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Kenya: July 2002 – June 2003 Annual Harvest Assessment

FEWS NET FAMINE EARLY WARNING SYSTEM NETWORK

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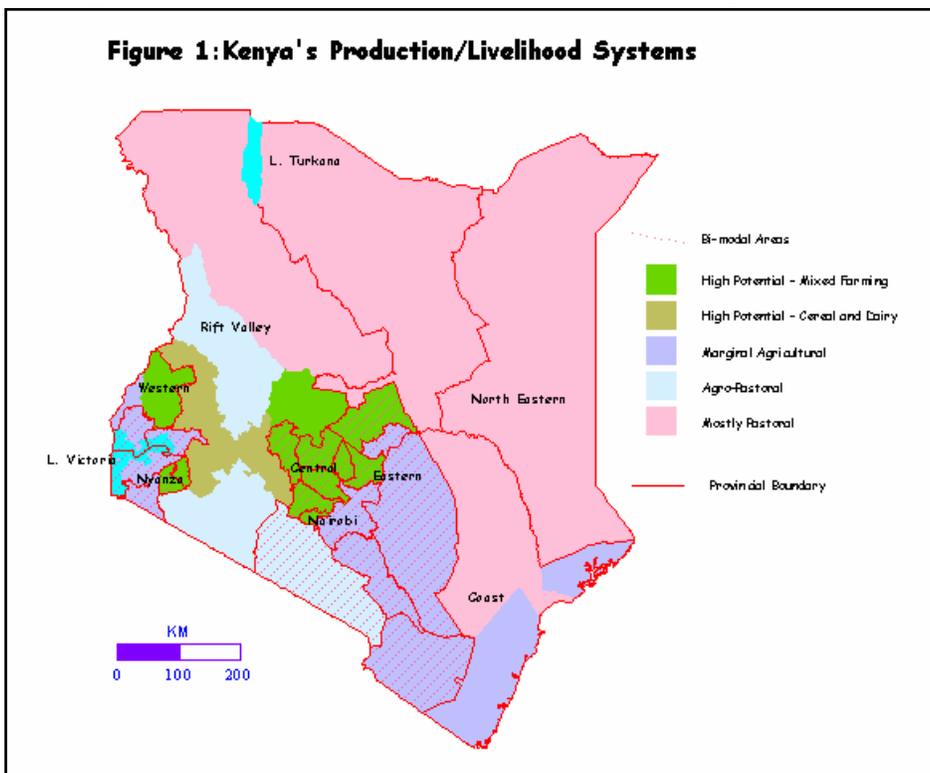


Summary

The outcome of the July 2002-June 2003 season was mixed – long-rains production was favorable in the key growing and high potential areas yet poor in the drought-prone marginal areas. However, in a welcome reversal, short-rains output was higher-than-normal in the short-rains dependent marginal agricultural cropping areas. Reduced supply of the key staple, maize caused substantial increases in prices across the country, during most of the production period, after an extended period of low prices. Food imports continued to crucially bridge production deficits, particularly for beans, wheat and rice.

Background: Kenya's Production Systems

Kenya's production system is characterized by a combination of uni-modal and bi-modal rainfall patterns. The uni-modal rainfall pattern is characteristic of Rift Valley, Western, Coast Provinces and the pastoral areas of Eastern and Rift Valley Provinces. The March to December long-rains season is the sole production season in these areas. The bi-modal rainfall pattern is characteristic of Central, Eastern and Nyanza Provinces, with the short-rains season running from October-February. Production systems in



Kenya are classified into five broad categories as shown in figure 1. The crop growing areas are confined to the areas shaded green and purple. These areas are high potential and the most important. The hatched areas are associated with the bi-modal rainfall pattern – see figure 1.

