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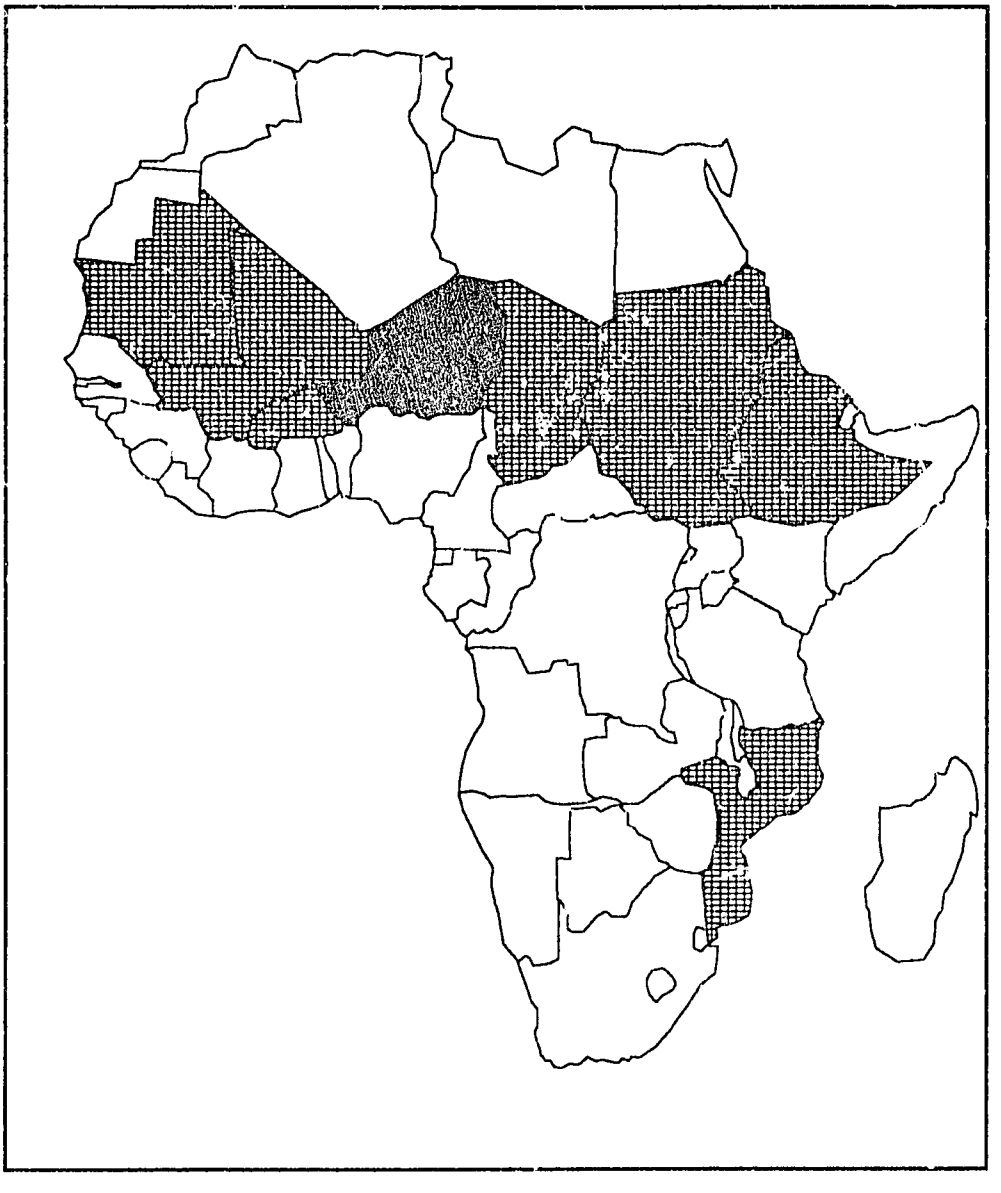
November 1986

