

Founded in 2013, Netherlands

Expert practitioners in microfinance and agriculture value chains

Technical Advisory Services for microfinance:

- ▶ Management consultancy
- ▶ MFI start ups and transformation
- ▶ Operational strength
- ▶ Risk management
- ▶ Agriculture financing
- ▶ Technology and alternative delivery channels

# Livestock value chain development, Niger

Background:  
Livestock - occupies 2nd place after uranium  
2010: 11% of GDP  
Almost 40mil livestock in 2010  
20% of the population benefit directly from pastoral activity



## Inputs challenges:

- \* Limited access to inputs for livestock
- \* Limited access to additional feeding
- \* Ineffective provision of veterinary services

## Production challenges:

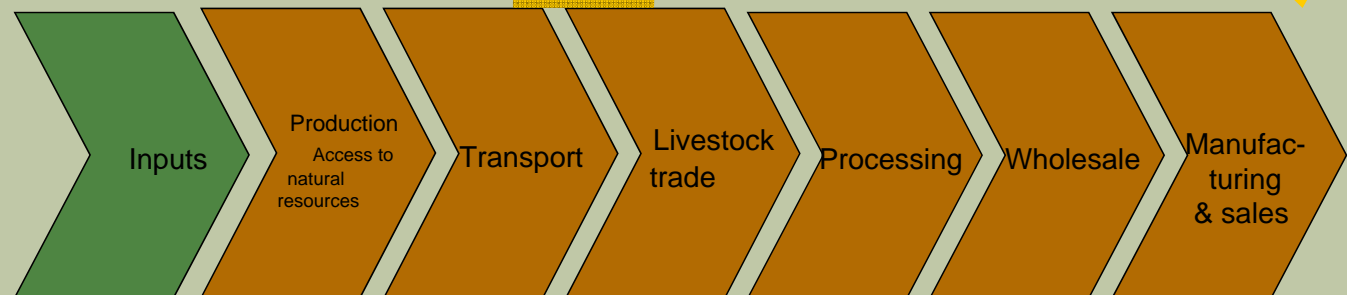
- \* Land tenure system not favourable for pastoral production
- \* Lack of transparent legal framework
- \* Conflicts on access and control on natural resources

## Transport challenges:

- \* Unfavourable policies for livestock transport
- \* High taxes and bribery
- \* Pastoralists lack knowledge on the legal aspect of transport

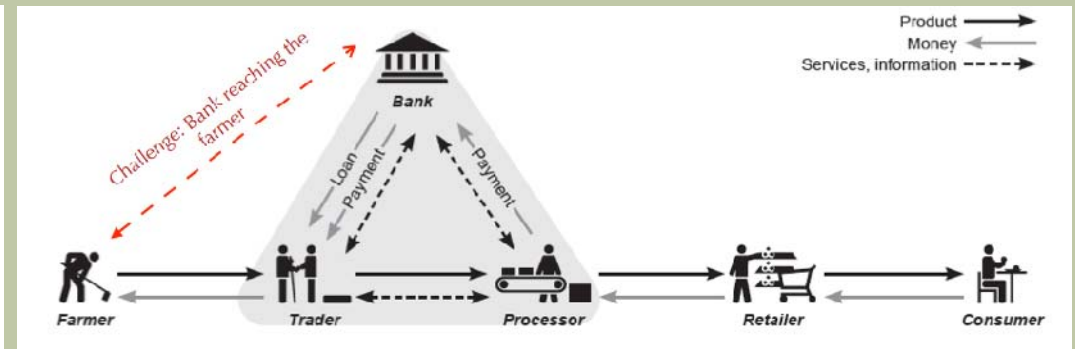
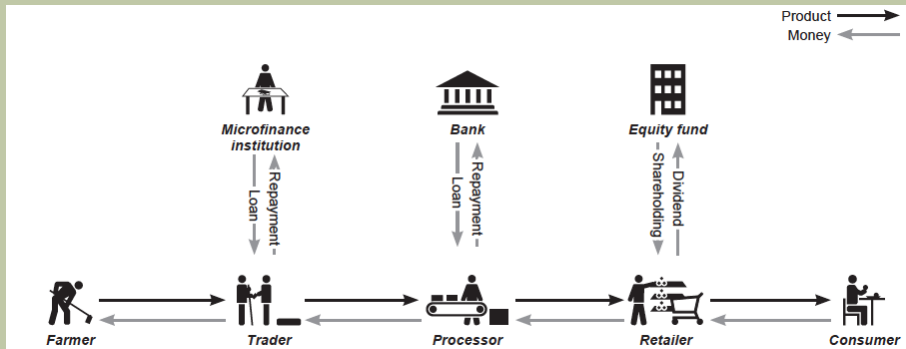
## Livestock trade challenges:

