayed start of the rainy season somehow disturbed the usual agricultural schedule.

Sowing of millet, sorghum and maize was generalized in the country only during the third decade of June and the first decade of July and there have been many cases of resowing.

Later on, abundant rains have made it possible for crops to develop normally.

The development of the different rice croppings (rainfed, low-lands, mangrove) has also been satisfactory despite a some shortage of water for mangrove rice.

However, it was important that the rains should continue until early November for long cycle crops.

2.4.2. Prospects for 1990-1991

2.4.2.1. Crops estimates

Estimates made in October show the following results :

- production of sorghum : 22,600 tons
- production of millet : 41,600 tons
- production of maize : 23,500 tons
- productionof fonio : 3,100 tons
- production of rice :159,600 tons

that is a total of 250,400 tons of cereals.

This production, if confirmed, is the best ever recorded in Guinea-Bissau. It is 2% higher that that of the past season.

2.4.2.2. Food prospects

The resources prior to imports represent 83.3% of total needs. For dry cereals, the resources prior to imports are 56.2% superior to the needs whereas for rice, the resources prior to imports cover only 65.2% of the needs.

Plans have been made to import 39,000 tons of rice including 83.3% of commercial imports and the remaining (6,500 tons) being planned aids. Estimated wheat imports represent 58.3% of wheat imports.

It must be specified that rice and wheat re-exportation has not been estimated although there will be re-exportations.

On the whole, the evaluation shows a surplus of 14,160 tons for all cereals.

At 214.70 per capita, apparent food availability is adequate as compared to the 175 kg standard per capita. However, it must be recalled that part of the rice and wheath available will be re-exported. There is no reason to foresea any shortage if one refers to the elements of the evaluation.

2.5. MALI

2.5.1. Agro-pastoral situation

2.5.1.1. Rainfall and hydrology

Rainfall

The South and South-West of the country have received efficient rains as early as the second decade of May.

Early June, it rained everywhere in the country and, at the end of June rains cumulation since May 1st ranged from normal to excess in the part of the country south of the North-eastern line of Nioro, south of Banamba and Kolokani, south of Niono, north of Mopti, south of Douentza as well as in a spot around Timbuctu.

July has been very rainy throughout the country. The major part of the agricultural regions thus witnesses a July rainfall ranging from normal to excess and the rainfall cumulation since May 1st also ranges from normal to excess. This concerns essentially the region of Sikasso, the south of the regions of Koulikoro and Ségou. However, rains cumulation shows a serious deficit in the north-western part (north of Kéniéba, south of Nioro, Nara) and North-East (north of the Niafunké Douentza line) of the country.

In August, rains were abnormally insufficient. At some places, namely north of the 14th parallel, the rains stopped for one or two decades. However rain cumulation is inadequate only at Kayes and Kita in the West of the country, in all the sahelian fringe, from West to East including Nioro and Nara for the agricultural zones.

September was relatively more rainy, but it was not possible to resorb the deficit already recorded in the West and in the sahelian zone.

At the end of the first decade of October, rains cumulation since May 1st ranges from normal to excess globally in the part of the country south of the southern line of Kita, south of Kolokani, Banamba, north of Ségou, south of San and around Mopti. There is a slight deficit in an East-west stretch located between that line and the Kéniéba line, south of Nara, south of Niafunké, north of Douentza except in a spot around Mopti. Elsewhere, the deficit is serious, namely at Bafoulabé, Kayes, Yélimané, Nioro, Nara, Niafunké, Goundam, Timbuctu and GAo for the agricultural parts of the country.

On the whole, the rainfall has been good and similar to that of last year.

Hydrology

The major water ways (River Niger, River Senegal, Bani) started flooding as early as May. The rising of the tide has been clear throughout the period from May to August on Rivers Niger and Senegal (at Kayes) with a period of stabilization in mid-June. As from early August, a decrease in tide level is recorded in the basins of Bani and High-Senegal.

In September, the average hight of water is equivalent to that of 1989 on River Niger and clearly lower on River Senegal at Kayes and on the Bani at Douna.

On all of the network, water hight is inférior to inter-anual averages.

2.5.1.2. Phytosanitary situation

The acridian activity has been marked by hatching of grasshoppers larvae in the regions of Kayes, Ségou and Mopti in June. A high density of mature alates was observed in July in the western part (Kayes, Yélimandé), central part (Nara, Nioro) and north-eastern part (Gossi) of the country.

In the sahelian stretch, hatching of larvae continued until the first decade of August.

Throughout the season, the acridian situation remained less serious than during the previous season.

Also, the emergence of other crops depredators was reported, namely blister flies mainly in the zones of poor rains (West of the country and sahelian stretch).

2.5.1.3. Pastoral situation

The poor rains in the pastoral zones of Mopti, Douentza, the region of Timbuctu, Nara and Nioro did not favour the reconstitution of the herbaceous cover. In September, the pasture lands are scraggy in the north of Kayes, at Yélimandé, Nioro and Diama. In the north of Banamba, at Nara, in the north of Kolokani, the situation of pasture lands is not better.

In September, a resumption of vegetation is recorded in the region of Timbuctu.

In the Delta of Niger and Bani, the state of "bourgou-fields" is mediocre. The seedlings of "bourgou" that could not grow fast enough due to shortage of rain were drowned at some place by the flooding.

Watering conditions are satisfactory except in the regions of Kayes and Timbuctu (Diré, Goundam) where the filling up of ponds and lakes was insufficient.

With respect to health, no rinderpest foci is reported but there is a re-emergence of infectious peripneumonia.

2.5.1.4. Evolution of crops

The preparation of soils in mid-June, the sowing in June-July took place in very good conditions. So that it may be assumed that cultivated surface areas have increased.

