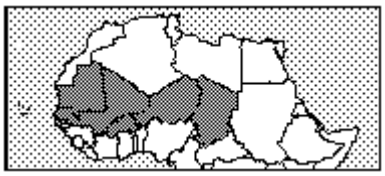


SAHEL WEATHER AND CROP SITUATION REPORT

Report No.4, 11 September 2000

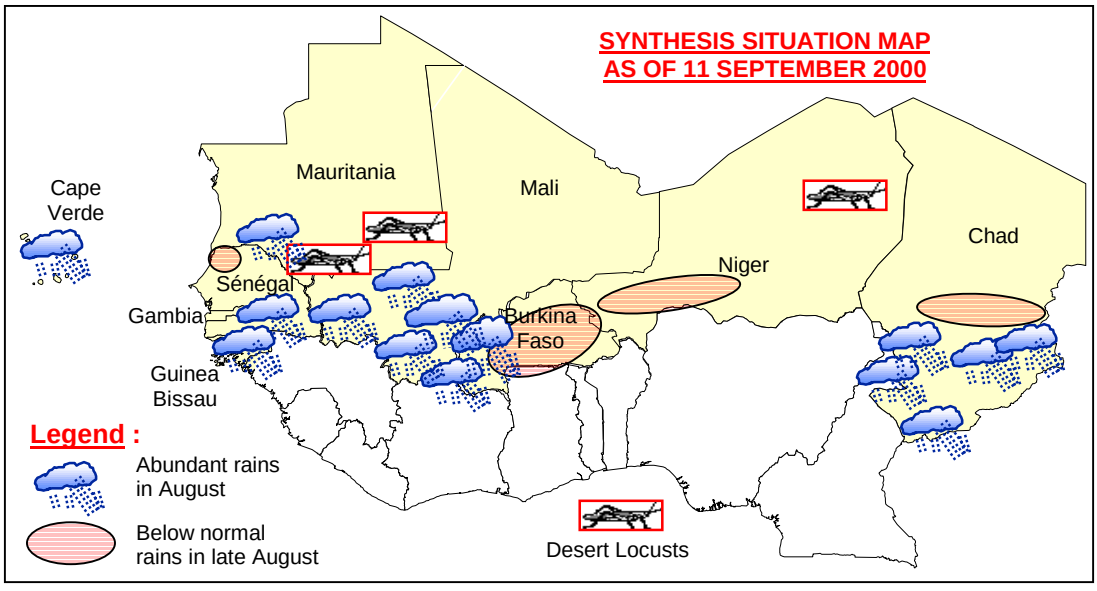
CROP DEVELOPMENT IS GENERALLY SATISFACTORY IN THE WEST OF THE SAHEL BUT UNFAVOURABLE IN CENTRAL AND EASTERN BURKINA FASO, NIGER AND NORTHERN CHAD

SUMMARY

Following generally widespread and abundant precipitation over the main agricultural zones of the Sahel in July, rains remained abundant over the western half of the Sahel in early August, decreased in mid-August but resumed in late August. Rains were particularly abundant during the first dekad of August in **Senegal** (even causing flooding in several areas), **The Gambia** and **Guinea Bissau**, during the second dekad in **Mauritania** and during the third dekad in **Mali**. In the centre of the Sahel, precipitation remained below normal in **Burkina Faso**, except in the south and west. In **Niger**, below normal rainfall was registered in late August while in **Chad**, growing conditions were favourable in the Sudanian zone but unfavourable in the Sahelian zone. Satellite images for the first dekad of September shows that cloud coverage remained over most agricultural zones of the Sahel but that intensity of the rains decreased significantly except in south-western Senegal, Gambia and Chad. Rainfall is notably well below normal in northern and south-eastern Senegal, western Mali and most parts of Niger.

Crops are generally developing satisfactorily in the western half of the Sahel region. Reduced rains affected crop development in central and eastern Burkina Faso, most parts of Niger and the Sahelian zone of Chad. Improved rains are needed in these areas to avoid water stress or crop failure.

