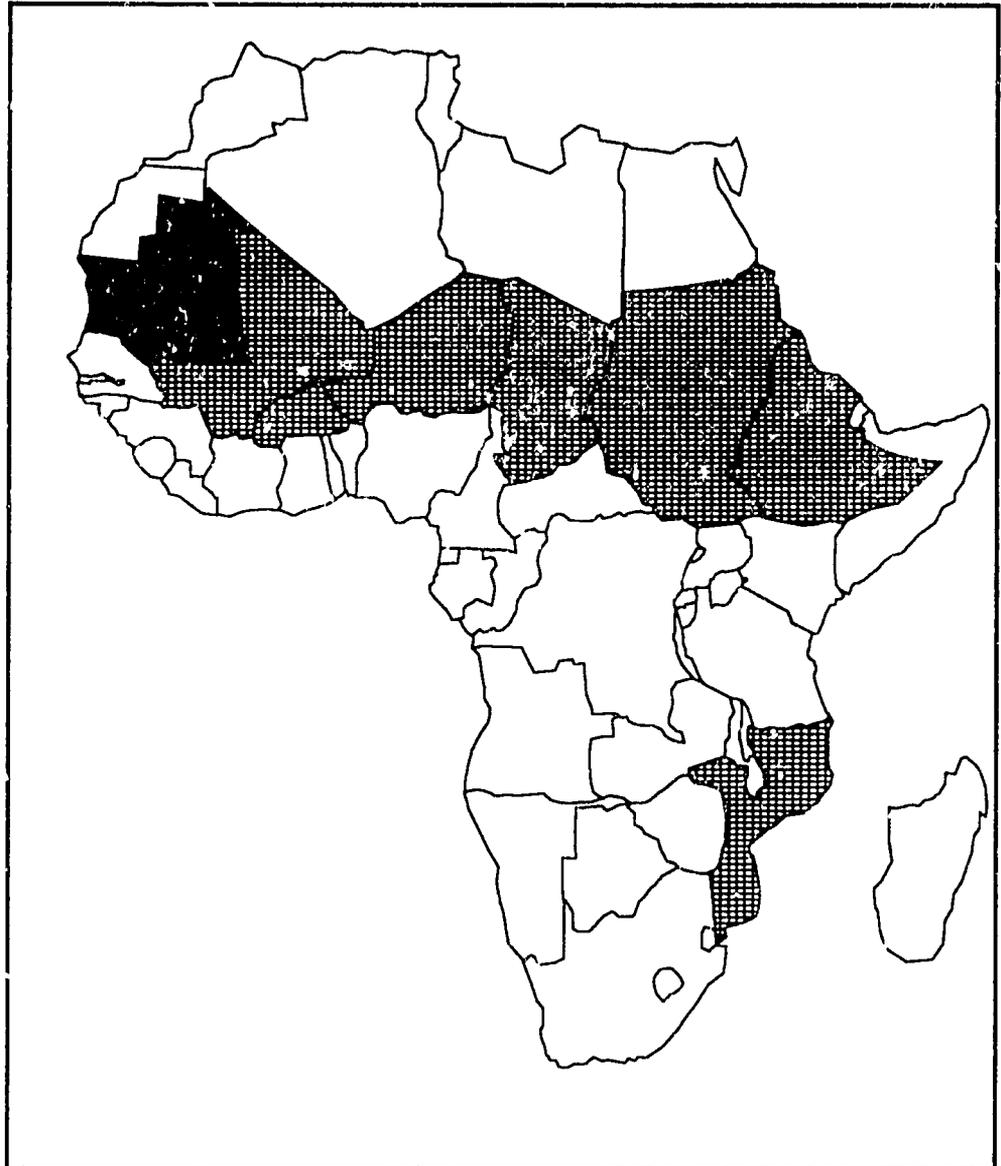


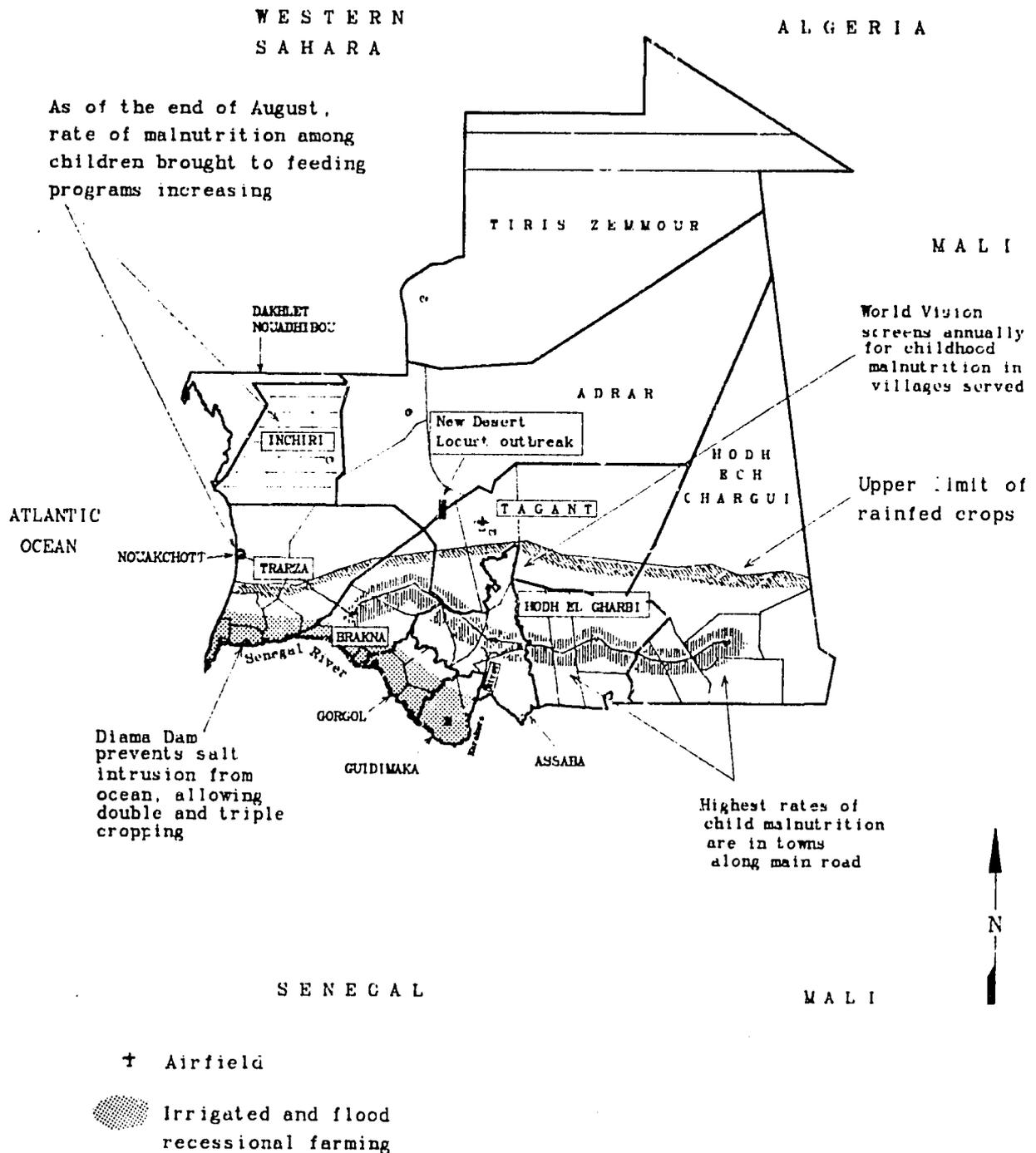
Report Number 7
December 1986

FEWS Country Report MAURITANIA



Africa Bureau
U.S. Agency
for International
Development

Summary Map



MAURITANIA

Grasshopper Season Over

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

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December 1986

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INTRODUCTION

This is the seventh of a series of monthly reports issued by the Famine Early Warning System (FEWS) on Mauritania. 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 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 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. 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, the seventh Mauritania report owes a debt to various offices of the US Agency for International Development (AID), the Oceanic and Atmospheric Administration's National Environment Satellite, Data, and Information Service's Assessment and Information Services Center (NOAA/NESDIS/AISC), USAID/Nouakchott, the Government of the Islamic Republic of Mauritania (GIRM) and the UN Food and Agriculture Organization (FAO).

