

SPECIAL REPORT

FAO/WFP CROP AND FOOD SUPPLY ASSESSMENT MISSION TO ETHIOPIA

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Acronyms and Abbreviations

ADLI	Agricultural Development Led Industrialisation
AISE	Agricultural Input Supply Enterprise
AMC	Agricultural Marketing Corporation
BoARD	Bureaux of Agriculture and Rural Development
CAZS	Centre for Arid Zone Studies, University of Wales, Bangor, UK
CBE	Commercial Bank of Ethiopia
CIF	Cost Insurance and Freight
CSA	Central Statistics Authority
DPPC/A	Disaster Preparedness and Prevention Commission/Agency
EFSR	Emergency Food Security Reserve
EGTE	Ethiopian Grain Trade Enterprise
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FEWSNet	Famine Early Warning System Network
FOB	Free on Board
FSCB	Food Security Coordination Bureau
FSS	Food Security Strategy
GDP	Gross Domestic Product
IFPR	International food Policy Research Institute
MoARD	Ministry of Agriculture and Rural Development
MOFED	Ministry of Finance and Economic Development
NGO	Non Government Organization
ODA	Official Development Assistance
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PRSP	Poverty Reduction Strategy Paper
PSNP	Productive Safety Net Programme
REST	Relief Society of Tigray
SDPRP	Sustainable Development and Poverty Reduction Programme
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WFP	World Food Programme

Mission Highlights

- Aggregate cereal and pulse production in Ethiopia from the 2005/06 “meher” season is forecast at 17.12 million tonnes, about 14 percent above the previous year’s revised estimates and 46 percent above the average of the previous four years.
- The increase was due to well-distributed and timely rainfall in main crop producing areas, increased use of fertiliser and improved seeds, rapid control of migratory pests, and increased area under cultivation compared to previous years.
- Despite the good harvest, some 2.6 million acutely food insecure people will require emergency food assistance. In addition some 7.2 million chronically food-insecure people will require food assistance through the Productive Safety Net Programme.
- Of immediate concern is the food situation of some 1.5 million people, mainly pastoralists in the south-eastern Ethiopia, due to failed seasonal rains. Pre-famine conditions are reported, including widespread human and livestock distress migrations, deterioration of livestock body condition and cases of livestock deaths.
- Total emergency food aid requirements are estimated at approximately 340 000 tons.
- In view of the expected good domestic grain production in Ethiopia, local purchases for food aid by both the Government and donors are highly recommended to support domestic markets.

1. OVERVIEW

An FAO/WFP Crop and Food Supply Assessment Mission visited Ethiopia from 12 November to 11 December 2005 to estimate the main meher season cereal and pulse production; review the final estimates of the 2004 meher and 2005 secondary belg season harvests; forecast the 2006 belg season production; assess the overall food supply situation; and estimate cereal import requirements, including food aid needs, for the 2006 marketing year (January/December). Accompanied by experts from the Federal Ministry of Agriculture and Rural Development (MoARD), the Central Statistics Authority (CSA) and an USAID observer, the Mission, in seven teams, visited sixty-two zones and special woredas (districts), over a 20-day period, in all the grain producing regions. Parallel to the crop assessment teams but spread over a longer period, 25 teams, led by the Government’s Disaster Prevention and Preparedness Authority (DPPA) and with members comprising WFP, bilateral donor agencies and NGO personnel, visited marginal localities and vulnerable zones and woredas to determine their current and prospective food security situation.

The assessment teams obtained planted area and yield data for all major food crops from woreda, zonal, and regional agricultural bureaux, which were cross-checked against information from farmers, traders, NGO and donor project staff and remote sensed data from early warning systems. Planted area was also compared with this year’s CSA estimates of meher area of cereals and pulses of the Private Peasant sectors compiled as part of their Annual Agricultural Sample Survey. Within the 62 entry points, 230 Key Informant Interviews/Rapid Case Studies were conducted with associated crop inspections including 62 sample spot-check crop-cuts. Market surveys, livestock condition observations and continuous transect observation-recording of crops and their conditions were conducted over the 24 000 km of routes taken by the teams. This information provided the background with which teams audited performance data received. In some 30 percent of cases yield forecasts obtained were adjusted to take into consideration latest and broader information.

The overall agricultural performance of the meher 2005 season is better than the previous year due to improved yields from a greater cultivated area in the both the main production zones and the country’s marginal areas. The timely and well distributed secondary belg season rains in 2005 (March to May) allowed for a timely start of the meher cultivation in most parts of the country. The 2005 secondary belg season crop itself, harvested last July/August, was estimated by MoARD at a bumper 1.4 million tonnes of cereals and pulses. With the exception of few hotspots in Konso and adjacent Special Woredas in SNNPR and in the central and southern woredas of Central Tigray, most crop dependent areas received favourable rains. Consequently, farmers have, universally, taken advantage of a better supply of fertilisers, improved credit and a migratory pest-free year to generate a substantially increased cereal and pulse meher harvest this year. Overall, the Mission puts total meher cereal and pulse production at 17.12 million tonnes, about 14 percent above last year’s MoARD post-harvest estimates and 46 percent above the average of the previous five years. With a forecast belg harvest in July/August 2006 of 250 000 tonnes, total domestic availability of cereal and pulses in 2006 is estimated at 17.37 million tonnes.

Grain prices throughout 2005 were higher but more stable than in previous years. The sharp drop in prices which usually follows an above-average crop was not exhibited in 2005, partly due to grain purchases made

by cooperatives and unions with the aim of stabilising prices, local purchases of food aid, increased informal cross-border trade and a staggered release of crops to the market by farmers and cooperatives. Grain prices have started to decline since last November/December in all major markets in response to the on-going harvest. However, price levels are still higher than average.

The estimated above-average grain harvest is expected to improve food availability in 2006. However, the sustained and relatively high grain price levels, although beneficial to surplus crop producing households, will negatively affect the poorer households that are net buyers of grain. In addition, despite the above average grain production, a significant number of vulnerable households remain largely food insecure and will depend on humanitarian assistance in 2006. This is particularly true in pastoral areas southeast Ethiopia where currently pre-famine conditions are reported, including widespread human and livestock distress migrations, deterioration of livestock body condition and cases of livestock deaths. Failed 2005 secondary "Deyr" season rains (October to December) have resulted in a serious food security crisis for southern Somali Region pastoralists. The situation is worst in the districts that had poor rains during the preceding main season "Gu" season (March to May), including Afder, Liban and parts of Gode zones. Other eastern zones of the region are also facing deteriorating food security conditions. The onset of the dry season (January to March) is expected to worsen the situation.

As a result, for the various interventions in Ethiopia the Mission estimates that a total of 340 000 tonnes of mixed food aid commodities, including 247 000 tonnes of cereals, will be required as emergency food aid during 2006 for 2.6 million people.

In view of the expected good domestic grain production in Ethiopia, local purchases for food aid by both the Government and donors are highly recommended to support domestic markets.

2. SOCIO-ECONOMIC CONTEXT

2.1 Macroeconomic situation¹

In the last three years the Ethiopian economy has shown a mixed performance, with negative real GDP growth rate of 3.8 percent in 2002/03 as a result of drought, followed by strong positive performance of 11.3 percent and 8.9 percent during the past two years. Accordingly, during 2001/02-2004/05 annual real GDP growth averaged at 5 percent. As usual, variability of growth was mostly a result of the variability in the outturn of the agricultural sector representing about 45 percent of GDP (Services 43 percent, Industry 12 percent). About 85 percent of the population gain their livelihood directly or indirectly from agricultural production, including livestock. Agricultural value-added declined by about 12 percent in 2002/03, and rebounded by 18 percent in the following year. Inflation stood at 15.1 percent in 2002/03, but declined to 9 percent in 2003/04 and 6.8 percent in 2004/05.

¹ This section is based on a variety of sources, i.a. the Ministry of Finance and Economic Development (MOFED), and the National Bank of Ethiopia.

Table 1: Ethiopia - Macroeconomic Indicators for 2002/03-2004/05

	2002/03	2003/04	2004/05
Real Sector & Prices (% change over previous year)			
• Real GDP	-3.8	11.3	8.9
• Agricultural Value Added	-11.6	17.7	12.1
• Non-Agricultural Value Added	3.9	6.1	6.0
• All Services	3.3	5.8	5.8
• Consumer Prices Inflation	15.1	9.0	6.8
Government Finance (% of GDP)			
• Domestic Revenue	16.4	16.6	16.1
O/w: Tax Revenue	12.1	13.0	12.8
• External grants	6.7	4.8	4.6
• Total expenditure ^{1/}	29.1	24.1	25.4
O/w: poverty related	12.6	12.1	14.5
Overall balance (incl. grants)	-6.1	-2.8	-4.7
External Sector (% change over previous year unless otherwise specified)			
Exports	7	25	36
Imports	9	39	41
Average Exchange Rate Birr/US\$	8.6	8.6	8.7
Reserve in months of imports	3.7	4.1	4.5
Total Merchandise Exports (Mio. US\$)	483	601	818
Total Merchandise Imports (Mio. US\$)	1,841	2,584	3633
Total Trade Deficit (Mio. US\$)	-1,358	-1,983	-2,815
Overall Balance of Payments (Mio. US\$)	306	307	-157

^{1/} Excluding special programmes.

Source: Ministry of Finance and Economic Development (MOFED), National Bank of Ethiopia.

Note: Fiscal Years ending 30 June.

Fiscal developments in the past three years supported the overall macroeconomic stability. In order to boost revenue, the government embarked on a comprehensive tax policy and administration reform. Measures taken included income tax streamlining and closing of loopholes, improving the incentive system, and strengthening tax administration; overhauling the income tax law and regulations; introducing a broad-based Value Added Tax (VAT) and tax identification numbers, and rationalizing tariff rates.

Domestic revenue mobilization efforts have been supplemented by increased external resource flows. External grants, particularly in the form of direct budget support, rose significantly in the past three years, to a level of Birr 2.8 billion in 2004/05, compared to Birr 467 million in 2002/03. Importantly, the composition of external assistance has shifted markedly from loans to grant, and especially to budget support grants, with loans representing only 25 percent of aid in 2004/05 compared to almost 50 percent in 2002/03.

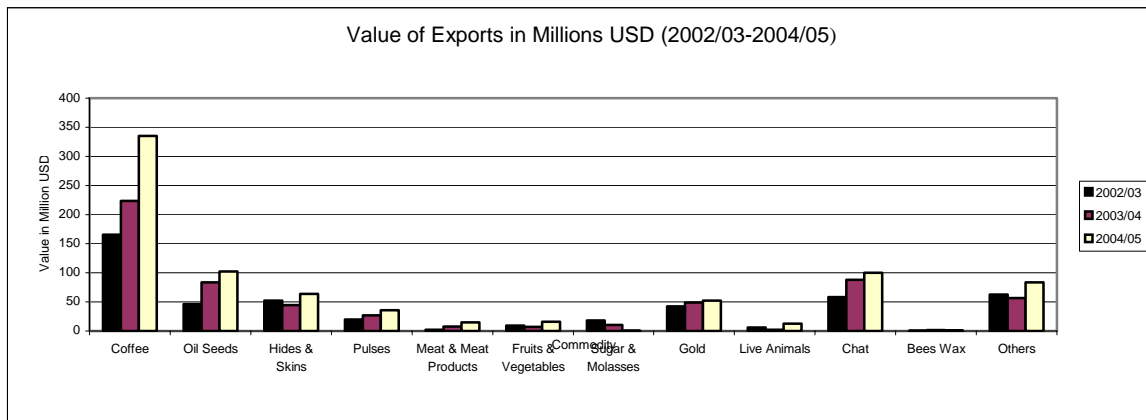
While Official Development Assistance (ODA) trends for Ethiopia reflect a steady increase in magnitude from US\$ 925 million in 2000 to about US\$ 1 786 million in 2004, the humanitarian/relief component has consistently been the largest representing on average about the third of total ODA. In fact, in 2000 the humanitarian/relief aid consumed about half of total ODA and has been several multiples of that invested in other socio-economic sectors such as agriculture, forestry and fisheries, health and education in subsequent years. On average, about 33 percent of ODA funds are allocated annually for humanitarian assistance compared to 6 percent for agriculture, forestry and fisheries and 10 percent for transport infrastructure.

Total government expenditure showed an increasing trend owing to higher spending in the poverty-oriented sectors particularly on capital outlays. The defence budget has been contained at Birr 3 billion per year; although actual expenditure was lower, at Birr 2.4 billion in the past fiscal year, representing a decline to less than 9 percent of spending, compared to over 20 percent in the immediately pre-SDPRP period (The Sustainable Development and Poverty Reduction Programme represents the first phase – 2000/01 to 2003/04 - of the Poverty Reduction Strategy Paper). The share of current expenditure in GDP (14 percent in 2004/05) has remained relatively constant, while capital spending has risen substantially, to 12 percent of

GDP from 9 percent of GDP in fiscal year 2002/03. Capital expenditure increased significantly due to the priority assigned to poverty-reducing investments.

With regard to the terms of trade, exports registered substantial growth in recent years, owing to both increases in volume and revival in the prices of major exports in the international market. In 2003/04 and 2004/05, total value of exports grew by 25.0 and 36.0 percent, respectively. Imports also surged in 2004/05, reflecting a general rise in private sector investment and consumption demand, and government spending on capacity building and poverty-reduction projects, in addition to escalating prices of basic imports such as fuel, fertilizer and construction materials. By the end of the 2004/05 fiscal year, the trade deficit stood at a record height of 2,815 million US\$. Compared to the fiscal year 2003/04 the trade deficit increased by 42 percent, and thus exports financed only 22.5 percent of imports.

Figure 1. Ethiopia: Exports in Millions of US\$ (2002/2003-2004/2005)



Source: Ministry of Finance and Economic Development (MOFED)

The increase in imports as opposed to exports of goods was reflected in a widening trade and current account deficit of the balance of payments. The external current account deficit (excluding official transfers) widened to 16.4 percent of GDP in 2004/05 from 13.3 percent of GDP in 2003/04. However, the increase in inflows of long-term official loans served as a cushion, protecting the country's reserves from declining. At the end of 2004/05, National Bank's reserves stood at 4.5 months of import coverage. The overall balance declined from a surplus of 226 million US\$ in the 2003/04 fiscal year to a deficit of 157 million US\$ (down by 151 percent) in the 2004/05 fiscal year, mainly due to the increase in fuel prices. The deficit was financed from reserves and debt relief.

During the fiscal year 2004/05 total export earnings which stood 818 million US\$ increased by 36 percent over the preceding fiscal year. This positive development in export earnings was attributed to the increase in the volume and world price of export commodities. The volume of exports for coffee (up 3 percent), oil seeds (up 37 percent), hides and skins (up 17 percent), pulses (up 56 percent), meat and meat products (up 80 percent), fruits and vegetables (up 29 percent), live animals (up 163 percent) and chat (up 57 percent) have increased significantly. The world price of coffee has gone up by about 45 percent during 2004/05. Similarly, world price for hides and skins, meat and meat products, fruits and vegetables, gold and live animals have increased by about 23, 6, 75, 14, and 133 percents respectively. For others, such as pulses and sugar and molasses, world price have declined by about 15 and 94 percent respectively.

The total import bill reached Birr 31 435 million in 2004/05. The highest expenditure on imports was for capital goods with Birr 10 377 million followed by consumer goods of Birr 8 532 millions. Likewise, fuel which was Birr 5 786 million and semi-finished products with Birr 5 751 million were in the third and fourth place respectively. The total import bill has expanded by about 41 percent - the increase for fuel and agriculture related commodity imports (especially increased demand for fertilizer) was more than hundred percent (116 and 127 percent respectively).

The total external debt outstanding during the 2004/05 was Birr 5 915 million, out of which multilateral creditors account for Birr 4 850 million (82 percent), Paris-club creditors for Birr 232 million (3.9 percent), and Non-Paris Club creditors for Birr 559 million (9.5 percent). Total external debt outstanding has decreased by about 17.9 percent mainly due to the decrease of almost 90 percent in the amount extended by the Paris-club creditors from Birr 1 886 million in 2003/04 to Birr 232 million in 2004/05.

During 2004/05 Birr 781 million internal and Birr 611 million external debts have been serviced. Compared with the 2003/04 fiscal year, internal debt service has declined by 4.7 percent and external debt service by 7.4 percent. The overall total debt service during the fiscal year was Birr 1391 million, showing a decline of 5.9 percent from the previous fiscal year.

Table 2: Ethiopia - Major Commodity Exports (2001-2004)

Commodity	2002/03	2003/04	2004/05
Coffee (US\$ Million)	165.2	223.6	335.4
Volume (000' tonnes)	126.1	159.7	161.0
Pulses (US\$ Million)	20.0	22.6	35.5
Volume (000' tonnes)	66.2	73.0	121.6
Oilseeds (US\$ Million)	46.1	82.7	102.3
Volume (000' tonnes)	83.0	106.0	140.7
Chat (US\$ Million)	58.0	88.1	99.9
Volume (000' tonnes)	8.07	13.80	21.67
Other exports (US\$ Million)	193.3	183.7	244.8
Total exports (US\$ Million)	482.7	600.7	817.9

Source: Customs Authority, National Bank of Ethiopia.

2.2 Population and poverty

A crucial mechanism, which has perpetuated in Ethiopia, is the interaction of poverty and population pressures with the productive resource base. Unprecedented population pressures has contributed in decreasing plot size (average landholdings declined from 0.5 hectares per person in the 1960s to 0.11 in 1999), making an increasing number of households dependent on inadequately small and unproductive plots, and more vulnerable to the vagaries of unpredictable rainfall, and rendering some traditional farming practices unsustainable. These households are too poor to leave land fallow or invest in it, leading to a progressive deterioration of their asset base. In the past moving onto new lands absorbed this additional population growth, but in many areas the limits of useable land have been reached, forcing farmers onto lower productivity, more fragile lands. Due to increasing human and livestock population pressure on arable land and forest resources, large areas of the country, particularly on the northern and central highlands, have been exposed to loss of fertility, degradation and ecological imbalances. Reports of the highland reclamation study have shown the seriousness of soil erosion on the highlands. Average farmland per household in the southern highlands has decreased to less than a quarter of a hectare. Furthermore, deforestation and lack of rainfall are major causes for food insecurity and poverty in Ethiopia. The elaboration of appropriate sector policies by the Government are intended to address both, poverty reduction and increased food security through the promotion of sustainable agricultural development (see below 2.3).

Rapid population growth remains a major barrier to poverty reduction. The addition of about 2 million persons per year puts tremendous strains on Ethiopia's resource base, the economy, and the ability to deliver services. It is much more difficult to make progress in creating sufficient employment, or in raising agricultural productivity enough to keep up with food needs, with this continuing massive additional number of people. The World Bank's most recent population figures put Ethiopia's population at 67.3 million in 2002, making it Sub-Saharan Africa's second most populous nation after Nigeria. IMF figures suggest a population of around 72 million in mid-2004. The World Bank estimates that the population is currently growing at 2.2 percent per year, although the president, Girma Wolde-Giorgis, speaking at a national symposium on population policy in mid-2003, cited a higher rate, of 2.7 percent, which implies Ethiopia's population to reach 83.5 million by 2010 and 106 million by 2020. However, the impact of AIDS—an estimated 4.4 percent of adults aged 15-49 were HIV-positive in 2003, according to the joint UN programme on HIV/AIDS (UNAIDS)—is likely to reduce the population growth rate, even though the incidence of the disease is apparently less than earlier thought. The population is still overwhelmingly rural, with only 16 percent living in towns, and only Addis Ababa, the capital, having populations of over 1 million. The population of Ethiopia for the mid-year 2006 is estimated by the Mission at 75.161 million. This estimate is based on projections of the 1994 population and housing census of Ethiopia conducted by the Central Statistical Authority under the auspices of the Office of the Population and Housing Census Commission in 1994 and released in June 1998 - the overall annual population growth rate is currently estimated by Government at 2.90 percent.

Table 3. Ethiopia: Total projected Population in mid 2006 (Millions)

	Male	Female	Total
Urban	5.971	6.042	12.013
Rural	31.695	31.453	63.148
Total	37.666	37.495	75.161

Source: The 1994 Population and Housing Census of Ethiopia, CSA.

Poverty in Ethiopia is pervasive, deep and persistent. At present, close to 45percent of the population is below the poverty line of US\$ 1/day and some social indicators of well-being are some of the most critical in Africa (UNDP). For instance, Ethiopia's life expectancy is 43 years where as the average for Sub-Saharan Africa and low-income countries is 47 years and 59 years, respectively. Infant mortality rate (107 per 1000 live births), illiteracy rates (62 percent) and school enrolment rates are some of the worst in the world. Moreover, the level of the social indicators for women and girls are much less favourable compared to those for boys and men and the malnutrition of children is considerably high. For instance, close to 47 percent of children under five years of age suffer from malnutrition. It is important to note that although urban poverty in Ethiopia is increasing, poverty is primarily a rural phenomenon. Close to 70 percent of the poor live in rural areas and they depend on agriculture as a source of their livelihood. There is, however, some variation in the incidence of poverty across the 10 regions within the country – it is highest in Tigray and lowest in Harari. A notable feature of poverty in Ethiopia is that in the various regions, it is closely associated with frequent episodes of food insecurity, widespread gender inequality, and the increasing fragility of the natural resource base.

In summary, the causes of poverty are of a multidimensional nature. The most important factors include sub-optimal levels of agricultural technology, high population growth rates, and underdeveloped rural infrastructure. The low level of agricultural technology is characterized by low use of fertilizers, high-yielding crop varieties and irrigation systems. Recurrent drought and the accompanying degradation of the natural resource base and political instability as well as wars have also contributed to the persistence of poverty and frequency of food insecurity in Ethiopia. Since agriculture employs 85 percent of the population, developing the agriculture sector would help in poverty reduction and the ensuing food security of the majority of the Ethiopian people.

2.3 Food security and vulnerability

Combinations of natural and man-made factors have resulted in a serious and growing food insecurity problem in many parts of the country. About fifteen million people are facing food insecurity that is either chronic or transitory in nature. The cause for the former is structural, while the later is usually triggered by short-term emergency situations. About five to six million people are chronically food insecure. These are people who have lost the capacity to produce or buy enough to meet their annual food needs even under normal weather and market conditions. The remaining ten million are vulnerable, with a weak resilience to any shock. Under any emergency circumstances, the likelihood of these people falling back into food insecurity is high.

Cognizant of this fact, the Government, in close collaboration with its development partners, has developed a Food Security Programme within the framework of the wider PASDEP - the Plan for Accelerated and Sustained Development to End Poverty - is Ethiopia's guiding strategic framework for the five-year period 2005-2010. The PASDEP represents the second phase of the Poverty Reduction Strategy Paper (PRSP) process begun under the Sustainable Development and Poverty Reduction Programme (SDPRP), which covered the past three years, 2000/01-2003/04. The core objectives of the programme are: (i) enable about five to six million chronically food insecure people attain food security within the coming 3 years and (ii) improve significantly the food security situation of up to ten million additional food insecure people within three to five years time. There are two underlying principles: a reliance on helping farmers use their own resources to overcome food insecurity – both through agricultural improvements and diversification of off-farm income sources – and a shift away from reliance on foreign food aid. The programme has three components: direct food production interventions, a productive safety net, and a voluntary resettlement programme.

Since 2003, the food security programme has been under implementation in most of the chronically food-insecure districts (*woredas*). Appropriate technologies have been introduced depending on the socio-economic conditions of the chronically food-insecure households and different menus of technological packages have been prepared and disseminated to these households through the extension services. The

packages include provision of improved inputs to increase livestock and crop production and productivity, moisture conservation and utilization, credit, training, support for additional income-generating activities, and provision of market information.

The core objective of the food security programme is to increase food availability and access at household level through (i) increased crop production and productivity (ii) increased livestock production and productivity and (iii) increased access to other non-farm income through agricultural and non- agricultural activities.

As stated above, agriculture employs 85 percent of the population and is the most critical area of intervention to sustain food security in the chronically food insecure woredas. The majority of the food insecure population lives in the rural areas, and the major resource available at hand is land and labour. Increasing the production and productivity of food in a sustainable manner is, therefore, critical to address the problem of food shortage. Consequently, the extension programme is being re-oriented to address the problem of moisture deficit in both crop and livestock production, and to promote conservation-based agriculture. The following are major areas of food security programme interventions: Water is one of the most critical resources for crop production in moisture-deficit areas. Productive use of rainwater and surface runoff/ run on systems such as pond construction, roof water harvesting, simple diversion schemes, construction of hand-dug wells combined with catchments treatment are important to increase crop production possibilities for vulnerable households. Small-scale irrigation is also very important to improve cropping intensity and thereby reduce the effect of erratic rainfall. The programme is supporting low cost irrigation technologies, such as construction of earth dams, river diversions, and treadle pumps, hand pumps that are managed by individual or group of farmers. Up until September 2004, over 200 000 water harvesting ponds, 155 000 shallow hand dug wells, over 186 000 traditional river diversion schemes and 13 000 small-scale irrigation schemes were constructed in different parts of the country. Soil and water conservation, crop diversification and intensification, and strengthening agricultural extension services are key activities considered to increase crop production and productivity. In livestock production the focus is on introducing improved animal breeds and availability of improved animal feed, water & health. To this effect, the programme centres around the establishment of water points; production of forage and fodder crops at household level; improvement of community grazing land; provision of livestock through saving and credit system focusing on small ruminants like sheep and goat; promotion of livestock diversification; and strengthening livestock extension services both in mixed farming and pastoral areas.

2.3.1 Productive Safety Net Programme (PSNP)

Despite the recovery in agriculture in the past two seasons (2003/04 and 2004/05), Ethiopia has a structural food problem, and over 7 million Ethiopians (10 percent of the population) required outside assistance even in 2005. For many years, the country's food aid requirements had been assessed on an annual basis by the Disaster Preparedness and Prevention Commission (DPPC – recently renamed DPPA, A for agency). This assessment was normally undertaken in October/November, following which the Ethiopian government might issue an appeal to the donor community in December for amounts to be delivered during the next calendar year. Thus food aid needs were continually reassessed and although some food aid assistance was programmed over a longer term, the vast majority was sourced and mobilized in response to annual requests for assistance. In 2004 however, the recognition that a significant number of people are chronically impoverished and constantly in need of assistance, led to a reassessment of the programming of food aid needs for the respective section of the population. Although around 2.2 million Ethiopians still depended on emergency handouts in 2005, unlike earlier years, almost 5 million of the needy were not targeted by emergency food aid but instead took part in the new, ambitious, safety net programme, which was devised in 2003 as part of the government's *Coalition for Food Security*, and which is being implemented since January 2005 with donor funding. The World Bank's executive board approved US\$ 70 million in December 2004 for the first phase of the programme (mostly in the form of grants), and has pledged US\$ 220 million over five years. Total spending will amount to US\$ 215 million in the first year, with the balance being provided by other donors (mainly Italy and Canada, as well as the EU with Euro 22 million), although most of this will not be new money but will instead be transferred from emergency feeding allocations.