Following good rains in July, pastures have regenerated satisfactorily throughout the pastoral zones of the Sahel. Grasshopper attacks are reported in Chad, Mali, Mauritania, Niger and Senegal. Small scale Desert Locust breeding is in progress in southern and central Mauritania. Some locusts are probably present and breeding in the Adrar des Iforas of Mali and in Aïr of Niger

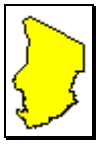


SITUATION BY COUNTRY

BURKINA FASO: Below normal rains in the centre and east have affected crop development. In August, precipitation was generally above normal and well distributed in the south and the west, being particularly abundant during the first dekad of the month. By contrast, rainfall was below normal in August over the eastern half of the country, except in the extreme north in late August. Cumulative rainfall as of late August is below average except in the west and the south-west. Millet and sorghum are in the elongation stage. Early millet is being harvested in the south and south-east. More rains are needed to avoid water stress or crop failure in the centre and the east.

Pastures remain adequate countrywide and the level of water reserves is satisfactory. No significant pest activity is reported.

CAPE VERDE: The onset of regular rains in late July permitted widespread maize plantings. Maize plantings progressed in the agricultural islands following the arrival of the rains in late July. Rains continued in early August and became more abundant in late August, notably on Fogo, Santo Antão and Santiago islands. However, precipitation remained generally below average. Crops are emerging satisfactorily and pastures are regenerating well.



CHAD: Crop development is satisfactory in the Sudanian zone but unfavourable in the Sahelian zone. Following well distributed and generally above average rains in July, notably during the third dekad, precipitation remained adequate during August in the Sudanian and the Sudano-Sahelian zones but below average in the Sahelian zone. Precipitation remained abundant in early September except in the east of the Sahelian zone. Coarse grain crops are growing satisfactorily in the Sudanian zone. By contrast, in the Sahelian zone, where millet and sorghum are tillering/elongating, more rains are needed to meet water needs at this critical phase of their development.

Pastures are abundant both in the Sahelian and Sudanian zones. Grasshopper attacks have been reported in Chari-Baguirmi, Lac and Ouaddaï regions. Grain eating birds caused some damage to millet and maize in Guéra prefecture (in Mangalmé area). No Desert Locusts activity is reported while some Migratory Locusts have been seen in Ati area along the Batha river.

THE GAMBIA: Crop development is generally satisfactory. Following widespread and above average rains from late June to early August, precipitation decreased significantly during the second dekad of August. However, rains improved in late August and remained abundant in early September, preventing crop water stress. Coarse grains and upland rice crops are developing satisfactorily, while recently transplanted rice is emerging or tillering.

GUINEA-BISSAU: Rice seedlings have been transplanted following desalination of swamp rice fields. Rains were regular and well distributed in early August. They decreased significantly during the second dekad of the month but became particularly abundant countrywide during the third dekad of August and in early September. These strong rains benefited development of coarse grains in the east and north and the rice crop recently transplanted from seedbeds in the swamp rice fields.

Pastures are abundant. The pest situation remains calm. Some insect attacks have been reported in the south.

MALI: Growing conditions are generally favourable. Following generally well distributed and regular rains in June and July, precipitation remained abundant in early August. Rains decreased in mid-August, notably in the west, but they were above normal during the last dekad. Torrential rains causing 15 deaths were recorded on 25 August in Abeïbara, north of Kidal. Precipitation remained widespread but decreased in early September. Crops are generally growing satisfactorily despite some water stress reported in the centre-north. Millet and sorghum are in the elongation or heading stages and rainfed rice is tillering/elongating. Irrigated rice is emerging in the Office Mopti and Ségou irrigated areas while it is tillering/elongating in the Office du Niger zone.

Pastures are generally good. Grasshopper attacks were reported in the Sahelian zone and treatments have been undertaken. Low numbers of Desert Locusts may be present and breeding on a small scale in the Adrar des Iforas.

MAURITANIA: Crop development is satisfactory reflecting generally widespread and adequate rains. Following abundant rains in late July, precipitation remained generally widespread and above normal in August. Substantial rains were registered in late August in Assaba and Gorgol. Following these good rains, crops are developing satisfactorily. Late plantings or replantings lasted up to mid/late August.