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 Mauritanian rainy season has ended. The heavy September rains caused greater flooding than had been seen in recent years, inundating some 60,000 hectares of recessional cropland. The final 1986 planting should thus be large, further improving an excellent agricultural year. The aerial grasshopper control campaign, now concluded, was successful in keeping crop destruction by grasshoppers to 10% of the national harvest. The main grasshopper threat to crops ends with the cessation of the rains, but plans are already underway for 1987 grasshopper control efforts. Although Mauritania is experiencing a record harvest for the 1980s, food grain support will still be needed.

Issues

- A new outbreak of larval Desert Locusts has been identified in the southern Sahara, some 200 km north of Moudjeria (Map 2). The densities are quite low, however (0.01 to 0.1 per square meter), and control measures are being undertaken.

Key December Events

- The planting of recessional crops will be completed by the end of December. This will allow a final estimation of the 1986 grain harvest.
- Joint Mauritania/Mali grasshopper/locust egg pod surveys are planned to begin in December, and will probably continue into the succeeding quarters of calendar year 1987.

RAINFALL AND AGRICULTURE

The end of the rainy season brings with it the harvest of rainfed millet and sorghum crops. Regional estimates of yield for these crops were made by NOAA in late October, based on rainfall information available at the end of September (Table 1). There still will be, however, at least one if not two more harvests from irrigated and recessional cropland before the official start of Mauritania's growing season in July of 1987. This year's flood was greater than in recent years, with an estimated 60,000 hectares (ha) having benefitted from inundation.

Maize, sorghum and some rice are being sown as the Senegal and Karakoro Rivers recede from their October floods. The cereal product of the main recessional crop Regions (Trarza, Brakna, Gorgol and Guidimaka) will account for up to 64% of the 1986 cereal product, according to the UN Food and Agriculture Organization (Appendix 1). Once these crops have been planted, the Food and Agriculture Organization (FAO) and any other global harvest estimates, based both on yield estimates

and acreage estimates, can be verified. With the wider than usual floods, it is possible that FAO's highly positive October acreage estimate will be increased further, increasing the contribution of recessional and irrigated grains.

Table 1: NOAA/NESDIS Forecast for Rainfed Millet and Sorghum

Region	86 Fcst (kg/ha)	86 as % 85 Yld	85 Area (ha)	Estimated 86 G Prod (MT)	Rainfed GH Loss* (%)	Estimated 86 Rainfed Prod (MT)
Assaba	350	77.8	19490	6822	13.6%	5894
Brakna	350	77.8	9500	3325	13.6%	2873
Gorgol	330	126.9	15000	4950	13.6%	4277
Guidimaka	750	83.3	15000	11250	13.6%	9720
Hodh ech Chargui	340	103.0	13000	4420	13.6%	3819
Hodh el Gharbi	290	87.9	5000	1450	13.6%	1253
Tagant	350	116.7	5900	2065	13.6%	1784
Trarza	300	115.4	5200	1560	13.6%	1348
Total			88090	35842	13.6%	30968

Source: NOAA/NESDIS Cable; GIRM Letter to US Ambassador, January 1986

* See footnote to Table 4, Appendix II

GRASSHOPPERS AND LOCUSTS

1986 Campaign Overview

Due to the larger than usual grasshopper populations seen in 1985, the Government of the Islamic Republic of Mauritania (GIRM) and the donor community were aware in the fall of 1985 that grasshoppers, and possibly Desert Locusts, would be a problem for the 1986 growing season. Insecticides and equipment were pre-positioned in regional capitals; training in ground control measures was given to GIRM Crop Protection Service (CPS) personnel, agriculture extension cadres, and farmers. As grasshoppers hatched with the June rains, these groups went into action.

By the end of July, it became apparent that the infestations were growing faster than the ground campaign could manage. The Minister of Rural Development convened a meeting of the donor community which set up a coordinating committee which meets weekly. The committee is chaired jointly by the GIRM Director of Agriculture and the FAO Representative, and includes the Director of the Crop Protection Service and representatives of the FAC (French aid), FED (European Fund for Development), USAID, UNDP (UN Development Program), GTZ (Federal German aid), CARE, World Bank, FLM, World Vision and the Mauritanian

Red Cross and Red Crescent. Representatives of the Algerian and Moroccan Embassies also frequently attend meetings.

