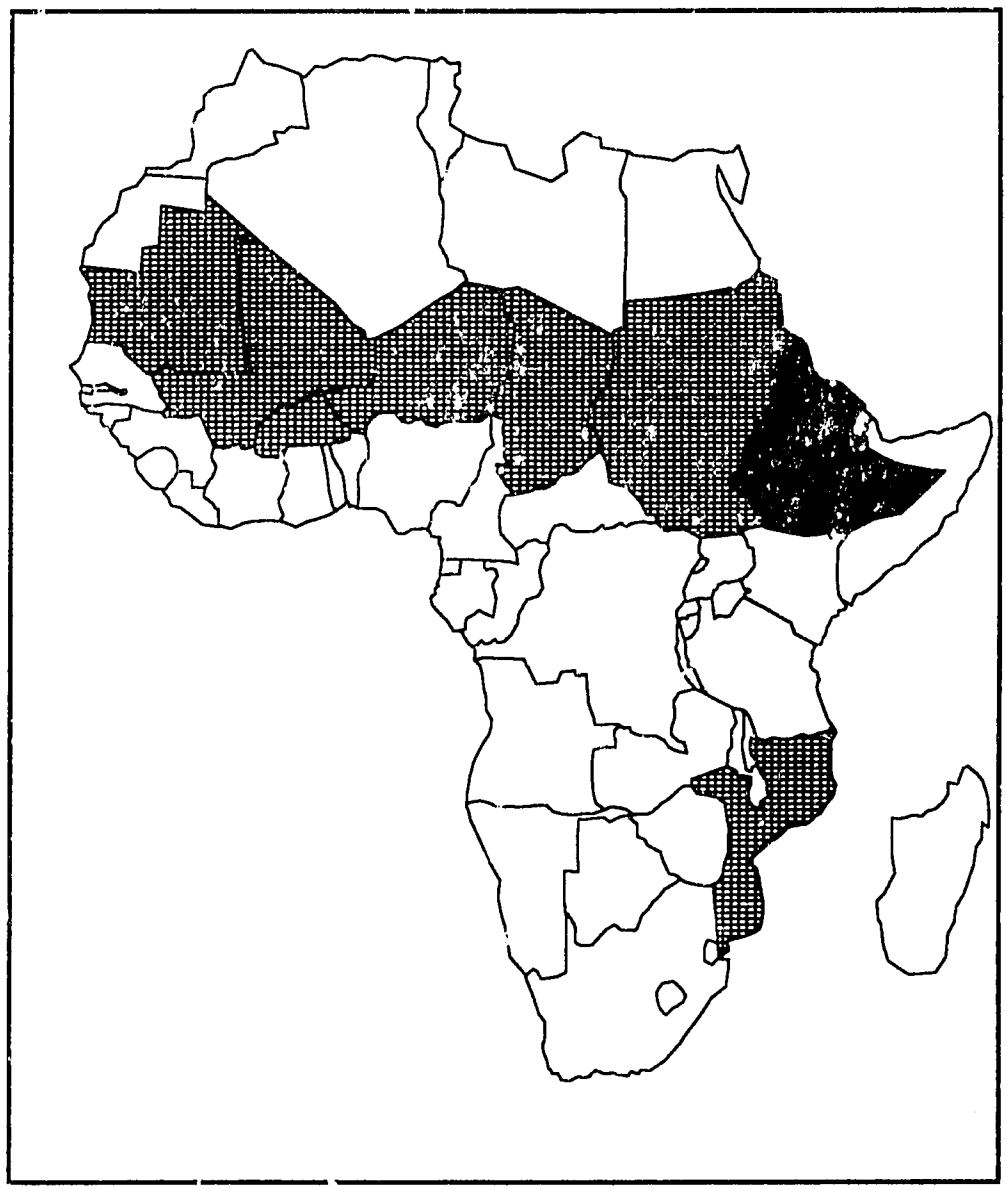
Report Number 5
October 1986

## FEWS Country Report

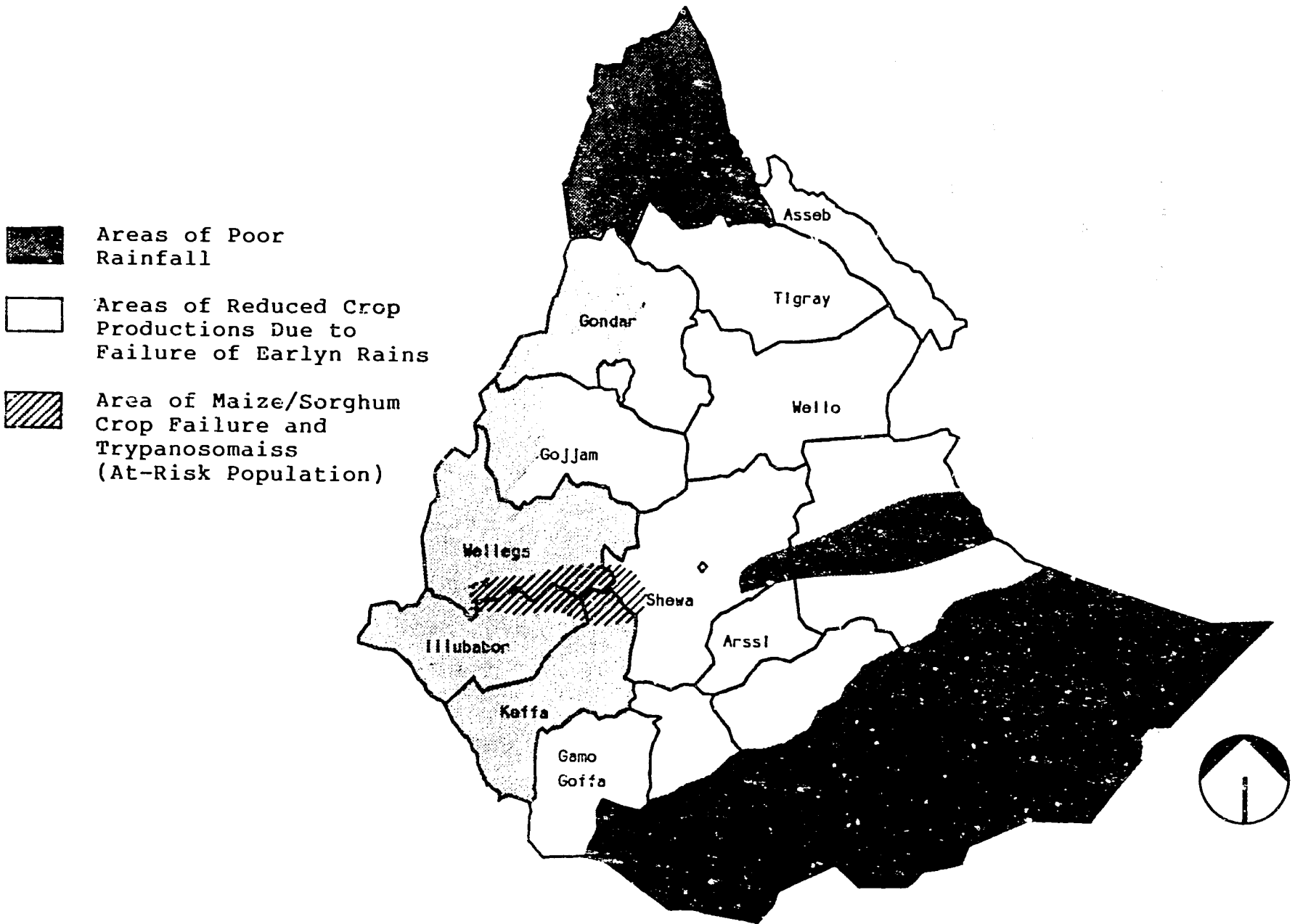
# ETHIOPIA



Africa Bureau
U.S. Agency
for International
Development

Map 1

# ETHIOPIA: Summary Map




Map: FEWS/PWA, October, 1986

Famine Early Warning System Country Report

# ETHIOPIA

## 1986 - A Good Harvest

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

Prepared by
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October 1986

Contents

## INTRODUCTION

This is the fifth of a series of monthly reports issued by the Famine Early Warning System (FEWS) on Ethiopia. It is designed to provide decision makers 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 decision makers, 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, trans-port, 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.

