

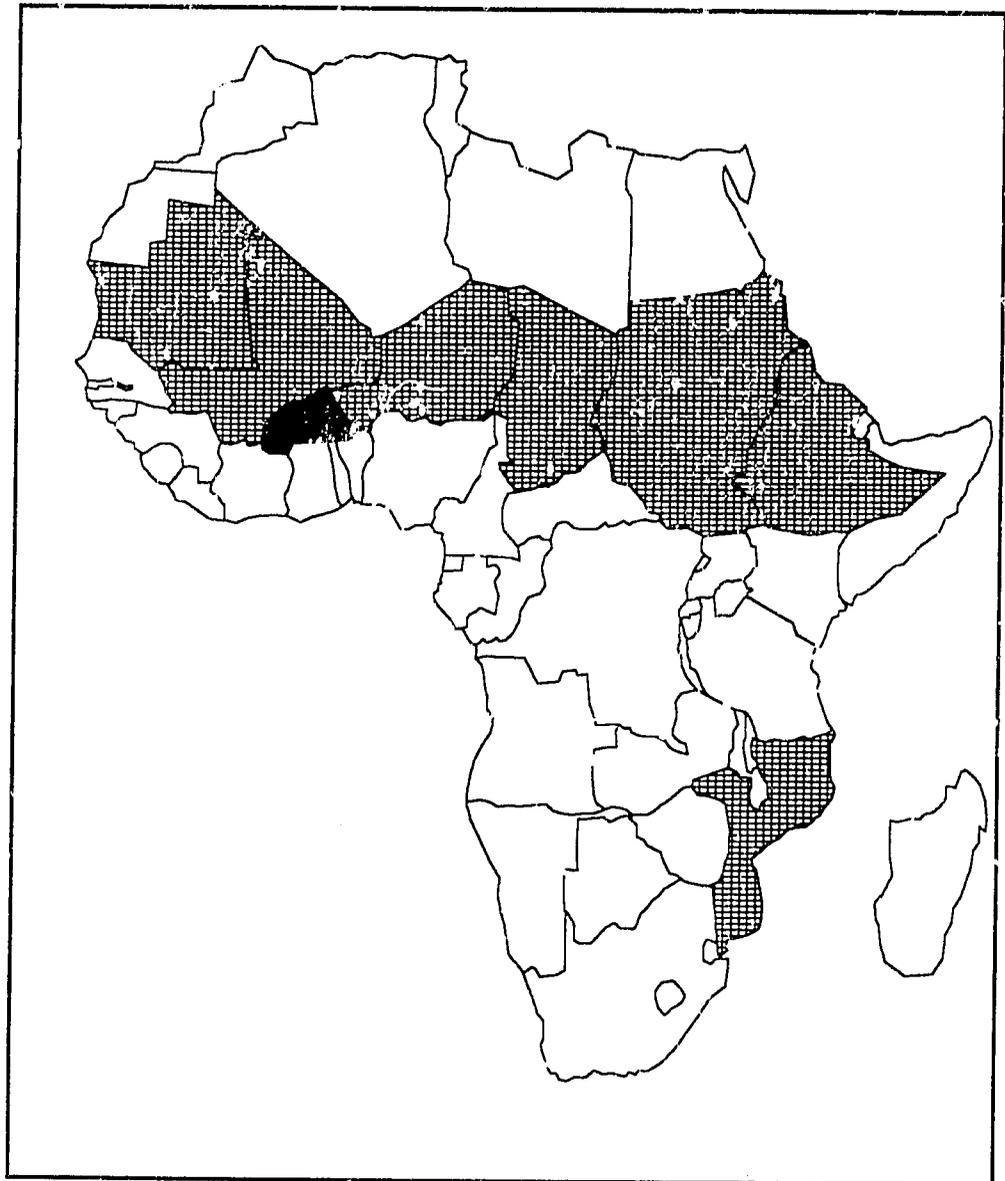
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Report Number 16

