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Ethiopia

Grain and Feed Annual

Annual Report

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Report Highlights:

Ethiopia is one of the largest grain producing countries in Africa, although it is still a food insecure country and a net importer of grain. Cereals are predominantly produced by smallholders, and are consumed as food, with only residues and by-products fed to livestock. Due to good rainfall in 2011, production of all grains in Marketing Year (MY) 2011/12 was high. In MY 2012/13, wheat production is forecast to be similar to the current year, but the late onset of the spring rains in early 2012 is expected to result in reduced production of corn and sorghum. Trade in grains is controlled by the government, and there is virtually no trade (imports or exports) in any cereal except wheat. Wheat imports (solely through the government and through food aid) in MY 2011/12 have dropped considerably, drawing down emergency reserves and leading to high domestic wheat prices.

EXECUTIVE SUMMARY: Grains in Ethiopia

Overall production of grains: Although Ethiopia is one of the largest grain producers in Africa, there are still large pockets of food insecurity, and it is a net importer of grains. The principal grain crops grown in Ethiopia are teff, wheat, and barley, which are primarily cool-weather crops; and corn, sorghum, and millet, which are warm weather grain crops. Teff (a gluten-free grain indigenous to Ethiopia and consumed as fermented bread called *injera*) is the most preferred crop grown in the cooler highlands, while sorghum is the principal lowland crop because it thrives well in semi-arid environments. They are all predominantly rain-fed crops.

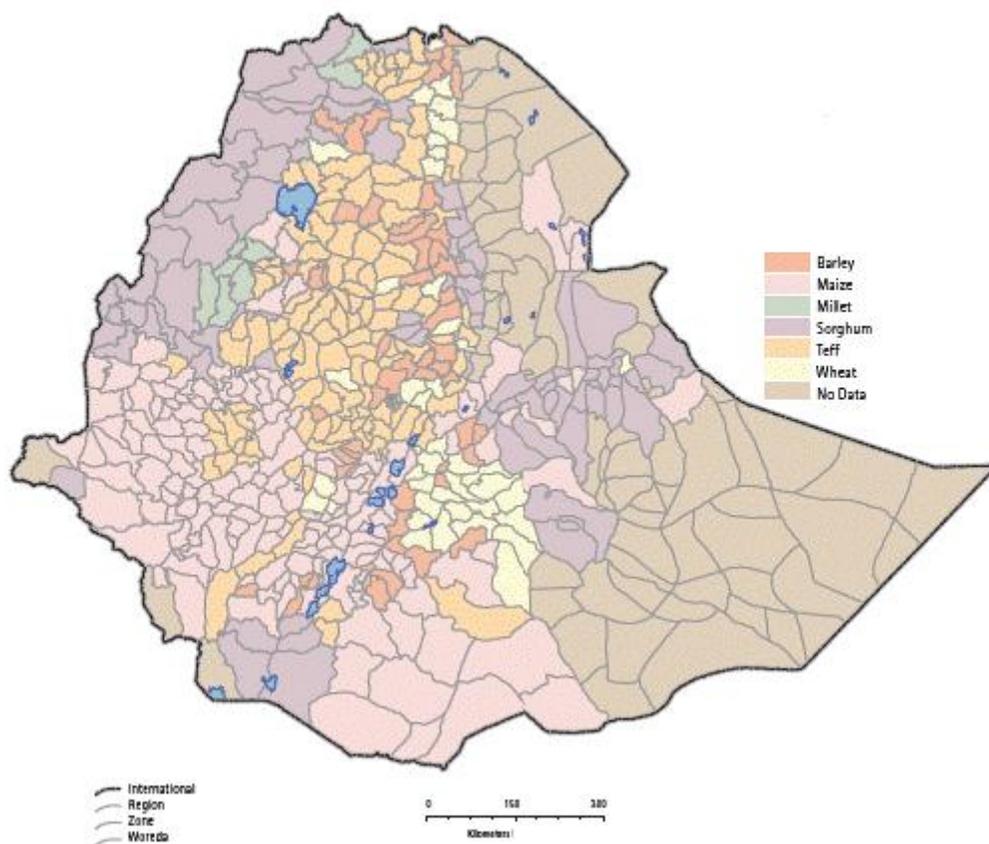
In the main producing areas of the highlands, in the northern and central parts of the country, there are two rainy seasons. The *meher* rains, normally in June-September, are the major rains and determine heavily the production levels. The smaller *belg* rains, in February-April, are important mainly for land preparation. In 2012 the *belg* rains were very late (just beginning in late March), which is expected to have some impact on this year's production of corn and sorghum, because they are planted earlier and depend more on these rains.

