

# Integration and synergies at farm through to global levels

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SANREM Annual Meeting

Cincinnati

20,21 October 2012



**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
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# Key messages

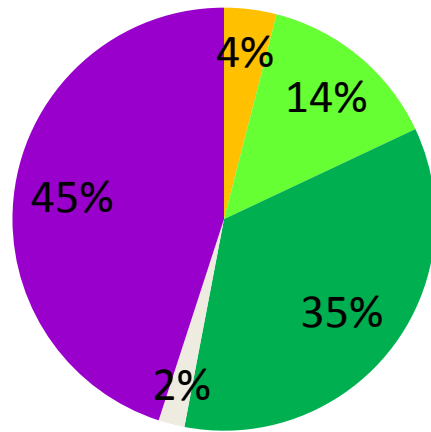
Multiple initiatives exist which address integration and explore synergies at different scales and in numerous dimensions

All are directed towards ensuring that research outputs lead to development outcomes and to impact

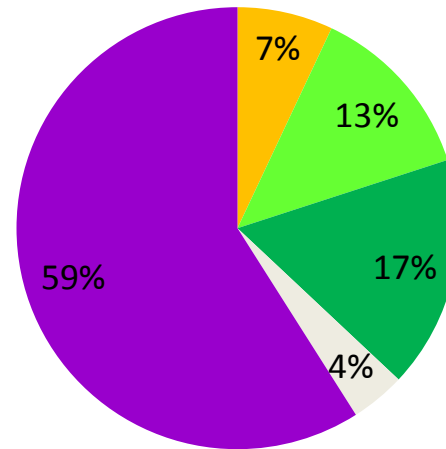


# Global food production – significant amounts from agro pastoral and mixed crop livestock systems

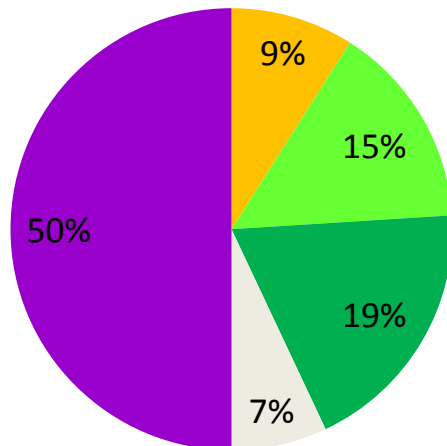
## Cereals



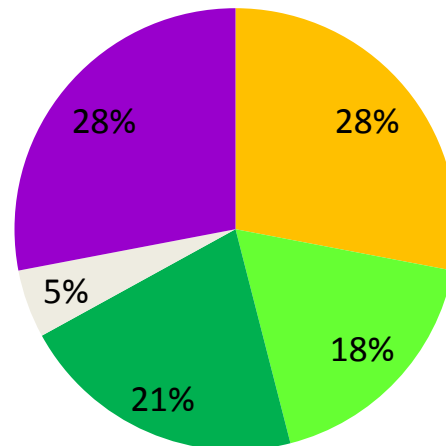
## Milk



## Beef



## Lamb



- agro-pastoral
- mixed extensive
- mixed intensive
- other
- developed countries