In economic terms, the switch from direct food aid to cash aid is intended to stimulate the development of local markets and enable internal trading between surplus and deficit localities, facilitated by a slowly expanding road network. The programme is designed to address the needs of about 4.8 million chronically food-insecure people in 267 *Woredas*. The overall development objective is to improve the efficiency and productivity of transfers to food insecure households, reducing household vulnerability, improving resilience to shocks, and to provide multi-annual and predictable resources. In this context, it is important to consider

the value of the assets that are being protected by the PSNP - at an individual level, a farmer's ox, cart or plough may be essential for continued production and the programme can claim justification in providing the cash or food that prevents these assets from being sold. The safety net programme is intended to serve a dual purpose. One is to help bridge the income gap of chronically food-insecure households, and the second to engage such household in community based asset-building in exchange for the income they earn. Thus, the two components of the PSNP are: (a) labour intensive public works, and (b) direct support for labour-poor households. A programme implementation manual has been prepared; training and awareness creation activities were undertaken at different levels; community committees have identified target groups for public works and direct support, and capacity-building measures have been initiated. A Food Security Coordination Bureau (FSCB) was created to administer the PSNP, reporting to the Ministry of Agriculture. The FSCB undertook the training of regional, *woreda* level and *kabele* authorities in the mechanisms of the PSNP. *Kabele* authorities have been trained to identify suitable projects in conjunction with farmers associations and other community groups and to use existing technical resources to undertake the necessary works with either cash or food aid as payment for the labour.

Roughly, 60 percent of the assistance was to be made available to beneficiaries as cash, with the balance being provided as food aid. Almost the entire food aid element was to be provided by USAID and supplied to the PSNP through the channels of Cooperating Sponsors and WFP. Food aid provided through NGOs was complemented with substantial cash inputs to cover non-wage costs of public works and capacity building. Direct support consists of the provision of cash or food to those households that cannot contribute labour to work schemes, including female-headed households and HIVAIDS-orphaned families, lactating and pregnant mothers are also eligible as beneficiaries. Direct support constitutes approximately 20 percent of the programme, with the majority of all resources (80 percent) going towards the work schemes. Those able to take part in work schemes receive cash or food according to the requests made by each *kabele* when submitting its programme requirements to the FSCB. In general, requests for food were made in those areas that are traditionally deficient in food supply, while cash was requested in those areas where markets for foodstuffs exist.

The PSNP should have started in January 2005, but did not get under way until March; and only 11 percent of the cash target, and 44 percent of the food target, had been met by May 2005. However, food and cash transfers under the programme picked up strongly in July, and this, combined with the favourable belg harvest, led to improvements in food security. The latest report of the Information Centre of the Federal Food Security Coordination Bureaux (28-11-05) on the status of the safety net transfers, with data collected from sample *woredas*, indicates that food allocations for 2005 are more or less completed in Oromia (100 percent), Amhara (99 percent) and Tigray (97 percent), and with SNNP showing the lowest performance (85 percent). Cash transfers have also significantly improved in all PSNP regions, with 88 percent for Amhara, 87 percent for Oromia, 86 percent for Tigray, and 83 percent for SNNP. Overall performance on resource transfer, based on sample *woredas*, stands currently at 86 percent for cash and 97 percent for food.

In general, donor commitments have been met in a timely fashion, or when these were late, have been bridged by local reserves. However, a wide range of deficiencies of the programme became apparent during implementation process. The targeting exercise, for instance, was subject to some confusion, leading initially to the exclusion of some of the most destitute from the programme (since they were deemed to lack the capacity to graduate), particularly in Amhara. Moreover, the elaboration and implementation of effective procedures for the disbursement of cash has not been straightforward. An internal assessment of the PSNP completed in mid October 2005 identified a series of bottlenecks to cash disbursement, including: Excessively rigorous and slow verification that work programmes had been properly undertaken; Inadequate numbers of trained staff available to account for cash disbursements; Paper-based financial management systems that are both unwieldy and inaccurate; Lack of delegation of financial management; The need to make direct delivery of cash to each beneficiary (as opposed to delivering food to groups of community beneficiaries). Furthermore, the analysis revealed a number of logistical and operational issues, such as, general shortage of qualified staff, continuous meetings and trainings sessions affecting distribution of resources and data processing, distance and location of distribution warehouses, exhaustive time needed to prepare lists of beneficiaries and payroll on hand, telephone communication problems in collecting information, and a lack of clarity in the time frame of resource distribution.

Furthermore, although it had been estimated by both the Ministry of Agriculture and Rural Development (MoARD) and CSA that the harvest of 2004/05 was the largest ever achieved in the country, market prices did not necessarily reflect this. Prices rose consistently throughout 2005 (see also section 4.3) to such an extent that the cash provided to beneficiaries, depending in a significant number on the PSNP, was inadequate to purchase the minimum standard ration from the market. On the other hand, it was noted that

by September 2005, food aid recipients in some areas where prices were extremely high could, if they wished, monetize the standard ration that they received for more than twice the value of the cash package that had been originally estimated to be more than sufficient to purchase both food and non-food necessities. As a result, in some *woredas* beneficiaries actually refused to accept the cash provided, demanding food instead. Three measures were implemented to resolve these issues. First, the number of beneficiaries was increased to the level of available contingencies under the PSNP. Secondly, disbursements under the PSNP were accelerated by providing a three-month tranche of cash to beneficiaries in a single instalment in late July, and thirdly, a number of *woredas* were transferred from cash to food, increasing the number of beneficiaries receiving food by approximately one million, and the overall food requirement by more than 100 000 tonnes. In consequence, while the initial estimate had been that PSNP would cover 4.5 million beneficiaries, of whom approximately 1.5 million would receive 150 000 tonnes of food, in the final analysis, beneficiary numbers in 2005 increased to 5.4 million, of whom at least 2.7 million (50 percent) received closer to 270 000 tonnes of food.

That the safety-net programme started at a time of plentiful domestic food supplies was fortunate, as the boost to food demand from the cash injection into the rural economy was met from local sources, not imports. Fundamental to the PSNP, as it is currently enunciated, is the premise that as a result of the benefits made available to those taking part in the programme and of the development of community assets, beneficiaries will eventually “graduate” from the programme to the point where they can survive without assistance. This developmental aspect of the programme is important if it is to arrest and reduce the spiral of chronic impoverishment that continues to draw an increasing number of people into destitution. Having almost completed its first year plan, planning of the second year programme, which is due to start in January 2006, has already started.

Meanwhile, other aspects of the food solution proposed by the Coalition for Food Security, such as the resettlement of 2 million people from overcrowded to unoccupied lands, are contentious.

2.3.2 Voluntary resettlement programme

Over many years, a large portion of the country's population has been forced to depend on food aid for survival. These are people who have lost the capacity to be productive mainly due to land degradation, drought and high population pressure. On the other hand, the country has a considerable amount of land currently under-utilized, but still suitable for farm activities. To rationalize the resource use, the government has embarked upon resettlement as part of its food security programme. Accordingly, it has targeted to help resettle 440 000 households or 2.2 million people over three years. The programme is purely on voluntary basis, and each settler household is guaranteed assistance of packages that include provision of up to 2 hectares of fertile land, seed, oxen, hand tools, utensils, and food ration for the first eight months. The settlers are also to be provided with access to essential social infrastructures (clean water, health post, feeder road), and logistics support. To ensure the efficient and effective implementation of the programme, an implementation manual has been prepared, and extensive training and awareness creation works have been carried out at federal, regional, *woreda* and *kebele* levels. To date over 149 000 households (about half a million people) have been resettled. Despite some problems encountered in early implementation, especially during the first year, the resettlement programme has proved itself as a crucial and reliable alternative to ensure food security in a very short period of time. A recent assessment, undertaken by the Federal Food Security Coordination Bureau, shows that the majority of the settlers have attained self-sufficiency in food and their livelihood has improved considerably.

2.4 Agricultural sector policies

Despite the indisputable potentials Ethiopia has in terms of agricultural development, the great efforts made by the Ethiopian government in the course of establishing an enabling framework and elaborating suitable strategies and policies and the continuous assistance provided by various donors, Ethiopia is still one of the most impoverished countries of the world. Thus, a large proportion of the Ethiopian population is severely affected by poverty and subsequently by chronic respectively transitory food insecurity and hence vulnerable livelihoods. As mentioned above, food insecurity and vulnerability to poverty are closely interrelated and multifaceted resulting from a broad range of root causes. However, as food insecurity is not only a result of these causes, but may even lead to further deterioration of the situation, it is necessary not only to tackle the immediate and visible impacts of food insecurity (e.g. by providing food aid to undernourished people), but consequently also to tackle the root causes through appropriate measures for a sustainable development of the country.

The Ethiopian government has elaborated various policies and strategies directly related to the above-mentioned problems, like the Agricultural Development Led Industrialisation (ADLI), which is still perceived as the central element of the government's overall policy in a direct attack on rural poverty. Its essence is that agricultural growth is seen as the engine of industrialisation through its effects on demand for industrial goods, supply of raw materials and exports. The government sees ADLI as a strategy that will ensure the widely sharing of growth benefits. ADLI also forms the basis for the national Food Security Strategy (FSS) as well as for the Poverty Reduction Strategy Paper (PRSP). In the long term, the FSS is to build the capacity of the poor and food-deficit households to attain food security on their own, while the short to medium-term aims are to prevent death due to starvation. Even though Ethiopia is expected to close its food gap, it is anticipated that continuation of food aid will certainly persist in the near future. The PRS-process started during the last quarter of the year 2000 with the release of the Interim Poverty Reduction Strategy Paper by the Ethiopian government, which was endorsed by the Boards of the World Bank and the IMF in March 2001. After the endorsement the process continued until the final programme document, the Sustainable Development and Poverty Reduction Programme (SDPRP), was produced and finalized in June 2002.

2.4.1 Agricultural credit

The Commercial Bank of Ethiopia (CBE) is the largest source of agricultural credit in the country. Currently, more than 2.5 million farmers, accounting for 25 percent of total smallholder agriculture, obtain credit annually for the purchase of inputs, mainly fertilizer. The bulk of this credit was provided by the commercial banks with the intervention of the state governments to underwrite the loans. During the current cropping year 2005/06, CBE approved a total of Birr 1.2 billion of agricultural input loans based on credit requests submitted by the regional governments - Oromia, Amhara, SNNP, Tigray, and Addis Ababa. Table 4 presents the total agricultural input credit approved, disbursed, and overdue for the last five years.

Table 4: Agricultural Credit - Approved, Disbursed, and Overdue 2001/02 to 2005/06

Year	Approved (Birr '000)	Disbursed (Birr '000)	Disbursed (percent)	Overdue (Birr '000)
2001/02	641 362	455 242	71	0
2002/03	545 303	304 625	56	27 433
2003/04	780 147	415 800	53	0
2004/05	989 316	795 604	80	258 349
2005/06*	1 194 139	532 119	45	556 156
Total	4 150 267	2 503 390	60	841 938

Source: The Commercial Bank of Ethiopia. *Data as of September 2005.

The amount of agricultural credit approved by CBE for the cropping year 2005/06 is about 21 percent higher than 2004/05 and the highest for the last five cropping years. The credit repayment default rate has been kept under control and it is expected that it will decline in the coming year given the good harvest prospects. Furthermore, the regional governments in their capacity as guarantors of agricultural input loans are implementing measures to reschedule part of the past due loans. The interest rate on these loans is 7.5 percent shared between the CBE which receives 5.25 percent on the disbursed amounts and regional governments which receive 2.25 percent for loan disbursement, recovery, and administrative charges.

2.4.2 Fertilizer balance

Ethiopia totally depends on imports to meet its annual fertilizer requirement. The foreign exchange needed for fertilizer importation is financed through loans, donor assistant (grants) and government treasury. Hence, precision in planning and fine-tuning of marketing activities are necessary to ensure timely imports and supplies. The fertilizer sector has been deregulated and opened for private competition since the mid 1990s. Following the issuance of the fertilizer policy, the pan-territorial fertilizer pricing system was eliminated and subsidies were removed. However, aware of the strategic role of the fertilizer sector in achieving self-sufficiency and alleviate poverty, the government of Ethiopia is still involved in the sector by making credit available to farmers and encourage more fertilizer use. In 2004/05, total fertilizer availability amounted to 482 000 metric tonnes comprising 425 000 metric tonnes of new imports for a total value of US\$ 122 million and 57 000 metric tonnes of carry-over stocks. The state-owned Agricultural Input Supply Enterprise (AISE), and the two private companies Ambassel trading house and Wondo trading company have been dominating the fertilizer sector over the years and are currently holding 80 percent of the market. However, in this cropping year three new companies (cooperative unions, backed by the regional governments for collaterals, and receiving technical assistance from the MOARD) have emerged operating on a regional basis – Merkeb in Amhara, Yerer and Lome Adama in Oromia Region. Cooperative unions and primary agricultural service

cooperatives are distributing significant quantity of fertilizer (exact figures are not available), indicating that the role of cooperatives in fertilizer marketing is picking up. Apart from this, only few private retailers are involved in fertilizer sales and distribution.

Retail prices of DAP and Urea registered a significant increase owing to a surge in international prices. Retail prices of fertilizer went up by around 20 percent for DAP and 18 percent for Urea. However, despite this increase in prices, the level of fertilizer demand this year amounted to 347 000 tonnes, accounting for a 7 percent increase compared to last year's demand. Details regarding total fertilizer supply, carry-over stocks, new imports and final demand for 2004/05 cropping season are shown in Table 5 below.

Table 5: Ethiopia - Total Fertilizer Balance for 2004-2005 (in tonnes)

Enterprise	Opening Stock			Import			Total Supply		
	DAP	Urea	Total	DAP	Urea	Total	DAP	Urea	Total
AISE	4 363	25 627	29 990	125 000	99 521	224 521	129 363	125 148	254 511
Ambassel	6 580	5 048	11 628	50 000	25 000	75 000	56 580	30 048	86 628
Wondo	14 143	1 493	15 636	25 000	0	25 000	39 143	1 493	40 636
Merkeb	0	0	0	50 000	0	50 000	50 000	0	50 000
Lome Adama	0	0	0	25 000	0	25 000	25 000	0	25 000
Yerer	0	0	0	0	25 000	25 000	0	25 000	25 000
Total	25 086	32 168	57 254	275 000	149 521	424 521	300 086	181 689	481 775
Sales Closing							224 819	121 735	346 554
							75 267	59 954	135 221

Source: Agricultural Input Market Department, Ministry of Agriculture and Rural Development (MoARD).

3. FOOD PRODUCTION IN 2005

3.1 General

In Ethiopia, of the 11 million hectares presently farmed to cereals and pulses, only some 190 000 ha are irrigated; consequently, production varies considerably from year to year depending on the quality and quantity of the annual rains. The crops grown are diverse and follow the complicated mosaic of agro-ecologies that are derived from soil types ranging from vertisols to sand, and cropping altitudes ranging from more than 3 000m to less than 600m above sea level. The main cereal staples include wheat, barley, teff, finger millet, maize and sorghum grown in varying proportions according to soils, altitude, and the prevailing climatic and market conditions of the year. Other carbohydrate sources include the stem of enset or false-banana, cassava, potatoes and sweet potatoes, all of which are found in either the middle altitude or highland areas of the south/central regions of the country. Cash crops include oilseeds, spices, coffee, chat and eucalyptus, the tree crops being found as hedgerows, on-farm woodlots and in forests in the middle altitude and highland areas.

Common grasslands provide extensive pasture and browse for livestock in most regions, but are particularly important to livestock producers in the eastern regions of Afar and Somali, the southern zones of Bale, Borena and South Omo, and in the western lowlands that reach from Gambella to Tigray. National livestock production from such pastoral areas is augmented by the settled agro-pastoralism of peasant farmers throughout the Central Plateau and the escarpments of the Rift Valley. Using common grazing, browse and crop residues these mixed systems produce sheep, goats and, less frequently, beef and dairy cow products for sale and home use. Livestock are further integrated into the farms through the universal use of animal traction for ploughing, secondary cultivation, threshing, and the transportation of goods and commodities.

3.2 Rainfall 2005

Rain in Ethiopia falls in two distinct seasons: (i) the belg, a minor season that usually begins in January-February and ends in April-May; and (ii) the meher or kiremt, the main rainy season, which starts in June-July and ends in September-October. In some ten zones in central and northern parts of the country, belg rains are regular enough to support the generally opportunistic belg harvest which may, in a good year, account for 5 percent of national cereal production. Elsewhere, belg rains offer the opportunity for land preparation and improve pasture and browse after the dry season. The melding of belg and meher rains in the south-west zones often generates one long season without clear-cut breaks, which although good for

perennial crops and the long-maturing stover cereal varieties, is less than ideal for the belg sown straw crops. This year, the belg rains were very good in all belg producing zones and special woredas visited by the Mission, which is reflected in the good belg harvest summarised in Section 3.8 below.

Regarding the meher season, the seven Mission teams dispatched throughout the country to determine agriculture production and conditions, collected qualitative and quantitative meher season rainfall data from all zones and woredas visited. The variable nature of the rainfall inherent in the semi-arid areas of Ethiopia means that in any zone and in any year there are always communities, particularly in the lowlands, that experience less than satisfactory rainfall. This year, such areas are noted to be fewer than last year. The combined returns confirm that in most of the 62 zones and special woredas visited by Mission teams, meher rains were considered to be as "good" or "better than last year". To be more precise, in 55 Mission entry-points the 2005 meher rains were considered to have been "normal," that is to say they conformed to the expected pattern, they began on time, they were reasonably evenly distributed during the season and they either finished on-time or later than expected. Only in 7 zones/special woredas were less than satisfactory reports filed. These reports included later starts and an erratic distribution with breaks of 10 to 20 days and early finishes. Such sites are located mostly in the south, with the worst examples being in Konso, Derashe, Burji, and Gedeo; and in the north-east and southern woredas of Central Tigray.

Consequently, at the national level, stover crops (maize and sorghum) that are usually sown in preference to straw crops (wheat, barley and teff) when the rains start on-time as they take longer to mature and so carry more risk when rains are late, have increased in area by 6.25 percent. For instance, this year in Tigray Region there has been a 22 percent shift to maize and sorghum at the expense of all the other annual cereals and pulses. In Amhara Region, an 18 percent increase in sorghum area and an 8 percent increase in maize area are noted to have occurred at the expense of teff, pulses and wheat-barley mixture² seeds. In SNNPR and Oromiya Region, the large increase in area reportedly sown to stover crops in 2004, compared to meher 2003, have been sustained.

The continuation of the rains into October and November also encouraged late, opportunistic planting of short-cycle pulse crops such as chick pea and grass pea and is supporting their development, adding a further positive aspect to the season.

The intermittent rains in December that fell during the time of the Mission are considered only to have had only positive effects. In Central Tigray, harvesting campaigns conducted as a precaution against possible storm-related losses, secured all vulnerable crops. Elsewhere in the north, the harvests of short-cycle crops were either completed or well-advanced at the time of the Mission. Further, the well-advanced and highly productive sorghum crops of Southern Tigray, North Wollo, South Wollo and Oromiya zones were being bunched and tied up to protect the heads against lodging under the effects of inclement weather if storms were to persist. In the cases of late-planted sorghum in North-West Tigray and very late planted barley and pulses throughout Awi zone, crop production will only benefit from any continued precipitation. In the south, a wide range of perennial and annual crops will benefit.

Regarding the effect of rainfall on pasture and browse, the good belg rain increased the availability of an early-bite compared to last year in most areas. As the main season rains have been widely distributed and prolonged they have increased forage production and improved water supply in all areas with the exception of south Somali, where premature pastoralist movements are anticipated if the December rain does not start soon.

3.3 Area planted

Agricultural data in Ethiopia is derived from two sources, (i) data emanating from the Central Statistics Authority (CSA) under their official mandate to provide comprehensive statistical data on agriculture through the organisation and implementation of sample surveys; and (ii) data collected at grassroots level, at ploughing, sowing and harvesting time from the whole farming community by the Development Agents of the Bureaux of Agriculture and Rural Development (BoARD). These BoARD data are processed through a hierarchical series of steps via woreda, zone and region to national level for use by agricultural specialists in their day-to-day activities. Each year, the two data sets differ significantly with regard to area and production, an issue noted regularly in CFASMs since 1994. Hitherto, it has been the latter data set that forms the basis of the CFASMs as such data are collected by the established government partner to the exercise (MoARD), they are available on time at all Mission entry points and are presented to the Mission, at a variety of levels,

² Wheat-barley seeds mixture is sown preferentially in years with poor early rainfall, it is a simple way of reducing risk in times of uncertainty. The mixture is called *hamfes* in Tigray and *wazarat* in Amhara.

which can be discussed and audited during the Mission field visits. Further, the BoARD data are the data used in the DPPA/WFP Annual Needs Assessments that form the basis of the annual food aid requirements, the summary of which provides the WFP component of the CFASM Special Reports.

This year, for the first time, the Mission received estimates of area planted from both sources. At the beginning of the Mission, the CSA provided Mission teams with area estimates, by zone and by crop, for the 2005 meher season, being estimates of the crop areas sown by private peasant land-holders registered in the Ethiopian Agricultural Sample Enumeration 2001-2. These area data, based on the preliminary returns of the 2005 Agricultural Sample Survey of 62 000 households selected from 2 072 Enumeration Areas (EA) do not include the area sown by (i) the large-scale farmers³, (ii) land farmed by the new resettlers (settled since EASE 2001-2) or (iii) areas farmed by private peasants on slopes considered to be too steep for annual crops to be sown (and beyond the scope of the CSA teams to survey)⁴. The estimates are considered by CSA to account for some 96 percent of the land farmed in Ethiopia. At the same time, most regions consider that the data do not represent their regional farming activities due to the omissions noted above and the sampling procedures adopted. The exception is Amhara region, following discussions at Federal level two years ago, the Amhara Regional Bureau of Agriculture and Rural Development (BOARD) embraced the use of CSA area data and now issue annual instructions to their Zonal Offices to use such data as envelopes for their own crop estimates. Interviews with key informants at Zonal level (Regional and Woreda Level, Tigray) held this year by all Mission teams at all entry-points throughout the country, confirmed that only in Amhara Region is CSA data being used for the 2005 annual meher crop assessments. All the other main crop producing regions prefer to use their own data collected in the manner described below, as CSA data are not considered to describe either their agricultural areas or the proportional distribution of crops grown. The BoARD data to which this report refers, are different from the “planned data” prepared by the regional BoARD specialists and used as targets for farming activities in response to regional policies. During the key informant interviews with BoARD staff, Mission teams identify both the “planned” and “actual” data sets and select only the “actual” sown area data for compilation. Examples of differences between planned and actual figures from 6 zones used as test-cases are given in Annex 1.

Regarding the collection of the “actual” data–set the process used was confirmed during the Mission to be as follows:

- In all cases other than Amhara, Regional (BOARD) data originates from Development Agents (DAs)⁵ based at Peasants’ Association (PA) level throughout the country.
- The DAs working through the farmer team-leaders of the 30 household head administrative units (known variously as Mengistu Guden, Lemhat Gujele, or Lemhat Gere), collect the annual crop ploughing/sowing/harvesting data and ,ultimately, yield estimates, from all farmers farming in their domains.
- These data, collected in local units, are translated into international units, collated and passed to the woreda crop experts by the DAs for cleaning, verification and onward passage to the zonal experts.
- The zonal experts confirm the figures and pass them forward to the Regional Bureaux.
- The Mission collects such data at the zonal level in all regions visited except Tigray, where there are no Zonal Agricultural Offices. In the latter case, this year, the Mission was provided with the original woreda data set by the Senior Agricultural Officer of the Region, which was re-aggregated, by the Mission, into zonal data for time-series comparison purposes.
- In addition, the Mission teams collect data on area and production of farming companies, investors, and resettled farmers either from the BoARD offices or from original sources.

One potential point of divergence between estimates of area is thought to be at the conversion stage when local measures are translated by DAs into international units. Pilot studies conducted by CSA in Oromiya Region on the Ethiopian Agricultural Sample Enumeration (EASE) 2001/02⁶ data comparing, inter alia, the international unit value of various local land-measures used by farmers and DAs to assess crop area, found that rather than the local measures conforming to the national standard of 4 temad or 4 temads per ha, the real value varied from 3 to 11 units per ha according to topography and heaviness of soil. This year, Mission teams found that in sample zones in Oromiya, SNNPR and Benshangul, the DAs were far more aware of

³ Being the commercial users of the old State Farms and the recent investors farming in newly opened cropland areas in West Tigray, North Gondar, Awi, Metekal, West Wollega, Sheka, Keffa, Gamo-Gofa and Bench-Maji.

⁴ These limitations need clarification.

⁵ DAs are extension agents. There is presently at least 1 DA per PA and in most zones there are as many as three functioning DAs per PA.

⁶ Tadessa, G and A. Gebre (2005) Construction of conversion factor models. The Ethiopian Agricultural Sample Enumeration In-Depth Analysis- Addis Ababa Workshop Proceedings, CAZS, UWBangor, UK

local measurement differences than was previously anticipated and used converters varying from 4 to 8 units per ha. Therefore, the simple explanation that Regional BoARD area data differs from CSA data because of the use of different conversion factors may not necessarily be the case.

For the time being, the Mission estimates are based on data collected from the BoARD offices, which with the exception of Amhara, have been compiled by the system of aggregation the BoARDs usually apply, as noted above. However, in an attempt to stop the increasing divergence of the two data sets, where 2005 BoARD area data appear to have increased at a rate way beyond the rate of increase noted in the CSA survey and in the absence of any substantive causes in the zone to increase area due to the inclusion of resettlers, new investors or expanded development within the erstwhile state farms, the Mission has opted to apply the CSA level of increase to last year's BoARD data. This approach has only been applied to data obtained from some of the Zonal Agricultural Offices in Oromiya Region and in with regard to wheat area in East Gojam.

Within this framework, Table 6 below presents the cereal and pulse area differences between the two data sets at zonal level. A more detailed review detailing the cereal crops is presented in annex 1.