There exists substantial variability in the onset and duration of the long-rains season. The **long-rains season** begins in February in the early planting areas of Nyanza, the southern Rift Valley and Western Provinces and between mid to late March in most of the

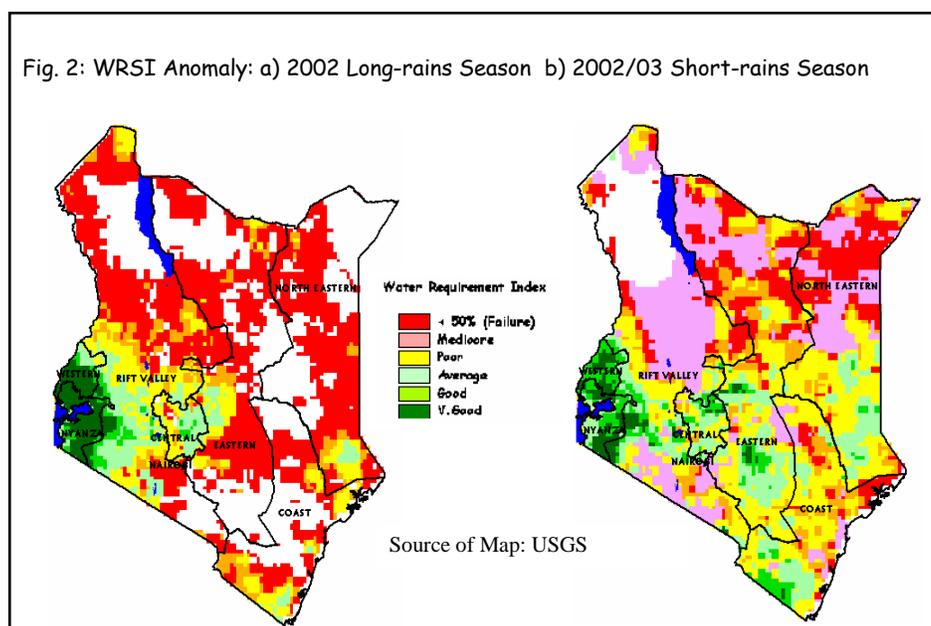
rest of the country. Likewise the end of the season ranges from July-August in the early planting areas of the Rift Valley, Eastern and Central Provinces. However, the main long-rains grain harvest occurs in November and December in the 'grain basket' districts of the Rift Valley Province. The long-rains season is most important and contributes over 80 percent to national output of major food commodities. The **short-rains season** runs from October to February in the major short-rains producing districts of Eastern, Central, Nyanza and Coast Provinces. However, the short-rains season remains the most critical season among the drought-prone marginal agricultural households of the country. Annex 1 is an illustration of the country's diverse agricultural calendar.

Maize, beans, sorghum, millet, wheat, rice and Irish potatoes are the country's major food crops. Horticultural crops are grown principally in Central, Eastern and parts of Rift Valley Provinces. Coffee, tea, sugarcane and pyrethrum are grown almost exclusively as cash crops. These crops are grown predominately in the high potential areas of Central, Rift Valley and a few upper lying areas of Eastern and Nyanza Provinces.

Livestock production is the preeminent source of livelihood for pastoralists and agropastoralists, residing in up to 70 percent of Kenya's land area. The major pastoral areas are found in North Eastern, Eastern and Rift Valley Provinces. Indigenous local breeds are the principal livestock reared in the pastoral as well as in the marginal agricultural areas. Conversely, high yielding improved breeds of livestock are reared in the high potential areas of the Rift Valley, Central and Western Provinces.

Agroclimatic Conditions During the 2002/03 Production Seasons

Favorable crop conditions in the key high potential districts situated in the Rift Valley, Western and Nyanza Provinces during the long-rains season contrasted sharply with poor agroclimatic conditions during the same season in the marginal agricultural districts of Eastern and Coast Provinces. However, good short-rains in these marginal agricultural districts significantly compensated for the poor long-rains. Figure 2 is an illustration of crop mixed crop conditions particularly during the long-rains season.



Production of Key Food Crops - the July 2002-June 2003 Cropping Year

Maize is the overwhelming staple and food crop grown in Kenya and accounts for over 70 percent of national cereal consumption. Maize production is disproportionate – close to 50 percent of national maize output is derived from only seven neighboring districts in the Rift Valley Province – see figure 3. 1.6 million hectares were put to maize during the 2002/03 long and short-rains production seasons, while an estimated 2.4 million MT of maize was harvested. Area put to maize and production were closely consistent with averages of 1.5 million hectares and 2.4 million MT respectively.