The water deficit in the West of the country and in the sahelian zone had negative effects on crops. Lat August early September there was, in these zones, cases of severe wilting. For the June sowing at Nioro and for the July-August sowing at Hombori, Gao, North of Kayes, Mopti (North), Nara and Nioro, the cumulated indices are inferior to 70%.

The rains in September did not make it possible to improve the situation. Also, grasshoppers and blister flies have caused localized damage.

South of the 14th parallel, in the regions of Koulikoro, Sikasso, Ségou and Mopti, the rain deficit of August had a lesser effect because water reserves in the soil were important. End of August, cumulated indices of water needs catering were everywhere superior to 75% except at Katibougou and Banamba for millet and sorghum. The rain deficit of August has caused a decrease rather than a loss of crops. For the maize of the regions of Koulikoro, Ségou and Mopti, the decrease in yields could be important; it will far less in the region of Sikasso. For millet and sorghum, the September rains allowed plants to resume normal growth; decrease in yields will not be significant.

Generally, we expect a slight decrease in production as compared to the previous season.

2.5.2. Prospects for 1990-1991

2.5.2.1. Crops estimates

The estimates made in October show the following results :

- production of millet : 695,356 tons
- production of sorghum : 754,163 tons
- production of rice : 375,682 tons
- production of maize : 214,442 tons
- production of fonio : 18,761 tons.

The national production would thus be 2,058,400 tons of cereals in decrease by 4.5% as compared to the previous season.

2.5.2.2. Food prospects

Available production would represent 84.4% of resources prior to imports and the stocks at the beginning of the exerice would represent 15.6%. The comparison of these resources to the needs established on the basis of an average consumption of 212 kg/inh/year reveals an imports need of 28,500 tons exclusively of wheat. The 212 kg standard resulting from the preliminary results of the budget-consumption survey of Mali in 1988/89 has been used here because it has been proposed by the Malian technicians for making the evaluation at national level. This standard seems more realistic that the one of 167 kg used previously. It is noted that the inter-annual average of apparent consumption ratios is of the same order of magnitude. (Let us recall that the 1989/90 ratio might be overestimated).

Planned imports amount to 37,300 tons including 64.4% of wheat. Food aid represents 62.4% of these imports.

Certainly the country will not need to import rice or dry cereals.

However, it is now clear that some populations of the sahelian and saharan zones run the risk of food shortage in the medium term. The device for monitoring risk zones (SAP) will have to identify them more precisely as soon as possible so that a cereals transportation programme could be set up to avoid the emergence of food shortage.

2.6. MAURITANIA

2.6.1. Agro-pastoral situation

2.6.1.1. Rainfall

Except for the heavy rains of June 29 in the South and South-East of the country, up till mid-July, only scarces rains fell.

Thus the first rains fell at Rosso only during the second decade of July.

Therefore, the rainy season started late in the country as a whole.

During the three decades of August, in all the agricultural zones, the rains have been poor as compared to the normal of 1951-1980 (often less than half).

At the end of August, rains cumulations were everywhere below 150 mm. The differences are importants for the meteorological stations of the agricultural zone as compared to the past season (from 20 to 60%) as as compared to the normal of 1951-1980 (from 10 to 50%).

The rains in September have been poorer than the normal and badly distributed.

End of September, rains cumulations are poor : below 200 mm at Aioun and Néma, around 220 mm at Kaëdi, Kiffa and a bit higher than 300 mm at Amourj and Sélibaby. The deficits compared to last year and to the normal are very important.

In October, the rains have been insignificant if not non-existent in the agricultural zone except Rosso.

The rainfall of this season has, therefore, been well below normal.

2.6.1.2. Phitosanitary situation

The phytosanitary situation has been rather calm on the whole.

During the season, the present of pilgrim locust was reported at some places in the Brakna, the Trarza and the Hodh. But it was isolated individuals and their incidence on crops and pasture lands was nil.

Grasshoppers infestations were reported in August and September in the Guidimake and in September in the wilayas of the Assaba, the Hodh and of the Gorgol.

The worst situations were recorded in the Guidimaka and in the South of Hodh el Chargui, but the damage on crops and pasture lands were far less than last year.

However, these cases have required terrestrial and aerial treatments but in less great number than last year.

2.6.1.3. Pastoral situation

The herbaceous vegetation gradually settled in the South of the country during the month of July.

Then the plant cover developed normally.

As from the first decade of September, the vegetation indices started to decrease in the North of the agro-pastoral zone and in the East of the country.

In October, the fodder resources are rather satisfactory. But this situation might degrade quite rapidly because cattle movements towards neighbouring countries will be far more limited than during the other years.

On the zoosanitary level, no significant problem was reported. But the limited transhymance of cattle will certainly have pernicious consequences.

2.6.1.4. Evolution of crops

Sowing started in the wilayas of Guidimaka and Assaba during the third decade of June. With the poor rainfall of early July, this sowing certainly failed.

Sowing was generalized in all the productive zones only during the second and third decades of July.

The growth of rainfed crops has been disturbed by rain shortage in August and September.

Whatever the period of sowing, the indices of catering cumulted water needs, for 90 day millet, are below 70%. They are especially low in the Hodh, the North of the Assaba and the Gorgol where expected yields range from 300 to 400 kg per hectar.

Low-land and dam foot crops have also suffered from rain shortage during this season.

As the rising of River Senegal was very weak this year, the walo cultivated surface areas will be limited.

Despite the problems related to the administration of the rice cultivated irrigated perimetres, the surfaces are deemed equivalent to those of last year.

2.6.2. Food prospects for 1990-1990

2.6.2.1. Crops estimates

The estimates made in October show the following results :

- production of millet : 6,400 tons
- production of sorghum : 82,400 tons
- production of maize : 2,500 tons
- productin of rice : 52,400 tons

that is a total of 143,700 tons of cereals.

This production is 21.3% below that of last year and slightly equivalent to that of the 1986-1987 season.

This important decrease is essentially due to a dieri crop production far below those of the previous seasons.

