SAHEL WEATHER AND CROP SITUATION REPORT

Report No. 4, 22 September 2004

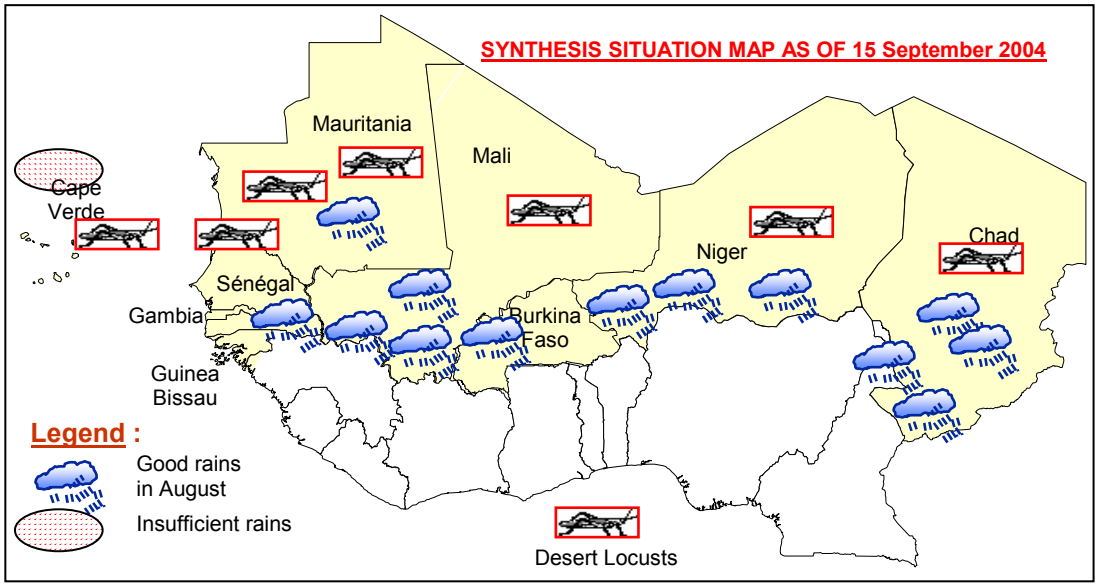
GROWING CONDITIONS WERE GENERALLY FAVOURABLE IN AUGUST BUT HARVEST PROSPECTS REMAIN UNCERTAIN AS THE DESERT LOCUST SITUATION CONTINUES TO DETERIORATE

SUMMARY

Following limited and erratic rains that delayed plantings in several countries in June, precipitation has improved significantly since July. In August and early September, rains were generally regular and widespread over most producing areas of **Burkina Faso, Chad, the Gambia, Guinea-Bissau, Mali**, **Mauritania, Niger and Senegal**, where crops are developing satisfactorily. **Cape Verde,** which registered its first significant rains in mid-July, is the only country where rains are still limited and where yield potential may be affected. As a result of these overall favourable conditions, an above-average harvest was anticipated, but the deteriorating Desert Locust situation continues to pose a serious threat to agricultural production across the Sahel.

Widespread breeding is underway in the Sahelian zone in Mauritania, Mali, Senegal, Niger and Burkina-Faso, while small-scale breeding is in progress in Chad. Numerous hopper bands formed in August and early September in Cape Verde. Some three to four million hectares are estimated to be infested across the Sahel, of which about 300 000 hectares have been treated so far. The number of swarms is expected to increase significantly in September and October in infested areas. The rate of pesticide treatment should increase somewhat in September, following improved aerial spraying capacity in infested countries, but control operations need to be intensified to prevent the situation from worsening.

The annual CILSS meeting held in early September on crop prospects in the Sahel estimated that 2004 cereal production could be close to last year's record level if current rainfall patterns continue through October and if Desert Locusts do not cause substantial damage to crops. However, the meeting estimated that up to 25 percent of the Sahel cereal production could be lost if large scale damage occurs. Although FAO anticipates a lower level of crop loss at regional level, the food security impact of Desert Locusts could be locally severe in some countries, notably in Mauritania, Mali, Senegal and Niger. In Mauritania, the hardest hit country, the rural population has become very vulnerable to production shocks, following several years of drought.



SITUATION BY COUNTRY

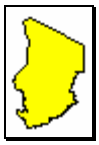
BURKINA FASO

Reflecting generally above normal rains, harvest prospects are favourable. After reduced and erratic rains at the beginning of the growing season, precipitation increased significantly from July over the entire country and remained widespread and above average in August and early September. Soil moisture reserves remained adequate for cereal crops to develop. As a result, millet and sorghum crops, which are generally in the heading and early maturation stages, are developing satisfactorily. A good harvest is anticipated at national level.