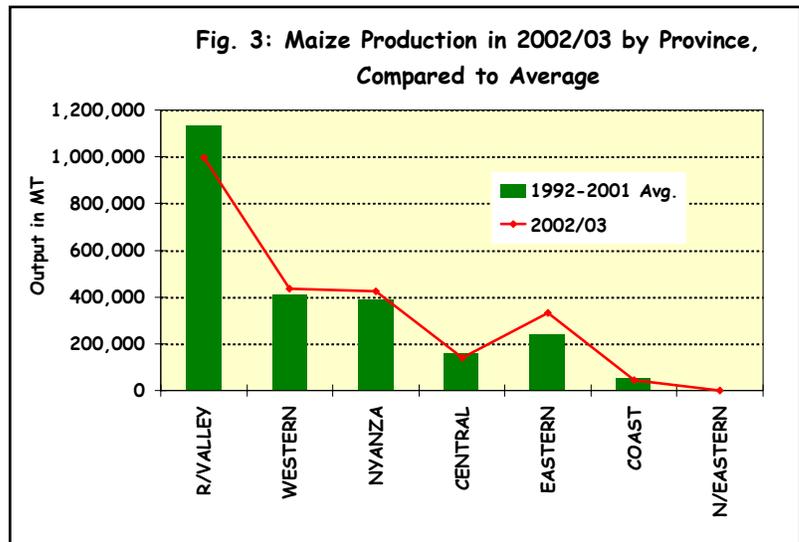
There was a 13 percent reduction in long-rains output, which was moderated somewhat, by a similar increase in short-rains output. The 13 percent reduction in long-rains maize output was attributed to a combination of a late season onset followed by mostly erratic rains in marginal agricultural areas of Eastern, Central and Nyanza Provinces. Fortunately, the main maize-producing and high potential districts experienced generally favorable conditions throughout the critical long-rains season.

Higher-than-average short-rains maize output was attributed to heavy and well-distributed rains, associated with the El Niño event, in the bi-modal and short-rains dependent marginal agricultural districts. However, farmers averted expected post-harvest losses by selling much of their grain soon after the short-rains harvest, though at lowered prices. The Larger Grain Borer has been a most destructive pest, particularly in these areas - losses of more than 50 percent were reported after the short-rains harvest of 2001/02.

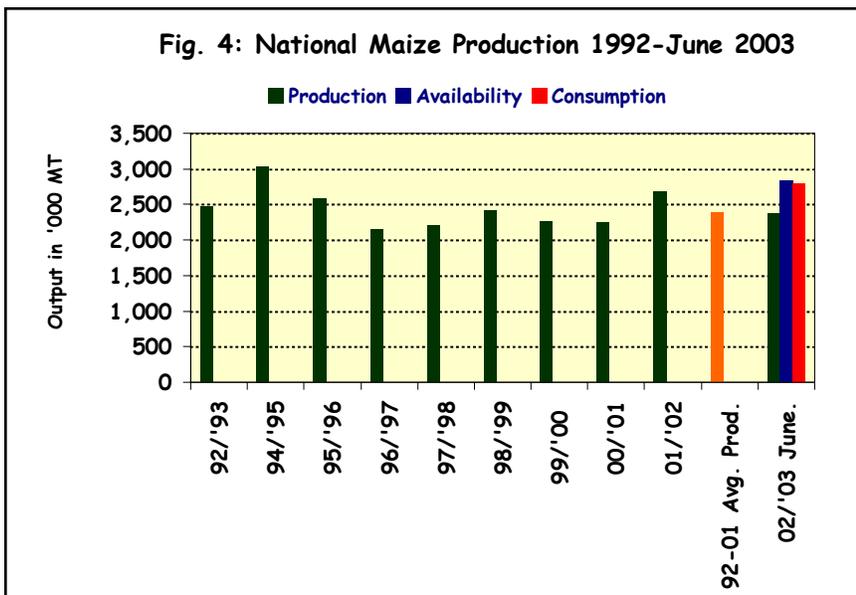
Although annual maize output was lower than consumption requirements, close to 500,000 MT of carryover stocks were sufficient to meet consumption needs but only up to the end of July 2003 – see figure 4.

