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FIELD TRIP TO AMHARA AND TIGRAY REGIONS 16 - 25 August 1996: Important *belg* areas recording bumper harvest

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1. Introduction and Executive Summary

The northern part of the country - consisting of Amhara Region and Tigray Region- figures amongst Ethiopia's most important crop producing areas but also includes traditionally vulnerable locations historically prone to drought and famine. The objectives of the latest trip by EUE field officers included an overall assessment of the current situation in terms of agricultural production regarding both *belg* (short season) and *meher* (main season) activities. Moreover, besides general information on rainfall patterns etc. the team tried to gather specific information on crop pests and estimated yield reduction in affected areas. The team also focused on relief food distribution. Information was obtained both at regional and zonal level. Although it has to be noted that due to the seasonal road conditions the team was unable to travel to Sekota (Wag Hamra zone) or to especially remote and vulnerable weredas (e.g. Dima, Western Tigray) and had to omit, because of time restrictions, the zonal capital Debre Tabor (South Gonder zone).

The overall picture is positive and encouraging. *Belg* rains, although locally recorded to have started a little late or having been temporarily interrupted, were generally normal and to above normal in most areas, creating favourable conditions for crop development. Both the Amhara regional authorities ("... good *belg* performance, no reason for alarm, everything under control") as well as the Tigray regional authorities ("...general situation very good despite *belg* yield reduction, *meher* expectations promising if rains continue") were optimistic after the completion of the *belg* harvest. Above average rainfall all over the north have secured in Amhara Region the best *belg* harvest in three years. Equally the outlook in the *meher* dependent areas is positive, despite the fact that in some pocket areas the abundance of rain was too much and had a damaging impact on crops, including waterlogging and delays in land preparation.

While floods in other parts of Ethiopia - such as Gambella or the situation along the Awash River - gave reason for concern, some weredas in North and South Gonder adjacent to Tana Lake also had their share of flooding, although the latter situation (being a regular seasonal phenomenon) was by no means disastrous at the time of the visit. In some parts of the Amhara Region there was concern that the continuation of heavy rains might pose a threat to *meher* crops, while Tigray expects encouraging *meher* results if the rains continue. The occurrence of armyworm[1] infestation led to some yield reduction in some pockets of Tigray, but authorities in all visisted areas confirmed that the pest had been successfully controlled.

[1] *Spodoptera exempta*

On the relief side no major problems were reported with more or less stable numbers of beneficiaries, although in some areas (e.g. Wag Hamra zone) prepositioning food had been difficult due to bad weather and road conditions. A good *belg* performance enhanced the food security situation in many *belg* producing areas reducing, to some extent, relief food needs. Equally, the nutritional status in most areas is reported to be satisfactory.

2. Amhara Region

2.1 General situation

Due to an early start of the rains, the four main *belg* producing zones of Amhara Region (North Shewa, Oromia, South Welo, North Welo) report very good results for this years *belg* season (see table). Although *belg* production amounts to only about 5% of food crop production in the entire region, it contributes up to 20 % of total food production in the *belg* cultivating zones. Normal patterns of development of *meher* crops in the other parts of the region were observed and at this point good results can be assumed.

Amhara *Belg* Production	1995	1996
Hectarage cultivated	**213,821 ha**	**259,284 ha**
Actual yield	**164,365 mt**	**195,896 mt**

(Source: Zonal DPPB's and Departments of Agriculture)
Note: Figures do not include Oromyia zone.

Out of the 105 weredas, including those which are town-weredas, in Amhara Region, 39 weredas can be identified as having chronic food deficits due to structural problems. According to the Disaster Prevention and Preparedness Bureau (DPPB) in the regional capital Bahar Dar, the overall planning figure for food aid beneficiaries this year is 930,000. Compared to 1995, when food aid for 1.5 million beneficiaries was fully implemented, this means a considerable reduction, reflecting an improvement in agricultural production. Food distribution in the region is undertaken jointly by DPPB and Ethiopian Relief Organisation (ERO) together with a number of other NGOs.

