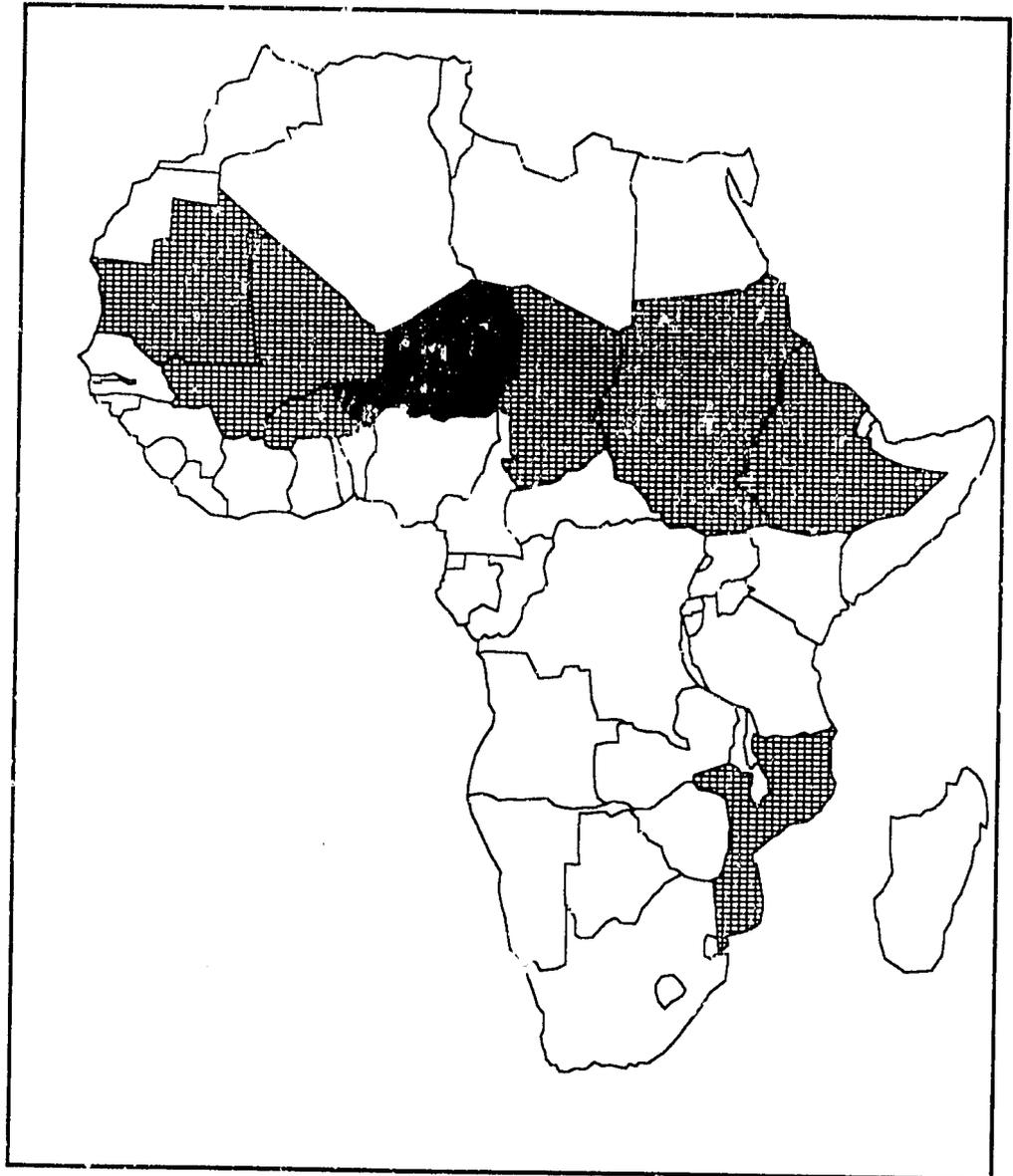


Report Number 13

July 1987

## FEWS Country Report

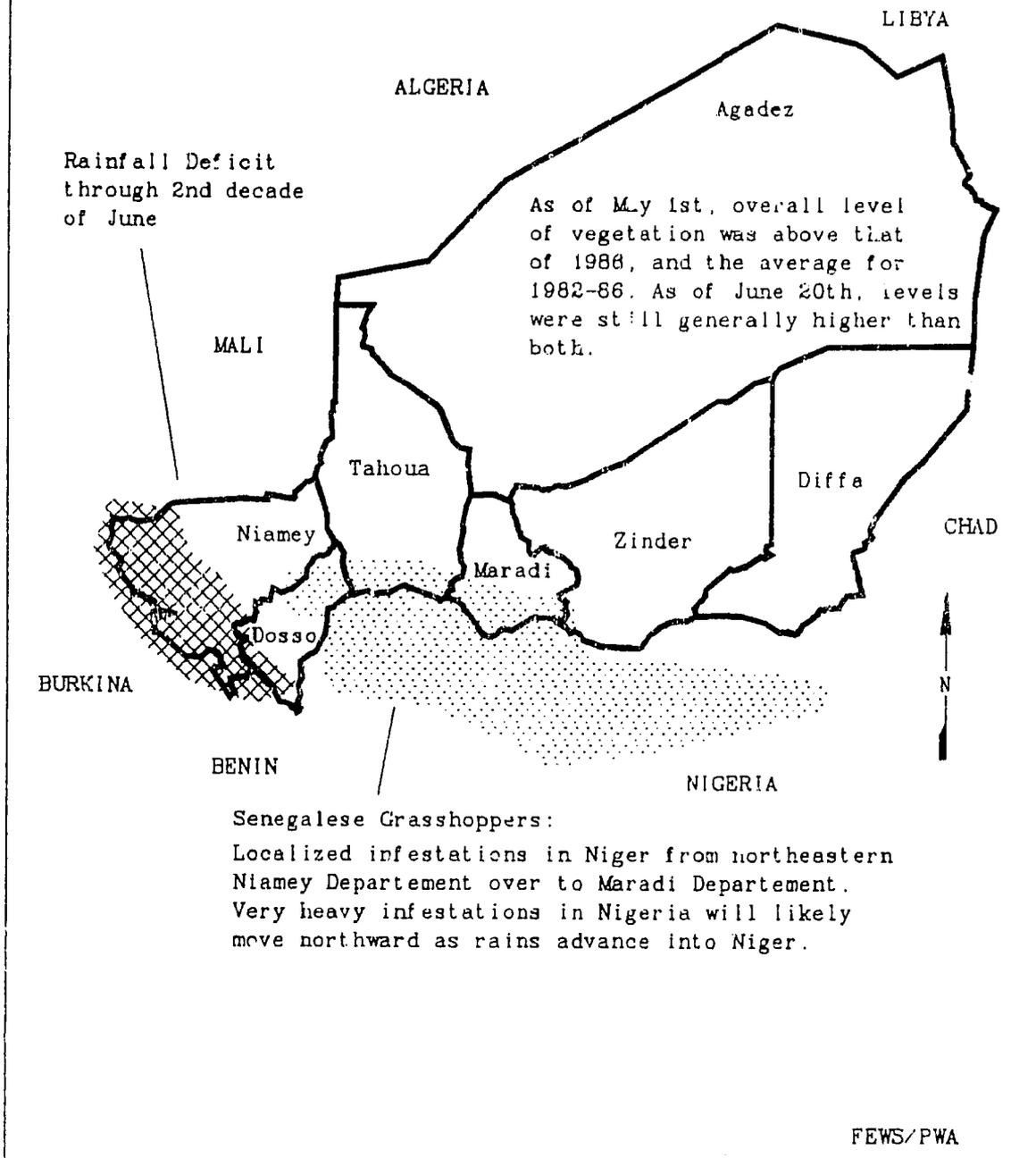
# NIGER



Africa Bureau  
U.S. Agency  
for International  
Development

MAP 1: NIGER

# Summary Map



Rainfall Deficit  
through 2nd decade  
of June

As of May 1st, overall level  
of vegetation was above that  
of 1986, and the average for  
1982-86. As of June 20th, levels  
were still generally higher than  
both.

Senegalese Grasshoppers:  
Localized infestations in Niger from northeastern  
Niamey Departement over to Maradi Departement.  
Very heavy infestations in Nigeria will likely  
move northward as rains advance into Niger.

# NIGER

## The Rains Begin

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

Prepared by  
Price, Williams & Associates, Inc.  
July 1987

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## INTRODUCTION

This is the thirteenth in a series of monthly reports on Niger issued by the Famine Early Warning System (FEWS). It is designed to provide decisionmakers with current information and analysis on existing and potential nutrition emergency situations. Each situation identified is described in terms of geographical extent and the number of people involved, or at-risk, and the proximate causes insofar as they have been discerned.

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 for the present, until a better usage can be found, 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 FEWS effort highlights the process underlying the deteriorating situation, hopefully with enough specificity and forewarning to permit alternative intervention strategies to be examined and implemented. Food assistance strategies are key to famine avoidance. However, other types of intervention 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 relation exists between numbers of persons at-risk and the quantity of food assistance needed. This is because famines are the culmination of slow-onset disaster processes which can be complex in the extreme.

The food needs of individual populations at-risk depend upon when in the disaster process identification is made and the extent of the cumulative impact on the individuals concerned. Further, the amount of food assistance required, whether from internal or external sources, depends upon a host of considerations. Thus the estimates of food needs presented periodically in FEWS reports should not be interpreted to mean food aid needs, e.g., as under PL480 or other donor programs.