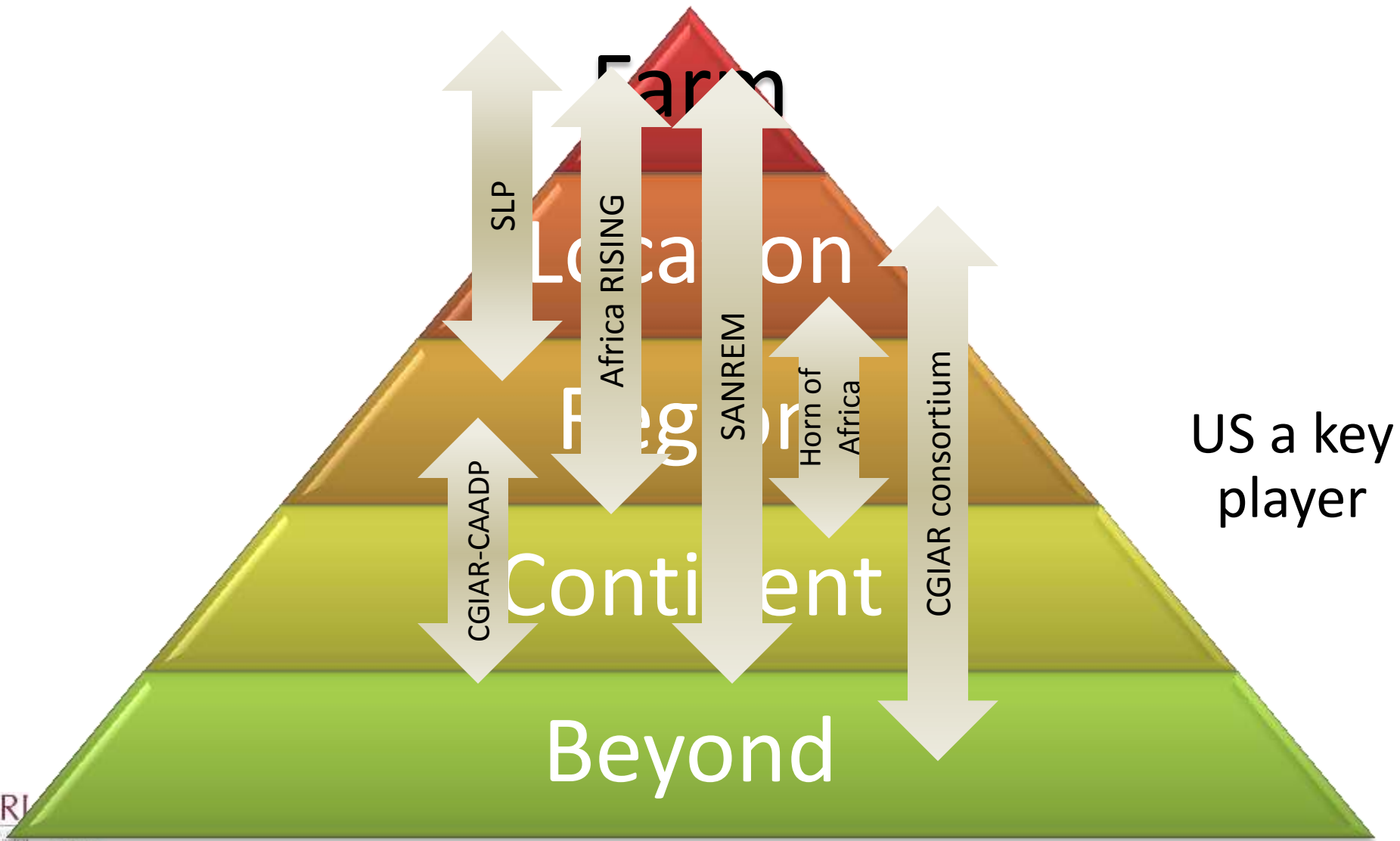
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# Integration and synergies (trade-offs)



