Kenya's Investment case

World Food Forum | Rome, Italy | 17th to 20th October 2023

HARAMBEE

Food and Agriculture Organization of the United Nations

Hand-in-Hand Initiative

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Presentation Outline

Accelerating Agriculture Investments in Kenya

1. **Context**
   Country Objectives & Indicators — 1
2. **Investment Priorities & Agri-Food Value Chains** — 2
3. **Investment Cases** — 3

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Why Kenya:
Investment Climate

ECONOMY	GDP Growth Rate	GDP per Capita
3rd largest economy in sub-Saharan Africa	4.8% in 2022	$ 2,080

- **Liberal Free Market Economy**
- **Repatriation of Capital & Profits**
- **Investment Guarantees**
- **Special Purpose Investment Entity**
- **Digital Hub**
- **Labour Productivity**
- **Locational Economies - logistic hub**

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Kenya : Context

51,525,602

KNBS, 2023

US$100 Billion

World Bank, 2022

AGDP

US$ 21.2 Billion

World Bank, 2022

POVERTY

34 %

World Bank, 2022

FOOD SECURITY

83 %

NDMA, 2023

Kenya Development Agenda

Vision 2030:
Upper Middle-Income Status

- At least 10% GDP growth rate per year
- Agriculture as key economic driver
- Treble Agriculture Trade
- Halve levels of poverty
- Build Inclusive and Resilient Food Systems

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Bottom Up Transformation Agenda (BETA)

INCREASING INVESTMENT

- MSMEs economy
- Housing and Settlement
- Health care
- Digital super-highway and creative economy
- Agriculture transformation

BETA

AGENDA for Agriculture Transformation 2022-2027

2. Increased access to market
3. Land use transformation
4. Increasing productivity of key food value chains
5. Reducing dependence on basic food imports
6. Adding value to agricultural exports
7. **Development of the Arid & Semi-Arid Lands (ASALs)**

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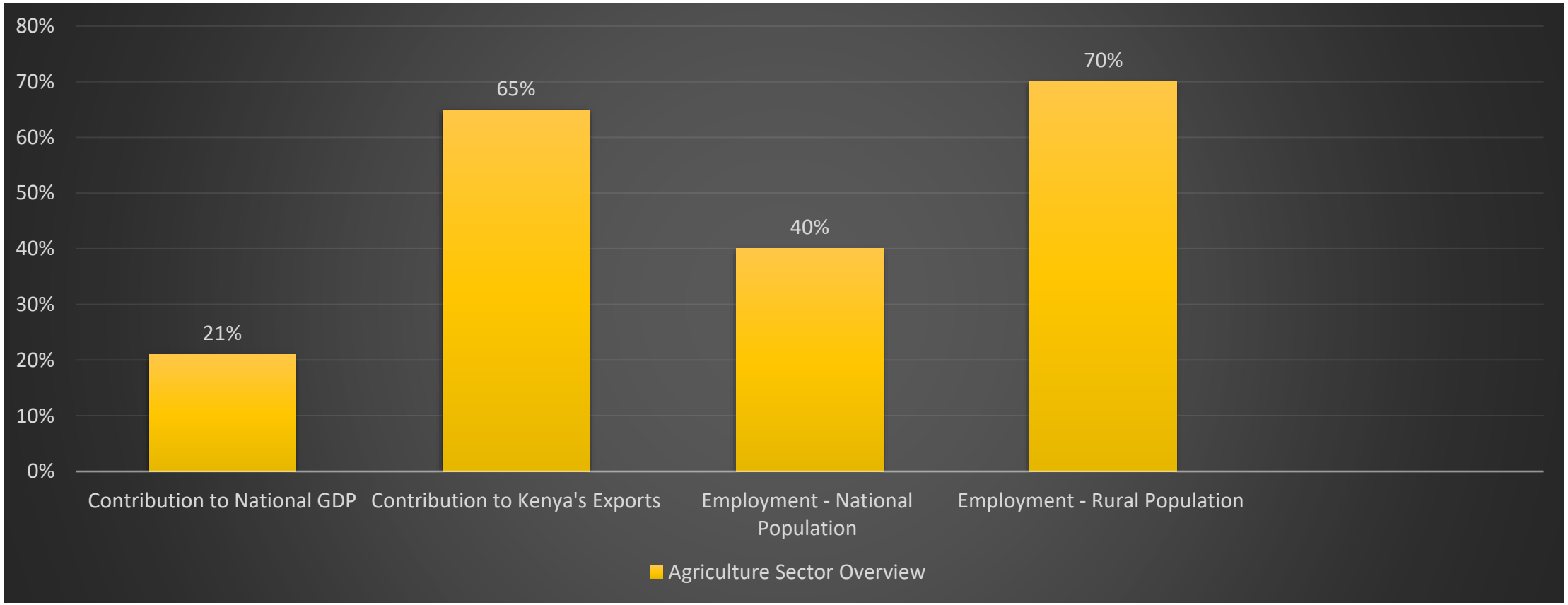
Agriculture Sector Overview