Pastures are adequate countrywide. Grasshopper attacks have been reported in Brakna and Gorgol. A total of 878 hectares have been treated against grain eating birds, notably in Trarza. Low numbers of Desert Locusts were present during August in southern Brakna, Trarza and the two Hodhs. Small scale breeding is in progress in Brakna and will continue in the other areas. There may be a slight shift of populations towards the west when vegetation starts to dry.

NIGER: Reduced rains in late August/early September affected crop development. Following widespread and regular rains in July, precipitation remained generally well distributed in early and mid August. However, rains decreased significantly during the last dekad of August over the western half of the agricultural zones of the country and remained limited in early September. Soil water reserves were generally sufficient but improved rains are needed to prevent water stress or crop failure. Millet and sorghum are generally in the elongation or flowering phase. They are heading in the Maradi department.

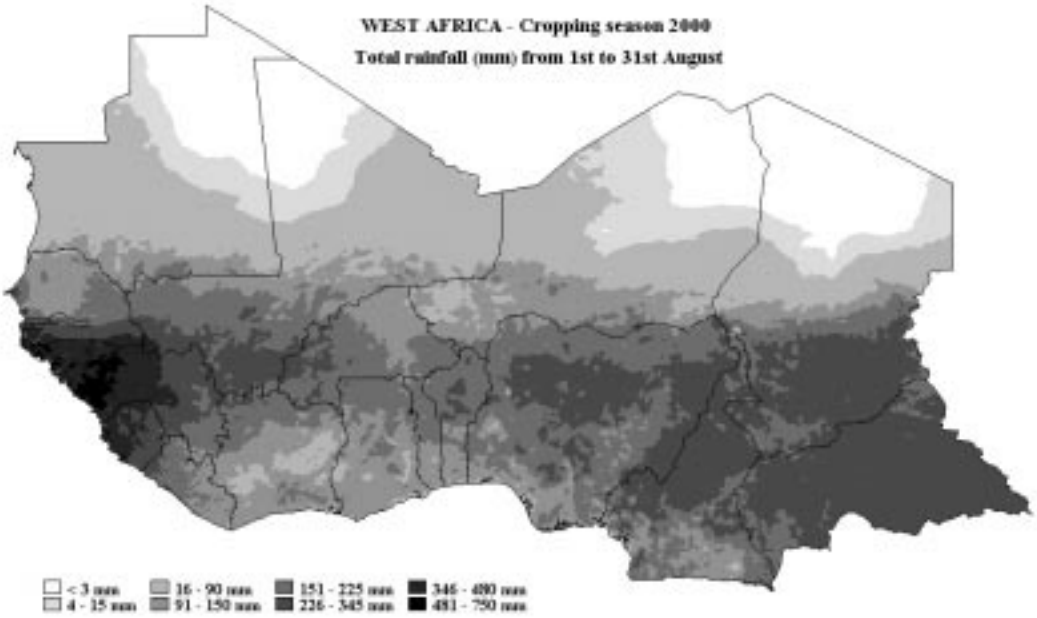
Infestations of grasshoppers are reported in various areas, notably in Diffa, Dosso, Maradi and Tahoua departments. Several thousand hectares have been treated. Treatments against grain eating birds have also been undertaken in Diffa and Tahoua departments. Scattered Desert Locusts were seen in the eastern Aïr. Small scale breeding may be in progress in the western and southern parts of the Aïr mountains and southern Tamesna where ecological conditions are favourable.

SENEGAL: Crop development is generally favourable. Following abundant rains in late July and early August which caused localized flooding in Dakar, Louga and Saint Louis areas, rains decreased significantly during the second dekad of August but resumed in late August, except in the north. Soil water reserves were generally sufficient to cover crop needs and crop development is reported to be normal in all the agro-ecological zones. However, reduced rains in the north in late August/early September and in the south-east in early September may cause water stress.

