USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Voluntary _ Public

Date: 6/21/2012
GAIN Report Number:

Kenya

Post: Nairobi

East-African Region Corn Report

Report Categories:
Grain and Feed
Approved By:
Stephen Hammond
Prepared By:
FAS/Nairobi Staff

Report Highlights:
During the July/June marketing year 2013, Kenya will likely require about 600 thousand tons of white corn imports to meet projected domestic demand. However, within the East African Community's (EAC) region, where almost all farmers produce white corn, there will only be about 200-300 thousand tons of exportable corn surpluses that Kenyan importers will be able to access. The remaining imports will likely originate from Member States of a larger trade coalition known as the Common Market for Eastern and Southern Africa (COMESA).

Executive Summary:

Of the EAC Member States, Kenya will likely import a majority of the corn traded in the region with about 600 thousand metric tons (TMT) of imports during MY 2013, up from an estimated 300 TMT during MY 2012. About 200 thousand tons will originate from Uganda and Tanzania may contribute up to 100 TMT.

South Africa, with about two million tons of exportable surplus for MY 2013, would traditionally have supplied most of the remaining 300-400 TMT import shortfall. However, Kenya's new import requirements for imports of genetically engineered (GE) corn and the 50 percent ad-valorem tariff applied to corn imports from non-EAC/COMESA Member States will likely keep South African corn out of the Kenyan market.

Kenya's new Biosafety regulations, enforced by the National Biosafety Authority (NBA), require import permission for GE commodities, which may imply additional trade uncertainty surrounding potential denial of the permit and/or the potential terms of the import permit. As an example, if the NBA were to issue an import permit, the terms might require the importer to mill the corn at the port of import into Kenya to preclude potential propagation of the GE corn.

As a result, Kenyan importers will likely source the remaining import balance from Zambia and Malawi. Both countries are Member States within COMESA and thus not subject to the EAC's 50 percent ad valorem tariff. The Governments of both countries have in recent years adopted input subsidy and minimum price guarantee programs that appear to have stimulated corn production and, in addition, neither country permits GE corn production or trade, which facilitates exports to Kenya under Kenya's Biosafety regime.

The corn production and trade policies in Zambia and Malawi appear to be facilitating an export platform, which has potential to displace South African white-corn market opportunities in southern and east Africa. As a result, South Africa appears to be on track to play the role of "supplier of last resort" for white corn in the region. The Government of South Africa's (GSA) decision to adopt GE corn enabled South African farmers to benefit from new agricultural technologies, but may also be working against South African corn exporters.

For this report, FAS/Nairobi includes production, supply and distribution tables for EAC Member States, Malawi and Zambia, because of their role in "South-South" trade and because they have enacted specific agriculture production and trade policies that have led them to their current export potential. This report updates the previous FAS dated March 9, 2011.

This report reflects the analysis and opinions of the FAS/Nairobi Office of Agricultural Affairs and does

not necessarily represent the views or opinions of the U.S. Department of Agriculture in Washington, D.C.

EAC

The supply and demand table here below presents a favorable price scenario for EAC corn producers on the aggregate through the first half of MY2013 and possibly through the entire year. The MY 2012 and 2013 estimates of aggregate import demand exceed estimates of aggregate exportable supplies by just over 20 TMT for MY2012, but about 300 TMT for MY2013.

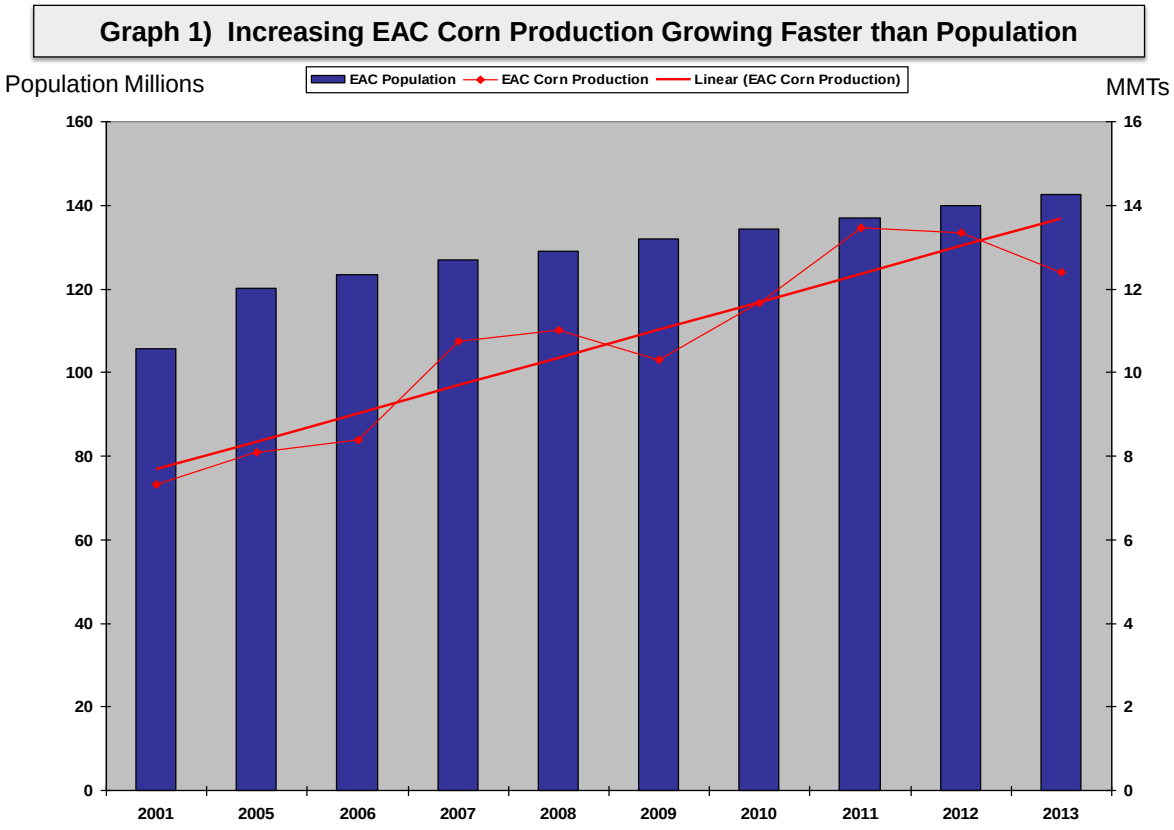
However, farm-gate price prospects will likely vary substantially within each of the EAC Member States and by regions, because of Member State export bans, non-tariff barriers to intra-EAC trade and high transport and transaction costs associated with transshipments from points of production to points of consumption throughout the region. Tanzanian corn producers, for example, may be financially-disadvantaged by Government of Tanzania (GOT) corn export bans, even while Kenyan corn producers may benefit financially from the GOT action.