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

**SUMMARY**

An good harvest combined with massive carryover food aid stocks insures that no new emergency food aid will be required in Ethiopia during 1987. Except for parts of Eritrea and the western Regions, all regions (especially those most at-risk during 1986) will have harvests greater than last year. Undistributed food aid stocks as of December 31, 1986 should total approximately 533,000-MT, sufficient to feed 3,230,323 people full emergency rations for a year. Preliminary estimates for 1987 forecast 3,972,630 people at risk who should require approximately 471,000MT of food aid. Available malnutrition data show relatively low levels, and suggest that emergency food aid programs have had the effect of limiting the impact of the 1984-85 drought. Official production figures for 1985 are finally available (released in September). Their low level suggests that additional and uncounted food grains were produced in 1985 but not counted in official figures. The threat of a locust plague in Ethiopia did not materialize and will have no effect on this year's crop production.

Issues

- o The Ethiopian economy will undergo a depression in 1987 as foreign relief operations are phased out. This anticipated depression could affect the amount of commercial food imports during 1987.

- o Locust activity in winter breeding areas must be monitored to plan for the 1987 campaign. Gregarious breeding along the Red Sea coast, on the Arabian Peninsula and in Somalia could lead to a large influx of locusts into the agricultural zones of Ethiopia in June of 1987.

Key October Indicators

- o In western Ethiopia the early failure of the Belg rains, in March through May, destroyed prospects for the usual main season crops of maize and sorghum. The total production of substitutes for these crops will also be refined during October through December.

**PESTS**

Locusts

The pest situation in Ethiopia was relatively quiet and controllable with no unusual prospects for crop damage. The Ethiopian Plant Protection Office has no sightings of unusual concentrations of locusts, along the Red Sea Coast of Eritrea Region, where they should be expected at the end of September. Reports of locusts in western Tigray Region could correlate to reports of grasshopper infestations in northern Gonder Region. The confusion of grasshoppers with locusts is common among unschooled observers and it is likely that Tigrayan locusts are in fact grasshoppers and therefore of limited threat to non-infested areas. The grasshopper concentrations are

reported to be on the order of 20,000 per hectare, or 2 per square meter. These concentrations are thought high in Ethiopia, but pale in comparison to levels reported in West Africa. While not a migratory pest, grasshoppers have been redefined for this year as falling under the control mandate of the Ethiopian government and steps have been taken to minimize their effects through spraying.

Reports, by the Relief Society of Tigray, of locusts in eastern Tigray overstate the threat to agriculture as the areas affected are grasslands. These sightings are identified by the Ethiopian government as Tree Locust, not Desert Locusts. Desert Locusts should be sighted now, in the lowlands of eastern Ethiopia and along the Red Sea coast, as they move to winter breeding grounds. If large numbers of locusts migrate out of Eritrea and Tigray to winter breeding grounds along the Red Sea Coast of Ethiopia, Somalia and the Arabian Peninsula then possible locust destruction in Eritrea and Tigray could be judged to have been high.

Locust activity in winter breeding areas must be monitored to assess the threat to next year's agricultural seasons. The production of breeding swarms escaping back into Ethiopia's agricultural areas next summer could lead to a potential plague situation. This potential exists every year.

Armyworms

Armyworm, a continual threat to agriculture in Ethiopia, failed to generate a destructive second generation during August or September due to a combination of control measures and meterological conditions. Armyworm depredations will have negligible impact on the current agricultural season.

**RAINFALL AND VEGETATION**

Rainfall in September and the first part of October bodes well for an good harvest. Rains continued into October in those areas where they were critical for a better harvest than last year. There was substantial rainfall in the central and southern highlands during the first week of October, as well as showers in the highlands of Hararghe Region. In the west, continued rainfall may ameliorate the failure of the maize and sorghum crops by bringing reasonable yields from replacement crops. The only agricultural areas with inadequate rainfall were in Eritrea Region and in the Rift Valley.

The last of the main season vegetation indices, derived from satellite images confirm these rainfall reports, with cloud cover obscuring important agricultural areas.