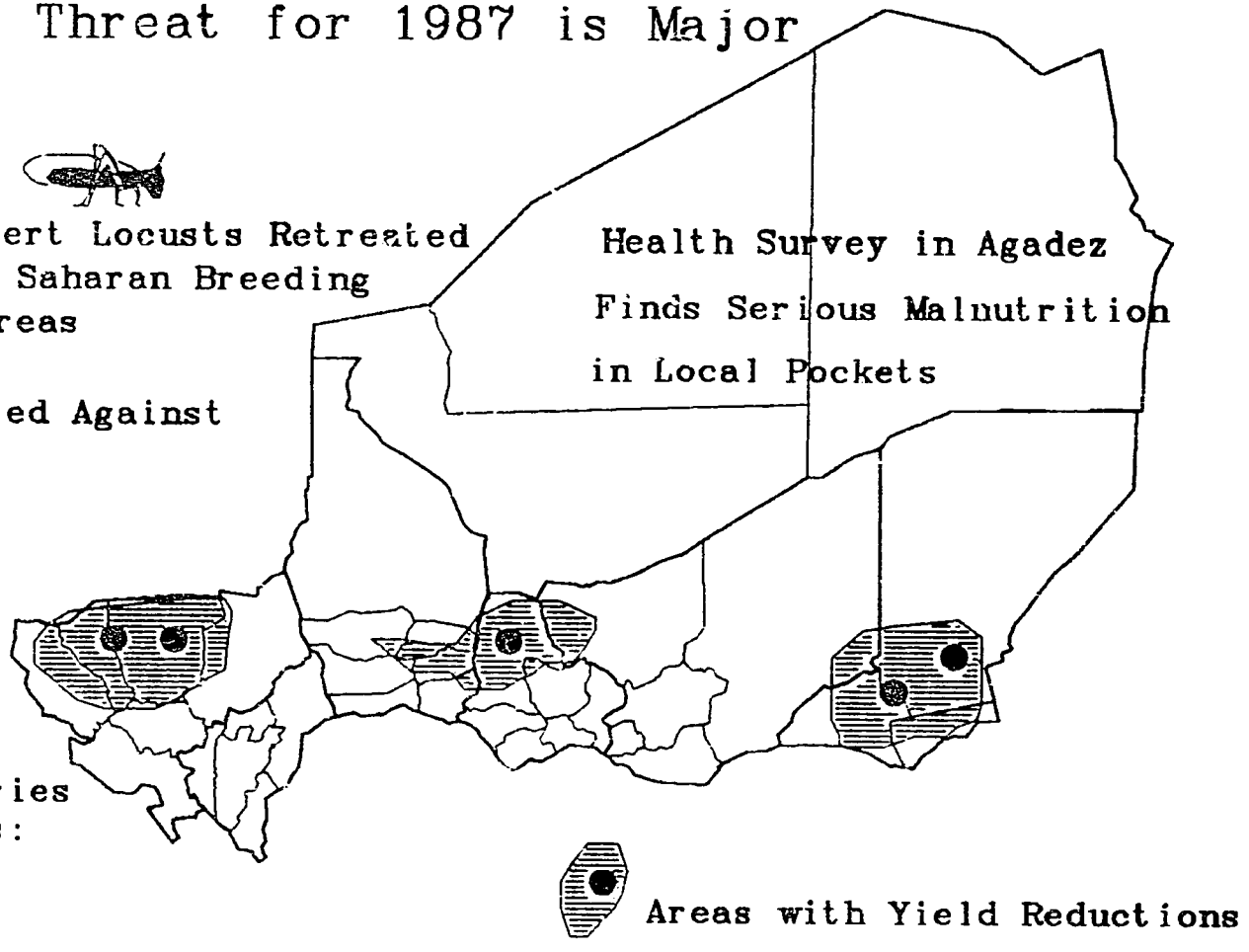
FEWS Country Report
NIGER



Africa Bureau
U.S. Agency
for International
Development

SUMMARY MAP

1986 Cereal Harvest Near 1985 Levels
Grasshopper Threat for 1987 is Major



FEWS/PWA 11/86

MAP 1: NIGER

Famine Early Warning System Country Report

NIGER

Good Harvest, Continued Recovery

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

Prepared by
Price, Williams & Associates, Inc.
November 1986

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INTRODUCTION

This is the sixth of a series of monthly reports issued by the Famine Early Warning System (FEWS) on Niger, current as of November 15, 1986. It is designed to provide decisionmakers with current infor-mation 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 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. 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, food needs estimates 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 its 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 food needs estimates presented periodically in FEWS reports should not be interpreted to mean food aid needs, e.g., as under PL480 or other donor programs.