Table 6. Ethiopia: Differences in Cultivated Area Under Cereals and Pulses Between BoARD and CSA Estimates by Zone in 2005 ('000) ha

Region	Zone	BoARD			CSA			BoARD/CSA		
		Cereals	Pulses	Cereals and Pulses	Cereals	Pulses	Cereals and Pulses	Cereals % difference	Pulses % difference	Cereals and Pulses % difference
Oromia	East Haraghe	292	79	371	138	22	160	212	359	232
Oromia	SWShoa	315	81	396	199	51	250	158	159	158
Oromia	Illubabor	276	30	306	181	19	200	152	158	153
Oromia	NShoa	434	100	534	288	62	350	151	161	153
Oromia	WestShoa	579	60	639	384	42	426	151	143	150
Oromia	Regional	5090	684	5774	3542	494	4036	144	138	143
Oromia	East Wellega	385	29	414	287	22	309	134	132	134
Oromia	Arsi	672	61	733	501	50	551	134	122	133
Oromia	EShoa	510	98	608	380	90	470	134	109	129
Oromia	Jimma	451	43	494	371	37	408	122	116	121
Oromia	Guji	96	20	116	88	11	99	109	182	117
Oromia	Bale	255	19	274	247	22	269	103	86	102
Oromia	West Haraghe	184	15	199	175	25	200	105	60	100
Oromia	Borena	13	3	16	18	14	32	72	21	50
Oromia	Commercial	54	2	56	na	na	na	na	na	na
SNNPR	Konta	21	8	29	6	3	9	350	267	322
SNNPR	Dawro	81	11	92	26	12	38	312	92	242
SNNPR	Hadiya	212	26	238	98	10	108	216	260	220
SNNPR	Kembata-T	61	6	67	26	5	31	235	120	216
SNNPR	Sidama	115	32	147	52	20	72	221	160	204
SNNPR	Burji	7	5	12	4	2	6	175	250	200
SNNPR	Derashe	26	8	34	15	2	17	173	400	200
SNNPR	Bench-Maji	51	7	58	23	7	30	222	100	193
SNNPR	Gurage	119	25	144	70	11	81	170	227	178
SNNPR	Basketo	7	0	7	4	0	4	175	na	175
SNNPR	Wolaita	104	25	129	58	16	74	179	156	174
SNNPR	Gamugofa	175	28	203	99	19	118	177	147	172
SNNPR	Regional	1280	242	1522	755	177	932	170	137	163
SNNPR	Alaba	34	7	41	26	2	28	131	350	146
SNNPR	Kaffa	133	29	162	73	39	112	182	74	145
SNNPR	Siltie	124	4	128	84	9	93	148	44	138
SNNPR	South Omo	36	7	43	32	6	38	113	117	113
SNNPR	Shekka	9	3	12	8	3	11	113	100	109
SNNPR	Yem	10	3	13	11	3	14	91	100	93
SNNPR	Amaro	7	1	8	8	2	10	88	50	80
SNNPR	Konso	13	2	15	18	3	21	72	67	71
SNNPR	Gedeo	4	4	8	14	2	16	29	200	50
Tigray	West	116	5	121	49	2	51	237	250	237
Tigray	East	82	9	91	60	6	66	137	150	138
Tigray	North-West	176	4	179	134	7	141	131	57	127
Tigray	Regional	743	69	812	586	55	641	127	125	127
Tigray	Central	186	12	198	146	14	159	127	86	125
Tigray	South	184	37	221	197	26	223	93	142	99
Afar	Region	20.6	0.4	21.1	11.4	0.4	11.8	181	100	179
Somali	Region	136	0	136	82	2	84	166	0	162
Harari	Region	10	0	10	6	0	6	167	na	167
Dire Dawa	Region	13	0	13	8	0	8	163	na	163
Addis Ababa	Region	9	1	10	8	3	11	113	33	91
Gambella	Region	16	1	17	na	na	na	na	na	na
Benshangul	Region	154	13	167	118	7	125	131	186	134

At the national level, a 25 percent difference between cereal and pulse area in favour of BoARD data is observed arising mostly from differences in Oromiya Region. Without detailed analysis, beyond the scope of the Mission, it is difficult to comment further on the relative merits of the two estimates, however, the data do beg one simple practical question, "How on earth do two serious estimates of farmed land in areas as small as Dire Dawa and Harari, differ by almost 50 percent?" Surprisingly, data collected from Amhara Zonal BoARD offices are 12 percent less than the CSA data presented to the Mission by CSA.⁷

⁷Given the expressed intention of the Amhara Zonal BoARD Offices to use the CSA data *in toto*, the Mission has opted to present, for comparison purposes, an alternative total, using the direct CSA data, in the national summary given in the bottom line of the table, thereby offering a figure of about 380 000 ha greater than the "actual" data collected and subsequently used in the analysis.

Consequently, using the data as collected, adjusted for outlying figures regarding expansion of area in the heavily populated areas in Oromiya and Amhara, the Mission estimates that the national area planted to cereals and pulses during the 2005 meher season is 11.297 million hectares, which is 8.7 percent higher than last year's Mission estimate of 10.39 million ha and 4.7 percent greater than the MoARDs' adjusted post harvest estimates for 2004 at 10.79 million ha. Explanations given to the Mission for the expansion this year include (i) expansion of commercial farms in the western zones, (ii) the resettler programme, (iii) an increased use of fallow land in Oromiya and SNNPR, (iv) the young entrants' programmes.

Closer examination of major cereal areas at national level reveals that there were increases in planted areas of all cereals except teff, which fell by 5 percent. National area increases in sorghum (9 percent), maize (3 percent) and finger millet (24 percent) confirm the anticipated, greater interest in early-planted, long-maturing grain crops this year in the lower lying areas due to the good rain in the belg season and an early start to the meher. As an effective cash crop, maize in particular, offers high financial returns early in the year from the green-cob market that provides a lucrative income when early rains are favourable. In areas with the green-cob potential maize would appear to have been selected over teff this year. Interest in the late-planted, short-maturing crops in the higher lands was sustained through increases in wheat (6 percent) and barley (3 percent) areas due to the favourable conditions throughout the season.

The area to minor cereals also expanded with oats and rice areas expanding by 42 percent and 20 percent respectively. Area sown to pulses shows an increase of 1 percent.

Countrywide, given the sustained levels of cultivation achieved every year since 2003; there do not appear to be any widespread constraints on ploughing capability. However, in the wetter, forested areas the risk and effects of trypanosomiasis are noted to have been higher this year with reports of possible drug resistant trypanosomes noted in Dawro, Burji, Gedeo, Amaro, Yem and Konso Zones/Special Woredas, SNNPR. Given that the small size of the farms precludes the effective use of the normal four-wheeled tractors but where timeliness of cultivation, sowing, and weeding is of paramount importance for the production of a satisfactory series of crops to achieve food security, it is surprising that there is still no apparent interest in testing the introduction of the diesel engine, two-wheeled, walking-tractor as an alternative power sources to oxen. This may well be the tool to improve the efficiency of husbandry practices and place less stress on the natural resources used to maintain the oxen in such areas.

Following the good 2004 meher harvest, seed supply per se was not a constraint on this year's meher planting. Indeed, seed rates were reported to have been higher this year across the country, resulting in the use of some 850 000 tonnes of cereal seeds. As in previous years, most seed sown came from farmer carried-over stocks from last year. Returns from the National Agricultural Input Suppliers' Association show that in 2005 improved seed sales decreased by 27 percent to 15 600 tonnes from last year's final estimate of 21 000 tonnes. The reasons for this are unclear but the reduction in directly purchased wheat probably connects to farmers opting to buy uncertified, improved wheat through farmer-to-farmer exchanges; while the reduction in the purchase of hybrid maize may connect to the emergence of cooperatives as buyers and teething troubles in the supply chain.

3.4 Factors affecting yields

The national yield averages compare favourably with averages estimated over the past five years reflecting an improved performance of cereals in all regions. Presently, under the prevailing BoANR system explained earlier in the report in the context of area estimates, DAs assess yields at pre-harvest and harvest stages for all field crops and pass the data to woreda specialists, who cross-check the findings with teams from the Zonal and regional Offices. Such data are then transferred to the zonal or regional desks for final review, analysis and onward passage.

Because of the timing of the exercise, the Mission teams usually receive only the earlier yield assessments.⁸ These are then adjusted during the Mission with the assistance of the key informants at the BoANR offices, NGOs and the farmers themselves, and take into account transect records, field observations, measurements and any changing conditions regarding the weather and late pest and disease challenges. This year, all Mission teams used the Pictorial Evaluation Tool (PET), developed by the Centre for Arid Zone Studies, University of Wales, Bangor, UK, to add more consistency to the auditing approach adopted.

⁸ In some instances no estimates are available at any level. In such cases the Mission teams rely on their transects and case studies to provide initial estimates that are then cross-referenced, by the team and the Mission team leader, with data from neighbouring zones, confirming *inter alia* the usefulness of transects, case studies and sampling.

On return to Addis Ababa, all assessments are subjects of rigorous reviews when performance estimates are revisited with respect to seed type, timing of sowing, extent and timing of fertiliser use, the season's pest and disease profile, the performance of similar crops in neighbouring localities, time-series data and finally compared with any other independent assessments available for the zones. However, as the CSA preliminary data for yield were not released to the Mission, no other assessments, other than last year's post-harvest yield assessments from the MoARD, were accessible for comparison.

Given that general rainfall adequacy and timely cultivation have already been confirmed for this year in the previous section, the remaining factors affecting crop performance reviewed below are inputs (seeds, fertilizers and chemical), pest and disease profiles and basic crop husbandry during the growing season and at harvesting.

In the 2005 meher season, 98 percent of the seeds used were local seeds carried over from the previous harvest either by the farmers themselves, following the traditional on-farm selection process whereby the farmer identifies next year's seed stock while it is still maturing in the field and gives it special protection, or by buying from preferred seed stock kept by farmers in the same locality. In the surplus areas, such seeds are mostly open-pollinated releases from government seed agencies that have stabilised over the last two decades and have acquired local identities reflecting their provenance. Farmer multiplication of more recent releases, followed by farmer-to-farmer exchanges, augment the flow of quality seeds but their volume is difficult to quantify. In the more marginal areas, as well as such seeds, local landraces are also in evidence and are exchanged or sold between farm families as needed. This year, seed assistance programmes were virtually absent being restricted to emergency supply programmes undertaken by FAO in response to localised problems in Konso, Derashe, Burji and Amaro in SNNPR and in woredas in East and Central Tigray.

Of the remaining 2 percent, amounting to the 15 900 t of improved seed sold, 6 600 t were maize seeds and 6 800 t were wheat seeds. Whereas improved maize seed sales are similar to last year, accounting for some 13 percent of the maize sown (30 percent in West Gojam), wheat seed sales are down at some 48 percent of last year's directly purchased volume, as farmer-to-farmer sales replace the purchase of more expensive certified seed from seed merchants. It is worth noting that this form exchange may persist for 2-3 years and then farmers will again renew the local stock, with certified seed, allowing the cycle to be repeated. Given the favourable rainfall, no widespread replanting was necessary except in the Zones and Special Woredas in SNNPR noted above. The continuation of the rainfall meant that where replanting did occur, the rains supported the growth and development of the replacement crop as well as the main crops in most areas, reinforcing the role of rainfall as the single most important determinant regarding crop performance in Ethiopia.

Continuing the trend, fertiliser use as indicated by cash and credit sales, increased by around 7.9 percent to 346 000 tonnes. Despite significant increases in prices of DAP (diammonium phosphate) and urea that have increased DAP base prices⁹ to c.380 Birr per quintal (US\$ 439/tonne) and urea prices to c. 318 Birr per quintal (US\$ 368/tonne). These current prices connect to FOB prices for DAP at around US\$ 209 per tonne are now around twice the retail price of compound/nitrogenous fertilisers sold to farmers in the UK. Nevertheless, demand appears to have been greater than the supply in the main production areas, particularly for urea for top-dressing.

Fertiliser distribution to the main crop growing regions was similar in proportion to the distribution in meher season last year. Tigray received the lowest share at 3.9 percent (2.7 percent in 2004; 5 percent in 2003); Amhara received 30 percent (31 percent in 2004; 29 percent in 2003); Oromiya received 50 percent (46 percent in 2004; 44 percent in 2003); SNNPR received 9 percent (10 percent in 2004; 8 percent in 2003) and the remainder being 7.1 percent (10 percent in 2004; 13 percent in 2003), was sold to farmers in the remaining regions and to various commercial enterprises. Zonal distribution patterns are more informative and indicate a continuation of the return to recommended levels of use of both DAP and urea in the Oromiya wheat growing zones, substantial increases in use in Illubabor, following a significant decline last year; and significant increases of 15 percent DAP and urea combined in the maize and teff growing zones of East and West Gojam and a 25 percent increase in use in Agew Awi.

Regarding pests and diseases, this year the season was threatened with two migratory pest attacks. A desert locust outbreak in the north-west zones of the country was curtailed by prompt action by the MoARD, supported by FAO, involving the surveying of 39 sites and spraying some 900 ha for hopper bands. MoARD

⁹ Transport from the main depots in each zone to the villages to be added.

also controlled outbreaks of migratory quelea quelea birds by the aerial spraying of roosting sites in zones approaching the western borders of Somali Region and in Arsi, East Shoa and Konso.

Non-migratory pests are noted to have been of little significance this year, nevertheless, they included infestations of sorghum chafers in Central Tigray; Wollo Bush Cricket in North Wollo and Weghamra; the ubiquitous presence of grass-hoppers, stalk borers, termites, boll-worms, and birds, the control of which through bird-scaring continues to place a great and underestimated demand on household labour, particularly in sorghum growing areas, if heavy losses are to be avoided.

Storage pests, especially weevils, are noted to be, as usual, as a cause for concern throughout the country but they are particularly important in the wetter south-western zones, where stored maize losses are noted to be as high as 40 percent in good rainfall years. This year an increased use of storage chemicals was reported, however, no sales figures were available to confirm its improved availability. The increased rainfall during the drying period to date suggests that annual grain storage losses will be again be higher in marketing year 2006 than during 2005 and have been proportionally adjusted at higher levels ranging from 3 percent (teff) to 25 percent (maize and pulses).

The adverse effects of crop diseases were also noted to be mild. Despite earlier reports of rust on improved wheat, no significant events were noted or reported to the Mission. Smut on sorghum in East Haraghe and Somali was reported as a cause for concern. The presence of sorghum smut was also identified by Mission teams in the fields of South Wollo, South and West Tigray, but was seen to be of very little concern to the farmers whose fields were infested. Local seed treatment carried out using cows' urine in some of the other localities visited was reported. It is noted that in the sorghum growing areas of Sudan bordering the expanding mechanised farming units in the western lowlands of Tigray and Amhara, treatment of sorghum seed against smut with proprietary brand seed dressings is universally practised by the commercial farmers.

Weed competition was again fierce this year, as the good distribution of rain generally enhanced all plant growth. The Mission teams noted an increase in frequency of hand-weeding of most crops in all regions and reports of "shillshallo" or "gusia" the animal-powered hoeing/thinning of maize and sorghum crops, followed by inter-row cultivation, were more evident this year. There was also an apparent increase in the use of herbicides. The Mission notes the use of 2.4 D by farmers as diverse as investors in West Tigray, (where labour rates were noted above last year's 30 Birr per day for workers harvesting sesame under piece work contracts), wheat farmers in Arsi and Bale, teff farmers in Jimma and mixed cereal farmers in East Gojam, the common elements linking their choice being the vigorous growth of weeds and a shortage of labour. Striga is noted to be present in all sorghum-growing areas but only in some of the farms in the large scale mechanised farming areas of West Tigray was the parasitic weed noted to be having a significant effect on production. In such cases crop emergence was poor in blocks of some 100 square metres. Crop rotation is suggested but it is unlikely the investors will consider the crop at that level of detail.

The combination of the positive factors noted above and the well-distributed rainfall described previously, explains the overall improvement in crop performance in all the main production regions, especially Tigray which has produced its best harvest for several decades. This is manifested by the universal increase in yields compared to the previous year for cereal and pulses listed in Table 7 below. The improved yields are considered by the Mission to be due to (i) the direct effects of well-distributed rainfall on crop growth and development, (ii) timely pre-season cultivation and main season husbandry, (iii) increased investment in inputs due to improved availability of fertilisers, improved seeds and credit. (iv) better financial returns to cereal growers last year and more accurate reporting of yields obtained.

3.5 Other crops

Crops contributing to household food security vary from north to south and from east to west. In the north, oilseeds, particularly nuq and sesame, are important to both peasant farmers and commercial producers. This year national oil seed area increased by 12 percent or 100 000 ha of which 44 000 ha is noted to be increases in Oromiya Region, 40 000 ha in Amhara and 10 000 ha in Tigray.

Given the diverse nature and generally favourable conditions for plant growth of the southern half of the country, a greater range of other crops contribute to the household's economy. In SNNPR and the southern zones of Oromiya, crops other than cereals and pulses occupy 12 percent and 32 percent respectively of the planted area compared to 3 percent and 7 percent in Amhara and Tigray. Of these the importance of enset, which provides the main carbohydrate staple for some 8+ million people and makes a substantial contribution to the diet of an additional 4 million people, is well understood. Data from southern zones are

incomplete this year, however the Mission teams in the enset area noted no reasons to suppose that enset harvesting is not in balance with replanting, suggesting that the area noted last year will have been sustained. Enset condition is noted to be good with yields at normal levels. Annual roots and tubers, mostly in the same agro-ecological zones as enset, have also performed well during both this year's belg and meher season, with sweet potato and potato yields of 15t-30t/ha as recorded by Mission team members, during a separate studying 2003 being achieved, this year.

This year's coffee production is expected to be similar to last year, according to the Coffee and Tea Authority specialists interviewed by Mission teams. Growing conditions during the year were good in all zones and prices are firm and expected to increase. The performance of other industrial field crops such as tea, sugarcane and cotton and the performance of chat, a mild narcotic cash crop grown throughout the southern half of the country in small backyard plots, are reported to be similar to last year.

3.6 Livestock

Ethiopia has the largest livestock inventories in Africa, including more than 38 million cattle, 30 million small ruminants, nearly 1 million camels and 4.5 million equines and 45 million chickens (CSA, 2004), with livestock ownership currently contributing to the livelihoods of an estimated 80 percent of the rural population.

In the arid and semi-arid extensive grazing areas in the Eastern, Western and Southern lowlands cattle, sheep, goats, and camels are managed in migratory pastoral production systems. In the highlands, livestock are kept under settled or transhumant systems utilising common pastures, many of which have a high clover content and crop residues. Such livestock includes some 9.3 million oxen providing draught power, for the mixed farming system that prevails.

Much has been made of the sequence of droughts in the pastoral areas yet livestock returns continue to increase nationally, which is something of a paradox. Certainly some recovery from shocks in the north-east and southern pastoralist areas should be possible this year, as pastures and water points are reported to be well-supported by the annual rainfall and, unlike last year, no premature herd-migrations to the relief grazing pastures in east Amhara or South Tigray were noted by the Mission team during field visits along the Afar-Amhara and the Afar-Tigray borders. In south Somali the pasture and water condition are reported by the National Meteorological Institute and WFP to be giving cause for concern and bear further investigation, as no Mission team had access to these areas.

Elsewhere, good pasture and ready access to drinking water has resulted in enhancing livestock body condition during the main grazing season throughout the central highlands and western zones to adult body condition scores of 2-3-4, averaging 3 in most areas. For the first time, one Mission team received information on grassland production from a community pasture. Studies using exclusion cages in Begasheka watershed, Central Tigray, suggest that during the period from May to the end of September some 8.0 tonnes of dry matter per hectare was produced by indigenous grasses and clovers.¹⁰ This is an interesting contribution to an area where no data is apparently available and will, hopefully, encourage other bodies interested in promoting animal production, to conduct similar investigations to place the understanding of the contribution of community pastures and their associated livestock to food security on a firmer footing.

Disease outbreaks noted as giving concern are lumpy skin disease in Somali and East Haraghe and African horse sickness in zones as far apart as West Haraghe, Sheka (SNNPR) and West Wellega. However, all the endemic diseases are noted to be present including internal/external parasites and reports of endemic infectious diseases such as pasteurellosis, anthrax, blackleg, CBPP, and CCPP. Trypanosomiasis is routinely cited as a concern in western and southern lowlands, this year with the extra observation in Dawro (Gojeb River valley) that the condition is not responding to the usual treatments with the recommended drugs, suggesting that resistant strains may be developing, but the condition is not reflected in the body condition scores noted in the transects of the team visiting the area.

Throughout the country, livestock prices are firm or increasing, boosted by a combination of a) firm cereal prices, b) food-security based credit programmes designed to encourage the purchase of fattening stock, dairy stock, draught animals and chickens) safety-net programmes increasing family incomes in marginal areas, d) increased daily labour rates throughout Tigray and northern Amhara and e) increased exports to the Middle East via the five export abattoirs with a current capacity to export 2.4 million sheep/goats per year and through cross border trade to Sudan.

¹⁰ Koronso,(2005) REST- personal communication.

Regarding the use of feed grains, information is scarce. On the one hand, the modern poultry industry producing eggs and broilers is served by private feed mills generating some 80 000 tonnes of poultry feed per annum to accommodate an estimated 1.5 million layers and 1 600 tonnes of broiler meat produced annually. About 70 percent of the components of the rations are estimated to be home-grown cereals. Feed grain use in the traditional backyard poultry industry, on the other hand, is far less easily assessed. Given that the backyard chicken population has recently been estimated by MOA at 56 million birds (7million households, 8 birds per household) and by the CSA at 45 million birds, assuming that every household feeds one menelik/wollo (0.7 kg) of home-produced cereals to the birds once a week, then the feed use is in the order of 254 000 tonnes per year. Mission observations suggest that both the grain ration and frequency of feeding are usually greater than assumed above. Therefore, the traditional and modern poultry industries may consume around 330 000 tonnes of cereals per year.

In addition to chickens, rations including some cereals are also given in limited quantities to working equines, draught oxen at ploughing time, fattening stock for the elite markets and the 156 000 grade and pure bred dairy cows. Information on rations and frequency of feeding, outside the small modern sector, is scanty. However, whereas it is understood that the bulk of the supplementary rations for large ruminants comes from household waste and cereal by-products, brans, mill-sweepings, brewers' grains, and oil-seed cakes, at household level home-grown cereals are also fed directly to livestock as cut sheaves and as grain. Consequently, a further 70 000 tonnes per annum has been added by the Mission to animal feed use in the cereal balance sheet to cover such eventualities this coming year when grains will be more freely available.

3.7 Cereal and pulse production forecast

The CFSAM teams' visits coincided with all stages of the harvest from crop cutting to threshing depending on crop and location. The wide range of harvesting activities underway at the time of the Mission enabled a ready assessment of actual production per unit area to be observed by the teams. Where crops were still standing, samples were taken, threshed using local techniques, dried when necessary to constant weight, and weighed to crosscheck agricultural bureaux yield estimates and farmers' predictions of production. Where harvesting was over, quantities of stored grains or cobs were matched against the areas from whence they came; and where threshing or combining of fields had been accomplished, information was obtained directly from the harvesting contractors, regarding the median yields in their areas of operation. In such ways, additional information was obtained to make adjustments to estimates and predictions received and to counter-balance glaring inconsistencies and false declarations or to supply figures for missing data. Transects driven by the Mission teams moving from location to location enabled observers to take detailed records of crop conditions, standardised using PET¹¹ As in previous years, Mission samples point to much higher potential yields per ha than are presented by woreda and zonal BoARDs particularly for sorghum crops in the lowland areas of north-east Amhara, where the lowest common denominator often appears to be used as the average, and higher yields per ha of most maize crops throughout Oromiya and SNNPR, where green-maize sale/use appears to be subtracted from harvest estimates. Mission adjustments, made to eliminate glaring inconsistencies are, however, conservative. Crop assessment training of young DAs and awareness raising of their supervisors with regard to the range of yields contemporarily available on small farms, is of paramount importance.

Regional totals of area and production, prepared by the Mission, are presented in Table 7 by crop. They indicate a 2005 meher cereal harvest of 15.85 million tonnes from 9.69 million hectares. This is 14 percent higher than last year's MoARD post harvest estimate¹² from a 4 percent greater area according to the BoARD data collected by Mission teams. Pulses return at 1.26 million tonnes from 1.41 million hectares, a harvest that is 3 percent lower than last year's corrected post harvest estimate and identical to last year's CFSAM figure.

¹¹ Robinson, I. Stirling, C. Hunde, M. and Bradbury, H. (2004) PET-Cereals, A Pictorial Evaluation Tool for Crop Harvest Assessment in Ethiopia, CAZS, University of Wales, Bangor, UK.

¹² The MoARD Final Post-harvest Assessment prepared in March 2005 returned 13.9 million tonnes of cereals, 7 percent higher than CFSAM 2005 cereal estimate.

Table 7: Area ('000 ha), Production ('000 tonnes) and Yield (tonnes/ha) of Cereals and Pulses in 2005/06 Meher Season

Region	Item	Teff	Wheat	Barley	Maize	Sorghum	Finger Millet	Other	Total Cereals	Total Pulses	Cereals and Pulses
Tigray	Area	136.2	74.1	68.4	84.4	240.8	99.0	39.1 ^{1/}	742.6	69.4	812.1
	Yield	0.7	1.4	1.3	1.6	1.4	0.9	1.0	1.2	0.7	
	Production	97.2	104.6	86.2	139.2	326.2	90.8	28.1	884.1	50.3	934.3
Afar	Area	5.5	0.0	0	10.6	7.1	0.0	0.0	20.6	0.4	21.1
	Yield	0.9	0.0	0	2.3	1.9	0.0	0.0	1.9	1.0	
	Production	4.9	0.0	0	24.3	13.3	0.0	0.0	39.6	0.4	40.1
Amhara	Area	705.1	359.5	280.1	311.8	483.3	153.3	39.3	2 333.2	457.0	2 790.1
	Yield	1.2	1.8	1.5	2.8	1.8	1.5		1.7	0.9	
	Production	848.2	654.5	415.3	873.4	860.6	229.2	60.8	3942.2	407.5	4 349.7
Oromiya	Area	1 237.0	1 126.5	664.7	1 035.0	757.0	230.8	39.0	4 994.2	683.8	5 677.9
	Yield	1.1	2.1	1.7	2.2	1.8	0.7		1.7	0.9	
	Production	1 307.8	2 421.9	1 104.4	2 244.9	1 340.2	151.0	48.0	8 618.0	587.8	9 206.1
Somali ^{2/}	Area	0.0	4.4	3.6	64.6	59.6	0.0	0.0	132.1	4.0	136.1
	Yield	0.0	0.6	0.5	0.6	0.7	0.0	0.0	2.4	0.7	
	Production	0.0	2.6	1.8	38.7	41.7	0.0	0.0	84.9	2.9	87.7
Beni-Gumuz	Area	19.0	3.5	1.5	47.9	53.0	28.7	0.4	154.1	13.6	167.7
	Yield	0.7	0.9	0.9	1.7	1.3	1.0	1.1	1.3	0.5	
	Production	12.9	3.1	1.3	81.1	66.3	28.7	0.5	193.5	6.2	199.2
SNNPR	Area	258.0	231.8	161.0	484.4	133.6	10.3	1.2	1 280.0	242.1	1 522.5
	Yield	0.7	2.2	1.1	2.0	1.3	1.2		1.6	0.8	
	Production	188.8	511.3	174.3	977.9	169.4	12.3	1.3	2 029.5	207.8	2 237.3
Gambella	Area	0.0	0.0	0.0	10.1	5.1	0.8	0.0	16.2	1.0	17.2
	Yield	0.0	0.0	0.0	1.2	0.9	1.0	0.0	1.1	0.6	
	Production	0.0	0.0	0.0	12.4	4.4	0.8	0.0	17.8	0.6	18.4
Harari	Area	0.0	0.5	0.0	2.6	6.7	0.0	0.0	9.7	0.0	9.7
	Yield	0.0	0.9	0.0	1.5	1.5	0.0	0.0	1.5	0.0	
	Production	0.0	0.5	0.0	3.9	10.0	0.0	0.0	14.4	0.0	14.4
Addis Ababa	Area	4.5	3.9	0.2	0.0	0.0	0.0	0.0	9.3	1.1	10.4
	Yield	1.6	2.6	1.0	0.0	0.0	0.0	0.0	2.0	1.0	
	Production	7.2	10.0	0.2	0.0	0.0	0.0	0.0	18.4	1.1	11.6
Dire Dawa	Area	0.0	0.0	0.0	0.6	12.0	0.0	0.0	12.6	0.0	12.6
	Yield	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.8	0.0	
	Production	0.0	0.0	0.0	5.0	9.6	0.0	0.0	10.1	0.0	10.1
TOTAL	Area	2 363	1 804	1 180	2 052	1 758	523	119	9 784	1 473	11 257
	Yield	1.0	2.1	1.5	2.1	1.6	1.0	1.3	1.4	0.9	
	Production	2 464	3 708	1 784	4 396	2 842	513	151	15 854	1 264	17 117

^{1/} Hamfes (wheat and barley seed mixture).

^{2/} Somali data incomplete.

Time series data for the past five years are provided in Table 8 for comparison purposes. They show that this year's production estimate for cereals and pulses is the highest that has been achieved to date. Its validity hinges on the accuracy of the area and yield estimates prepared by the BoARD offices. The differing area estimates described earlier generate doubt in the minds of assessors, who may then opt for lower yield estimates to redress possible overestimated areas, therefore, the sooner the area differences can be practically identified and resolved at woreda or PA level the better. This year the formalised approach to transect-based field recording and crop cutting by all Mission teams resulted in "spot-check" yield estimates that are significantly higher than the zonal averages, particularly in the marginal zones, where many of the low average yield estimates of 2-3 quintals are thought to be highly unlikely and connect to the absence of training in crop assessment and the availability of suitable equipment viz. manuals, accurate balances and quadrats, at woreda level. Supervisors verifying DAs' yield data should also be shown how to assess fields objectively. This points to the need for a programme to address these issues as soon as possible, coupled with technical support from zonal and regional specialists to help BoARD staff at local levels to resist local pressures to underestimate production in order to sustain the flow of food aid.