Vegetation is shown to be good in most crop producing areas, with the exceptions of Eritrea Region and the Rift Valley. In the east and south, vegetation imagery shows lowland pastoralist areas to be poorer than last year. This does not bode well for the rehabilitation of already economically marginal pastoral people. The images also show some decline from last year in regions of excellent rainfall (the highlands of Wello and northern Shewa Regions). This could be attributed to the early senescence of barley and sorghum, but is in any case not a reflection of current crop conditions. (See Images 1 and 2.)

## CROP PRODUCTION

All signs point to a harvest better than 1985, in all but the westernmost regions of Ethiopia and Eritrea Region. Total production of cereals and pulses during the current main season should reach as high as, or higher than, the 6,284,000MT estimated here. Production increases will be most obvious in just those Regions judged most at risk in 1985, with the exception of Eritrea Region where an early end to the rains in August will severely limit total production to approximately the same as last year. (See Map 2)

**Table 1: Estimated 1986 Total Main Season Production and Official Estimates of 1985 Main Season Production of Cereals and Pulses by Region. (Private Sector, State Farms and Cooperatives, Thousands of Metric Tons)**

| Region | 1985 Production (Official) | 1986 Production (Estimated) |
|---|---|---|
| Arssi | 431.3 | 640.0 |
| Bale | 77.2 | 172.5 |
| Eritrea | 134.7 | 143.0 |
| Gamo Gofa | 68.7 | 127.0 |
| Gojjam | 789.8 | 688.9 |
| Gonder | 524.9 | 529.7 |
| Hararghe | 227.7 | 363.0 |
| Illubabor | 118.6 | 126.8 |
| Keffa | 272.1 | 224.8 |
| Shewa | 1,182.7 | 1,782.0 |
| Sidamo | 128.3 | 185.0 |
| Tigray | 163.6 | 207.0 |
| Wellega | 372.8 | 402.2 |
| Wello | 378.8 | 692.5 |
| Total | 4,871.2 | 6,284.0 |

IMAGE 1: Ethiopia, Negative Changes in NOAA Vegetation Images For September 11-20, 1986 As Compared To The Same Period In 1985.

Ethiopia, Neg Vegetacion Image, September 11-20, '85-'86

| | | |
|---|---|---|
| 63173 | 53.9037% | No Change, or Positive Change |
| 26669 | 22.7556% | Clouds in Either Image |
| 17107 | 14.5935% | 1 Category Decline |
| 6141 | 5.2389% | 2 |
| 2559 | 2.2177% | 3 |
| 1007 | 0.8592% | 4 |
| 504 | 0.4300% | 5 or more Category Decline |

IMAGE 2: Ethiopia, Positive Changes In NOAA Vegetation Images For September 11-20, 1986 As Compared To The Same Period In 1985.

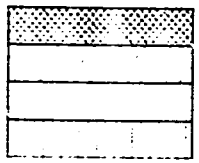
Ethiopia, Pos Vegetation Image, September 11-20, '85- 86

| | | |
|---|---|---|
| 67945 | 54.5659% | No Change, or Negative Change |
| 26665 | 21.7559% | Clouds in Either Image |
| 18437 | 15.7318% | 1 Category Improvement |
| 4865 | 4.1546% | 2 |
| 1958 | 1.6943% | 3 |
| 810 | 0.6911% | 4 |
| 474 | 0.4045% | 5 or more Category Improvement |