With input from the AID Office of Foreign Disaster Assistance (OFDA), the CPS and USAID/Mali, the GIRM/donor coordinating committee determined which infestations could be treated from the air (Map 2; Table 1, Appendix II) and pledged supplies, equipment and logistical support for the effort. Aerial spraying east of Kiffa was made the domain of USAID/Mali, while FAO and FED were given responsibility for aerial spraying west of Kiffa.

As of November 3, USAID/Mali had sprayed some 78,500 ha in the east, FAO and FED had sprayed some 97,400 ha in the west, and about 7,500 ha were treated from the ground. The total area that had been treated for grasshoppers by the start of November was 183,494 ha. The loss to grasshoppers is estimated by the Mission at 10% of the harvest, or 12,292 MT, a much better figure than that for 1985 (Appendix I). This loss puts the 1986 harvest at 110,631 MT. After further loss to milling (8,000 MT for rice) and seed stock (about 2,500 MT), the net 1986 cereals harvest becomes about 100,100 MT.

Overall, some 43% of Mauritania's population lives in Departments which experienced grasshopper damage in 1986 (Table 2, Appendix II), while only 34% of the country's cropland as estimated by FAO was involved in the outbreaks (Table 3, Appendix II). The effect of the grasshopper damage is not evenly distributed across Mauritania's agricultural regions, however. According to information from the Mission, Tagant Region was not affected by grasshoppers at all. In Gorgol, Guidimaka, Hodh ech Chargui and Hodh el Gharbi Regions, from 70 to 100% of the people live in Departments containing grasshopper infestations, while in Assaba, Brakna and Trarza Regions, only 45 to 55% of the people live in affected Departments (Table 2, Appendix II).