Although some crops in Ethiopia are produced on large commercial farms, cereals are predominantly produced by small-holders, with average land holdings of less than one hectare. In its ambitious five-year Growth and Transformation Plan (announced in late 2010), the Government of Ethiopia (GOE) aims to double the production of grains by 2015. However, the land in the densely-populated highlands and semi-highlands is fully utilized, so there is little chance for increased area planted to highland crops, especially wheat and barley. The government is encouraging exploitation of large uncultivated land tracts in pastoral areas of the country, but so far these areas are primarily being planted to industrial or export crops, not cereals.

Low use of agricultural inputs and a fragmented land holding system contribute to low productivity in the grain production system, with Ethiopian farmers among the lowest users of fertilizer and improved seeds in Sub-Saharan Africa. Agricultural inputs, including fertilizer and seeds, are still largely controlled by the Ethiopian government, which places a higher priority on assuring access for the most remote farmers than on efficient distribution networks. The state-owned Agricultural Inputs Supply enterprise (AISE) is the sole importer of fertilizer. There is no domestic fertilizer production and little soil testing, so what fertilizer is used is a generic blend and not very effective.

Overall consumption of grains: All grains in Ethiopia are consumed as food, with crop residues and by-products commonly fed to livestock. It is estimated that farmers hold about 10 percent of their grain production for planting (included in the FSI Consumption category in the PSD). Despite Ethiopia's large livestock population (the largest in Africa), the commercial feed industry is just beginning, mostly located around Addis Ababa and slightly to the south. Feed is by far the biggest constraint to the livestock sector. There are about 20 feed millers in the country, but most of them produce primarily for their own consumption. Only about half produce feed solely for sale.

Map showing the dominant cereal crop growing area in Ethiopia



Source: International Food Policy Research Institute (IFPRI)

Area and Production of Common Cereals in Ethiopia in MY 2011/12
October 2011 – September 2012

Crop	Area (1000 hectares)	Production (1000 MT)
Corn	2,152	5,400
Teff	2,781	3,790
Sorghum	1,869	3,781
Wheat	1,490	3,147
Barley	1,013	1,592
Millet	436	662
TOTAL	9,741	18,372

Source: FAS Addis Ababa

Overall trade of grains: All grain trade, both commercial and for food aid, comes in via the port of Djibouti. From Djibouti to Ethiopia, it takes about two days by truck. In the late 19th and early 20th centuries, the French and other Western partners helped to build a railway from Addis Ababa to Djibouti, which gradually fell into disrepair and was completely discontinued in 2009. A recent agreement with Chinese firms will reportedly re-build the railway over the course of five years. Since April 2008 there have been no private sector grain imports, with the exception of several shipments of wheat in 2009 and 2010, brought in under two separate USDA Food for Progress agreements and monetized by NGOs. In 2008 the GOE, which controls foreign exchange, started to restrict private traders' ability to access to foreign currency, effectively stopping private sector imports. All grain imports come through the state-owned Ethiopian Grain Trade Enterprise (EGTE).

Overall grain policy: Tariffs on grains are low (5 percent), with 15 percent VAT tax, but these tariffs are not relevant. Although imports of grains are not officially banned, traders and millers are not given the access for foreign exchange needed to purchase internationally. Exports of grains are officially prohibited, except for occasional exceptions for maize, which is allowed to be exported to neighboring countries when there is sufficient production.