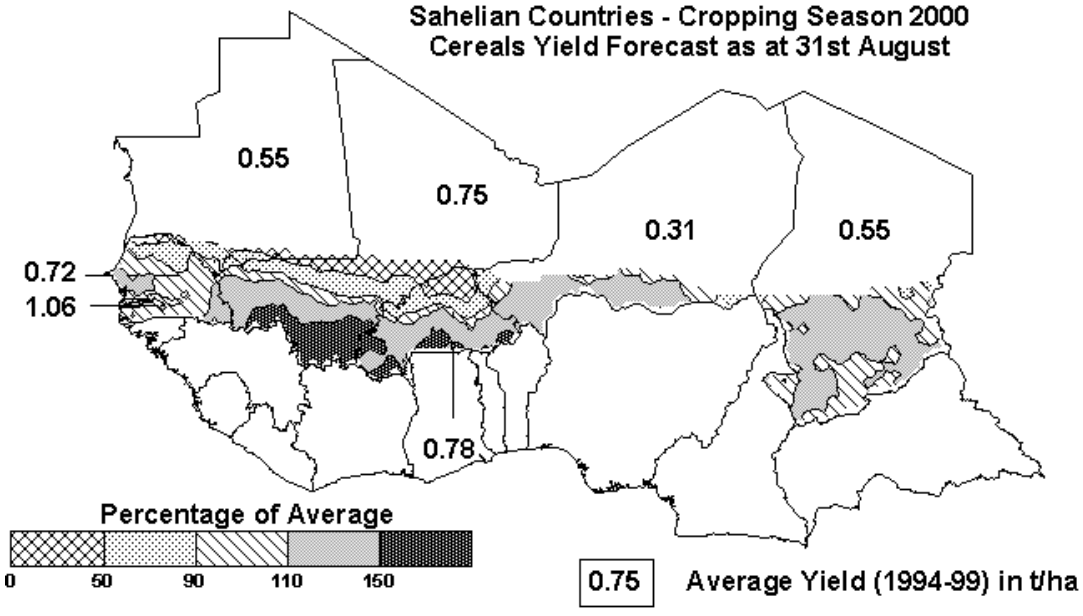
Pastures have regenerated satisfactorily following strong rains in late July/early August. Grasshopper attacks have been reported in Bambey, Gossas, M'Bour, Tivaouane and Thiès departments. Insect and rodent infestations are also reported. As of 29 August, 41 500 hectares have been treated of which 17 000 hectares against grasshoppers.

TOTAL RAINFALL AND YIELD FORECAST MAPS

The first map indicates the total rainfall amount from 1st to 31th August. Data is extracted from FAO field reports and the RainFall Estimate (RFE) Satellite Imagery as produced by the 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 forecast yield of cereals (maize, millet, sorghum) for the Sahelian countries for the 2000 cropping season, as percent of the average yield in the period 1994-99. The map is obtained by applying to each country a yield function which relates, in statistical terms for the period 1982-99, the output parameters from the FAO crop specific water balance model to the crop yield. For 2000, the water balance model uses reported precipitation or estimated rainfall from satellite imagery up to 31th August and 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 2000 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 2000 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. Satellite images of the first dekad of September have 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 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.*

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 Reports.

The report can also be received automatically by **E-mail** as soon as it is published, subscribing to the ***GIEWS/Sahel report ListServ***. To do so, please send an E-mail to the FAO-Mail-Server at the following address: mailserv@mailserv.fao.org, leaving the subject blank, with the following message:

subscribe GIEWSSahel-L

To receive the report in French, do the same with the message:

subscribe SMIARSahel-L

To be deleted from the list, send the message:

unsubscribe GIEWSSahel-L (or *unsubscribe SMIARSahel-L*)

This report is prepared under the responsibility of FAO/GIEWS with information from official and unofficial sources and is for official use only. Since conditions may change rapidly, for further information, please contact Mr. Abdur Rashid, Chief, Global Information and Early Warning Service, FAO Headquarters- Rome
Fax No.: 0039-06-5705-4495, E-Mail address: GIEWS1@FAO.ORG
Web site : HTTP://WWW.FAO.ORG/GIEWS/