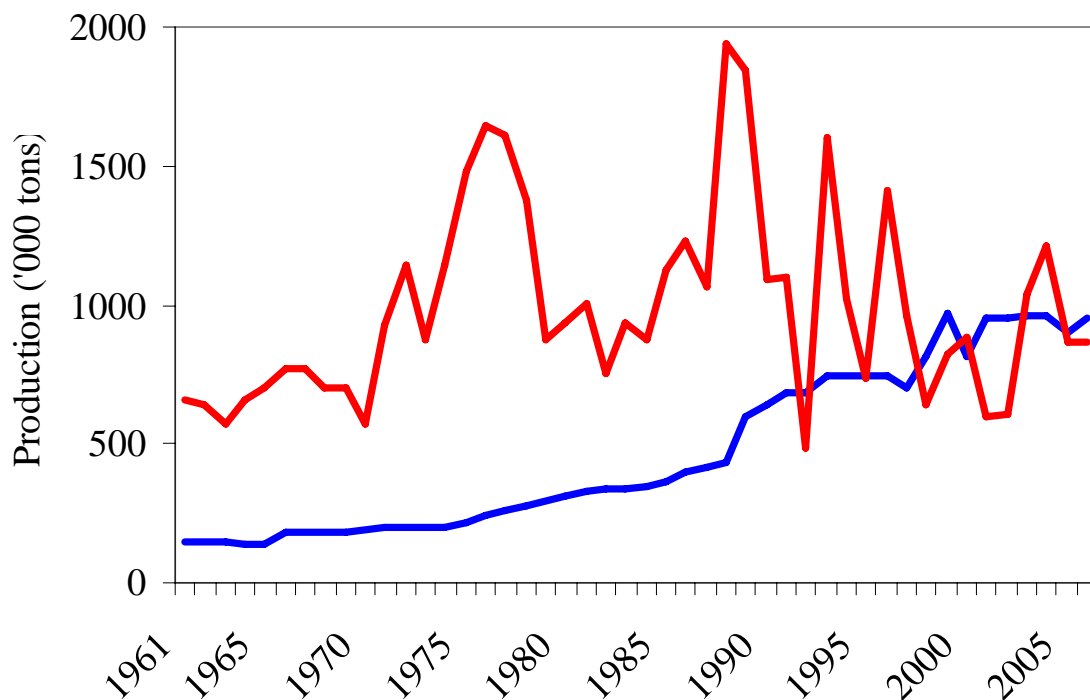


# From Roller Coasters to Rocket Ships: Lessons from Past Successes in African Agriculture

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Michigan State University  
AGRA Policy Planning Workshop  
Nairobi June 23-24, 2008

## Roller Coasters or Rocket Ships?



# IFPRI Review of Successes in African Agriculture

1. Methods

2. Lessons

a. What has to happen?

b. How?

## 1. Methods

- Inventory “successes”: expert survey
- Select informative cases: advisory panel
- Comparative case studies: case study teams
- Generalize: analytical teams plus stakeholder workshops

# Case Studies Reviewed

- Maize: Kenya, Malawi, Zambia, Zimbabwe
- Cotton: Mali
- Cassava: Nigeria, Ghana, Malawi, Zambia
- Horticultural exports: Kenya, Ivory Coast
- Dairy: Kenya, Ethiopia, Uganda
- Conservation farming: Burkina, Zambia
- Improved fallows: Kenya, Zambia

## Categorizing the Case Studies

Motors of change	Case studies
Comprehensive public research, input and marketing package	Maize Cotton Dairy
Public R&D	Cassava
Private-led marketing	Export horticulture
Research and extension: private and public	Conservation farming Improved fallows

