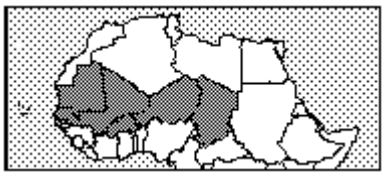


SAHEL WEATHER AND CROP SITUATION 1999

Report No.5 - 11 October 1999

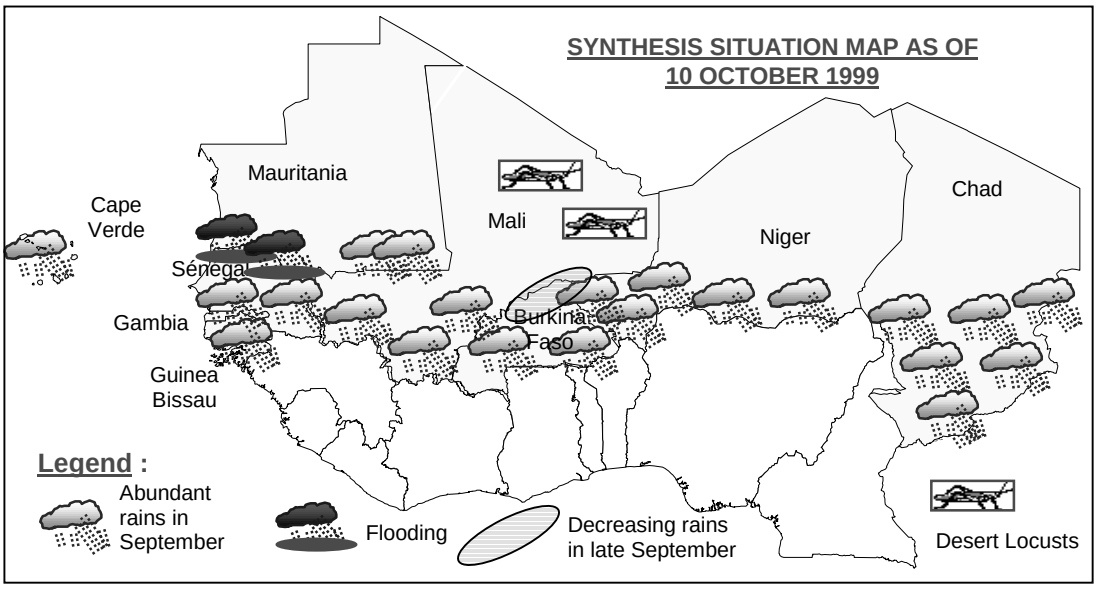
OVERALL HARVEST PROSPECTS ARE FAVOURABLE IN THE SAHEL REFLECTING GENERALLY ABOVE NORMAL RAINFALL SINCE JULY

SUMMARY

After abundant rains in mid or late August in several parts of the Sahel, rainfall decreased somewhat in September but remained generally widespread and above normal. During the first two dekads, rains were well distributed over the producing zones of the Sahel and abundant in Senegal, The Gambia, Guinea Bissau, Burkina Faso and Chad. However, they were more limited in Mali. During the third dekad, they stopped in north-western Senegal and central Chad but continued over all the other producing zones. Cumulative rainfall is generally normal to above normal in Burkina Faso, Chad, The Gambia, Niger and Senegal. High water levels in the Senegal and Niger rivers caused flooding, notably in Mauritania. Soil moisture reserves are adequate except in some areas in northern Senegal and Niger. Early millet and sorghum are maturing or reaching harvest stage in most productive zones. Satellite images for the first dekad of October indicate that cloud coverage continued over most producing zones of Senegal, Mali, Burkina Faso and Chad but diminished over Mauritania, north-eastern Burkina Faso and Niger. Precipitation remained above normal in southern and central Senegal, Mali, western Burkina Faso and southern Chad. Overall, good harvests are anticipated in most countries.