In August, some mature locust swarms reached northern Burkina Faso, where hatching and band formation occurred. Some 400 hectares have been treated so far. Although Desert Locusts may cause severe damage to crop and pasture locally in the north near the Mali border, they are not expected to significantly affect national food supply.

CAPE VERDE

Crop prospects are unfavourable, reflecting irregular rains and desert locust threat. Following first rains, which permitted widespread plantings in July, rains were irregular in August. During the first dekad, they were generally badly distributed, being very limited on the southern agricultural islands of Santiago and Fogo, while heavy rains caused flooding and substantial damage to roads and houses on S. Antao and S. Vicente islands. Precipitation was generally limited in late August. Cumulated rainfall as of end August was below average on all agricultural islands, except S. Antao and Fogo. Moreover, several islands have been invaded by Desert Locust swarms in July and August, and hatching and band formation occurred, notably on Santiago Island. Therefore, overall crop harvest prospects are unfavourable. However, even in a normal year, domestic production covers only one-fifth of the country's cereal utilization requirement and the balance has to be imported.



CHAD

Good harvests are expected in most agricultural zones. Widespread and above normal rainfall since July benefited crop development in most producing areas. Millet and sorghum are maturing in the Sudanian zone while they are developing in the Sahelian zone. Crop prospects are favourable. Small-scale breeding of Desert Locusts is in progress in the central province of Batha and in the east near Biltine, but cereal production is not expected to be significantly affected at national level, although crop loss may occur locally.

As of mid September, the estimated number of Sudanese refugees in eastern Chad was 189 168. A recent survey by the Centre for Disease Control (CDC) revealed alarming malnutrition rates and a worrisome health situation among refugees.

THE GAMBIA

A good harvest is anticipated but the country may be invaded by locust swarms in October. After limited rains in June that delayed plantings and stressed crops, notably in the Western Division, precipitation improved significantly in July and remained regular and widespread in August and early September. As the rainy season progressed, crop performance improved greatly. Groundnut crops, which are flowering/pegging countrywide, are developing satisfactorily. Early millet and sorghum are flowering/maturing, while transplanting of swamp rice is underway. Area under cereal is estimated to have increased over last year, and a bumper crop is anticipated, provided that good rains continue through October, notably in the Western Division.

Blister beetle have been reported on millet and pasture in Central River Division, Lower River Division and Upper River Division; no significant damage has to crop occurred so far. The Desert Locust situation remains calm. However, a small proportion of the swarms that form in the Sahel are likely to invade the Gambia through Senegal in October, according to FAO forecast.

GUINEA-BISSAU

Reflecting abundant and widespread rains, crop conditions are satisfactory and a good harvest is in prospect. Regular and widespread rains have been received since the beginning of the rainy season, benefiting crop development in most producing areas. Coarse grains are flowering/maturing. Swamp rice fields have been desalinated and transplanting is underway. A good harvest is anticipated. However, the country may be invaded by Desert Locusts in October, according to FAO forecast.

The country faced a particularly difficult lean season this year due to a steep rise in rice price in the country, due mainly to a decline in commercial imports caused by an increase in the world price. The low producer price of cashew, the main export of the country, has further limited access to food notably for farmers living in the structurally food deficit regions of Pirada and Pitche in the East, and Biombo and Cacheu in the North.

MALI

The risk of substantial Desert Locust damage to agriculture is increasing in the country. Although good rains fell in July and August, benefiting crops countrywide, harvest prospects remain bleak due to a deteriorating pest situation. Desert Locust swarms that were previously reported in the north are now breeding in cereal producing areas in the south and the centre, with hopper bands developing in Kayes, Koulikoro, Segou and Mopti, the main food baskets of the country, raising serious concerns over the food supply and economic outlooks. As of early September, only 10 percent of infested areas had been treated.

Mali accounts for almost 25 percent of the total Sahel cereal production. A severe locust impact will strongly affect food supply not only in the country but also in other neighbouring countries, particularly Mauritania. Large scale damage to crops may also have severe macroeconomic and poverty consequences, since cotton, which is the main foreign exchange earner of the country, is the main source of income for millions of farmers and contributes up to 45 percent to total exports. Control operations need to be intensified to prevent a severe food security crisis for the country and the region.