FEWS is operated by AID's Office of Technical Resources in the Bureau for Africa in cooperation with numerous USG and other organizations.

SUMMARY

The 1986 agricultural year was a generally good one, except in the northern areas of Niamey Department, and in Diffa Department. Production estimates of cereal crops range from 1,700,000 to 1,807,000 metric tons, very close to what was produced last year. Early food balance sheet assessments forecast that domestic production and current stocks will cover even a worst-case scenario. Despite good harvests this year and last year, new nutritional survey results show scattered pockets of serious malnutrition. A looming threat next year is grasshoppers. They came late to Niger in 1986, and produced only minor damage. However, regular and sufficient rains this year provided optimum conditions for increasing grasshopper numbers, and likely will result in a large increase in hatchings next rainy season. The grasshopper threat next year is considered high.

Issues

- The good harvest this year will contribute to keeping cereal prices very low. Farmers with surpluses will not benefit from their crops as much as they might require to repay debts, or rebuild financial reserves.
- Most of Niger's regional cereal shortages could probably be met by buying from surplus areas and transporting to deficit areas.
- Many of Niger's neighbors are expecting good, if not record harvests this year. This will work to reduce flows of cereals over international boundaries, particularly the Niger-Nigeria border.
- Niger's grasshopper problem for the 1987 rainy season is potentially greater than in 1986.