FEWS depends on a variety of US Government agencies, private voluntary organizations (PVO's), international relief agencies, foreign press and host government reports as sources of information used in the country reports. In particular, a debt of gratitude is owed to many individuals within various offices of the US Agency for International Development (USAID) who routinely provide valuable information: the Office Of Emergency Operations (OEO); the offices of Food For Peace and Voluntary Assistance (FFP/FVA); and the Office of Foreign Disaster Assistance (OFDA). Additional useful information is also provided by the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautic and Space Administration (NASA), AGRHYMET/Niamey, the UN Food and Agriculture Organization (UNFAO) Global Information and Early Warning System (GLEWS), the World Food Programme, and other U.N. agencies.

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## **SUMMARY**

The beginning of the rainy season has been generally normal throughout the country, with the recent exception of western and northwestern parts of Niamey Department and southwestern parts of Dosso Department, where rains have been slightly late and deficient. The current stress in these areas could be reversed with few if any ill effects on eventual harvests if rains were to resume by early July. As of the 20th of June, satellite images of vegetation showed that most areas have not yet begun to "green-up". This is not abnormal for most areas, where the impact of whatever rains received would not normally be felt for several more weeks. Senegalese grasshoppers in the hopper stage have been reported from Niamey Department across to Maradi Department, but are currently being sprayed and are under control. Large, record-setting, early season infestations of Senegalese grasshoppers in northern Nigeria pose an immediate and serious threat for Nigerien crop development as the rains move northward, bringing these migratory grasshoppers with them.

## **Issues**

The large numbers of Senegalese grasshoppers reported in Nigeria, and the good possibility that they will eventually make their normal northward migration into the most fertile areas of Niger, underscores the regional nature of the locust and grasshopper problem.

