



## GOAT VALUE CHAINS IN ZIMBABWE

A SYSTEMS APPROACH TO CROP-LIVESTOCK INTEGRATION.

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Neil MacLeod & Thabane Dube


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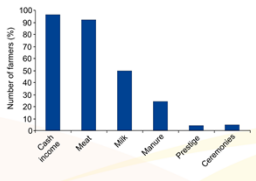
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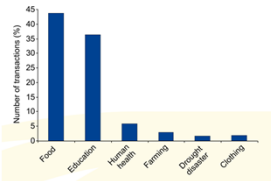
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### Why Goats? (Income, nutrition, education, human health)



Function	Number of farmers (%)
Cash income	~95
Meat	~90
Milk	~55
Manure	~25
Pregnancy	~10
Commodities	~10



Expense	Number of transactions (%)
Food	~45
Education	~38
Human health	~10
Farming	~5
Drought/illness	~5
Clothing	~5

Figure 1. Most important functions of goats.

Figure 2. Expenses covered through goat sales.

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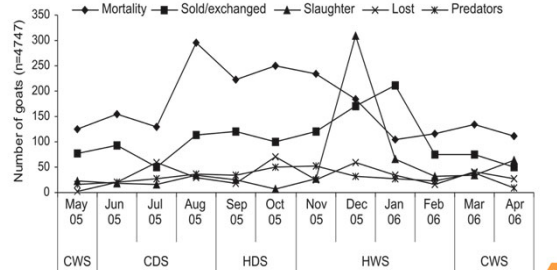
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Number of goats (n=4747)

Legend: Mortality (diamond), Sold/exchanged (square), Slaughter (triangle), Lost (cross), Predators (asterisk)

Seasons: CWS (Cool Wet Season), CDS (Cool Dry Season), HDS (Hot Dry Season), HWS (Hot Wet Season)




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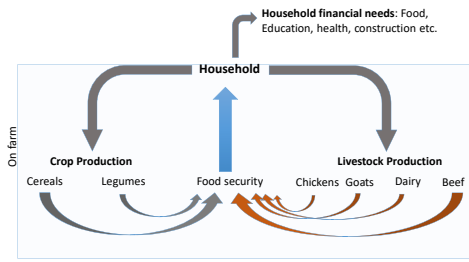
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### CROP-LIVESTOCK AND MARKETS



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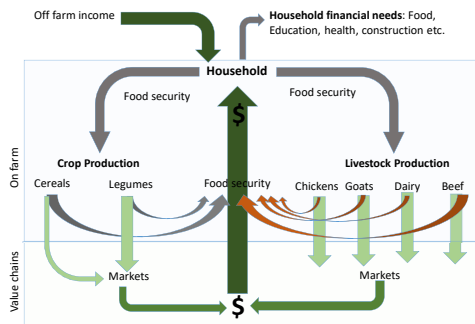
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### CROP-LIVESTOCK AND MARKETS



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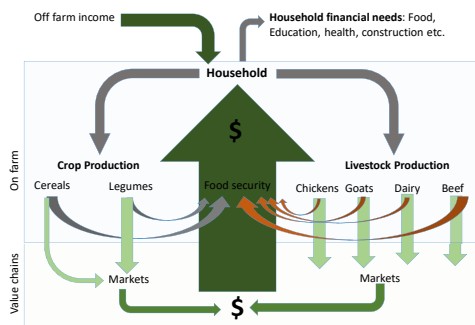
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### CROP-LIVESTOCK AND MARKETS