October 1987

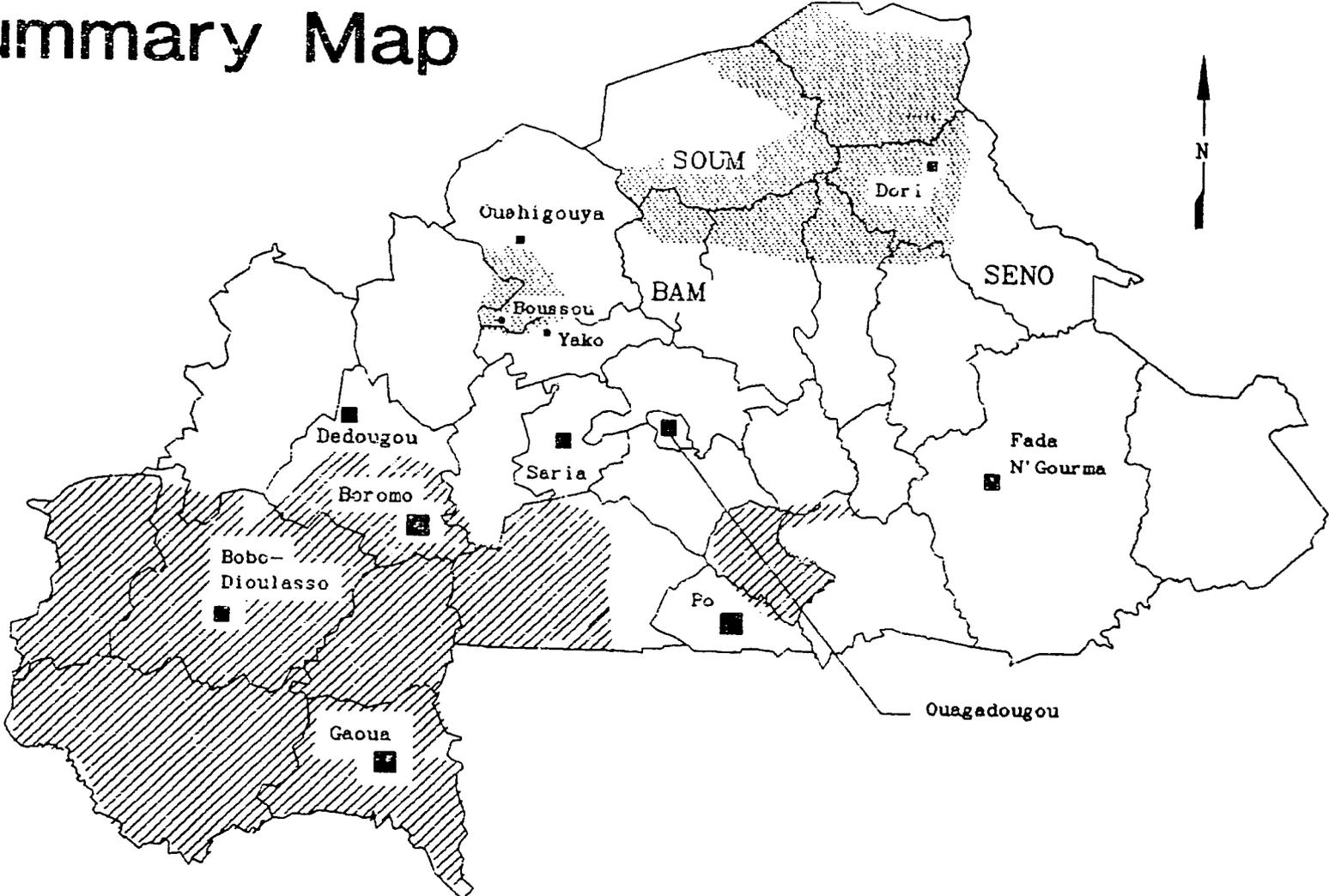
FEWS Country Report

BURKINA



Africa Bureau
U.S. Agency
for International
Development

Summary Map



Rainfall Through September 20:

- < 65% of 1951-80 average
- > 70% of 1951-80 average
- > 85% of 1951-80 average

- ▤ Harvest prospects poor
- ▨ Harvest prospects very good

BURKINA

Harvest Prospects Vary Regionally

Prepared for the
Africa Bureau of the
U.S. Agency for
International Development

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October 1987

Contents

Page

1	Summary
1	Vegetation
2	Rainfall
5	Agriculture
5	Cereal Requirements

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List of Figures

Page

2	Table	1:	Cumulative Rainfall
3	Figure	1:	Recent Vegetative Trends
4	Figure	2:	Seasonal Vegetative Trends
7	Appendix	1:	Reference Map