## **Key Events**

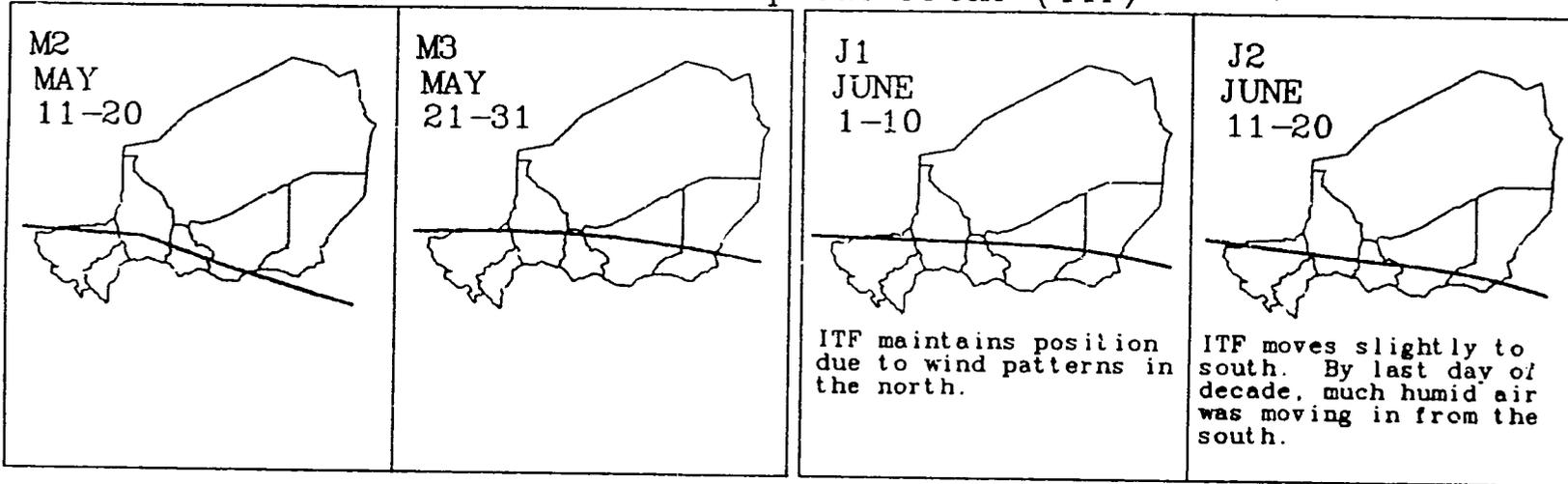
The Inter-Tropical Front, recently stalled in its northern movement along a line crossing central Niger, brings with it the conditions most propitious for rainfall. As long as the front remains stalled, rainfall may stay largely south of Niger's vulnerable second-tier of non-border arrondissements; the normally marginal cropping conditions in these arrondissements would thus be worsened.

## **METEOROLOGY**

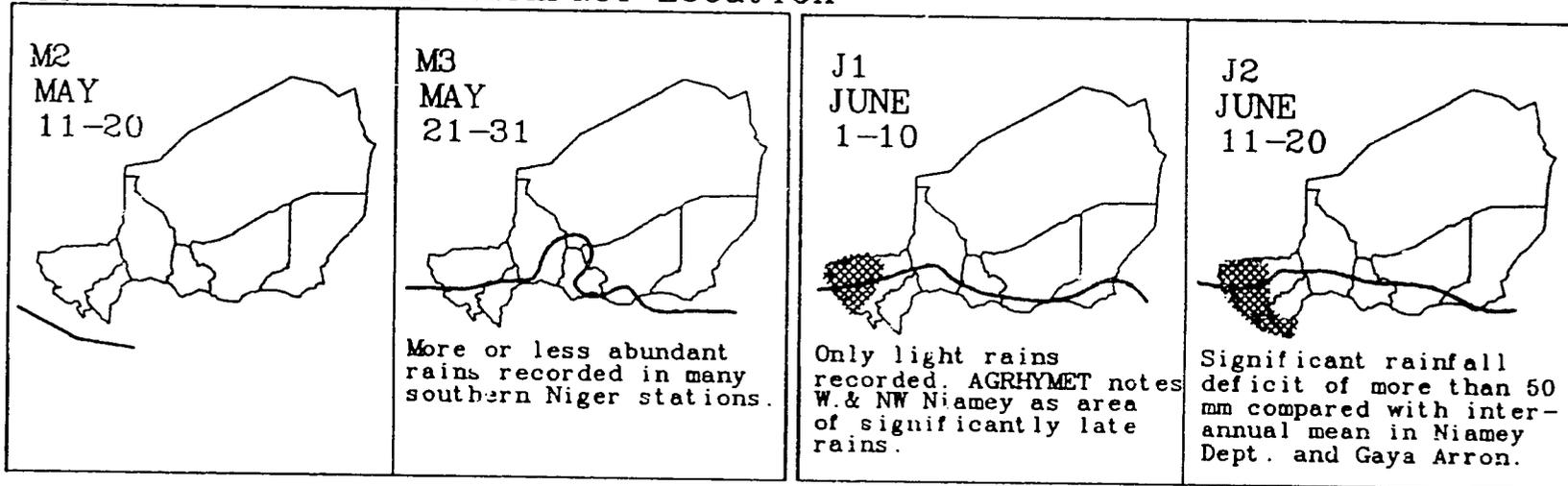
Reports from the AGRHYMET Center (Regional Center for Agrometeorology and Hydrology) in Niamey, and from NOAA (National Oceanic and Atmospheric Administration), indicate that the rainy season began rather normally up to the second decade of June in most parts of Niger. Some early deficits have been recorded in western and northwestern Niamey, and in southwestern Dosso Departements (see Figure 1). It is, nevertheless, still very early in the season, and even those areas currently under stress from light rainfall could recover with few if any ill effect if rains return in normal amounts by early July. The last several years have not been kind to some of these same areas. Ouallam, Filingue, Kollo, and parts of Tillaberi Arrondissements suffered from relatively

