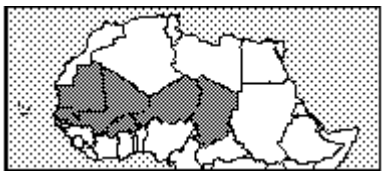


SAHEL WEATHER AND CROP SITUATION REPORT

Report N°4 - 7 September 2001

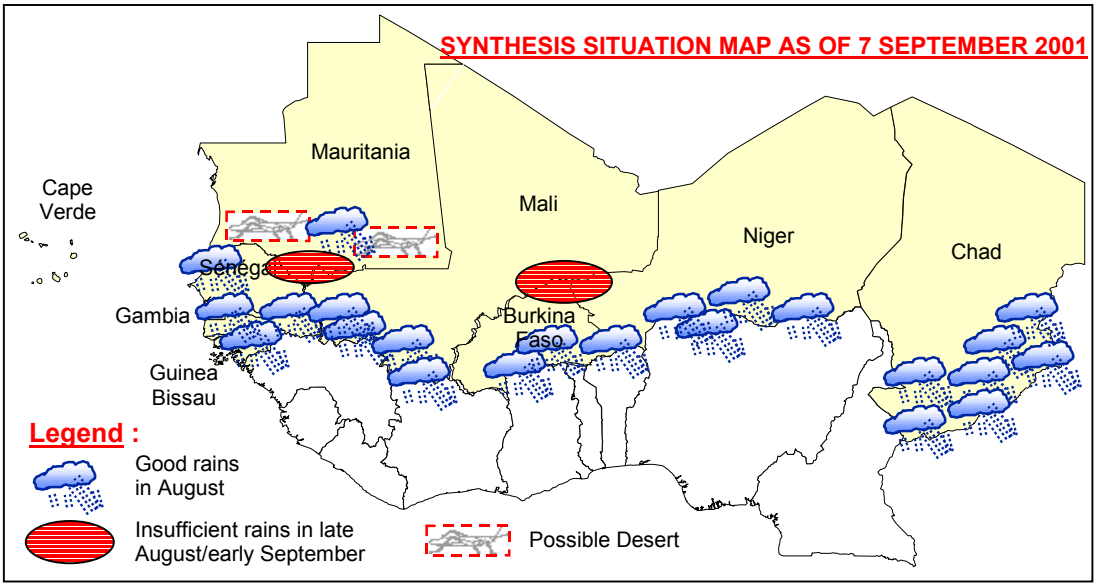
GROWING CONDITIONS REMAINED FAVOURABLE IN AUGUST IN THE EAST AND CENTRE OF THE SAHEL AND IMPROVED IN THE WEST

SUMMARY

Following regular and widespread rains in July over the main producing areas, precipitation was generally well distributed and above normal in August in the east and the centre of the Sahel. Rains became abundant in late August in the centre and south of **Burkina Faso**, the south and the centre of **Chad**, the southwest and centre of **Mali** and the centre of **Niger**. By contrast, in the western countries, **The Gambia**, **Mauritania** and **Senegal**, rainfall was irregular and below normal up to mid-August. The second dekad of August was particularly dry and cumulative rainfall was below last year's level and below normal in these countries. However, rains improved significantly in late August and early September, notably in **Guinea Bissau**, The Gambia, the south and west of Senegal and Mauritania. The satellite image for the first week of September indicates that substantial rains were received over most producing areas of the Sahel. After significant and widespread rains in early August in all agricultural islands of **Cape Verde**, precipitation decreased from the second dekad of August but remained widespread.

Harvest prospects are favourable in Burkina Faso, Chad, Guinea Bissau, Mali and Niger reflecting generally good growing conditions since July. In The Gambia, Mauritania and Senegal, crop conditions improved following increasing rains in late August/early September but more rains are needed to allow late plantings to cover their growing cycle.