COMMODITIES:

Wheat

Production

Ethiopia is the second largest wheat producer in sub-Saharan Africa, after South Africa. Wheat is mainly grown in the highlands, planted in the summer before the main rainy season, and harvested in October-November. Seventy-five percent of the wheat is grown in the regions of Arsi, Bale, and Shoa, a belt stretching from just north of Addis Ababa to the southeast. Most of the wheat grown in Ethiopia is bread wheat. There is some durum wheat grown, but this is commonly mixed in with bread wheat in the fields. In comparison with other cereals, a relatively large percentage of wheat (between 5 and 10 percent) is produced on large-scale farms. These large-scale farms, established as state-owned farms in the Communist military Derg regime of 1974-1991 and since privatized, are located in the Arsi-Bale wheat belt.

In crop year 2010, the rains were good, but the humidity and cool temperature resulted in a high incidence of yellow (or striped) stem rust. This wheat rust epidemic destroyed a significant amount in the wheat producing belt of central and southeast Ethiopia, and production in the October-September Marketing Year (MY) 2010/11 has been adjusted downward. In 2011, a La Niña year, the rain, although good, was not as heavy and temperatures were warmer during harvest, so rust was not as big a problem, resulting in a higher production level for MY 2011/12.

Yellow stem rust epidemics occur in Ethiopia roughly every seven years. In addition, Ug99 stem rust has occurred here, and is anticipated to become a problem sometime in the future. Especially because of the problems encountered in 2010, a consortium of researchers, including USDA, USAID, Cornell University, the Gates Foundation, the International Center for Agricultural Research in the Dry Areas (ICARDA), and the Ethiopian Agricultural Research Institute (EIAR) has conducted a lot of research and have developed several rust-resistant varieties. However, multiplication of this seed continues to be a constraint.

Consumption

Teff is the preferred grain, but wheat consumption in Ethiopia is steadily increasing, due to population growth (about 2.6 percent a year) and a gradual change of life style in the urban areas. In the urban areas (which account for less than 10 percent of total population), there is a gradual consumption shift from teff to wheat, because of price and ease of preparation.

There are around 207 flour mills in Ethiopia, with a total production capacity of 3.2 million tons of flour a year. Almost a third of these mills (and most of the large ones) are located in the Addis Ababa area. Mills are able to obtain wheat only through two channels. The state-owned Ethiopian Grain Trade Enterprise (EGTE) controls all commercial (non-food aid) wheat imports and makes this available to millers at a subsidized price; this accounts for roughly a quarter of the wheat market. (See Policy section.) The rest of the market (in general, rural areas) is supplied from domestic production, whose price is not controlled and is higher than imports.

Inadequate EGTE imports have led to critical wheat shortages recently, and most of the mills have been operating at half-capacity for the last two years. During calendar year (CY) 2011 the national grain reserve was depleted, causing considerable concern among international donors, faced with an emergency drought situation throughout the Horn of Africa.

Wholesale Prices of Cereals in Addis Ababa for CY 2011

(Ethiopian Birr)

Commodities	Teff	Wheat	Barley	Sorghum	Maize	Exchange rate (\$1)
Month						
January	764	547	444	449	258	16.58
February	755	540	438	411	266	16.64
March	837	651	550	457	326	16.68
April	875	705	587	457	396	16.75
May	873	806	626	503	455	16.79
June	952	851	726	545	447	16.88
July	972	803	732	555	487	16.94
August	996	737	767	652	610	17.00
September	990	773	773	751	632	17.05
October	971	798	770	683	604	17.10
November	980	772	805	675	534	17.15
December	964	658	830	721	442	17.19

Source: Ethiopian Grain Trade Enterprise (EGTE)

Trade

Trade data in the PS&D are derived from exporter data, and include exports to Ethiopia as well as to Djibouti, since most of the wheat is transshipped to Ethiopia. Data in the tables included in this section are from Ethiopian trade statistics, and do not correspond to PS&D data.