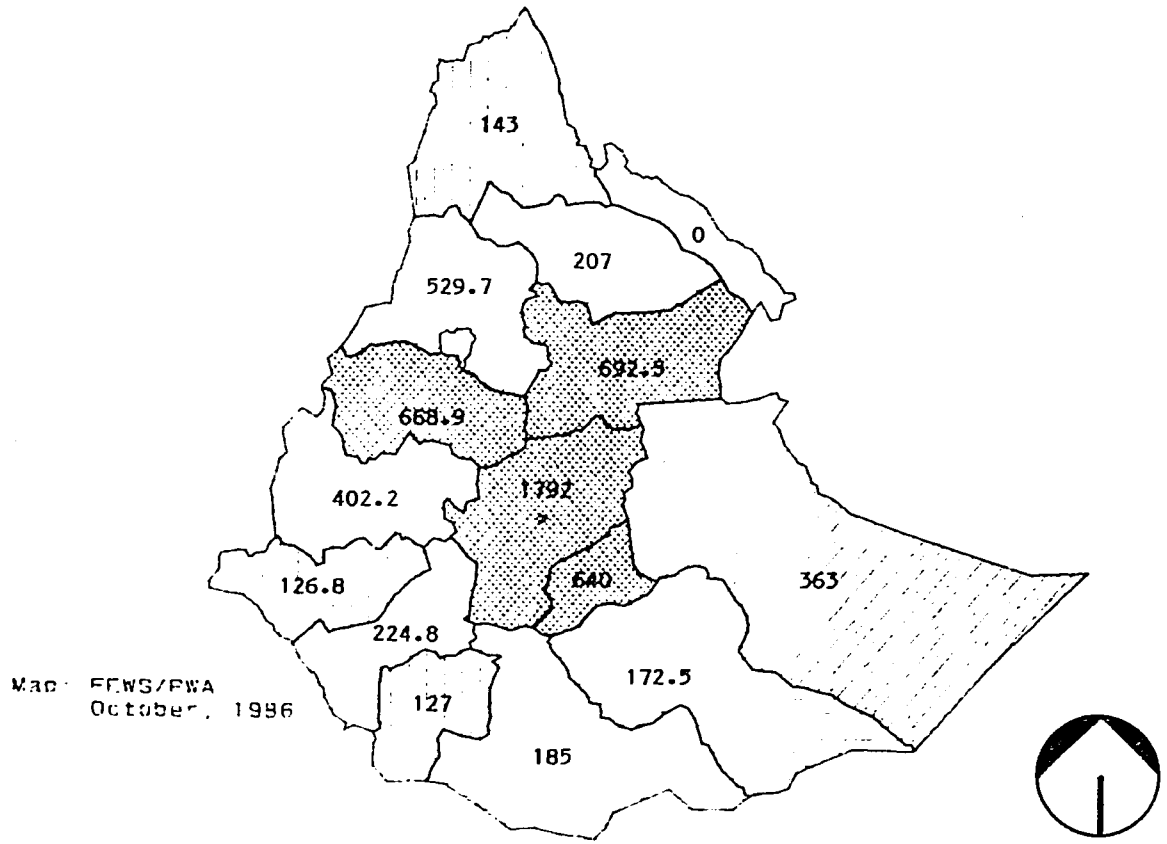
# MAP 2: ETHIOPIA, 1986 CROP PRODUCTION

ESTIMATED 1986 MAIN SEASON PRODUCTION OF GRAINS AND PULSES

000's Metric Tons



529.7 to 1782
224.8 to 529.7
143 to 224.8
126 to 143




Map: FEWS/EWA
October, 1986

Total official production during the 1985-86 season was 5,067,000MT (counting 196,000MT for 1986 Belg season production). Given the relatively good (compared to 1985) nutrition levels extant in the country this year, this production estimate must considerably understate reality. FEWS, for example, estimated actual Belg season production in 1986 at 350,000MT, fully 80% higher than the official figure. For Wello Region, the Ethiopian Relief and Rehabilitation Commission (RRC) projects a food aid requirement in 1986 of 327,900MT. Emergency food aid into Wello will total (at most) 172,800MT, leaving a net deficit of 155,100MT. Yet, monitoring of childhood nutrition shows childhood malnutrition in Wello to be around 4%, about normal for Ethiopia. The clear inference is that more food was available within Wello Region (there is no free movement of grains between Regions) than anticipated by the RRC. This food could have been from farmer stocks, or from unforeseen production, or a combination of the two. Whether from stocks or from unseen 1985 production, this inferred food supply has never been reported to, or by, the Ethiopian government.

All indications are that the 1986-87 crop year is good and production should reach at least normal levels in most of the country. Based on reported improvements by region, FAO assessments, and an estimate of official under reporting, total cereal and pulse production in the 1986-87 crop year is forecast to be at least 6,534,000MT.