MAURITANIA

Crop prospects deteriorate as Desert Locusts continue to infest agricultural areas, following widespread hatching and band formation. Desert Locusts have invaded most central and southern agricultural areas and their number is likely to continue to increase as hatching and hopper band formation are occurring in all regions across the country. Control operations are underway but need to be intensified to contain the invasion. As of late August about 1 million hectares had been infested, of which only 39 000 hectares have been treated. According to the national food security authority, the country may lose up to 75 percent of its cereal production. Although FAO anticipates a lower level of crop loss, the food security impact of the Desert Locust invasion will be severe in several regions of the country. Mauritania is a food import dependent country whose domestic production covers less than 40 percent of total food requirement in a normal year. The country already faces a tight food situation due to three consecutive years of drought (which necessitated emergency food assistance to 420 000 people in 2003) and the depreciation of the Ouguiya (the national currency), which led to a significant increase in food prices. The food security and poverty impacts of the current Desert Locust outbreak could be tremendous, as the rural population has become very vulnerable to food production shocks because their coping strategies have been exhausted.

NIGER

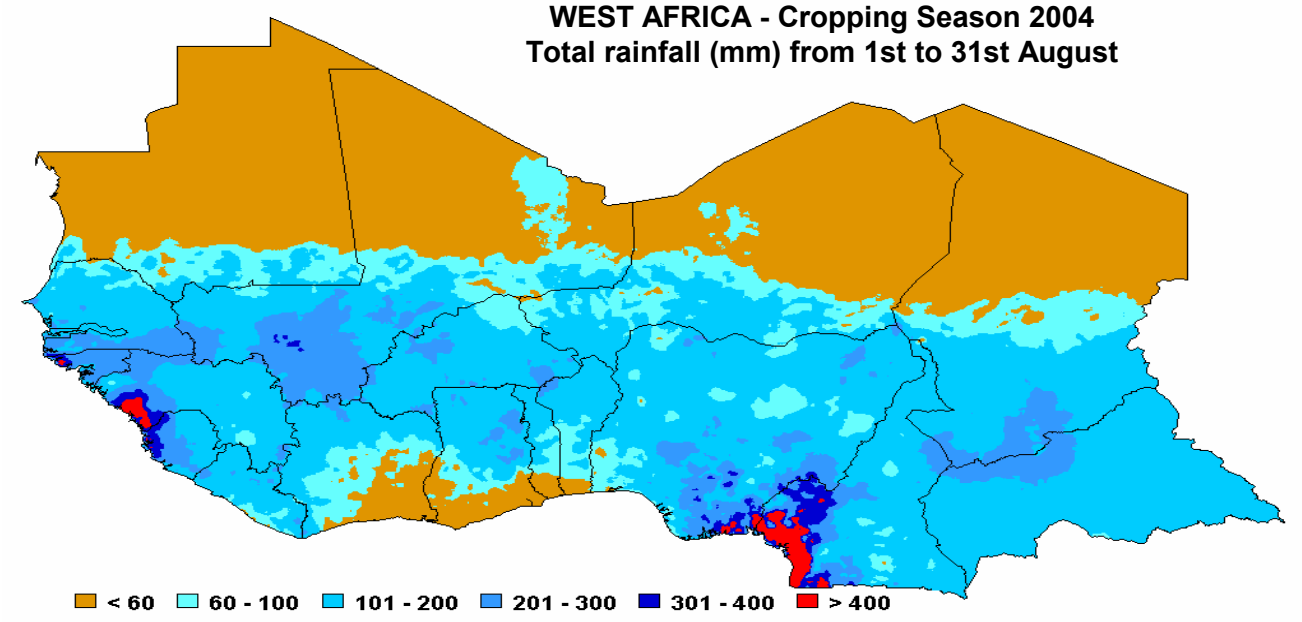
Rains have improved since late July but the Desert Locust threat remains very serious. Rains were insufficient in June and early July, delaying planting and stressing crops in several locations, notably in Maradi and Zinder regions. However, precipitation increased significantly with widespread and regular rains over most producing areas from the last dekad of July, benefiting crops. However, an estimated 800 000 hectares have been infested by Desert Locusts as of mid- September, mainly in the Sahelian zone. About 37 000 hectares have been treated so far. The rate of treatment is expected to increase somewhat in September, following improved aerial spraying capacity in the country. Serious food shortages are not anticipated at national level, due to overall good weather conditions and the current distribution and forecast dynamic of Desert Locusts. However, the impact on food security may be severe in some regions, notably in the Sahelian zone. Over 85 percent of Niger's population depend on farming for its livelihood and agriculture accounts for 40 percent of GDP; large scale damage to crops would have disastrous food security and economic consequences, notably for the poor 60 percent.