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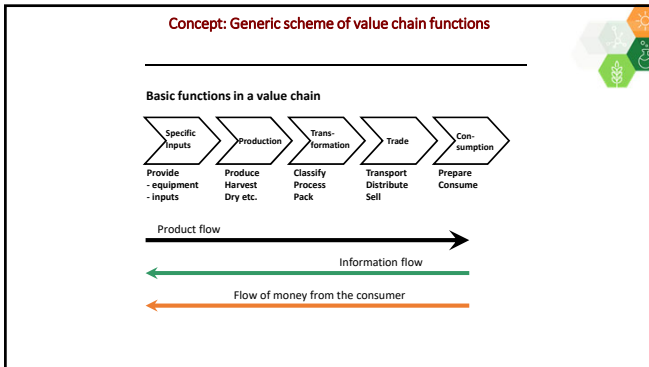
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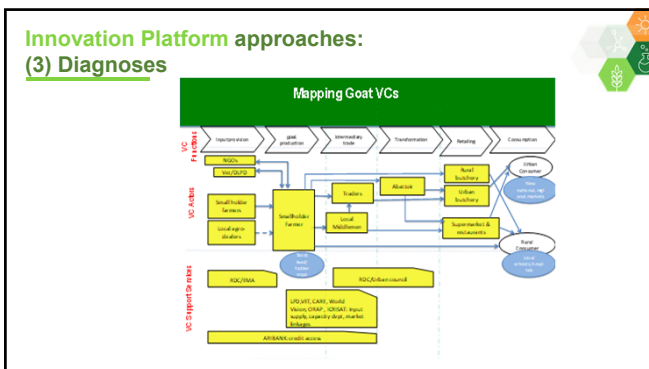
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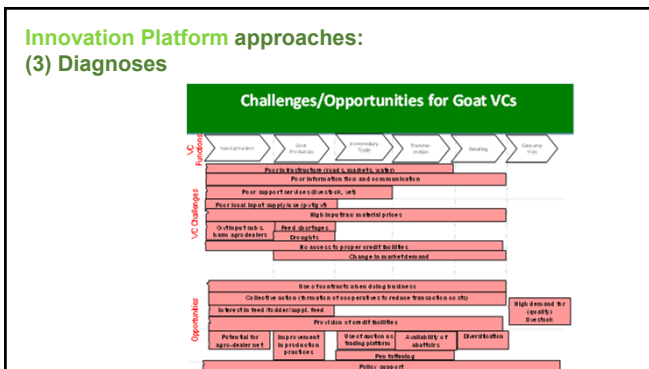
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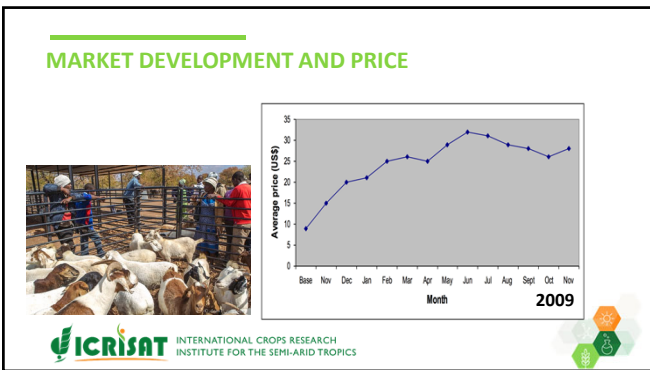
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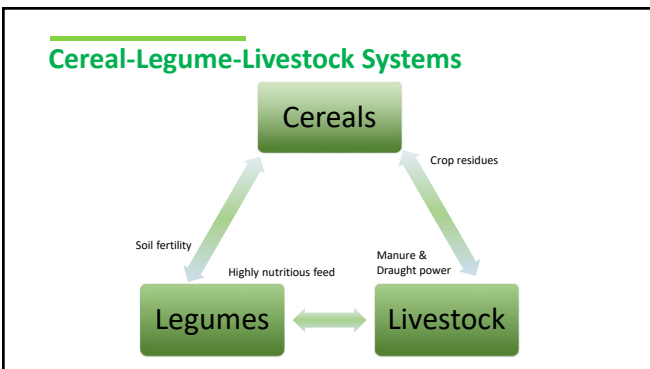
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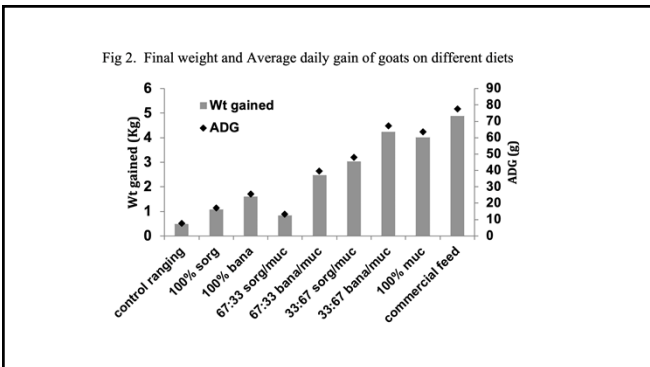
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**Farmers' own response to improved markets: Increased investments in animal feed**