The net production of cereals and pulses, after deducting for seed and losses, should be 5,194,530MT. Root crops and milk production add an additional 966,000MT of cereal equivalent to produce a total available to the population for consumption, during 1987, of 6,160,530MT. Emergency food aid stocks, commercial imports and regular food aid programs (see FOOD AID STOCK) should add an additional 1,008,000MT for a grand total of 7,168,530MT of food for 1987. This is only 81,478MT less than Ethiopia's predicted consumption requirement for 1987. If this deficit actually exists in 1987 it cannot be ascribed to emergency needs. (See People At-Risk)

**FOOD AID STOCKS**

Approximately 900,000MT of emergency food aid are expected to arrive in Ethiopia during 1986. In-country stocks of emergency food aid, as of December 31, 1985, were 305,000MT (The UNOEOA recently negotiated a new figure with the Ethiopian government of 275,000MT which could be a political solution to a touchy political problem). Distributions of emergency food aid during 1986 are expected to total no more than 672,000MT. On

December 31, 1986 emergency food aid stocks in Ethiopia will total at least 533,000MT. Emergency food aid distributions should decline, based on food aid need, as the harvest comes in September through December (Table 2). Some relief organizations, however, are likely to continue distributing food aid at current levels until a final evaluation at the end of the year. The food they deliver in excess of need will be in the hands of recipients and is the functional equivalent of official emergency food aid carryover stocks.

**Table 2: Distributions and Estimated Distributions of Food Aid During 1986 (Metric Tons)**

| Month | Total |
|---|---|
| January | 37,800 |
| February | 46,800 |
| March | 48,600 |
| April | 48,400 |
| May | 50,300 |
| June | 63,300 |
| July | 68,600 |
| August | 68,600* |
| September | 65,000* |
| October | 60,000* |
| November | 60,000* |
| December | 55,000* |
| Total | 672,400* |

* Estimated maximum distributions, distributions actually required during these months should decline from September through December due to the progressing harvest.

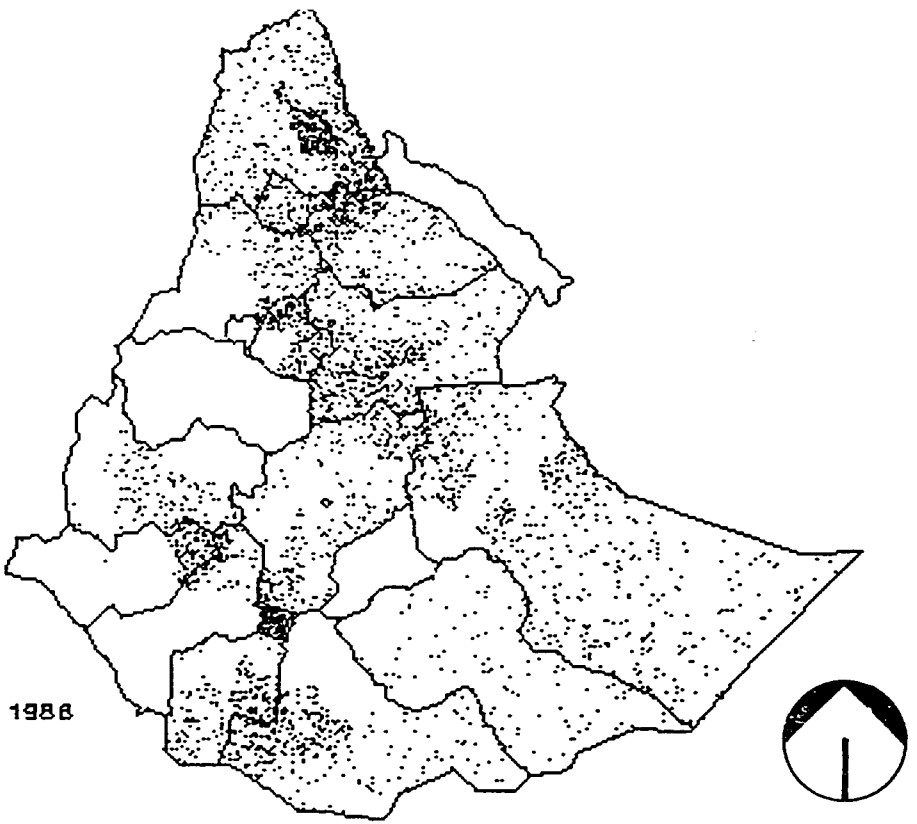
Sources: Various governmental, international and private voluntary organizations.