Domestic output of **wheat**, the second most important cereal, traditionally meets less than 40 percent of the country's consumption needs. Most of the rest of the requirement is imported. During the 2002/03 production period, 300,000 MT of wheat was obtained from 142,000 hectares,

representing a 13 percent increase over normal wheat output. The favorable output was attributed to favorable agroclimatic conditions in the four main growing districts of Uasin Gishu, Narok, and Nakuru in the Rift Valley Province and Meru District in Eastern Province. Figure 5 and annex 2 are an illustration and tabulation respectively, of the production, supply and consumption of key food commodities.



Rice is grown in irrigation schemes situated in Nyanza and Central Provinces. Rice Production has

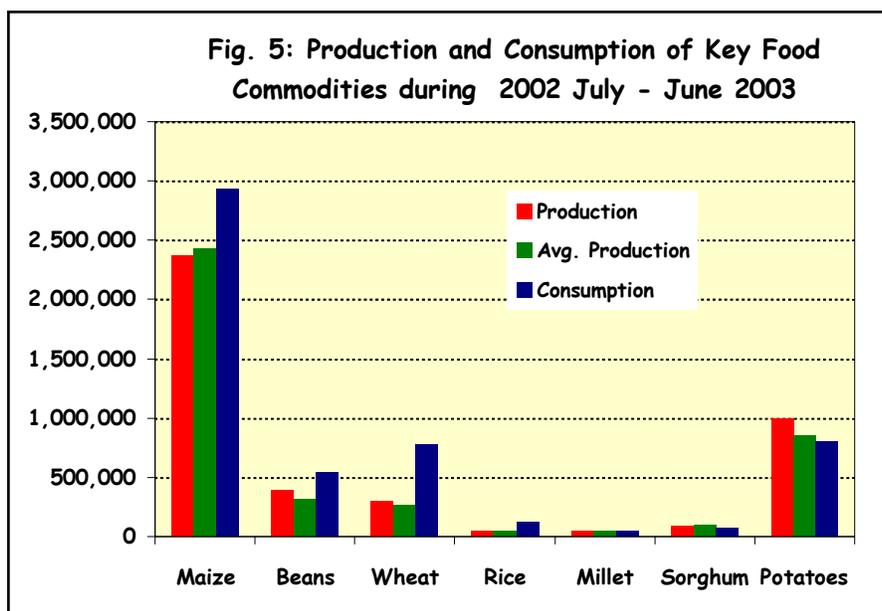


steadily declined in recent seasons, principally due to the collapse of several irrigation schemes in Nyanza Province. Subsequently, local production normally meets only 30 percent of total national consumption. Domestic production shortfalls are being increasingly mitigated by imports through Tanzania and the sea port of Mombasa. During 2002/03, 40,000 MT of rice was harvested from 10,000 hectares, representing a 10 percent reduction in both output and planted hectareage, a function of declining national output alluded to earlier.