2.6.2.2. Food prospects

Availaibe production thus would represent 80.7% of resources prior to imports.

Cereals needs 92.9% of which are consumption needs for the exercise exceed by 247,600 tons the resources prior to imports.

The imports programme established of 188,300 tons provides for rice only (36.6% of imports) and wheat (63.4%). The food aids programmed exclusively in wheat represent 29.2% of the total of imports (against 35.6% last year).

Consequently the imports programme appears inadequate as compared to the needs. Indeed there is an apparent availability per capita of 149.86 kg inferior to the official standard which is 165.00 kg. Dry cereals imports will be needed. Informal trade will probably take care of part of the imports. Given the low level of apparent availability, it is desirable to make formal imports in order to reduce the risks of shortage.

Furthermore, the closing of sales points of the Food Security Commission in many rural areas could have tragic consequences on the good circulation of cereals, namely in the landlocked zones, as the private sector cannot ensure regular supply to these zones. The price hikes reported in Octeober 1990 are an evidence for that.

2.7. NIGER

2.7.1. Agro-pastoral situation

2.7.1.1. Rainfall - Hydrology

Rainfall

The first efficient rains fell in May in the southern and south-western part of the country (South of Tillabery, South of Dosso, South of Tahoua, South of Maradi and South of Zinder).

After the final settling of the season in June, there was a succession of dry periods and humid periods.

Generally, the month of June showed deficit as compared to the normal everywhere except in some isolated places : Banibangou, Gouré and Matmaye in the Department of Zinder, Maradi and Mayahi in the Department of Maradi, N'Guigmi in the Department of Diffa, Niamey and Ouallam in the Department of Tillabery.

In July, the rains have been more abundant and better distributed in time and space. The south of the Department of Agadez, the south of the Department of Zinder, the Department of Tahoua, the Department of Tillabery South of the line Filingué, Ouallam, Tillabery have received rains ranging from normal to excess. Only the extreme East of the country received little rain.

Rains in August have been less good is not bad.

As from the first decade of August that witnessed a continuation of the regime of July, the rains were poor and scattered with stoppages at some places.

In September, the global situation shows deficit. Most of the stations witness a more or less marked seasonal deficit. Rain stoppages of 10 days are recorded in Zinder and N'Guigmi, during the first and second decades of September. At the end of the second decade, a few isolated stations in the departments of Tillabéry (Tillabéry, Niamey, Torodi, Filingué), Dosso (Dosso, Gaya) Tahoua (Keita, Birni-N'Kouni), Maradi (Mayadi, Maradi) Zinder (Zinder, Diffa (N'Guigmi) have cumulations of rains, since May 1st, ranging from normal to excess. Everywhere else the rainfall was poor.

The last rains of the season fell in earlyl October.

Globally, the rainfall of this season shows deficit as compared to the normal of 1951-1980. Only the South-West (Niamey, Ouallam, Tillabery, Torodi) witnessed excess rains.

Hydrology

The beginning of the rising of River Niger took place in June following the local rains and the inputs from Burkinabé tributaries.

The tiding of water was important in July. In Niamey and Kandji, the increase in the average discharge continued in early September to stabilize during the second and third decades.

Generally, the rising in Niamey has been similar to that of 1989.

2.7.1.2. Phytosanitary situation

Grasshoppers infestations occured in June in the Departments of Maradi, Tahoua and Tillabéry and in early August in the north of Dosso (Dogondoutchi), in the South (Dakoro).

Thes infestations continued to develop until September in the North of the 14th parallel despite aerial treatments. Late September, a low density of pilgrim locust was reported in the Aïr. The Senegalese locust is always present at young stage but in low density around Diffa, Goudoumaria, Madaoua, Zinder and in the Department of Agadez.

2.7.1.3. Pastoral situation

The state of pasture lands improved from May to late July. The effects of the poor rains of September have been clear on pasture lands the state of which is little satisfactory throughout the sahelian zone. However, it is deemed that in the zones of the South, namely in the south of Tahoua, Maradi and Zinder as well as in the East of the country, fodder production could be not negligible.

2.7.1.4. Evolution of crops

Risky sowing took place in May in the Department of Tillabery whereas in the that of Diffa there was dry sowing in June in the absence of efficient rains.

The poor rainfall of June hindered crop growth everywhere except in Niamey and Torodi.

In July, the plant water needs since the beginning of their vegetative cycle were generally met except at Filingué, Gouré and N'Guigmi.

In August, the crops have undergone unsastifsfactory water conditions. The cumulated index of water satisfaction since the beginning of their vegetative cycle is low nearly everywhere for millet and sorghum. Ceses of wilting were recorded in the North-East of the Department of Tillabery and in the departments of Tahoua, Maradi, Zinder.

2.7.2. Food prospects for 1990-1991

2.7.2.1. Crops estimates

The poor rainfall of June and August caused decrease in yields as compared to a normal year. The expected potential yields are below 200 kg/ha in the North-West of the Department of Tillabery, in the sub-districts of Dongondoutchi (Dosso), Maine-Soroa, N'Guigmi (Diffa) and Zinder (Zinder). In the southern parts of the departments of Tillabery, Dosso and Tahoua namely in Birni N'Koni, Torodi, Dioudiou, Gaya, the millet yield might reach 800 kg/ha.

The estimates made from quantitative observations show the following results :

- production of millet : 1,129,700 tons
- production of sorghum : 418,300 tons
- production of maize : 2,600 tons
- production of rice : 72,800 tons
- production of wheat : 10,000 tons

The total cereals production of 1,633,400 tons has decreased by 3.2% as compared to the previous year the result of which was deemed low.

2.7.2.2. Food prospects

Estimated availability prior to imports amount to 1,504,900 tons including 90.8% of available production and 9.2% of stocks at the beginning of the exercise.