FAS/Nairobi--EAC Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested(Mixed MY)(1000 Hectares)	5,875	6,118	6,408	6,255	6,290	6,189
Beginning Stocks(Mixed MY)(1000 MT)	1,088	961	789	1,465	1,611	1,183
Production(Mixed MY)(1000 MT)	7,783	8,194	10,174	9,577	8,927	8,931
MY Imports(Mixed MY)(1000 MT)	1,068	704	74	305	605	551
TY Imports(Oct/Sep)(1000 MT)	1,330	405	205	305	605	570
TY Imports from USA(Oct/Sep)(1000 MT)	220	0	0	0	0	44
Total Supply(Mixed MY)(1000 MT)	9,939	9,859	11,037	11,347	11,143	10,665
MY Exports(Mixed MY)(1000 MT)	33	105	180	283	305	181
TY Exports(Oct/Sep)(1000 MT)	43	105	176	280	305	182
Feed and Residual(Mixed MY)(1000 MT)	500	500	725	700	600	605
FSI Consumption(Mixed MY)(1000 MT)	8,435	8,465	8,671	8,756	8,877	8,641
Total Consumption(Mixed MY)(1000 MT)	8,935	8,965	9,396	9,456	9,477	9,246
Ending Stocks(Mixed MY)(1000 MT)	961	789	1,465	1,611	1,361	1,237
Total Distribution(Mixed	9,939	9,859	11,037	11,347	11,143	10,665

MY)(1000 MT)						
Yield(Mixed MY)(Tons/HA)	1.50	1.60	1.70	1.60	1.60	1.60
Data Source: Latest available Government area harvested and production data--Otherwise FAS/Nairobi estimates						

Longer term, EAC Member State producers appear to be increasing production on the aggregate at a faster rate than the increase in EAC population (please see Graph 1) here below). On the aggregate, FAS/Nairobi forecasts that EAC Member States will meet EAC consumptive demand by about 2015 and increase production at or about the level of increasing population, because the production-stimulating effect of the ad-valorem tariff stimulus will soon be completely exhausted as the two aggregated numbers coincide (please see Graph 1) here below).

Even though EAC white-corn producers possess tremendous production potential (currently averaging only 1.6 tons/hectare versus South Africa's four (4) tons/hectare), there aren't financial incentives for EAC corn farmers to produce, on the aggregate, in excess of EAC domestic demand. If and when EAC corn farmers produce in excess of domestic demand, farm-gate prices will likely plummet, because the non-EAC export market for white corn remains very limited (South Sudan and the DRC) and/or dominated by exports from lower-cost producers like South Africa.



Data Source: Latest available Government area harvested and production data--Otherwise FAS/Nairobi estimates

Kenya

Currently, almost all of east Africa's corn exporters will benefit from Kenya's MY 2013 corn production "shortfall" in that the Kenyan wholesale price draws off exportable supplies from neighboring countries to the extent that the Kenyan market demands additional supply and to the extent permitted by neighboring Governments intent on maintaining food security at home. Kenyan traders have even imported corn from logistically-distant Malawi via Mozambique and the Port of Mombasa. The newly formed Government of Malawi, however, will need to rescind the corn export ban put in place by the previous Government, if they are to contribute to Kenya's corn supply.

The MY 2013 Kenyan corn production estimate reflects a reduced output from the five-year average do to lateness of planting, shortages of seed and fertilizer and a disease some scientists have identified as corn lethal necrosis (CLN) appear to be limiting corn development in some regions.

CLN has prompted much concern amongst farmers and in the national press. Local scientists are calling

on farmers to burn the infected corn and the Minister has promised replacement seed. In the United States, the disease reportedly prospers when two viruses develop conjointly within the corn stock. One of the viruses implicated could be the corn chlorotic mottle virus, which produces mild symptoms, until a key second virus infects the same corn plant. The second virus can be the sugar cane-mosaic virus or the wheat-streak mosaic virus. CLN reduces yields from slight-to-complete failure, depending on the timing and severity of the infection.

FAS/Nairobi--Kenya Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested (Jul/Jun)(1000 Hectares)	1,794	1,885	1,925	1,950	1,975	1,906
Beginning Stocks(Jul/Jun)(1000 MT)	391	349	193	234	300	293
Production(Jul/Jun)(1000 MT)	2,367	2,439	3,222	3,100	2,600	2,746
MY Imports(Jul/Jun)(1000 MT)	1,013	699	64	300	600	535
TY Imports(Oct/Sep)(1000 MT)	1,305	400	195	300	600	560
TY Imports from USA(Oct/Sep)(1000 MT)	220	0	0	0	0	44
Total Supply(Jul/Jun)(1000 MT)	3,771	3,487	3,479	3,634	3,500	3,574
MY Exports(Jul/Jun)(1000 MT)	3	0	5	8	5	4
TY Exports(Oct/Sep)(1000 MT)	3	0	1	5	5	3
Feed and Residual(Jul/Jun)(1000 MT)	100	100	100	200	100	120
FSI Consumption(Jul/Jun)(1000 MT)	3,319	3,194	3,144	3,129	3,100	3,177
Total Consumption(Jul/Jun)(1000 MT)	3,419	3,294	3,244	3,329	3,200	3,297
Ending Stocks(Jul/Jun)(1000 MT)	349	193	234	300	295	274
Total Distribution(Jul/Jun)(1000 MT)	3,771	3,487	3,479	3,634	3,500	3,574
Yield(Jul/Jun)(Tons/Hectare)	1.30	1.30	1.70	1.60	1.30	1.44
Data Source: Latest available GOK area harvested and production data--Latest available GTA trade data--Otherwise FAS/Nairobi estimates						