Pastures are developing in all pastoral zones. Infestations of grasshoppers are reported in several zones of Chad, Guinea Bissau, Niger and Senegal. Control measures are being undertaken. The Desert Locust situation remains calm.



SITUATION BY COUNTRY

BURKINA FASO: Crop prospects are favourable reflecting adequate growing conditions in August. Following reduced rains in late July and early August, precipitation improved during the second dekad of August, particularly in the centre and the north. Rains remained widespread and above average during the last dekad. The centre and the south received significant rains in late August and early September. Soil moisture reserves remained adequate for cereal crops to develop satisfactorily. Maize crops are generally cobbing but localized harvesting of early sowings has started. Millet and sorghum are generally in the heading and early maturation stages. Early planted varieties are being harvested and crop prospects are favourable.

Pastures are adequate countrywide. The incidence of pests infestations is limited.

CAPE VERDE: Substantial rains in early August benefited crop development in the humid zones. After regular and widespread rains since mid-July, precipitation increased significantly in all agricultural islands during the first dekad of August. It decreased from mid-August but remained widespread. The maize crop is developing satisfactorily in the humid zones of Brava, Fogo, Santiago and São Nicolau islands. Dry spells affected development of the late-planted maize in semi-arid zones. No significant pest activity is reported.

CHAD: Good cereal harvests are expected in all agricultural zones. After substantial rainfall in late July, rains decreased somewhat in early August but remained widespread and above normal. They increased significantly during the second dekad of August and became abundant during the last dekad. Flooding in lowland sorghum fields is reported in the sub-prefectures of Mangalmé, Doum-Doum and the two Logones. Cumulative rainfall as of late August was well above last year's level and average. Satellite images for the first week of September indicate that precipitation remained significant and widespread notably in the northeast and the south of the producing zones. Soil moisture reserves are plentiful and crops are developing satisfactorily. Millet and sorghum are heading/maturing in the sudanian zone while they are tillering/elongating in the sahelian zone. Crop prospects are favourable reflecting widespread and regular rains in all agricultural zones.

Pastures are regenerating well following good rains since June. Infestations of grasshoppers are reported in several parts in the sahelian zone.

THE GAMBIA: Improved rains were registered in late August. Following dry conditions in late July, rains improved significantly during the first dekad of August in the west. In mid-August rains decreased over the country. They increased and became widespread and above normal during the last dekad of August notably in the centre and the east. Precipitation remained adequate in early September. These good rains benefited crop development. Millet and sorghum are emerging/tillering while transplanted rice is establishing. Grasshoppers have been reported in the centre.

GUINEA-BISSAU: Significant and well distributed rains allowed satisfactory crop development. During the first two dekads of August, precipitation became regular and well distributed across the country. Rains were particularly abundant during the last dekad of August and in early September. Transplantation of swamp rice is about to be completed. Early transplanted rice is tillering while millet, sorghum and upland rice are elongating/heading. Harvesting of the early maize has started in Bafata and Gabu regions. Crop prospects are favourable particularly in the eastern regions.

Pastures are abundant countrywide. Infestations of grasshoppers are reported in Bafata and Gabu regions, but no significant damage is reported..

MALI: Crop prospects are favourable reflecting regular and widespread rains since July. Precipitation remained generally widespread and abundant in July and August. Rains decreased somewhat in early August but improved during the second and third dekads. The southeast registered abundant rains in late August. Cumulative rainfall is above last year's level and above normal. Satellite images for the first week of September indicate that the northwest of the agricultural zones received above normal rains. Crops are reaching the reproduction phase in the south; they are elongating in the north. Irrigated rice is tillering.

Pastures are generally adequate**.** No Desert Locusts activity is reported.