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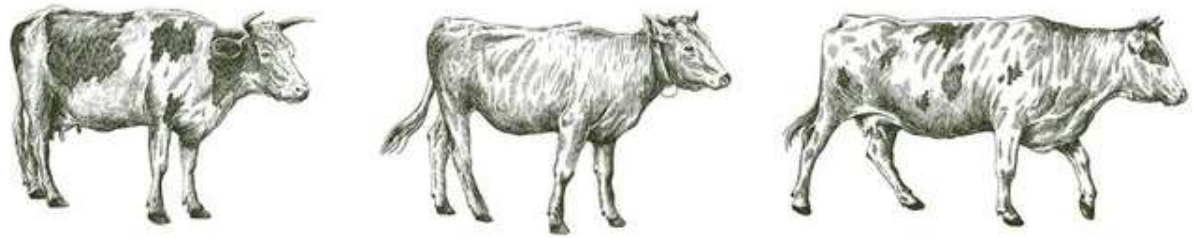
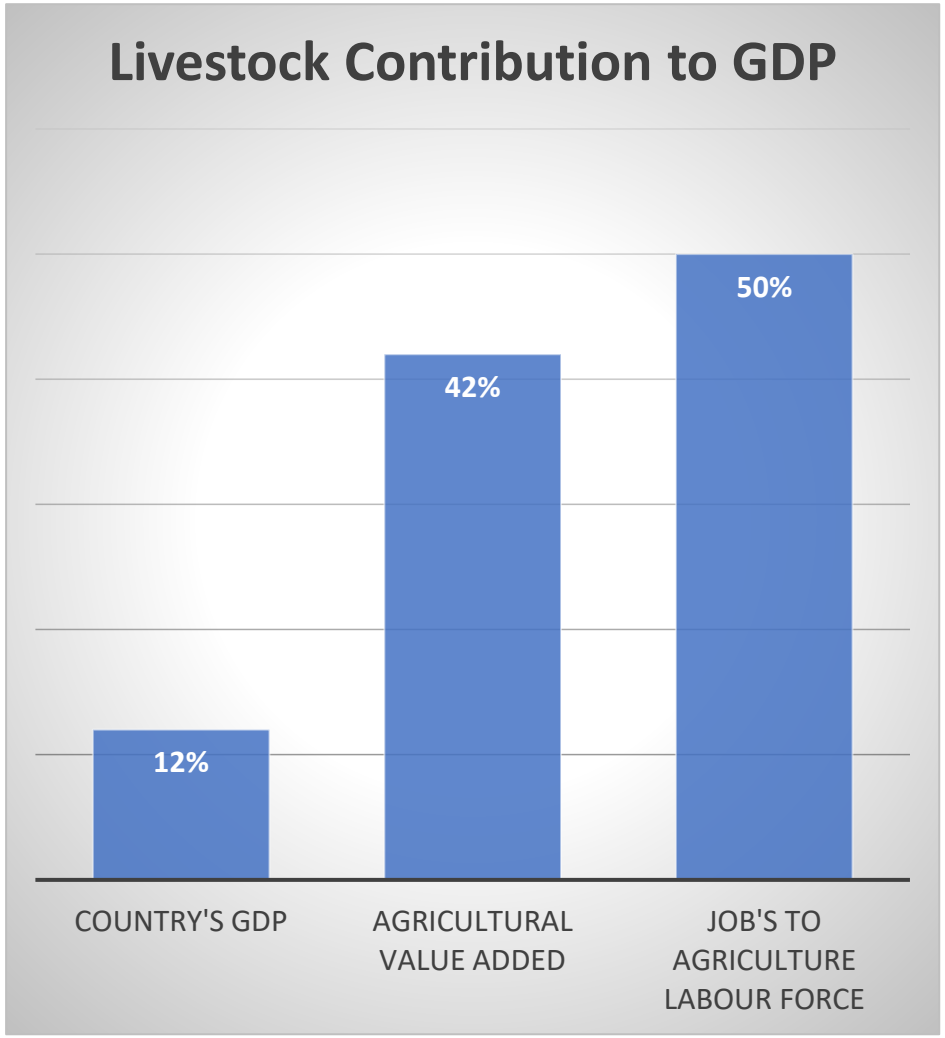
Drivers of Livestock Production and Productivity