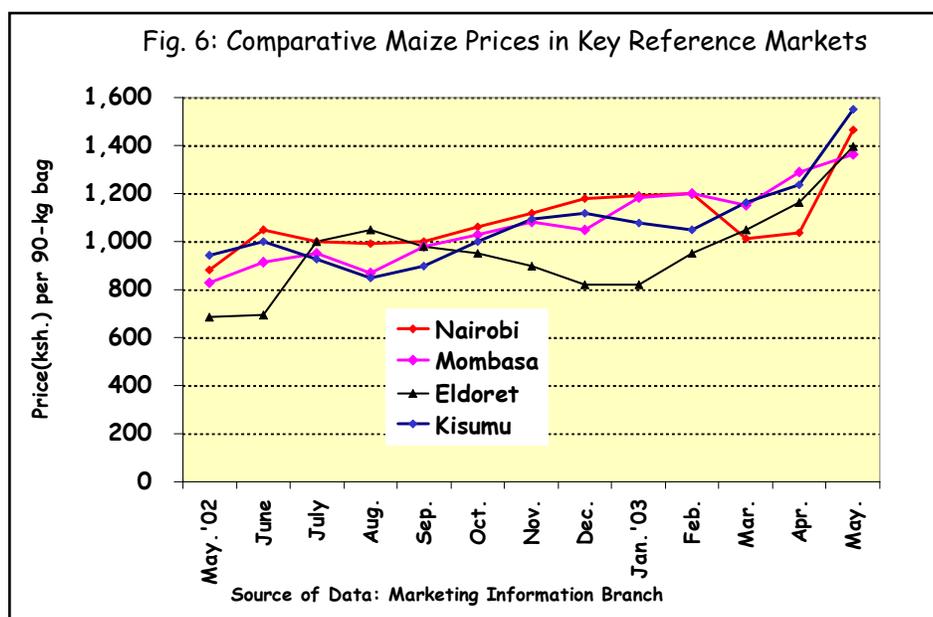
Sorghum is grown principally in the often drought-prone marginal agricultural areas of Eastern, Nyanza and Coast Provinces. Consumption of sorghum is similarly localized to these growing areas. Although area put to sorghum increased by over 10 percent during the 2002/03 growing period, the

90,000 MT output obtained from 142,000 hectares, represents a 6 percent reduction over the 1993-'01 average. The decline in output was attributed to poor agroclimatic conditions in the key growing coast and lakeshore areas. Nevertheless, production of sorghum was supplemented by 61,000 MT of carryover stocks.

Millet is another important cereal crop grown in a similar agroecology as sorghum. Millet output for the 2002/03 production period was closely consistent with average. The MoALD attributed the greater resilience of the millet crop to the use of the more drought-tolerant local varieties - in spite of unfavorable long-rains in key growing areas. The 50,000 MT produced, from 115,000 hectares during the season, including 10,000 MT of carry carryover stocks from the previous year's output, ably met the 41,000 MT domestic demand.



Beans are the most important of the pulses in terms of both production and consumption. Other minor pulses include pigeon peas, green grams and cowpeas. 390,000 MT of beans were obtained from 900,000 hectares during the 2002/03 growing season. Both output and area put to beans represent a 22 percent increase over the respective 1993-01 averages. The increase in area put to beans compensated for yield losses that arose from excessive short-rains in Eastern Province and poor long-rains in the Coast and Eastern Provinces.



The 2002/03 output accounts for just over 70 percent of the national consumption requirement. Fortunately, cross border imports from Tanzania, Uganda, Ethiopia and Rwanda have over the previous few years, bridged this production shortfall.

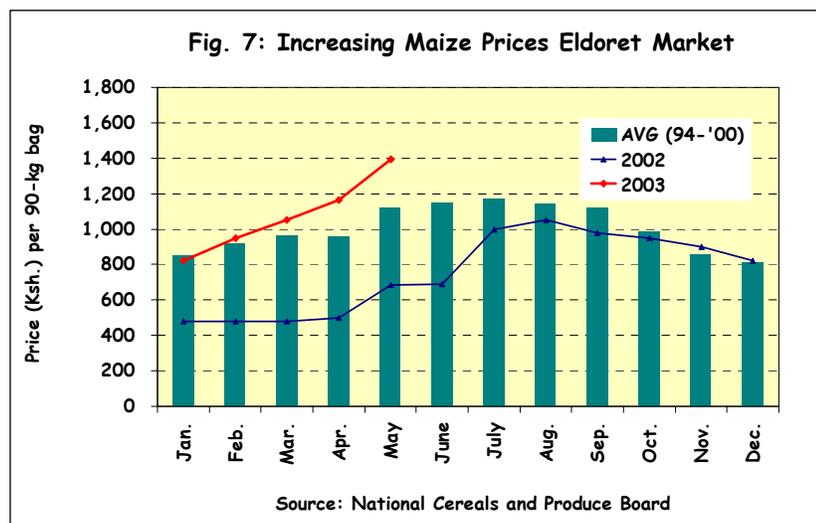
Potatoes (Irish) are the most important tuber crop grown and consumed across most livelihoods of the country. Potatoes tend to substitute for maize, particularly in

Central and Eastern Provinces. 1 million MT of potatoes were harvested from 112,000 hectares, representing a 17 percent higher-than-average output as well a 13 percent increase in area.