Table 8: Ethiopia – Cereals and Pulses Production – Comparison of 2001/02 to 2005/06 Meher Seasons

Region	Meher season	Cereals		Pulses		Cereals and Pulses	
		Area	Production	Area	Production	Area	Production
		('000 ha)	('000 tonnes)	('000 ha)	('000 tonnes)	('000 ha)	('000 tonnes)
Tigray	2001/02	723	637	47.3	24.6	770	662
	2002/03	692	427	41.8	14.2	733	442
	2003/04	761	677	52.5	28.0	814	705
	2004/05	729	596	71.0	36.7	800	633
	2005/06	743	884	69	50	812	934
Afar	2001/02	10.5	8.3	1.3	0.6	11.8	8.9
	2002/03	8.5	4.6	1.0	0.1	9.5	4.7
	2003/04	12.8	12.8	0.2	0.8	13.0	13.8
	2004/05	21.2	32.6	0.3	0.3	21.5	32.9
	2005/06	20.6	39.6	0.4	0.4	21.1	40.1
Amhara	2001/02	3 307	3 546	656	424	3 962	3 970
	2002/03	3 212	2 760	683	361	3 895	3 121
	2003/04	2 276	2 705	460	216	2 736	2 921
	2004/05	2 307	3 365	468	474	2 775	3 892
	2005/06	2 333	3 942	457	408	2 790	4 350
Oromia	2001/02	4 419	5 326	608	416	5 026	5 742
	2002/03	4 275	3 804	610	287	4 885	4 090
	2003/04	4 395	5 579	541	391	4 937	5 970
	2004/05	4 757	7 279	606	564	5 363	7 843
	2005/06	4 990	8 618	684	588	5 674	9 206
Somali	2001/02	97.3	36.6	0.0	0.0	97.3	36.6
	2002/03	98.9	47.9	0.0	0.0	98.9	47.9
	2003/04	210	61	6.5	2.0	217	63
	2004/05	193	114	8.8	5.5	202	120
	2005/06	132	85	4.0	2.9	136	88
BEN-G	2001/02	137	118	10.9	7.0	148	124
	2002/03	135	111	8.1	5.0	143	116
	2003/04	142	165	14.3	9.6	156	175
	2004/05	133	160	12.6	6.8	146	167
	2005/06	154	194	13.6	6.2	168	199
SNNP	2001/02	1 104	1 246	177	129	1 281	1 376
	2002/03	1 041	973	170	98	1 211	1 071
	2003/04	1 194	1 453	192	143	1 386	1 595
	2004/05	1 052	1 414	238	171	1 289	1 585
	2005/6	1 280	2030	242	208	1 523	2 237
Gambella	2001/02	18.1	21.0	1.1	1.5	19.2	22.6

Region	Meher season	Cereals		Pulses		Cereals and Pulses	
		Area	Production	Area	Production	Area	Production
		('000 ha)	('000 tonnes)	('000 ha)	('000 tonnes)	('000 ha)	('000 tonnes)
Harari	2002/03	14.5	12.3	1.0	1.3	15.4	13.6
	2003/04	15.6	17.6	0.9	1.2	16.5	18.8
	2004/05	9.6	13.2	1.0	1.0	10.6	14.2
	2005/6	16.2	17.8	1.0	0.6	17.2	18.4
	2001/02	10.2	6.6	0.1	0.0	10.3	6.6
	2002/03	8.9	4.3	0.1	0.0	9.0	4.3
AAbaba	2003/04	9.8	7.1	0.0	0.0	9.8	7.1
	2004/05	9.9	9.0	0.0	0.0	9.9	9.0
	2005/6	9.7	14.4	0.0	0.0	9.7	14.4
	2001/02	8.1	9.1	1.8	1.1	9.9	10.3
	2002/03	8.3	11.2	1.5	1.1	9.8	12.2
	2003/04	8.8	17.1	1.7	2.1	10.5	19.2
Dire Dwa	2004/05	8.5	13.7	1.9	1.9	10.4	15.4
	2005/6	9.3	18.4	1.1	1.1	10.4	11.6
	2001/02	11.3	5.8	0.0	0.0	11.3	5.8
	2002/03	8.4	1.0	0.0	0.0	8.4	1.0
	2003/04	11.4	4.3	0.0	0.0	11.4	4.3
	2004/05	12.0	9.6	0.0	0.0	12.0	9.6
TOTAL	2005/6	12.6	10.1	0.0	0.0	12.6	10.1
	2001/02	9 845	10 960	1 502	1 005	11 347	11 964
	2002/03	9 502	8 157	1 515	767	11 018	8 923
	2003/04 ^{1/}	9 036	10 699	1 268	794	10 304	11 493
	2004/05 ^{2/}	9 234	13 751	1 408	1 299	10 640	15 049
	2005/06	9 784	15 853	1 473	1 264	11 257	17 118

1/ Use of CSA based data for Amhara begins

2/ MoARD final post-harvest figures

3.8 Belg harvest

This year, the Mission was provided with the MoARD pre-harvest assessment of the 2005 belg season and collected data from belg producing woredas and zones during field visits by the Mission teams. Consequently, a much fuller data set is available this year than last year's incomplete set. The MoARD summary is presented in Table 9 by Region, juxtaposed with final belg harvest data from the two previous years. The Mission is not in a position to audit or adjust the belg data, they are presented in the report "as found" but it is clear that this year's harvest was much higher than any harvest recorded in recent years.

Table 9: Ethiopia - Belg cereals and pulses production in 2003, 2004 and 2005

Region	2003		2004		2005	
	Area ha 000's	Product (tonnes)	Area ha 000's	Product (tonnes)	Area ha 000's*	Product (tonnes)*
SNNP	71	52 345	56	28 319	465	616 206
Amhara	209	163 699	159	101629	214	202 462
Oromiya	270	250 160	212	157530	506	601 658
Tigray	22	20 626	6	4740	12	10 773
Somali	na	na	na	na	2	2 220
TOTAL	572	487 830	433	292 218	1 199	1 433 299

* MoARD pre-harvest data, August 2005

Post-harvest belg returns obtained by Mission teams directly from 22 woredas and zones out of the 26 localities noted by MoARD with belg crops this year, also suggest a harvest of over one million tonnes. Missing data preclude a valid comparison, however, the improved volume compared to previous years, is clearly of the same order as indicated by the figures in Table 9. However, in the last four years, two belg crops have provided less than 350 000 tonnes, consequently, the Mission feels compelled to make a cautious forecast for the belg in 2006 at 250 000 tonnes of cereals and pulses. It should also be noted that, as in all previous years, maize yields used in this year's estimates of the meher harvest include "maize eaten

green." Excluding them would be misleading with regard to the production achieved. Carrying forward the total maize production to marketing year 2006 is only justified in the same way as the inclusion of the 2006 belg harvest is justified in that it is assumed that both green maize and belg harvests will be domestically available next year.

4. CEREAL SUPPLY/DEMAND SITUATION¹³

4.1 Marketing system

The main cereals produced in Ethiopia are teff, wheat, maize, sorghum, barley and finger millet. Smaller quantities of oats, emmer wheat (known locally as Aja) and rice are also grown. Cereals are produced in different areas throughout the country and may be sown and harvested at different times of the year. In general, however, most are grown as long or short cycle crops within the Meher season, with teff, wheat and barley also cultivated under the Belg rains. It is important to recognize that the two long cycle crops (maize and sorghum) which are mainly grown in the higher temperature, lower lying areas of the country constitute on average more than 50 percent of total cereal production, while amongst the short cycle crops wheat and teff make up between 15 percent and 20 percent each, and barley comprises 10 percent of the total.

Prior to 1974, market forces largely determined the prices of agricultural products with little or no government intervention. However, farm gate prices tended to be low due to lack of market information by the growers. The small farmers, after walking almost half a day to reach the nearest market, sold their grains to local traders who would then take it to bigger markets either to sell to consumers themselves or to pass to another trader who could be a wholesaler or a retailer. In the post-1974 period, the government adopted a policy of direct intervention to keep prices at low levels. Farmers were required to deliver a significant proportion of their output (quota) at fixed prices to the state owned Agricultural Marketing Corporation (AMC) established in 1976. Private traders, who bought the balance after the quota was deducted, were restricted from transporting grain from one region to the other through a system of strict check points. In March 1990 the "Mixed Economy Policy" was introduced which removed the AMC quota system of grain delivery, restriction on grain movement and the system of fixed pricing for farm produce. The present Government initiated further liberalization of the grain market and limited the role of AMC to wholesale trade primarily for regulatory purposes and stabilization of markets. In 1992, the AMC was restructured to create the Ethiopian Grain Trade Enterprise (EGTE).

Market Structure: The number of players in the market is considerable. As grain sales by smallholders beyond 20 km distance are not very frequent, a large number of assemblers play a vital role in consolidating small producer shipments. These assemblers are mostly independent operators at primary markets who assemble and transport the grain using pack animal and small trucks for sale in the secondary or urban markets. For maize, they are estimated to handle about half of the marketed volume from the smallholders, according to investigations carried out by the Grain Marketing Research Project in the late 1990s. Their major sales outlets are the relatively larger wholesalers who handle roughly 75 percent of the total marketed quantity of maize; the remaining 25 percent is directly sold to rural/urban retailers and consumers. Wholesalers are generally licensed grain traders who receive grain from farmers and rural assemblers at their stores, in secondary markets. They usually sell their grains to private companies, wholesalers in urban areas, or urban retailers. Next to the wholesalers there exists a substantial network of private traders who buy, store, transport and sell grain on local and inter-regional markets within the country. The wholesalers play a key role in the grain trade in that they act as the main store of grain in the country. Most wholesalers have the capacity to store between 50 and 500 tonnes of grain, and it is in these stores that the bulk of the grain traded in a given season is held between January and October. Assemblers and retailers do not hold stocks of any size and the larger merchants equally prefer to remain liquid, buying from wholesalers as and when they need to meet a contract.

There are no functioning market information systems in the country that could be used by traders to discover opportunities for trade. The Central Statistical Authority (CSA) collects market prices, but these are used to compile the Consumer Price Indices and by the time they are published they are of historical interest only. EGTE continues to collect market information for its own purposes and for the Ministry of Agriculture, but this data is not made public. The Marketing Division of the Ministry of Agriculture has plans to implement a comprehensive market information system, but this is still under review. As the information gained is expensive and frequently unreliable, further contributing both to increased transaction costs and the extent of market dislocation, traders are obliged to rely upon personal networks to obtain price information.

¹³ This section relies heavily on reports from EGTE, MoARD, IFPRI, as well as special reports and information made available to the mission by USAID, FewsNet, and the EU.

Most traders, therefore, operate through specialized brokers, mainly located in Addis Ababa, that mediate between traders in surplus areas and wholesalers in terminal and deficit markets, processors and private companies. The brokers operating in the main terminal markets normally coordinate inter-market grain flow, are specialized by route and coordinate grain buying, selling, transporting and pricing activities. Generally, most of the regional traders are loyal to their respective client broker. This situation indicates usually long-term relationships between brokers and regional traders based on trust. Two key aspects of this structure become apparent, first the hierarchical nature of the system, with the brokers in Addis controlling flows both to and from the Capital, and secondly that it is based upon personal contact and trust. As a result, there is little direct flow of grain between surplus and deficit areas. The market structure does not facilitate this as there are few personal contacts between wholesale merchants operating on different routes. Instead, surplus grain moves first to Addis and is then redistributed to deficit areas. This circuitous route, which is partially also enforced by the very nature of the existing road network, considerably increases the overall transaction cost.

Transport infrastructure: The rugged nature of the Ethiopian landscape with its steep valleys and high upland areas makes the transport of bulky commodities both difficult and expensive (see Map 1). At the same time, rail networks are rendered impractical for much of the country (with the exception of the link between Addis Ababa and Dire Dawa), while the construction and maintenance of road infrastructure is itself expensive. The road network is limited and does not reach many villages in rural areas. As a consequence, the cost of moving commodities within Ethiopia is a significant element in the final price, increasing import parity prices on the one hand and reducing the farm-gate value of export commodities on the other. While this may provide some protection for local production against competition from imports, it renders low value/high volume exports such as cereals relatively uncompetitive on the export market.

Commercial imports: The cereal market in Ethiopia currently operates at a level above export parity pricing and (possibly as a result of limited consumer purchasing power) below import parity prices. For cereals, this is a wide price range due to the costs of haulage on the one hand (which create a differential of at least US\$ 60/tonne) and import duties and taxes on the other (up to another US\$ 60/tonne). Thus, a price range of up to US\$ 120/tonne may exist between floor and ceiling prices, without allowing for traders' margins. As a result, there are few commercial imports of cereals. A small volume (approximately 10 000-15 000 tonnes each year) of hard Australian wheat is imported by the Dire Dawa Food Factory in consortium with a small number of government-associated mills, as a necessary ingredient of a macaroni/pasta grist. At the same time, a variable volume of cereal products (flour, biscuits, semolina, and pasta) is imported in containers. The actual amount of cereal equivalent imported through this channel is hard to estimate, but customs data would suggest that it amounts to between 10 000 tonnes and 20 000 tonnes per annum.

Summarizing, agricultural markets in Ethiopia are fragmented, unregulated, lacking in open market information systems, saddled with high transaction costs, constrained by inadequate liquidity, tending to operate only when price differentials are considerable – all of which limit the extent to which any commodity can move from an area of surplus to an area of deficit and most Ethiopian markets. Moreover infra-structural constraints increase import parity prices and lower export parity prices to such an extent that marked price fluctuations can occur when the supply of a commodity with a relatively inelastic demand varies above or below the requirements of the domestic population.

4.2 Price policies

As stated above, agricultural commodity prices in Ethiopia are determined primarily by market forces. The Government has no clearly stated food pricing policy, and does not set floor or ceiling prices. Nevertheless, there is a degree of government intervention in the market through the agency of EGTE. The government seeks to increase agricultural production through the promotion of crops in specific areas according to their comparative advantage. This policy is dependent upon the development of effective markets for the products and EGTE is tasked with the purchase of specific crops from producers and assemblers in given areas as and when necessary in order to maintain prices and incentivise continued production. For this purpose, EGTE purchased about 80 000 tonnes of grains in 2005, and has targeted the purchase of 100 000 tonnes of grains during 2006. The commodities purchased will either be exported or sold to Donor agencies (via DPPC/A) to augment the Ethiopian Food Security Reserve (EFSR). The amounts purchased have been significant (up to 300 000 tonnes per annum) and the purchases have been undertaken on a regular basis. This has resulted in a change in the operational behaviour of the larger merchants who have indicated a clear preference to deal with the DPPA as a more reliable purchaser, than with small local wholesalers. Although the extent of EGTE's intervention in the market is relatively small (less than 10 percent of total

production), purchases by EGTE have a disproportionately large effect upon the market. This is due on the one hand to the traditional respect that the producers and traders pay to prices offered by EGTE, which are commonly regarded as official prices, and on the other hand to the fact that EGTE offers direct cash payment and is therefore able to attract sellers readily. The relative thinness of the market will have also increased the extent to which any purchase intervention might increase prices.

With respect to marketing enhancement initiatives, the government is currently promoting the development of institutional arrangements necessary to implement a warehouse receipt-based inventory credit system which is expected to be in place by early 2006, together with the development of market awareness campaigns amongst growers and traders through the retraining of extension agents.

4.3 Price development

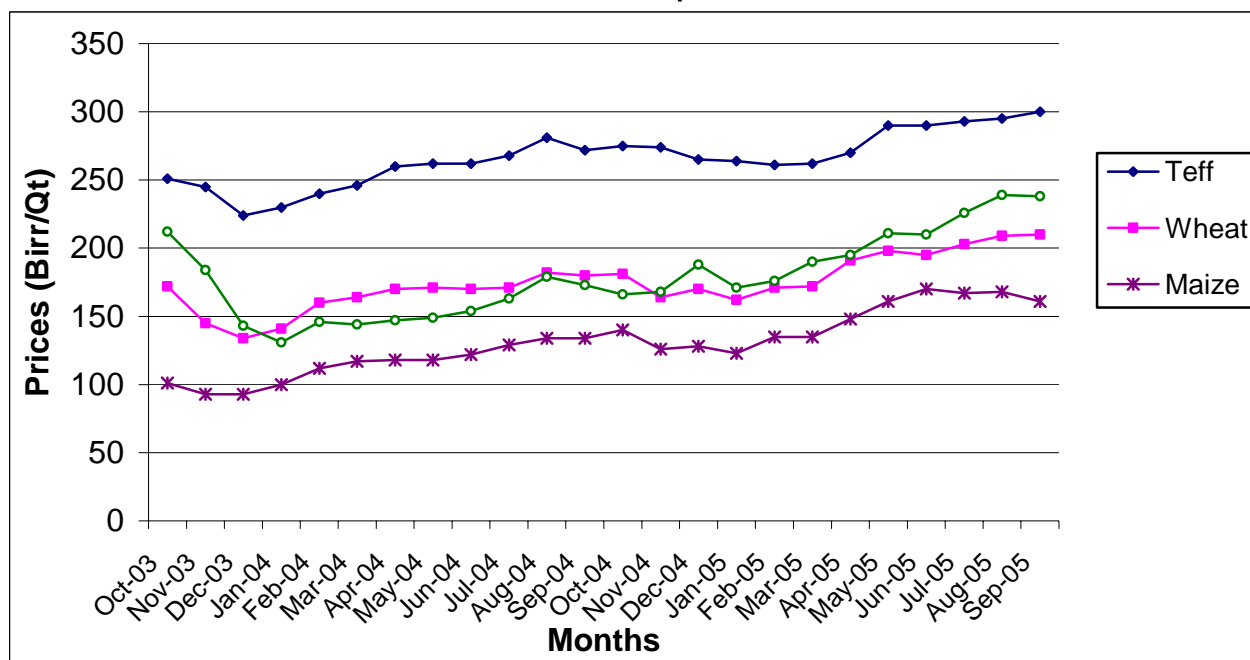
Grain prices normally peak in July/August of each year before falling as the new Meher season crop comes on to the market. Maize is the first crop to reach the market, from mid October onwards. Early maize deliveries are commonly higher in moisture than the standard crop (16 percent-18 percent as opposed to 12 percent) and initial maize prices are lower than standard prices. Subsequent prices stabilize at higher levels as drier crop becomes available and fall thereafter; standard prices are normally lowest in early December. Thereafter, prices rise gradually through January to April although they may frequently stabilize or fall slightly from late April to early June as Belg cereal production comes on to the market. From June to July/August, prices again increase and any subsequent reduction in price is a reaction of traders to the prospects of the next season's crop. Similar cycles are repeated for the other crops, although they may be delayed by up to 60 days according to the time of harvest. Barley is harvested soon after maize and wheat approximately one month thereafter. Teff can be harvested over a wider time range, but normally reaches the market after wheat. Farmers will normally sell the bulk of their marketable surplus (estimated at approximately 15-20 percent of their total net harvest) from November through to January. A small proportion is generally retained for sales throughout the year.

Since 2000, cereal prices in Ethiopia have generally remained above export parity and below import parity levels. This is not surprising given the significant gap between export and import parity caused in part by the high costs of transport and in part by duties and taxes. However, it does mean that even when prices have reached record levels as at the end of the 2004/05 season, it has not been cost effective to import on a commercial basis other than for select niche markets. As a result, Ethiopian cereal markets are largely insulated from international price trends. Prices rise and fall within a considerable range purely as a result of domestic supply and demand.

Following the poor Meher season production in 2002, the cereals market prices reached a peak in August 2003. Thereafter prices fell as the prospects of improved production were realized and new crop came on to the market, reaching a minimum in December 2003 (see Graph 2)¹⁴. From December 2003, cereal prices have increased consistently, falling back only slightly after the Meher harvest of 2004, and reaching record levels (at least in nominal terms) by August 2005. Analysis of the price data series shows that the main difference between average price movements and those experienced over the last 18 months has been the lack of any significant post harvest reduction in price. From the early part of 2005 onwards, prices have behaved in a normal manner, increasing from February to May, stabilizing somewhat thereafter and then increasing again until July/August. The price reduction between July and December has been diminishing in 2004 as compared to average price movements of previous years. An effect that is more marked for maize, suggesting that the availability of maize did not increase during the post-harvest period in the way that it would normally. It is also quite apparent that the overall price level of maize has remained significantly above average throughout the entire twelve-month period, as compared with the price of wheat, which has remained closer to normal levels, increasing more dramatically during the months of July to September. Graph 3 shows the market price development for Teff in three different locations. As expected, the highest prices were recorded in the deficit grain market of Mekele in the northern Tigray Region, whereas the surplus market in Jimma located in the south-western part of Oromia Region registered the lowest commodity prices.

¹⁴ In the analysis, EGTE collected market prices are used; EGTE has been collecting grain market prices for many years. It is the only institution that has full time and specifically trained grain market prices enumerators stationed in the respective market places.

Figure 2. Ethiopia: Main Cereal Crops in Addis Ababa – EGTE Monthly Wholesale Prices October 2003 to September 2005

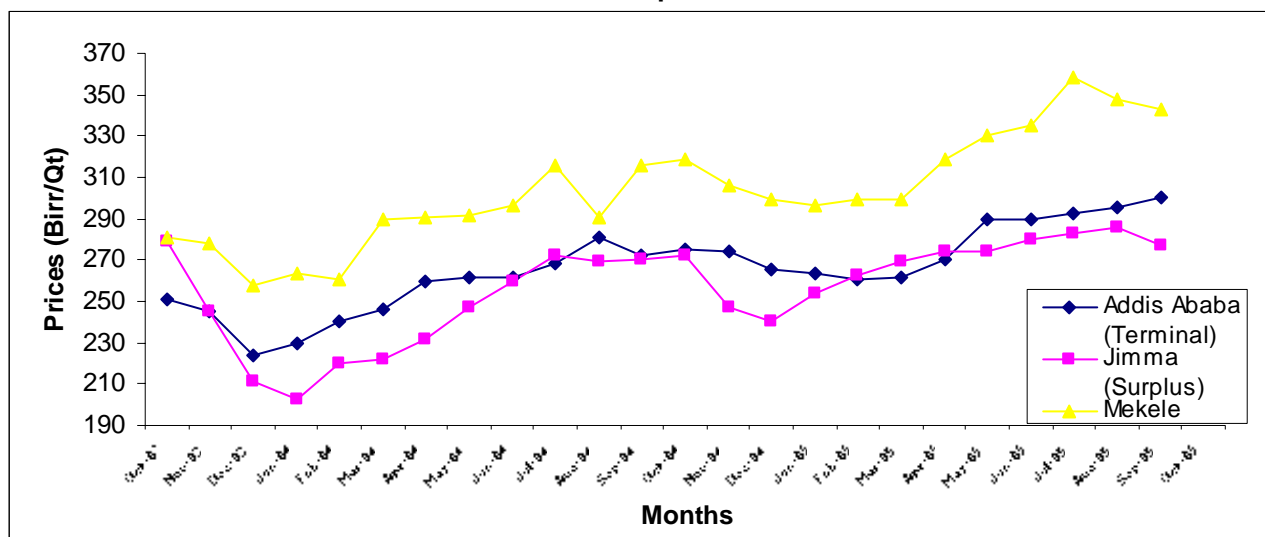


In 2005, despite a forecast of a bumper harvest in the cropping year of 2004/05, market prices were generally high but stable with reduced fluctuations between hunger season and post-harvest prices. This is unlike previous years where a bumper crop is usually followed by a sharp drop in market prices. Although a more thorough study is required to pinpoint the main causes for such behaviour, some likely reasons are given below:

- The intensified 'local purchase scheme' practised by both, the EGTE (see above) and agricultural cooperatives; the latter increased their purchased cereal volumes to nearly 100 000 tonnes during 2005, mainly wheat and maize; Although limited by the lack of working capital, this year a total of 1 300 primary cooperatives and 48 unions engaged in local purchase of cereals; furthermore, the Cereal Availability Study (WFP/EU) estimated the available volume for local food aid purchase by relief agencies at around 355 000 tonnes – in 2005, WFP purchased 156 000 tonnes locally to be distributed as food aid;
- Increased exports, particularly cross-border grain trade to Sudan, Djibouti and Somalia. Recorded (formal) exports of pulses in 2004 and 2005 amounted to 73 000 tonnes and 125 000 tonnes respectively. Anecdotal evidence of unrecorded (informal) exports of pulses and cereals to the neighbouring countries of Djibouti, Somalia, Sudan and indirectly to Eritrea suggests no less than 100 000 tonnes and up to 200 000 tonnes depending on levels of production. Specific studies are recommended to quantify the amount of cross-border grain trade.
- The direct as well as psychological effect of the commencement of the Productive Safety Net Programme (PSNP) Which for the first time began targeting chronically food insecure people through the transfer of cash and food increasing effective demand to local produce.
- Possible increase in the amount and frequency of grain consumption following increased production.

Market prices are expected to decrease in the following few months as the bulk of the new crop gets to the market. However, the decline may be limited as the above given factors are most likely to be repeated in 2006.

**Figure 3. Ethiopia: Teff Monthly Wholesale Prices in three different Markets
October 2003 to September 2005**



Source: Ethiopian Grain Trade Enterprise (EGTE)

4.4 National grain supply/demand balance in 2006

The projected supply/demand balance for cereals and pulses for the 2006 (January-December) marketing year is summarized in Table 10. It is based on production estimates of the 2005 meher crop, a forecast of 2006 belg crop and the latest information on trade and stocks. Total cereal and pulse production is estimated at 17.37 million tonnes, including 17.12 million tonnes from the main meher crop, and a provisional forecast of 250 000 tonnes for the 2006 belg crop. As these estimates are based on a field assessment carried out mainly during the month of November final production figures, once all meher season crops are harvested by end January, might vary.

- **Opening stocks** for the 2006 marketing year (January/December) are estimated at 405 000 tonnes. These include an estimated 40,000 tonnes held by the Ethiopian Grain Trade Enterprise (EGTE); about 295 000 tonnes held by the Emergency Food Security Reserve (EFSR). Estimates of stock levels in households and traders are not available and usually a zero stock change is assumed. (approximately 25 000 tonnes with commercial traders; about 45 000 tonnes with small farmers in the surplus producing areas).

The EFSR is a revolving grain fund with a maximum stock size of 407 000 tonnes. Several national and international agencies including DPPC, WFP, EGTE, donors, and NGOs borrow grain from it on a six month contract, and exclusively against a confirmed donor contribution. As its de facto availability is greatly conditional to confirmed donor financing, it can be argued whether the EFSR should or not should be considered in the National Food Balance. However, as EFSR stocks are physically in the country to be mobilized in case of emergency, the mission has included the respective opening stocks in its calculation.

- **Closing stocks** are forecast at 800 000 tonnes. This represents a bit less than the minimum national food requirements for one month, and is advisable to maintain, given the well documented level of variation in production of both the meher and the belg harvest.
- **Feed use** is forecast at 400 000 tonnes largely for the consumption of poultry industry, dairy industry and equines.
- **Seed requirement** is estimated at 1.00 million tonnes based on the seed rates used in Ethiopia and 11.3 million ha of cereals and pulses to be sown in 2005/06¹⁵.