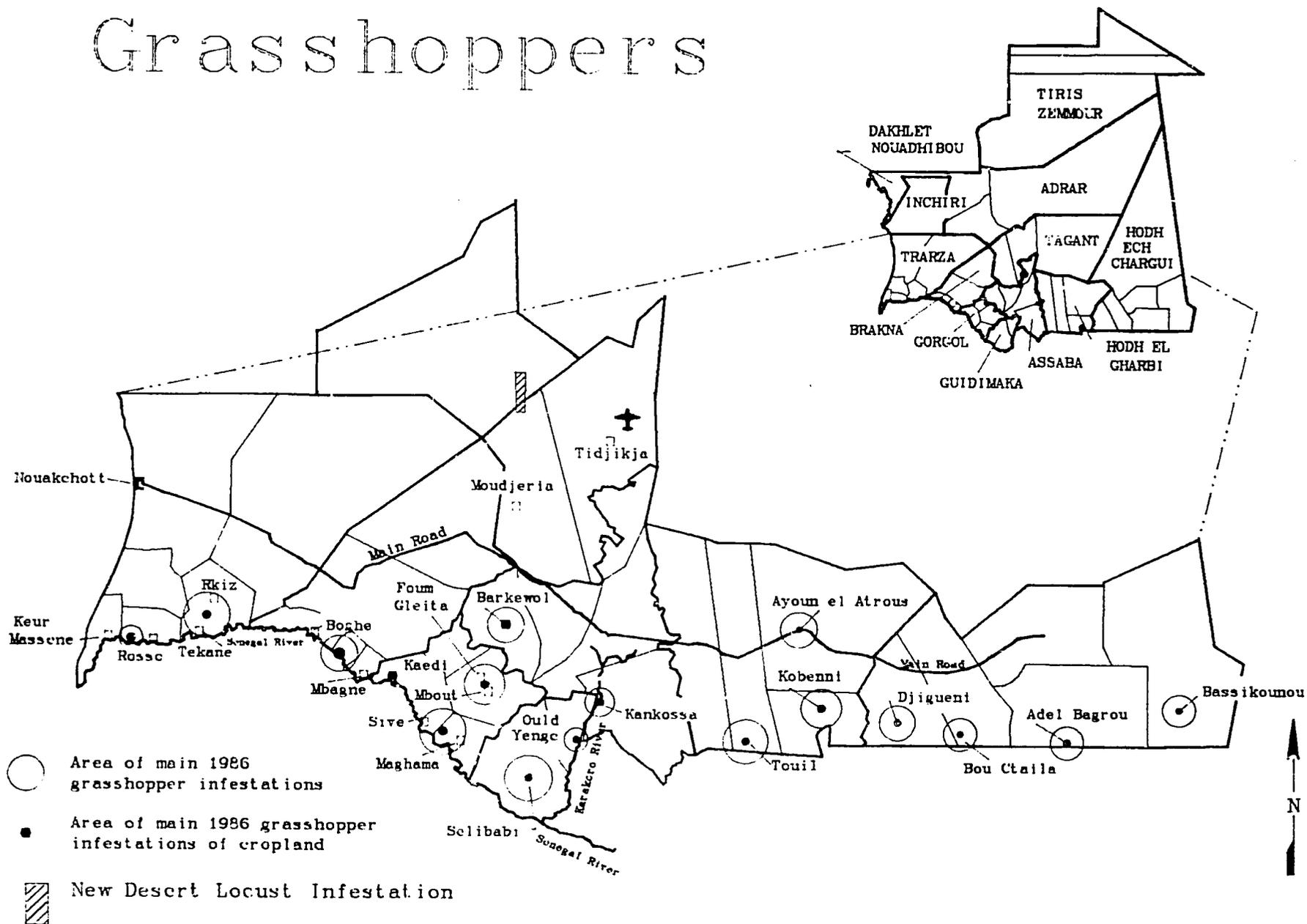
1987 Campaign

Planning for the 1987 grasshopper and locust control campaign has already begun. Lists of needed equipment and supplies have been prepared, as has the plan for pre-positioning materiel. Joint Mauritania/Mali surveys to identify grasshopper and locust egg pod sites are to begin in December and continue well into 1987.

Locusts

In early November, a new sighting of Desert Locusts in the larval (nymphal) stage was made in a 100,000 ha area about 200 km north of Moudjeria (Map 2). The sighting has been confirmed, with the density of the locust nymphs

Grasshoppers



ranging from 0.01 to 0.1 per square meter. This density is low compared to grasshopper densities in the south of the country (from 50 insects per square meter up to 150 per square meter).

On November 10, three crop protection teams departed Nouakchott for the outbreak area via four wheel drive vehicles mounted with spray rigs. Pesticides and a spray airplane were also being dispatched to Tidjikja, the site of the closest airfield to the outbreak area (Map 2). While the density of the Desert Locust nymphs is minimal, their presence in that area this late in the year is fairly uncommon, and is sufficient to make the Algerian and Moroccan anti-pest organizations nervous. The prompt control efforts should keep the situation from getting out of hand.

NUTRITION

There is no new information this month on the nutritional status of Mauritians. It is presumed, however, that trends seen at the end of the summer have remained in effect (Summary Map). While the nutritional status of borderline or moderately malnourished children may respond quickly to foods available after a good harvest, those children who are severely malnourished will require substantially more intervention in order to recover. The World Vision/Mauritania team may have completed a November nutrition status assessment of the children in the villages it serves, as tentatively planned, and results of that survey may become available soon.

FOOD FLOWS/ NEEDS

As of early November, there were 70,000 MT of food-aid stock in Mauritania. At that time, the UN World Food Program (WFP) expected an additional 38,000 MT of grain to arrive from all sources before the end of the calendar year. Thus, with a net cereals harvest of 100,100 MT, it is expected that Mauritania will have a stock of 208,100 MT of grain at the start of 1987.

The present population of Mauritania is estimated to be 1,827,786 people (CEDES;FEWS/Mauritania). Using the FAO standard grain portion for Mauritania of 165 kg per capita per year, Mauritania will need 301,600 MT of grain for calendar year 1987. Therefore the stock and production grain deficit at the start of 1987 will be on the order of 93,500 MT. It is not known what the commercial grain imports will be for 1987. Last year this figure was about 42,000 MT for the period from November 1985 to August 1986. If another 42,000 MT were imported commercially in 1987, 51,500 MT of grain would have to be supplied through other sources in order to maintain a

grain portion of 165 kg per capita. Without the commercial grain imports, the amount to be procured via non-commercial means would remain at 93,500 MT.