SUMMARY

Seasonal vegetative trends, derived from satellite imagery through September 21-30, suggest that growing conditions were excellent in the southwestern Provinces, eastern Sissili, and Nahouri Province (see Figure 2). Vegetative vigor in the central provinces of Burkina has generally been good, but field reports indicate that crops sown in high areas, where water retention is poor, have suffered stress during dry periods. In the north, imagery, rainfall, and Government of Burkina (GOB) Ministry of Agriculture (MINAG) reports, all confirm that crop prospects are poor -- because of late rains and substantial dry periods in July and again in September (when many crops were at the critical flowering stage). Nationally, it is likely that average yields will be lower than in 1986 (701 kg/ha), but possible that they will approach that level. According to the GOB MINAG preliminary estimates, approximately 2.52 million hectares were seeded this year. If yields are the same as last year and area seeded is the same as area harvested, net domestic production will total 1.50 million metric tons (MT). This will be 0.12 million MT below the estimated national cereal requirement of 1.62 million MT.

Indicators

- Only 19,402¹ hectares, of a planned total of 150,000, were treated during the grasshopper campaign because densities have been low.
- Reported cumulative rainfall from the Dori station (Seno Province) is the lowest in the historic (1951-86) record, fully 98 mm below the previous low (see Table 1).² This suggests that crops in this area were severely compromised, and that pastures may quickly lose their capacity to maintain herds once the rains end.³

VEGETATION

Satellite imagery from August 21-31 to September 21-31 suggests that vegetation conditions have generally been at least equal to the historic (1981-86) maximum

¹ 10,410 hectares (ha) were treated for army worms, 8,358 ha were treated for grasshoppers, and 634 ha were treated for both grasshoppers and army worms.

² Cumulative rainfall through September 20 in Dori was 43% of the 1951-80 average of 528 mm, and 54% of the 1970-86 average of 418 mm.

³ Average cumulative rainfall for October 1 to 20 is 8 mm in Dori. After October 20, average rainfall drops to zero.

throughout the southwest and south central provinces for those four consecutive 10-day periods (see Figure 1). In contrast, northern Sanmatenga and Namentenga Provinces, the northern tip of Bam Province, and southern Soum and Oudalan Provinces have been at the historic minimum for four consecutive 10-day periods. More recently, vegetation conditions in the northern tip of Gnagna have been below the historic minimum, and vegetative vigor has changed little since July 21-30. This suggests that pasturage in that area, which the GOB MINAG reported was in a precarious condition in late July, has not improved.

After the rainy season began in earnest, vegetative vigor below 13° latitude was above average and near the historic maximum throughout the growing season (see Figure 2). Although imagery shows that vegetation conditions in the northern provinces were near average throughout the rainy season, vegetative vigor did not change appreciably between June 10-20 and July 10-20, suggesting that crops in these provinces were stressed and that yields are likely to be poor.