FAS/Nairobi--Kenya Corn PSD (million 90Kg Bags)	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested (Jul/Jun)(1000 Hectares)	1,794	1,885	1,925	1,950	1,975	1,906
Beginning Stocks (Jul/Jun)(million 90Kg Bags)	4.34	3.88	2.14	2.60	3.33	3.26
Production (Jul/Jun)(million 90Kg Bags)	26.30	27.10	35.80	34.44	28.89	30.51
MY Imports (Jul/Jun)(million 90Kg Bags)	11.26	7.77	0.71	3.33	6.67	5.95
TY Imports (Oct/Sep)(million 90Kg Bags)	11.26	7.77	0.71	3.33	6.67	5.95
TY Imports from USA (Oct/Sep)(million	2.44	0.00	0.00	0.00	0.00	0.49

90Kg Bags)						
Total Supply (Jul/Jun)(million 90Kg Bags)	41.90	38.74	38.66	40.38	38.89	39.71
MY Exports (Jul/Jun)(million 90Kg Bags)	0.03	0.00	0.06	0.09	0.06	0.05
TY Exports (Oct/Sep)(million 90Kg Bags)	0.03	0.00	0.01	0.06	0.06	0.03
Feed and Residual Jul/Jun)(million 90Kg Bags)	1.11	1.11	1.11	2.22	1.11	1.33
FSI Consumption (Jul/Jun)(million 90Kg Bags)	36.88	35.49	34.93	34.77	34.44	35.30
Total Consumption (Jul/Jun)(million 90Kg Bags)	36.89	35.50	34.95	34.79	34.46	35.32
Ending Stocks (Jul/Jun)(million 90Kg Bags)	3.88	2.14	2.60	3.33	3.28	3.05
Total Distribution (Jul/Jun)(million 90Kg Bags)	41.90	38.74	38.66	40.38	38.89	39.71
Yield (Jul/Jun)(90Kg Bags/HA)	14.44	14.44	18.89	17.78	14.44	16.00
Data Source: Latest available GOK area harvested and production data--Latest available GTA trade data--Otherwise FAS/Nairobi estimates						

The tables above show an increase in yields for MYs 2011 and 2012 that will likely have resulted (at least partially) from a Kenyan Ministry of Agriculture attempt to implement a subsidized fertilizer and seeds program for small-scale farmers. East African corn producers respond very positively to free or highly subsidized inputs as demonstrated in the PSD tables from Malawi and Zambia here below and as shown in the break-even analysis in Table 1) presented below.

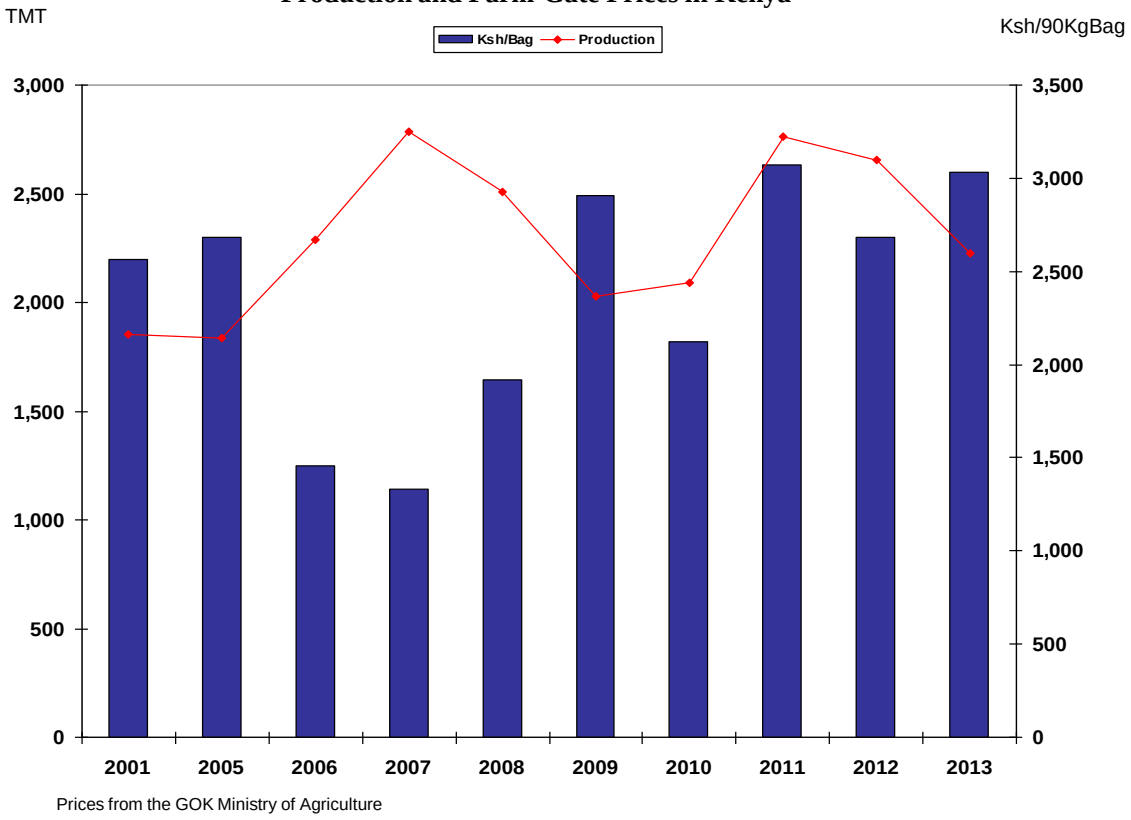
The Future of Kenya's Corn-production behind the EAC 50 Percent ad-valorem tariff wall using different production-policy approaches