¹⁵Seed rates used are 35 kg/ha for teff, 150 kg/ha for wheat, 120 kg/ha for barley, 135 kg/ha for hamfes, 25 kg/ha for maize, 15 kg/ha for sorghum, 80 kg/ha for millet, 100 kg/ha for pulses and 100 kg/ha for other crops.

- **Post harvest losses** are estimated at about 2.4 million tonnes based on post harvest loss rates ranging from 3 percent for teff to as high as 25 percent for maize and pulses¹⁶. The post harvest losses take account of the bumper crop and have averaged at about 14 percent of the total meher harvest.
- **Exports** - Grain exports, mainly pulses, in the coming marketing year are expected to be higher than in the past few years and are estimated at about 260 000 tonnes. This is related to the exceptionally good harvest, but also considers suggestions of recent increases in cross-border grain trade (see also 4.3).
- **Food Use:** The estimate for the 2006 national 'food use' takes an average per capita food consumption derived from the currently available CSA databank and respective population estimates. The "National Household Income, Consumption and Expenditure Survey" was carried out in 2000, and detailed data was made available to the Mission in 2005 (see Annex 2. for details). CSA has completed another nation-wide Household Consumption and Expenditure Survey in 2004/05, with preliminary results expected to be published not before mid 2006. The currently available figure of 176 kg grain intake per person per annum reflects the de facto 'status quo' food consumption which corresponds to an increased per capita consumption, as compared to the usually used 156 kg per person derived deductively from what availability. On the basis of the per caput consumption figure of 176 and an estimated population mid-marketing year population of 75.2 million the total food requirement of grains is estimated at about 13.2 million tonnes in 2006.

Table 10. Ethiopia: National Grain Supply/Demand Balance, January-December 2006 (in tonnes)

Domestic Availability	17 779
Opening Stocks	405
Production	17 374
<i>Meher</i>	17 124
<i>Belg</i>	250
Total Utilization	17 779
Food Use	13 235
Feed	400
Seed Use	776
Losses	2 397
Exports	260
Closing Stocks	711

From the above, it follows that, at the national level, Ethiopia is able to cover all of its cereal requirements through the above-average cereal production and available stocks. However, a significant number of vulnerable households remain largely food insecure and will depend on humanitarian assistance in 2006. This is particularly true in pastoral areas of southeast Ethiopia where currently pre-famine conditions are reported, including widespread human and livestock distress migrations, deterioration of livestock body condition and cases of livestock deaths. Failed 2005 secondary "Deyr" season rains (October to December) have resulted in a serious food security crisis for southern Somali Region pastoralists. The situation is worst in the districts that had poor rains during the preceding main season "Gu" season (March to May), including Afder, Liban and parts of Gode zones. Other eastern zones of the region are also facing deteriorating food security conditions. The onset of the dry season (January to March) is expected to worsen the situation.

It is also important to emphasize that the food use indicated above is an estimate that will not be adequate to achieve ideal levels of nutrition. It is an empirically derived figure that will provide enough food to the country to maintain the nutritional "status quo" that has been achieved as a result of local production, donor intervention, and the overall economic development over the last few years. The advantage of such an approach is that it is internally consistent, which significantly strengthens its validity. Its disadvantage is that it does not meet ideal nutritional needs, and food aid, in the volumes estimated, will still leave significant levels of malnutrition in some areas of the country. However, this approach is preferred over one which uses standard nutritional requirements since it reflects the actual conditions experienced in the country, not a nutritionally ideal situation. While the achievement of adequate nutritional standards may be a worthwhile goal of donor interventions, it does not reflect a gap due to an emergency situation.

¹⁶Storage losses: wheat 10 percent, barley 10 percent, hamfes 10 percent, sorghum 10 percent, maize 25 percent, pulses 25 percent, finger millet 5 percent, teff 3 percent and other crops 10 percent.

4.5 Risk factors that may affect the national grain supply/demand balance in 2006

It is important to highlight that the production figures above are preliminary and made at the beginning of the harvesting season. Significant changes that have major implications on domestic availability and thus on imports may occur. Main among the likely changes are the level of total production and per caput consumption figures.

As far as the changes in production is concerned, even a 20 percent decline in the meher crop, amounting to about 340 000 tonnes, can easily be absorbed by the projected closing stocks (less stock build-up). On the other hand, the belg crop, forecast at the lower end of recent outturns, may actually increase augmenting availability. The scheduled release of results from CSA's in 2004/05 nation-wide Household Consumption and Expenditure Survey later in 2006 may also have significant implications by either increasing or decreasing the food use levels.

The need to strengthen the data generating process in Ethiopia, particularly that of production, cannot be over-emphasised. The CSA and FAO with assistance from EC and other partners, have recently embarked on a process of doing just that.

4.6 Emergency agricultural support measures in 2006

There is an urgent need for agricultural emergency interventions in 2006, both in the crop and livestock sectors, to address the needs of vulnerable households affected by disasters, mainly drought, and assist in the restoration of their productive capacity. As indicated in Table 11 below, an estimated US\$18.6 million is required to address the needs of these vulnerable households in 2006. In response to the expected above average crop, the emergency seed requirements declined by about 18 percent compared to 2005.¹⁷ By contrast, intervention requirements in the livestock sector has increased by about 14 percent in response to the impact of the current severe drought in pastoralist areas of southern and eastern parts of Ethiopia.

Table 11. Ethiopia: Emergency Agriculture Sector Requirements in 2006

Programmes	No. of Beneficiaries		Cost (US\$)
	Households	Animals	
Provision of emergency seeds	694 029	-	4 865 929
Support to irrigation	22 811	-	484 500
Livestock emergency health interventions	-	54 246 207	4 508 182
Destocking and restocking	-	69 300	2 815 456
Supply of forage seeds and animal feed	11 658	52 000	2 974 817
Prevention of avian influenza	-	-	1 480 000
Sectoral capacity building and coordination	-	-	1 500 000
Total	11 658	54 367 507	18 628 884

Source: Ministry of Agriculture and Rural Development

In 2005 agricultural emergency interventions were directed in addressing the needs of the most vulnerable households who lost all or part of their crops or livestock due to disasters. However, planned interventions planned at about US\$10.8 million, were partially carried out due to poor response to the appeals made early in 2005.

5. HOUSEHOLD VULNERABILITY AND EMERGENCY FOOD SECURITY NEEDS ASSESSMENT

5.1 Food security and nutrition background

5.1.1 Pre-crisis household food security situation

Food insecurity, affecting large parts of the population, is recurrent in Ethiopia, and food aid has for the last three decades played a major role as a response to this. Food insecurity has taken on a chronic form and between 6 and 13 million people in Ethiopia risk starvation every year¹⁸. Overall food security indicators are poor with domestic growth production falling behind the population increase and pervasive depletion of the household asset-base taking place. The growing scale of the structural food deficit is highlighted by the fact that the country needs to produce an extra 750,000 tons of food annually to keep pace with population

¹⁷ This also reflects improvements made in identifying the most needy.

¹⁸ Plan for Accelerated and Sustainable Development to End Poverty (PASDEP), 2005

growth. Recurrent drought, disruptions due to civil and border wars, soil exhaustion, erosion and overcrowding of human and animal populations are among the major causes of food insecurity.

It is against this background of a general low household food access and availability that the population's resilience to sustain shocks is extremely weakened and acute food insecurity, requiring relief (emergency) interventions, occurs.

Persistent threats to food security and a number of humanitarian risks exist. During the second half of 2005, a peak of 3.3 million people required relief assistance due to the following unpredictable events: floods accompanied by outbreaks of malaria and diarrhoeal diseases (which remained the major causes of morbidity, disability and mortality in 2005), causing significant livelihood damage and displacements in the northeastern and south-eastern lowlands, especially along Awash River in the Afar region; increased cereal prices which have remained at unseasonably record high levels in 2005; tribal conflicts that occurred in southern Oromiya, Somali and Afar regions. Additionally, pockets of acute malnutrition emerged, reaching levels that define critical emergency situations, and an unusual outbreak of vitamin C deficiency was observed in one district of Oromiya region. Volcanic eruptions in Afar region resulted in relief needs. These unpredictable events and humanitarian risks aggravated the food insecurity level of the people during 2005.

5.1.2 General nutrition status of vulnerable populations

The preliminary Demographic Health Survey of 2005 (EDHS 2005)¹⁹ results show that 38 percent of the surveyed population in Ethiopia is underweight, while 47 percent is stunted. Though these prevalences have now decreased slightly compared to the EDHS 2000, they remain abnormally high, describing a population that is permanently affected by the consequences of a combined poor nutrition and poor health status. Similarly, 10.5 percent of the children under-five are affected by wasting. 10 percent wasting prevalence defines an "alert situation" according to international humanitarian standards and corresponds to the cut-off point where relief targeted supplementary feeding and therapeutic feeding interventions need to be initiated²⁰. Such prevalence reveals a very poor nutrition status overall and indicates that underlying causes of malnutrition throughout the year are significantly worsening the vulnerability level of the population and their resilience to shocks.

The survey revealed that the highest wasting prevalence is found in Somali region, with a global acute malnutrition rate (GAM)²¹ of 23.7 percent and severe acute malnutrition (SAM)²² of 5.1 percent. Other regions with a high prevalence of wasting include Beneshangul Gumuz, Amhara, Tigray and Dire Dawa region with respectively 16 percent, 14.2 percent, 11.6 percent and 11.4 percent global acute malnutrition. Though nutrition surveys conducted during 2005 by the Government and NGOs have very low spatial and temporal coverage, concentrated in areas suspected to have deteriorating nutritional conditions – which prevent results from being extrapolated to wider areas and/or to other seasonal period. They nevertheless reveal and provide proxy indications of the probable nutrition situation in the surveyed areas. Findings confirm a situation described by the EDHS 2005, with the highest level of acute malnutrition found in Somali region: GAM ranging from 16.1 percent to 21.8 percent and SAM ranging from 1.2 percent to 5.1 percent.

5.1.3 Links between HIV/AIDS, nutrition and food security

With an official estimated prevalence of 4.4 percent, HIV/AIDS poses a substantial threat to Ethiopia's development. An estimated 1.47 million people are infected, leaving Ethiopia as one of the countries in the world with the largest number of people living with the virus. By end-2003, an estimated 539,000 children had been orphaned by AIDS. The impact of the pandemic on food security, socio-economic development and health is devastating, with close to 93.5 percent of reported AIDS cases found among economically active adults.

The affects of HIV/AIDS on individuals, households and communities are multiple. HIV infection, rapid progression to AIDS, food insecurity and malnutrition are all causes and consequences of general conditions of hardship and poverty that are found in many areas in Ethiopia. HIV/AIDS contributes to food insecurity and compromises the goal of increasing food security in Ethiopia. Food insecurity worsens socio-economic conditions and causes distress and the breakdown of family and community structures and social norms. These conditions lead to earlier sex and marriage, violence, sexual exploitation and abuse and increased

¹⁹ Ethiopia Demographic Health Survey 2005, Central Statistic Agency, November 2005

²⁰ WFP Food and Nutrition Handbook, 2004 and management of Nutrition in Major Emergencies, WHO, 1997

²¹ All reported GAM are expressed in WFH <-2 z-scores in this section

²² All reported SAM are expressed in WFH <-3 z-scores in this section

rates of HIV infection. Food insecurity facilitates the spread of HIV/AIDS as people are forced to adopt risky strategies in order to survive. High-risk livelihoods, including sex work, are low paid, temporary, insecure and often illegal, further compounding vulnerability. Food insecurity in rural areas encourages seasonal labour migration and migration to urban areas, which brings vulnerable people into contact with urban populations with higher rates of HIV/AIDS prevalence and situations of increased risk. This also leads to the transfer of HIV/AIDS back to rural areas when migrants return to their homes. HIV/AIDS increases financial burdens on households who have to pay for medicine and funeral costs on diminished incomes and are unable to meet other expenses, including food. The combination of food insecurity and HIV/AIDS, therefore, creates a vicious circle of poverty, and destroys existing coping mechanisms.

5.1.4 Background of current crisis

As indicated previously in this report, the 2006 main rainy season was positive overall and production for the country is on the whole very promising. This does not however exclude acute food insecurity affecting the population in some areas of the country. Failure of the 2005 rains in parts of the country, abnormal cessation of rains, dry spells, pest infestations and locally adverse weather conditions have resulted in a continued need for humanitarian assistance in 2006. In the pastoral and agro-pastoral areas of Ethiopia, failure of the “deyr” rains in five zones of Somali region has resulted in severe drought conditions, insufficient pasture regeneration and poor water replenishment. In Borena zone of Oromiya region, delays in the onset of the short “hageya” rains, erratic rainfall and inadequate amounts of rains received have led to a critical shortage of pasture and water. In these areas, much of the population are facing extreme food insecurity. In parts of Afar region, late-onset and early cessation of “karma” rains have led to water shortages and poor pasture and grazing conditions for livestock. In pocket areas of crop-dependent parts of the country, the food security for a relatively small part of the population has been negatively affected by a range of weather-related factors, such as late onset or early cessation of rains, pests, dry spells at critical periods of crop development, floods or other adverse weather conditions.

5.1.5 Relevant Government policies and actions on food security crisis

In view of the extreme vulnerability and general food insecurity of the population, the Government has engaged on a number of programmes that deal with agricultural growth as well as broader food security and poverty reduction concerns. In the new Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) (2006-2011), which represents the second phase of the poverty reduction strategy process, started in 2000, the Government highlights the importance of increasing food availability at access level through increased crop production, increased livestock production and productivity and increased access to other non-farm income sources through agriculture and non-agriculture activities.

The Government, in close collaboration with its development partners, has developed a food security programme within the framework of the PASDEP. The core objectives of the Programme are: (i) enable about five to six million chronically food insecure people attain food security within the coming three years and (ii) improve significantly the food security situation of up to ten million additional food insecure people within three to five years time. There are two underlying principles: helping farmers use their own resources to overcome food insecurity – both through agricultural improvements and diversification of off-farm income sources – and a shift away from reliance on imported food aid. With regard to pastoral communities, the national strategy emphasises livestock development, strengthening livestock marketing, agro-pastoralism and sedentarisation.

2005 marked the start of the Productive Safety Net Programme (PSNP), which is an important pillar in the Government’s overall food security programme. For the first time in Ethiopia, the needs of chronically food insecure households in bridging income gaps are being addressed through multi-annual resource transfers (cash or food) in exchange for participation in community based asset building. In 2006, the implementation of the PSNP will continue to be an important pillar in the Government’s food security policy.

Meanwhile, unpredictable emergency situations, which aggravate food insecurity and vulnerability level of the food insecure households, continue to be addressed through relief interventions, based on relief needs assessments and humanitarian appeals. There are therefore two main mechanisms in place to address the needs of food insecure populations: PSNP and relief humanitarian assistance (often referred to as “emergency”). While the PSNP has a predictable number of beneficiaries, the second is related to unpredictable shocks and events, monitored on regular basis through the Early Warning System of the Government.

5.1.6 Previous emergency assistance

Relief food aid requirements have varied somewhat in recent years, with beneficiary numbers ranging between 2.7 million beneficiaries in 1996 and the record high of 13 million people in 2003. In 2005 the Government of Ethiopia and the humanitarian community faced several major humanitarian challenges. With the start of the PSNP, partners working on the two processes are coordinating closely to effectively address humanitarian concerns. This complementarity was not fully appreciated in 2005 and the late support to the Humanitarian Appeal - as well as delays in the implementation of the PSNP - resulted in increasing malnutrition levels in pocket areas across the country. In May, a "Flash Appeal" revised food aid needs upwards by an additional 690 000 beneficiaries from the initial 3.1 million people. The situation improved in the second half of 2005 following significant progress in the humanitarian response through enhanced food distributions and cash transfers as part of the PSNP. This was coupled with reasonably abundant rains during the "belg" (March – May) and the "meher" (June – October) seasons which helped ease extreme food insecurity conditions across most of the country.

In the last ten years, an average of 870 000 tons of food aid has been provided annually, primarily through relief response. In 2004, more than 7.8 million beneficiaries received relief food aid and in 2005, a peak of 3.8 million beneficiaries was assisted through relief food interventions, while 4.8 million were assisted through the PSNP. It is important to note that with the start-up of the PSNP, parts of the population assisted through relief response prior to 2005, has now been brought under a long-term predictable response mechanism, and therefore the total number of food insecure people assisted has not changed significantly, though there has been a significant shift from food transfers to cash transfers.

5.2 Needs assessment process²³

In Ethiopia, the main tool for assessing relief food needs is the joint multi agency "meher" assessment, led by the Government, and in which WFP staff participates actively in preparatory work, in the field work itself, and in the reports writing following the assessment. The field work was carried out in December 2005, following the main agricultural season of the country. The assessment identified the people requiring external assistance to meet minimum food requirements, i.e., beneficiaries by district, and by month, for 2006. The approach of the assessment was predominantly qualitative. Field visits were undertaken, and multi-agency teams used rapid rural assessment techniques such as interviews with key informants at different levels and visual/physical inspection of crops, livestock, pests, pasture and market conditions, wherever situations permitted, to substantiate the information provided by local officials. Interviews were conducted at the district level with local officials, communities and with some households. In the Southern Nations, Nationalities and Peoples Region (SNNPR), a new methodology was piloted, based on the Household Economy Approach (HEA). The needs estimation was multi-factorial, taking into account a wide range of variables such as changes in food and cash crop production, and changes in cash crop and livestock prices²⁴.

The "meher" assessment teams evaluated the main food security indicators during the assessment period, including rain performance, agricultural activities, livestock conditions, and market conditions. In addition, the teams analysed sources of income and coping mechanisms for the vulnerable population, including estimated percentage of food derived from own production, from market or other sources, last year compared to this year, other sources of income, actual or planned migration, other coping mechanisms employed to cope with present situation and extent to which coping mechanism will offset any change in crop production or income from wage labour.

The FAO/WFP CFSAM is seen as an externally managed complement to the national emergency need assessment process. When assessing the situation, the CFSAM reviews food production and supply estimates as well as food security information, including sources such as the Welfare Monitoring Survey, the Food Utilisation and Impact Survey²⁵ and nutrition information. The annex provides a review of the strengths and limitations of the multi agency "meher" assessment. On balance, the CFSAM was satisfied that the "meher" assessment produced a reasonable estimate of relief food needs and therefore adopts these numbers, assuming PSNP covers the chronically food insecure, which are estimated to be 7.2 million people in 2006 (and will be 8.3 million people when Somali region will shift its chronic food insecure population from relief to PSNP assistance).

²³ Please see annex outlining details around methodology.

²⁴ For full description of this methodological approach, please see the annex outlining methodology.

²⁵ WFP 2003 and 2004.

5.3 Current vulnerability and coping status

5.3.1 Area and population groups affected or likely to be affected

In 2006, relief food aid requirements concentrate on the critically drought affected pastoral and agro-pastoral south-eastern parts of the country, with particular concerns for the food security situation in Somali region and Borena zone of Oromiya region. Some of these areas have reached critical levels of food insecurity as of January 2006. Parts of Afar region have also been affected by below normal rainfall, resulting in poor pasture and livestock conditions and parts of the region therefore face a poor food security outlook for 2006. In fact, more than two thirds of the relief food aid needs for 2006 are found in the pastoral and agro-pastoral areas of the country. The remaining relief food aid requirements are found in pocket areas across the crop-growing parts of the country, including parts of Amhara, Oromiya, Southern Nations, Nationalities and Peoples Region, Dire Dawa, Beneshangul Gumuz and Gambella regions.

Somali. In Somali region, the overall food security is much below normal; “deyr” performance was very poor in particular in five zones, while the performance of the rains in most parts of the region is generally rated as poor. The rains were limited to light showers lasting for a few days in a few pocket areas of the region. As a consequence, pasture regeneration and water replenishment have been poor, with shortage of water reported in January as critical in many zones of the region. This situation is expected to deteriorate further as the dry season, locally known as “Jilal” (between January and April), progresses. Crop production was dismal and the food security in the region in general is critical. Early signs of stress indicators have already been observed in December and January, with abnormal livestock migration from parts of neighbouring Somalia and Kenya taking place, particularly in Warder, Afder and Liben zones. This has already contributed to an early depletion of resources in some areas and aggravated the problem. There is also similar concern in all areas where livestock concentration is high. The situation is most serious in Afder, Liben and parts of Gode.

Afar. The performance of 2005 “karma” rains varied through the region, with rainfall generally performing better in Zone 1, 3, 4 and 5. Food security concerns are especially in Zone 2, but also in some districts of Zone 1, and in limited parts of Zone 3 and 4, where the rainfall was poor, delayed in onset or ceased early. In areas where the “karma” rains performed poorly, there is currently a critical shortage of drinking water both for humans and livestock. Though conditions for livestock are generally not as bad as in previous years, reproduction remains poor due to consecutive years of drought, with the exception of goats and camels. Also, in areas where “karma” rains performed better, improvements in pasture and browse condition was not sufficient due to consecutive drought years. As a consequence, the main livelihood of the pastoralist population in Afar, namely livestock and livestock products, risk being further eroded.

Oromiya. Overall, the food security outlook in the region is positive due to better performance of “meher” rains than in previous years. However, a critical shortage of water and pasture is reported from the mainly pastoralist Borena zone of the region, due to the failure of “hageya” rains. The onset of the rains was almost one month late and was also erratic and inadequate for regeneration of pasture and replenishment of water. Water shortages as of December and January are already critical in some parts of the zone, as are pasture conditions for the large herds of livestock held by the local population. Unusual early migration of livestock is also observed. Influxes of livestock from northern parts of Kenya are believed to put further stress on the grazing areas and consequently on the food security of the zone.

In the lowlands and in some other pocket areas of the region, significant yield reductions were reported due to poor weather conditions, pest infestation and diseases. The most affected areas were East Harerge, East Shewa, lowland areas of Bale, Arsi, and Liben district of Guji zone. In East Shewa zone, there were extended dry periods in pocket areas. In the highland and midland areas, adverse weather conditions such as excessive rain and hailstorms were also reported in parts of East Shewa, Bale and Guji zones. These, together with persistent chronic problems, contributed to a deterioration of food security in a number of districts in the region.

Amhara. In Amhara, the “meher” rains performance was satisfactory overall. However, lowland and pocket areas of South and North Wello, North Shewa, Oromiya and Wag Hamra zones experienced early cessation of the rains. Moreover, these areas had significant crop damage due to pest infestation. Acute food gaps and needs were therefore identified in these lowland and pocket areas of North and South Wello, Wag Hamra, Oromiya, North Shewa and North Gonder zones.

Southern Nations, Nationalities and Peoples Region. In SNNPR, the overall performance of the rains and production is good. However, lowland parts of Gamo Gofa zone, Dawro zone, Kembata Tembaro zone, Parts of Welayita zone and Alaba and Dirashe special districts received below average rains. In Alaba and Dirashe special districts the performance of the rains was much below average, causing a dry spell for two months. In addition, districts that had adverse weather will require relief assistance, especially the lowlands parts of Sidama zone and parts of Angacha in Kembata Tembaro that faced moisture stress and lost most of their harvest. Markeo district of Gurage zone that had excess rain during the months of July and August had significant reductions in maize and pepper production. These districts will not be able to fulfill their food requirements and will require external assistance in 2006.

Dire Dawa. In Dire Dawa Administrative Council, “belg” and “meher” rains performed generally well, although irregular distribution of rains during July and early cessation had some negative impact on the production of long-cycle crops. A small-scale relief intervention is needed to deal with food insecurity following dry spells, inadequate rains and pest infestations in pocket areas.

Gambella. Agricultural activities were interrupted by ongoing conflicts and security problems, and some relief needs are identified for the first six months of the year. Rains were also erratic and insufficient in amount and distribution in some areas. Furthermore, the potential for continued displacements, and the return of others from areas they have previously migrated to, makes close monitoring of the food security in the region necessary.

Beneshangul Gumuz. Except in some pocket areas, where shortages of rains and weather adversities like hailstorms, wild fire, stock borer, weed and pest infestation were reported, the overall food security situation in Beneshangul Gumuz region is stable.

Tigray. Overall food security is positive due to satisfactory rainfall and crop performance in 2005. Most districts of Central, North Western, Southern and Eastern zones of the region improved compared to the last five years. There are however pockets of exception in the highland and lowland districts bordering Afar region, where the rainfall performance was not as good, and where extended dry spells and early cessation of the rains affected some crops. However, the underlying causes for food security in this region are believed to be chronic, and no relief food assistance is planned for the first six months of the year. Chronically food insecure populations will be assisted under the Productive Safety Net Programme.

5.3.2 Crisis impact on livelihoods

In the pastoralist areas, the failure of the “deyr” rains has started to impact on the livelihood of the population; the intensity, however, depends on population group (if people are nomadic pastoralists, semi-pastoralists, settled pastoralists), and their slightly different livelihood patterns. Poor pasture and water availability has led to competition over resources, and to unusual migration. Abnormal trans-border migrations are also observed. The consequences are that pastoralist communities will be obliged to make use of damaging practices such as selling of livestock for very low prices, killing of calves to save cows and others. Additionally, migrations have consequences on the health conditions of the herds: animals that are weaker are concentrating in over-crowded areas, increasing the potential of diseases outbreak and increase livestock mortality. Drought induced competition for scarce water and grazing land further increases the potential for clan conflicts.

In other parts of the country with high reliance of farmers on their own food production, any shock or variation in the rainfall pattern (onset, distribution, frequency and amount) has a direct impact on local food availability and on accessibility. A number of coping strategies, which are directly eroding the household asset base, are used by the most vulnerable population to survive. These activities generate little income proportionally to the human cost involved and generally entail long-term consequences on livelihoods, through a degenerated environment, decreased soil productivity, changed social organisation, which ultimately deepen the level of poverty.

5.3.3 Impact on nutrition and health

On the human side, consequences on livelihoods have correlated impacts on health and nutrition. Use of stress coping mechanisms have an indirectly negative impact on the nutritional status of individuals by limiting the time consecrated to education, proper care practices and the use of safe water. These aspects have a direct impact on both diseases and dietary intake, which in turn has consequences for nutrition status, mortality and longer-term disabilities.

In the pastoralist areas, the current lack of water forces people increasingly to use potentially contaminated water. The use of poor water is highly correlated with increase of diarrhoea prevalence, and consequently of under-five morbidity and mortality. In the current context, closing of both schools and health centres is evident. In a time of increased need for health services, the system is actually weakened due to lack of staff and supplies as people have moved in search of food and water, to ensure their own survival. Additionally, the high concentration of humans and herds in limited areas with limited resources increases the risk of human disease outbreak and epidemics. There is a very high risk of a measles epidemic; measles and acute malnutrition are highly correlated for children under-five and quickly contribute to a higher under-five morbidity and mortality. With limited milk and meat access, it is also likely that dietary intake will change, negatively impacting on both the health and nutrition status of the pastoralists.

5.3.4 Strategies and scope for coping

There are few off-farm earning opportunities for the vulnerable rural population of Ethiopia and purchasing power is limited. Food Utilisation and Impact Surveys, carried out by WFP Ethiopia in 2003 and 2004 and the Welfare Monitoring Survey (WMS) from 2004, find that when confronted by shocks such as illness, drought and crop damage and livestock death, households use a combination of coping mechanisms, including reduction in the number of meals (as surveyed in the FAUIS 2003 & 2004). Depending on the shock intensity and duration, these coping mechanisms erode the household's asset base and cannot be repeated throughout the years, thereby increasing the vulnerability of the population. The findings also illustrate the importance of food aid and safety net schemes to allow households to cope with shocks.