RAINFALL

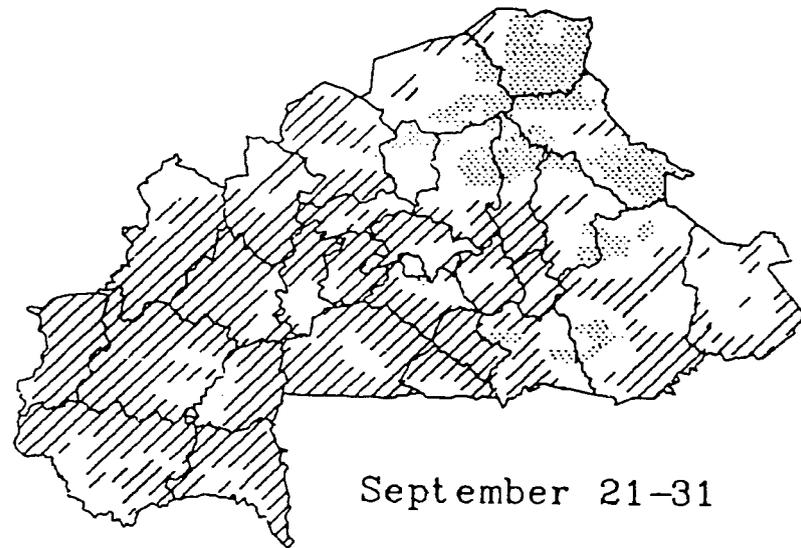
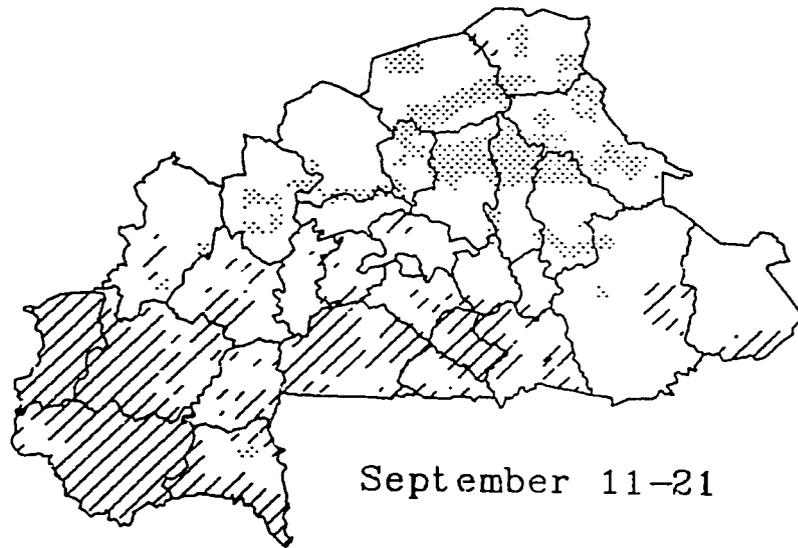
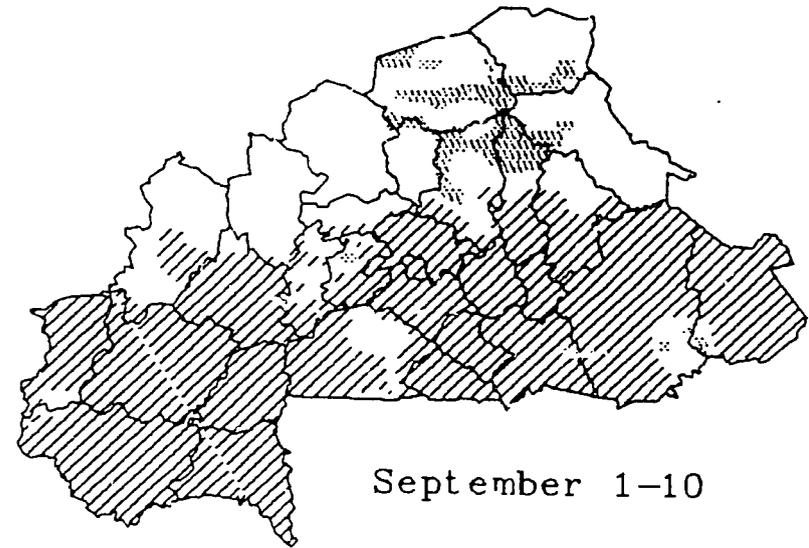
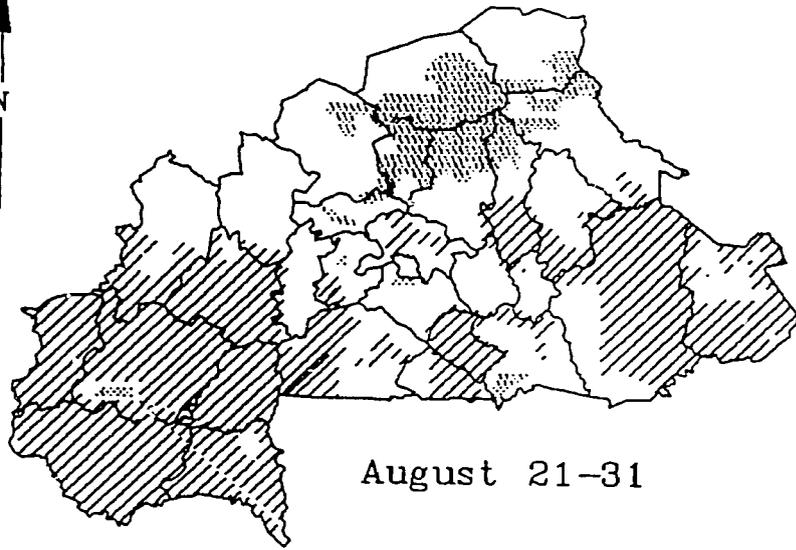
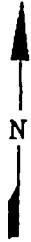
Cumulative rainfall through September 20 generally supports evidence from satellite imagery that crop prospects are good in the south and south central provinces, but poor in the northern provinces (see Table 1 and Summary map). At the southeastern stations (Gaoua, Po, Boromo, and Bobo-Dioulasso), reported rainfall was greater than 90% of either the thirty year average or 1986 levels (see Table 1). Rainfall has generally been well distributed in these areas, according to the GOB MINAG. In contrast, cumulative rainfall recorded at the