	Market Nhwali	No market Shashe	Sign
Graze residues in fields	71.	73.3	ns
Cut & carry leaves, grass, pods	66.7	17.8	p < 0.01
Feed leguminous crop residue	35	2.2	p < 0.01
Commercial feeds	22.2	6.7	p < 0.05
Grazing reserves	24.4	2.2	p < 0.01
Feed cereal crop residue	8.9	6.7	ns
Produce forages	11.1	2.2	p < 0.05
Treat crop residues	11.1	0	p < 0.05

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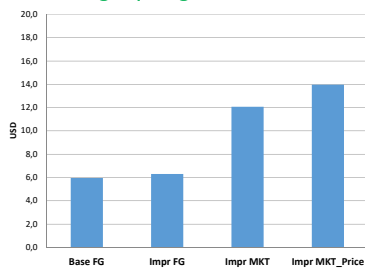
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**Profit margin per goat**




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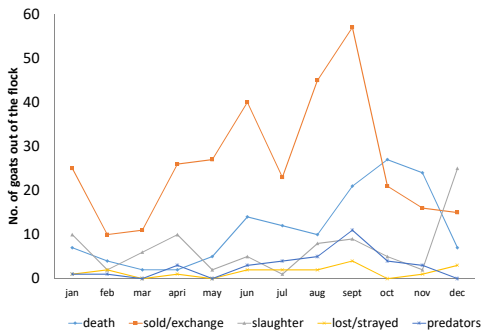
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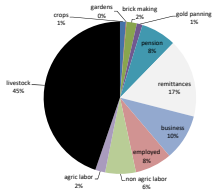
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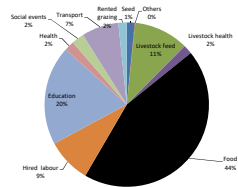
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## Household income & expenditure 2013

Income



Expenditure




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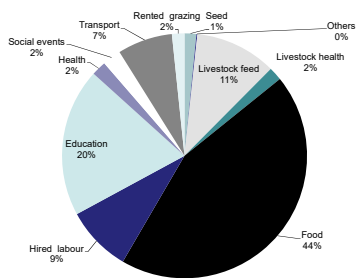
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## HH expenses and re-investment in agriculture




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Gross Margin Analysis

270-1811  
FOR IS GOATS = K100,000

GROSS MARGIN = GROSS WOME - TOTAL VARIABLE COST  
 GROSS WOME = INVENTORY CHANGE IN STOCK + NET SALES

JCS = CLASSING VALUATION - OPENING VALUATION

NET SALES = SALES - PURCHASES

→ OPENING VALUATION = 4 does @ K15,000/dae = K60,000  
 1 buck = K20,000  
 Subtotal = K80,000

10 goats for fattening @ K8,000 each = K80,000  
 → CLASSING VALUATION = 8 kids @ K10,000 each = K80,000  
 = K80,000 + K80,000 (bv) = K160,000

→ INVENTORY CHANGE IN STOCK = CV - OV = K160,000 - K80,000 = K80,000

10 kids + bucks

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### Innovation systems and systems innovation.