# Plan of Attack

1. Methods

2. Lessons

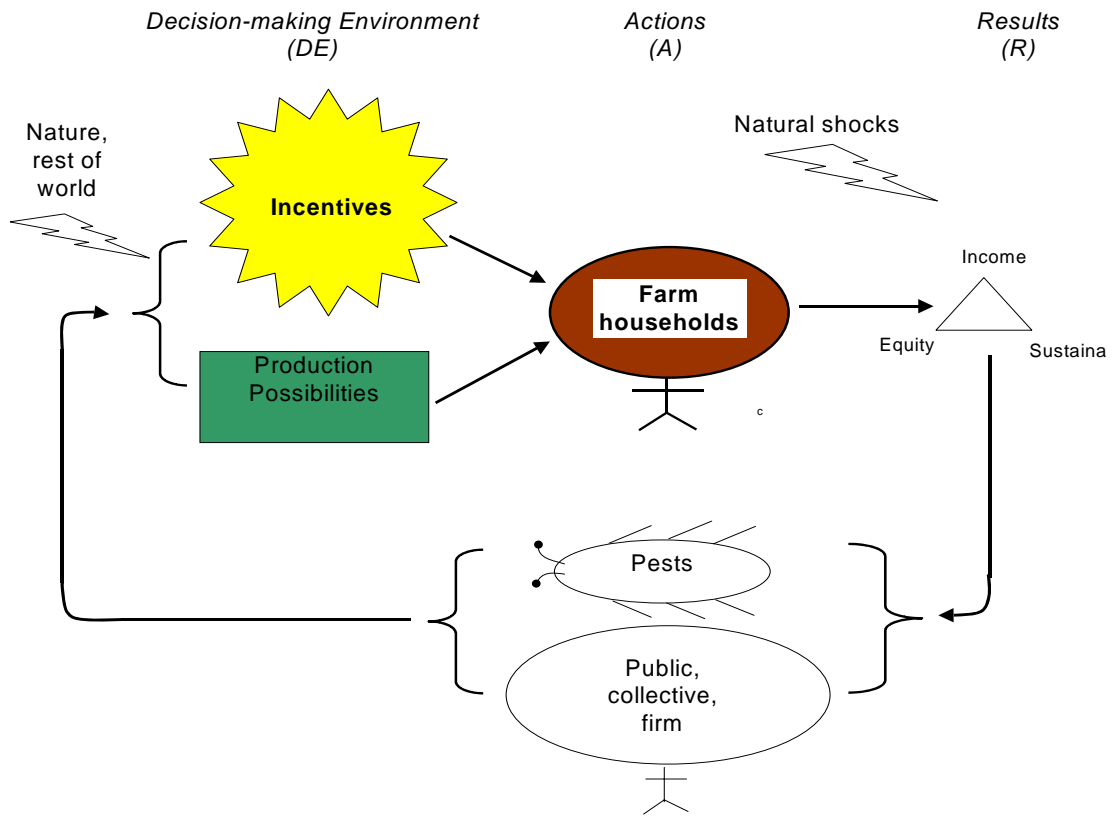
**a. What has to happen?**

b. How?

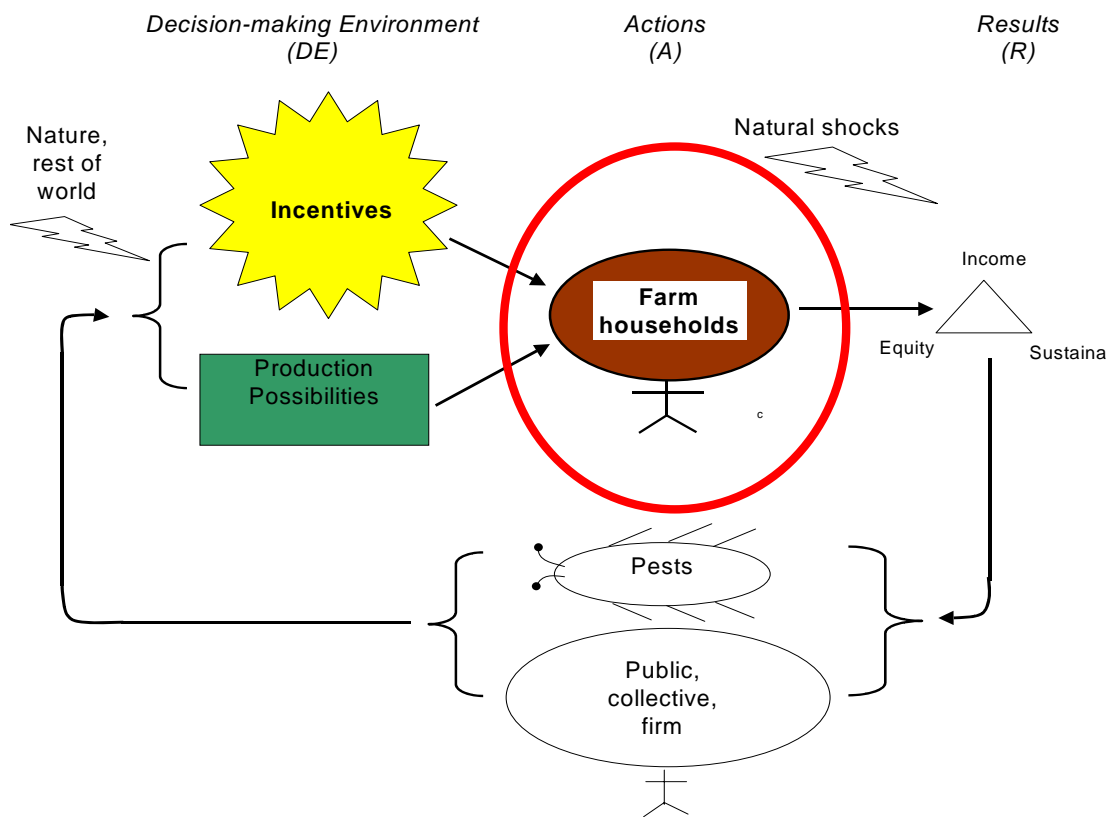
2a. What has to happen?