Although this years results are assumed to be very encouraging, certain problem areas continue to require special care. In this context, the *meher* dependent Wag Hamra zone has to be mentioned, although according to the regional authorities the prospect for Wag Hamra this year are better than in 1995. In 1995 this zone recorded a huge (40 %) crop failure. Starting December, the first quarter up to March recorded 146,000 beneficiaries in this zone (due to restructuring of administrative boundaries, by the commencement of the second quarter 15,000 beneficiaries were attributed to North Welo, which leaves for the rest of the year an adjusted number of 131,000 in Wag Hamra). The Bureau of Agriculture (BoA), ERO and the Ethiopian Orthodox Church (EOC) have been distributing fertiliser and seeds, while by the third dekade of August no pest infestation was reported.

Other problematic areas in Amhara Region include Adi Arkai in North Gonder, where, based on a nutrition survey conducted in May, the number of food aid recipients had to be increased from 15,000 to 34,000, and drought prone and *meher* dependent locations around Debre Tabor in South Gonder (Ibnat, Simada, Tach Gayint and Lay Gayint weredas), which were affected by the occurrence of armyworm. Moreover, in the area around Ibnat town heavy rain and hailstorms on 2 August destroyed 5263 ha of chick peas (of which only 1400 ha would be replanted) leaving 20,000 people affected. - ERO have since started a relief operation.

Relief food beneficiaries in the Debre Tabor area number 152,975 persons with distributions administered by SOS Sahel, Canadian Physicians for Aid and Relief (CPAR), Food for the Hungry International (FHI) and DPPB. Also in South Gonder Fogera wereda suffered some flooding caused by the overflowing of Lake Tana. The area, mainly grazing land, is annually subjected to seasonal flooding, although this year more water than in previous years was recorded. Similarly Dambia wereda in North Gonder was affected by flooding from Lake Tana.

Interesting to note in view of crop diversification possibilities is a Chinese pilot project on wetland rice cultivation in the Fogera area near Tana lake.

In terms of low agricultural production, critical pocket areas also include Debre Sina (Mekane Selam) wereda in North Welo zone, where the authorities had to increase slightly the number of food aid beneficiaries. Due to structural problems, even in the traditionally *meher* surplus producing zones of West and East Gojam, four weredas require relief distribution. Despite those pocket areas, Gojam overall can expect bumper harvests this year, thereby enhancing the overall good performance of the region.

Also, reflecting the overall good performance of the region, the DPPB reported that one wereda in Northern Shewa (Bita Bilo) does not require any further assistance for the time being and had therefore been taken out from the relief scheme.

2.2 North Shewa zone

According to the Debre Birhan Bureau of Agriculture the onset of the *belg* rains, which usually start in January, occured one month earlier, in December 1995. However, the normal amount and distribution started in January 1996.

A *belg* crop assessment was conducted by the BoA in June 1996. In the seven *belg* dependent weredas the bureau reported a better harvest than the previous two years. From a total area actually planted (126,044 ha), 98,770 mt of different crops were harvested. The increase over last year was around 18%.

It was reported by the zonal bureau plant protection department that from 22 May to 12 August 1996, 29,733 ha of cropland had been infested with armyworms and 1,888 ha of grazing land. 15,511 ha had been chemically treated and 1,463 ha using traditional methods. The amount of chemicals utilized was reported to be 14,912 lit/kg.

Out of the 12 weredas in the zone, five weredas were reported to be *meher* dependent. The normal patterns of *meher* activities have taken place and the onset of rainfall, the amount and distribution was mentioned to be normal. However, it was mentioned that the continuation of the *kiremt* rainfall has hampered late planting of teff, and resulted in the reduction of this crop's coverage to some extent. Despite this, the total hectares planted for this years *meher* was reported to be more than that of last year.

2.3 South Wello zone

According to the Bureau of Agriculture the *belg* harvest in this zone has been completed. Figures indicated that crop coverage for this year has increased by 10,337 ha over last year. The *belg* crop assessment had been conducted in June and the result reported to be satisfactory. From the actual crop coverage of 82,560 ha, a total of 57,783 mt of different crops had been harvested. During discussions with the bureau, yield reduction as the result of

shortage of rain and pest infestation was reported. However, despite some damage, it was reported that this years harvest was better than last year.