Estimated needs in all cereals amount to 1,961,900 tons, that is, 30.3% more than availability prior to imports.

Gross deficit prior to imports is 456,900 tons.

The imports programme only provides for an input of 193,000 tons including 179,000 tons (92.7%) of commercial imports.

The net deficit of dry cereals is important : 255,800 tons. The readjustment of the imports programme for dry cereals is necessary. The informal sector will find it difficult to fill this gap.

We expect a significant decrease in the level of local cereals consumption. It also probable that some populations of the Department of Diffa, of the sub-districts of the North of Maradi, of Zinder and Tahoua will face food shortages. A monitoring of these zones is indispensable if we wish to detect on time the emergence and settling of food crises.

2.8. SENEGAL

2.8.1. Agro-pastoral situation

2.8.1.1. Rainfall - Hydrology

Rainfall

The first significant rains fell during the first decade of June at Kédougou and Tambacounda and generalized throughout the country during the second and third decades of June.

Generally the rainfall has been poor in June.

In July, the distribution of rains in time and space improved everywhere but the quantities were poor except in the sourthern zone of the country.

During the first two decades of August, the rainfall has been quite normal throughout the country but the rainfall of the third decade of August was again below normal except in the regions of Kédougou, Matam and Ziguinchor.

At the end of August, the cumulations of rainfall was well inferior to those of last year and to those of the normal of 1951-1980 except in the extreme South of the country and the region of Thies.

In September, the distribution of the rains was relatively mediocre in the North and Centre of the country and satisfactory in the South.

End of September, as compared to last year, the cumulations were poor throughout the country except in the regions of Matam and Bakel. The gaps were very importants, superior to 40% in Podor, Louga, Linguéré, Ndiefoune, Dakar, Bambey and Mbour.

Compared to the normal of 1951-1980, the cumulations were poor throughtout the country except in the region of Cap Skirring. The gaps were very important, superior to 40% in Podor, Ndiefoune, Dakar and Mbour.

However, the rains continued in the South of Senegal until the second decade of October.

Hydrology

The artificial character of the regime of River Senegal does not allow for interpretation.

Nevertheless, the hight of the water has, from mid-August onwards, been inferior to that of last year. Thus on the September 15 1990, the level was inferior to 25% in Bakel, 35% in Matam and 48% in Podor.

The rising finally settled on River Senegal during the second decade of August and on the whole it has been weak.

Until September 10, the hydrological situation of River Gambia, at Kédougou, was better than last year. Later on the situation clearly reversed.

River Casamance has been dry at Kolda until tlhe third decade of June and from early August onwards the hight of water has been well inferior to that of last year (by 21% on September 30).

The hydrological situation of all the rivers of the country has been far less good than last year.

2.8.1.2. Phytosanitary situation

On the whole the phytosanitary situation has been calm.

There is nothing to report about pilgrim locust.

Concerning grasshoppers, important foci have been reported in the regions of Saint-Louis, Thies, Dakar, Kaolack and Fatick.

Damage on crops was recorded especially on millet in the North, but on the whole it does not seem to be important.

At September 30, more thatn 220,000 hectars were treated by the Directorate of Plant Protection.

Other damage on crops was caused by bugs (Louga, Centre of the country, Kolda) and by blister flies (Kolda, Fatick and Diourbel).

2.8.1.3. Pastoral situation

Bush fires have again struck before the start of the rainy season. End of May, about 100,000 hectars had burnt.

The rainfall, very poor until July, has disturbed the start of the herbaceous vegetation.

The herbaceous cover developed differently according to regions : normal in the southern, south-eastern and centre-southern zones and difficult in the northern and centre-northern zones (water stress at the end of August).

The gross dry herbaceous production was well inferior to that of the 1989-1990 season. This decrease was estimated at about 60% in the department of Podor and the eastern part of the department of Dagana.

The level of ponds in the northern zone rapidly decreased due to the bad distribution of the rains. End of October, 40% of the ponds of the sylvopastoral zone and of the Ferlo dried up.

2.8.1.4. Evolution of crops

In the southern and south-eastern zones of the country, sowing took place during the third decade of June and the first decade of July.

In the central and northern zones, dry sowing took place in late June early July whereas humid sowing took place during the second and third decades of July.

After the delayed start of the season, crop growth has been quite satisfactory on the whole.

The surface areas successfully sowed with millet decreased by 9%, those with rice by 7%, whereas those, far more limited, with sorghum have increased by 32%.

The indices of satisfaction of cumulated water needs were at September 30 superior to 70% except for the sowing of early August for which the October rains were necessary.

Expected potential yields, however, varied according to regions : from 200 kg/ha for the sowing of 90 day millet of mid-July at Louga to more than 900% kg/ha for the sowing of 90 millet of June at Kédougou and Tambacounda and the sowing of 120 day millet of June at Kédougou.

2.8.2. Prospects for 1990-1991

2.8.2.1. Crops estimates

The estimates made in October show the following results :

- production of millet : 508,000 tons
- production of sorghum : 160,900 tons
- production of maize : 138,700 tons
- production of rice : 157,400 tons

that is a total of 964,900 tons of cereals.

This production is 9.6% inferior to that of the previous season. However it is better than that of the 1986-1987 and 1988-1989 seasons.

This decrease as compared to the previous season is essentially due to the 33.6% decrease in millet production.

2.8.2.2. Food prospects

Estimated available production is 773,000 tons including 686,400 tons of

dry cereals (88.8%) and 86,600 tons of rice (11.2%).

The internal resources (prior to imports) cover 59.9% of total needs in cereals.

The gross deficit prior to imports is 611,400 tons of cereals including 404,800 tons of rice and 162,000 tons of wheat.

The programme of imports reaches 585,000 tons : 411,900 tons of rice, 164,000 tons of wheat and only 9,100 tons of dry cereals. The imports are essentially commercial ones (92.5%).