Growing demand for Animal source foods by 2030

FOOD PRODUCTS	DEMAND
Milk	10.5 B Liters
Meat	1.6 M MT
Eggs	8.9 Billion





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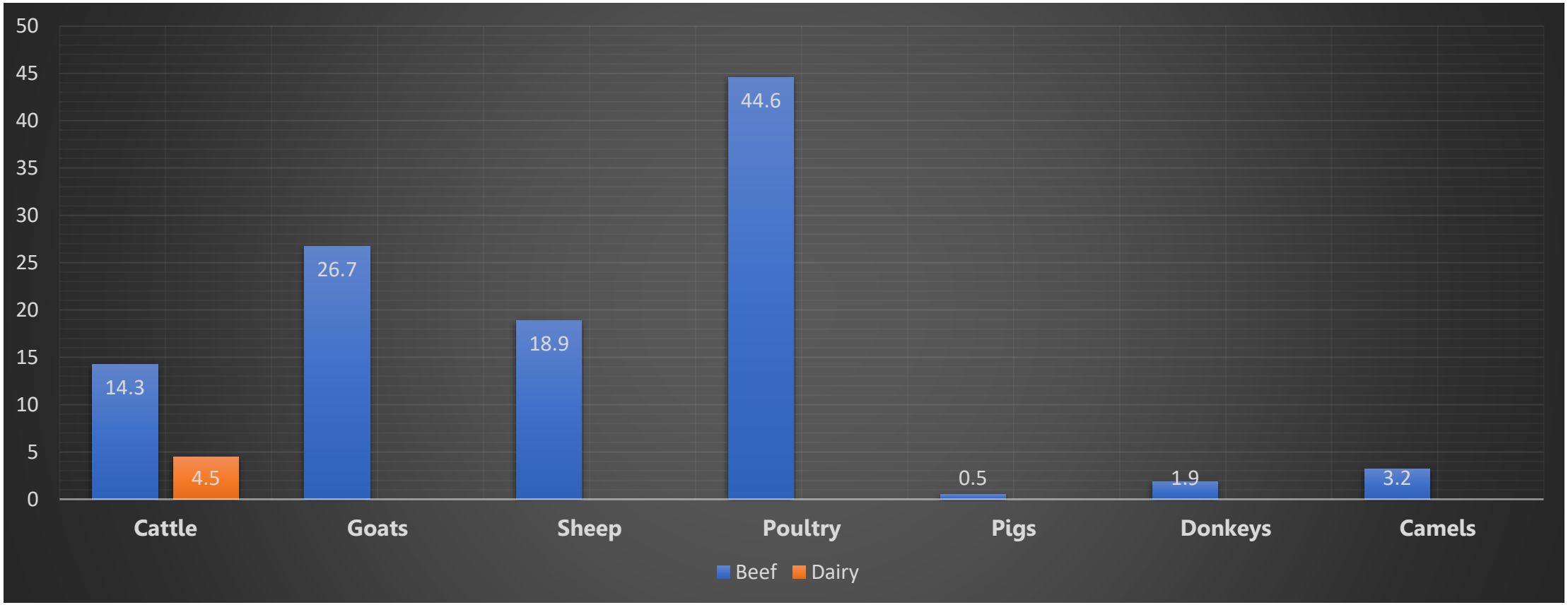
National Livestock Population - 2022

in Millions



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Options for Improving Livestock Production and Productivity

Livestock Transformation Agenda

1. Farm Management Technical Advisory Model
2. Ward Cooperative Model
3. Feedlot Model in ASALs
4. Dairy (Cow) Value Chain
5. Beef Value Chain
6. Indigenous Chicken
7. Leather Value chain

Drivers of the Livestock Agenda

1. Animal Breeding
2. Animal Feeds
3. Animal Health
4. Policy Environment

Opportunities and Challenges in Feeds

Livestock Feed Opportunities

- Growing human population
- Demand for animal Protein
- National economic growth.

Livestock Feed Challenges

- 60 % feed deficit annually (Annual total of 55 M MT)
- Post-Harvest Feed Losses – 46.3% Annually
- Low Mechanization and Transport Connectivity.
- High Cost of Feed Inputs – 60 – 80% of total cost of production
- Importation of energy and protein ingredients – 475,000 MT per year.

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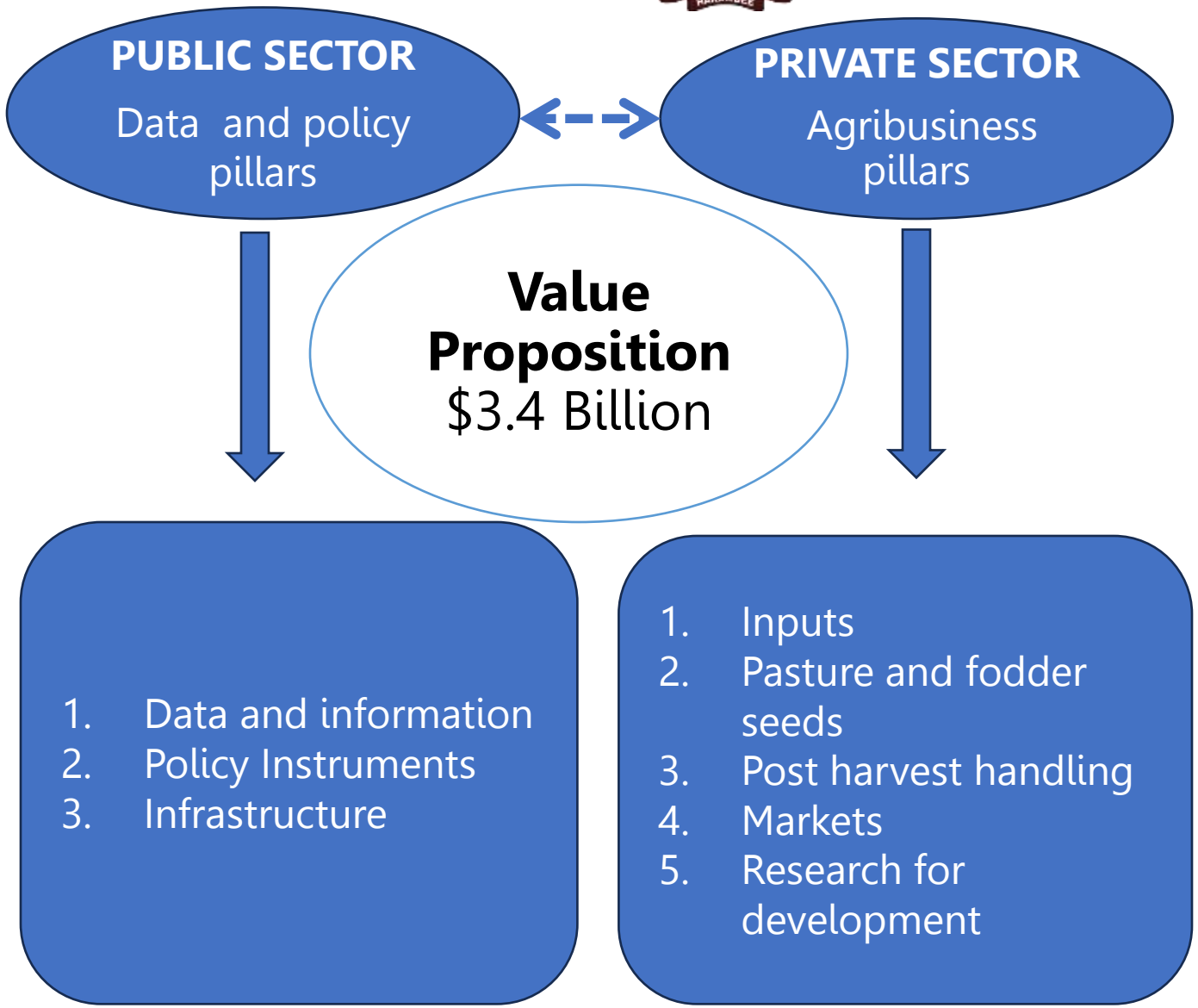
Strategic Animal Feeds Investment Planning for Kenya