# Integration and synergies

## Different “levels”



# Interactions and synergies

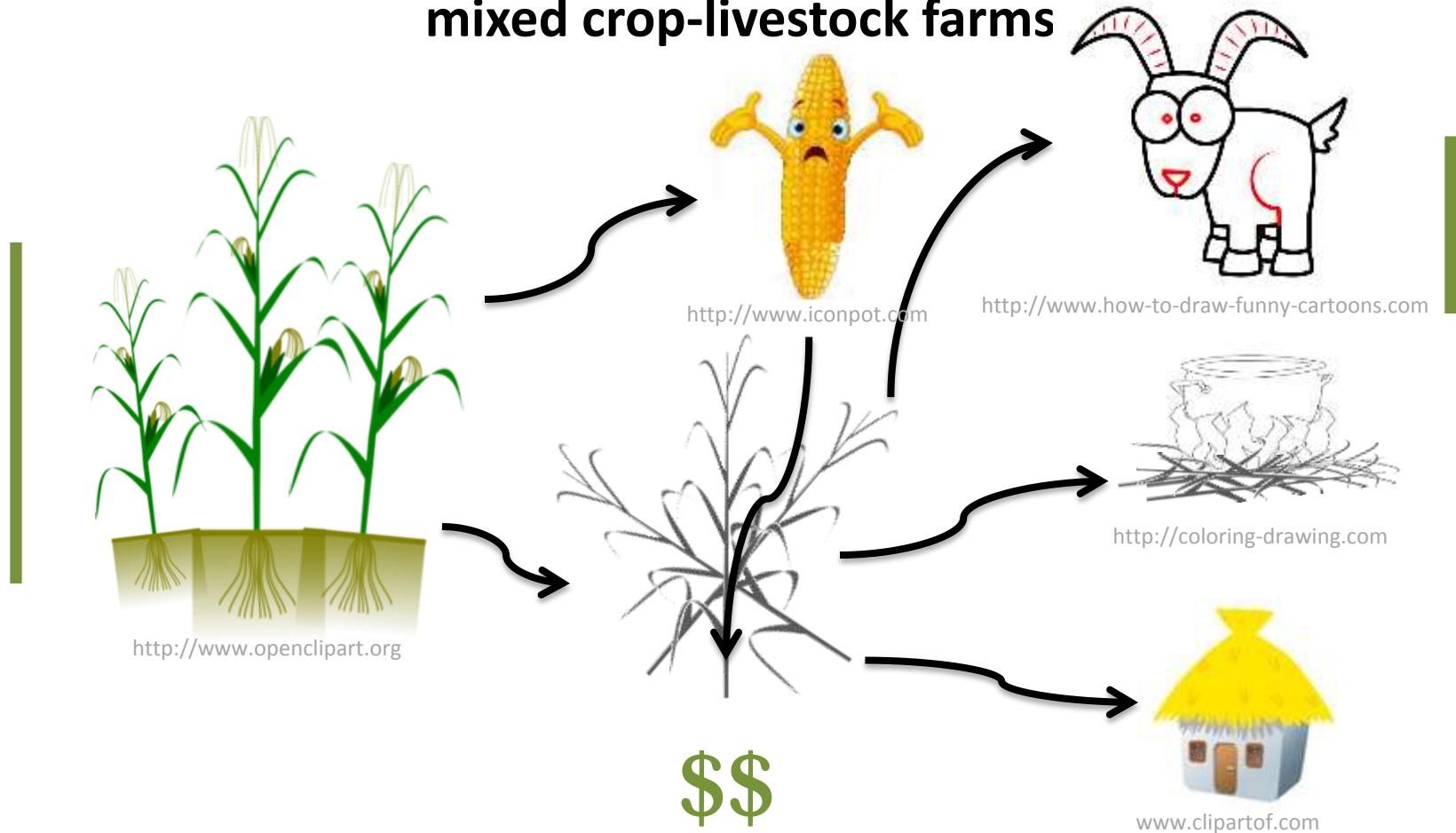
## Different dimensions

- Biophysical
- Context-drivers-institutions-markets-processes
- Research-development