- \* Low prices
- \* Poor marketing practices
- \* High transaction costs
- \* Pastoralists lack market information



A sustainable value chain requires a strong partnership between public and private sector

# Financing agriculture value chain - Instruments



## Product financing

- \* Trader
- \* Input supplier
- \* Marketing firm
- \* Lead firm financing

## Receivables financing

- \* Trade receivables financing
- \* Factoring
- \* Forfaiting

## Asset collateralization

- \* Warehouse receipts
- \* Repurchase agreements
- \* Financial lease (lease-purchase)

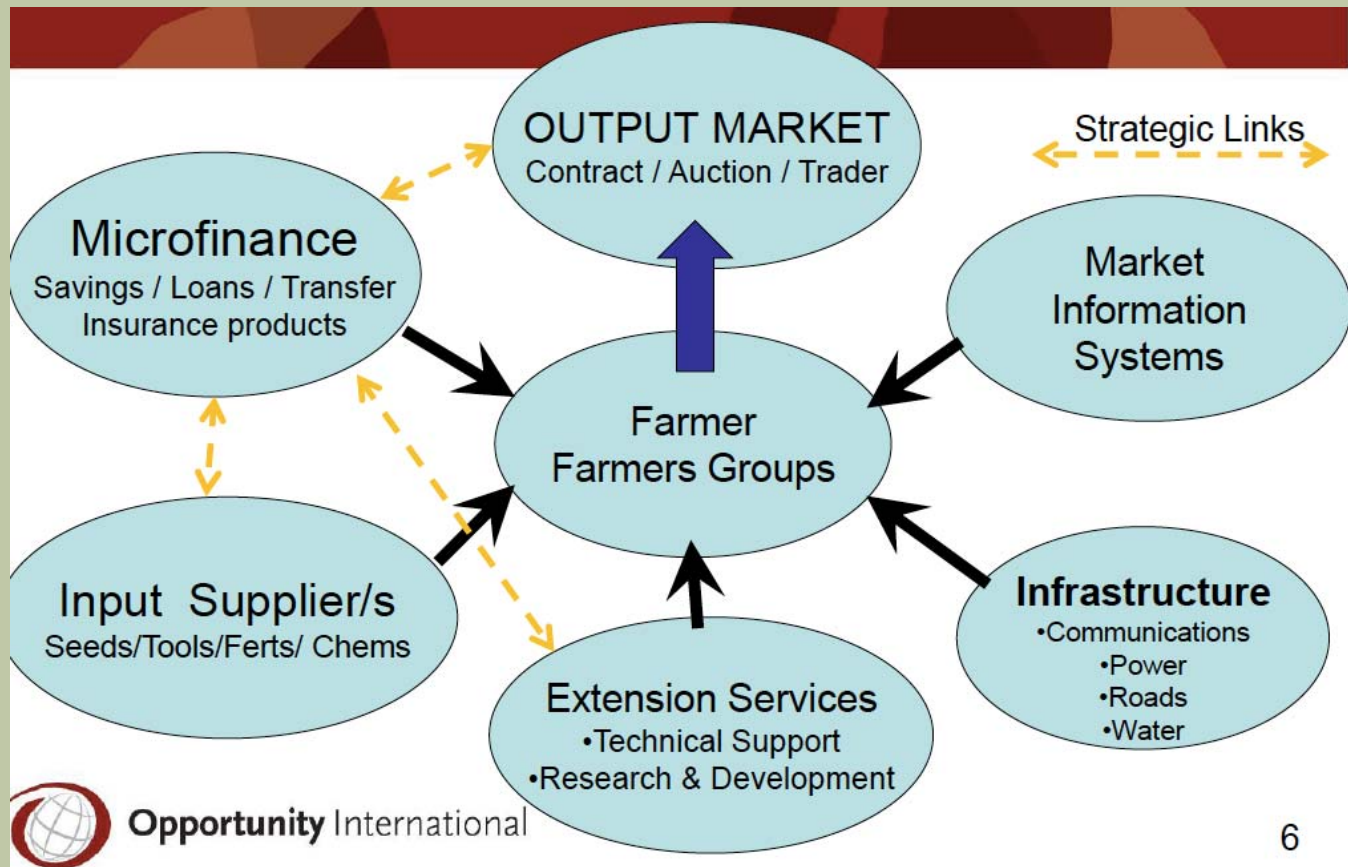
## Risk Mitigation & Financial Enhancements