Imports by EGTE enter mainly during the critical time from May through October, before the new harvest is on the market. Through much of MY 2011/12, the EGTE, trying to ensure that domestic production was fully utilized, did not import much wheat. Due to cost, the EGTE imports wheat

primarily from the Black Sea, which is generally regarded to be of lower quality than domestically produced wheat.

To replenish the national grain reserve as well as to reduce shortages in the market, EGTE has purchased roughly 765,000 MT of wheat (from the Black Sea) since the start of this marketing year (October 2011). In addition, EGTE recently tendered for another 35,000 MT, which will bring the total commercial import to 800,000 MT by the end of this marketing year. EGTE does not plan to purchase any additional quantities.

Domestic wheat prices are above wheat import parity prices, indicating that it would be profitable for private traders to import wheat if they had access to foreign exchange at the official exchange rate. (Wheat imports are not technically banned, but foreign exchange is controlled, and private sector buyers are not given the foreign exchange to purchase wheat on the international market.) In addition to needing imports to satisfy their unmet demand, flour millers would prefer to purchase higher quality wheat than what EGTE provides.

All U.S. wheat into Ethiopia enters as food assistance of some kind. The barriers to commercial imports of U.S. wheat include millers' lack of access to foreign exchange, price, millers' inability to handle the large volumes in shipments from the United States, and lack of silo capacity at the port of Djibouti.

Wheat Imports by Country of Origin
(1000 MT)

Marketing year begins in October		
Country of Origin	MY 2009/ 2010	MY 2010/ 2011
Russian Federation	39	335
United States	590	207
Italy	243	89
Oman	2	45
Pakistan	-	33
Brazil	-	24
Turkey	4	14
United Arab Emirates	8	13
Egypt	2	4
Australia	10	2
Ukraine	249	-
Australia		2
Bulgaria	197	-
Romania	63	-
Turks and Caicos	-	2
Others	0	28
Total	1,408	796

Source: Central Statistics Authority

Note: Totals may not add up, due to rounding

Ethiopian Wheat Imports – Commercial vs. Food Aid

(1000 MT)

Import	2009/10	2010/11	2011/12 est.
GOE commercial imports	183	76	800
Food assistance	1225	720	700
TOTAL wheat imports	1,408	796	1500

*Source: GOE commercial imports from Ethiopian Grain Trade Enterprise (EGTE)
Total wheat imports from Ethiopia Revenue and Custom Authority*

Policy

The GOE controls the supply chain of wheat and flour in urban areas through EGTE distribution. Millers can buy wheat from EGTE based on their production capacity as registered with the Ministry of Trade. Only 59 bakeries and flour mills are permitted to buy this subsidized wheat, primarily mills in the Addis Ababa vicinity, since it's more efficient for mills in the rural areas to purchase locally. EGTE provides the wheat at a subsidized price, but flour made from this wheat is subject to a price cap. The wheat subsidy is about 200 birr per quintal or almost 30 percent lower than the price EGTE paid in purchasing the wheat.

Wheat is one of the priority strategic crops identified by the Government of Ethiopia (GOE) for solving the food security challenges in the country. It is therefore one of the target crops in many donor development plans, including the USG's Feed the Future.

Stocks

About sixty percent of the grain stocks are held by the Ethiopia Emergency Food Security Reserve Administration (EFSRA), for use in an emergency requirement. The remaining stocks are in the hands EGTE, in a few mills, and a small amount in private storage. Because of the late imports by EGTE during MY 2011/12, stocks at the end of this year are expected to be high.