Feed resource	Metric Tons	Hectares (Ha)
Hay	447,504.6	233,989
Silage	4,193,366	524,171
Maize	3,123,852	462,793
Sorghum	896,717	199,270
Cassava	438,483	25,056
Soya beans	204,625	110,908
Sunflower seed cake	1,268,147	289,862
Cotton seed Cake	455,051	104,012
Lucerne	4,296,496	211,637
Black Soldier Fly (BSF)	63,407	-
Total	**16.5M MT**	**2,161,699**



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Country Level Priority Areas for Investments

Investment Hub	Coverage	Investment Target USD	No of beneficiaries
Hay production	240,000 Ha	283.2 M	201,600
Sunflower production	283,400 Ha	246.7 M	476,000
Hay mechanization	240,000 Ha	171.4M	192,000
Sunflower oil pressing	700,000 MT	242 M	6,946
Feedlot	141 Units	668,834	50,700
Slaughterhouse	6 Plants	1 Billion	6,666
Digitization	180 m Cattle	90 M	340,000
Grand Total		**$ 2.0 Billion**	**1,273,972**

Country Level Priority Areas for Investments

Investment Target $2.0 Billion AGRICULTURE & FOOD SYSTEM TRANSFORMATION AGENDA	Number of Beneficiaries 1,273,972 DIRECT, INDIRECT AND SERVICE PROVIDERS
Catalytic Investments (Donors/Impact Investors/Government)	
Investment Facilitation & Services	

One Stop Investment Services Centre (OSISC)

- Company/ Business Registration
- Tax registration
- Issuance of Investment License
- Immigration permits
- Processing of Environmental Impact Assessment (EIA)
- Connectivity to utilities like water and power, securing land
- Advisory services on any other statutory requirements

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Hand in Hand Initiative in Kenya

Prioritizing areas identified having high – medium agricultural potential and medium – moderate efficiency to:

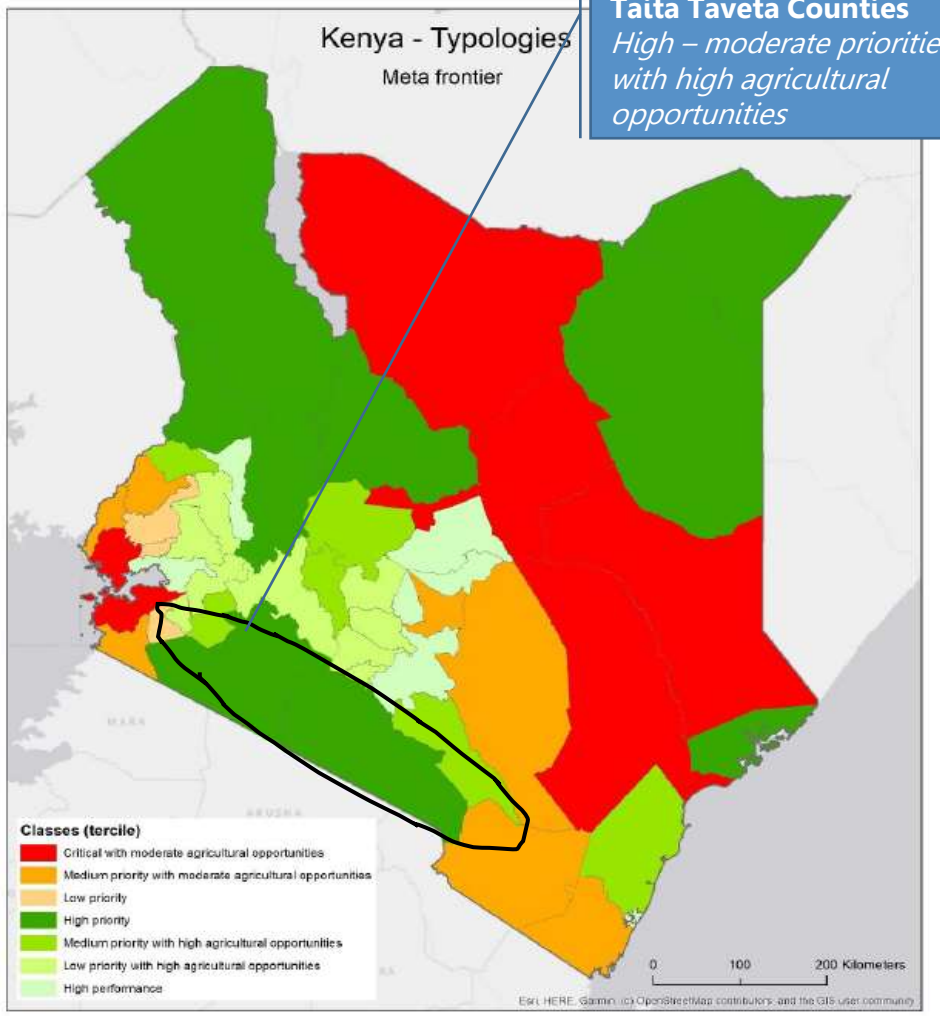
- Attract market led investments
- Enhance agricultural productivity
- Provide a process to implement
- Strengthen the institutional environment
- Consider positive and negative