# METEOROLOGY

## Mean Decadal Location of Inter-Tropical Front (ITF)



## Approximate Decadal Rainfall Location



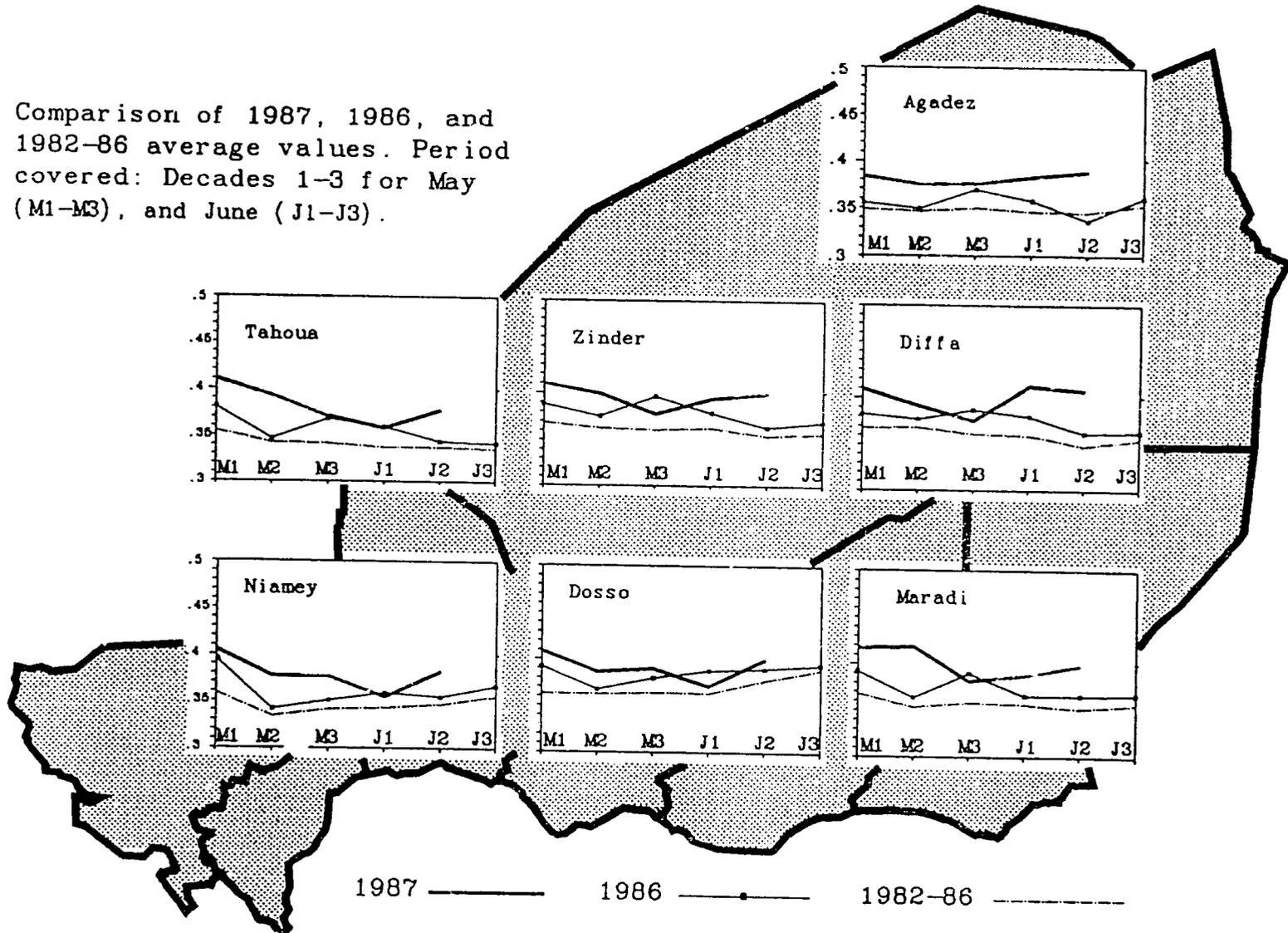
Source: AGRHYMET

FEWS/PWA

Figure 1:

# Niger NVI Trends by Department

Comparison of 1987, 1986, and 1982-86 average values. Period covered: Decades 1-3 for May (M1-M3), and June (J1-J3).



1987 ——— 1986 —•— 1982-86 - - - -

NVI Images: NASA

FEWS/PWA

Figure 2:

poor rains and mediocre harvests in 1985 and 1986, even while national cereal production was setting records for the country.

The Inter-Tropical Front, the northerly movement of which brings rains to the Sahel, has recently moved significantly above its normal latitudes in the Western Sahel, while it has largely stagnated at lower than normal latitudes over the central belt of Niger. Should it remain in that position, it would likely bring less rain than normal to most parts of the country. The last report from Niamey indicated that as of June 20th, however, conditions for a more northerly movement of humid air into the country had significantly improved.

## **VEGETATION LEVELS**

Satellite imagery furnished by NASA, (National Aeronautic and Space Administration) shows that vegetation is still very sparse in most areas, and has not yet begun to "take-off" as a result of the onset of the rainy season (see Figures 2-9). Looking at the trend lines representing the 1982-86 average NVI values in Figure 2, it can be seen that only in Dosso and Niamey Departements would a greening of vegetation be likely this early in the season. The relatively high NVI values shown for the beginning of the 1987 rainy season do not reflect a significantly better level of vegetation compared to prior years. The NVI levels of a number of the more agriculturally vulnerable arrondissements are discussed below.

**Selected Niamey Arrondissements** - Figure 3 shows that the impact of the rainy season has not yet been felt in the more northern arrondissements. As of the 20th of June, note had been made by AGRHYMET and NOAA of the light rains in these areas, where cumulative rainfall totals are significantly less than the long-term inter-annual average. NVI values for the 3rd decade of June would not be expected to rise significantly.

**Selected Dosso Arrondissements** - NVI values normally begin to rise during the first decade of June in Loga and Dogondoutchi; in 1987 they are following this same pattern (see Figure 4).

**Selected Tahoua Arrondissements** - The impact of the rains would not normally be seen in these arrondissements during the period shown (see Figure 5, where the flat curve of the 1982-86 averages show that "take-off" has normally occurred later than June in each of the arrondissements).