Corn

Production:

Corn occupies more land than any other cereal crop after teff, and accounts for 36 percent of all grain production. In 2011, some large-scale investors (mostly foreign) were not ready to plant the cash crops they are planning for their holdings in the west and planted corn instead, to avoid having the government confiscate the land as un-utilized. Therefore, planted area in MY 2011/12 increased, temporarily. In addition, yields increased, due to better rainfall distribution as well as increased distribution and use of improved seeds. (The greater use of improved seeds is not having as much impact on production as it could, however, because of the low use of fertilizer.) Production in MY 2012/13 is expected to revert to lower levels, both because acreage is expected to decrease as some large-scale producers in the west convert to cash crops, and because the late start of the short *belg* rainy season in early 2012 is likely to have a negative impact on land preparation and seed germination.

After wheat, maize has the second highest amount of production coming from large-scale commercial farms, in the western part of the country. However, smallholders and subsistence farmers still represent 95 percent of production. Maize is another one of the GOE's priority crop, and also a crop in donor development plans, including the USG's Feed the Future.

Consumption:

Corn plays a critical role in food security, especially in rural areas. Per capita consumption of maize in rural areas is estimated at about 45 kg/year, triple the 16 kg/year consumption in urban areas. More than 80 percent is consumed at the household level, with commercial marketing largely limited to large-scale producers. Smallholder households eat what is available, and the larger maize production in MY 2011/12 led to increased consumption. Because of high wheat prices, many rural households this year mixed maize flour with wheat flour to make bread.

In the countryside, a large proportion of maize (perhaps 10-20 percent) is consumed at the green stage, during the pre-harvest months of June-September, when little else is available. This aspect of consumption has increased in the recent couple of years, due to high food prices.

Maize stalks are a main source of fuel, as well as cattle feed. It is also used for house construction in most of the countryside. Consumption is primarily confined to traditional food and beverages, and there are no agro-industries that diversify or enhance the utilization of maize.

Trade:

Except when the government determines that there is sufficient production, and allows some cross-border trade to neighboring countries (as in MY 2010/11), exports of maize are prohibited. There is, however, some informal trade across the borders much of the time, depending on production levels in neighboring countries (which have different rainfall patterns and tend to grow maize in lowland areas).

Production, Supply and Demand Data Statistics:

Com Ethiopia	2010/2011		2011/2012		2012/2013	
	Market Year Begin: Oct 2010		Market Year Begin: Oct 2011		Market Year Begin: Oct 2012	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	2,000	1,963	2,000	2,152		2,100
Beginning Stocks	271	271	521	435		482
Production	4,800	4,897	4,400	5,400		5,200
MY Imports	0	0	0	0		0
TY Imports	0	0	0	0		0
TY Imp. from U.S.	0	0	0	0		0
Total Supply	5,071	5,168	4,921	5,835		5,682
MY Exports	50	65	0	0		0
TY Exports	50	65	0	0		0
Feed and Residual	300	423	300	465		430
FSI Consumption	4,200	4,245	4,200	4,888		4,800
Total Consumption	4,500	4,668	4,500	5,353		5,230
Ending Stocks	521	435	421	482		452
Total Distribution	5,071	5,168	4,921	5,835		5,682
Yield	2.	2.49	2.	2.51		2.48
TS=TD		0		0		0
Comments						
AGR Number						

Sorghum

Production:

Sorghum is a crop dominated by resource-poor smallholders and typically produced under adverse conditions in the eastern and northwest parts of the country, where there is low rainfall. The good rainfall distribution during the *meher* main rainy season in 2011, coupled with additional area planted in northern part of the country by new settlers, led to an increase in production in MY 2011/12, considerably more than earlier forecast. In MY 2012/13, however, both planted area and resultant production are forecast to drop, due to the late start of the short *belg* rainy season, delaying land preparation.

Limited use of inputs continues to constrain productivity. Despite the availability of some improved varieties, most farmers prefer to use the local varieties because they offer more biomass for fodder and for fuel.

Consumption:

Sorghum accounts for an average ten percent of daily caloric intake of households living in the eastern and northwest areas of the country. About three-quarters of the sorghum grain in Ethiopia is used for making *injera* (the traditional bread, made from teff in more productive areas of the country). Another 20 percent is used for feed and for local beer production, with the remainder held for seed. The entire plant is utilized, with sorghum stalks used for house construction of house and cooking fuel, and leaves used for animal fodder.