- **Organized goat interest group**
  - Common vision & cooperation
  - Coordinate activities on the ground
  - Lobby policy
  - Private sector driven
- **Market development**
  - Grading system
  - Consumer preferences and awareness
  - Price information
  - Skins and hides
- **Production**
  - Stud breeders – breeding breeding stock
  - Commercial producers

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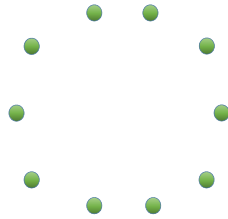
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Developing functional networks



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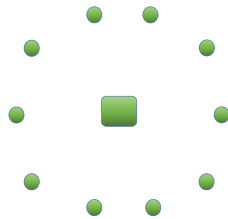
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Developing functional networks



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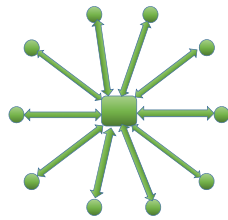
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Developing functional networks



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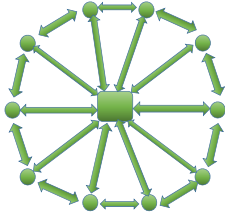
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Developing functional networks



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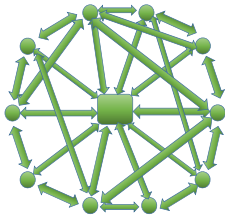
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Developing functional networks



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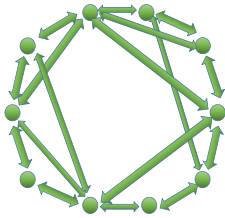
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Developing functional networks



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### WHAT DID WE DO?

- Established a goat forum – partnerships of like minded bodies
- Baseline surveys
- Established first Innovation Platforms (Focusing on Markets)
- Established Market infrastructure
- Mobilized farmers to use sales pens: Facilitated the software around the markets – integrated markets into the existing sales calendars
- Partnerships with Rural District Councils – Custodians of livestock Markets
- Linkages with processors and reduced transaction costs through markets
- Initiated feed and fodder development**
  - Crop residue storage and management
  - Commercial stock feeds
  - Fodder crops: evaluation and production, storage, feeding, feed mixes
  - Feeding trials – abattoir carcass condition evaluation

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### CRITICAL CONSIDERATIONS

- **Innovation platforms** – process based on *their* agenda, id challenges and opportunities, links to all actors and dialogue
- **Create a common vision and belief** amongst all stakeholders
- **Change paradigms** – subsistence to market oriented production
- **Authentic Partnerships** (local gov, private sector, dev partners)
- **Functional VC, you CAN intervene at this level**
- **Focus on the feedback mechanisms that ensure sustainable intensification**
- **Commercialize the sector** – not necessarily the farmer.



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### APPRECIATE YOUR ATTENTION



**ICRISAT** INTERNATIONAL CROPS RESEARCH  
INSTITUTE FOR THE SEMI-ARID TROPICS



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### Main Issues:

- Breed....? No....
- Mortality
- Support services (Gov. & NGO)
- Feed
- Veterinary care
- Markets
  - Aggregation
  - Transportation
  - Consumer awareness
- Policy
- Back to breed improvement!!!

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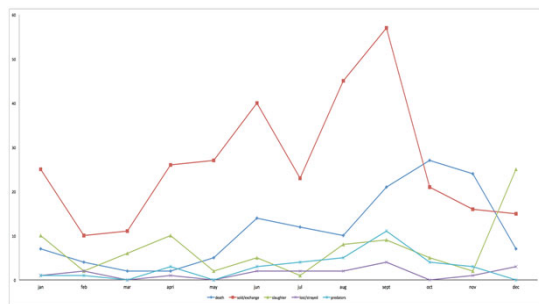
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