Pastures are abundant and of good quality, notably in Mauritania. Pest infestations (mostly grasshoppers, blister beetles and floral insects) were reported in Cape Verde, Niger, and Senegal. A small outbreak of Desert Locusts occurred in northern Mali as a result of exceptionally good breeding conditions. Limited breeding has also been reported in Mauritania. Elsewhere, no significant developments are expected.

A series of joint FAO/CILSS Crop assessment missions are scheduled in all the Sahelian countries from 11 to 29 October to estimate 1999 cereal production.



SITUATION BY COUNTRY

BURKINA FASO: Harvest prospects are favourable following generally above normal rains since July. In early September, precipitation remained widespread and above normal. Rains decreased during the second dekad but remained widespread. They continued regularly during the third dekad. Cumulative rainfall is normal to above normal countrywide. Soil moisture reserves are generally adequate for satisfactory crop maturation. Millet and sorghum are generally heading/flowering. Early planted crops have matured or are at early harvest stage. Overall harvest prospects are good.

Pastures are abundant and of good quality. Attacks of blister beetles and other insects are reported on millet, maize or rice in several areas.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 18 to 22 October to estimate 1999 cereal production.

CAPE VERDE: Significant and widespread rains since August permitted satisfactory crop development. Growing conditions remained favourable in September with the first two dekads registering significant and widespread rains in the archipelago. Soil moisture reserves are adequate to meet crop needs in most areas. Maize and beans are developing satisfactorily particularly in Fogo and Brava islands where good harvests are expected.

Pastures remain insufficient in coastal areas. Despite the treatments against larvae in August, persistent attacks of grasshoppers and other pests (armyworm in particular) are reported in Fogo and Santiago islands.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 25 to 29 October to estimate 1999 cereal production

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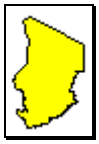

CHAD: Harvest prospects are favourable reflecting above normal rains in August and September. Following abundant rains in August, rainfall decreased steadily in September but remained widespread and above normal in most producing zones. During the first dekad, the south and south-centre received significant rains while the Sahelian zone received less precipitation particularly in Mayo Kebbi and Chari-Baguirmi. In late September, rainfall decreased countrywide but soil moisture reserves are adequate except in Doum Doum area. Overall, conditions are satisfactory for late-planted crops to reach maturity. Good harvests are anticipated.

Pastures are abundant and the pest situation is calm.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 18 to 22 October to estimate 1999 cereal production

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THE GAMBIA: Harvest prospects are good reflecting satisfactory growing conditions in September. After unusually heavy rains in August, rainfall decreased somewhat but remained regular and well distributed during the first two dekads of September with the second dekad registering abundant rains in the centre and the east, often exceeding 100 mm. Rains decreased significantly during the third dekad of September. Cumulative rainfall is above normal and soil moisture reserves are adequate for satisfactory crop development. However, excessive water is recorded locally in Basang, Basse, Keur, Kwinello, Sapu and Sibanor. Millet and maize planted in June are maturing and crop prospects are good.

Pastures are adequate. No significant pest infestation has been reported so far.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 18 to 22 October to estimate 1999 cereal production.

GUINEA-BISSAU: Abundant and well-distributed rains in September favoured crop development. Following abundant and well distributed rains in August, precipitation decreased during the first dekad of September but remained above normal in the western and eastern regions. Rains were particularly abundant across the country during the second dekad. Although decreasing from levels received in the previous dekad, substantial rains were registered during the last dekad in the southern region. Cumulative rainfall is above normal and soil moisture reserves are sufficient for satisfactory crop development. Rice transplanting in swamps is almost completed.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 11 to 15 October to estimate the 1999 cereal production.

MALI: Crop prospects remain generally favourable despite decreased rains in September. Abundant and well-distributed rains in August maintained adequate soil moisture in most productive zones. During September, rains decreased significantly and were below normal in the south-west and the centre. Early millet and sorghum are in the heading or early stages of maturity in the Sahelian zone. However, maturing of late-planted cereals in the Sudanian zone might be hampered if rains stop too early.