## PEOPLE AT-RISK

As a result of the current harvest the number of people at-risk in Ethiopia should decline drastically from a 1986 high of 7,165,000 to an estimated 3,973,000. Ethiopian officials estimate that, in any given year, even with optimal meterological conditions, at least 2,000,000 people would require food aid. These people are not at-risk from drought or warfare but require food aid because of the structure of the Ethiopian economy, over population in rural areas, and because of government policies that reduce farmer incentives to grow more than the margin for survival. (See Maps 3 and 4.)

# MAP 3: ETHIOPIA, POPULATION AT-RISK 1987

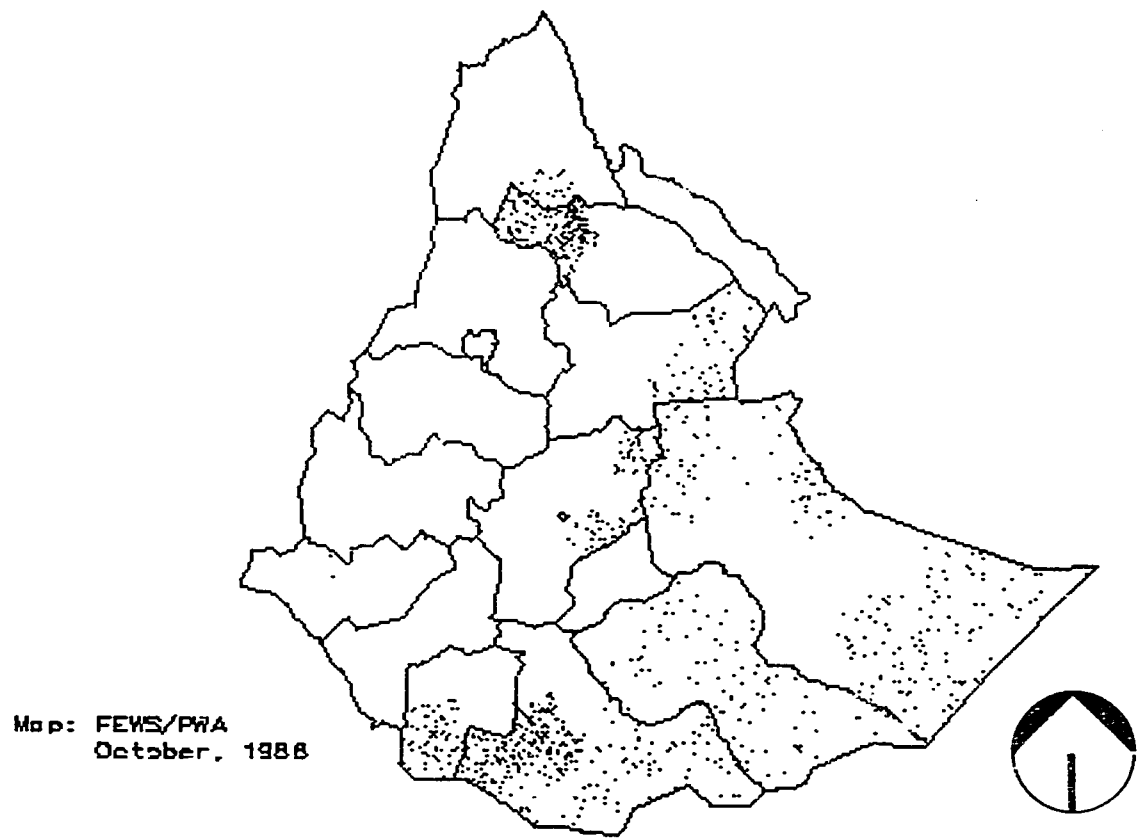
EACH DOT EQUALS 1000 PEOPLE



Map: FEWS/PWA
October, 1988

# MAP 4: ETHIOPIA, PASTORAL PEOPLE AT-RISK

PASTORALISTS AT-RISK IN 1987: EACH DOT EQUALS 1000 PEOPLE



Map: FEWS/PWA
October, 1988

**Table 3: Populations At-Risk in 1986 and 1987 by Region**

| Region | Maximum Total At-Risk 1986* | Estimated Total At-Risk 1987** | Estimated Pastoralists At-Risk 1987 |
|---|---|---|---|
| **Arssi** | 19,670 | --- | --- |
| **Bale** | 99,000 | 99,000 | 99,000 |
| **Eritrea** | 650,000 | 650,000 | 20,000 |
| **Gamo Gofa** | 153,470 | 153,470 | 71,000 |
| **Gojjam** | --- | --- | --- |
| **Gonder** | 340,720 | 340,720 | --- |
| **Hararghe** | 1,516,720 | 758,360 | 312,230 |
| **Illubabor** | 101,600 | 101,600 | 1,600 |
| **Keffa** | 90,000 | 90,000 | --- |
| **Shewa** | 708,810 | 278,730 | 73,730 |
| **Sidamo** | 441,800 | 441,800 | 305,800 |
| **Tigray** | 1,000,000 | 450,000 | 200,000 |
| **Wellega** | 116,470 | 116,470 | --- |
| **Wello** | 1,926,950 | 492,780 | 60,000 |
| **Total** | 7,165,210 | 3,972,930 | 1,143,360 |

*As Estimated by the Relief and Rehabilitation Commission as requiring food aid for any part of 1986.

**At-Risk Does Not Imply Requiring Emergency Food Aid For the Entire Year.

Eritrea and, to a lesser extent, Tigray Regions are forecast to maintain relatively high levels of people at-risk due to the security situation and the generally marginal agricultural potentials of those areas. The population at-risk in Tigray during 1986 was consistently overestimated by the RRC. Contrary to their expectations, there was no reservoir of at-risk people in the countryside, almost all people at-risk were in feeding centers in government controlled areas, or were refugees in Sudan.