5.3.5 Food security outlook in the ensuing crop year

The current food security outlook for the first part of the year is, as already noted, of particular concern in south-eastern pastoral and agro-pastoral parts of the country, and in parts of Afar region. The outlook for the whole year depends largely on the upcoming "gu"-rains in Somali region, "sugum" rains in Afar region and "belg" rains in other parts of the country. The rainy season in the first half of the year is particularly important in south and south-eastern regions. Rains can be expected from mid-February through May, with local variations between the regions. Current predictions for the season are not optimistic, with the Ethiopia's National Meteorological Agency predicting an erratic and deficient seasonal rainfall over the south-eastern regions. The consequences of a below-normal rainy season will severely aggregate food insecurity of the pastoral and agro-pastoral populations in these areas. The progress of the upcoming rainy seasons will therefore be closely monitored.

5.4 Estimation of food gaps of affected populations

5.4.1 Figures of populations generally affected by food crisis

According to the Welfare Monitoring Survey 2004, over 30 percent of the households surveyed reported to have faced a gap in satisfying their food needs during the twelve months prior to the survey. However, there is a very significant difference between rural and urban areas as most of the population affected by food gaps are from rural areas, totalling 3.9 million households or some 20 million individuals. The population eligible for assistance are those having a food gap of three months or more during the year. For most of these households the food gap is an indication of a chronic problem, and they are therefore to be assisted under the Productive Safety Net Programme. The number of people facing food gaps due to acute shocks is outlined below.

5.4.2 Figures of affected population requiring assistance, by region

Overall, some 2.6 million people are estimated to require relief food assistance in 2006. While these estimated humanitarian needs are significantly lower than previous years, the number of chronically food insecure beneficiaries covered under the Government's Productive Safety Net Programme has increased to some 7.2 million (and will be 8.3 million when the chronically food insecure population in Somali region shifts from relief to PSNP). In 2006 it is therefore anticipated that the number of people who have been affected by acute shocks remain comparatively low, while the number of chronically food insecure remain high. These requirements will be updated in June/July following the short-rainy season. The estimated number of people in need of relief food assistance and food requirements divided by region is as follows:

Table `12: Beneficiaries and Relief Food Requirements 2006 (tons)

Region	Relief beneficiaries	Cereal	Pulses	Vegetable oil	Blended food^{1/}	Total
Afar	54 600	4 914	493	148	1 301	6 856
Amhara	154 700	18 770	1 877	563	5 457	26 667
B. Gumuz	4 200	378	38	11	91	518
Diredawa	31 160	2 804	280	84	841	4 010
Gambella	50 200	4 518	452	136	1 355	6 461
Harari	-	-	-	-	-	-
Oromiya	733 780	75 958	7 596	2 278	10 699	96 531
SNNP	35 910	3 232	323	97	877	4 529
Somali	1 514 960	136 346	13 635	4 090	39 447	193 518
Tigray	-	-	-	-	-	-
Total	2 579 510	246 920	24 694	7 407	60 068	339 089

^{1/} Blended food requirements are for "blanket" distributions to particularly vulnerable groups, such as children under-5, pregnant women and nursing mothers. Where the Enhanced Outreach Strategy is operational, supplementary rations will be targeted to children and women based on nutrition screening and the food requirements are included in the Health and Nutrition sector.

It is also estimated that about one million people, identified as moderately malnourished through regular nutrition screening, will receive some 60,000 tons of supplementary food (Corn Soy Blend and vitamin A-fortified vegetable oil) through targeted supplementary feeding programmes. This one million people would normally receive a general food ration or cash transfer either through the relief operation or through the PSNP.

5.4.3 Description of targeted populations

The people in need of relief food assistance are highly vulnerable crop-dependent farmers or livestock-dependent pastoralists and agro-pastoralists affected by acute shocks such as adverse weather conditions, below normal or erratic rainfall and extended dry spells during critical periods of the cropping cycle. The lingering effects of the multiple shocks they have sustained in recent years, leading to a gradual depletion of their household asset-base and limited income options, have further exacerbated the food security situation of these acutely affected populations. In 2006, pastoralists and agro-pastoralists are particularly in need of assistance due to the much below normal rainfall in these areas in the second half of 2005.

5.4.4 Quantification of the food gaps

Due to the high level of household food insecurity, parts of the rural population are experiencing food gaps for certain periods of the year, even when the estimated national food gap is minimal, as in the case of this year. Due to a combination of factors, including poor market integration, limited purchasing power and limited income earning possibilities, full access to food is not ensured for all at all times, even in nationally good production years.

The population in need of food assistance has food gaps between 3 to 9 months. The critical food gaps are experienced at different times of the year by different population groups and in different parts of the country. For example, food needs of pastoral populations need to be met immediately at the beginning of the year, while populations in crop-growing areas who have harvested late in the calendar year, experience food gaps later in the following year, and therefore also receive their food transfers later.

At the national level, the food gap for relief food assistance is the gross requirement minus carryover stocks and pledges from 2005. With gross requirements of 339 090 tons and carryover stocks and pledges of 238 024 tons, the gap for relief food assistance amounts to 101 066 tons. For targeted supplementary feeding, the gross requirement is 59 877 tons and with carryover stocks and pledges of 44 382 tons, the gap amounts to 15 495 tons.

5.5 Possible strategies for assistance

5.5.1 Food assistance: rationale, magnitude and phasing

Recognizing that meeting annual exigencies with relief aid has been essential but inadequate, the Productive Safety Net Programme is expanding its coverage to include most of the chronically food insecure under one programme. This leaves the framework for humanitarian assistance to provide food assistance to acutely food insecure populations in 2006. Relief food intends to save lives and increase access to food during times of unpredictable disaster in and outside chronically food-insecure districts. A complete food basket will be distributed to meet urgent household food needs until their own food resources become available.

Some 9.8 million people will in total receive assistance, either through the Productive Safety Net Programme (PSNP) for chronically food insecure (food or cash), or through humanitarian response mechanisms for acutely food insecure populations (food). In comparison to 2005, this represents a decrease of 1.2 million people receiving relief food assistance (earlier 3.8 million) and an increase of 2.4 million people assisted under the PSNP (earlier 4.8 million).

The modalities for implementation of relief food operations will consist of a monthly general food distribution provided in exchange of labour, gratuitous distributions to labour-poor and other particularly vulnerable beneficiary households, as well as through supplementary feeding. For chronically food-insecure people, rations will be used to meet household food gaps and prevent negative coping strategies: Food-for-assets (FFA) will provide a predictable transfer to target food-insecure families, who will carry out community-based labour-intensive activities that protect and create assets and decrease vulnerability to shocks; a free food transfer "as direct support" will be provided for those not able to work. Under the Productive Safety Net Programme, a substantial part of the beneficiaries is also receiving their transfers in form of cash rather than food.

Provision of supplementary food is crucial in reducing malnutrition and reversing the effects of transitory hunger among mothers and children under-5, and in 2006 this will be done to a broader extent than earlier through an expansion of targeted supplementary feeding. Blanket supplementary feeding will be provided to vulnerable groups in areas where there is no targeted supplementary feeding, and or as an emergency measure in areas facing very critical food security situations and defined as "areas of concern".

5.5.2 Non-food assistance: rationale and potential interventions

A multi-sectoral response to humanitarian crisis is critical to obtain increased food security, reduce levels of malnutrition, enhance resistance to diseases and minimise overall human suffering. In response to the current humanitarian concerns of the country, interventions are planned in the health and nutrition sector, in the water and sanitation sector and in the agricultural sector. Emphasis will be put on combating child malnutrition through enhanced outreach strategies, limiting the spread of diseases in emergency situations through strengthened immunisation, provision of relief drugs and insecticides, distribution of relief water and sanitation facilities, and the provision of agricultural inputs and animal health services. Non-food relief interventions were poorly funded in 2005 and few carryover resources for 2006 are available. Donor funding is urgently needed to support these critical interventions.

5.5.3 Linking crisis assistance with longer-term developmental solutions

Recognising the chronic nature of food insecurity in Ethiopia, the majority of the food insecure population in the country is now assisted by the multi annual Productive Safety Net Programme (PSNP), and no longer through annual relief operations.

The coherent food security strategy of the Government highlights the importance of linking various components in order to achieve the objectives of the programmes. To achieve maximum impact, the Government is emphasising that districts must integrate PSNP interventions with other food security programmes and broader district development interventions. There is acknowledgment that predictable, chronically food insecure- populations also may endure further food security problems due to external shocks, increasing their food gaps beyond normal, and therefore a 20 percent contingency can be activated within the PSNP to address this. Acute shocks endured by populations not regarded as chronically food-insecure or humanitarian needs arising in these areas above the PSNP implementation, will be addressed through relief programmes. Close monitoring of the two population categories and exchange of information

about these is crucial to ensure that appropriate response mechanisms are applied and that relief food aid interventions are linked to longer-term food security programmes, using both food and cash as implementation modalities.

Both chronically food insecure populations supported through the PSNP and acutely food- insecure populations supported through relief programmes will benefit from targeted supplementary feeding from the joint Enhanced Outreach Strategy/Targeted Supplementary Feeding (EOS/TSF) when identified as malnourished.

5.5.4 Scope for local purchases

When provided with cash contributions, the preference is to purchase food locally. This is usually on the condition that local purchases are at or below import price parity and can meet delivery schedules for timely distributions to beneficiaries. The quantity of food purchased locally increased in 2005 compared to 2004, with more than 300,000 tons delivered in 2005. Due to an overall positive “meher” harvest, it is expected that substantial amounts of locally produced food will be available for purchase in 2006. The local production capacity for fortified blended food is now more than 200 tons/day. A better estimate of quantities available for local purchase will be determined through the forthcoming “Cereal Availability Study” by WFP.

In view of last year’s exceptionally high cereal and livestock prices in regional and local markets, a strengthening of market analysis and monitoring of prices for staple food will be important. Such monitoring is crucial to evaluate the impact of local purchases, and food and cash distributions on markets.

The abnormal prices trends for both grains and livestock in 2005, with much higher prices compared to previous years, has an impact on the livelihood of the population. The “meher” assessment, based on a the Household Economy Approach²⁶, carried out in Southern Nations, Nationalities and Peoples Region in 2005, revealed that changes in the price of one particular crop can represent a significant increase in the food gap faced by one wealth group, if this crop constitutes their main food source. It can even mean that this wealth group is suddenly facing an expenditure deficit while it was not the case in the baseline year. On the other hand, there are often concerns about falling food prices following harvests, giving low food prices for farmers selling parts of their production, and thus losing important income. The Government is making efforts to stabilise prices, and recently announced that the Ministry of Trade and Industry has suspended exports of grain products (teff, maize, sorghum, and wheat) indefinitely. The ban is intended to stabilise prices of staple food in response to recent price increases and fears of undue pressure on consumers. Ethiopia exports relatively small amounts of grain but the Ministry noted that exports and smuggling were among the causes for the domestic price hikes.

5.6 Risks and constraints

5.6.1 Capacity constraints

The overall capacity of relief food agencies to respond to food crisis in Ethiopia is strong and has been built up through the extensive response carried out in this sector for the last three decades. However, strengthening of food aid management and monitoring, both at federal at local level needs further attention. It is crucial for an efficient food response in 2006 that the capacity of regions to report on food utilisation is built-up. Initiatives for enhancement of the capacity for monitoring of food distributions, targeting of beneficiaries and appropriateness of response should also be strengthened. The capacity to implement distribution practices that ensure protection of the most vulnerable from the effects of HIV/AIDS while collecting their food needs to be built up at all levels. Abnormally high prices for staple food, experienced in 2005, highlighted the need for close monitoring of market prices, especially in the current environment where both food and cash is distributed (food and cash under the PSNP, and food under relief programmes), and substantial local purchases are undertaken.

5.6.2 Logistics implications

The port of Djibouti is expected be used for all imported cargo. In 2005, the Djibouti port handled imports of about one million tons, and the capacity is assessed as sufficient for handling of 2006 requirements. The road infrastructure from the port to major logistic hubs is in good operational condition, and the trucking fleet has satisfactory capacity to deal with the quantities to be delivered to various food distribution points around the country. The government Disaster Prevention and Preparedness Agency (DPPA) and the national

²⁶ Livelihood baseline conducted by FEWS Net, SNNPR, September 2005

Emergency Food Security Reserve Administration (EFSRA) have adequate warehouse space to receive and off-load trucks promptly. The direct delivery from vessels to trucks is supported by use of transit warehouses in the port whenever there is a priority load by the Government. When required, on short notice, additional commercial warehouses are available for lease.

5.7 Future and next steps

5.7.1 Follow-on assessments

In 2006, as in previous years, the “belg” pre-harvest seasonal assessment should take place in June and evaluate rainfall performance in the first half of the year and food security prospect in relation to this generally shorter rainy season, important in south and south-eastern regions and in some other districts across the country. The assessment which applies similar methodology as the “meher” assessment will allow adjustments in relief food requirements from June to December; making it likely that the food gap and relief food assistance will change during the second half of the year. Additionally, possible mid-“meher” and mid-“belg” assessments conducted in mid-rainy seasons can be organised when decided by the Government and partners and on the basis of particular food security concerns such as low performance of the rains.

In areas of particular concern, ad hoc assessments can be jointly organised by the Government and its humanitarian partners. At the start of 2006, the Early Warning Department (EWD) of the Government’s DPPA, with the support of the Emergency Nutrition Coordination Unit (ENCU) has decided to undertake a series of nutrition surveys in Somali region and Borena zone of Oromiya. A total of 15 nutrition surveys lead by international NGOs are underway as of January 2006. It is expected that follow-up nutrition surveys will be taking place during the first and second quarter of 2006 to monitor the evolution of the crisis and the impact of the interventions. Results provided by these surveys will complement and serve for adjustment of relief interventions currently outlined in the 2006 Humanitarian Appeal. In general, nutrition surveys are very frequently conducted to estimate the impact of food insecurity on human health and used by NGOs to initiate targeted nutrition interventions.

5.7.2 Food security monitoring on crisis-related elements

Monitoring of the food security situation in affected districts during 2006 will be pursued by the EWD of the Government’s DPPA, at all levels, through their regular early warning system. Food security monitoring on crisis-related elements such as unexpected shocks, floods, conflicts, displacements, volcanic eruption, locust infestation as experienced during 2005, will be assessed by the rapid disaster assessment capacities within the EWD. The Rapid Disaster Assessment section deploys teams when a shock happens to assess impact and relief needs. The rapid disaster assessment can be complemented by a nutrition survey lead by trained staff of the EWD/DPPA.

When larger-scale food security crises occur, EWD capacities will be reinforced by consolidated and joint effort of the humanitarian partners. Members of the Early Warning Working Group (EWWG), belonging to other line ministries, United Nations agencies and international NGOs will contribute to the monitoring capacities with their own early warning and food security monitoring systems. These partners would conduct complementary rapid assessments and nutrition surveys and jointly support Government monitoring. The DPPA will take the lead and play its coordinating role in case of a large-scale crisis.

Crop Production Situation by Region

1.1 Oromiya

Oromiya, comprising 14 administrative zones, is the largest region in the country extending in a “T” shaped landmass from near the Sudanese border in the west, across central Ethiopia near the eastern border with Somalia and southwards to the border with Kenya. It includes the most productive highland plateaux as well as drought-prone valley bottoms and lowland plains and usually produces some 54 percent of the nation’s seeds and pulses. In six of the southern zones a bimodal rainfall pattern is readily identifiable, usually providing a prolonged growing season and a wide range of cropping options. In the densely populated high rainfall zones, the small size of peasant land holdings necessitates production of two or three crops annually from the same land, if household needs are to be met. This places the farm families in a vulnerable position as the loss of a crop in a series cannot be compensated by increasing the area of the next crop in the sequence and increases the importance of the timeliness of operations at field level.

This year good belg rains were followed by a timely onset to the main season. Breaks between belg and meher, where they occurred, were short and compensated by an extended season in most areas.

The belg harvest estimated by MoARD at 601 658 tonnes of cereals and pulses is far above any estimates in recent years. It has been recorded as the production from 506 000 ha in the zones of Bale, Borena, Arsi, North Shoa (Oromiya), West Haraghe, East Haraghe and East Shoa and stands testimony to the quality of the early rains.

The main season rains began on time and were also plentiful and well -distributed geographically. They continued at least until October positively affecting levels of crop performance and boosting regional production.

The timely availability of credit and fertilizers, plus pro-ploughing policies of the regional government, combined with good prices for cereals and pulses during the year, encouraged an expansion in cropped area and investment in inputs. Consequently, regional combined fertilizer (DAP and urea) use increased by 18 percent to 173 000 tonnes, 27 000 tonnes more than last year and 50 percent of the national meher season fertilizer use, despite retail price increases of around 50 Birr per quintal.

Increase in use was particularly dramatic in Illubabor (DAP 68 percent , urea 108 percent); Arsi (urea by 54 percent); Bale and East Wellega (DAP and urea 25 percent) and East Shoa (DAP and urea 22 percent).

At the same time improved maize seed use was 15 percent lower than last year at 2 300 tonnes providing, mostly hybrid seed, for use on some 10 percent of the maize area. Wheat seed sales underwent a dramatic fall of 62 percent as more farmers opted for farmer-to-farmer exchanges of the new releases this year, rather than direct purchase of certified seed from seed merchants. Notwithstanding, the fall in the use of improved seeds, which conforms to the national pattern, seed availability per se was not an issue. With no major need to replant this year, sufficient farmer-saved seed was available on-farm and in local markets to meet the demands. Higher than normal seed rates are noted and optimal cultivation practices are reported to have been fully observed resulting in an area planted to cereals and pulses 6 percent greater than last year²⁷. According to BoARD data all cereal areas, except teff which fell by 5 percent, are noted to have increased with wheat and the combined maize/sorghum areas increasing by 70 000 ha, so at regional level there is no evidence of any shift to long-cycle crops.

Area data from CSA present a different picture with regard to this meher season’s farmed area. Table A.1 summarises the two data sets for cereals and pulses by zone.

²⁷ This figure has been calculated after removing outlying (extreme) zonal area increases and using CSA increases instead.

Table A1: Area differences in Oromiya by zone (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
WestWellega	477	43	520	285	27	312
East Wellega	385	29	414	287	22	309
Illubabor	276	30	306	181	19	200
Jimma	451	43	494	371	37	408
WestShoa	579	60	639	384	42	426
SWShea	315	81	396	199	51	250
NShoa	434	100	534	288	62	350
EShoa	510	98	608	380	90	470
Arsi	672	61	733	501	50	551
WestHaraghe	184	15	199	175	25	200
EastHaraghe	292	79	371	138	22	160
Bale	255	19	274	247	22	269
Borena	13	3	16	18	14	32
Guji	96	20	116	88	11	99
Commercial	54	2	56	na	na	na
Regional	5 090	684	5 774	3 542	494	4 036
Reg diff.	+ 1 548	+ 190	+ 1738	-	-	-

No significant outbreaks of pests or diseases were noted. MoARD aerial spraying controlled efficiently minor infestations of quelea quelea birds in Arsi, East Shoa and East Haraghe. Infestations of the regular non-migratory insect pests including sorghum chafer, stalk-borer, shoot-fly, boll-worm, grasshoppers, termites and aphids were all reported to have been present but at non-significant levels. Vertebrate pests including non-migratory birds, wart-hogs and monkeys required the usual attention of the farmers wishing to protect their fields, particularly in the lead-in to harvest.

According to the BoARD Mission adjusted figures, the current meher crop is estimated to have resulted in 8.62 million tonnes of cereals and 0.59 million tonnes of pulses, which is 13 percent greater than last year. The cereals comprise 2.4 million tonnes of wheat, 2.2 million tonnes of maize, sorghum and teff crops each of 1.3 million tonnes and 1.1 million tonnes of barley. Grain prices in Oromiya, which are presently, firm, being the same or higher than in November 2004 in all zones except Illubabor and East Wellega, are expected to fall in the next two months when the new harvest is presented for sale. Local purchasing for distribution out of the region is recommended.

1.2 Amhara

Amhara Region, located in the north, north-west of the country includes the nation's highest mountain ranges, lowland riverine valleys and plains as well as agriculturally productive plateaux with well-established mixed farming systems. Comprising 10 administrative zones, the region usually produces around 33 percent of the national meher grain production. Following the national pattern of rainfall distribution and notwithstanding the within-zone vagaries of altitude, the western half of the region usually produces surplus grains from a substantial meher crop. The eastern half of the region has a less reliable meher, but contains zones where the belg crop may offer a substantial contribution to local annual production, depending on the year.

This year, belg rains in the eastern production zones were good and a much increased belg harvest of some 202 000 tonnes, 100 percent higher than last year, is estimated to have been produced by MoARD from 214 000ha in North Wollo, South Wollo, Oromiya and North Shoa Zones. In all zones the start to the meher season was both timely and followed by well-distributed rains that continued throughout the season until October and November.

Following the regional BoARD instructions all zones used CSA data to describe their zonal agricultural area, however, the application of the instructions which involves partitioning area data to woredas and crops has resulted in a lower area estimate than the 2005 Preliminary data set issued by CSA to the Mission. Nevertheless, all cereals register an area increase over last year's data except teff, which declines by 10 percent. A loss of 70 000 ha that coincides with the increase in sorghum area, suggesting a shift to long-cycle stover crops in response to the good rain which was apparent from all the transects driven by the

Mission teams working in the region. Excellent sorghum crops are noted across all the low-lying fertile plains from Debre Sinna throughout North Shoa, South Wollo and North Wollo to Kobo to the exclusion of most other crops this year. The area to pulses is estimated to have fallen by 5 percent closely matching the area increase in maize. In the productive zones of Awi, West and East Gojam and in the rapidly expanding agricultural investment areas in North Gondar, early starts to the meher and good mid-season rainfall encouraged planting of maize and sorghum that is noted to have performed as well, if not better than last year.

No reports of cultivating difficulties reached the Mission and no significant fallow areas were noted in what remains a very intensively farmed region. The new areas amounting to 15 500 ha reported to have been brought into production through the activities of 13 000 resettlers in 5 sites (4 sites in N.Gondar and 1 site in Awi) last year are reported to be incorporated into the data set for this year, however, the situation regarding the commercial farms remains as before with the Mission including the data separately. The area under commercial enterprises is now estimated to have reached 40 000 ha of mixed crops of which more than 50 percent are oilseeds (sesame). From the remaining data, 16 010 ha of cereals have been incorporated into the Mission data-set.

Regarding seed availability, given last year's good season, no seed shortages were either anticipated or noted this year. However, improved seed purchase fell by 10 percent to 2 700 tonnes including around 1 000 tonnes of maize and 1 000 tonnes of wheat, connecting to a reduction in sales by 246 tonnes of hybrid maize seed and by 703 tonnes of certified wheat seed. Seeding rates are noted to have been higher than normal with no noted need for replanting.

Other input utilization in Amhara this year, follows the pattern established last year with fertilizer use at 105 000 tonnes some. 30 percent of the national input with notable increases of 15 percent, 17 percent and 12 percent in West Gojam, East Gojam and North Shoa zones, respectively. Problems relating to empty stores and untimely deliveries that thwarted purchasers last year were not reported this year. This year, DAP and urea were available on time to meet the demand albeit at official prices 30-70 birr per quintal higher than last year.

Pest and disease outbreaks were noted to be minimal with sustained threat from migratory pests reported. Non-migratory pests noted this year, as most years, included sorghum chafers in the eastern zones, Wollo bush crickets, stalk-borers, aphids, termites and grasshoppers but no infestations were described as anything but mild.

Good meher crop production is evident throughout the region. This generalization includes very productive areas in West and East Gojam and good production in woredas in most other zones including the eastern lowlands of South and North Wollo. Even in Weghamra and Meket, North Wollo and adjacent woredas to the west and north of Meket leading to Lalibella, crops were comparatively good, particularly sorghum. The resulting cereal harvest is estimated at 3.94 million tonnes, 5 percent higher than the MoARD post-harvest estimate for meher 2004. Pulses from an area reduced by 5 percent, exhibit a 13 percent reduction in production at 0.41 million tonnes as Mission adjusted yields are slightly lower than MoARD estimates for the air-dry grains.

Of the cereals harvest, maize contributes 0.87 million tonnes, sorghum 0.86 million tonnes, teff contributes 0.84 million tonnes, wheat 0.67 million tonnes, sorghum at 0.62 million tonnes, barley at 0.41 million tonnes; and finger millet at 0.22 million tonnes makes up the remainder of the crop. Cereal prices are similar to this time last year but are expected to come down in the next couple of months as market presentations increase.

Livestock condition is universally good (cattle body condition scores 3-4) with pasture and water supplies currently satisfactory and crop residues plentiful. Livestock prices are stable at rates similar to or higher than this time last year. At the time of the Mission there had been no early migration of animals in or out of the region, although movement from Afar was expected in the usual round of transhumance next year.

1.3 Southern Nations Nationalities and Peoples' Region (SNNPR)

Presently formed from 15 zones and 6 special woredas, the SNNP Region is the most culturally diverse in Ethiopia. The cultural diversity is matched by a wide range of agro-ecologies encompassing everything from rainforests to deserts. Bi-modal rainfall patterns exist throughout the region offering opportunities to crop two or three times per year on the same piece of land. Very small land holdings, however, create a structural vulnerability to dry spells at crucial times in the production cycles, as increased planting later in the year cannot easily compensate for lost opportunities. Fortunately, the majority of the rural population eat *enset*. This perennial carbohydrate source, also known as false banana, is very resistant to rainfall fluctuations and provides a carbohydrate based food safety net for most farm families in the highland and middle altitude communities. The ubiquitous presence of perennial cash crops including coffee, chat and eucalyptus confirm the overall natural resources wealth of SNNPR in all but the lowland localities, where pastoralism is the main agricultural enterprise.

In 2005, *belg* rains were very good in all the 12 potential *belg* producing localities²⁸, resulting in a harvest of cereals and pulses estimated by MoARD to be 616 000 tonnes from an area reported to be 8 times bigger than last year at 465 000ha, the highest for many years. This substantial boost to local food security will have been augmented by contemporary harvests of potatoes and sweet potatoes, however, the areas of such crops are not available.

Rainfall post-*belg* is reported to have been poor in Konso, Derashe, Burji and Amaro although the other zones and special woredas in SNNPR received well-distributed and adequate *meher* rainfall. Consequently, the Mission notes that the *meher* cereal area has increased by 6 percent over last year's post-harvest MoARD assessment to 1.28 million ha, as farmers have taken advantage of the better conditions. With such a substantial increase in *belg* crops, the *meher* expansion is noted to be through increases in teff, wheat, barley and late-sown sorghum; with teff and late-sown sorghum probably planted after the *belg* harvests of maize and root crops on the same areas. In the *enset* eating high and middle altitude zones of the region, cereals are of secondary importance for food security, therefore, economic forces have a greater role to play in planting cereals than in marginal areas located in the lowlands and as prices have been firm throughout the year farmers have opted to invest in their production.

Presently the BoARD uses its own area and yield data collected by DAs in the way described earlier. CSA data may have been given to the Regional Office but has not been circulated to the zones. As is the case elsewhere, area data from CSA present a different picture with regard to this *meher* season's farmed area. Table A.2 summarises the two data sets for cereals and pulses by zone.