Pastures of good quality are available across the country. Surveys reported isolated Desert Locusts in a few areas in the Timetrine and the Adrar des Iforas. During September, mature adults and swarms were reported near Aguelhok, Tessalit and in the Tilemsi Valley. Locust numbers are expected to continue to increase in the Timetrine, Adrar des Iforas and the Tilemsi Valley and could extend to parts of Tamesna. Once vegetation starts to dry out, some concentration and grouping may occur.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 25 to 29 October to estimate 1999 cereal production.

MAURITANIA: Prospects for rainfed and recession crops are favourable reflecting abundant precipitation which, however, caused substantial flooding of irrigated rice fields. Following abundant rains in mid and late August, precipitation decreased significantly during the first dekad of September in all productive zones. The rains resumed during the second dekad and were widespread and above normal in the south. They remained quite abundant in late September. Cumulative rainfall is generally above normal. Millet and sorghum are in the heading/maturing stages. Early planted crops are now being harvested. The high level reached by the Senegal river caused substantial flooding in Brakna, Gorgol and Trarza. Almost 2 000 hectares are flooded in Gorgol (of which 1 300 hectares are under rice) and 1 000 hectares in Trarza. In Brakna, the impact of flooding is not fully evaluated as some areas are completely isolated by water.

Pastures continue to develop. Low numbers of Desert Locusts were reported in September in Brakna west of Moudjeria, in Tagant near Tidjikja, in the Akoukar region near Aïoun El Atrous and north of Nema. Limited breeding started in early September and is expected to continue in Brakna and Aouker Aïoun, and will almost certainly extend to Trarza, northern Assaba and the two Hodhs. Once vegetation starts to dry out, locusts are likely to concentrate and form small groups. Some may also start to appear further north in Inchiri and Adrar.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 18 to 22 October to estimate 1999 cereal production.

NIGER: **Widespread and above normal rains benefited crop development.** Rains decreased in early September in the north of Tillabery, Tahoua, Zinder and Diffa departments but remained above normal in the producing zone. Satisfactory conditions prevailed in the southern part. Cumulative rainfall is generally above normal but soil moisture deficits persist locally in Zinder department and in Dosso and Tillabery areas. Elsewhere, rains decreased in late September but crop water needs are generally covered. Maturing of crops in Fandou Mayaki, Lossa, Simiri, Bosso, Tebaram, Tameské and Banibangou might be affected by reduced moisture reserves. Harvesting of early millet is underway in the southern regions.

Good pastures are widespread. Infestations of grasshopper and other insects are reported in Diffa, Tahoua, Maradi and Zinder departments. Blister beetles caused some crop damage in Tillabery department. Low numbers of Desert Locust adults are likely to be present and breeding on a small scale in central Tamesna and on the western side of the Aïr, but as vegetation starts to dry out, locust numbers will decline.

A joint FAO/CILSS Crop Assessment Mission is scheduled from 25 to 29 October to estimate the 1999 cereal production