Table 1: Cumulative Rainfall Through September 20 (mm)

Station	1987	1986	1951-80 Average	% of 1986	% of 1951-80 Average
Gaoua	867	980	887	89	98
Po	776	943	831	82	93
Boromo	738	749	839	99	88
Bobo-Dioulasso	728	763	983	95	78
Ouagadougou	617	740	776	83	80
Fada N'Gourma	603	546	851	110	71
Saria	596	870	752	68	79
Dedougou	576	739	782	78	74
Ouahigouya	390	558	611	70	64
Dori	227	331	528	68	43

Source: Government of Burkina National Meteorological Office

Recent Vegetative Trends



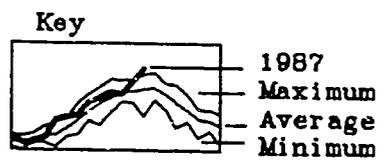
 Vegetative vigor less than or equal to historic minimum

 Vegetative vigor greater than or equal to historic maximum

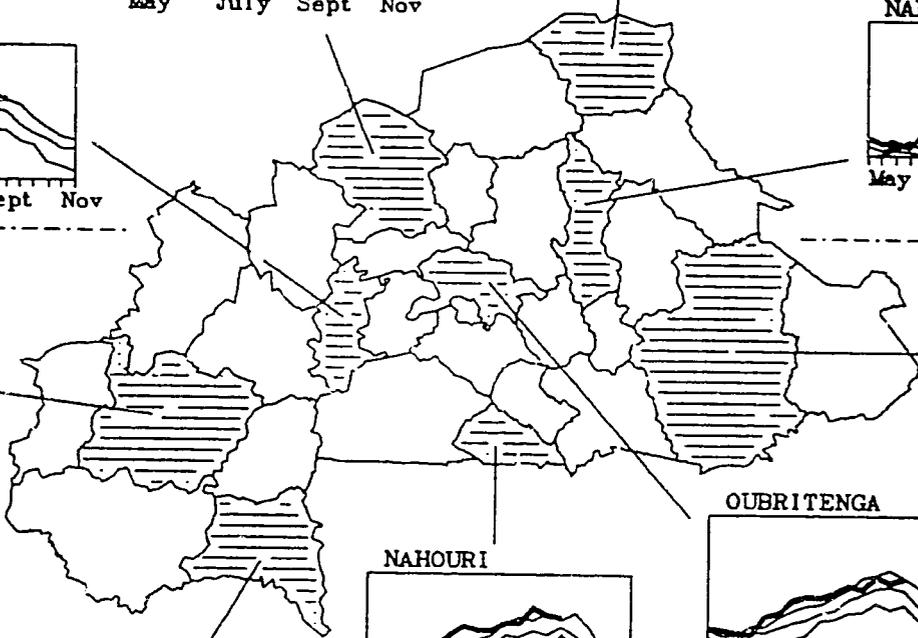
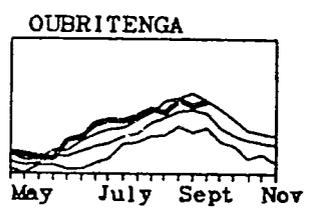
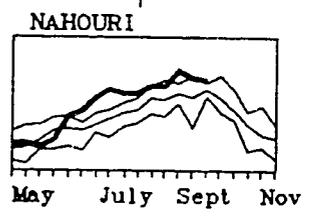
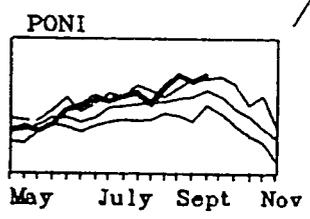
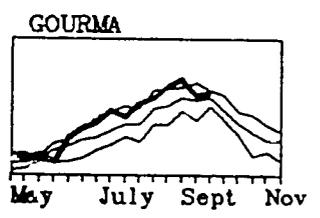
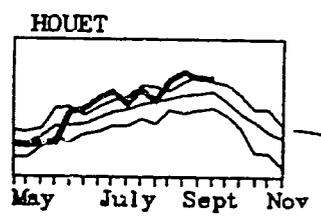
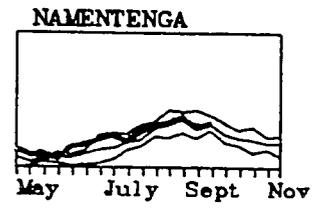
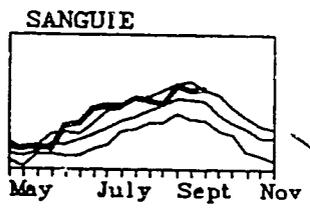
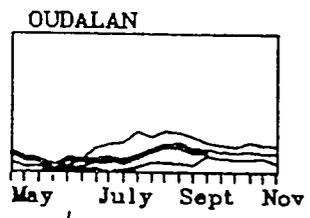
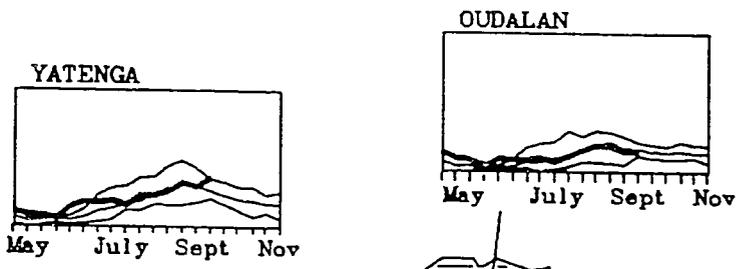
Source: NASA AVHRR satellite imagery