This imports programme is better balanced than those establised for the forecasts of 1987/88 and 1989/90 since it does not reveal excessive rice and wheat surpluses.

The net deficit of 35,500 tons in dry cereals could easily be fill with additional imports by the Food Security Commission, if the market situation so requires. The transfer of local cereals to the low production zones will probably be rather difficult.

2.9. C H A D

2.9.1. Agro-pastoral situtions

2.9.1.1. Rainfall - Hydrology

Rainfall

The first rains fell in May in the sudanian zone and in June in sudano-sahelian and sahelian zones.

But at the end of June, compared to last year and to the normal of 1951-1980, the rain cumulations were poor throughout the country except for the western Logone.

In July, the rains were relatively good in all the agricultural zones.

During the month of August, particularly the first and third decades, the rains were lower than normal especially in the shalian zone (Abéché, Biltine, Mao, Ngouri).

End of August, the cumulations everywhere are lower than last year (up to 54% at Abéché and than the normal of 1951-1980 (more than 30% with cumulations inferior to 200 mm in the Sahel).

In September, the rains of each decade have been everywhere inferior to normall, with rare exceptions in the South of the country.

At September 30, the cumulations of all the main meteorological stations of the country are poor compared to last year except for Moundou. The gaps are important : more than 40% at Abéché and N'Djamena with respective cumulations of 150 mm and 300 mm.

As compared to the normal of 1951-1980 all the cumulations are poor except for Mandalia, all with gaps superior to 25%, reaching 49% at N'Djamena , and 68% at Abéché.

Globally, the rainfall has been very poor during this season, particularly in the sahelian zone of the country.

Hydrology

The station of Bol on Lake Chad was dry as from July 9 whereas it was not so in 1989.

As from the first decade of July, the Logone shows a regular rising at Nguely and Bongor.

The water hight of Rivers Chari and Logone, throughout the season, have

been inferior to that of last year. The hydrological situation was affected by the generalized deficit of the rainfall.

2.9.1.2. Phytosanitary situation

Regarding pilgrim locust the situation has been calm throughout the season.

As regards grasshoppers, their presence was reported in eight prefectures : Kanem, Batha, Ouaddaï, Chari Baguirmi, Mayo Kebbi, Guera, Salamat and Moyen Chari.

Damage recorded on crops is rather important particularly in the sahelian zone.

Furthermore, the Directorate of Plant Protection did not receive insecticides this year and the treatments have therefore been limited.

Other crop pests were also present :

- African migratory locust in Mayo Kebbi
- Tree-dwelling locust in Guera
- Grain eating birds in the prefectures of the Lake, of Kanem, Batha and Biltine.
- Striga in the sudanian zone.

2.9.1.3. Pastoral situation

In the South of Chad, the herbaceous vegetation started during the third decade of May. Then it developed normally.

In the sahelian zone of the country, the herbaceous cover settled throughout July and its growth suffered sowhow from the poor rainfall recorded in August and September.

On the whole, it is deemed that fodder production will be good in the sudanian and sahelo-sudanian zones and mediocre in the North of the shelian zone.

On the zoosanitary level, no serious problem was recorded. However cases of trypanosomiasis have been reported nearly everywhere in the country as well as cases of dermatophilosis in the South in August. In September, cases of symptomatic smut were observed in the prefectures of the Lake and Guera.

Furthermore, a device was set up, at the Chado-Lybian border to control "Bouchère fly".

2.9.1.4. Evolution of crops

In all the country, the rainy season settled late.

In the sudania zone, sowing took place during the second fortnight of May.

Humid sowing in the sudano-sahelian zone started during the first decade of June, and in the sahelian zone during the second and third decades of June.

Until late July, the crops on the whole developed satisfactorily.

Later on, the crops in the sudanian zone did not suffer too much from the low level of rainfall.

In the sahelian zone, in contrast, crops growth was very much disturbed.

Slight and persistent wiltings were recorded and even total drying up after field abandonment. Early harvest at some places made it possible to minimize losses. The situation has been particularly serious in the prefectures of Batha and Biltine, the Centre and North of the Ouaddai, the North of Guera and the North of Chari Baguirmi.

2.9.2. Prospects for 1990-1991

2.9.2.1. Crops estimates

The estimates made in October show the following results :

- production of millet : 172,300 tons
- production of sorghum : 282,900 tons
- production of maize : 31,000 tons
- producion of berbéré : 54,700 tons
- production of rice : 59,800 tons
- production of wheat : 3,300 tons
- production of fonio : 700 tons

that is a total of 604,700 tons of cereals.

This production is 1.9% inferior to that of the 1989-1990 season.

If the harvests of milllet and sorghum have been better than last year, those of rice, maize and berbéré have considerably decreased.

2.9.2.2. Food prospects

Expected net production is 496,100 tons, that is a 0.7% increase as compared to last year.

Total resources prior to imports will make it possible to cover only 67.9% of total needs. Therefore there is a gross deficit of 264,300 tons of all cereals including 195,800 tons of dry cereals.

Taking into account this deficit, the planned imports of 75,400 tons are clearly inadequate.

It is true that these are not commercial imports, as no confirmed aid has been reported. It must be recalled that in 1989/90, only 7,150 tons of aid (wheat) have been received. The low level of cereal aid therefore tallies with the size of the needs.

It is desirable that the programme of commercial and non commercial imports be revived in order to avoid shortages, all the more so as the on-goind troubles may disturb the cerals market and subsequently the supply to the populations. It is reported now that some populations of the prefectures of Batha, Biltine, Ouaddai, Guera and Chari-Baguirmi show signs of food shortage.