- \* Insurance
- \* Forward contracts
- \* Futures
- \* Loan guarantees

## Typical Microfinance Financial Services to Agriculture Value Chain:

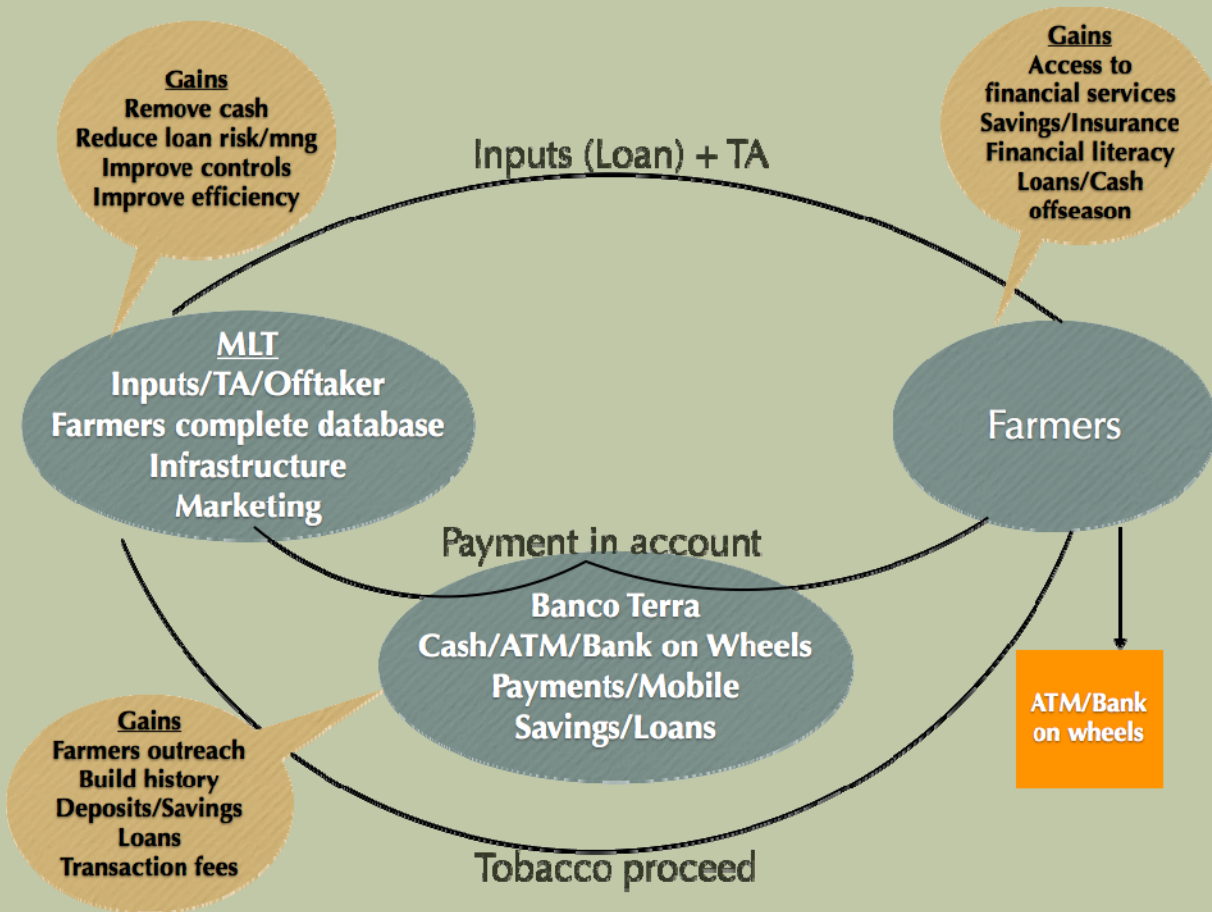
- \* Trader credit
- \* Input supplies
- \* Warehouse receipts
- \* Insurance
- \* Savings
- \* Payments
- \* Cash services to lead firm