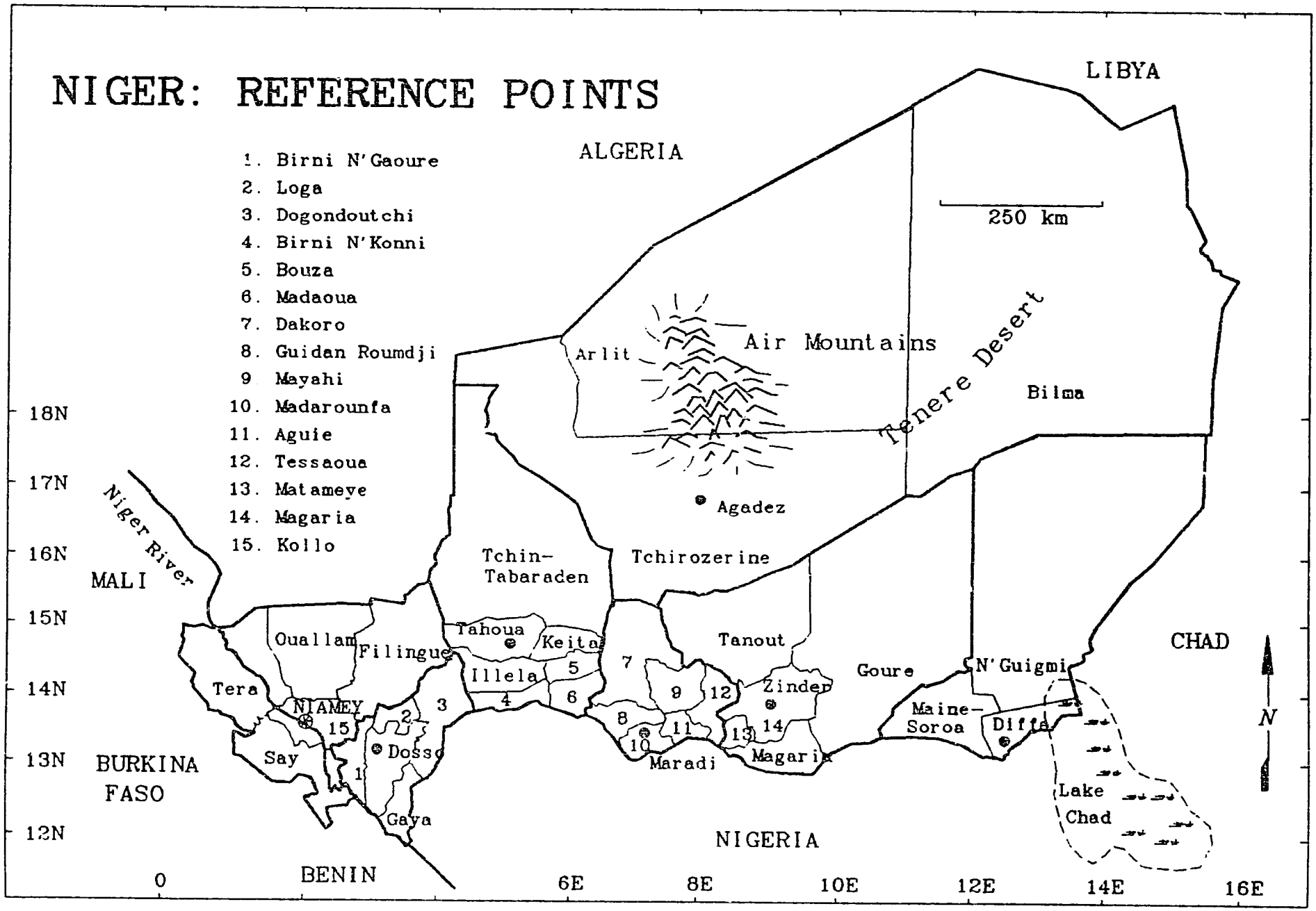
Key November Events

- Government of Niger crop estimates are due to be released in November.
- An FAO coordinated grasshopper evaluation team will arrive in Niger in November or early December and will try to give a preliminary estimate of how to plan for next year's potential threat.

RAINY SEASON

Overall, this rainy season was a good one. After a slow start, most reporting stations recorded rainfall totals higher than those of 1985, a good year, and much higher than those of 1984, a bad year. The major exceptions to the good rainfall are found in Diffa Department, and in other more localized areas in the northern parts of Niamey Department (see Map 2).

MAP 2: NIGER


NIGER: REFERENCE POINTS
1. Birni N'Gaoure
2. Loga
3. Dogondoutchi
4. Birni N'Konni
5. Bouza
6. Madaoua
7. Dakoro
8. Guidan Roumdji
9 Mayahi
10. Madarounfa
11. Aguie
12. Tessaoua
13. Matameye
14. Magaria
15. Kollo
LIBYA
ALGERIA
250 km
Air Mountains
Arlit
Tenere Desert
Bilma
Agadez
Niger River
MALI
Tchin-Tabaraden
Tchirozerine
Ouallam
Filingue
Tahoua
Keita
Illela
Tanout
Zinder
Goure
N'Guigmi
CHAD
Tera
NIAMEY
Say
Dosso
Maradi
Magaria
Maine-Soroa
Diffa
Lake Chad
BURKINA FASO
Gaya
BENIN
NIGERIA
N
18N
17N
16N
15N
14N
13N
12N
0
6E
8E
10E
12E
14E
16E

In general, the regularity of rainfall, which is almost as important as the total received, was sufficient to maintain soil moisture and crop growth without undue stress. Again, the exceptions include northern Niamey Department, Diffa Department, and some of the most northerly of the farming areas across the rest of the country.

The onset of the rains was delayed until late June and early July in many cases. Rodent and other pest damage to early plantings caused farmers to replant several times in some areas. The Ministry of Agriculture, at one point, estimated that most millet and sorghum was from two to four weeks behind in crop development.

While the season began late, it also continued later than normal. The Inter-Tropical Convergence Zone (ITCZ), which largely determines when and where rain will fall in the Sahel, remained farther north than normal well into the month of October. It brought rains in amounts greater than the historical average in late September and early October. This had the much needed effect of replenishing soil moisture levels late in the season, and effectively lengthened the growing season, allowing many late-planted fields to come to maturity.

CROP PRODUCTION

As has been informally predicted since late in the rainy season, most crop estimates coming from national and international agencies now show a harvest size that is very close to last year's. Several harvest estimates are compared below.

In last month's FEWS report, the initial National Oceanic and Atmospheric Administration (NOAA) yield estimates showed a likely millet and sorghum harvest of approximately 1,686,000 mt, versus 1985's production of 1,748,000 mt. Modifications made in these yield estimates since then, primarily based upon rainfall amounts and patterns, show a millet and sorghum harvest of approximately 1,737,000 mt (made up of 1,337,000 mt of millet, and 400,000 mt of sorghum).