Except for pulses, *meher* planting had been finalised in all 13 *meher* dependent weredas.

Armyworm infestation was reported in six weredas (87 kebeles) from 5 June to 25 July. According to zonal plant protection experts, the total infested area was 11,276 ha of crop land and 1,633 of grazing land. To control the infestation, chemical spray and traditional control measures had been applied to 5604 ha crop land and 714 ha grazing land. According to information provided, 5,552 litres and 633 kgs of different types of chemicals had been utilized in the course of operations.

From the western weredas of Kelela, Tenta, Jama, Were Illu and Debre Sina, armyworm infestation was reported towards end of July and beginning of August on 403 hectares of crop land. However, the infestation had been controlled after using the proper chemicals.

The nutritional survey of Save the Children Fund (UK) for the late *belg* season was being finalised at the time of the mission. However, according to information provided by SCF the situation in the *belg* producing areas was reported to be good except in the western part of Dessie in Debre Sina wereda. While food aid beneficiaries numbering 1,500 had been identified early this year, this has since been upscaled to 16,670 after recent nutritional surveys conducted by the central and regional DPPC.

2.4 North Wello zone

From a total of eight weredas in the zone, all have *belg* crops, while mainly five weredas are *belg* dependent. As it was indicated in this years zonal *belg* crop assessment, conducted on 15 June 1996, the total area actually planted was 56,680 ha. According to local DPPB officials, from the anticipated production of 47,643 mt of grain, 39,334 mt of grain was actually harvested. The reduction was said to be due to heavy rain, hail storms and pest infestation.

Kiremt rainfall was reported to have been good except for the lowland part of Guba Lafto, Habru, and Kobo weredas where there had been some shortage of rain. Seven weredas were reported to have been affected by armyworm infestation between May and June. Plant protection officials in the zone reported a total area of 12,993 ha of crop land and 1646 ha of grazing land had been infested. Of this 7,504 ha of crop land and 207 ha of grazing land had been treated using a total quantity of 8,311 lit/kgs of chemicals.

As the result of last years post *meher* harvest assessment, a total of 165, 000 beneficiaries were confirmed for relief assistance according the 20% - 80% quota for 1996. However, as the result of the good *belg* harvest and optimistic *meher* prospects there is a possibility to reduce the number of beneficiaries following the DPPC assessment which is planned for after September.

2.5 North Gonder zone

The zone consists of 15 weredas all of which are known as *meher* dependent.The *kiremt* rains usually start at the end of May; however, this year, it was reported to be one month earlier than normal. Following the early start, except in lowland part of Metema and Belesa (in which shortage of rainfall was registered in July), the amount and distribution of rainfall in the other parts of the zone were reported to be fair.

Very heavy rains, hail storms, seasonal flooding and landslides caused crop damage over an area reported to total 16,797 ha in five weredas of the zone.The zonal DPPB has requested the zonal Bureau of Agriculture to conduct short cycle seed distribution in the affected weredas.

According to the 1995 DPPC *meher* crop assessment report, the total number of beneficiaries in need of assistance for six months (May to October) was 130,000. During the mission, the first quarter distribution had been finalised and preparations were underway for the second quarter. The total hectarage planted this year for *meher* was reported to be 845,854 ha with a total anticipated production of 783,496 mt of grain.

The zonal Bureau of Agriculture reported an armyworm infestation in a few pocket areas of Belesa and Debark weredas. However, the damage was said to be insignificant.