Figure 3: NVI Trends - Niamey - May/June 1987

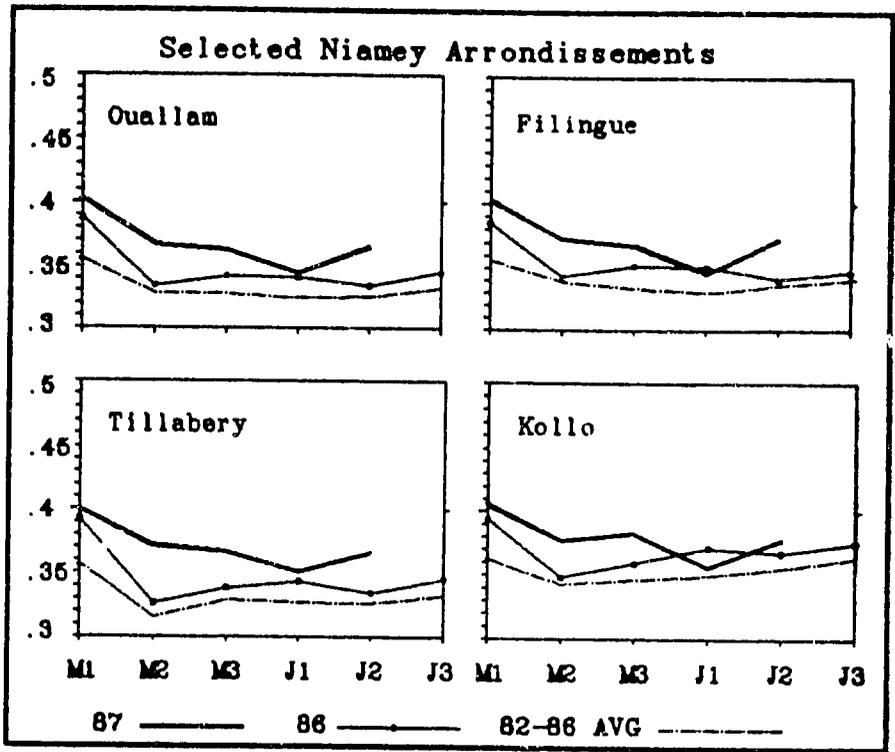
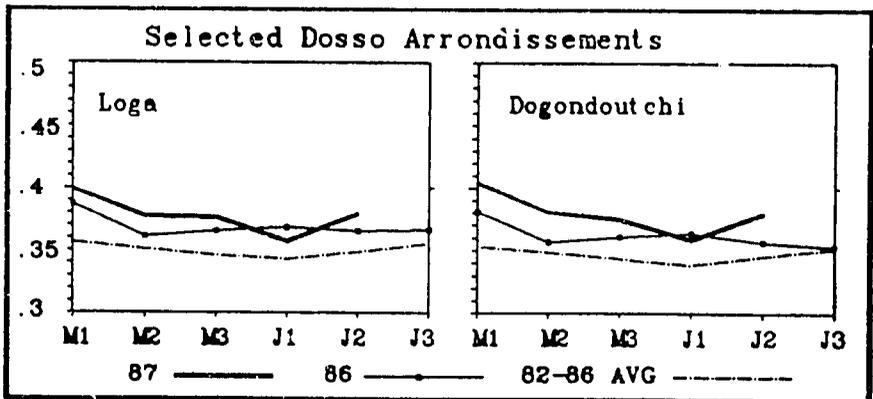


Figure 4: NVI Trends - Dosso - May/June 1987

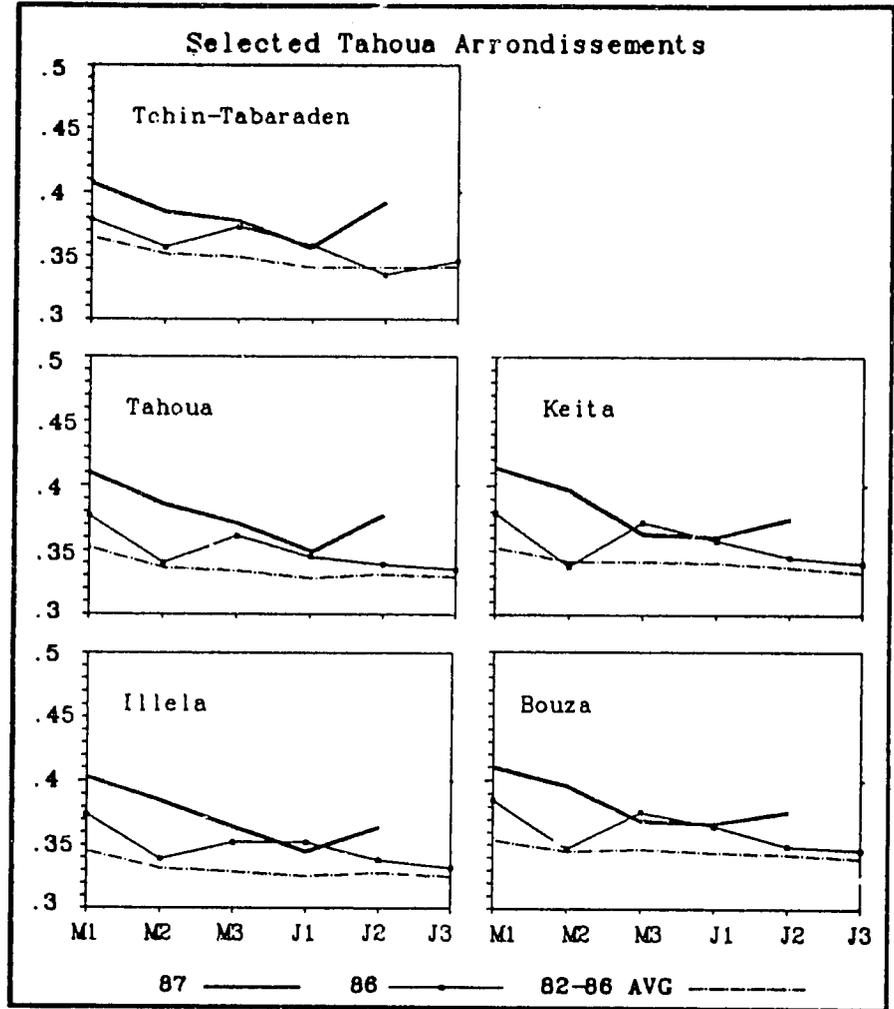


Selected Maradi Arrondissements - NVI values for Dakoro Arrondissement (see Figure 6) would not normally show the impact of the rains this early. In future assessments of NVI values of Dakoro, and other arrondissements such as Dogondoutchi and Goure, that cover several micro-climates with their long, north-south axes, separate NVI values