The changes in the NOAA figures since last month reflect an increase of 78,000 mt in millet, primarily due to a rise in estimated yields for Niamey and Dosso Departments. They also reflect a decrease of 27,000 mt, in the sorghum harvest, primarily due to a large downward revision of yields in the Tahoua Department.

The CILSS (Inter-State Committee for the Fight Against Drought in the Sahel) in conjunction with the Food and

Agriculture Organization (FAO) published its initial estimate of 1986/87 cereal production for Niger in October. It shows a gross production of 1,650,000 mt of millet and sorghum, and 50,000 mt of rice. Without supporting information (not available for this report), differences between this estimate, and those made by NOAA and by USAID/Niger below cannot be interpreted.

A USAID/Niger cereal production estimate made as of October 31, 1986 forecasts a gross millet and sorghum harvest of 1,807,000 mt. This reflects a 2% increase nationally from last year's reported harvest of 1,779,000 mt*. A regional breakdown is given below in Table 1.

TABLE 1. 1986 Estimated Regional Production of Millet & Sorghum ('000 mt)

Department	Production	Change from 1985
Niamey	357	- 7%
Dosso	298	- 4%
Tahoua	345	+21%
Maradi	377	- 4%
Zinder	403	+ 6%
Diffa	26	+ 1%
Agadez	1	+ 3%
TOTAL	,1,807	+ 2%

Source: USAID/Niger

Of these three forecasts, the most optimistic is that of USAID/Niger, and the least is that of CILSS/FAO (9% less than the USAID estimate), the NOAA estimate falling in between those two (4% less than the USAID estimate). A fourth estimate will be made by the Ministry of Agriculture in November.

GRASSHOPPERS

It is fortunate that Niger did not experience the same levels of grasshopper infestation in 1985 as did its neighbors to the west. Given the amount and spacing of rains that Niger received throughout the rainy season, near optimum conditions prevailed for expansion of grasshopper populations. It is only because the number of eggs laid in 1985 was so small, far fewer than in Mali and Burkina, for example, that there was not a disastrous outcome this year.

* Ministry of Agriculture figure

Niger and Chad, which began the year with a minor threat because of the low number of diapausal (suspended animation) eggs laid in 1985, now face the same level of threat in 1987, due to this year's good weather, as do Mali, Burkina, Mauritania, and Senegal. Those countries began 1986 with many more diapausal eggs, but saw poor weather conditions limit grasshopper populations, and therefore the number of diapausal eggs laid this year.

Operation S.A.S. (Grasshoppers in the Sahel), directed by the PRIFAS group of the CIRAD (Center for International Cooperation in Agronomic Research for Development), now estimates infestation rates in 1987 in Niger as a 4 on a scale of 0-5, or a "high" rate of infestation. All of Niger's Sahelian neighbors, from Senegal and Mauritania across to Chad are similarly rated. This contrasts with Niger's rating of 1, or a "very low" infestation rate, at the beginning of 1986!

The desert locusts (Shistocerca gregaria) which were found in the Air Mountain areas may possibly pose a problem early in next year's rainy season as well. They have moved north, where they will breed during the winter. If climatic and vegetation conditions converge to cluster large number of locusts in small areas where vegetation is sufficient, they could evolve into a gregarious phase in which they would breed rapidly, and might eventually move southwards toward the Sahel and the rainy season of 1987.

An FAO-coordinated team of grasshopper experts will undertake a study in Niger in November or December. They will try to report on what happened there in 1986, and give a preliminary idea of what might occur in 1987.

HEALTH AND NUTRITION

A nutritional survey of children in the Agadez Department has recently been undertaken by the private and voluntary organization CARITAS, the Ministry of Health's Planning Office, and FEWS. For this survey, the department was stratified in four general zones: urban, mountainous, pastoral, and desert (see Map 3). Data collection and preliminary analysis have been completed for all but the desert zone.

The results are interesting and disturbing in one case. The following rates of malnutrition (less than 80% weight for height) were observed:

TABLE 2. Malnutrition Rates in Agadez Department

Zone	Rate	Sample Size
Urban	6.5%	495
Pastoral	6.0%	704
Mountainous	16.0%	833

Source: CARITAS/GON Cellule de Planification/FEWS

While the nutritional conditions in the pastoral zone appear surprisingly good for a rural population, the rates in the mountainous zone are disturbing. The urban rates are not alarming, but they are not as low as they might have been, given the quantity of food aid distributed in the urban centers involved (Agadez and Arlit).