3. Tigray Region

3.1 General situation

The regional DPPB in Mekele reports the overall situation in Tigray to be "very good". Despite an interruption of 13 days in June, general rainfall patterns were satisfying, leading to reasonable results for the *belg* harvest. In terms of hectare coverage, the 1996 *belg* season planting surpassed last year by 6 %. In terms of yield, however, there was as a reduction of 12 % (from 18,710 mt last year down to 16,400 mt this year). Reasons for the latter were stated as insufficient use of fertiliser and the occurrence of armyworm. Furthermore, in the Eastern zone (negligible in terms of *belg* output) and especially in the *belg* important Southern zone (Alamata, Alajie, Chercher, Enda Mehoni) the above mentioned interruption of rain in June was a further reason for the yield reduction, while excessive rains later were also damaging. Replanting of short cycle crops was not always possible. However, a total of 2,665 ha had been successfully replanted for the *meher* season. In Dima wereda (Western zone), for years a well-known problem area, no production took place.

Tigray *Belg* Production	1995	1996
Hectarage prepared	**32,320 ha**	**28,400 ha**
Hectarage cultivated	**24,300 ha**	**25,800 ha**
Anticipated Yield	**25,014 mt**	**21,410 mt**
Actual Yield	**18,710 mt**	**16,400 mt**

(Source: Regional DPPB Mekele)
Note: Mainly South Tigray zone is belg dependent
At the time of the mission planting for the *meher* season was completed (except for chick peas) and the line departments expected good results, provided the good rains continue.

Armyworm infestation was minimised by use of chemicals (10,165 litres; 1,081 kg) bringing the situation under control. In the Central zone a 87 ha loss of Sorghum, Maize and Millet (in 10 weredas) was replaced with short cycle cereal varieties. Local NGOs (such as REST) provided seed distribution. Shoot flies occurring in some areas, mainly affecting teff, were effectively brought under control by insecticide spraying. In general terms, the improvement of grazing land due to rains has led to good livestock conditions.

The emergency situation was reported to be generally stable in Tigray Region, with the *belg* rainfall also mentioned to be good both in amount and distribution, despite some interruption of rain in pocket areas of Eastern zone and three weredas of Southern zone: Alamata, Alage and Mehoni.

Relief food distribution in Tigray was reported to be planned for a number of 740,200 beneficiaries for the third quarter. Agencies involved in distribution include, besides the DPPB, the Joint Relief Programme (JRP), the Ethiopian Red Cross, the Relief Society of Tigray (REST) and World Vision International (WVI). In most areas (including the most vulnerable wereda of Dima) it had been possible to preposition food prior to the rains. However, in a few locations (such as Samre-Saharti wereda in the Southern zone) logistic constraints such as bad roads and lack of appropriate storing facilities were posing problems. While the food situation in most parts of Tigray is acceptable, there is reason for concern in Alage (Southern zone).

3.2 Southern zone

Of the eight weredas in the zone seven weredas were reported by the DPPB to be *belg* dependent. The timely onset *belg* rains in January was reported to have been followed by a dry spell in February. However, according to the recent *belg* crop assessment conducted in June, production is still better than last year, except Alage wereda, which was affected by crop failure as the result of shortage of rainfall and pest infestation.

The start of this year *kiremt* rainfall was on time, and the amount and distribution has been normal. However, according to the zonal Bureau of Agriculture, uneven distribution since mid-July has been reported from Enderta and Entalo weredas.

Out of the eight weredas in the zone all but three were affected by armyworm, with infestations taking place during the period from the beginning of June to mid-August. According to information obtained by the mission the area affected included 20,742 ha of crop land and 7,545 ha of grazing land. Of this, 22,860 ha was treated chemically and through various traditional practices (such as driving cattle through the fields). The total amount of chemical used was reported to be 13,013 lit /kg.

As the result of the 1995 zonal *meher* crop post harvest assessment, the total number of beneficiaries in need of assistance was 309,081. However, this figure was later reduced to 132,600.

According to zonal information three distributions had been conducted since the beginning of the year and a further distribution will take place before the next survey in October 1996.

Furthermore, of the total number of beneficiaries receiving food aid assistance in the zone, 97,408 are included in the JRP programme up to August, while the balance comes under the zonal DPPB.

3.3 Eastern zone

Belg plantings this year were reported to have been delayed by one month as a result of the late start to this year's *belg* rains. However, following the late start, the overall amount and distribution was reported to be satisfactory.

A *belg* crop assessment was conducted by the zonal authorities in July. However, data regarding the assessment could not be obtained, since the experts who were in charge had left for Mekele for official work.