TABLE N° 1 : DEFINITE RESULTS OF GROSS FOOD PRODUCTIONS

1989-1990 CROPPING SEASON

in tones

	Millet/ Sorghum	Maize	Paddy rice	Fonio	Other cereals	Total céréales
Burkina Faso	1.640.495	256.913	41.841	12.422	-	1.951.671
Cape Verde	-	9.714	-	-	-	9.714
Gambia	61.411	14.144	20.700	-	-	96.255
Guiné-Bissao	82.614	*	162.429	-	-	245.043
Mali	1.572.659	225.393	337.749	18.928	628 (1)	2.155.357
Mauritania	125.079	2.663	55.067	-	-	182.809
Niger	1.599.766	2.604	70.863	226	12.900 (1)	1.686.359
Sénégal	765.751	131.407	168.227	1.402	-	1.066.787
Chad	416.347	19.171	105.003	911	75.349 (2)	616.781
All	6.264.122	662.009	961.879	33.889	88.877	8.010.776

(1) Wheat (2) Berbere (74.899 t) + Wheat (450 t)

* Maize production included in that of Millet-Sorghum.

TABLE N° 2.

COMPARISON OF CEREAL OUTPUTS IN 1982-1983 A 1990-1991 in thousand of tones

	1982-83 season	1983-84 season	1984-85 season	1985-86 season	1986-87 season	1987-88 season	1988-89 season	1989-90 season	Projections: 1990/1991 season	RATE % 90/91season: 89/90season:
Burkina Faso	1210	1011	1119	1584	1925	1513	2101	1952	1788	91,6
Cape Verde	4	3	3	2	12	21	17	10	16	159,3
Gambia	109	66	89	116	102	92	94	96	91	94,8
Guinea-Bissao	132	132	165	180	200	231	225	245	250	102,0
Mali	984	880	760	1669	1763	1637	2196	2155	2058	95,5
Mauritania	21	16	22	67	146	166	174	183	144	78,7
Niger	1704	1747	1075	1834	1825	1434	2384	1686	1634	96,9
Sénégal	766	517	706	1241	890	1054	867	1067	965	90,4
Chad	453	489	314	690	730	572	808	617	605	98,1
ALL	**5383**	**4861**	**4253**	**7383**	**7593**	**6720**	**8866**	8011	7551	94,3

SOURCE : CILSS.

TABLE No 3 : PRPOJECTIONS ON GROSS CEREAL OUTPUT
1990/1991 CROPPING SEASON
in thousand tones

	Millet/ Sorghum	Maize	Paddy rice	Fonio	Other Cereals	TOTAL CEREALS
Burkina Faso	1514	217	43	14	-	1788
Cape Verde	-	16	-	-	-	16
Gambia	56	15	21	-	-	91
Guinea-Bissao	64	23	160	-	3	250
Mali	1450	214	376	19	-	2058
Mauritania	89	3	52	-	-	144
Niger	1548	3	73	-	10	1634
Sénégal	669	139	157	-	-	965
Chad	455	31	60	1	58	605
ALL	**5845**	**661**	**942**	**34**	**71**	**7551**

Source : CILSS/FAO

(1) : Fonio. (2) : Wheat. (3) : Berbere.

CEREAL ASSESSMENT PROJECTIONS 1990/1991

TABLE N° 4 :ALL CILSS COUNTRIES (in thousands of tones)

ITEM\PAYS	BURKINA FASO	CAPE VERDE	GAMBIA	GUINEA BISSAO	MALI	MAURI-TANIA	NIGER	SENEGAL	CHAD	TOTAL CILSS COUNTRIES RICE	WHEAT	OTHER.C	GRD.TOTAL
Population	9171000	385000	853000	999000	8186000	2136000	7926000	7598000	5702000				42956000
1.AVAILABLE CEREALS	1630,0	27,7	75,1	166,9	1939,2	131,8	1504,9	912,7	559,7	663,5	72,6	6211,9	6948,0
Gross output	1787,6	15,5	91,5	250,4	2058,4	143,7	1633,4	964,9	604,7	941,3	13,3	6595,5	7550,1
Available output	1506,5	13,2	71,6	165,0	1636,9	106,4	1366,5	773,0	496,1	517,7	11,3	5606,2	6135,2
Initital Stock	123,5	14,5	3,5	1,9	302,2	25,4	138,4	139,8	63,6	145,8	61,3	605,7	812,8
-On-Farm stocks	28,4	nd	,0	nd	240,2	nd	84,0	27,0	34,0	1,9	,0	411,7	413,6
-Others stocks	95,1	14,5	3,5	1,9	62,0	25,4	54,4	112,8	29,6	143,9	61,3	194,0	399,2
2.NEEDS	1828,5	119,0	140,8	200,3	1797,4	379,4	1961,9	1524,1	824,0	1364,2	550,1	6861,2	8775,4
.Human Consumption	1742,5	79,3	140,8	174,8	1735,4	352,4	1878,5	1405,6	804,0	1221,3	498,5	6593,4	8313,3
.Final stocks	86,0	39,7	,0	25,5	62,0	27,0	83,4	118,5	20,0	142,8	51,6	267,7	462,1
-On-Farm stocks	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	,0	nd	nd
-Others stocks	86,0	39,7	,0	25,5	62,0	27,0	83,4	118,5	20,0	142,8	51,6	267,7	462,1
3.GROSS SURPLUS (+)/ DEFICIT (-)	-198,5	-91,3	-65,7	-33,4	141,7	-247,6	-456,9	-611,4	-264,3	-700,7	-477,5	-649,2	-1827,4
4.PROJECTED/IMPORT/EXP	109,3	91,3	54,3	47,6	37,3	188,3	193,0	585,0	75,4	681,9	467,9	231,5	1381,3
Commercial Import	88,0	35,0	51,1	37,5	14,0	133,3	179,0	540,9	75,4	634,5	366,2	153,5	1154,2
Programmed food Aid	21,3	56,3	21,3	10,1	23,3	55,0	14,0	44,1	,0	60,8	106,5	78,0	245,2
Exports	,0	,0	18,1	,0	,0	,0	,0	,0	,0	13,3	4,8	,0	18,1
5.NET SURPLUS/(+) DEFICIT (-)	-89,2	-,0	-11,4	14,2	179,0	-59,3	-263,9	-26,4	-188,9	-18,7	-9,6	-417,7	-446,1
6.Apparent Available cereals/head (kg)	189,6	309,0	151,6	214,7	241,4	149,9	214,2	197,1	111,4	31,3	12,6	150,0	193,9
7. Consumpt.level/(kg)	190,0	206,0	165,0	175,0	212,0	165,0	237,0	185,0	141,0				