MAURITANIA: Irregular rains in August hampered the development of recently planted coarse grains. Following reduced rains in late July, precipitation improved significantly in the south in early August, but decreased during the second dekad. The northern parts of the producing zones received above normal rains in late August. Rains became unusually abundant in some localities of Gorgol and Brakna causing damage to young crops. By contrast, most producing zones in the south received limited rains during the second and the third dekads of August. Cumulative rainfall as of late August was below last year's level and below average. Irregular rains in August affected development of late planted crops. Early millet and sorghum are elongating. Irrigated rice is elongating/heading.

Apart from the departments of Maghama (southeast of Gorgol) and Sélibaby (Guidimakha), the regeneration of pastures in most pastoral zones has been hindered by the dry spell in mid-August. Treatments against grain eating birds have been undertaken in Trarza and Gorgol. Isolated and limited numbers of Desert Locusts are reported in the south. Small-scale breeding is underway but no significant developments are likely.

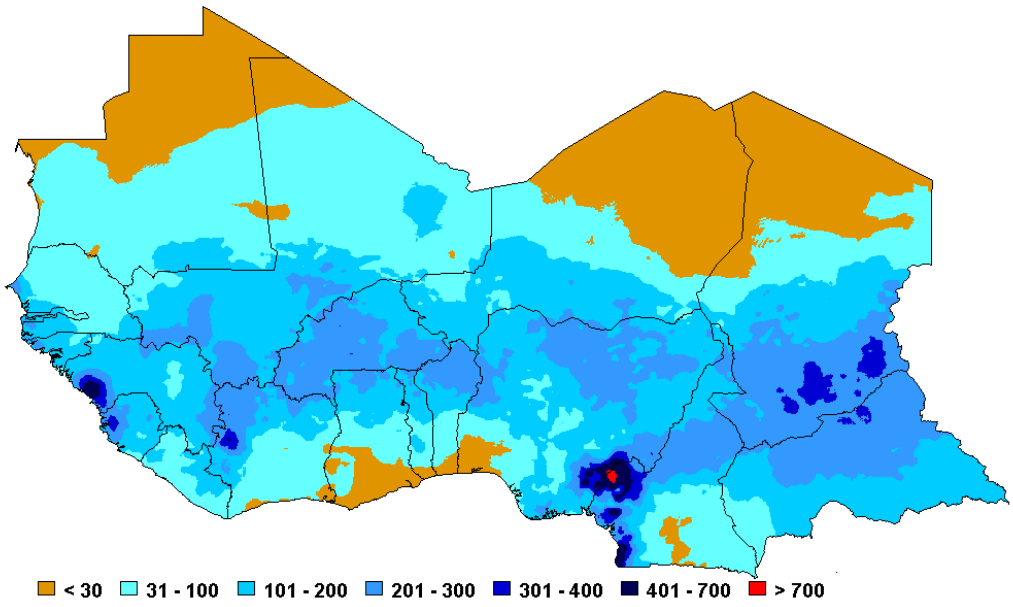
NIGER: Harvest prospects are favourable reflecting regular and well-distributed rains in July and August. Following above normal rains in late July, rains decreased somewhat in early August. They improved significantly during the second dekad of August notably in the centre where they were abundant. Precipitation remained widespread and above average in late August and early September. Satellite images for the first week of August indicate that significant rains were received in the south and the centre. Cumulative rainfall as of late August was generally above last year's level and above normal. Crops are developing satisfactorily in all agricultural zones. Early harvests of millet have started in Zinder region.

Pastures are abundant reflecting good rains in the pastoral zones. Grasshopper and other insect infestations are reported in several departments; treatments have been undertaken locally. No Desert Locust activity is reported.

