Kenya's agricultural dilemma:

Thriving green crops with no economic impact

Kenya is still largely agrarian with 80 percent of its population depending on agriculture for food, employment and income. The dilemma facing the country is that only 20 percent of the land is suited for agricultural production. A greater proportion of the country, however, consists of agro-ecologically less favoured areas (LFAs). Another dilemma in Kenya's agricultural sector is that economic development impacts are not homogeneously spread even among the agriculturally favoured areas. For rural development government policies need to include developing infrastructure and institutions to open up the economically less favoured areas.

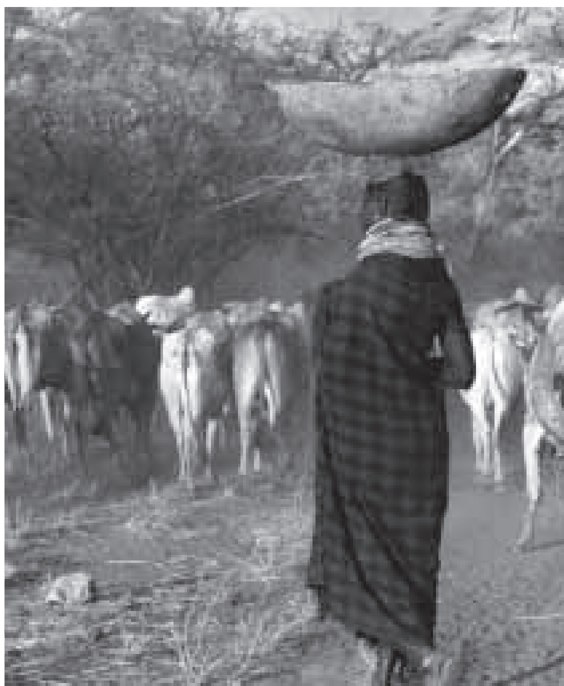
The Kenyan economy like those of most sub-Saharan Africa (SSA) countries is still heavily dependent on agriculture. The performance of the national economy and those of the local regions and districts are thus closely tied to the performance of the agricultural sector. According to the current National Development Plan for 2002–2008, Kenya's population is estimated at about 33 million and growing at 2.4 percent per annum (*National Development Plan 2002–2008,* Government Press, Nairobi, 2002). About 80 percent of this population lives in the rural areas where they disproportionately derive their livelihood from agriculture in terms of food, employment and income. It is estimated that the agricultural sector accounts for about 26 percent of the gross domestic product (GDP) and 60 percent of the total export earnings in the country (*Economic Recovery Strategy for Wealth and Employment Creation – 2003–2007,* Government Press, Nairobi, 2003 and *Strategy for Revitalizing Agriculture – 2004–2014,* Government Press, Nairobi, 2004).

Professor Mark O. Odhiambo
Moi University
Department of Economics and Agricultural Resource Management
Eldoret, Kenya
mooodhiambo@yahoo.com

It is worth noting from the outset that Kenya faces the dilemma that only 20 percent of its land area can be classified as high and medium potential for agriculture. The other 80 percent of the land surface is either marginal or low potential and thus less suitable for agricultural activities. These arid and semi-arid lands (ASALs) are ecologically fragile and susceptible to frequent droughts leading to crop failures and loss of livestock (Government press, 2002). It is estimated that 25 percent of the Kenyan population and 50 percent of livestock are found in arid and semi-arid lands regions of the country.

The favoured and less favoured areas (LFAs)

Kenya has a fast growing population, which is largely agrarian but with very limited agricultural land. Yet there is so much attachment to land among the people to the extent that culturally nearly all Kenyans feel that they should each have land on which to support themselves and where they expect to be buried when they finally die. However, the fact remains that only 20 percent of the total land area has good potential for agricultural production and nearly 75 percent of the population are to be found in these areas; mostly in Western, Central, Nyanza, Rift Valley and Coast Provinces. The major food crops (maize, wheat, rice, sorghum, vegetables) and the major cash crops (tea, coffee, pyrethrum) are all grown in these regions (Tables 1 and 2). Intensive livestock production, particularly high yielding dairy and beef cattle, are also mainly found here. These areas can be termed



Box 1: Criteria for economically favoured areas

A. Natural conditions

1. Agroecological zone is high or medium potential.
2. Adequate rainfall (reliable, well distributed) or use of irrigation water.
3. Soils are deep, fertile and well drained.
4. Temperatures are moderate (not too hot, no frosts, snow, etc.).