Kenyan corn producers will likely continue to produce at or just below aggregate domestic demand as long as the GOK maintains the 50 percent ad-valorem tariff an in spite of any efforts to push them beyond this level. At the macroeconomic level, as long as Kenyan corn farmers don't produce in excess of Kenyan aggregate demand, Kenyan farm-gate corn prices can climb to very high levels (please see graph 2) here below), as supported by the 50-percent ad-valorem tariff and high transport and transaction costs. However, once aggregate production exceeds aggregate demand the external tariff no longer provides price support and farm-gate prices can fall precipitously (MY 2006-08 in Graph 2) here below). Corn production in excess of domestic human-consumptive demand must be stored at high cost or sold domestically as animal feed at much lower farm-gate prices, because transactions and transportation costs and quality discounts exclude Kenyan production from the export market.

However, more often than not, Kenyan corn farmers produce at levels that assure the highest possible

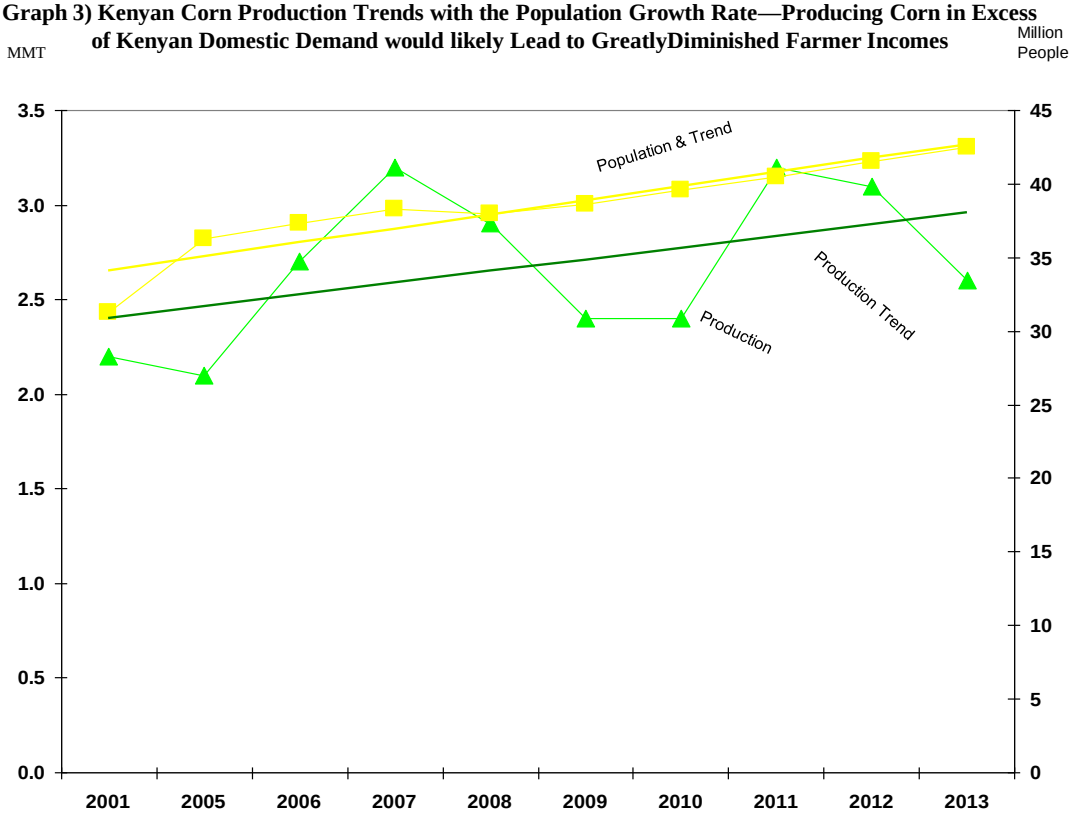
farm-gate prices under the EAC corn tariff. The 50 percent ad-valorem tariff wall on non EAC and non COMESA corn imports, combined with the high "basis" (transaction and transportation costs) to bring imported corn to the wholesale markets from outside Kenya, permit strong farm-gate corn prices (please see Table 1) and Graph 2) below).

Graph 2) The Relatively Strong Inverse Relationship between Aggregate Kenyan Corn Production and Farm-Gate Prices in Kenya



Prices from the GOK Ministry of Agriculture

Graph 3) Kenyan Corn Production Trends with the Population Growth Rate—Producing Corn in Excess of Kenyan Domestic Demand would likely Lead to GreatlyDiminished Farmer Incomes



Prices from the GOK Ministry of Agriculture

In Table 1) below, the microeconomic estimates clearly indicate that at today's farm-gate prices and estimated expenses, small-scale farmers benefit financially from, and respond to free fertilizer and seed through the input subsidy programs represented in Scenario a) with increased yields. They also benefit from adhering to the high-investment approach represented in scenario c). However, assisting small-scale farmers (who produce 75 percent of Kenya's corn production) achieve greater corn yields and production, without commensurate focus on expanding corn off-take will eventually work against the financial position of small-scale corn farmers.

In the microeconomic view at the farm-gate, Table 1) below clearly indicates why many external actors dedicate tremendous effort and development funds to improving individual-farmer yields. There's lots of room for Kenyan farmers to improve yields (please see the yields for South African farmers) and improve incomes, if prices were to remain steady.

However, without some form of price stability over and above the protection provided by the EAC 50-percent ad-valorem tariff, Kenyan corn farmers will likely continue to minimize inputs (scenario b). Under this scenario, farmers may not receive enough income to cover minimal extra-farm living expenses required to meet basic family necessities.