Traditionally potatoes are grown principally in the high potential areas of the country. Subsequently, generally favorable agroclimatic conditions throughout the year ensure that the supply of potatoes is continuous and adequately meets local consumption needs.

Prices of the Major Cereal and Pulse

Maize prices predictably increased during most of the 2002 and through 2003, following much-reduced external supplies. The increase in maize prices was a complete contrast to the lower-than-breakeven prices during the 2001/02 production period, after the unprecedented supply glut.



Although expected price declines were reported in maize producing areas, during respective harvesting periods, the fall in prices during 2002/03 has been uncharacteristically low and short-lived. Figure 6 is an illustration of that increase in maize prices during the 2002/03 season in key reference markets. Figure 7 is a further

illustration of the trend in maize prices in Eldoret market, which lies at the heart of one of the most important growing areas. This graphic illustrates the impact of reduced household and national stocks on prices – the price of maize during 2002/03 is now close to 30 percent higher than the long-term average and 100 percent higher than the severely depressed prices of the previous year. This pattern has been a characteristic feature of most markets across the country.

Bean prices are determined by local production as well as by the availability of exportable surpluses from Uganda, Tanzania and Rwanda. In spite of regular production shortfalls and fluctuations, bean prices have in recent years, generally lowered and stabilized. This is attributed to the operationalization of the COMESA trade agreements.

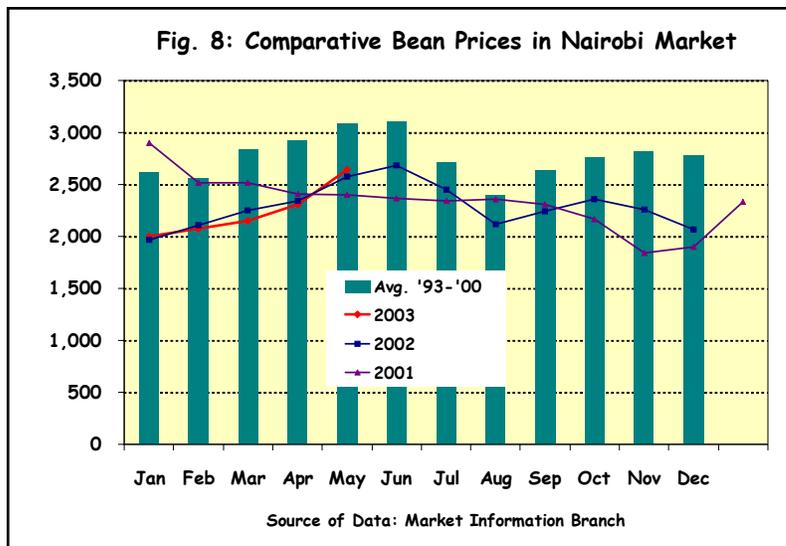


Figure 8 is an illustration of bean prices in Nairobi, a key trading center.

Prospects for the 2003/04 Cropping Season

The prospects for the current 2003/04 cropping season is mixed. Generally, good rainfall though substantially delayed, has been experienced in the key long-rains areas of Western, Nyanza and Rift Valley Provinces. In contrast, the more than one-month delay in the season onset in Eastern, Central and Coast Provinces suggests that a substantial proportion of the maize crop in particular, may not attain

maturity. Subsequently, the 2003 long-rains maize output is expected to decline by 15 percent. In addition, the delay in the onset of the long-rains season means that the beginning of the harvest has been pushed back to late August. Harvesting will also be unusually continuous, raising the possibility of a temporary glut between September and December, soon after a 190,000 MT deficit, anticipated between July and September.