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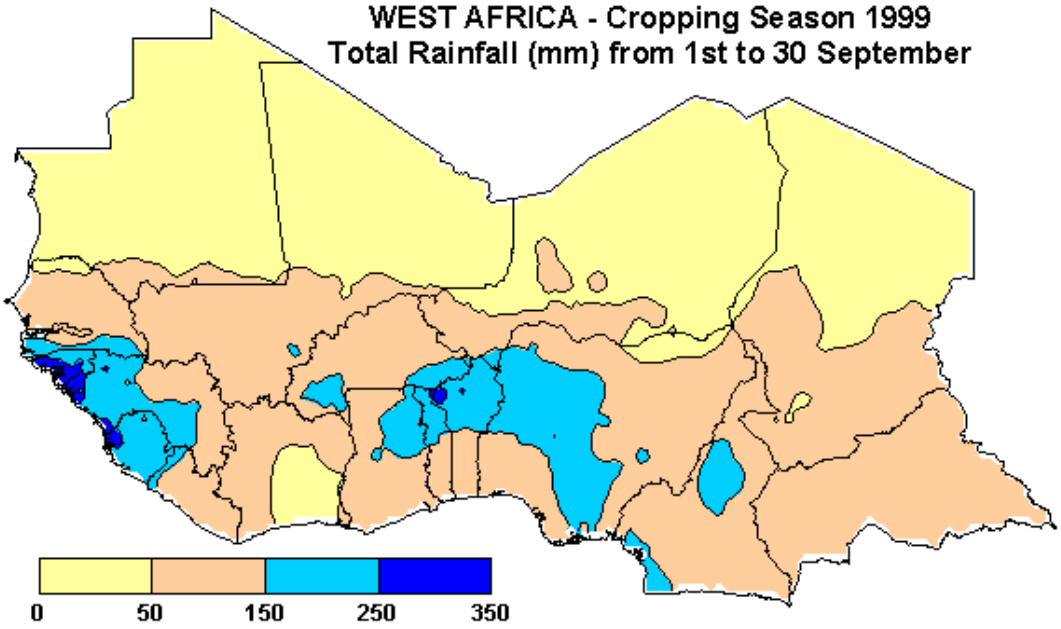
SENEGAL: Overall crop prospects are favourable reflecting widespread and generally above normal rainfall in August and September. Following abundant precipitation in mid and late August, rains decreased somewhat in early September in the centre and the north but remained widespread and generally above normal elsewhere. The second dekad registered substantial rains, increasing from west to south (more than 100 mm in Ziguinchor, Kolda and Tambacounda). Cumulative rainfall is above normal. Rains decreased in late September but soil moistures reserves are adequate to maintain satisfactory crop growth. The Senegal River overflowed its banks, causing flooding in Saint-Louis region. Early millet and sorghum are maturing.

Pastures are abundant countrywide benefiting from regular rains since July. Infestations of grasshoppers and other insects are reported in several areas.

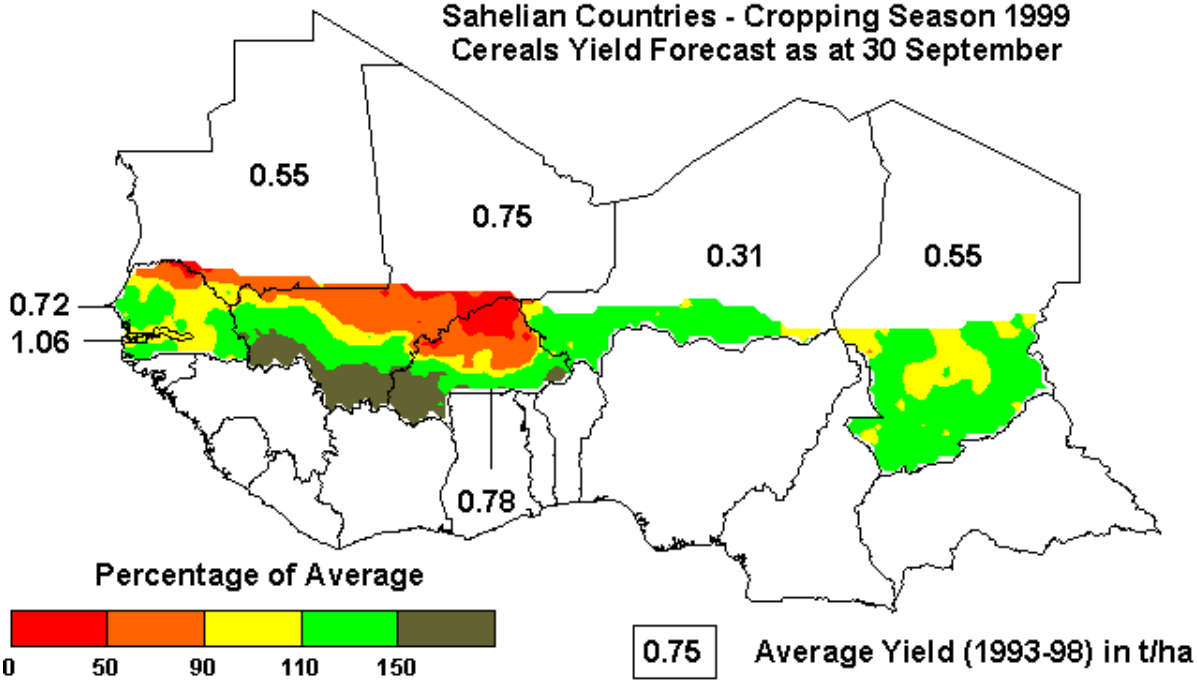
A joint FAO/CILSS Crop Assessment Mission is scheduled from 25 to 29 October to estimate 1999 cereal production