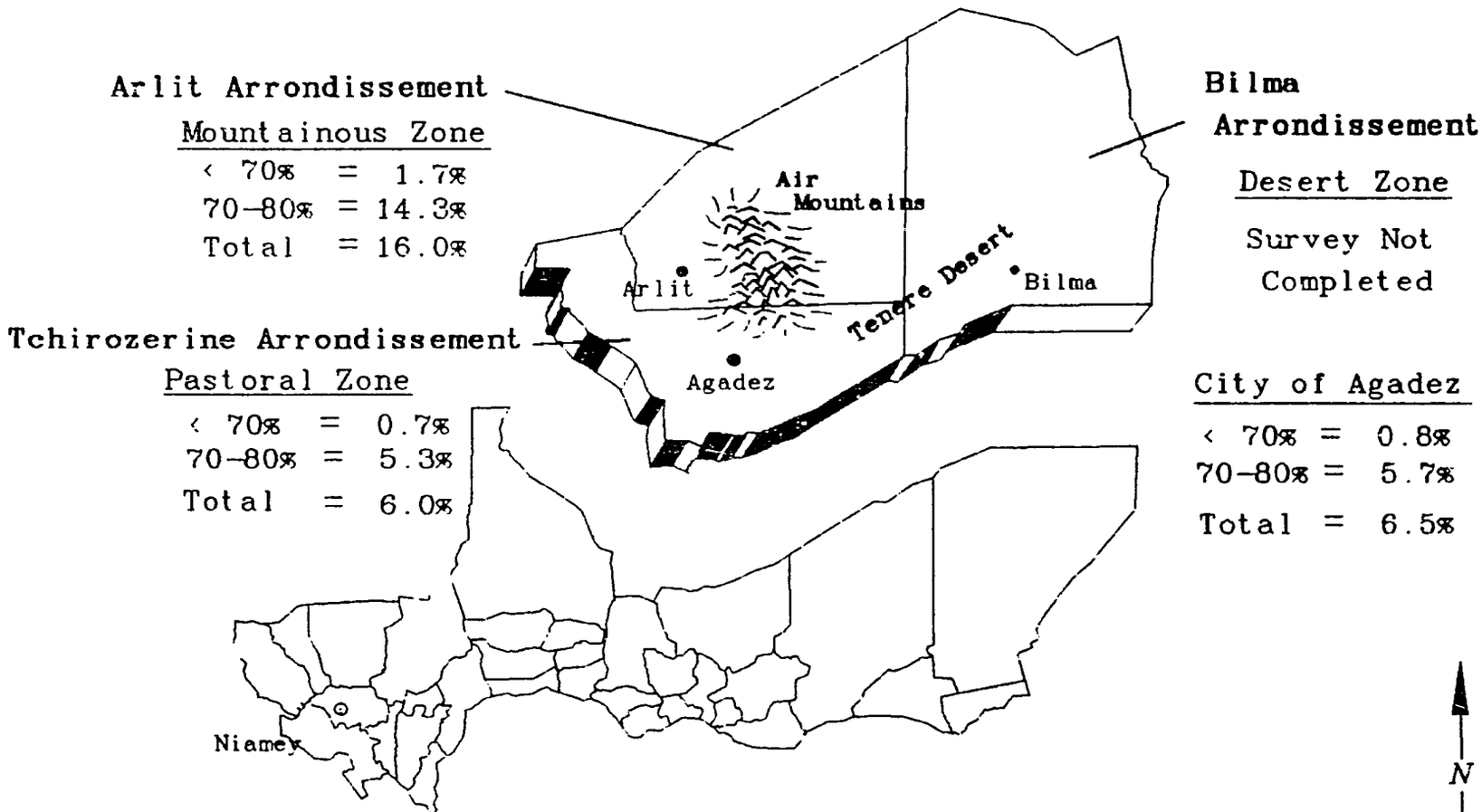
The findings seem to underline the need for more nutritional data from the rest of the country. While the departmental malnutrition rates may fall in acceptable ranges they may hide areas where the nutritional stress is great and malnutrition serious.