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousand of tones)

TABLE Nº 5 : BURKINA FASO

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population (mid-1991)				9.171.000
1. AVAILABLE CEREALS	64,49	5,00	1.560,50	1.629,98
. Gross output	43,10	,00	1.744,50	1.787,60
. Available output	23,71	0,00	1.482,83	1.506,53
. Initial Stock	40,78	5,00	77,67	123,45
-On-Farm stocks	,00	,00	28,40	28,40
-Others stocks	40,78	5,00	49,27	95,05
2. NEEDS	99,19	34,35	1.694,95	1.828,49
. Human Consumption	74,19	29,35	1.638,95	1.742,49
. Final stocks	25,00	5,00	56,00	86,00
-On-farm stocks	nd	,00	nd	nd
-Others stocks	25,00	5,00	56,00	86,00
3. GROSS SURPLUS (+)/DEFICIT(-)	-34,71	-29,35	-134,46	-198,51
4. PROJECTED/IMPORT/EXPORT	62,20	30,50	16,57	109,27
. Commercial Import	60,00	28,00	,00	88,00
. Programmed food Aid	2,20	2,50	16,57	21,27
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+)DEFICIT (-)	27,50	1,15	-117,89	-89,24
6. Apparent Available cereals/Head (KG)	13,81	3,87	171,96	189,65
7. Consumption level/head(kg))				190,00

(1) Data corrected by CGP different from the one published by the national services.

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousand of tones)

TABLE Nº 6 : CAPE VERDE

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population (mid-1991)				385.000
1. AVAILABLE CEREALS	,28	2,11	25,33	27,72
. Gross output	,00	,00	15,51	15,51
. Available output	,00	,00	13,18	13,18
. Initial Stock	,28	2,11	12,15	14,54
-On-Farm stocks	,00	,00	nd	nd
-Others stocks	,28	2,11	12,15	14,54
2. NEEDS	23,87	16,54	78,60	119,01
. Human Consumption	17,26	15,68	46,37	79,31
. Final stocks	6,61	,86	32,23	39,70
-On-Farm stocks	,00	,00	nd	nd
-Others stocks	6,61	,86	32,23	39,70
3. GROSS SURPLUS (+)/DEFICIT (-)	-23,59	-14,43	-53,27	-91,29
4. PROJECTED/IMPORT/EXPORT	22,75	10,50	58,00	91,25
. Commercial Import	10,00	,00	25,00	35,00
. Programmed food Aid	12,75	10,50	33,00	56,25
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+)DEFICIT (-)	-,84	-3,93	4,73	-,04
6. Apparent Available cereals/head (KG)	59,82	32,75	216,45	309,02
7. Consumtion level/head(kg)				206,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE Nº 7 : GAMBIA

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				853.000
1. AVAILABLE CEREALS	14,03	,76	60,27	75,06
. Gross output	20,60	,00	70,90	91,50
. Available output	11,33	0,00	60,27	71,60
. Initial Stock	2,70	,76	,00	3,46
-On-Farm stocks	,00	,00	,00	,00
-Others stocks	2,70	,76	,00	3,46
2. NEEDS	59,17	16,34	65,24	140,75
. Human Consumption	59,17	16,34	65,24	140,75
. Final stocks	,00	,00	,00	,00
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	,00	,00	,00	,00
3. GROSS SURPLUS (+)/DEFICIT (-)	-45,14	-15,58	-4,98	-65,70
4. PROJECTED/IMPORT/EXPERT	31,17	23,13	0	54,30
. Commercial Import	31,09	20,02	,00	51,11
. Programmed Food Aid	13,40	7,91	,00	21,31
. Exports	13,32	4,80	,00	18,12
5. NET SURPLUS/(+) DEFICIT (-)	-13,97	7,55	-4,98	-11,40
6. Apparent Available cereals/head (KG)	52,99	28,01	70,65	151,65
7. Consumption level/head (kg)				165,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE Nº 8 : GUINEA-BISSAO

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				999.000
1. AVAILABLE CEREALS	88,27	1,43	77,21	166,92
. Gross output	159,59	,00	90,84	250,43
. Available output	87,77	0,00	77,21	164,99
. Initial Stock	,50	1,43	,00	1,93
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	,50	1,43	,00	1,93
2. NEEDS	135,47	15,61	49,25	200,33
. Human Consumption	116,97	10,61	47,25	174,83
. Final stocks	18,50	5,00	2,00	25,50
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	18,50	5,00	2,00	25,50
3. GROSS SURPLUS (+)/DEFICIT (-)	-47,20	-14,18	27,96	-33,41
4. PROJECTED/IMPORT/EXPERT	39,00	8,57	,00	47,57
. Commercial Import	32,50	5,00	,00	37,50
. Programmed Food Aid	6,50	3,57	,00	10,07
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	-8,20	-5,61	27,96	14,16
6. Apparent Available cereals/head (KG)	127,40	10,01	77,29	214,70
7. Consumption level/head (kg)				175,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE N° 9 : MALI