B. Man made conditions

1. Good infrastructure.
2. Adequate access to market (local and international).
3. Good prices for commodities produced.
4. Access to affordable external inputs.
5. Access to farm credits.
6. Good government policies providing incentives.
7. Environment of good governance (free trade, good institutions and legal framework).
8. Adequate security.
9. Existence of efficient farmers' organizations (Cooperatives/Associations) to help market and supply inputs.

as the more favoured areas (MFAs) in terms of agroecological conditions characterized by good climate with adequate and reliable rainfall associated with moderate temperatures and well-drained soils.

Economically favoured areas vis-à-vis agricultural favoured areas

Although Kenya lies on the equator, its variation in altitude and the bimodal nature of its rainfall pattern allows it to produce both tropical and temperate crops and livestock. The long rainy season, which is more reliable and widespread throughout the country, occurs between March and June, while the short rainy season occurs between September and November. The long rainy period is the main cropping season when all farmers in the country including those in the marginal areas get busy in producing both food and cash crops.

The grazing land in both the high potential and marginal areas and fodder production for livestock also get a major boost during this period. The agriculturally favoured areas are therefore mainly found in these areas of high agroecological potential with good climate, reliable and well-distributed rainfall pattern and deep fertile and well-drained soils. These areas are favoured by nature, and with adoption and application of modern agricultural innovation technologies will be capable of producing surplus crop and livestock products.

The production is characterized by mixed farming consisting of high valued cash crops, livestock and some food crops for home consumption. However, the commercial production orientation of the farmers here will only succeed if the areas are well developed in terms of good infrastructure and proper access to ready markets for their surplus production and where they can also purchase farm inputs. In this case we would refer to such areas as economically favoured areas (EFAs) where incomes will be high and both food poverty and overall poverty will be low. These include such areas like nearly all Districts in Central Province (Kiambu, Muranga, Nyandarua and Nyeri), Western Province (Kakamega, Bungoma, Lugari, Vihiga, Busia and Butere-Mumias), Nyanza Province (Kisii, Nyamira, Gucha, Migori, Homa Bay, Kuria, Rachuonyo), Rift Valley Province

Table 1: Examples of cropping patterns in economically favoured areas in Central and Rift Valley Provinces

Crop	Central Province	Rift Valley Province
	Kiambu District - ha -	Kericho District - ha -
Maize	0.6	0.9
Beans	0.1	0.5
English Potatoes	0.2	0.2
Pyrethrum	0.3	0.2
Vegetables	0.4	0.1
Bananas	0.1	0.1
Coffee	0.5	0.2
Tea	0.5	0.5
Finger Millet	0	0.3
Maize & Millet	–	0.1
Maize & Beans	0.3	0.7
Green Potatoes	0.1	0.2

Source: Calculated from Ministry of Agriculture Farm Management Guideline and Rural Welfare Surveys

Photo: Panos

In economically less favoured areas like in Kenya's north, small urban centres might provide off-farm employment and small markets.

Table 2: Examples of cropping patterns in agriculturally favoured, but economically less favoured areas

Crop	Nyandarua (Central Province) - ha -	Marakwet (Rift Valley Province) - ha -
Maize	1.3	0.9
Wheat	2.8	0
Potatoes	0.6	0
Vegetables	0.5	0.2
Pyrethrum	0.5	0.1
Maize & other crops	0.8	0.7
Other crops	0.4	0.6
Cotton	0	0.8

Source: Calculated from Ministry of Agriculture Farm Management Guideline and Rural Welfare Surveys

(Nakuru, Trans Nzoia, Kericho, Nandi, Narok) and Eastern Province (Meru and Embu).