Appendix I

Table 1: Total 1986 and 1985 Grain Product, by Region

Region	Area (ha)	Yield (kg/ha)	Product (mt)	Loss (%)	Net Prod (mt)	Net Yld (kg/ha)
1986 (FAO Estimate)						
Assaba	19300	400	7720			
Brakna	21720	557	12090			
Gorgol	71330	606	43243			
Guidimaka	11950	623	7445			
Hodh ech Chargui	75000	316	23700			
Hodh el Gharbi	28500	352	10025			
Tagant	8000	400*	3200			
Trarza	9500	1632	15500			
Total 1986	245300	501	122923	14%	105714	431
1985 (GIRM Report)						
Assaba	23000	459	10561	37	6698	291
Brakna	21751	520	11320	27	8270	380
Gorgol	41515	441	18324	27	13363	322
Guidimaka	17712	823	14570	27	10656	602
Hodh ech Chargui	22700	274	6230	34	4106	181
Hodh el Gharbi	11000	303	3330	22	2585	235
Tagant	7500	323	2426	36	1564	209
Trarza	23870	566	13508	28	9674	405
Total 1985	169048	475	80269	29%	56916	337

Source: FAO/Mauritania; FEWS/Mauritania; GIRM Letter to US Ambassador, January, 1986

* A second report of the FAO estimate for Tagant was 8000 ha, 1511 kg/ha and 12090 MT. Tagant is well north of any permanent river. A yield of 1511 kg/ha is highly unlikely. If the FAO production estimate is indeed 12090 MT, the acreage figure must be incorrect.

Appendix II

Table 1: Main 1986 Grasshopper Infestations

REGION/Department (Site)	Population	Area (sq. km.)	Area Infested (ha)	Crop Area Infested (ha)
ASSABA				
Barkewol el Abiod	48,256	6,700	120,000	7,000
Kankossa	42,134	11,700	80,000	5,000
BRAKNA				
Boghe to Bababe to M'Bagne	99,962	3,100	120,000	10,000
GORGOL				
Kaedi to Sive to Maghama	54,677	6,600	207,000	13,000
M'Bout	42,423	5,200	150,000	5,000
GUIDIMAKA				
Ould Yenge	26,377	3,700	50,000	3,000
Selibabi	36,108	6,600	200,000	4,000
HODH ECH CHARGUI				
Amourj (Adel Bagrou)	40,562	9,300	100,000	4,000
Bassikounou	41,980	16,500	100,000	3,000
Djigueni	33,580	3,900	120,000	4,000
Timbedgha (Bou Claita)	49,371	9,100	100,000	3,000
HODH EL GHARBI				
Ayoun el Atrous	33,483	17,900	120,000	2,000
Kobenni	33,483	9,500	150,000	5,000
Tintane (Touil)	59,220	11,400	180,000	4,000
TRARZA				
Keur Massene to Rosso	79,869	4,200	50,000	6,000
Rkiz to Tekane	61,357	7,700	200,000	6,000
TOTAL	782,842	133,100	2,047,000	84,000

Source: Mission Cable; FEWS/Mauritania

Table 2: Population in Areas Affected by Grasshoppers

Region	Population	Area (sq. km.)	Population in Affected Departments	% Region Pop in Affected Departments
Adrar	82,134	65,900	-	-
Assaba	200,519	36,600	90,390	45.1%
Brakna	182,904	33,000	99,962	54.7%
Dakhlet Nouadhibou	30,517	17,800	-	-
Gorgol	132,207	13,600	97,100	73.4%
Guidimaka	62,485	10,300	62,485	100.0%
Hodh ech Chargui	224,156	182,700	165,493	73.8%
Hodh el Gharbi	151,949	53,400	126,186	83.0%
Inchiri	13,641	46,800	-	-
Nouakchott	344,224	-	-	-
Tagant	116,560	95,200	-	-
Tiris Zemmour	21,036	252,900	-	-
Trarza	265,454	67,800	141,226	53.2%
Total	1,827,786	876,000	782,842	42.8%