The desert portion of the survey will be completed in November or December.

MAP 3: NIGER

Malnutrition Survey in Agadez Department

Children 0–5 Years: Less Than 80% Weight for Height



SOURCE: CARITAS/GoN Cellule de Planification/FEWS

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FOOD NEEDS

All harvest estimates for 1986 are similar in projecting a relatively good harvest. Table 3 shows estimated production surplus or deficit, using the highest and the lowest of the three estimates given above, with differing assumptions about annual cereal needs and population figures.

Map 4 extracts portions of Table 3 to visually represent the impact of different assumptions about population size and food needs on regional surpluses and deficits.

The CILSS/FAO team projects a national production deficit of 55,000 metric tons using an average yearly cereal need of 225 kg. CILSS uses a population figure of 6,522,000 in making its calculation.

The USAID/Niger estimates of population and net production are presented using three different food need rates. The first rate is the one USAID used last year which assumes 175 kg. of cereals are needed per year for urban dwellers and pastoralists, and 205 kg for agropastoralists. The second rate is that used by the GON, a rate of 200 and 250 kg. for the same groups. Finally the third food rate is the 225 kg. figure used by CILSS.

Using the 175/205 rate, USAID projects a national production surplus of 269,000 metric tons for the year. Using the GON food need rate, the surplus is projected at only 22,000 mt. If the CILSS food need rate is used with the USAID population and production estimates, a surplus of 69,000 mt is calculated.

The FEWS population estimates have also been used with the USAID production estimate and the three food need figures to show another series of possibilities. The FEWS population estimate is built from arrondissement and urban center administrative unit estimates done by the respective local authorities.

Using these figures, the production surplus is estimated at 187,000 mt using the USAID food need rate. By contrast, production deficits of 75,000 mt and 31,000 mt are forecast using the GON and CILSS food need rates respectively.

The range of all of these estimates runs from a production surplus of 269,000 mt to a production deficit of 75,000 mt, not a disturbing picture overall. The GON's Ministry of Agriculture will release its own estimates of cereal production in November.

TABLE 3: NIGER, 1986 Food Needs and Production Surplus/Deficit

AGENCY Admin. Unit	1986 POP. ('000)	Gross Production ('000 mt) (3)	Net Production ('000 mt) (3)	Food Needs at 175/205 ('000 mt)	Production Surplus at 175/205 ('000 mt) (5)	Production Surplus at 200/250 ('000 mt) (5)	Food Needs 225 (6) ('000 mt)	Prod. Surplus 225 ('000 mt)
CILSS/FAO	6667	1700	1445	NA	NA	NA	1500	-55
USAID (1)				(4)				
Niamey	1545	357	303	278	25	-19	348	-45
Dosso	867	298	254	175	79	41	195	59
Tahoua	1223	345	293	243	50	0	275	18
Maradi	1214	377	320	244	76	25	273	47
Zinder	1279	403	343	255	88	36	288	55
Diffa	202	26	22	39	-17	-24	45	-23
Agadez	192	1	1	34	-33	-37	43	-42
TOTAL	6522	1807	1536	1267	269 *	22 *	1467	* 69
FEWS (2)								
Niamey	1830	357	303	329	-26	-78	412	-109
Dosso	894	298	254	180	74	34	201	53
Tahoua	1175	345	293	233	60	12	264	29
Maradi	1283	377	320	258	62	8	289	31
Zinder	1374	403	343	274	69	13	309	34
Diffa	197	26	22	39	-16	-23	44	-22
Agadez	211	1	1	37	-36	-41	47	-46
TOTAL	6964	1807	1536	1349	187 *	-75	1567	-31

Notes: (1) Population based on 1980 census with 2.77% increase/yr.

(2) FEWS population estimate based on reports from administrative units as of September, 1986.

(3) Both estimates of net production shown here use a 15% loss rate average

(4) USAID food need rate for urban and pastoralists, and agropastoralists, respectively.