Some of these areas in Central, Eastern, Rift Valley, Nyanza and Western Provinces with well-developed road networks and other infrastructure will access all major markets like Nairobi, Mombasa, Nakuru, Eldoret, Kisumu, Nyeri, Kakamega and Garissa at affordable rates. Moreover, through the same system they are also able to access the export markets.

However, if on the other hand, the farmers are blessed with good agroecological zones, but are limited in their operations and commercial orientation by poor infrastructure, and lack of access to ready local and international markets for their products, then we would refer to them as agriculturally favoured but economically disadvantaged areas (EDAs). In such areas, farmers do not get properly rewarded for their efforts in farming. Initially such farmers may adopt new or high yielding technical innovations and realize surplus production but which they cannot sell at all or at competitive prices. Examples in Kenya include areas in some like Nyandarua, Marakwet and Narok districts which are not served with good roads and which during heavy rainy season may realize surplus production of maize, wheat, potatoes, fruits and vegetables which cannot be cost effectively shipped to the markets.

Worse hit in these areas are farmers who produce perishable products like milk, potatoes, fresh fruits and vegetables in surplus but cannot get to the market at all or in good time. In most cases, even the most innovative farmers here end up turning to subsistence farming, where they will only produce what they can eat and avoid the risk of producing surplus. Thus in these areas, crops will be thriving but the underlying economy will still lag behind with pervasive poverty.

Although the farmers here may not be food-poor as their counterparts in the marginal agriculturally less favoured areas like in Eastern and North Eastern Provinces they would still be poor due to low or lack of on-farm earnings. As a result where opportunities for off-farm employment exist they may resort to formal and informal employment in local towns or in urban centers in other regions. Indeed small towns in such areas are not only useful in providing off-farm employment but also provide ready markets for farmers' produce.

If on the other hand, good infrastructural development and adequate road and rail networks come up to connect these small rural towns, then they could help solve the problem of market access for such remote areas by providing transport connectivity with outside markets including international markets. Indeed in Nyandarua District during the dry seasons the non-tarmac roads become passable and its seven towns and other urban centres (like Ol Kalou, Nyahururu, Ndundori, Kipipiri, Ndunyu Njeru, Tulaga and Njabini) not only get connected to the 43 trading centres in the District, but also provide a link to the major urban centres outside the district. During the dry period the agricultural produce can reach other markets, but the dilemma is that every year this access is quite limited during the rainy season, which hap-

Box 2: Criteria for agricultural favoured areas that are not economically favoured

A. Natural conditions

1. Agroecological zone is in the high or medium potential areas.
2. Adequate, reliable and well distributed rainfall or is irrigated.
3. Soil is good (deep, fertile and well-drained).
4. Temperatures are moderate and good for crop and livestock production (not too hot, not too cold, no frosts or snow).

B. Man made conditions: Socio-economic environment

1. Poor or no infrastructural development.
2. Lack of access to remunerate markets (local and international).
3. Low or poor prices for agricultural commodities.
4. Unavailability of inputs.
5. Lack of access to farm credit.
6. No farmers' organizations/institutions to market products and supply inputs.
7. Poor government policy environment (no incentives).
8. Prevalence of insecurity (e.g. Molo Region, Mt. Elgon Region in Rift Valley and Western Provinces where there are ethnic/tribal clashes resulting in farmers leaving their farms green but unattended as they join centres for Internally Displaced Peoples (IDPs).
9. Poor legal environment/legal framework.

Box 3: Criteria for ecologically less favoured areas

A. Natural conditions

1. Agroecologically low potential or marginal for agricultural production.
2. Low and reliable or erratic rainfall (less than 800 mm per annum).
3. Hot and dry.
4. Fragile, shallow, weathered soils with low fertility.
5. High risk of erosion.
6. Frequent crop failure.
7. Frequent famine necessitating periodic food relief aid.
8. Lack of water for domestic use and for livestock or irrigation.
9. Low crop and livestock yields.
10. Low human and livestock carrying capacity.