Table 1) Estimates of approximate break-even points for maize farming in Kenya based on farmer yields of: a) 1.65; b) 1.3; c) 4; and, d) 4 tons/hectare and different input-cost and farm-size scenarios

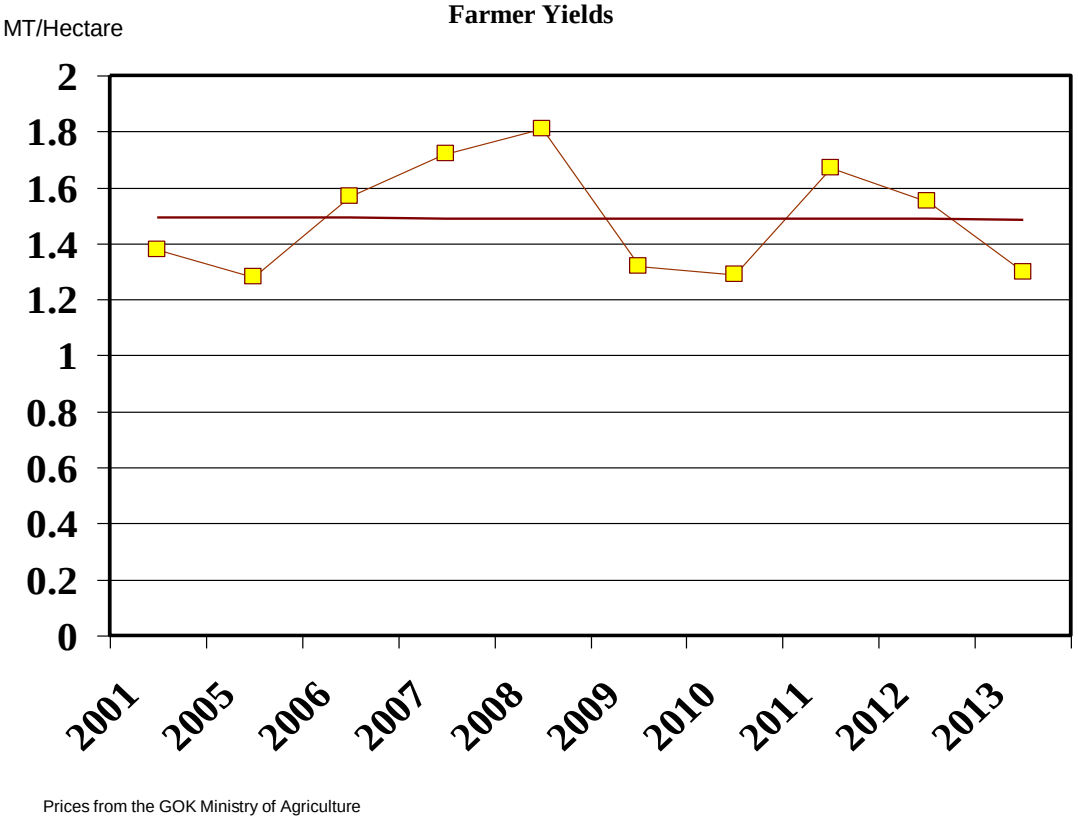
Kenya Shilling (Ksh) and thousand metric tons (TMT) unless otherwise denoted	a)	b)	c)	d)
Hectare/s/farm family	1	1	1	100
Yield (MT/Ha)	1.65	1.30	4.00	4.00
Yield (90Kg Bags/Ha)	18.3	14.4	44.4	44.4
Farm Production (MT)	1.65	1.30	4.0	400
Farm Production (90 kilo bags)	18.3	14.4	44.4	4,444
Area Harvested (AH)(1000 hectares)	1,906	1,906	1,906	1,906
Production potential under scenarios a), b), c) & d)	3,145	2,478	7,623	7,623
Aggregate National Demand 2009-2013 Avg.	3,177	3,177	3,177	3,177
Shortfall/surplus using AH & Yields in a), b), c) & d)	**-33**	**-700**	**4,446**	**4,446**
Deficit/Surplus AH to meet current demand (1000 Ha)	**-20**	**-538**	**1,112**	**1,112**
Corn Farmers (1000) needed under scenarios a), b), c) & d)	**1,926**	**2,444**	**794**	**7.94**
Avg. consumption/Kilos/farm family/year--6 Members/Family	480	480	480	480
Avg. consumption/90Kg bags/farm family/year	5.3	5.3	5.3	5.3
Exportable farm surplus (90 kilo bags)	13.0	9.1	39.1	4,439.1
Farm-gate breakeven price under scenarios a), b), c) & d)	**2,310**	**3,690**	**1,370**	**433**
Gross revenue from exportable surplus	30,030	33,619	53,582	1,920,001
Fertilizer & certified seed expense	0	3,000	20,000	1,600,000
Estimate of Interest Expense	0	600	3,500	280,000
Living Ex. (school fees, food, clothes, etc.)	30,000	30,000	30,000	40,000
Aggregate Expenses (does not include opportunity cost)	30,000	33,600	53,500	1,920,000
Net income to producer--includes return to labor	30	19	82	110
Net income to producer (Ksh/90 Kilo Bag)	2	2	2	0
Net income/day/crop	0.08	0.05	0.22	0.30
Net income to producer	$0	$0	$1	$1
Net income/day/crop	$0.00	$0.00	$0.00	$0.00

Data Source: Average Production GOK--Other estimates based on interviews and public reports

a) Free or Nearly-Free Subsidized Inputs --b) Low-Input Investment & Yield --c)--High-Input & Yield Small-Scale Farm--d) High-Input & Yield Large-Scale Farm--The estimates in this table are indicative and intended only to approximate the scenarios represented

Reportedly, Kenya's large-scale farmers have noticed the financial implications in Table 1) above and Graph 2) below and have increased their farm acreage dedicated to corn production. Large-scale farmers, who increase corn area-planted, potentially benefit financially even more from the 50-percent ad-valorem tariff than small-scale farmers, because they capture economies of scale in knowledge, input purchasing power and transaction and transport costs. Large-scale corn farmers (numbering in the tens) reportedly account for about 25 percent of Kenya's annual corn production. However, they represent a very small fraction of Kenya's farmers. Some analysts estimate that there are about 3.5 million small-scale Kenyan farmers, however, in Table 1), we can mathematically identify 2.45 million farmers using averaging calculations to make the determination.