Why the Focus on Arid & Semi-Arid (ASALs)

- Constitute 80% of Landmass;
- 36 % of human population
- Host over 70% of all livestock
- 80% of households livelihood
- High poverty rates -
- Food insecurity - 17%
- GAM rates 69%

Livestock Feed Management : improving food and nutrition security for enhanced livelihoods resilience in ASAL communities, Kenya

Kajiado, Makueni and Taita Taveta Counties
High – moderate priorities with high agricultural opportunities



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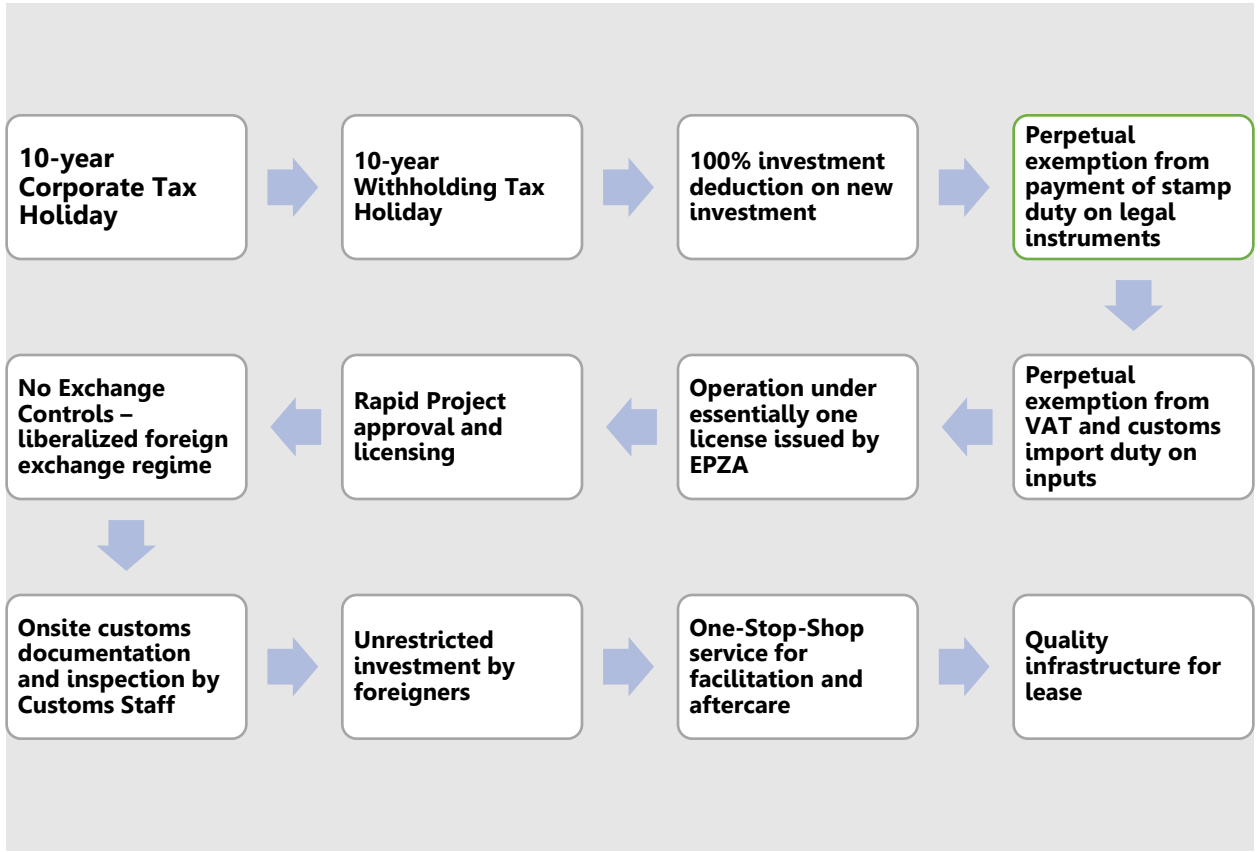
Kenya's Investment Incentives

Range of Fiscal, Physical & Procedural Incentives under the Kenya Export Processing Authority (EPZ) Programme



The EPZA Small & Medium Enterprises (SME) Development Programme – Nurture SME Exporters with Majority Local Shareholding

SMEs from the Horticulture/food processing, Textile/apparel, Leather, Commercial crafts, BPO, and ICT sectors also have access to:

- Purpose-built infrastructure with smaller warehouses.
- Reduced rent rate and service charge;
- With a rent-free period of 4 months to allow for set up.
- Capacity building: Business Development Services are provided.