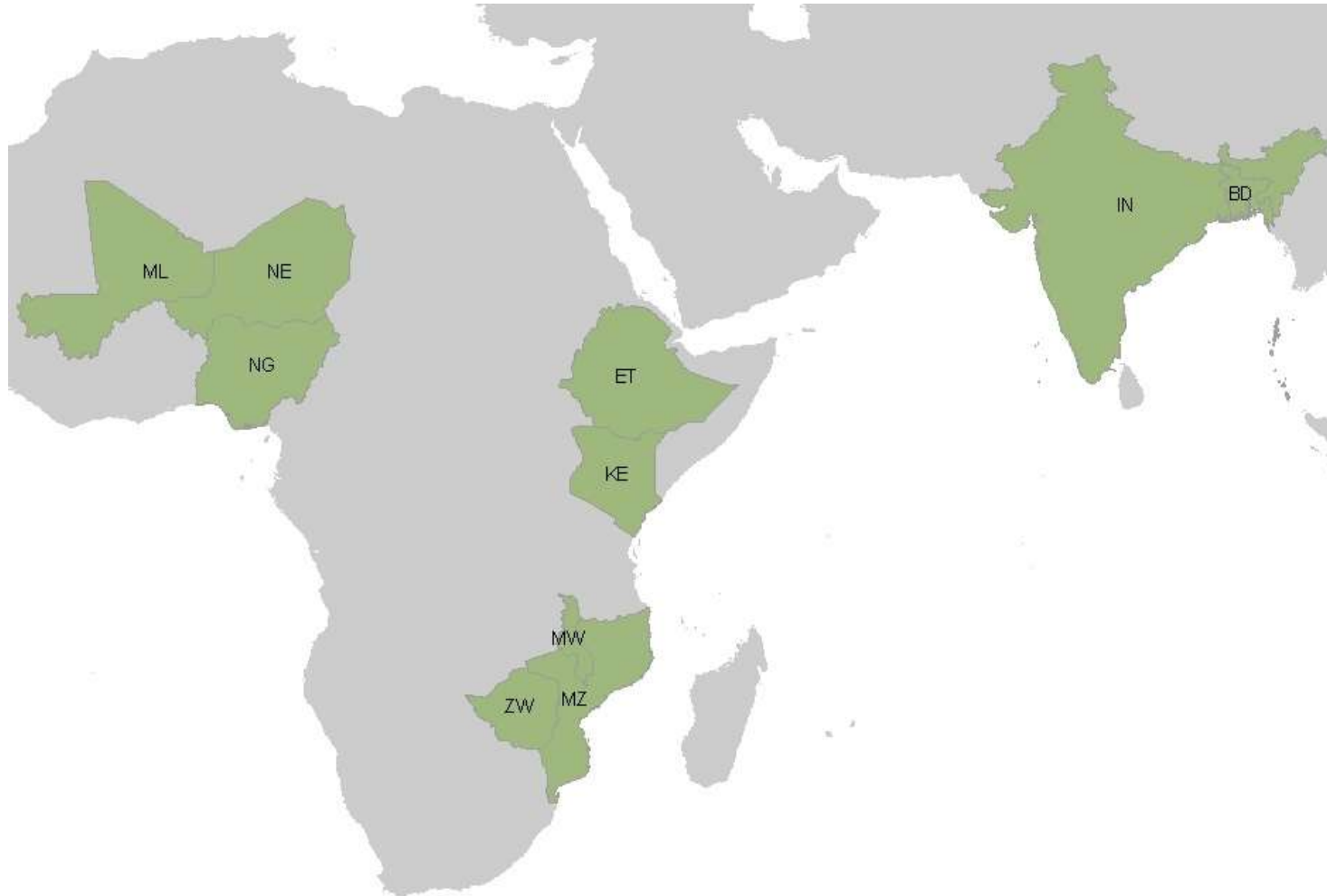
# System-wide Livestock Programme

## crop residue use mixed crop-livestock farms

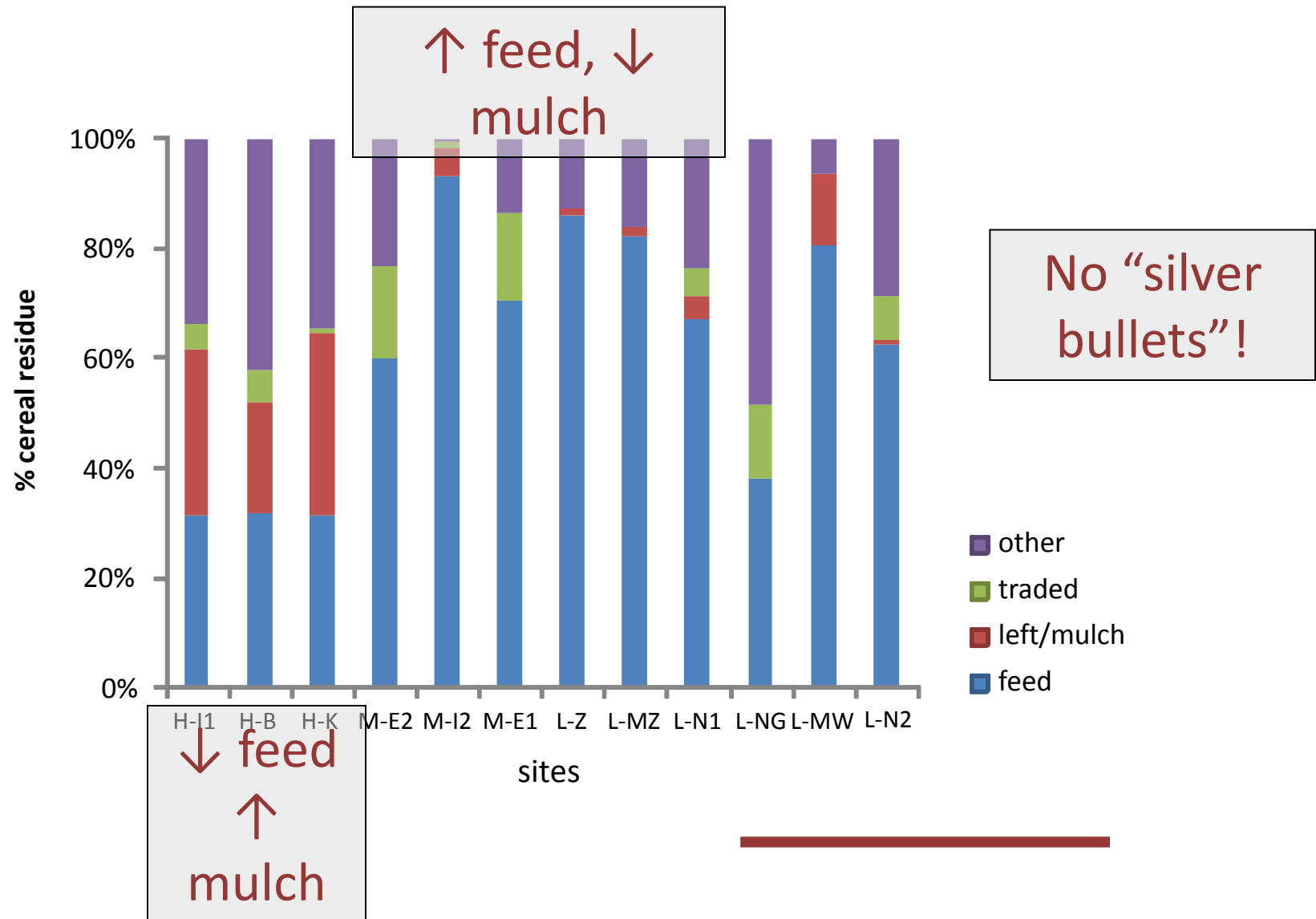


# Biomass use and trade offs

Diversity of intensification ---- market access



# Multiple use of crop residues – cereals and legumes



# Findings

Increasing – residue collection and feeding

Farmers often know the potential benefits of mulching but constrained by low biomass production and lack of alternative resources

- CR multipurpose only where:
  - high biomass production
  - medium production with low livestock demand (fertilizer subsidies in Malawi)
- Options for sustainable intensification; management of resources....
  - Understand and work with farmers
  - CR public or private: R&D should account for institutions regulating CR use

CR more than mulch: if biomass production remains low, the opportunity costs for using CR as mulch may be high for smallholder farmers (e.g. fuel, feed). Incentives might be needed.