FEWS/PWA

Seasonal Vegetative Trends



Maximum, Minimum, and Average are derived from the 1981-88 historic record



13°

13°



Source: FEWS/PWA, September 1987

Dori station (Seno Province) was 98 mm below the lowest year (1984) in the historic (1951-86) record. Reported rainfall at the Ouahigouya station was the fourth lowest in the historic record.

AGRICULTURE

In mid-September, the principle cereal crops in the north and central provinces suffered from moisture stress at a time when they reached the critical flowering stage. In the north and the high areas of the central provinces, yields will probably be poor, because crops were also stressed during a dry period in July, which, according to the GOB MINAG, resulted in alarming conditions in the northern part of Kongoussi Department (Bam Province) and light wilting in other areas. According to Sidwaya, a Burkina periodical, the dry period seriously stressed crops in an area in southwestern Yatenga and Passore Provinces between Ouahigouya and Yako (see Summary Map). The southwest corner of Yatenga, near Boussou town, is generally considered the major grain producing area of the Province. Additionally, both the GOB MINAG and Sidwaya reported that reseeded in some places continued into late July and August. Even if rainfall continues into mid-October, which is still a possibility,⁴ crops sown this late are unlikely to yield well.

In the south and south central provinces, some short-term millet is being harvested, while other cereals are at the heading and flowering stages. Field reports specify that crop conditions in the south and central provinces were good in low lying areas, where more moisture is available, but that crops in high areas were particularly stressed during dry periods. In the eastern provinces of Gourma and Tapoa, the GOB MINAG reported that crops are developing normally.

CEREAL REQUIREMENTS

If Burkina is to meet 100% of its cereal requirements with domestic production, net production must reach approximately 1.62 million MT.⁵ The GOB MINAG estimated that 2.52 million hectares were planted in 1987. If area harvested is the same as area planted, yields must average approximately 758 kg/ha for net production to reach 1.62 million MT.

⁴ Average reported rainfall at the Ouahigouya station (Yatenga Province) from October 1 to 20 is 23 mm.

⁵ This figure is based on an estimated national population in 1988 (pro-rated to July) of 8,460,000, and USAID/Burkina's per capita cereal needs estimate of 192 kg/year. Net production is estimated to be 85% of gross production to account for seed, feed, waste, and loss.

