

Kenya County Climate Risk Profile Annex: Taita Taveta County

Annex 1

Selection of Value Chain Commodities in Taita Taveta County

For the development of this County Climate Risk Profile, four major value chain commodities (VCCs) were selected for in-depth analysis, based on their contribution to food security, productivity characteristics and importance to the economy. These VCCs, validated by local stakeholders, have been selected from a list compiled from the above-mentioned documents, using the following prioritization indicators: harvested area (hectares), production (90 kg bags), variation in production (in the past five years), value of production (US\$/bag), dietary energy consumption (Kcal/ capita/ day), protein content (g of protein/ 100 g of product), iron content (mg of iron / 100 g of product), zinc content (mg of zinc / 100 g of product), and Vitamin A content (IU Vitamin A / 100 g of product). The VCCs selected are: maize, banana, cattle (dairy) and goat (meat).

Table 1: Value chain selection indicators

Indicator	Value Chain Commodity			
	Maize	Banana	Cattle (dairy)	Goat (Meat)
Harvested Area (Ha)	653	2,513	N/A	N/A
Number	N/A	N/A	27,472	172,450
Production (90 Kg bags-maize; tons-potatoes; Kgs (millions)-dairy cow; eggs-local poultry)	9,142	129,739	17.2	159,000
Value of production (KSh million)	30	1,236	758	464
Yield (90 Kg/ha bags-maize; tons/ha-banana; Kgs/day/cow-dairy cow ¹ ;Kgs/animal -Goats)	13	51.6	9	20
Dietary energy consumption (Kcal/ capita/ day) ²	77	24.24	167	167
Protein content (gr of protein/100 gr)	9.4	1.09	3.28	3.56
Vitamin A content (IU Vitamin A/100 gr)	214	64	138	198

Sources: GoK,2015; GoK,2014; USDA,2015 and author compilation

¹ Average for liters/cow/day for season 1& 2, exotic cattle

² Value for egg; the value for meat are; Kcal/capita/day: 258, Gr of protein/100gr: 17.55 and IU Vitamin A/100 gr: 178

Annex 2

Adaptation strategies in Taita Taveta

Various adaptation strategies were identified by stakeholders and residents of Taita Taveta County in the Government of Kenya's "Agricultural Sector Development Support Programme (ASDSP)" of 2014. The table below compiles these results and disaggregates them by percentage of the population using each practice, as well as percentage based on the gender and age of the head of the household.

Table 3: Adaptation strategies as defined in the ASDSP

Adaptation strategy	Adoption Rate (% by Head of Household)				Value chain	Value chain activity	Inputs	Results	Challenges
	M	F	Y	All					
Tree planting: -Agroforestry	20	25	21	21	All	Production	Seedlings	-wind breaks - shade - livestock fodder	-lack of political good will -marginalization of women due to land tenure issues -deforestation due to high fuel utilization & illegal settlement
Soil-water conservation: -cover crops -intercropping -water harvesting -drainage channels -conservation agriculture	20	4	29	17	All	- Production	Seeds Water tanks Herbicides Water pans	-good water holding capacity - change in crop mixes -increased yields -reduced leaching and crusting -reduced distance to water sources	-high poverty levels -low farmer adoption -expensive equipment -siltation of dams
Change crop type: -early maturing varieties	15	0	14	12	Bananas Maize	Production	hybrid seeds; pesticides; fertilizers	-increased yields -reduced use of inputs	-low technology adoption -Expensive inputs -Counterfeit inputs
Staggered cropping	7	13	0	7	Maize	Production	Seeds; Fertilizers; water	-increased yields -reduced disease incidences	-lack/expensive inputs -low technology adoption
Change livestock type: -improved breeds	1	4	0	2	Dairy cow Goats	Production	Hybrids; Vaccinations, Artificial Insemination (AI)	-good animal quality -high production	-social norms -expensive inputs
Feed conservation	3	4	0	3	Livestock	Production	Fodder; baler; storage facility	-reduced disease incidences -efficient disease	- lack of storage facilities -fodder crop

							pulverizers	control -good animal quality -high production	failure -expensive equipment
On farm diversification	5	0	7	5	Livestock Crops	Production Marketing	seeds, fertilizer capital entrepreneurship	-increased income -better livelihoods -food security -reduced production and marketing risks	-lack of inputs -lack of capital -low entrepreneurial capacity
Value addition: -processing -cooling -grading -boiling -defeathering	4	4	0	4	Livestock Crops	Marketing	Processors transporter packaging material	-high prices -increased shelf-life	-low capacity -poor infrastructure -expensive equipment
Food storage facilities	3	4	0	3	Maize	Post-harvest handling	-pesticides, -storage facilities	-food availability -post-harvest losses	-low food production -post harvest loss
Seek employment: -Abandoning agriculture	5	4	7	5	Livestock Crop farmers	-	Skills; Education	-stable incomes -urban migrations	-congestion in urban areas
Irrigation	8	22	0	10	All	Production	-Water pumps	-reduced production risks -high yields -soil conservation	-lack of capital -low agricultural productivity -water contamination -high production costs

Sources: GoK, 2014 and author compilation