

SECTION 7

Implications for Policy

7.1. Policy Background

The overall economic strategy adopted by the Kenya Government since independence in 1963 has been based on an open market system in which profit to individuals or organizations has been an accepted driving force. In the agricultural sector, the involvement of government at both production and processing levels has been rather limited, although involvement in marketing and distribution has been considerable. During the 1960s and 1970s agricultural production as a whole expanded at an overall rate of about 3.5% per annum (Government of Kenya, 1981). However, with an annual population growth rate of over 4% per annum, even this remarkable growth in output has not kept pace with the food needs of the population.

Subsection 7.2 summarizes the implications of the previous papers in this case study. Subsection 7.3 examines various aspects of government policy to determine where changes may be possible not only to increase overall output, but also to reduce the effects of the vagaries of the weather on agricultural production and farmers' living standards. Conclusions are given in Subsection 7.4.

7.2. Summary of the Kenya Case Study

The previous sections of this case study have considered the climate, agricultural production and smallholder socioeconomics of the study area – Kirinyaga, Embu and Machakos Districts in Central and Eastern Kenya. Five scenarios were developed, based on the cumulative probability of seasonal rainfall for the 1951–1980 record:

- A good season with a 10% probability of occurrence.
- An average (median) season.

Table 7.1. Summary of climatic impact assessment in the tea-coffee zone, I/II (Kerugoya).

<i>Scenario</i>	<i>Agroclimatology</i>		<i>ACZ</i>	<i>Production</i>		<i>Smallholder economics</i>
	<i>Normal rainfall (mm)</i>	<i>% of normal</i>		<i>Forage (DM t/ha)</i>	<i>Maize (kg/ha)</i>	
Good year	2040	134	I	19	2400	Good to very good yield from food and cash crops. Off-farm and cash crop income available for investment, education and household purchases. Adequate feed for grade cows.
Average year	1525	100	II	13	1900	Good crop yields for food and cash crops. Income available as above. Grade cows require use of off-farm feed and crop residues to supplement on-farm forage.
Moderate drought	1100	72	III	11	1300	Fair crop yields. Proceeds from previous cash crops main source of farm income. Grade cows severely affected by feed shortage resulting in little milk production and calf losses.
Severe drought	940	62	IV/V	9	250	Poor crop yields, but total crop failure unlikely. Proceeds from previous year's cash crop vital to farm income. Grade cows severely affected as even off-farm grazing and crop residues in limited supply. Very little milk produced; calf mortality approaching 100%
Back-to-back drought	1300 / 940	-	-	-	-	Poor crop yields in both years. Little cash crop income in second year so credit and off-farm income required to purchase farm needs, food and subsequent reinvestment. Stock deaths expected as feed availability shrinks in second year.

- A moderate drought season with a 10% probability.
- A severe drought with a 2% probability of occurrence.
- Back-to-back drought (successive seasons of drought with a 10% or less probability).