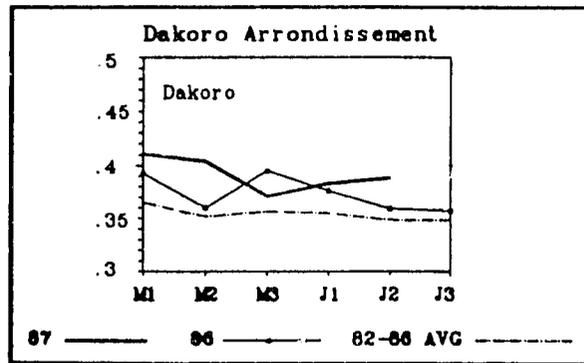
with their long, north-south axes, separate NVI values should probably be given for the largely southern farming areas, and for the more pastoral northern areas.

**Selected Zinder Arrondissements** - At present, biomass levels are still not indicating that "take-off" has occurred. The trend lines for the 1982 to 1986 period show this is not unusual (see Figure 7).

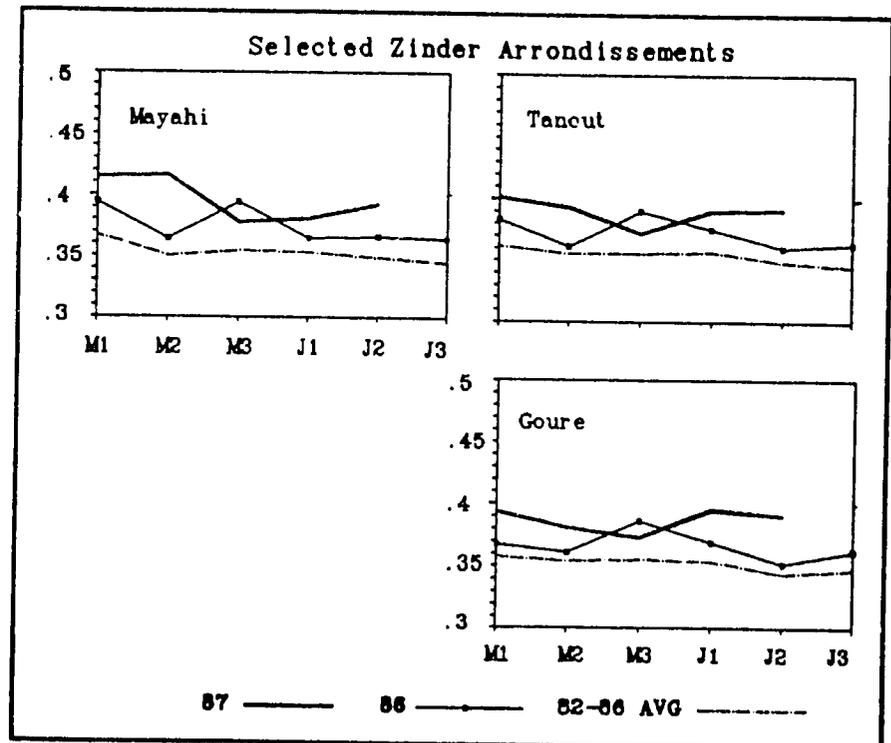
**Figure 5: NVI Trends - Tahoua - May/June 1987**



**Figure 6: NVI Trends - Maradi - May/June 1987**



**Figure 7: NVI Trends - Zinder - May/June 1987**



**Selected Diffa Arrondissements -** The past three years have been relatively difficult ones in Diffa Departement. Poor rains and vastly deficient grain production have put great stress on the food supply in these areas. Particular attention should be paid to these areas during this rainy season to see if this trend may continue.

Figure 8 indicates that NVI values may be showing the first signs of greening due to early rains in Diffa and Maine-Soroa.

**Selected Agadez Arrondissements - Bilma Arrondissement** is generally considered to be about as desolate a place in Niger as can be found. While it is currently very difficult to make comparisons of one area to another, based solely on NVI averages, a comparison of the NVI values for Bilma (see Figure 9) shows that they are very similar to those seen for other arrondissements examined here. This is simply an interesting indication of the need for collateral information in order to use the NVI values for decision-making.