# Examples of financial services within value chain: Opportunity International Informed Lending





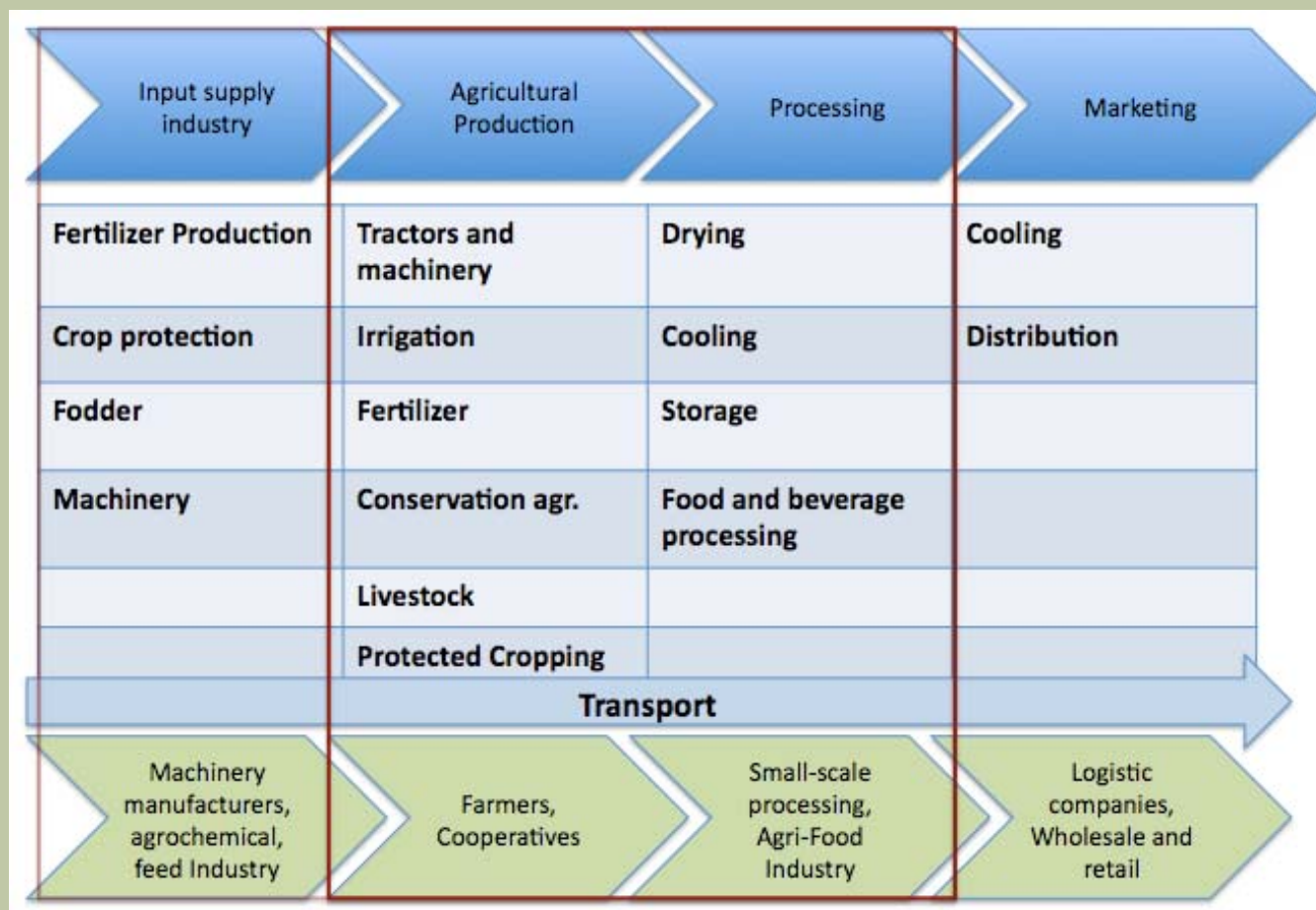
# Examples of financial services within value chain: Banco Terra - MLT partnership