With higher production levels in MY 2011/12, household sorghum consumption increased. Because of the high prices of teff, even middle class households increased sorghum consumption, mixing sorghum with teff to make *injera*.

Trade:

There is some informal export trade in sorghum, which is largely produced in the northwest of the country, closer to Sudan than to the central markets in Addis Ababa. In MY 2011/12, these informal exports are anticipated to be higher than in other years, because the good production levels resulted in excess supply, and prices in Sudan are more attractive than farmers would get by transporting the crop to Addis Ababa.

Sorghum Imports by Country (1000 MT)

Marketing year begins in October		
Country of Origin	MY 2009/ 2010	MY 2010/ 2011
Sudan	5	20
USA	118	13
Total	123	33

Source: Central Statistics Authority

Production, Supply and Demand Data Statistics:

Sorghum Ethiopia	2010/2011		2011/2012		2012/2013		
	Market Year Begin: Oct 2010		Market Year Begin: Oct 2011		Market Year Begin: Oct 2012		
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Harvested	1,550	1,780	1,550	1,869		1,800	(1000 HA)
Beginning Stocks	47	47	297	231		245	(1000 MT)
Production	3,200	3,465	2,700	3,781		3,550	(1000 MT)
MY Imports	50	33	50	30		0	(1000 MT)
TY Imports	50	25	50	12		0	(1000 MT)
TY Imp. from U.S.	0	10	0	0		0	(1000 MT)
Total Supply	3,297	3,545	3,047	4,042		3,795	(1000 MT)
MY Exports	0	72	0	80		70	(1000 MT)
TY Exports	0	60	0	88		55	(1000 MT)
Feed and Residual	100	204	100	212		200	(1000 MT)
FSI Consumption	2,900	3,038	2,700	3,505		3,300	(1000 MT)
Total Consumption	3,000	3,242	2,800	3,717		3,500	(1000 MT)
Ending Stocks	297	231	247	245		225	(1000 MT)
Total Distribution	3,297	3,545	3,047	4,042		3,795	(1000 MT)
Yield	2.	1.95	2.	2.02		1.97	(MT/HA)
TS=TD		0		0		0	
Comments							
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Barley

Production:

Barley is cultivated by small holders in every region of Ethiopia, since it is able to grow at all elevations, but it performs best at the higher elevations in the northern and central regions of the country. Barley producers, especially, do not benefit from improved inputs like seed and fertilizer, and productivity is stagnant. In addition, the problem of soil erosion in the highlands contributes to low productivity. As a highland crop, there is little increase in the area planted to barley; the small increases in MY 2011/12 and forecast for MY 2012/13 are due to heightened interest by local breweries and the local malt producer. However, the good rains in the highlands resulted in an increase in production in MY 2011/12.

Consumption:

Barley is a staple food crop for many Ethiopians, and is substituted for wheat when wheat prices are high. It is consumed in the Ethiopian fermented bread *injera* in the highlands, as porridge, as a roasted

snack, and in homemade beer. Because of its wide range of uses, in much of the country, it is considered the "*King of grains*". The straw is a main source of animal fodder and roofing material in barley growing regions.

About 2 percent of total barley supply goes into making malt for the six local breweries in the country. The total estimated requirement of barley malt is around 55,000 ton per year, of which only a third can be supplied from locally produced barley. The remaining two-thirds are imported primarily from Belgium and France. Ethiopian-grown varieties of barley have considerably lower conversion factors than European or U.S. varieties, and imported malt is cheaper than locally produced product. Currently, the Assela Malt Factory (AMF), a state-owned plant scheduled to be privatized in the next three years, is the only local malt processing factory, and supplies malt for all six brewers in Ethiopia. AMF is trying to expand its capacity to increase malt production to satisfy the local demand, and working with foreign beer companies (many of whom own the local breweries) and donors to help farmers increase barley production.