Following are the incentives currently accessed by EPZ SMEs:

- EPZ Tax incentives: similar to other large EPZA enterprises.
- Purpose-built warehouses.
- Reduced rent rate and service charge.
- Business Development Services are provided to the SMEs.

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HiHI Investment Opportunities in Kenya

A Value-Chain Approach (Farm to Shelf)

Total Investment Outlay: USD 163,968,543

HiHI Investment Clusters

INVESTMENT CLUSTER 1 **Feed Production Systems (US$134,110,143)** 11 Commercial Hay Production hubs – US$129,352,113 9 Sunflower Seed Production hubs: US$4,758,030
INVESTMENT CLUSTER 2 **Value Addition & Mechanization System (US$24,557,900)** 50 Hay Mechanization Hubs: US$21,428,350 4 Sunflower Processing Plants US$2,074,076 60 Feedlots with a total throughput of 180,000 cattle/year: US$284,4000 1 Scalable Slaughterhouse with a throughput of 26,000 cattle/year: US$771,074
INVESTMENT CLUSTER 3 **Digitization & Digitalization US$5, 300,500** 1 Scalable RFID livestock traceability System: US$5,300,500

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10,000 Ha/Year Base Case Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$11,759,283
Operating Margin	$2,648,143
Internal Rate of Return (IRR)	21%
Net Present Value	$6,427,591
Environmental Performance Indicators	
• Climate smart pasture varieties • Reduced resource conflicts	
Socio-Economic Performance Indicators	
Direct beneficiaries (farmers) **Indirect beneficiaries** **Total beneficiaries**	2,100 6,300 8,400
Additional HH Incomes	US$617/Household/HA
Other Benefits to Farmers	50% Reduction in Feed Cost Higher Incomes 50% reduction in malnutrition
Macro-Economic Benefits	20% Import Substitution

11 Modular Hay Production Hubs Investment Outlay US $129,352,113 M

Micro-Region Hay Supply Deficit/Gap 27Million Bales/Year	
Investment Model	Establishment of 11 Hay Production Clusters of 10,000Ha Each
Total Ha	110,000Ha
Production	27 Million Bales per Year
Micro-Regions	3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta
Total beneficiaries	92,400

Government incentives :

- ❖ Import duty exemption on agriculture equipment
- ❖ Up to 40% Subsidized Fertilizers, seeds &Agro-chemicals

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Investment in Sunflower Production

600Ha/Year Base Case Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$528,670
Operating Margin	$127,599
Internal Rate of Return (IRR)	23%
Net Present Value	$346,662

Environmental Performance Indicators

- Deep rooted crop
- Enhanced feed intake – reduced methane emission per unit

Socio-Economic Performance Indicators	
Direct beneficiaries (farmers) :	255
Indirect beneficiaries:	765
Total Beneficiaries	1,020
Addition Incomes/Kgs	$0.04/Kg
Other Benefits to Farmers	50% reduction in malnutrition
Production of animal-source foods	
Increased Incomes,	
Macro-Economic Benefits	20% Import Substitution

9 Modular Sunflower Production Hubs Investment Outlay US$4,758,030

Establishment of Modular Sunflower Production Hubs	
Investment Model	Establishment of 9 Sunflower Production Clusters of 600Ha Each
Target Hectares	5,400Ha
Micro-Regions	3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta
Production	21.6 Million MT of Sunflower Seeds per Year
Total Beneficiaries	9,180

Government incentives :

- Import duty exemption on agriculture equipment
- Up to 40% Subsidized Fertilizers, seeds &Agro-chemicals

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Investment in Hay Mechanization Hubs

600Ha/Year Base Case Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$428,567
Operating Margin	$103,176
Internal Rate of Return (IRR)	23%
Net Present Value	$279,247

Environmental Performance Indicators	
Benefits	Annual reduction in land under cultivation

Socio-Economic Performance Indicators	
Direct beneficiaries (farmers)	150
Indirect Beneficiaries	450
Total	600
Additional Incomes	$0.74/Bale
Other Benefits to Farmers	Feed loss reduction Improved feed quality
Macro-Economic Benefits	Import substitution of meat

50 Modular Hay Mechanization Hubs Investment Outlay $21,428,350

Investment Model	Establishment of 50 Hay Mechanization Hubs
Target Hectares	30,000Ha
Micro-Regions	3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta
Production	1.8 Million Bales per Year
Total beneficiaries	30,000

Government incentives :

- ❖ Import duty exemption on agriculture equipment

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2,625MT/Year Base Case Sunflower Oil & Cake Milling Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$518,519
Operating Margin	$134,148
Internal Rate of Return (IRR)	22%
Net Present Value	$347,029

Environmental Performance Indicators
200kw Solar lighting to displace of 23.12MT of CO2 Eq/Year from grid