Graph 4) Partly Because of the Price Implications of "Over Producing," Kenyan White Corn Yields Trend Completely Flat, in spite of Extensive Efforts to Improve Individual Farmer Yields



Prices from the GOK Ministry of Agriculture

Tanzania

Tanzanian corn producers will likely produce about 100 TMT of exportable surplus destined for the market in Kenya. These farmers, however, remain even more isolated from the regional market and susceptible to low farm-gate prices than other EAC Member State producers. The Government of Tanzania's (GOT) policy to keep domestic corn production within Tanzanian borders through tools like the export ban, ultimately helps limit Tanzanian farm-gate price incentives to expand production. Tanzanian corn farmers can't afford to take the risk of operating in high-investment corn production under the potential threat of rapidly diminishing farm-gate prices that occur when aggregate production exceeds aggregate Tanzanian demand and the GOT chokes off the export market through use of an export ban.

FAS/Nairobi--Tanzania Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested(Jun\May)(1000 Hectares)	2,961	3,045	3,288	3,100	3,100	3,099

Beginning Stocks(Jun\May)(1000 MT)	574	470	196	806	1,036	616
Production(Jun\May)(1000 MT)	3,556	3,326	4,475	4,200	4,000	3,911
MY Imports(Jun\May)(1000 MT)	55	5	10	5	5	16
TY Imports(Oct/Sep)(1000 MT)	25	5	10	5	5	10
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(Jun\May)(1000 MT)	4,185	3,801	4,681	5,011	5,041	4,544
MY Exports(Jun\May)(1000 MT)	5	5	75	75	100	52
TY Exports(Oct/Sep)(1000 MT)	15	5	75	75	100	54
Feed and Residual(Jun\May)(1000 MT)	200	100	200	200	200	180
FSI Consumption(Jun\May)(1000 MT)	3,500	3,500	3,600	3,700	3,800	3,620
Total Consumption(Jun\May)(1000 MT)	3,700	3,600	3,800	3,900	4,000	3,800
Ending Stocks(Jun\May)(1000 MT)	470	196	806	1,036	941	690
Total Distribution(Jun\May)(1000 MT)	4,185	3,801	4,681	5,011	5,041	4,544
Yield(Jun\May)(Tons/HA)	1.20	1.10	1.40	1.40	1.30	1.28
Data Source: Latest available GOT area harvested and production data via CountryStat--Otherwise FAS/Nairobi estimates						

Uganda

Ugandan producers appear to be on track to supply about 200 TMT to the Kenyan market and the remaining 300-400 TMT will likely originate in Tanzania, Zambia and Malawi (please see Malawi and Zambia corn PSD tables here below). Ugandan corn producers have relatively unfettered access to the Kenyan marketplace and, as a result, have continued to expand production to meet domestic and Kenyan demand. There remains a formal border between the two EAC Member States that includes the imposition of some non-tariff trade barriers, but border officials don't apply tariffs and to date, the Government of Uganda doesn't impose an export ban on domestically-produced Ugandan corn.

FAS/Nairobi--Uganda Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested(Jul/Jun)(1000 Hectares)	820	850	850	850	850	844
Beginning Stocks(Jul/Jun)(1000 MT)	95	30	230	330	180	173
Production(Jul/Jun)(1000 MT)	1,260	1,800	1,800	1,600	1,600	1,612
MY Imports(Jul/Jun)(1000 MT)	0	0	0	0	0	0
TY Imports(Oct/Sep)(1000 MT)	0	0	0	0	0	0
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(Jul/Jun)(1000 MT)	1,355	1,830	2,030	1,930	1,780	1,785

MY Exports(Jul/Jun)(1000 MT)	25	100	100	200	200	125
TY Exports(Oct/Sep)(1000 MT)	25	100	100	200	200	125
Feed and Residual(Jul/Jun)(1000 MT)	100	200	200	150	150	160
FSI Consumption(Jul/Jun)(1000 MT)	1,200	1,300	1,400	1,400	1,400	1,340
Total Consumption(Jul/Jun)(1000 MT)	1,300	1,500	1,600	1,550	1,550	1,500
Ending Stocks(Jul/Jun)(1000 MT)	30	230	330	180	30	160
Total Distribution(Jul/Jun)(1000 MT)	1,355	1,830	2,030	1,930	1,780	1,785
Yield(Jul/Jun)(Tons/HA)	1.50	2.10	2.10	1.90	1.90	1.90
Data Source: Latest available GOU area harvested and production data--Otherwise FAS/Nairobi estimates						

Rwanda

Rwandans appear to be/may be developing a taste for white corn, similar to the populations in neighboring Uganda and much of the rest of east Africa. For MY 2013, the estimate of per capita consumption now suggests that Rwandans may derive more than 20 percent of their daily calories from white corn (please see consumption table here below). Many policy makers denounce the high and increasing production and consumption of corn in east Africa and encourage production of drought-tolerant and more nutritious crops such as sorghum or sweet potatoes but farmers/consumers will ultimately decide the balance.