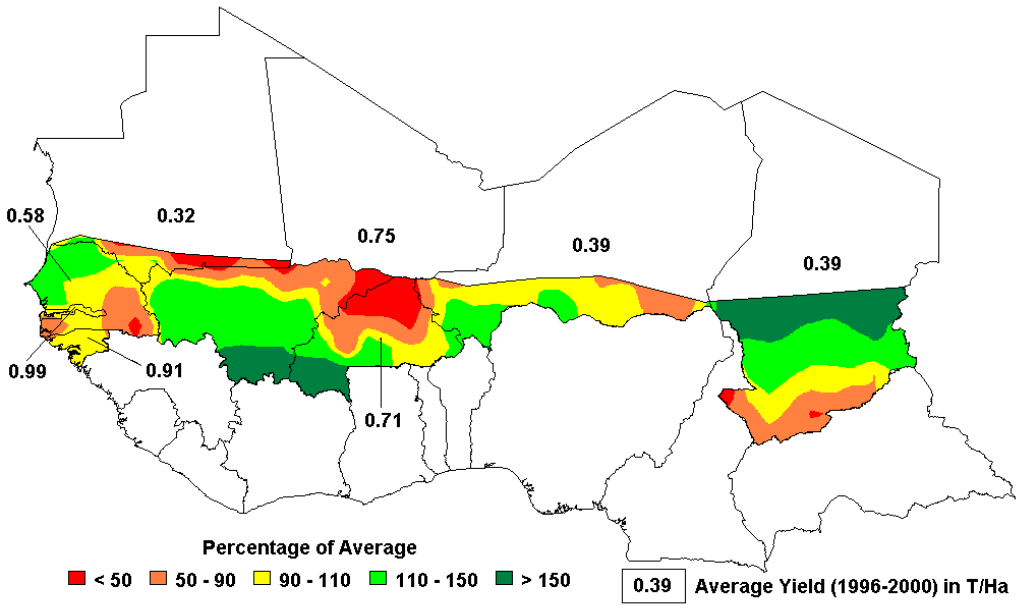
SENEGAL: Reduced rains in mid-August affected crop development. After limited rains in the north and the centre in late July, precipitation improved significantly in the west during the first dekad of August. From 10 to 22 August, dry conditions prevailed in major parts of the country causing water stress for the young millet crop, mostly in the central and northern parts. Rains resumed during the last week of August and remained regular and widespread in early September allowing crops to recover, notably in the centre and the south. Cumulative rainfall as of the end of August was generally below last year's level and below normal. Satellite images for the first week of September indicate that rains improved, notably in the southeast. In the south and the east, millet and sorghum are heading while they are tillering/elongating in the north. Apart from Louga area, pastures are generally good. Infestations of insects have been reported in many zones in the southeast, the centre and the northwest. Localised treatments have been undertaken.

TOTAL RAINFALL AND CROP YIELD FORECAST MAPS

The first map indicates the total rainfall amount for the whole month of August. Data are extracted from the RainFall Estimate (RFE) Satellite Imagery as produced by NOAA/USGS/FEWS/USAID project. The RFE images are obtained by interpolating various parameters recorded at ground and obtained through remote sensing measurements as: rainfall, relative humidity, wind speed, elevation, cold cloud temperatures.



The map below shows the forecasted yield of millet for the Sahelian countries for the 2001 cropping season, as percent of the average yield of the last five years (1996-2000). The map is obtained by applying to each country a yield function which relates, in a statistical way for the period 1982 to 2000, the output parameters from the FAO crop specific water balance model to the crop yield. For 2001, the water balance model is using average rainfall from 1st September to the end of the crop cycle.



Source: NOAA – Prepared by FAO, SDRN, Agrometeorology Group

*This is the **fourth GIEWS report of the 2001 season on weather and crop conditions in the Sahelian countries of western Africa**. Geographical coverage of these reports include 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 2001 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 Organizations (NGO's). In this report, satellite imagery provided by FAO/ARTEMIS, field data on rainfall, FAO agro-meteorological crop monitoring field reports and information provided by FAO Representatives up to **31 August** have been utilized. The satellite images of the first week of September has also been utilized 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 shown in the map on page 4 and 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.*

Please note that this report is available on the **Internet World Wide Web** at the following address: HTTP://WWW.FAO.ORG/GIEWS/ then click on "English" and "Sahel Weather and Crop Situation Reports".

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