Socio-Economic Performance Indicators	
Direct beneficiaries (farmers):	742
	6,678
Other Beneficiaries:	7,420
Total beneficiaries	
Additional HH Incomes	$0.04/Kg
Other Benefits to Farmers	Feed loss reduction Reduced feed costs Improved nutrition
Macro-Economic Benefits	Import Substitution of oil and protein feed concentrates

Investment in Sunflower Oil Pressing and Sunflower Cake Milling

4 Modular 10.5Million MT of Seed/Year Sunflower pressing
Investment Outlay US$ 2,074,076

Establishment of 4 Modular Sunflower Processing Plants	
Investment Model	Establishment of 4 Sunflower Seed Processing Plants
Location	3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta
Annual Sunflower Seed Throughput	10.5Million MT of Sunflower Seeds per Year
Outputs	Sunflower Oil: 4,200MT/Year Seed Cake: 6,300MT/Year
Total beneficiaries	29,680

Government incentives :

- Import duty exemption on agriculture equipment

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Base Case 3000 Cattle/Year Feedlots
Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$4,740
Operating Margin	$1,749
Internal Rate of Return (IRR)	20%
Net Present Value	$2,262

Environmental Performance Indicators
180MT/Year of methane gas avoided (60% cattle reach market earlier & Organic fertilizer Production

Socio-Economic Performance Indicators	
Direct beneficiaries (farmers):	60 producers/Feedlot/year
Indirect Beneficiaries	300
Total	360
Addition Incomes	$74/Cattle
Other Benefits to Farmers **Reduction in production costs** **Reduction of livestock losses to droughts**	Guaranteed livestock market for cattle
Macro-Economic Benefits	Export Earnings

Investment in Feedlots

60 Modular Feedlots Investment Outlay US$244,000

Establishment of Modular Feedlots	
Investment Model	Establishment of 60 feedlots with a throughput of 3,000 cattle/Year each
Cattle Throughput	180,000 Cattle/Year
Feed supply	Local Hay Production (10,000HA), 6,300MT/year of Sunflower Seed Cake & Government Macro Plans on Energy, Protein, mineral & Vitamin feeedstuffs
Micro-Regions	3-Identified Micro-Regions (Kajiando, Makueni & Taita Taveta
Environmental benefits	• 10,800MT of Methane Gas Avoided @60% 3-months early off-take • Approx. 311,500MT CO2e./year
Total beneficiaries	21,600 feedlots, farmers & employees (Average of 50 cattle/farmer in ASAL)

Government incentives:
- ❖ Import duty exemption on agriculture equipment

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100 Cattle/Day Base Case Modular Slaughterhouse Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$771,074
Operating Margin	$173,052
Internal Rate of Return (IRR)	21%
Net Present Value	$417,477

Environmental Performance Indicators

200kw Solar lighting to displace of 23.12MT of CO2 e./Year from grid displacement (116gm of CO2e./kWh grid Intensity)
1,600MT of Methane gas avoidance/year equal to 45,000MT CO2e./year
Organic fertilizers from slaughter waste

Socio-Economic Performance Indicators	
Direct beneficiaries	470
Indirect Beneficiaries (feedlots)	21,600
Total	22,070
Additional incomes	$220/Cattle
Other Benefits to Farmers	Guaranteed Market Leather Production
Macro-Economic Benefits	Meat Export Earning

Investment in Slaughterhouse

1 Modular Slaughterhouse Investment **Outlay** US$771,074

Investment Model	Establishment of a slaughterhouse with daily throughput of 100 cattle/day
Cattle Throughput	26,000 Cattle/Year
Micro-Regions	3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta
Environmental Benefits	❖ 45,100MT CO2.e/Year from 200kw solar lighting & Methane Gas avoidance ❖ Use of slaughter waste into Blood and Meat Meal for Non-Ruminant feeds
Direct beneficiaries	470
Indirect beneficiaries	21,600
Total beneficiaries	22,070 farmers, feedlots, employees

Government incentives:
❖ Import duty exemption on agriculture equipment

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Investment in RFID Based Cattle Traceability System

1,000,000 Cattle Base Case RFID Traceability System Economic & Financial Analysis

Profitability Indicator	
Investment Outlay	$5,300,500
Operating Margin	$1,339,900
Internal Rate of Return (IRR)	24%
Net Present Value	$3,884,678
Environmental Performance Indicators	
Deployment of energy efficient devices/Network Elements	
Socio-Economic Performance Indicators	
Direct beneficiaries Farmers & Feedlots:	20,000
Incomes	5% Price Premium
Other Benefits to Farmers	
• **Herd Management**	• Credit Coding
• **Diseases Control**	• Market Access
• **Livestock Insurance**	• Food Safety
Macro-Economic Benefits	Export Earnings

Modular RFID Based Cattle Traceability System

Investment Model	Establishment of a National Cattle Traceability System
Cattle	18 Million Cattle
Micro-Regions	• 3-Identified Micro-Regions (Kajiado, Makueni & Taita Taveta • Progressively to national coverage
Environmental benefits	Smart, green, energy saving & emission neutral network elements & end-use devices
Direct Beneficiaries	200,000 livestock keepers & Feedlot Operators in ASAL

Government incentives : ICT investments

- ❖ 10% corporate tax for the first 10 years after start of operation, 15% for the next 10 years and 30% thereafter
- ❖ Government ICT infrastructure