²⁸ Burji, Amaro, Gedeo, Sidama, Konso, Derashe, South Omo, Wolaita, Gamugofa, Kembata- Tembura, Hadiya and Dawro all had significant *belg* harvests this year

Table A2: Area differences in SNNPR by zone (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Gurage	119	25	144	70	11	81
Hadiya	212	26	238	98	10	108
Kembata-T	61	6	67	26	5	31
Sidama	115	32	147	52	20	72
Gedeo	4	4	8	14	2	16
Wolaita	104	25	129	58	16	74
South Omo	36	7	43	32	6	38
Shekka	9	3	12	8	3	11
Kaffa	133	29	162	73	39	112
Gamugofa	175	28	203	99	19	118
Bench-Maji	51	7	58	23	7	30
Yem	10	3	13	11	3	14
Amaro	7	1	8	8	2	10
Burji	7	5	12	4	2	6
Konso	13	2	15	18	3	21
Derashe	26	8	34	15	2	17
Dawro	81	11	92	26	12	38
Basketo	7	0	7	4	0	4
Konta	21	8	29	6	3	9
Siltie	124	4	128	84	9	93
Alaba	34	7	41	26	2	28
Regional	1 280	242	1522	755	177	932
Difference	+ 525	+ 65	+ 590	-	-	-

Notwithstanding the extreme differences between the two data sets, both have shown an increase each year since 2002. The increase continues this year as noted above, which implies that neither means of cultivation nor were seeds in short supply. Local seeds provided most of the planting material and, as elsewhere, the quantity of improved seeds purchased from seed merchants fell by 27 percent to 3 000 tonnes. However, unlike in other regions, the direct purchase of improved maize seed increased by 25 percent to 1 500 tonnes connecting to the production of 60 000 ha of hybrid maize in the region, with a concomitant effect on the average yield.

At the regional level, fertilizer use decreased by 10 percent to 30 000 tonnes lowering the market share to 9 percent, price increases may have been an issue but in any event only in the greater cereal producing areas of Wolaita + 52 percent (DAP and urea), Gurage + 17 percent (DAP) and Hadiya + 63 percent (urea only, DAP use fell) were significant increases noted.

Pests and diseases are, again, noted to be minimal this year. Regarding migratory pests, the presence of migratory quelea quelea birds was noted in Konso special woredas but no outbreaks ensued due to controlling measures undertaken by MoARD. All other pests are noted as mild, nevertheless non-migratory vertebrate pests from the forests require an inordinate amount of farm labour to protect the fields and so avoid substantial losses. Storage pests are also noted to remain causes for concern.

Consequently, the Mission anticipates a meher cereal and pulse harvest 37 percent greater than last year at 2.243 million tonnes, comprising about 0.97 million tonnes of maize, 0.17million tonnes of sorghum, 0.19 million tonnes of teff, 0.51 million tonnes of wheat, 0.17 million tonnes of barley and 0.20 million tonnes of pulses. Regarding other crops this meher season, areas to both potatoes and sweet potatoes are estimated to have fallen by 57 percent to a combined area of 31 000 ha, about 40 percent of the size of the enset orchards. With conservatively estimated yields in the order of 15 tonnes per ha such crops, potatoes should be contributing the equivalent of a further 93 000 tonnes of cereals by the end of the meher season. Such a contribution although significant does not match the annual production from enset, which, from a similar area

of established orchards and given an 8 year cycle of tree turnover, may be producing around 468 000 tonnes of cereal equivalent.²⁹

Livestock condition in the zones and special woredas visited by the Mission team was recorded as good (cattle body condition scores 3-4) with no problems noted relating to pasture or water supply. Reports from South Omo, where the team did not visit suggest adequate pasture and water conditions prevail. Presently, livestock prices are higher than last year throughout the region. Grain prices, on the other hand, are noted to be falling in the cluster of belg producing areas south of Sidama.

1.4 Tigray

Tigray, the northernmost region of Ethiopia bordering Sudan and Eritrea, has a cultivated area of about 820 000 ha farmed by some 775 000 households and 406 investors, the latter located in the western lowlands. Usually classified as a food-deficit area due to its semi-arid climate and high population density, the region has embarked on major environmental rehabilitation programmes over the past ten years. Presently, it is in the process of linking food security issues to watershed management with the objective of improving employment and income generation opportunities in the central and eastern zones. The food deficit status of the region masks the fact that in most years there is surplus crop production from well-organized run-off based, peasant farming systems in the South Zone and from the fore-mentioned mechanized commercial enterprises in the western lowlands.

This year, the belg rains were good, supporting a much larger planted area in the Southern Zone this year of 12 000 ha resulting in a harvest estimated by MoARD to be some 11 000 tonnes. Thereafter, a timely start to the meher heralded a much better year than for many years in almost all woredas. Only in the north-east and southern woredas of the Central zone and in Mechele woreda (Southern Zone) were rainfall conditions non-conducive for better production than usual. Elsewhere, timelier and better distributed rain during July and August and into September and beyond, in the western zones, encouraged and sustained meher season production possibilities. In the eastern zone, the good rains generated a series of run-off spates that produced many more floods than has been experienced in the past decade in Alamata, Raya-Azebo and in Afar Zone 2. Each locality benefited extensively from several run-offs and good rains in the middle of the season, supporting maize and sorghum production and continuing the long sequence of highly productive sorghum plains this year beginning in North Shoa, traversing Oromiya (Amhara), South and North Wollo, Alamata and finishing north-east of Mehoni (Mechele woreda is reported not to have received floods and the rains were inadequate).

Meher season rains in the north-west and west were timely and their onset was followed by good distribution and a late finish, supporting the extensive fields of later sown sorghum in Shire that will be harvested in January. Backyard maize production was also noted by the Mission to have performed well throughout the central and north-western woredas reflecting (i) choice of location for planting to catch available run-off; (ii) selection of better water retaining soils; and (iii) higher organic content of the soils near to the homesteads.

All the BoARD offices use data generated in Tigray by the BoARD DAs in the manner described earlier and substantiated through socio-economic surveys conducted by the Regional Government, REST and other agencies. House-hold farm sizes have been registered during land-redistribution programmes throughout the region and offer a direct means of cross-checking assessments. CSA data, generated by the Mekelle CSA branch office, are markedly different and are not considered by the BoARD to represent farmed areas. The summaries of this year's estimates are juxtaposed below in Table A.3 by zone.

²⁹ Assumptions for onset; 72 000 ha connects to an annual harvest of 9 000 ha given stable orchards and an 8 year cycle yielding 130 tonnes of *kucho* per ha (52 kg per tree at 2x2m spacing) and estimating *kucho* at 40 percent dry-matter, onset harvested over a year may provide 468 000 tonnes of net starch.

Table A3: Area differences in Tigray by zone (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
West	116	5	121	49	2	51
North-West	176	4	179	134	7	141
Central	186	12	198	146	14	159
East	82	9	91	60	6	66
South	184	37	221	197	26	223
Regional	743	69	812	586	55	641
Difference	+ 157	+ 14	+ 171	-	-	-

Area planted to cereals and pulses reported by the Regional BoARD to have increased by 4 percent. Mission estimated yields, after visits to 17 of the 34 woredas, are higher than last year as neither the rainfall condition, within the context of the semi-arid nature of Tigray, nor access to fertiliser was noted as limiting. Regional fertilizer use increased by 55 percent to 4 percent of the market share at 13 600 tonnes as farmers opted to take advantage of the better rain and credit facilities. Cereal seed supply this year was almost entirely from farmer-saved stocks, local markets or seed banks, however, some 284 tonnes of pulses were made available by FAO supported seed distribution programmes in woredas in the north-east.

Marketing opportunities to Sudan, enhanced by improved roads, better transport facilities and a permeable border has sustained sesame planting in the North West and Western Zones. The regional oilseed area has increased by 5 percent to 198 000 ha as investors³⁰, resettlers³¹ and settled farmers in the two zones have expanded the farmed area by further 40 000ha. Sesame is presently being sold at 480 Birr per quintal compared to 650 Birr last year.

Regarding pests and diseases, a desert locust challenge in Region was surveyed by MoARD, FAO and Regional teams and controlled by spraying at the hopper larval stage. Consequently, no significant outbreaks of pests and diseases were noted.

The Mission estimates that cereal and pulse production will be significantly greater this year for all cereal crops with a harvest of 0.884 million tonnes. The cereal production estimate is some 43 percent greater than last year's Mission estimate and comprises 97 000 tonnes of teff, 105 000 tonnes of wheat, 39 000 tonnes of hamfes, 86 000 tonnes of barley, 139 000 tonnes maize, 326 000 tonnes of sorghum and 99 000 tonnes of finger millet. Estimates for pulses and oilseeds are 50 000 tonnes and 100 000 tonnes respectively.

Livestock condition in all the zones is noted to be good. No cattle herds predominantly exhibiting the poor body condition scores of 1 to 1.5 noted last year in south-east and eastern woredas. Such improvement is due to better pastures and drinking water supply and an absence of debilitating disease outbreaks. Regarding pastures, a single preliminary study of the Begasheka water-shed, Central Tigray, undertaken by REST/BoARD under the DCI supported Operational Research programme, suggests that dry-matter production from common pastures in that water-shed may have been in the order of 8.0 tonnes per ha during the period from the beginning of May until the end of September. The gathering of such information should be promoted to help to generate a base-line relating to the all important use of common pastures in the Region and the role played by indigenous grasses and clovers.

Presently, livestock prices are higher than last year throughout the region because of the buoyant market for all classes of stock, partly because of the good grazing, partly because of a strong export trade and partly because of regional investment in credit programmes for livestock purchase.

³⁰ 406 investors farming c.100 000 ha; 12 000ha farmed by resettled families

³¹ 2 resettler areas in West Tigray; 20 000 households and 14 000 ha

1.5 Afar

Afar, an arid region located in the north-eastern part of Ethiopia has an agro-ecology characterised by low erratic rainfall and high temperatures, this year's rainfall has been better than last year in both amount and distribution, generally favouring the production of pasture and browse. Consequently, the premature movement of transhumant herds, noted last year, was not seen this year by Mission teams in Afar and in the areas bordering Amhara and Tigray.

Afar's harsh and dry climate prevents crop production except in areas in Zone 2 where run-off from the eastern escarpment serves minor spate irrigation and facilitates production of sorghum. Elsewhere, maize, cotton and some pulses are grown under riverine irrigation schemes.

This year, approximately 21 000 ha of cereals and pulses are estimated to have been planted. Sorghum yields are noted to be very good indeed in Zone 2 spate systems on the Ab Alla (Shikeit) plain. Maize yields are reported to have been sustained in the irrigation schemes in the southern zones resulting in a much improved overall cereal harvest of around 40 000 tonnes. An area comparison with CSA data is given in Table A.4.

Table A4: Area differences in Afar Region (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	20.6	0.4	21.1	11.4	0.4	11.8
Difference	+9.2	0	+9.2	-	-	-

1.6 Somali

The Somali Region, predominantly a pastoralist, agro-pastoral area, is located in the semi-arid south-eastern corner of Ethiopia. With a predominantly nomadic population of nearly 3.5 million, only 15 percent live in urban centres and an estimated 90 percent of the population derive their livelihood from pastoralism and animal related activities. Rainfed cereal production is generally concentrated in villages and towns along the Wabi-Shabelle river complex and by settled farmers in the highlands and middle altitude areas in Jigjiga and Shinelle zones. Permanent irrigation schemes along the river complex facilitate the production of a variety of annual crops along with some perennial crops including bananas, fruit trees and chat.

Pre-famine conditions are being reported in the region, including widespread human and livestock distress migrations, deterioration of livestock body condition and cases of livestock deaths. According to the preliminary results of the Disaster Preparedness and Prevention Agency (DPPA) needs assessment in the region, failed 2005 *Deyr* season rains (October to December) have resulted in a serious food security crisis for southern Somali Region pastoralists. The situation is worst in the districts that had poor rains during the preceding *Gu* season (April to May), including Afder, Liban and parts of Gode zones. Other eastern zones of the region are also facing deteriorating food security conditions. Initial estimates indicate more than one million people in Somali Region to be facing severe food shortages and over US\$40 million urgently required to stave off starvation. The onset of the dry season (January to March) is expected to worsen the situation.

The Mission team visiting Jigjiga was unable to obtain any realistic information regarding the agricultural season except regarding Jigjiga and its immediate environs. Data from Somali is, therefore, woefully incomplete. Table A.5 below compares the CSA area data with the incomplete data obtained from the regional BoARD Office in Jigjiga.

Table A5: Area differences in Somali Region (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	136	0	136	82	2	84
Difference	+ 54	- 2	+ 52	-	-	-

General information suggests that fertiliser use in the region is minimal and restricted to demonstration plots. Improved seed use is non-existent as farmers use their own seeds, carried over from year-to-year.

Crop pests and diseases this year included migratory quelea birds that were controlled by spraying. Stalk borer infestations of maize and sorghum are reported to have been ubiquitous.

Total cereal output at 88 000 tonnes from 136 000 ha is less than last year but is known to be incomplete.

1.7 Harari

Harari is a small region surrounding the city of Harar with some 12 000 ha of agricultural land. Apart from chat, the main products are usually sorghum and maize. This year the meher rains were early in April and the promising start was followed by a good season finishing later than usual.

Table A6: Area differences in Harari (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	10	0	10	6	0	6
Difference	+ 4		+	-	-	-

The early start prompted the planting of long cycle cereals in the first week of May. Local seeds were available in sufficient quantity to meet the seed requirement and fertiliser use increased four fold to 700 tonnes. Despite widespread stalkborer infestations, production of cereals is estimated to have increased to 9 000 tonnes from 9 900 ha being a 28 percent improvement due to better yields. More than seventy percent of the crop is sorghum, 19 percent maize and the rest is teff. Area differences between BoARD and CSA, as shown in Table A.6, are still extreme even in this very small area and must, surely, be easily resolved with cooperation between the two organisations.

Livestock condition is noted by the Mission team to be good, with adequate grazing and water available for the settled stock in the area. Animal and grain prices are firm and higher than last year due to the emerging export trade.

1.8 Dire-Dawa

Sorghum, maize and vegetables are the main crops grown around the city of Dire-Dawa. This year the rains began on time in April were sufficient and evenly distributed and have continued until October. This year no replanting was necessary. Local seeds were sown at greater than normal sowing rates to secure crop establishment was secured. Area planted to cereals estimated by BoARD, as mostly sorghum, is placed at 13 000 ha producing 10 600 tonnes, which is more than twice the estimated post-harvest crop last year. Differences between BoARD data and CSA data are shown in Table A.7 below and elicit the same concern as indicated for Harari.

Table A7: Area differences in Dire Dawa (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	13	0	13	8	0	8
Difference	+ 5	-	+5	-	-	-

Livestock condition noted by Mission teams was good and livestock prices are high due to a flourishing export trade.

1.9 Addis Ababa

The area planted to cereals and pulses this year in Addis Ababa administration area is similar to last year at 10 400 ha.

Table A8: Area differences in Addis Ababa (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	9	1	10	8	3	11
Difference	+1	- 1	-1			

Good rainfall beginning in mid-May has continued without any breaks or dry spells until December supporting crop growth and development. Fertiliser use through purchases via the BoARD, for the first time this year has increased. Following a year when husbandry practices were normal and with no significant pests and diseases, cereal and pulse production is similar to last year's final estimate from BoARD at 19 000 tonnes from 10 000 ha..

1.10 Gambella

Gambella Region, located in south-west Ethiopia bordering Sudan, is a lowland area with regular rainfall and seasonal floods from permanent rivers that bisect the region providing the opportunity for at least two crop production cycles per year, one from rain and one from residual moisture. The Region, which has experienced much movement of refugees from Sudan in the past decade, is inhabited by cattle pastoralists (Nuer), shifting cultivators (Anuak) and settlers from the central highlands. Currently internecine conflict and random acts of violence are disrupting farming patterns and the other diverse livelihood systems fishing, hunting-gathering and cross-border trade seen to be as important as agriculture to the household food economies are also negatively affected from time to time. Some 6 000 families are currently taking refuge in Pochalla district in Sudan. As no Mission team visited Gambella this year agricultural information is scanty comprising only data from the regional BoARD that appears to be incomplete as no extensive crop assessments have been conducted. No CSA data was provided for Gambella.

Table A9: Area differences in Gambella Region (000's ha rounded)

	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	16	1	17	na	na	na
Difference	-	-	-	-	-	-

Rainfall data is also incomplete. Information from BoARD sources indicates a reduced harvest of cereals and pulses of 18 400 tonnes from 17 000 ha.

1.11 Benshangul Gumuz

Benshangul Gumuz Region, bordering the eastern clay plains of Sudan is a lightly populated, low-lying Region with a uni-modal rainfall, which supports crop and pastoralist livestock production. This year the rains were universally favourable, a timely start was followed by well-distributed rainfall that finished late in all five zones. Area differences between CSA and BoARD estimates are shown in Table A.10.

Table A10: Area differences in Benshangul-Gumuz Region (000's ha rounded)

Zone	BoARD Cereals	BoARD Pulses	BoARD Cereal and Pulses	CSA Cereals	CSA Pulses	CSA Cereal and Pulses
Region	154	13	167	118	7	125
Difference	36	6	42			

Given the good rains, normal farming practices were observed. Fertiliser use throughout the region increased by 23 percent by the increased availability of credit through the Regional government programme, but the application of DAP and urea is still very low compared to other localities nearby.

No major field pests or disease problems completed the favourable profile of growing conditions that have sustained the increase in regional cereal and pulse production noted last year to reach an estimated 199 000 tonnes.

Table B1: Ethiopia - Comparison of Area ('000 ha) estimates of Cereals and Pulses in 2005/06 Meher Season between CSA and BoARD

Region	Item	Total C+P	Pulses	Cereals	Teff	Wheat	Barley	Hamfes	Maize	Sorgh	F. Millet
Tigray	BoARD (B)	812	69	743	136	74	68	39	84	240	99
	CSA (C)	640	55	585	140	91	98	0	48	151	57
	% B/C	127	125	127	97	81	69		175	159	174
Afar	BoARD	21	0	21	3	0	0	0	11	7	0
	CSA	12	0	12	2	0	0	0	8	2	0
	% B/C	175		175	150				138	350	
Amhara	BoARD	2 810	457	2 353	705	380	281	0	312	483	153
	CSA	3 190	634	2 556	876	402	386	0	294	434	155
	% B/C	88	72	92	80	95	73		106	111	99
Oromiya	BoARD	5 773	684	5 089	1 237	1126	664	0	1 035	757	231
	CSA	4 035	494	3 541	930	678	458	0	817	549	87
	% B/C	143	138	144	133	166	145		127	138	266
Somali	BoARD	138	4	134	0	4	4	0	65	60	0
	CSA	86	2	84	0	18	7		32	26	0
	% B/C	160	200	160		22	57		203	231	
SNNPR	BoARD	1 524	242	1 282	258	232	161	0	484	136	10
	CSA	932	177	755	218	134	87	0	215	95	5
	% B/C	164	137	170	118	173	185		225	143	200
Benshan.	BoARD	168	14	154	19	3	2	0	48	53	29
	CSA	123	7	116	13	0	1	0	29	52	21
	% B/C	137	200	133	146		200		166	102	138
Dire D.	BoARD	13	0	13	0	0	0	0	1	12	0
	CSA	7	0	7	0	0	0	0	0	7	0
	% B/C	186		186						171	
Addis A	BoARD	11	1	10	5	4	0	0	0	0	1
	CSA	11	3	8	4	4	0	0	0	0	0
	% B/C	100	33	125	125	100					
Gambella	BoARD	17	1	16	0	0	0	10	5	1	0
	CSA	0		0	na	na	na	na	na	na	na
	% B/C										
Harari	BoARD	10	0	10	0	0	0	0	3	7	0
	CSA	6	0	6	0	0	0	0	1	5	0
	% B/C	167		167					300	140	
National	BoARD	11 297	1 472	9 825	2 363	1 823	1 180	49	2 048	1 756	523
	CSA	9 042	1 372	7 670	2 183	1 327	1 037	0	1 444	1 321	325
	% B/C	125	107	128	108	137	114		142	133	161
NB foot note 7	B + CSA Am	11 677	1 649	10 028	2 534	1 845	1 285	49	2 030	1 707	525

Table C1: Ethiopia – Zonal Grain Surplus/Deficit in 2006 – Estimates

Region/Zone	Population '000s	Gross Production (tonnes)	Net Production (tonnes)	Use per person per year (kg)	Consumption (Requirements) (tonnes)	Surplus/ Deficit (in)
<u>TIGRAY REGION</u>	4 345 471	934 307	773 751	202.850	881 479	-107 728
Seed and loss		160 556				
MISRAKAWI ZONE	1 007 176	77 731	59 229	202.850	204 306	-145 077
Seed and loss		18 502				
MEHAKELEGNAW ZONE	1 288 417	195 956	160 833	202.850	261 355	-100 522
Seed and loss		35123				
MIRABAWI ZONE (W and NW)	809 859	404 622	345 373	202.850	164 280	181 093
Seed and loss		59249				
DEBUBAWI ZONE	1 240 019	255 999	207 806	202.850	251 538	-43 732
Seed and loss		48193				
<u>AFAR REGION</u>	1 398 405	40 053	31 959	147.714	206 564	-174 605
Seed and loss		8094				
ZONE 1	417 966	n/a	n/a	147.714	61 739	
ZONE 2	274 056	n/a	n/a	147.714	40 482	
ZONE 3	195 533	n/a	n/a	147.714	28 883	
ZONE 4	158 191	n/a	n/a	147.714	23 367	
ZONE 5	352 659	n/a	n/a	147.714	52 093	
<u>AMARA REGION</u>	19 166 160	4 349 700	3 601 706	209.610	4 017 419	-415 713
Seed and loss		747 994				
SEMEN GONDAR ZONE	2 908 502	727 840	600 692	209.610	609 651	-8 959
Seed and loss		127 148				
DEBUB GONDAR ZONE	2 433 656	392 180	324 261	209.610	510 119	-185 858
Seed and loss		67 919				
SEMEN WELLO ZONE	1 736 998	230 776	188 178	209.610	364 092	-175 914
Seed and loss		42 598				
DEBUB WELLO ZONE	2 949 364	439 282	363 187	209.610	618 216	-255 029
Seed and loss		76 095				
SEMEN SHEWA ZONE	2 164 352	519 812	435 626	209.610	453 670	-18 044
Seed and loss		84 186				
MISRAK GOJAM ZONE	2 352 109	746 019	723 655	209.610	493 026	230 629
Seed and loss		22 364				
MIRAB GOJAM ZONE	2 445 674	751 366	614 048	209.610	512 638	101 410
Seed and loss		137 318				
WAG HEMRA ZONE	377 008	64 991	53 053	209.610	79 025	-25 972
Seed and loss		11 938				
AGEW AWI ZONE	993 326	298 548	249 498	209.610	208 211	41 287
Seed and loss		49 050				
OROMIYA ZONE	640 744	101 004	88 467	209.610	134 306	-45 839
Seed and loss		12 537				
BAHIR DAR SPECIAL ZONE	164 427	n/a		209.610	34 466	-34 466
Seed and loss						
<u>OROMIYA REGION</u>	26 565 686	9 206 163	7 539 627	188.619	5 010 793	2 528 834
Seed and loss		1 666 536				
MIRAB WELLEGA ZONE	2 182 890	832 836	661 559	188.619	411 734	249 825
Seed and loss		171 277				
MISRAK WELLEGA ZONE	1 780 232	678 511	579 123	188.619	335 786	243 337
Seed and loss		99 388				
ILLUBABOR ZONE	1 198 060	434 781	350 483	188.619	225 977	124 506
Seed and loss		84 298				
JIMMA ZONE	2 775 647	683 733	542 033	188.619	523 540	18 493
Seed and loss		141 700				
MIRAB SHEWA ZONE	3 296 527	1 031 890	855 786	188.619	621 788	233 998

Region/Zone	Population '000s	Gross Production (tonnes)	Net Production (tonnes)	Use per person per year (kg)	Consumption (Requirements) (tonnes)	Surplus/ Deficit (in)
Seed and loss s.west shoa	n/a	176 104 679 594	573 277	n/a	n/a	573277
Seed and loss SEMEN SHEWA ZONE	1 628 606	106 317 776 383	646 185	188.619	307 186	338 999
Seed and loss MISRAK SHEWA ZONE	2 467 025	130 198 1 070 020	870 873	188.619	465 328	405 545
Seed and loss ARSSI ZONE	3 137 820	199 147 1 467 425	1 223 299	188.619	591 853	631 446
Seed and loss MIRAB HARERGE ZONE	1 789 356	244 126 289 076	241 071	188.619	337 507	-96 436
Seed and loss MISRAK HARERGE ZONE	2 560 402	48 005 514 228	411 017	188.619	482 940	-71 923
Seed and loss BALE ZONE	1 728 046	103 211 503 330	419 699	188.619	325 942	93 757
Seed and loss BORENA ZONE(plus Guji)	2 021 075	83 631 115 239	87 205	188.619	381 213	-294 008
Seed and loss		28 034				
<u>SOMALI REGION</u>	4 340 323	87 736	68 706	159.939	694 187	-625 481
Seed and loss		19 030				
SHINILE ZONE	453 219	n/a	n/a	159.939	72 487	
JIGJIGA ZONE	1 036 215	n/a	n/a	159.939	165 731	
FIQ ZONE	291 810	n/a	n/a	159.939	46 672	
DEGEHABUR ZONE	387 995	n/a	n/a	159.939	62 055	
WARDER ZONE	403 756	n/a	n/a	159.939	64 576	
KORAHE ZONE	306 002	n/a	n/a	159.939	48 942	
GODE ZONE	418 626	n/a	n/a	159.939	66 955	
AFDER ZONE	446 633	n/a	n/a	159.939	71 434	
LIBEN ZONE	596 067	n/a	n/a	159.939	95 334	
<u>BENISHANGUL-GUMUZ REGION</u>	627 690	199 660	161 807	208.268	130 728	31 079
Seed and loss		37 853				
METEKEL ZONE	276 019	n/a	n/a	208.268	57 486	
ASOSA ZONE	283 834	n/a	n/a	208.268	59 114	
KAMASHI ZONE	67 836	n/a	n/a	208.268	14 128	
<u>SOUTHERN NATIONS, NATIONALITIES & PEOPLE'S REGION</u>	14 910 211	2 243 338	1 844 676	99.796	1 487 979	356 697
Seed and loss		398 662				
GURAGE ZONE	2 226 572	212 380	313 386	99.796	222 203	91 183
Seed and loss		40 109				
silitie	n/a	178 632	141 115	n/a	n/a	141 115
Seed and loss		37 517				
HADIYA ZONE	1 507 581	518 265	422 039	99.796	150 451	271 588
Seed and loss		96 226				
KEMBATA ALABA & TEMBARO ZONE	1 045 657	111 347	89 863	99.796	104 352	-14 489
Seed and loss		21 484				
SIDAMA ZONE	2 939 793	238 358	176 685	99.796	293 380	-116 695
Seed and loss		61 673				
gamogofa	n/a	187 806	139 067	n/a	n/a	136 924
Seed and loss		48 739				
GEDEO ZONE	820 430	8 088 2 088	6 000	99.796	81 876	-75 876
SEMEN OMO ZONE wolaita	3 743 388	140 592	104 776	99.796	373 575	-268 799
Seed and loss		35 816				
DEBUB OMO ZONE	471 019	61 070	50 009	99.796	47 006	3 003
Seed and loss		11 061				

Region/Zone	Population '000s	Gross Production (tonnes)	Net Production (tonnes)	Use per person per year (kg)	Consumption (Requirements) (tonnes)	Surplus/ Deficit (in)
KEFICHO SHEKICHO ZONE(keffa)	1 044 368	197 852	163 194	99.796	104 224	58 970
Seed and loss		49 272				
shekka		18 522				
Seed and loss		3 908				
BENCH MAJI ZONE	468 737	78 536	61 778	99.796	46 778	15 000
Seed and loss		16 758				
Basketo	n/a	9 211	9 061	n/a	n/a	9061
Seed and loss		150				
YEM SPECIAL WEREDA	91 955	13 683	11 019	99.796	9 177	1 842
Seed and loss		2 664				
AMARO SPECIAL WEREDA	139 933	3 894	2 816	99.796	13 965	-11 149
Seed and loss		1 078				
BURJI SPECIAL WEREDA	56 338	7 043	5 965	99.796	5 622	343
Seed and loss		1 078				
KONSO SPECIAL WEREDA	224 507	9 831	7 970	99.796	22 405	-14 435
Seed and loss		1 861				
DAWRO	n/a	96 226	71 796	n/a	n/a	71 796
Seed and loss		24 430				
alaba	n/a	69 015	53 066	n/a	n/a	52 637
Seed and loss		15 949				
konta	n/a	37 888	29 409	n/a	n/a	29 409
Seed and loss		8 479				
DIRASHE SPECIAL WEREDA	129 934	28 680	23 145	99.796	12 967	10 178
Seed and loss		5 535				
<u>GAMBELA REGION</u>	246 959	18 369	14 112	182.266	45 012	-30 900
Seed and loss		4 257				
ZONE 1	66 637	n/a	n/a	182.266	12 146	
ZONE 2	48 161	n/a	n/a	182.266	8 778	
ZONE 3	89 040	n/a	n/a	182.266	16 229	
ZONE 4	43 120	n/a	n/a	182.266	7 859	
<u>HARARI REGION</u>	195 510	14 380	12 102	176.650	34 537	-22 435
Seed and loss		2 278				
<u>ADDIS ABABA</u>	2 970 719	19 523	16 999	171.262	508 771	-491 772
Seed and loss		2 524				
ZONE 1	448 216	n/a	n/a	171.262	76 762	
ZONE 2	608 823	n/a	n/a	171.262	104 268	
ZONE 3	516 723	n/a	n/a	171.262	88 495	
ZONE 4	657 481	n/a	n/a	171.262	112 601	
ZONE 5	619 390	n/a	n/a	171.262	106 078	
ZONE 6	120 086	n/a	n/a	171.262	20 566	
<u>DIRE DAWA PROV/ADM.</u>	395 136	10 116	8 833	178.656	70 593	-61 760
Seed and loss		1 283				
Commercial farms not included						

Ethiopia Household Consumption Survey (CSA) Summarized Methodology

The “1999/2000 Household Income, Consumption and Expenditure Survey” covered the population in sedentary areas of the country on a sample basis excluding the non-sedentary population in Afar and Somali Regional States. Thus, the survey covered the population of nine Regional States and two administrative regions.