3.4 Central zone

The central zone is well known as *meher* dependent. The onset of this year's rainfall was reported to have been earlier than normal with the amount and distribution better than last year. According to information provided by the Bureau of Agriculture in Axum, prospects for the *meher* harvest are positive. From total planned plantings of 242,409 ha for the 1996 *meher*, it was reported that 225,168 ha had been actually planted.

As the result of the 1995 *meher* crop assessment, it was reported that 293,900 beneficiaries were identified as in need of relief food assistance in the zone. As the team learnt from the zonal DPPB, two distributions had been completed and the third quarter distribution for the month of July, August and September was in process. However, for the third quarter distribution, beneficiary numbers will be reduced by 7,100 since some Kebeles from Tana wereda have merged with the western zone from the central zone as the result of the new wereda restructuring process. Shortage of transport and irregularities of delivery from the region to the zone was reported as constraint.

From a total of 10 weredas in the zone, eight were reported to have been affected by armyworm. According to the available information from the zonal bureaus of Agriculture, cropland amounting to 4,296 ha and grazing land totaling 1,132 ha were infested during the period June to July 1996. Chemical spray and traditional practices were applied to control the situation. The amount of chemical which had been used during the infestation period was said to be 1,117 lit/kg.

3.5 Western zone

All nine weredas in the western zone are *meher* dependent. The onset of the long cycle rains this year were reported to be timely and as usual in June. However, this was followed by 15 days of dry weather toward the end of July mainly in two weredas, Tahtai Adiabo and Kafta Humera.

A total of 1,598 ha of crop land and grazing land was reported to have been infested with armyworms in all the weredas in the zone. However, the infestation impact in terms of damage was insignificant. Infestations of Shoot Fly[2] on teff and [3]Stalk Borer on sorghum and maize towards end of July was reported. Effective control measures were taken using chemical sprays.

4. Conclusion

The *belg* producing areas of Amhara Region are recording optimal yield figures with an overall regional *belg* yield increase of at least 15% over last year's results. Moreover, the situation in the region at the time of the mission indicated that the *meher* season would also result in one of the best harvests in recent years. West and East Gojam zones of the Amhara Region - traditional surplus producing areas - are likely to have a bumper harvest. Overall food security will be increased while favourable conditions for livestock are expected to continue.

Optimism in Tigray is mainly based on the overall situation estimates and favourable expectations regarding the *meher* season. Despite the fact that the Southern zone of Tigray (the region's main *belg* dependent area) records a *belg* yield reduction compared to last year (1995: 18,710 mt - 1996: 16,400 mt), the increase in the actual area cultivated (from 24,300

[2] *Delia arambourgi*
[3] *Buseola fusca, Chilo pratellus*

ha in 1995 to 25,800 ha in 1996) was encouraging. The yield reduction could be primarily due to damage to 5 % of the teff crop as a result of excessive rainfall (teff made up 50 % of the area cultivated during this year's *belg* season in southern Tigray).

While only the Southern zone of Tigray has a significant *belg* production (other zones have only some *belg* producing pocket areas), the major part of Tigray depends on the *meher* season - and in this respect the above average rainfalls seem to promise very good results.

Based on information obtained in the field at zonal and regional levels, there is, at this time, no reason for concern in either of the visited regions. On the contrary, the overall agricultural production in Amhara and Tigray this year is expected to be better than last year's production. The above average *kiremt* rains in July and August generally had a positive impact, and negative effects were confined to local areas. Therefore, prospects are encouraging for the coming *meher* harvest (October to December). The most significant increase in the actual *belg* yield was a recorded 50% in North Welo zone (1995: 26,123 mt - 1996: 39,334.4 mt); North Shewa zone, with a yield increase of roughly 18 % (1995: 83,335.4 mt - 1996: 98,778 mt) reflects the countrywide assumed quota of *belg* production increase. Based on the overall figures given by the regional DPPB (see tables above) *belg* production was 19 % higher than last year in Amhara Region, while it was 12 % lower in Tigray Region.

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