Despite the 190,000 MT deficit, the GoK is reluctant to waive the 25 percent duty levied on maize imports, due to the upcoming harvest in August. The GoK is fearful that imports could seriously undermine producer incomes by causing a maize glut similar to the situation in 2001. Limited imports from Tanzania are moderating prices in markets closest to the border areas. A local importer is also expected to import 45,000 MT of maize from Malawi, by August. More significant reductions in prices are expected between the September and December harvesting period.

Production prospects for **beans** have also been moderated more by yield losses caused by excessive rainfall during April and May in key growing areas rather than by the lateness in the start of season. It is anticipated that 80 percent of production will be achieved. **Wheat** is predominantly grown in the Rift Valley Province where long-rains have been favorable. Prospects for wheat and **rice** output are consistent with normal expectation, barring unusual changes in agroclimatic conditions. Poor long-rains in the **sorghum** and **millet** growing zones of the marginal agricultural areas of Eastern and Coast Provinces have reduced prospects for a good harvest. An estimated 15 percent of the output will be lost, in spite of the resilience of these drought-tolerant crops.

Favorable agroclimatic conditions during 2002/03 have had a marked positive impact on **livestock productivity**, especially in the high potential areas. However, in pastoral districts, the viability of pastoralism as a predictable source of livelihood is becoming increasingly debatable. After several poor seasons, the number of tropical livestock units per household, in a growing number of pastoral households, tends not to meet the critical levels prescribed for sustained household food security.

Conclusion

The mixed outcome of the 2002/03 season seems to mirror production prospects for the 2003/04 season. A favorable long-rains season in key growing areas sharply contrasts with poor growing conditions in the southeastern marginal agricultural districts, in the Coast and Eastern Provinces. However, significant improvements in livestock production indicators have been reported across most pastoral districts during the current season.

ANNEX 1: Kenya's Agricultural Calendar

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Arable Areas											
Dry season in most arable areas. Long-rains season land preparation. Early sowing of long-rains crops in southwestern arable districts around and south of Lake Victoria.		Long-rains season onset in March. Sowing of long-rains crops in all other areas. Sowing of wheat up until June.			Harvesting of long-rains season short cycle crops (beans and vegetables)		Long-rains harvesting in Eastern, Central, Nyanza and Western Provinces and southwestern districts.			Long-rains harvesting in the 'grain-basket' Rift Valley Province.	
	Short-rains harvesting						Short-rains land preparation in Eastern, Central and Nyanza	Short-rains sowing.			
Pastoral Areas											
Dry Season establishes-livestock and pastoralists migrate to dry-season grazing areas. Increased dependency on boreholes.		Long-rains season onset - pasture, browse and water regeneration – livestock and pastoralists return to wet season grazing areas. Calving, lambing and kidding occur and milk production increases.			Dry Season – pastoralists migrate to dry season grazing areas.			Eastern pastoralists return to wet season grazing areas as minor short-rains begin.			

Source: FEWS NET-Kenya

ANNEX 2: Production, Supply and Consumption of Key Food Commodities

Annex 2: Food Crops Balances July 2002-June 2003 all in MT

	Maize	Millet	Sorghum	Wheat	Rice	Beans	Potatoes
Carry over stocks	494,214	10,790	61,003		86,996	85,752	150,000
Production	2,428,882	50,002	89,687		297,237	40,000	1,000,000
Imports- commercial (through Mombasa)	0	0	0		540,005	40,000	0
Imports - commercial (cross border trade)	126,001	0	0		0	30,000	45,000
Imports- food aid	18,000	0	0		10,000	-	0
Total imports	144,001	0	0		550,005	70,000	0
Total supply	3,067,097	60,791	150,690		934,238	195,752	1,150,000
Exports (cross border)	0	0	0		0	0	0
Exports (other destinations)	0	0	0		0	0	0
Total Exports	Negligible	0	0		0	0	0
Consumption-Human	2,887,823	40,635	63,001		765,008	120,400	450,000
Consumption-feed/industrial	24,289	-	9,000		0	-	-
Total seed	22,500	630	1,161		16,900	624	200,000
Total consumption	2,934,612	41,265	73,162		781,908	121,024	1,000,000
Ending stocks	132,486	19,526	77,528		152,330	74,728	13,000

Source of Data: MoALD