**Figure 8: NVI Trends - Diffa - May/June 1987**

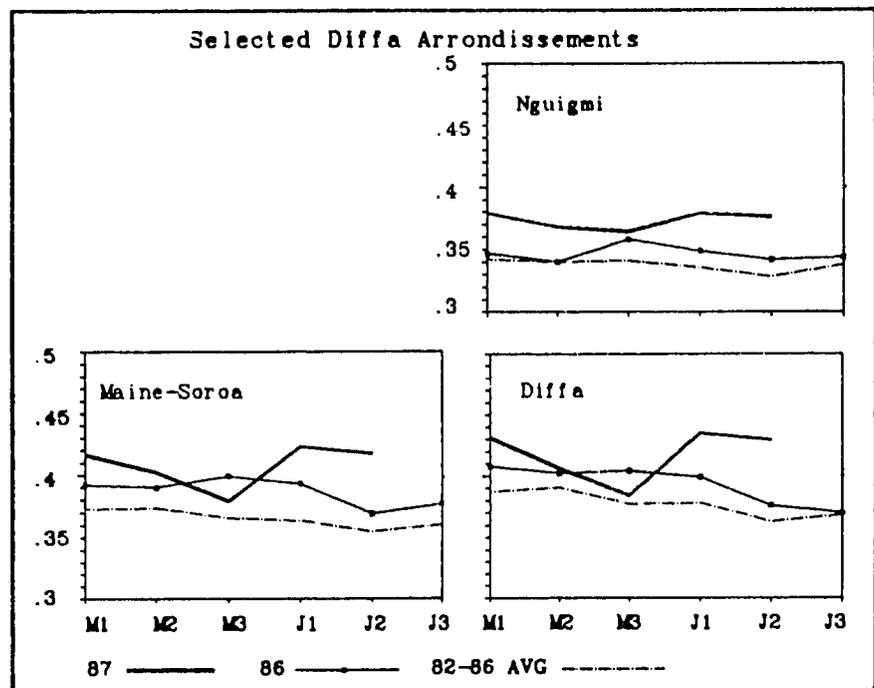
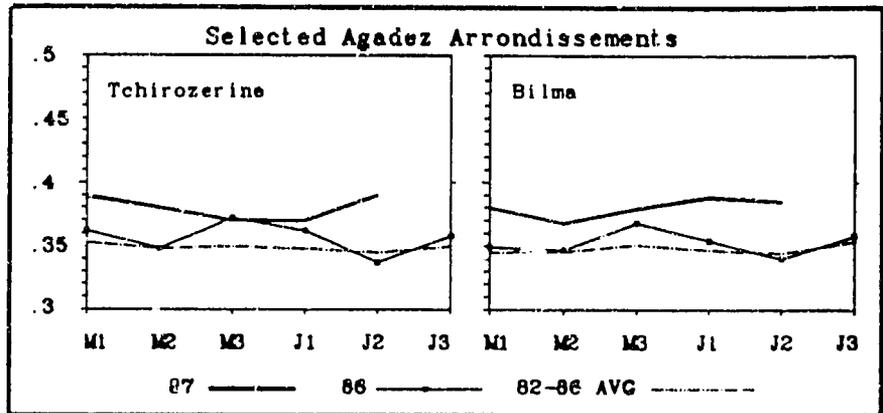


Figure 9: NVI Trends - Agadez - May/June 1987



**GRASSHOPPERS and LOCUSTS**

Localized hatchings of Senegalese grasshoppers (*Oedaleus senegalensis*) have been observed around southeastern parts of Niamey Departement, northern Dosso Departement, southern Tahoua Departement, and Maradi Departement. It is yet uncertain just how large a threat these early infestations, and those that may follow them, may be for Nigerien agriculture. At the moment, the size of the infestations is not overwhelming, and treatment is underway.

Rains occurring further south in Nigeria in April, caused the first hatching of Senegalese grasshoppers, and significant damage to newly planted crops has already occurred. Levels of infestation in some states there are as great as ever seen. The localities covered by the infestations stretch along the other side of the southern Niger border, from the eastern edge of Gaya Arrondissement, to Diffa Arrondissement, and are particularly found in the Sokoto, Kano, and Bornu states in Nigeria. The normal pattern of movement for these grasshoppers would be movement northward with the winds and the ITF. An unmoving ITF, as at present, will tend to slow down their arrival in Niger. Other significant hatching has occurred in eastern Chad.

Desert locust (*Shistocerca gregaria*) swarms have been identified moving through Sudan from Ethiopia, and may be on a course that would soon bring them to Chad, if not further west. This is, as well, a common trajectory, and would not, in itself, be cause for undue concern if control facilities are ready. All indications at this point show that they are.