TOTAL RAINFALL AND PLANTING OPPORTUNITY MAPS

The first map indicates the total rainfall amount from 1st to 30th September. Data is extracted from FAO field reports and the Rainfall Estimate (RFE) satellite imagery as produced by NOAA/USGS/FEWS/USAID project. The RFE images are obtained by interpolating various parameters recorded on the ground and obtained through remote sensing measurements such as: rainfall, relative humidity, wind speed, elevation, cold cloud temperatures.



The map below shows the forecasted yield of cereals (maize, millet, and sorghum) for the Sahelian countries for the 1999-cropping season, as percent of the average yield of last years (1993-98). The map is obtained by applying to each country a yield function which relates, in a statistical way for the period 1982-98, the output parameters from the FAO crop specific water balance model to the crop yield. For 1999, the water balance model is using average rainfall from 30th September to the end of the crop cycle.



Data source: NOAA, FAO - Prepared by: FAO, SDRN, Agrometeorology Group

*This is the **fifth GIEWS report of the 1999 season on weather and crop conditions in the Sahelian countries of western Africa**. Geographical coverage of these reports includes the nine CILSS (Permanent Inter-State Committee for Drought Control in the Sahel) member states: Burkina Faso, Cape Verde, Chad, Gambia, Guinea-Bissau, Mali, Mauritania, Niger and Senegal. Reports will be issued each month from June to November. The final report for 1999 with the first production estimates will be issued in late-November*

These reports are prepared with data from, and in close collaboration with, out-posted FAO Representatives, the Agro-Meteorology Group and the Environmental Monitoring Group (SDRN), the Emergency Centre for Locust Operations (ECLO), the Special Relief Operations Service (TCOR), the World Food Programme (WFP), as well as various Non-Governmental Organisations (NGO's). In this report, FAO/ARTEMIS rainfall estimates, field data on rainfall, FAO agro-meteorological crop monitoring field reports and information provided by FAO Representatives up to 30 September have been utilised. The satellite images of the first dekad of October has also been utilised for final updating.

*In these reports, reference will be made to four different **eco-climatic zones** based on the average annual precipitation and agricultural features, i.e. Sahelian zone, Sudano-Sahelian zone, Sudanian zone and Guinean zone. They are described below:*

***Sahelian zone**: Where average annual precipitation ranges between 250 and 500 mm. This zone is at the limit of perennial vegetation. In parts where precipitation is less than 350 mm, only pastures and occasional short-cycle drought-resistant cereal crops are grown; all cropping in this zone is subject to high risk.*

***Sudano-Sahelian zone**: Where average annual precipitation ranges from 500 to 900 mm. In those parts of this zone where precipitation is less than 700 mm, mostly crops with a short growing cycle of 90 days are generally cultivated predominantly sorghum and millet.*

***Sudanian zone**: Where average annual precipitation ranges from 900 to 1 100 mm. In this zone, most cereal crops have a growing cycle of 120 days or more. Most cereals, notably maize, root and cash crops are grown in this zone.*

***Guinean zone**: Where average annual precipitation exceeds 1 100 mm. Guinea-Bissau and a small area of southern Burkina Faso belong to this zone, more suited to root crop cultivation.*

*Reference will also be made to the **Intertropical Convergence Zone (ITCZ)**, also known by its trace on the earth's surface, called the **Intertropical Front**. The ITCZ is a quasi-permanent zone between two air masses separating the northern and southern hemisphere trade winds. The ITCZ moves north and south of the equator and usually reaches its most northerly position in July. Its position defines the northern limits of possible precipitation in the Sahel; rain-bearing clouds are generally situated 150-200 km south of the Intertropical Front.*

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