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Next Steps for Animal Feeds Investments in Kenya

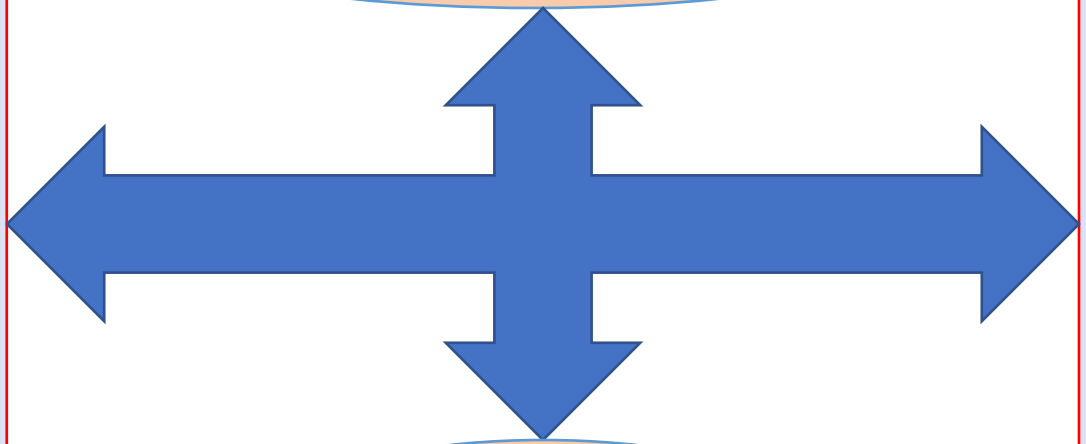
HiHI Contribution

1.8M MT of Dry Matter (Cultivated pasture, fodder & concentrates)

$164 Million

11 % Contribution

Annual Feed Demand 55M MT of Dry Matter



Annual Feed Shortage 60%

Country Level Targets

16.5M MT of Dry Matter (Cultivated pasture, fodder & concentrates)

$3.4 Billion

100 % Contribution

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Kenya Investment Plan: Summary

US$ 164 M
Total Investment

22%
Overall Average IRR

239,933
Total Direct Beneficiaries

164,997
Total Indirect Beneficiaries

US$ 49.2 M
Income Increase

45,100MT CO2e./year
Emission Reduction

Cluster 1 Feed Production Systems

1. Hay Production
Investment Cost: US$129.4M
IRR: 21%
NPV:US$6.4M
Sustainability Benefits:
- 50% Feed Cost Reduction
- 92,400 Beneficiaries
- US$617/HA additional Incomes
- Climate Smart Pasture Varieties
- Reduced Resource Conflicts

2. Sunflower Production
Investment:US$4.8M
IRR: 23%
NPV: US$346,662
Sustainability:
- 20% Feed Cost Reduction
- 9,180 direct jobs & other beneficiaries
- 0.04/Kg of sunflower in additional incomes
- Climate smart crop – sunflower is a deep-rooted Crop

Cluster 2: Mechanization & Value Addition

1. Hay Baling Service
Investment Cost: US$21.4M
IRR: 23%
NPV: US$279,246
Sustainability Benefits:
- 40% Post-harvest loss reduction
- US$0.74 per bale in additional incomes
- 30,000 direct Jobs & other beneficiaries
- Reduced emissions from better feeds/nutrition

2. Sunflower Oil Press & Seed Cake Milling
- Investment Cost: US$ 2.1M
- IRR: 22%
- NPV: US$ 347,029

Sustainability Benefits:
- Reduced protein concentrate imports
- Reduced feed costs & prices
- 29,680 direct jobs & other beneficiaries
- US$0.04 per kg of seed in additional farmer incomes
- 23MT CO_2e./year avoided from displacing grid with a 200kW solar lighting system

3. Feedlots
Investment Cost: US$284,400
IRR: 20%
NPV: US$2,262
Sustainability Benefits:
- Local level off-take market for farmers
- Reduced animal losses to drought
- Reduced methane gas reduction for intense fattening
- Production of organic fertilizers/manure
- Livelihood support to 21,600 livestock suppliers
- US$0.74 per cattle in additional incomes

4. Slaughterhouse
Investment Cost: US$771,074
IRR: 21%
NPV: US$417,477
Sustainability Benefits:
- Market for feedlots & farmers
- Reduced animal losses to drought
- Livelihood support to 470 farmers & feedlot entrepreneurs
- US$150 per cattle additional incomes
- 23MT CO_2e./year avoided from displacing grid with a 200kW solar lighting system
- 45,000MT CO_2e./year avoided from methane gas avoidance
- Climate smart technologies to produce animal feeds from slaughterhouse waste
- Ethical designs to protect animal welfare standards

Cluster 3 Digitization & Digitalization

RFID Livestock Traceability System
Investment Cost: US$5.3M
IRR: 24%
NPV: US$3.9M
Sustainability Benefits:
- Improved market visibility & access
- Digitalization of livestock data for data led policy making
- Traceability of animal welfare standards
- Livelihood support to 200,000 farmers and feedlot and slaughterhouse
- Improved herd management, disease surveillance, response and control
- De-risking of livestock insurance
- Credit coding
- Smart, green, energy saving & emission neutral network elements & end-use devices