The fieldwork of the first round of the survey started on 11 June 1999 and covered both urban enumeration areas. The first round data collection was completed during the first week of August 1999. The field work of the second round was carried out in January and February 2000 covering the same enumeration sites and households both in rural and urban areas. A total of 1 300 enumerators and 260 field supervisors were involved with an average supervisor-enumerator ratio of 1 to 5. In all the sample units data were collected from 12 households from each rural sample EA and 16 households from each urban sample EA. The interview method and objective measurement of household consumption items were utilized throughout the survey period. In rural areas data were collected in such a way that the households selected from each enumeration area were grouped into two, each group consisting of six households. The first six households were interviewed over a period of four weeks and the remaining six households again over a period of the next four weeks. The enumerators visited two households daily, so that each household was interviewed twice a week and for eight times during the one month period in each round.

A total of 1 264 enumeration areas (EA), 722 in rural and 542 in urban areas, were selected. With regards to ultimate sampling units, 17 336 households (8 664 in rural and 8 672 in urban areas) were covered. For the survey exercise, the country was divided into three categories: I. Rural areas; II. Regional capitals and five major urban centres; III. Urban centres other than under category II. A stratified two-stage sample design was used to select the sample in which the primary sampling units were EAs. Sample enumeration areas from each domain were selected using systematic sampling that is probably proportional to size; size being number of households obtained from the 1994 population and housing census. With each sample EA a fresh list of households was prepared at the beginning of the survey's field work and for the administration of the survey questionnaire 12 households per sample EA were selected.

Data were collected using three basic schedules: a. schedule on basic population characteristics that comprises population size, age, sex, marital status, and education; b. schedule on household consumption expenditure, i.e. consumption on food, beverages, and tobacco; and C. schedule on household expenditure on various consumption and non-consumption items such as, expenditure on clothing and footwear; household goods and services; house rent, energy and water; transport and communication; entertainment and education; personal care and others. Furthermore, information was collected on household income and receipts. The data collection exercise took into account the two major seasons of the country, i.e. the slack season, and the peak/harvest season.

Ethiopia: Retrospective Analysis of pre and post Harvest Grain Production Estimates and Possible impact on CFSAM Grain Balances

Background

In CFSAM balances, estimated domestic grain (cereals and pulses) availability is compared with grain requirement in order to determine the likely level of deficit or surplus during the coming marketing year for the country in question. The balances are, simply put, a combination of forecasts and estimates of parameters which, for the most part, are i) not easily measured; ii) have rarely, if ever, been studied in their own right to establish the existing range of absolute values in the country; iii) where they have been studied, vary according to source; iii) may fluctuate during the year: and iv) may vary markedly from year-to-year, according to the prevailing conditions. This level of uncertainty lies at the heart of the reason why CFSAMs were derived in the first place, why they are still required and why they are frequently requested. The foregoing notwithstanding, it behoves Missions to strive to obtain the closest possible fit between their estimates and the true values of crop performance, availability and use for the year under study.

In the Ethiopian case, CFSAM domestic availability consists of the following components:

- An estimate of the *meher* harvest, including maize eaten green,³²
- A prediction of the following year's *belg* harvest (not yet planted),
- Stocks held on-farm, by traders and by government/international agencies that are available for use,
- Imports,
- Adjustments for post-harvest losses, including transport and storage losses,
- Adjustments for seed use,
- Adjustments for the feeding of grains to livestock, including poultry.

Regarding cereal and pulse production, the annual CFSAMs attempt to collate, audit, adjust and present for international consumption information obtained by the Regional Bureaux of Agriculture and Rural Development (BOARD) juxtaposed with concomitant explanations of the levels obtained disaggregated to zonal level.

Where no information exists, rapid case studies, which are routinely undertaken to audit the existing data, provide an immediate supply of empirical data that may be used to update historical BOARD or alternative source³³ data and used to bridge the gap.

In the spirit of transparency and to generate a greater understanding of the performance of CFSAMs to date, a series of studies is in hand to compare and contrast BOARD crop area and production estimates with CSA data. At the same time a preliminary study was recommended to ascertain in general terms an estimate of accuracy of previous CFSAM assessments of the *meher* harvest.

Methodology

Given that official data generated by CSA is associated with a completely different time-series of values, estimates of CFSAM levels of accuracy may only be determined by strict area-by-area comparison with the BOARD final post-harvest assessments generated using the same methodology that provides the basis of CFSAMs. An initial overview of accuracy, using the national-level data for the past ten years, is shown below. In this preliminary study, the following steps have been taken:

- CFSAM pre-harvest assessments and BOARD post-harvest assessments of area and production for total cereals, total pulses and total cereal + pulse combinations are juxtaposed in the Tables E1 and E2, by year.
- Pre-harvest assessments are expressed as percentages of post-harvest assessment for each grain type for each year.
- Means and standard deviations of the percentages are presented for each Ten-year time-series.

³² Maize eaten will not be available for consumption but it is *assumed* that an equivalent quantity will be grown and will be available.

³³ Central Statistics Authority (CSA) collects the official statistics, but until recently (2005/6) these have not been available to CFSAMs until midway through the marketing year following the annual missions.

- Individual values greater than 2 x standard deviation away from the mean are significantly different from the population studied.

TABLE E1. Ethiopia: Area Comparison of Pre and Post-harvest Performance of Meher Crop (000 ha) 1995/96-2004/05

	Cereals			Pulses			Cereals & Pulses		
	Expected	Observed	pre/pos	Expected	Observed	pre/pos	Expected	Observed	pre/pos
1995/96	8 735	8 943	97.7	1 335	1 324	100.8	10 071	10 277	98.0
1996/97	9 442	9 442	100.0	1 399	1 477	94.7	10 842	10 919	99.3
1997/98	9 456	9 484	99.7	1 526	1 525	100.1	10 981	11 010	99.7
1998/99	9 426	9 807	96.1	1 302	1 488	87.5 ^{1/}	10 728	11 295	95.0
1999/00	9 366	9 290	100.8	1 519	1 504	101.0	10 885	10 794	100.8
2000/01	9 807	9 814	99.9	1 496	1 505	99.4	11 302	11 318	99.9
2001/02	9 796	9 845	99.5	1 526	1 502	101.6	11 322	11 347	99.8
2002/03	9 502	9 502	100.0	1 515	1 515	100.0	11 018	11 018	100.0
2003/04	9 653	9 036	106.8 ^{2/}	1 423	1 268	112.2 ^{3/}	11 076	10 304	107.5
2004/05	9 231	9 234	100.0	1 408	1 408	100.0	10 640	10 640	100.0
mean of %			100.1			99.7			100.0
sd of %			2.6			5.8			2.9

^{1/} 1998/99 pulse area outside usual range of accuracy.

^{2/} 2003/04 cereal area outside usual range of accuracy.

^{3/} 2003/04 pulse area outside usual range of accuracy.

TABLE E2. Ethiopia: Production Comparison of Pre and Post-harvest Performance of Meher Crop (000 t) 1995/96-2004/05

	Cereals			Pulses			Cereals & Pulses		
	Expected	Observed	pre/pos	Expected	Observed	pre/pos	Expected	Observed	pre/pos
1995/96	8 301	8 886	93.4	794	813	97.7	9 095	9 699	93.8
1996/97	10 761	10 842	99.3	950	996	95.4	11 711	11 839	98.9
1997/98	8 084	8 105	99.7	701	702	99.9	8 786	8 806	99.8
1998/99	10 843	10 397	104.3	837	995	84.1 ^{1/}	11 690	11 384	102.7
1999/00	9 691	10 706	90.5	1 030	1 039	99.1	10 722	11 745	91.3
2000/01	11 614	11 780	98.6	999	1 019	98.0	12 613	12 799	98.5
2001/02	11 360	10 960	103.6	1 028	1 005	102.3	12 334	11 964	103.1
2002/03	8 157	8 157	100.0	767	767	100.0	8 923	8 923	100.0
2003/04	11 828	10 699	110.6	1 220	794	153.7 ^{2/}	13 047	11 493	113.5 ^{3/}
2004/05	13 007	13 751	94.6	1 261	1 299	97.1	14 268	15 049	94.8
mean of %			99.5			102.7			99.6
sd of %			5.5			17.6			5.9

^{1/} 1998/99 pulse production outside usual range of accuracy.

^{2/} 2003/04 pulse production outside usual range of accuracy.

^{3/} 2003/04 cereal and pulse production outside usual range of accuracy.

Findings

The calculations are summarised below in Table E3 below. Overall they present a narrow range, suggesting a regular closeness of fit.

Table E3 CFSAM Pre-harvest and post harvest percentage variations^{1/}

	Cereals	Pulses	Cereals and pulses
Area	98.2 – 101.9	95.6 – 103.9	98.1 – 103.5
Production	95.5 – 103.4	90.1 – 115.3	95.5 – 103.8

^{1/} 100% means pre-harvest and post harvest estimates are the same

Further, the means are both above and below 100 percent suggesting no consistent bias over the years. The greatest range is within the assessment of pulses. Unreported or unrecognised intercropping may well be the source of some of the area variation, however, the practice of opportunistic late-sowing of crops to capitalise on prolonged *meher* rains is probably the main cause of underestimation and, by the same token, lack of success of later sown crops in poor years the main cause of overestimation. In addition, pulses are much harder to estimate and no Pictorial Evaluation Tool (PET) has been produced to assist in this regard.

Although the area set to pulses is around one tenth of the area set to cereals, so the overall performance (cereals and pulses) is not significantly affected, they are valuable nutritionally and economically because of their export earnings, consequently, steps should be taken to address the current level of performance of pulses. Regarding estimations of grains and cereals, the overall performance, as determined by this comparison of pre- and post-harvest estimates over the past 10 years, is good, reinforced by the obvious differences on occasions when breakdowns in the system have occurred. In this regard, the effects of the area differences in 2003/4 and 2004/5, due to the intermittent introduction of a new area data base in one major and several minor production regions, during the two years in question, are clearly visible in Table E1 and in all the charts in both the area and the production statistics.

The final year, 2004/5 indicates a greater post harvest production estimate, which, although within the range of accuracy of the Ten year sample is substantial. It is less easily explained than the lower post harvest assessment in 2003/4, which was brought about by area changes. A more detailed analysis is necessary to determine, where and possibly why this happened. The opening paragraphs of this short note made mention of the array of uncertain information that is combined to provide the domestic availability side of the CFSAM balance. Of these, the coming *belg* harvest may only be speculated upon, using the scanty and incomplete data of the previous year, usually collected by the mission during the field visits that can never touch all *belg* areas. This year, for the first time in several years, a MoA *belg* assessment was conducted and returned an initial pre-harvest assessment of one million tonnes. This is around five times greater than the expected level of *belg* harvests, apparently due really good rainfall and a concomitant increase in area planted, plus more realistic assessments of yield per ha. The 2005 *belg* estimate points to the extreme range available (150 000 t to 1 000 000t) from which the CFSAM must chose a figure to complete its balance. This obviously leaves massive room for error and suggests a real need for a mid-year audit to update the choice made.

Post-harvest losses are derived from a long-term practical/academic understanding of the probable losses of different types of cereals and pulses under peasant storage conditions. Basically, the smaller the grain the lower the loss, ergo teff is estimated to have a mean loss of 3 percent per year whereas maize is expected to have a mean loss of 25 percent per year. Consequently, grain losses in any one year vary according to the proportion of crops grown *viz*; the significant fluctuations in teff/maize planting ratios according to the early rainfall pattern. These figures are cross-checked, each year, during the rapid case studies and key informant interviews. Very small scale *ad hoc* studies indicate that in the wetter south, maize losses over a year, without chemical protection may be as high as 40 percent. However, in the rapid case studies, such figures are never reported. This again points to the need for comprehensive widespread and long-term studies related to storage losses.

Seed rates, by-and-large, usually follow the standard extension service recommendations, nevertheless, they are always cross-checked during every CFSAM interview to ascertain annual variations. For instance, because of the good rainfall conditions this year and the good harvest last year, the returns from the seven mission teams travelling throughout the country, working independently but to a set format, show that seed rates for the 2005 *meher* were slightly but nevertheless, discernibly, higher, therefore this information was

used to adjust the balance. Again, to the knowledge of the author, to date, no specific study has been conducted on seed rates.

Use of feed grains is another area of complete ignorance. No body or institution has any information, no matter how scanty, on feed grain use. Unreported empirical evidence during these and other missions throughout Ethiopia over 22 years, indicate that farm families throw handfuls of grain to the c 40 million backyard chickens, feed grains to equines and draught oxen, and feed standing crops of mature maize and sorghum (thinnings) to cattle and mature oats to horses. The modern poultry industry certainly uses grains in their straight and compound feed rations but even these data may only be derived from a general understanding of poultry rations rather from any reports from Ethiopia *per se*.

Finally, information on stored grains at farm level is unavailable, trite comments that there are no on-farm stocks in Ethiopia indicate a complete misreading of the Ethiopian agricultural economy, on-farm stocks of significance even exist as far north as Tigray (*gud-guad*: underground stores) but nowhere in the country are the levels of stocks held understood, therefore CFSAMs rely on farmer comments during rapid case studies for an indicative estimates. At trader level, grain in store is as big a commercial secret as cross-border exports to Sudan (Eritrea for teff), Somalia and beyond and just as unlikely to be revealed.

The above may serve to indicate some the work that remains to be done to obtain better understanding of domestic availability. Such work goes far beyond adjusting the structure and content of CFSAMs. It requires a commitment to the belief that it is only with accurate information of the real *status-quo* that meaningful plans may be laid. While the BOARD field staff are without the minimal levels of equipment such as weighing scales, let alone more sophisticated measuring equipment, there will always be exaggerated room for error. A pilot project funded by DCI (Ireland) includes the use of solar powered office equipment at DA level and the introduction of simple farm recording schemes that farmers can manage. Such schemes, coupled with *woreda* level BOARD specialist advice and bench-mark related peer-group discussions of performance, offer a way forward that will not only provide data for analysis but will also create the foundation for true participatory development.

Methodology of Emergency Needs Assessment

The 2005 Disaster Prevention and Preparedness Agency (DPPA)-led Multi-Agency Emergency Food Needs Assessment was conducted in three separate arrangements. The first assessment was on cropping parts of the country that benefit from meher rains, excluding Southern Nations, Nationalities and Peoples Region (SNNPR). The second assessment covered agro-pastoral and pastoralist areas of Afar and Somali regions and Borena zone in Oromiya Region. The third used a different approach based on household economy and livelihood based data analysis to assess emergency food needs in SNNPR.

The assessment in all regions except SNNPR was based on information provided by early warning committees at various levels, experts, community members and the assessment teams' observations. Group discussions with communities, and household interviews were also used in the visited districts. Semi-structured questionnaires/checklists were used on crop production, livestock production, food and income sources, market situations, food security related programmes, and risk and coping mechanisms. The analysis and interpretation of results in the first two cases were based on the qualitative judgments of the respondents and the assessment teams.

The methodology used in the SNNPR assessment was a combination of both a qualitative and quantitative approach. The assessment used the livelihood baseline data established in 2005 for the 40 livelihood zones in the region as a benchmark. The need estimation was multi-factorial, taking into account a wide range of variables such as changes in food and cash crop production, and changes in cash crop and livestock prices. The basic principle underlying the method is that the impact of a current 'hazard' (e.g. current levels of crop production and market prices) is best analysed in the context of a detailed understanding of local patterns of livelihood and how different types of change will affect these. Detailed analyses were completed for each livelihood zone in each woreda, and the results summed across livelihood zones to obtain a single district-level result.

Differentiation between chronic and acute food security

In Ethiopia food aid recipients fall into two broad categories, chronically food insecure and acutely food insecure for which assistance is provided through two main response mechanisms, the Productive Safety Net Programme (cash and food transfers) and emergency response mechanisms. The Government-led pre-harvest assessments aim at identifying the acutely food-insecure.

Chronically food-insecure populations are understood as households who have faced continuous food shortages (usually 3 months of food gaps or more) in the last 3 years and who have received food assistance. This also includes households who suddenly become more food insecure as a result of severe losses of assets and are unable to support themselves (for the last 1-2 years) and household without family support and other means of social protection and support. Households falling outside this definition that are subject to sudden external shocks and thus becoming food insecure, are regarded as acutely food insecure.

While the PSNP has a relatively predictable number of beneficiaries, the second is related to unpredictable shocks and events, monitored on regular basis through the Early Warning System of the Ethiopian government. Beneficiaries are therefore defined by the multi-annual needs assessments.

The assessments are based on the General Guidelines for meher (or belg) pre harvest assessments³⁴, which are regularly revised by the Methodological Sub-working Group of the Early Warning Working Group (EWWG). They are conducted in all drought prone regions of Ethiopia, and the extent of their coverage is determined by the outlook of the rainfalls and projected food security situation based on information from the Early Warning System (regular monitoring information from DPPA). These assessments are entirely institutionalised and have been owned by the Government, through the EWD/DPPA leadership. Therefore, a solid experience has been acquired throughout the years, both from Government and contributing agencies in carrying-out these assessments. The assessment process will be extensively described in the paragraphs below this section.

³⁴ Latest version of the assessment guidelines: *General guideline for the 2005 Meher pre harvest assessment*, Disaster Preparedness and Prevention Agency, November 2005

Identification and prioritisation of geographic area

The identification and prioritisation of the geographic areas is done at two levels. At federal level, the EWWG of the DPPA indicates coverage requirements and necessity of undertaking field assessments. The decision is taken on the basis of food security situation and information from the Early Warning System. For the meher pre-harvest assessment 2005, which aimed at looking at food security prospect of the first half of 2006, it was agreed that most of the western areas of the country will not be necessarily covered: the forecast of the rains was promising and these areas are as not considered deficit crop production areas.

Once geographic areas to be assessed have been identified at federal level, field assessment teams are dispatched to the various areas. According to the guidelines, the prioritisation of districts to be assessed is then done in agreement between the teams and the DPPA officials at both regional and zonal levels. Based on information from the Early Warning System and disaster assessments conducted at district level prior to the main assessment, officials will classify the districts into priority categories: from moderately to very severely affected. The districts affected by the most critical food security situation will be visited by the assessment teams as a priority; districts with lack of information will also be prioritised.

Description of assessment tools

The assessment tool is based on the General Guidelines for pre and post harvest assessments from the DPPA. The exercise is a multi-agency assessment, led and owned by the DPPA with participation of government ministries, UN agencies, NGOs and donors. It is a combination of briefing and debriefing meetings, at federal, regional and district levels complemented by field visits. At district level, community interviews are used to crosscheck the information collected. Collection of household level information is not conducted as such in the assessment, due to representativity issues and coverage capacity; however, if time allows, household information is used to cross-check the information.

Secondary data available for household level analysis

As mentioned above, analysis is not conducted at household level, but at district level, with emphasis on the lowest administrative level (kebele) when particularly affected by a shock. Therefore, secondary data is used for the overall assessment process and briefing and debriefing at district level. Prior to the field visits, the assessment teams are briefed at federal level and are provided with secondary data: for the meher pre-harvest assessment 2005, the past 2004 meher and belg zonal reports were provided. Population figures, emergency beneficiaries' in 2005, average emergency beneficiaries and PSNP beneficiaries' figures by district were added to the briefing package. Additionally, market prices monitoring data (past three year's average, previous year and current year) by district were added. Satellite imagery information on rainfalls, with analysis of trends and current rainfall patterns at zonal level, was made available. Food security monitoring information of the past six months, and current "areas of concerns based on the use of pre-famine Cuny indicators" were consolidated and handed over to the teams, together with regional maps. Finally, 2005 nutrition surveys results (Global Acute Malnutrition and Severe Acute Malnutrition prevalence (GAM and SAM), plus crude mortality rate and under five mortality rate (CMR and UMR) were handed over to team leaders. In 2005, increased attention was given in briefing and providing background information on both PSNP programmes – to ensure coherence and linkage between relief assistance and PSNP programme – and on nutrition data as well as the targeted supplementary feeding of the "Extended Outreach Strategy for Child Survival Initiatives" – to increase understanding of food utilisation aspect of food security. However, additional efforts are ongoing to strengthen guidance on non-food assessment and response options and further enhance the collaboration and coordination between the Task Forces on Water, Health and Agriculture and the DPPA.

Field visits approach

The field visits are composed of firstly briefing and debriefing discussions with district officials. These discussions are lead by the Early Warning Committee at district level, with participation of representatives of various line ministries: agriculture, livestock, market monitoring, crops, health and nutrition. The discussions are structured according to the guidelines, covering the following topics: weather conditions, cropping patterns and performance, water, pasture and livestock conditions, market conditions, coping mechanisms, human health conditions and food security prospects. Though the assessment guidelines are designed to comprehensively cover the three pillars of food security, there is a tendency of bias toward food availability

aspects. This is partly due to the focus given in the early warning system as a whole on food availability and production as the main denominator for food security.

New methodology piloted in SNNPR

Regarding the Southern Nations, Nationalities and People region (SNNPR), a different methodology compared to the one usually applied for emergency need assessments was piloted during this meher pre-harvest need assessment 2005. The methodology is based on the Household Food Economy Approach (HEA). Consequently, the assessment in SNNPR for the meher 2005 was the outcome of a livelihood baseline and a first trial to determine needs with an alternative methodology.

The methodology builds upon the following concepts: “people at any given time are exposed and affected by different hazards or shocks – they can be drought, market failure, conflict or any other hazard affecting the household food security. The principle of the methodology is to be able to understand how people react and cope confronted by a given hazard, in order to preserve through adequate interventions their livelihood”³⁵. To achieve this, one must first understand how people live and survive in a non-crisis situation and which mechanisms they use to cope when facing a shock. This implies the establishment of a livelihood baseline analysis. Once the livelihood baseline data are available – which determines the context – they are compared to monitoring data – which represent the changes. The analysis of current information when compared to the baseline information provides understanding of the current and future food security situation and necessary information for intervention needs – this constitutes the outcome.

For the SNNPR pilot, the following project activities have been conducted during 2005 for implementation of the HEA methodology in relation to needs assessment: (1) mapping of the livelihood zones down to peasant association (PA) level related to population figures for each preliminary livelihood zone existing by administrative unit, (2) conduction of livelihood baseline throughout the year 2005 to define the pattern of the LZ and to confirm the livelihood mapping, (3) training of district, zonal, regional and federal DPPA/B in the baseline assessment and further use of the baseline, (4) discussions to improve district level monitoring to capture key relevant indicators by LZ, and finally (5) implementation of the methodology for the “meher” 2005 assessment.

During the “meher” assessment, the teams (four in total lead by core members from DPPA and USAID) visited a total of forty-five districts, as per agreement with the Early Warning Department of DPPA. Price and crop production data were collected and compared to the baseline data. The analysis was completed for each livelihood zone, by wealth group, in each district. The outcome of this work provides detailed information regarding food gaps and expenditure deficit for the main sources of both food and income, by wealth group, in each of the forty livelihood zones (LZ) defined by the baseline. Detailed information obtained by LZ, by wealth group are available through DPPA and FEWS-NET. The methodology allows gaining a deeper understanding of the food security and livelihood patterns in the region. This information, while used to refine emergency food aid beneficiaries, could serve a broader purpose as it provide information on expenditure deficit as well as food gap, by wealth group and by LZ; therefore, it could be used to determine and advise not only food aid intervention but also cash and non-food intervention in the region. Further discussions and steps regarding the future of the methodology will be undertaken through the HEA steering committee and the Early Warning Working Group.

Limitations and constraints

Large-scale assessments such as the traditional meher and belg-assessments, despite being a routine exercise, are facing important constraints. Two of them, considered in the paragraph below, are seen as the most important ones in terms of consequences regarding quality and reliability of the assessments.

One major constraint regards the data accuracy in a broad way, as most of the assessment is relying on secondary data collected at district and zonal level. Two types of data are particularly crucial to the outcome of the assessment: population figures and production data. Population data reflecting the reality of Ethiopia is an issue in itself as there has been no official population census since 1994; consequently, usually population figures are calculated by estimated yearly adjusted growth rates. However, at district level, it is not unusual that the officials in line ministries use other estimates. The fact that population data are not based on recent census constitutes an important problem for any assessment in Ethiopia, and for the meher assessment a fortiori. With regards to production data, they have been and continue to be collected by the

³⁵ Concept definition extracted from Food Economy Group’s presentation on livelihood baseline SNNPR pilot, in Addis Abeba, November 2005

Ministry of Agriculture and Rural Development (MoARD); however for standardisation purposes, it has been officially decided since last year that the Central Statistics Authority (CSA) will be responsible for production data. The decision has been implemented by some regions by the end of 2005; however, as the CSA has no local representation, it remains difficult to implement the decision fully and keep control over the data. During the 2005 meher assessment, teams reported this issue as a major constraint, impeding the quality and reliability of the data and therefore the analysis of the food security prospect in areas with conflicting data. Depending on which region, source of production data collection were different during this year assessment.

Another limitation that affects the assessment results is the preparedness level of the district officials regarding the exercise. The first limitation is structural as it relates to the regular monitoring capacities of the district officials: number and skills of their staff, capacity to keep record data. The second is linked to the actual assessment preparation and the capacity (at all levels) of anticipating and preparing for the assessment. For the 2005 meher assessment, this issue has also been underlined on various occasions by the assessment teams as a major constraint.