Stocks

Most of the stocks are in the hands of smallholder farmers and local traders, but some amount is held by AMF to be used for malting.

Production, Supply and Demand Data Statistics:

Barley Ethiopia	2010/2011		2011/2012		2012/2013		
	Market Year Begin: Oct 2010		Market Year Begin: Oct 2011		Market Year Begin: Oct 2012		
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Harvested	975	1,046	975	1,013		1,020	(1000 HA)
Beginning Stocks	120	120	120	130		118	(1000 MT)
Production	1,400	1,525	1,400	1,592		1,580	(1000 MT)
MY Imports	0	0	0	0		0	(1000 MT)
TY Imports	0	0	0	0		0	(1000 MT)
TY Imp. from U.S.	0	0	0	0		0	(1000 MT)
Total Supply	1,520	1,645	1,520	1,722		1,698	(1000 MT)
MY Exports	0	0	0	0		0	(1000 MT)
TY Exports	0	0	0	0		0	(1000 MT)
Feed and Residual	0	127	0	135		132	(1000 MT)
FSI Consumption	1,400	1,388	1,400	1,469		1,440	(1000 MT)
Total Consumption	1,400	1,515	1,400	1,604		1,572	(1000 MT)
Ending Stocks	120	130	120	118		126	(1000 MT)
Total Distribution	1,520	1,645	1,520	1,722		1,698	(1000 MT)
Yield	1.	1.46	1.	1.57		1.55	(MT/HA)
TS=TD		0		0		0	

Comments						
AGR Number						

Millet

Production:

Millet is not a preferred grain, but has an important place in marginal areas, because of its resistance to drought and to pest infestation both in the field and in the storage. The type of millet grown in Ethiopia is generally finger millet, and in general area planted and productivity do not vary widely from year to year. For all its importance, however, millet is completely neglected by researchers and agricultural institutions in Ethiopia, compared to the attention given to other grains. Productivity is low, because of minimum use of improved seed or fertilizer. Production in MY 2011/12 increased somewhat due to the good rainfall in the main *meher* rainy season in 2011, which contributed to more planted area as well as slightly better yields. As prices of other grains increase relative to millet, there is some concern that farmers in marginal areas may shift out of millet to other commercial (and less resilient) cereals, and potentially lose their entire crop.

Consumption:

More than 90 percent of millet production is used for household consumption, with the rest going to feed. Millet is used like teff to make local bread (*injera*), if possible mixed with teff flour. It also used for local (not commercial) beer production. Because of high teff prices, consumption of millet increased considerably in MY 2011/12. The price of teff increased for the last seven month even during the harvest months

Trade:

There is no formal export or import of millet, although there is a very little amount of informal trade with neighboring countries.

Production, Supply and Demand Data Statistics:

Millet Ethiopia	2010/2011		2011/2012		2012/2013		
	Market Year Begin: Oct 2010		Market Year Begin: Oct 2011		Market Year Begin: Oct 2012		
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Harvested	400	408	400	436		420	(1000 HA)
Beginning Stocks	0	0	0	28		30	(1000 MT)
Production	525	584	525	662		600	(1000 MT)
MY Imports	0	0	0	0		0	(1000 MT)
TY Imports	0	0	0	0		0	(1000 MT)
TY Imp. from U.S.	0	0	0	0		0	(1000 MT)
Total Supply	525	584	525	690		630	(1000 MT)
MY Exports	0	0	0	0		0	(1000 MT)
TY Exports	0	0	0	0		0	(1000 MT)

Feed and Residual	0	16	0	19		20
FSI Consumption	525	540	525	641		580
Total Consumption	525	556	525	660		600
Ending Stocks	0	28	0	30		30
Total Distribution	525	584	525	690		630
Yield	1.	1.4314	1.	1.5183		1.4286
TS=TD		0		0		0
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