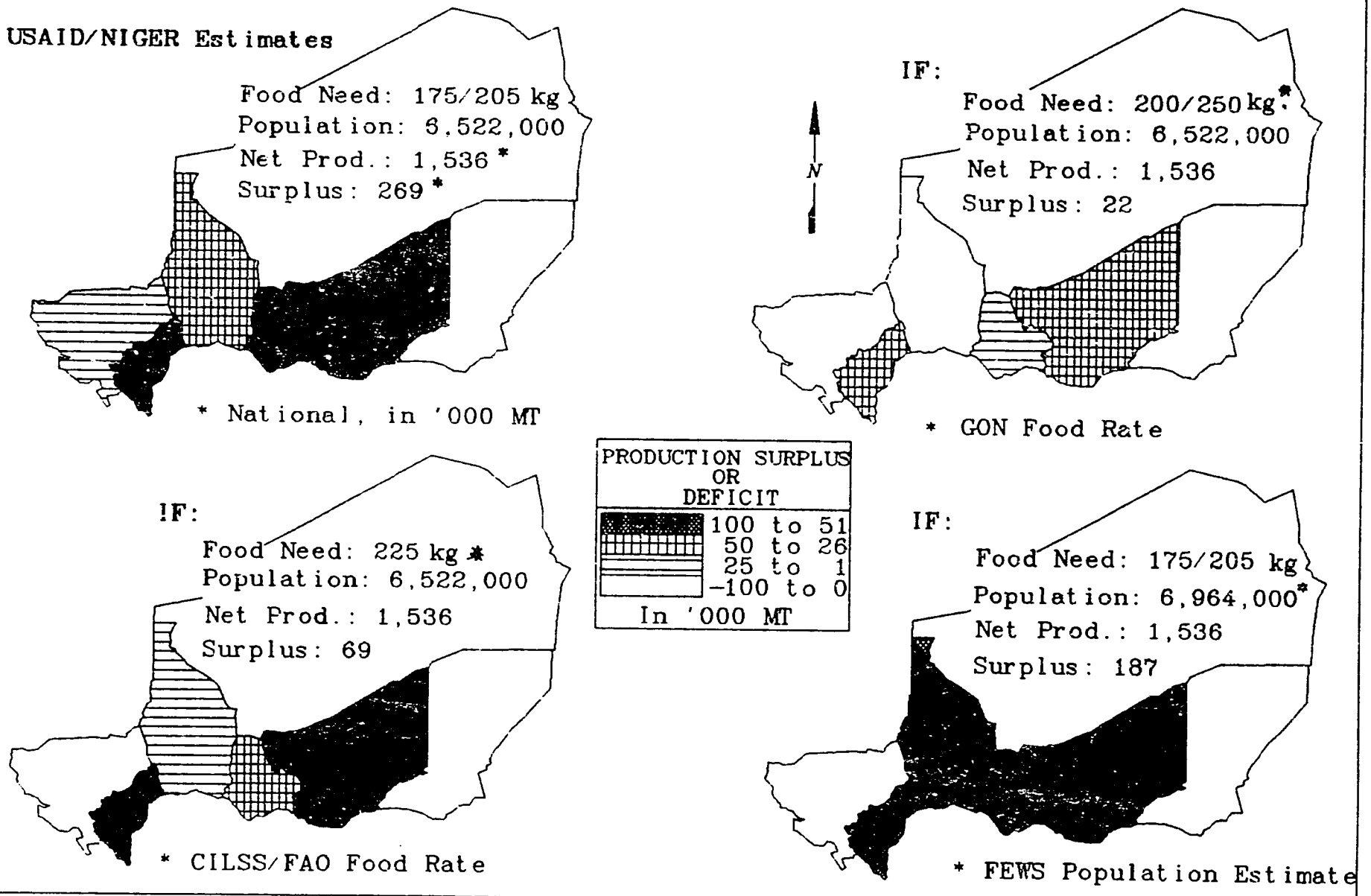
(5) GON food need rates.

(6) CILSS food need rate as reported in October, 1986.

* See Map 4

MAP 4: NIGER

Regional Production Surplus or Deficit – 4 Scenarios



Other stocks and imports are estimated by USAID to be between 187,000 and 212,000 metric tons for 1986, most of which are already in-country. Of this total, no new food aid is included. Even given the worst case presented above, a deficit of 75,000 mt, these existing stocks would cover the need easily. Additionally, Nigeria is expected to harvest a high, if not record, cereal crop. This will reduce the chances that Nigerien-produced cereals will flow towards Nigeria.