

Economic performance of small ruminants to smallholder farmers in Climate Smart Villages of Nyando

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Introduction



Introduction

- Climate Change is a major challenge to smallholder livestock farmers in developing Countries
- In livestock production manifested by increased incidences of disease outbreaks, high temps triggers stress, feed and water scarcity
- Need for adoption of appropriate and mitigation strategies against Climate Change

Intro'

► Products



Intro'

In 2014, CCAFS, Vi Agroforestry, World Neighbors, MALF & ILRI Introduced improved indigenous breeds as an intervention against CC



Intro'

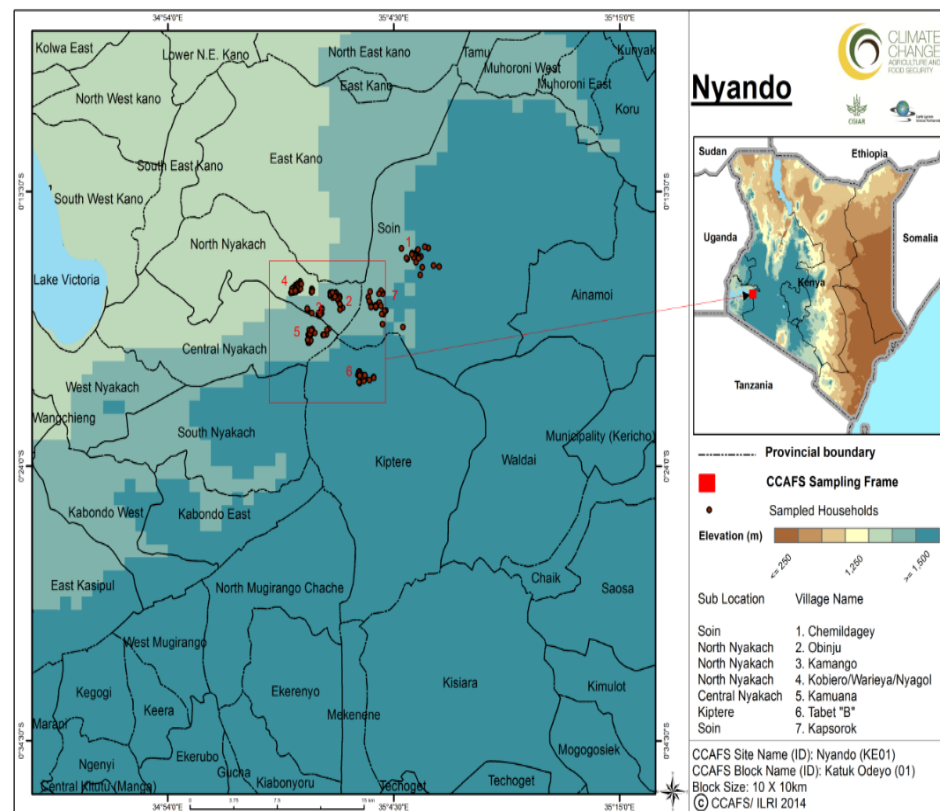
Introduced breeds



Materials and methods

Study site, household sampling and data collection

- Kericho and Kisumu
- 162 households in 2018
- ODK-data collection
- Captured:
 - farmer demographics
 - Resource endowment
 - Flock dynamics
 - Revenues
 - Socio-economic factors



Data analysis

- Statistical package of STATA version 15.1

- Descriptives :
 - Farmer demographics, key resources, flock characteristics and dynamism

- Impact of different socio-economic factors on revenues analyzed using regression analyses.

- Fixed effects
 - Gender, Education level, land and flock size

Results

Farmer characterization

- 75% men and 25% women household heads
- Higher proportion elderly 69%
- 55% have at least secondary level of education
- Crop, livestock and Poultry main economic activity adopted by 90% of household heads

Land and flock ownership

- ▶ Land holdings small - 2.2 ± 0.2 ha in Kericho & 1.9 ± 1.7 ha in Kisumu
- ▶ 31% of farmers had land holdings > 2 ha- 3% farmers Kisumu
- ▶ Flock size increased relative to land size
- ▶ Only 50% of farmers owned > 10 animals

Flock dynamics

- 93% of inflows through birth
- others purchase and gifts
- No proper breeding plan
- Outflows mainly through sales-90%
- Other modes-stolen ,dead granted as gifts

Revenues from small ruminant production

- More sales from
 - ❑ Mature animals
 - ❑ Female animals
- Best prices in mature male animals
- Uneconomical to sell young animals
- Highest sales month-April and December

Small ruminant prices in 2018

Kericho

	Sheep		Goat	
	Average price (Ksh)	Total revenues (Ksh)	Average price (Ksh)	Total revenues (Ksh)
Mature females	4,000.00		7,000.00	182,000.00
Immature females	3,500.00		4,000.00	24,000.00
Castrates	8,000.00	24,000.00	20,000.00	140,000.00
Immature males	3,000.00	15,000.00	8,000.00	0.00
Mature males	7,000.00		15,000.00	270,000.00
Lambs/kids	2,000.00		3,000.00	12,000.00
Total revenues per species		39,000.00		628,000.00

Total Revenues Kericho 667,000.00

Kisumu

	Sheep		Goat	
	Average price (Ksh)	Total revenues (Ksh)	Average price (Ksh)	Total revenues (Ksh)
Mature females	5,000.00	35,000.00	6,000.00	144,000.00
Immature females	3,500.00	3,500.00	4,500.00	36,000.00
Castrates	7,000.00	0.00	5,000.00	10,000.00
Immature males	4,000.00	20,000.00	4,500.00	36,000.00
Mature males	7,500.00	22,500.00	8,000.00	144,000.00
Lambs/kids	2,500.00	0.00	3,000.00	0.00
Total revenues per Species (KSH)		81,000.00		370,000.00

Total Revenues Kisumu (KSH) 451,000.00

Impact of socio-economic factors on returns of small ruminants

➤ R^2 0.4

Fixed effects	Kericho		Kisumu	
	df	Prob>F	df	Prob>F
Gender of the hh	1	ns	1	ns
Education of hh	2	***	2	***
Size of land owned	2	ns	2	ns
Species type	1	***	1	***
Flock size	3	ns	3	ns

Conclusion

- Peak prices Holidays-April December
- **Timely sales maximize returns**
- More sales female animals- how about reproduction
- Higher proportion of female animals
- **Optimizing flock structure a solution?**

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➤ It is implemented in a partnership with



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