B. Man made conditions

1. Poor infrastructure.
2. Lack of government policy and plans resulting in lack of incentives (neglected).
3. Lack of market access.
4. Few and less developed towns and market centres.
5. Low population density.
6. High food poverty levels.
7. High dependency on food aid.
8. High overall poverty levels due to low on-farm and off-farm incomes.
9. Lack of credit.
10. Lack of access to modern farming inputs.
11. Weak or non-existence of farmer's organizations and institutions.

pens to be also the period of peak production resulting in heavy losses.

Conclusion

Kenya's agricultural potential is quite limited. While we would expect that only farmers in the marginal agroecological zones are less favoured a dilemma exists whereby farmers in some parts of the high potential areas have remained poor due to lack of access to remunerative local and export markets. There is therefore need for targeted government policies aimed at addressing provision of adequate infrastructure, efficient credit and marketing institutions to boost production and open up these areas. A balanced growth policy is required which should not only pay attention to the economically favoured areas but also to the less favoured areas in other parts of the country.

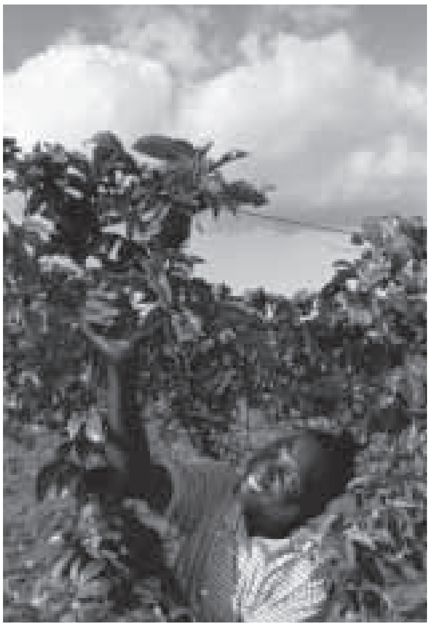


Photo: Panos

Almost 75 percent of the rural population live in the areas with high agrarian potential.

Zusammenfassung

Kenia ist immer noch ein Agrarland. Das Dilemma in diesem Land liegt darin, dass auf Grund von Klima und Bodenbeschaffenheit nur 20 Prozent der Fläche für die Landwirtschaft nutzbar sind und dass hier etwa 75 Prozent der Bevölkerung leben. Ein großer Teil der Fläche besteht dagegen aus agrarökologisch benachteiligten Gebieten (LFA, less favoured areas), in denen nur 25 Prozent der Bevölkerung, hauptsächlich Nomaden oder Hirten, leben. Ein weiteres Hindernis für den Agrarsektor in Kenia sind die ungleich verteilten Errungenschaften der Wirtschaftsentwicklung, auch innerhalb der landwirtschaftlich nutzbaren Gebiete. Die wirtschaftlich benachteiligten Gebiete leiden unter einer schlechten Infrastruktur und schlechtem Zugang zu den Märkten. Für die Förderung der ländlichen Entwicklung muss jede staatliche Politik daher auch den Ausbau der Infrastruktur und die Förderung von Institutionen zur gezielten Erschließung der wirtschaftlich benachteiligten Gebiete beinhalten.

Resumen

Kenia sigue siendo un país mayoritariamente agrícola. El dilema que afronta el país reside en que sólo el 20 por ciento de su territorio es apto para la producción agrícola en términos de un clima favorable y suelos fértiles, lo cual hace que el 75 por ciento de la población resida en dichas regiones. Sin embargo, la mayor parte del territorio consiste en tierras no favorecidas desde el punto de vista agro-ecológico (áreas menos favorecidas o LFA por sus siglas en inglés), y ocupadas únicamente por el 25 por ciento de la población, sobre todo por comunidades nómadas o agro-pastorales. Otro dilema del sector agrícola de Kenia se halla en que los efectos del desarrollo económico no se distribuyen homogéneamente, incluso en las áreas agrícolas favorecidas. Las áreas económicamente menos favorecidas afrontan los problemas de una infraestructura deficiente y la falta de acceso al mercado. Por lo tanto, las políticas gubernamentales de desarrollo deben incluir el fomento de la infraestructura y el desarrollo institucional, a fin de proporcionar facilidades de acceso a las áreas económicamente menos favorecidas.