FAS/Nairobi--Rwanda Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested(Jul/Jun)(1000 Hectares)	185	223	230	240	250	226
Beginning Stocks(Jul/Jun)(1000 MT)	28	112	170	95	95	100
Production(Jul/Jun)(1000 MT)	484	508	550	550	600	538
MY Imports(Jul/Jun)(1000 MT)	0	0	0	0	0	0
TY Imports(Oct/Sep)(1000 MT)	0	0	0	0	0	0
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(Jul/Jun)(1000 MT)	512	620	720	645	695	638
MY Exports(Jul/Jun)(1000 MT)	0	0	0	0	0	0
TY Exports(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Feed and Residual(Jul/Jun)(1000 MT)	100	100	225	150	150	145
FSI Consumption(Jul/Jun)(1000 MT)	300	350	400	400	450	380
Total Consumption(Jul/Jun)(1000 MT)	400	450	625	550	600	525
Ending Stocks(Jul/Jun)(1000 MT)	112	170	95	95	95	113
Total Distribution(Jul/Jun)(1000 MT)	512	620	720	645	695	638
Yield(Jul/Jun)(Tons/HA)	2.60	2.30	2.40	2.30	2.40	2.40

Data Source: Latest available USDA area harvested and production data--Otherwise FAS/Nairobi estimates—very preliminary data

Rwanda Corn Consumption based on 3,650 Calories/Kg and a daily diet of 2,200 calories (FAS/Nairobi Estimates)					
MY	Kg/PP/Yr	Grams/PP/Day	Cal/PP/Day	% of Daily Diet	Population
2013	40.2	110.1	401.8	18.3%	11,200,000
2012	37.0	101.5	370.4	16.8%	10,800,000
2011	38.5	105.4	384.6	17.5%	10,400,000
2010	34.0	93.1	339.8	15.4%	10,300,000
2009	29.4	80.6	294.1	13.4%	10,200,000
2008	19.6	53.8	196.3	8.9%	10,186,063
2007	10.1	27.7	100.9	4.6%	9,907,509
2006	9.4	25.7	93.7	4.3%	8,648,248
2005	9.6	26.3	96.0	4.4%	8,440,820
2004	6.8	18.5	67.5	3.1%	8,440,820
2003	9.7	26.7	97.3	4.4%	7,810,000
2002	11.1	30.4	110.8	5.0%	7,400,000
2001	8.9	24.4	88.9	4.0%	7,310,000

Burundi

FAS/Nairobi--Burundi Corn PSD	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	5 Yr. Avg.
Area Harvested(Jul/Jun)(1000 Hectares)	115	115	115	115	115	115
Beginning Stocks(Jul/Jun)(1000 MT)	0	0	0	0	0	0
Production(Jul/Jun)(1000 MT)	116	121	127	127	127	124
MY Imports(Jul/Jun)(1000 MT)	0	0	0	0	0	0
TY Imports(Oct/Sep)(1000 MT)	0	0	0	0	0	0
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(Jul/Jun)(1000 MT)	116	121	127	127	127	124
MY Exports(Jul/Jun)(1000 MT)	0	0	0	0	0	0
TY Exports(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Feed and Residual(Jul/Jun)(1000 MT)	0	0	0	0	0	0

FSI Consumption(Jul/Jun)(1000 MT)	116	121	127	127	127	124
Total Consumption(Jul/Jun)(1000 MT)	116	121	127	127	127	124
Ending Stocks(Jul/Jun)(1000 MT)	0	0	0	0	0	0
Total Distribution(Jul/Jun)(1000 MT)	116	121	127	127	127	124
Yield(Jul/Jun)(Tons/HA)	1.00	1.10	1.10	1.10	1.10	1.08
Data Source: Latest available GOB area harvested and production data--Otherwise FAS/Nairobi estimates						

Malawi

Shortly after the disastrous MY 2005 corn crop, Malawian Government officials, with support of many European Governments and NGOs, put in place a subsidized and/or free seeds and fertilizer program for corn production. The subsidization appears to have been effective in spurring sufficient production to meet domestic demand at internal Malawian prices and to have provided some exportable surpluses from time-to-time.

FAS/Nairobi generated the PSD table here below using the Government of Malawi (GOM) area harvested and production estimates (there are several differing data series—this one sanctioned by the ministry of agriculture). However, export estimates during the period remain elusive. Using generous export estimates and relatively high stocks, implied domestic consumption appears to exceed Malawian' potential to consume corn. As a result, FAS/Nairobi limited the estimates of the consumption of corn for food, seed and industrial use to a maximum of about 60 percent of an average Malawian's 2,200 calorie per day diet (please see table here below) and included the remaining balance in the "Feed and Residual" category. Using this methodology, the "Feed and Residual" category may contain unknown exports, over-reported production, unidentified domestic use, under-reported stocks, as well as corn used for feed. There don't appear to be any major industrial uses of corn in Malawi.

To understand the potential for imprecision in the production estimates, some observers point to a possible incentive under donor-supported seed and fertilizer programs to "over report" the success of donor contributions. Others point to the general poor quality of agricultural statistics in Malawi (and the region in general), including inaccurate estimates of corn exports.

Underscoring the difficulty to understand the corn supply situation in Malawi, the GOM imposed a corn export ban at the end of calendar year 2011, even while reporting an above average and fully sufficient MY 2011 crop and average-but-sufficient production estimate for MY2012. FAS/Nairobi has reflected the effect of the ban on the MY 2012 estimate of corn exports but expects that the GOM will lift the ban soon.

FAS/Nairobi--Malawi Corn PSD	**2008/ 2009**	**2009/ 2010**	**2010 / 2011**	**2011 / 2012**	**2012 / 2013**	**5 Yr. Avg.**

Area Harvested(May/Apr)(1000 Hectares)	1,650	1,696	1,732	1,750	1,750	1,716
Beginning Stocks(May/Apr)(1000 MT)	1,200	1,240	1,688	1,457	1,452	1,407
Production(May/Apr)(1000 MT)	2,635	3,583	3,419	3,895	3,600	3,426
MY Imports(May/Apr)(1000 MT)	5	15	0	0	0	4
TY Imports(Oct/Sep)(1000 MT)	5	15	0	0	0	4
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(May/Apr)(1000 MT)	3,840	4,838	5,107	5,352	5,052	4,838
MY Exports(May/Apr)(1000 MT)	100	100	300	300	200	200
TY Exports(Oct/Sep)(1000 MT)	100	100	300	300	200	200
Feed and Residual(May/Apr)(1000 MT)	500	1,000	1,250	1,400	1,200	1,070
FSI Consumption(May/Apr)(1000 MT)	2,000	2,050	2,100	2,200	2,250	2,120
Total Consumption(May/Apr)(1000 MT)	2,500	3,050	3,350	3,600	3,450	3,190
Ending Stocks(May/Apr)(1000 MT)	1,240	1,688	1,457	1,452	1,402	1,448
Total Distribution(May/Apr)(1000 MT)	3,840	4,838	5,107	5,352	5,052	4,838
Yield(May/Apr)(Tons/HA)	1.60	2.10	2.00	2.20	2.10	2.00
Data Source: Latest available GOM area harvested and production data--Otherwise FAS/Nairobi estimates						