- Fewer but more productive cows? In most of these location, livestock intensification is low but they provide services beyond markets (traction, savings, risk aversion, etc.).

# Africa RISING

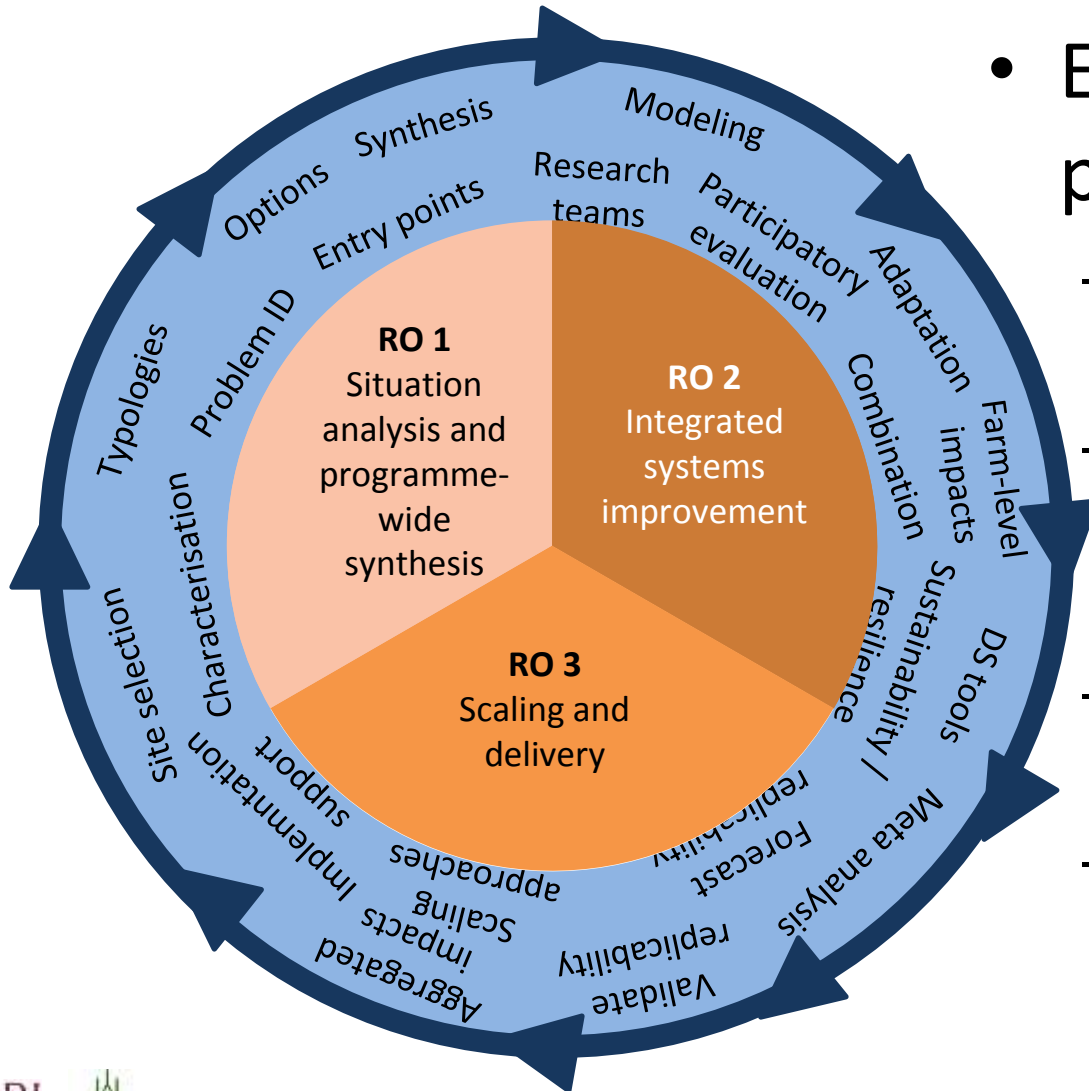
RISING = Research into Sustainable Intensification for a New Generation