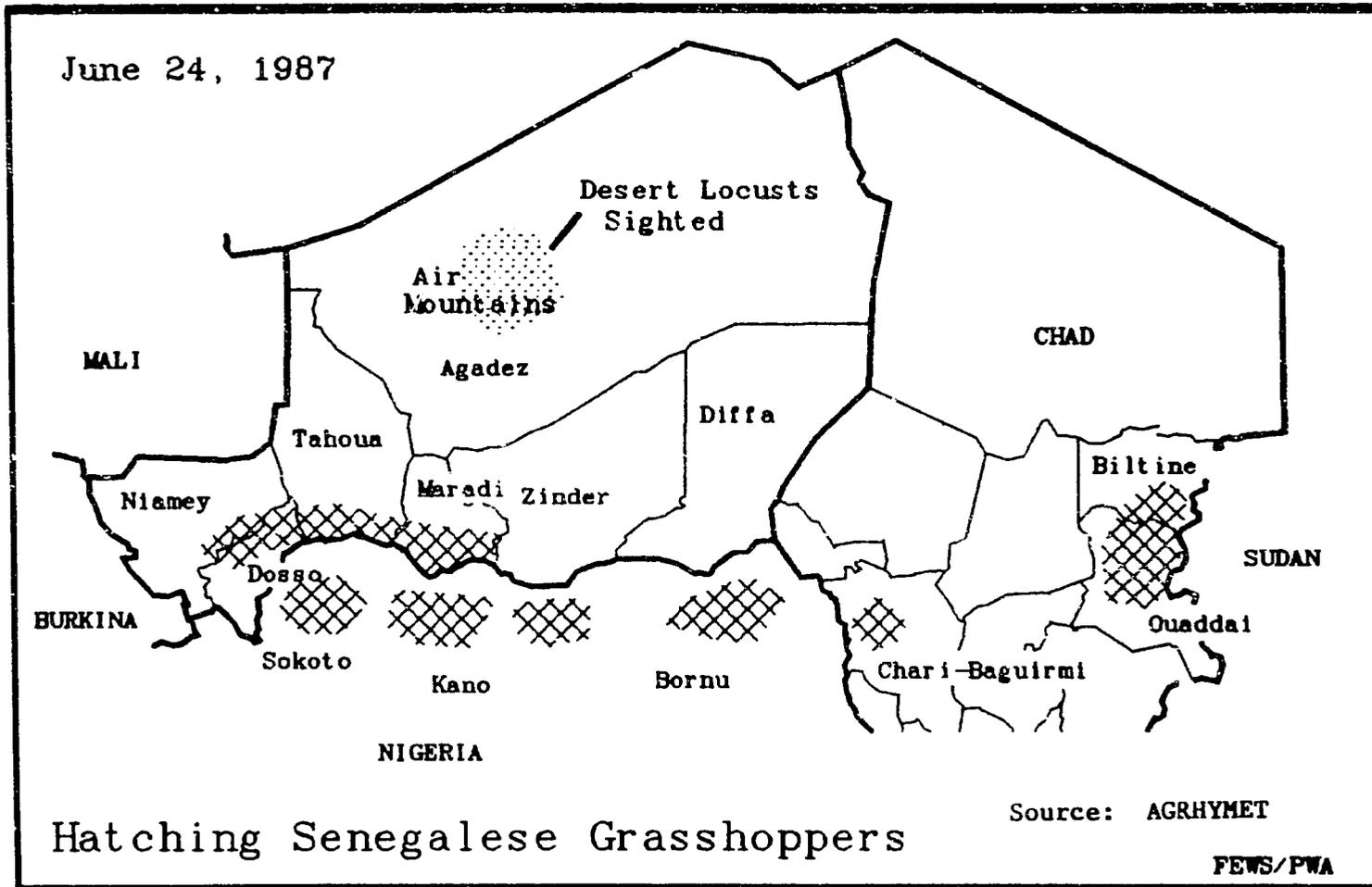
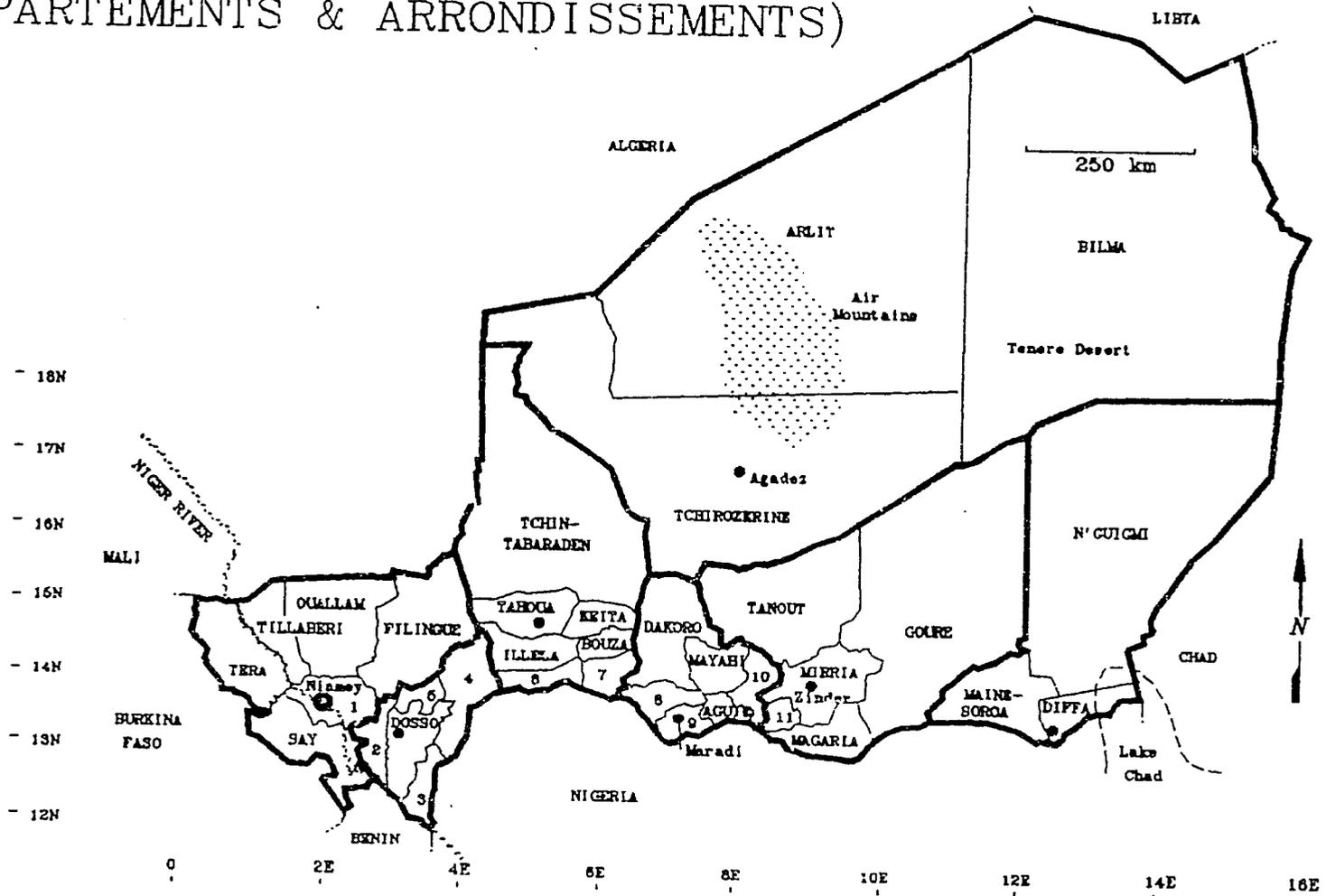


Figure 10:

In Niger itself, Desert Locusts in the hopper stage have been identified in the Air Mountains, an area which saw them in late 1986. It is not unusual that Desert Locusts be found this early in small numbers in Niger. In this case too, it is too early for serious concern about Desert Locust problems in Niger.

# NIGER: ADMINISTRATIVE UNITS (DEPARTEMENTS & ARRONDISSEMENTS)



FEWS/PWA

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DOSSO  
TAHOVA  
MARADI

ZINDER  
DIFFA  
AGADEZ

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ARRON. BOUNDARY

DEPT CAPITAL

NAT'L CAPITAL

### OTHER ARRONDISSEMENTS

- |                   |                   |
|-------------------|-------------------|
| 1. KOLLO          | 6. BIRNI N' KONNI |
| 2. BIRNI N' GAURE | 7. MADAOUA        |
| 3. GAYA           | 8. GUIDAN ROUNDJI |
| 4. DOGONDOUTCHI   | 9. MADAROUNFA     |
| 5. LOGA           | 10. TESSAOUA      |
|                   | 11. MATAMEYE      |