Source: FEWS/Mauritania; Mission Cable

Table 3: Crop Area Infested by Grasshoppers

Region	Area Infested (ha)	% Region Area Infested	Crop Area Infested (ha)	% Infested Area in Crops	FAO Area in Grains (ha)	% FAO Cropland Infested
Adrar	-	-	-	-	-	-
Assaba	200,000	5.46%	12,000	6.0%	19,300	62.2%
Brakna	120,000	3.64%	10,000	8.3%	21,720	46.0%
Dakhlet Nouadhibou	-	-	-	-	-	-
Gorgol	357,000	26.25%	18,000	5.0%	71,330	25.2%
Guidimaka	250,000	24.27%	7,000	2.8%	11,950	58.6%
Hodh ech Chargui	420,000	2.30%	14,000	3.3%	75,000	18.7%
Hodh el Gharbi	450,000	8.43%	11,000	2.4%	28,500	38.6%
Inchiri	-	-	-	-	-	-
Nouakchott	-	-	-	-	-	-
Tagant	-	-	-	-	8,000	-
Tiris Zemmour	-	-	-	-	-	-
Trarza	250,000	3.69%	12,000	4.8%	9,500	126.3%
Total	2,047,000	2.34%	84,000	4.1%	245,300	34.2%

Source: Mission Cable; FAO

Table 4: Crop Loss to Grasshoppers

Region	FAO Region Product (MT)	% FAO Cropland Infested	Product Affected (MT)	% Loss Due to GH*	Product Lost* (MT)	Post-GH Product (MT)
Adrar	-	-	-	-	-	-
Assaba	7,720	62.2%	4,800	27%	1,303	6,417
Brakna	12,090	46.0%	5,566	27%	1,511	10,579
Dakhlet Nouadhibou	-	-	-	-	-	-
Gorgol	43,243	25.2%	10,912	27%	2,962	40,281
Guidimaka	7,445	58.6%	4,361	27%	1,184	6,261
Hodh ech. Chargui	23,700	18.7%	4,424	14%	600	23,100
Hodh el Gharbi	10,025	38.6%	3,869	14%	525	9,500
Inchiri	-	-	-	-	-	-
Nouakchott	-	-	-	-	-	-
Tagant	3,200	-	-	-	-	3,200
Tiris Zemmour	-	-	-	-	-	-
Trarza	15,500	126.3%	19,576	27%	4,207	11,293
Total	122,923	34.2%	53,509	23%	12,292	110,631

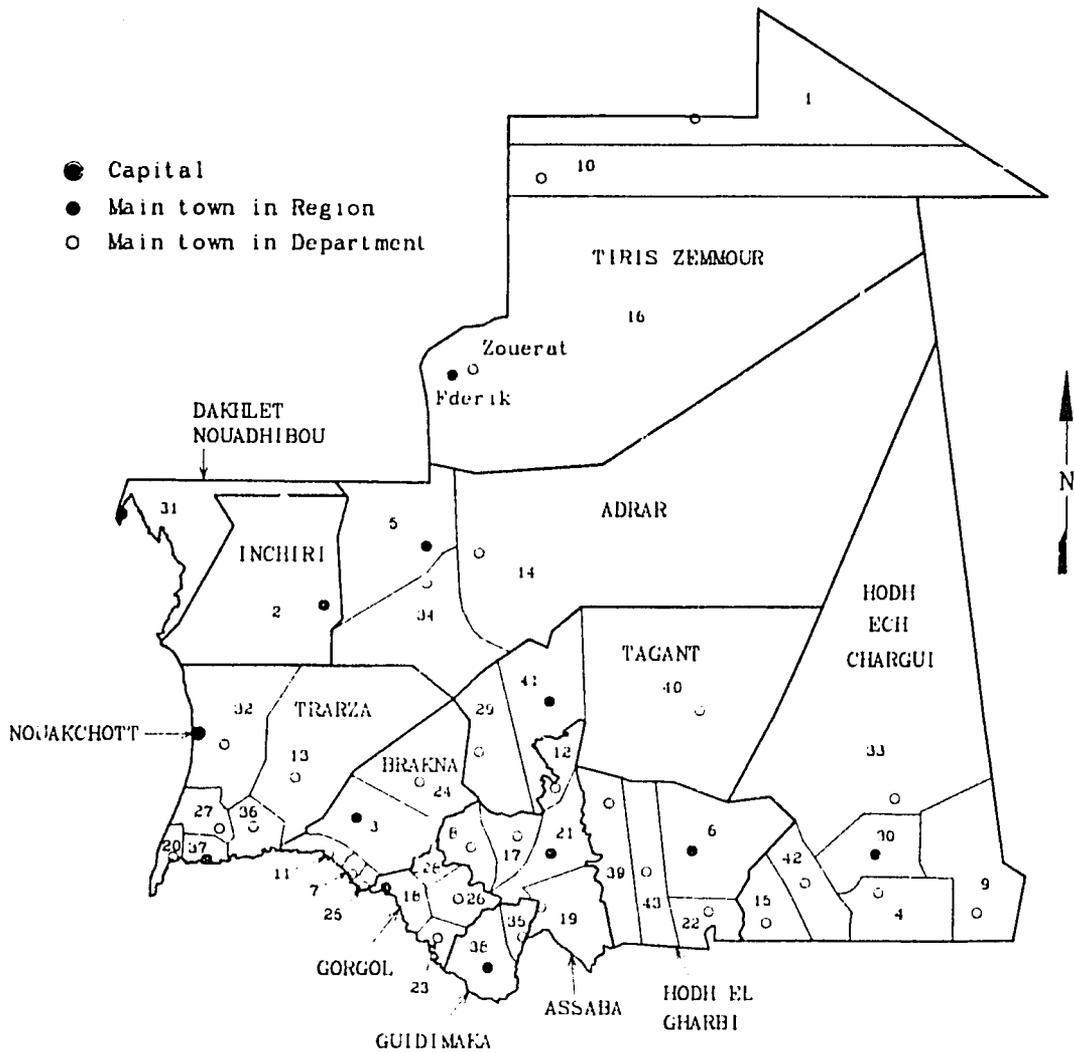
Source: Mission Cable; FAO; FEWS/Mauritania