- USAID Feed the Future – to end hunger and food insecurity
  - 3 multi-stakeholder agricultural research projects
  - Sustainable intensification of key farming systems
  - **Catalyse** and promote **synergies**; **leverage** opportunities with research and development action = **alignment**
    - Comprehensive Africa Agricultural Development Programme (CAADP)
    - Major agricultural development programmes
    - National and CGIAR research efforts
  - R4D / farming systems approach to SI in mixed crop-livestock systems



[www.africarising.net](http://www.africarising.net)

# Research Process



- **Emphasis on partnerships**

- Strengthen research capacity / synergies
- Not re-inventing wheels or inventing new wheels with flat tires
- Grounding the research in development problems
- Opportunities for scaling

# Types of Intervention

## Knowledge and capacity strengthening

- Tools for targeting and scaling
- Tools / documents to support farmer decision-making

## Social cohesion

- Community level innovation to support peer-to-peer learning
- Removing constraints on collaboration and reciprocity

## Technical advances

- Integrating pulses into cereal-based systems
- Capitalising on tree-livestock interactions
- Improved feed resource management

## Institutional strengthening

- Multi-stakeholder approaches for strengthening market function / service delivery etc.
- Community-based Policy Advocacy

# Horn of Africa “Technical Consortium” Innovative partnership: demand driven research – sustainable action for development

- Response to 2011 drought
- Relief.....sustainable development
- Research in development context
- Technical (=research) input:
  - Country programme planning papers; investment plans
  - Regional
  - Technical briefs

(TC = ILRI coordinates for CGIAR – FAO... other research...)



# Lessons, opportunities

- Innovative research will be needed to enhance impact on resilience of drought-prone communities
- Transaction costs....understanding between “research” and “development”
- Essential for
  - Long term impact
  - Research – into – use (outcomes....)



# The “Dublin Process”

## Enhancing CAADP and CGIAR Alignment and Partnerships

- **Initiative**
  - Comprehensive Africa Agriculture Development Programme (CAADP),
  - CGIAR -- a global research partnership for a food secure future,
  - CAADP’s Development Partners
- **Aim**
  - Deepen alignment and collaboration between Africa’s agricultural research, extension and education programs and the programs of the CGIAR Consortium along with
  - Other important partners, to facilitate agricultural transformation across the African continent.

CAADP



# Consortium of CGIAR

- CGIAR consortium (board; office)
- Fund council
- 15 CGIAR Research Programs
- System level outcomes
  - Reduced rural poverty
  - Improved food security
  - Improved nutrition and health
  - Sustainably managed natural resources

[www.cgiar.org](http://www.cgiar.org)

# CGIAR Research Programs

**Dryland Cereals  
Grain Legumes  
Livestock and Fish  
Maize  
Rice  
Roots, Tubers and Bananas  
Wheat**

**Climate Change, Agriculture and Food Security  
Forests, Trees and Agroforestry  
Water, Land and Ecosystems**

**Integrated Systems for the Humid Tropics  
Aquatic Agricultural Systems  
Dryland Systems**

**Policies, Institutions, and Markets**

**Agriculture for Nutrition and Health**

**Multiple initiatives exist which address integration and explore synergies at different scales and in numerous dimensions**

**All are directed towards ensuring that research outputs lead to development outcomes and to impact**



# *Better lives through livestock*

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