Malawi Corn Consumption based on 3,650 Calories/Kg and a daily diet of 2,200 calories (FAS/Nairobi Estimates)

MY	Kg/PP/Yr	Grams/PP/Day	Cal/PP/Day	% of Daily Diet	Population
2013	134.1	367.4	1,341.1	61.0%	16,776,825
2012	134.8	369.3	1,347.8	61.3%	16,323,044
2011	132.3	362.6	1,323.3	60.2%	15,869,263
201	132.9	364.0	1,328.7	60.4	15,428,098

0				%	
2009	133.3	365.3	1,333.4	60.6 %	14,999,197
2008	130.3	357.0	1,303.0	59.2 %	14,582,219
2007	127.0	347.9	1,269.7	57.7 %	14,176,833
2006	105.2	288.2	1,052.0	47.8 %	13,782,717
2005	119.4	327.1	1,194.1	54.3 %	13,399,558
2004	122.8	336.5	1,228.2	55.8 %	13,027,050
2003	126.3	346.1	1,263.3	57.4 %	12,664,898
2002	129.9	356.0	1,299.5	59.1 %	12,312,814
2001	133.7	366.2	1,336.6	60.8 %	11,970,518

Zambia

The above discussion regarding estimates for the Malawi PSD applies also to the data presented here below for Zambian corn PSD--completely reliable data remains difficult. Regardless of data accuracy, very clearly Zambia has become a corn exporter in the region, replacing South Africa as the exporter of preference for exports to Zimbabwe and Kenya. The Government of Zambia (GOZ) established a policy of setting a domestic floor-price for corn (a form of contract) and buys more than half of Zambian-farmer production at the floor price. That policy has spurred domestic production, skyrocketing from just over 560 TMT during MY 2000 to about three million metric tons in recent years (please see the PSD table here below for the most recent years).

The GOZ corn floor-price converts to be about $245/ton, while in Kenya, the market price currently rests at about $280/ton, providing economic support for Kenyan imports from Zambia. In addition, the GOZ does not permit the production or trade in GE corn. As such, Zambian corn exports to Kenya do not come under scrutiny of Kenya's NBA.

Zambia will reportedly export about 300 TMT to neighboring Zimbabwe, as a result of a G-to-G deal recently inked. When combined with the 100 TMT "on the water" to Kenya, Zambia will have cleared 400 of the 500 estimated in the MY 2012 exportable surplus.

FAS/Nairobi--Zambia Corn PSD	2008/	2009/	2010/	2011/	2012/	5 Yr.

	2009	2010	2011	2012	2013	Avg.
Area Harvested(May/Apr)(1000 Hectares)	1,125	1,242	1,356	1,300	1,300	1,265
Beginning Stocks(May/Apr)(1000 MT)	145	117	309	909	1,154	527
Production(May/Apr)(1000 MT)	1,212	1,887	2,795	3,020	2,850	2,353
MY Imports(May/Apr)(1000 MT)	60	5	5	0	0	14
TY Imports(Oct/Sep)(1000 MT)	60	5	5	0	0	14
TY Imports from USA(Oct/Sep)(1000 MT)	0	0	0	0	0	0
Total Supply(May/Apr)(1000 MT)	1,417	2,009	3,109	3,929	4,004	2,894
MY Exports(May/Apr)(1000 MT)	0	100	100	300	600	220
TY Exports(Oct/Sep)(1000 MT)	0	100	100	300	600	220
Feed and Residual(May/Apr)(1000 MT)	100	200	600	675	750	465
FSI Consumption(May/Apr)(1000 MT)	1,200	1,400	1,500	1,800	1,850	1,550
Total Consumption(May/Apr)(1000 MT)	1,300	1,600	2,100	2,475	2,600	2,015
Ending Stocks(May/Apr)(1000 MT)	117	309	909	1,154	804	659
Total Distribution(May/Apr)(1000 MT)	1,417	2,009	3,109	3,929	4,004	2,894
Yield(May/Apr)(Tons/HA)	1.10	1.50	2.10	2.30	2.20	1.84
Data Source: Latest available GOZ area harvested and production data--Otherwise FAS/Nairobi estimates						

Zambia Corn Consumption based on 3,650 Calories/Kg and a daily diet of 2,200 calories (FAS/Nairobi Estimates)					
MY	Kg/PP/Yr	Grams/PP/Day	Cal/PP/Day	% of Daily Diet	Population
2013	128.2	351.4	1,282.5	58.3%	14,425,000
2012	128.6	352.3	1,285.7	58.4%	14,000,000
2011	110.5	302.7	1,105.0	50.2%	13,575,000
2010	106.4	291.4	1,063.6	48.3%	13,163,000
2009	94.0	257.6	940.1	42.7%	12,764,000
2008	93.1	255.0	930.8	42.3%	12,377,000
2007	100.3	274.7	1,002.5	45.6%	12,000,000
2006	87.8	240.6	878.2	39.9%	11,637,000
2005	88.8	243.3	888.0	40.4%	11,284,000
2004	89.4	244.9	893.8	40.6%	10,942,000
2003	67.8	185.7	677.7	30.8%	10,610,000
2002	86.5	237.0	865.1	39.3%	10,288,000
2001	90.2	247.2	902.2	41.0%	9,976,000