* The crop loss to grasshoppers was given by the Mission as 10% of the total harvest. The affected cropland, however, is not evenly spread over all of Mauritania's cereals area. Mauritania's various regions differ in climate and geography. In Mali, which also has a wide spread of climate and geography, it was found that the grasshopper control effort kept losses to 5% in Kayes and Koulikoro Regions, which are most akin to the Hodhs, while in Mopti/Gao Region, more like the Senegal River area, the loss was held to 10%.

To estimate what the rate of crop loss to grasshoppers would be in each Mauritanian region, it was decided to mimic the findings in Mali and assign to the riverine regions a loss rate twice that of the two Hodh regions. Starting with the total crop loss of 12,292 MT and the affected product in each region shown in Table 4, it was deduced that the two loss rates must be approximately 27.2% and 13.6% respectively. These two rates were then used to calculate the per region crop loss to grasshoppers. Note that while yield varies with the crop and the growing conditions, it is unknown which crops the grasshoppers had infested, so the calculations have been made as if the damage were evenly distributed across an affected Department.

MAP 3: MAURITANIA

Departments (Preliminary)



1. Ain Ben Tili	TZ	16. Fderik/Zouerat	TZ	30. Nema	HC
2. Akjoujt	IN	17. Guerou	AS	31. Nouadhibou	DN
3. Aleg	BR	18. Kaedi	GO	32. Oued Naga	TR
4. Amourj	HC	19. Kankossa	AS	33. Oualata	HC
5. Atar	AD	20. Keur Massene	TR	34. Oujeft	AD
6. Ayoun el Atrous	HG	21. Kiffa	AS	35. Ould Yenge	GU
7. Bababe	BR	22. Kobenni	HC	36. Rkiz	TR
8. Barkewol el Abiod	AS	23. Maghama	GO	37. Rosso	TR
9. Bassikounou	HC	24. Magta Tahjar	BR	38. Selibabi	GU
10. Bir Mogrein	TZ	25. M'Bagne	BR	39. Tamchekket	HC
11. Boghe	BR	26. M'bout	GO	40. Tichit	TA
12. Boumeird	AS	27. Mederdra	TR	41. Tidjikja	TA
13. Boutlimit	TR	28. Monguel	GO	42. Timbedgha	HC
14. Chinguetti	AD	29. Moudjeria	TA	43. Tintane	HG
15. Djigueni	HC				

Source: FEWS/Mauritania 1986; IGN 1980
FEWS/PWA, December 1986