It is unlikely that the average national yield will be this high. In 1986, the average national cereal yield was 701 kg/ha.⁶ Reported cumulative rainfall through September 20 is lower than in 1986 (see Table 1), while satellite imagery suggests that vegetative vigor has consistently been above 1986 levels only in the southwest (the major crop producing area). In other areas throughout Burkina, crop conditions vary from good to poor. Imagery, rainfall data, and field reports all confirm that crop conditions in the north are near the historic minimum or, at best, similar to 1986. While neither ground reports nor any of the other indicators suggest that, nationally, conditions for crop growth are better than last year, recent and seasonal vegetative trends (derived from satellite imagery) suggest that crops have generally had good growing conditions. It is, therefore, likely that, while Burkina will not meet 100% of cereal requirements with domestic production, the shortfall will be small. If, for example, yields are similar to 1986 levels, the net cereal shortfall will be approximately 0.12 million MT.

⁶ According to the United Nations Food and Agriculture Organization, this was the second highest yield ever recorded. The highest yield, in 1985, was 763 kg/ha. However, it is likely that between 1984 and 1985 the methodology for estimating yields changed, and new estimates can only be compared to data since 1985. The 1985-86 average yield (732 kg/ha) was a dramatic 17% above the previous high (40% above the 1965-84 average), without a corresponding improvement in agricultural techniques or inputs. Additionally, rainfall in 1985 and 1986, while good, was unexceptional with respect to historical rainfall patterns.

REFERENCE MAP



NATIONAL BOUNDARY	OUAGADOUGOU
Provincial Boundary	Provincial Capital

FEWS/PWA, June 1987

This is the sixteenth in a series of monthly country reports issued by the Famine Early Warning System (FEWS) on Burkina. These reports are designed to provide decisionmakers with current information and analysis on existing and potential nutritional emergency situations. Each situation identified is described in terms of geographical extent, the number of people involved, or at-risk, and the proximate causes insofar as they have been discerned. Information sources are cited in the text. Information has, whenever possible, been presented in the form of quantified data. When quantified data do not exist, qualitative data are used.

Use of the term "at-risk" to identify vulnerable populations is problematical since no generally agreed upon definition exists. Yet it is necessary to identify or "target" populations in-need or "at-risk" in order to determine appropriate forms and levels of intervention. Thus, FEWS reports will employ the term "at-risk" to mean..

...those persons lacking sufficient food, or resources to acquire sufficient food, to avert a nutritional crisis (i.e., a progressive deterioration in their health or nutritional condition below the status quo) and who, as a result, require specific intervention to avoid a life-threatening situation.

Perhaps of most importance to decisionmakers, the process underlying the deteriorating situation is highlighted by the FEWS effort, hopefully with enough specificity and forewarning to permit alternative intervention strategies to be examined and implemented. Food assistance strategies are key to famine avoidance. Other types of intervention, however, can be of major importance both in the short-term and in the long-run, including medical, transport, storage, economic development policy change, etc.

Where possible, estimates of food needs are included in the FEWS reports. It is important to understand, however, that no direct a priori relationship exists between numbers of persons at-risk and the quantity of food assistance that may be needed. This is because famines are the culmination of slow-onset disaster processes which can be extremely complex.

The food needs of individual populations at-risk depend upon when in the disaster process they are identified, and the extent of the cumulative impact on the individuals concerned. Furthermore, the amount of food assistance required, whether from internal or external sources, depends upon a great number of considerations. Thus the food needs estimates presented periodically in FEWS reports should not be interpreted to mean food aid needs, (e.g., as under PL 480 or other donor programs).

FEWS does not collect primary data. Rather, it receives information from various domestic U.S. and international agencies and private voluntary organizations, and from government agencies in the countries under study via in-country FEWS Public Health Advisors. The information is then examined, compiled and analyzed for its predictive potential. Without the ongoing cooperation of all these organizations, FEWS could not function.

In particular, this report owes a debt to various offices of the US Agency for International Development (AID), National Oceanic and Atmospheric Administration's National Environment Satellite, Data, and Information Service's Assessment and Information Services Center, NOAA/AISC, the Cooperative Institute for Applied Meteorology, and USAID/Burkina; the GOB National Meteorological Office; the GOB Drought Commission; the GOB Ministry of Agriculture; and the multi-donor funded Agro-Hydro-Meteorological Center in Niger (AGRHY-MET).

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9