SENEGAL

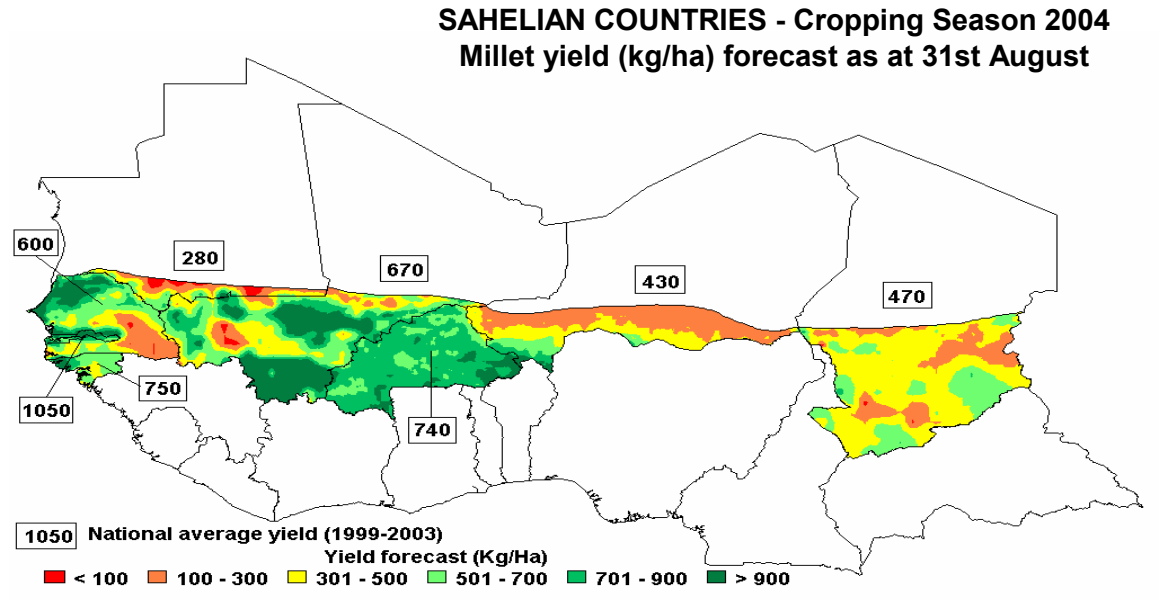
Harvest prospects are mixed. Following limited and erratic first rains that delayed plantings in several regions in the north, precipitation increased significantly and has been generally regular and widespread in August. Crops are developing satisfactorily in most agricultural regions. The 2004 cereal production could be close to last year's record level due to large cultivated areas and renewal of several government agricultural programs including subsidizing maize and groundnuts seeds and fertilizers. However, crop yields may be seriously affected in the north of the country which is severely infested by Desert Locusts. Control operations are underway and more than one third of infested areas have been treated, but a part of the swarms in the Sahel are expected to reinvade northern Senegal in October, the cereal harvest period of the country. Although FAO does not anticipate significant crop losses and a large reduction in national food supply, Desert Locusts may cause localized food shortages, notably in Matam, Saint-Louis, Diourbel and Louga regions. The north-western Departments where the onset of rains was significantly delayed are also at risk of food insecurity.

TOTAL RAINFALL AND CROP YIELD FORECAST MAPS

The first map indicates the total rainfall amount from 1st to 31st August. Data is extracted from FAO field reports, data received through GTS (Global Telecommunication System) of WMO (World Meteorological Organization), 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 millet for the Sahelian countries for the 2004 cropping season. The map is obtained by applying to each country a function which relates, in a statistical way for the period 1983 to 2003, the output parameters from the FAO crop specific water balance model to the crop yield. For 2004, the water balance model is using average rainfall from 1st September to the end of the crop cycle.



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

*This is the **fourth GIEWS report of the 2004 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 are issued each month from June to November. The final report for 2004 with the first production estimates will be issued in late-November*

*These reports are prepared with data from, and in close collaboration with, FAO Representatives, the Agro-Meteorology Group and the Environmental Monitoring Group (SDRN), the Emergency Centre for Locust Operations (ECLO), the Emergency Operations Service (TCEO), 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 **31August** have been utilized. The 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:*

***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 **Inter-Tropical Convergence Zone (ITCZ)**, also known by its trace on the earth's surface, called the **Inter-Tropical 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 Inter-Tropical Front.*

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