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				8.186.000
1. AVAILABLE CEREALS	229,31	4,00	1.705,85	1.939,17
. Gross output	375,68	,00	1.682,72	2.058,40
. Available output	206,62	0,00	1.430,31	1.636,94
. Initial Stock	22,69	4,00	275,54	302,23
-On-Farm stocks	,00	,00	240,22	240,22
-Others stocks	22,69	4,00	35,32	62,01
2. NEEDS	224,38	32,49	1.540,56	1.797,43
. Human Consumption	224,38	28,49	1.482,56	1.735,43
. Final stocks	,00	4,00	58,00	62,00
-On-Farm stocks	nd	nd	nd	nd
-Others stocks	,00	4,00	58,00	62,00
3. GROSS SURPLUS (+)/DEFICIT (-)	4,93	-28,49	165,29	141,74
4. PROJECTED/IMPORT/EXPERT	1,90	24,00	11,38	37,28
. Commercial Import	,00	14,00	,00	14,00
. Programmed Food Aid	1,90	10,00	11,38	23,28
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	6,83	-4,49	176,67	179,02
6. Apparent Available cereals/head (KG)	28,25	3,42	209,78	241,44
7. Consumption level/head (kg)				212,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE N° 10 : MAURITANIA

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				2.136.000
1. AVAILABLE CEREALS	40,70	12,20	78,92	131,82
. Gross output	52,36	,00	91,31	143,67
. Available output	28,80	0,00	77,61	106,41
. Initial Stock	11,90	12,20	1,31	25,41
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	11,90	12,20	1,31	25,41
2. NEEDS	111,89	148,93	118,62	379,44
. Human Consumption	92,89	140,93	118,62	352,44
. Final stocks	19,00	8,00	,00	27,00
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	19,00	8,00	,00	27,00
3. GROSS SURPLUS (+)/DEFICIT (-)	-71,19	-136,73	-39,70	-247,62
4. PROJECTED/IMPORT/EXPERT	69,00	119,29	,00	188,29
. Commercial Import	69,00	64,29	,00	133,29
. Programmed Food Aid	,00	55,00	,00	55,00
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	-2,19	-17,44	-39,70	-59,33
6. Apparent Available cereals/head (KG)	51,36	61,56	36,95	149,86
7. Consumption level/head (kg)				165,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE Nº 11 : NIGER

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				7.926.000
1. AVAILABLE CEREALS	41,73	10,20	1.453,01	1.504,94
. Gross output	72,79	10,00	1.550,60	1.633,39
. Available output	40,03	8,50	1.318,01	1.366,54
. Initial Stock	1,70	1,70	135,00	138,40
-On-Farm stocks	,00	,00	84,00	84,00
-Others stocks	1,70	1,70	51,00	54,40
2. NEEDS	78,90	60,19	1.822,77	1.961,86
. Human Consumption	77,20	58,49	1.742,77	1.878,46
. Final stocks	1,70	1,70	80,00	83,40
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	1,70	1,70	80,00	83,40
3. GROSS SURPLUS (+)/DEFICIT (-)	-37,17	-49,99	-369,76	-456,92
4. PROJECTED/IMPORT/EXPERT	34,00	45,00	114,00	193,00
. Commercial Import	34,00	45,00	100,00	179,00
. Programmed Food Aid	,00	,00	14,00	14,00
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	-3,17	-4,99	-255,76	-263,92
6. Apparent Available cereals/head (KG)	9,56	6,96	197,71	214,22
7. Consumption level/head (kg)				237,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE N° 12 : SENEGAL

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				7.598.000
1. AVAILABLE CEREALS	149,64	27,00	736,10	912,74
. Gross output	157,38	,00	807,56	964,94
. Available output	86,56	0,00	686,43	772,99
. Initial Stock	63,08	27,00	49,67	139,75
-On-Farm stocks	,00	,00	27,00	27,00
-Others stocks	63,08	27,00	22,67	112,75
2. NEEDS	554,47	188,99	780,67	1.524,13
. Human Consumption	482,47	161,99	761,17	1.405,63
. Final stocks	72,00	27,00	19,50	118,50
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	72,00	27,00	19,50	118,50
3. GROSS SURPLUS (+)/DEFICIT (-)	-404,83	-161,99	-44,57	-611,40
4. PROJECTED/IMPORT/EXPERT	411,90	164,00	9,06	584,96
. Commercial Import	387,90	147,00	6,00	540,90
. Programmed Food Aid	24,00	17,00	3,06	44,06
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	7,07	2,01	-35,51	-26,44
6. Apparent Available cereals/head (KG)	73,91	25,14	98,07	197,12
7. Consumption level/head (kg)				185,00

CEREAL ASSESSMENT PROJECTIONS 1990/1991
(in thousands of tones)

TABLE Nº 13 : CHAD

ITEM	RICE	WHEAT	OTHER CEREAL	TOTAL
Population				5.702.000
1. AVAILABLE CEREALS	35,03	9,91	514,76	559,70
. Gross output	59,80	3,30	541,60	604,70
. Available output	32,89	2,81	460,36	496,06
. Initial Stock	2,14	7,10	54,40	63,64
-On-Farm stocks	1,90	,00	32,10	34,00
-Others stocks	,24	7,10	22,30	29,64
2. NEEDS	76,81	36,66	710,51	823,98
. Human Consumption	76,81	36,66	690,51	803,98
. Final stocks	,00	,00	20,00	20,00
-On-Farm stocks	nd	,00	nd	nd
-Others stocks	,00	,00	20,00	20,00
3. GROSS SURPLUS (+)/DEFICIT (-)	-41,78	-26,76	-195,75	-264,29
4. PROJECTED/IMPORT/EXPERT	10,00	42,90	22,50	75,40
. Commercial Import	10,00	42,90	22,50	75,40
. Programmed Food Aid	,00	,00	,00	,00
. Exports	,00	,00	,00	,00
5. NET SURPLUS/(+) DEFICIT (-)	-31,78	16,15	-173,25	-188,89
6. Apparent Available cereals/head (KG)	7,90	9,26	94,22	111,38
7. Consumption level/head (kg)				141,00