Opening savings accounts for farmers, Banco Terra Mozambique



# Energy consumption in Agriculture Value Chain



Source: Laura Jakobeit, energypedia.info

Indirect energy inputs in fertiliser production, insecticides etc. (Can be replaced with organic fertilisers)

Fuel powered two-wheel or four-wheel tractors  
Irrigation systems  
Storage facilities

Heat, solar, electricity driven drying machines  
Heat or electrical, solar driven refrigerators  
Cereal milling

Fossil fuel-powered or biofuel-powered engines for transport  
Market information using solar powered mobile phones and internet  
Local markets: use of solar lanterns at night



## Irrigation pumps and energy use

Source: Winrock International

Pumping Technology	Purchase Price	Energy Use
Treadle pump	\$100	\$0.25/h labor
Manual 2-cylinder suction pump	\$120	\$0.25/h labor
Manual rope & washer	\$200	\$0.38/h labor
Diesel suction pump	\$700	0.4 L/h
Gasoline centrifugal pump	\$400	0.4 L/h
Submersible electric pump*	\$2,800	2.24 kw
Submersible diesel pump*	\$2,800	1 L/h
Solar pump*	\$2,736	0
Wind electric pump*	\$4,000	0

## Affordable and sustainable irrigation solution for farmers: Bicycle powered pump, Uganda



RAINMAKER is a division of Project 41 and in partnership with WomenFirst.



33 METERS DELIVERY HOSE



A farmer can start irrigating immediately with the Rainmaker, a bicycle and a water source.



# Anywhere energy empowered by and for agriculture



Clean electricity,  
odourless and quiet

The only fuel cell system known to  
convert raw vegetable oil and used  
cooking oil into clean electricity.

Runs on any type of fuel: natural gas,  
propane, diesel, kerosene, JP-8  
(military logistics fuel), ethanol,  
biodiesel, raw vegetable oils  
(e.g. soybean, corn, palm, jatropha, and  
croton nut), used cooking oil, biogas,  
and ammonia.



Scalable: blocks of 1kw, add  
blocks for more power

Cost Effective: Fuel cell systems  
consume less than half the fuel of a  
comparable gas engine or generator.

Continuous Power Availability. AE systems  
are mobile, can be sited indoors, and  
provide instant, continuous power  
anywhere, anytime. This compares to wind,  
solar and diesel generators which are  
intermittent and stationary, require large  
outdoor footprints, and battery backup.

Pre-commercial systems are now being field tested.