The bulk of the people expected to be at-risk in Sidamo, Bale, and Gamo Goffa Regions in 1987 are pastoralists. While Ethiopia contains the largest livestock herd in Africa, the average family herd size is at the bare survival level. The drought of 1984 and 1985 reduced animal populations by up to 50% in some pastoral areas. The prospects for rebuilding the average family herd size, to economically viable levels, are slim. Population increase among pastoralists insures their continuing on this thin margin of survival.
In Hararghe Region the population at-risk in 1987 is

expected to be a mix of mid-altitude agriculturalists and pastoralists. Good agricultural prospects in the higher altitude areas and mixed prospects in the mid-altitude areas means that for many agriculturalists emergency food aid will not be required until later in the year. Relief organizations should drastically curtail their food distributions after harvest, then gradually increase activities as people exhaust their own resources.

It is difficult, if not impossible, to disaggregate 1987's estimated population at-risk into structural and emergency categories. In fact, individuals probably are at-risk from a combination of the two causes. There is a residual emergency drought component of the 1987 population at-risk. Effects of the 1984/85 drought are most apparent in the number of pastoralists still at-risk. These effects are intertwined with the structural problem of an increasing pastoralist population with static livestock resources. Among agriculturalists in Eritrea, Tigray, Wello and Hararghe Regions, there is also a residual effect from the 1984/85 drought. And, in these regions there are also current problems with pockets of drought, pest damage, flooding and hail damage. This year new areas of concern include trypanosomiasis affected areas of Wellega, Keffa and Illubabor Regions where total production will be reduced due to the failure of the maize and sorghum crops and lack of draft animals. In these areas, access to improved sorghum seed, that would have mitigated the maize and sorghum failure, is restricted to state farms, and is restricted due entirely to the policies of the Ethiopian government.

While pastoralists at-risk would probably require close to full rations for all of 1987 this is not true for agriculturalists. It is likely that most will require emergency food aid for less than a full year and (conservatively) averaging six months. Relief organizations commonly distribute full rations at 15kg/person/month. Using these figures agriculturalists will require 265,636MT of emergency food aid during 1987 and pastoralists will require 205,805MT for a total of 471,440MT. This is less than the estimated carryover of emergency food aid stocks into 1987...leaving the possibility of carryovers from 1986 through 1987 and into 1988.