- Improved productivity
- Adequate incentives

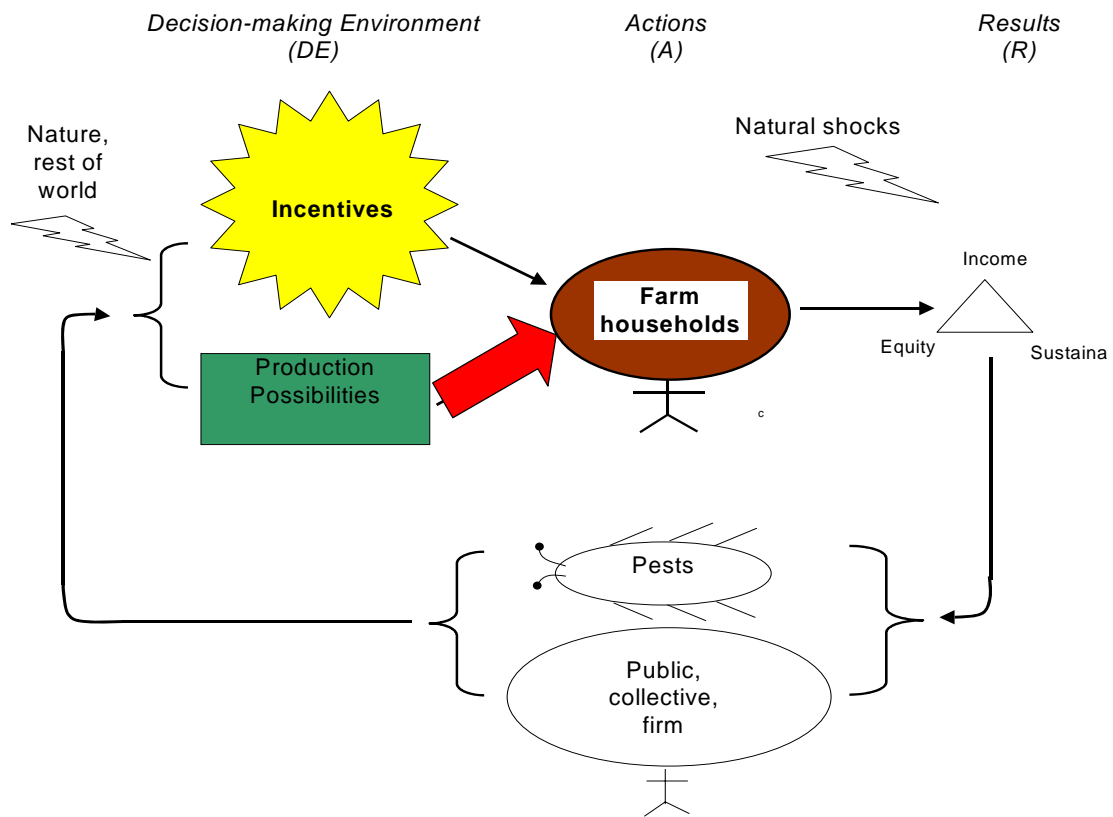
## The Dynamics of Agricultural Change



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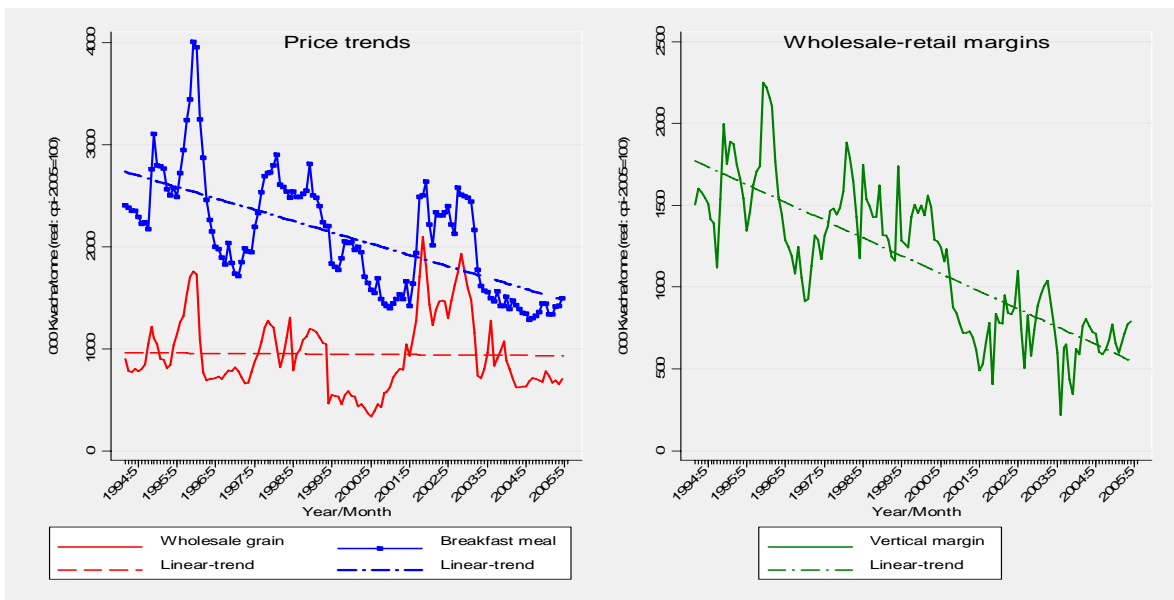
## Improved productivity: technology



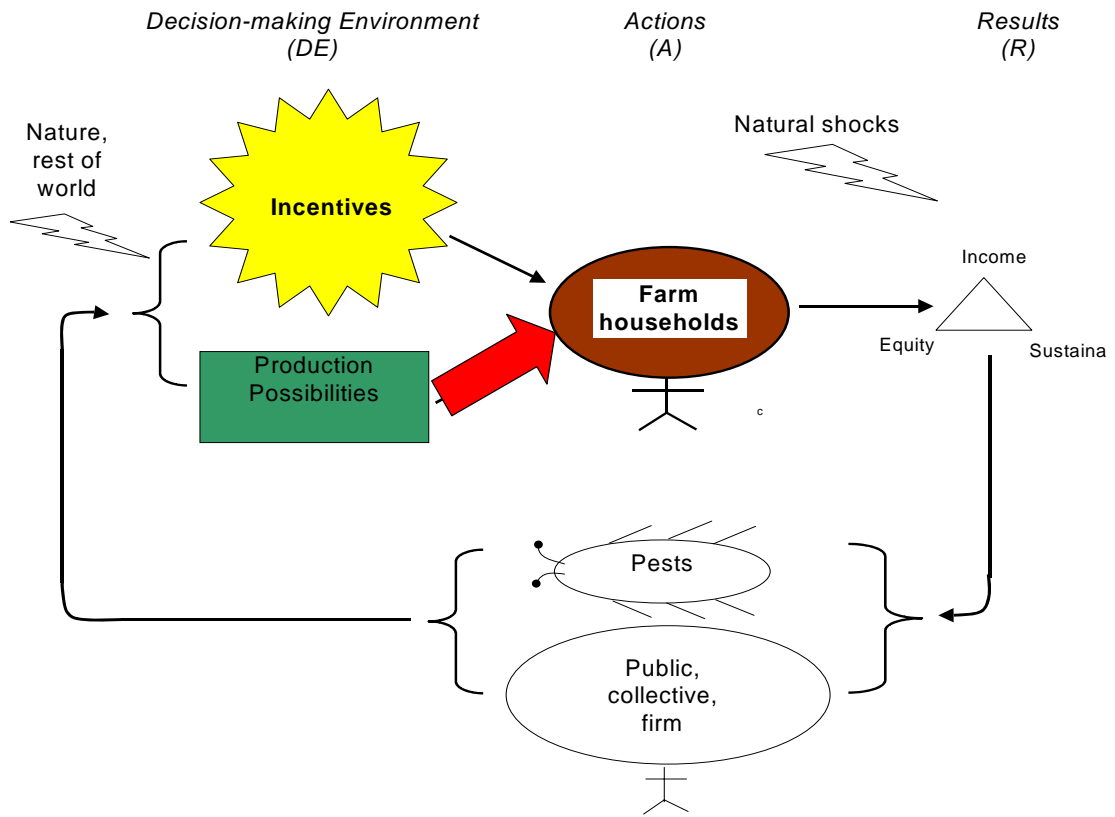
# Improved productivity: management

	Yield (kg/ha)	
	Cotton	Maize
Conventional plowing	820	1,350
Conservation farming basins	1,280	3,000
Sources of difference		
higher input use	90	500
early planting*	40	400
water harvesting in basins*	330	750
total difference	460	1,650

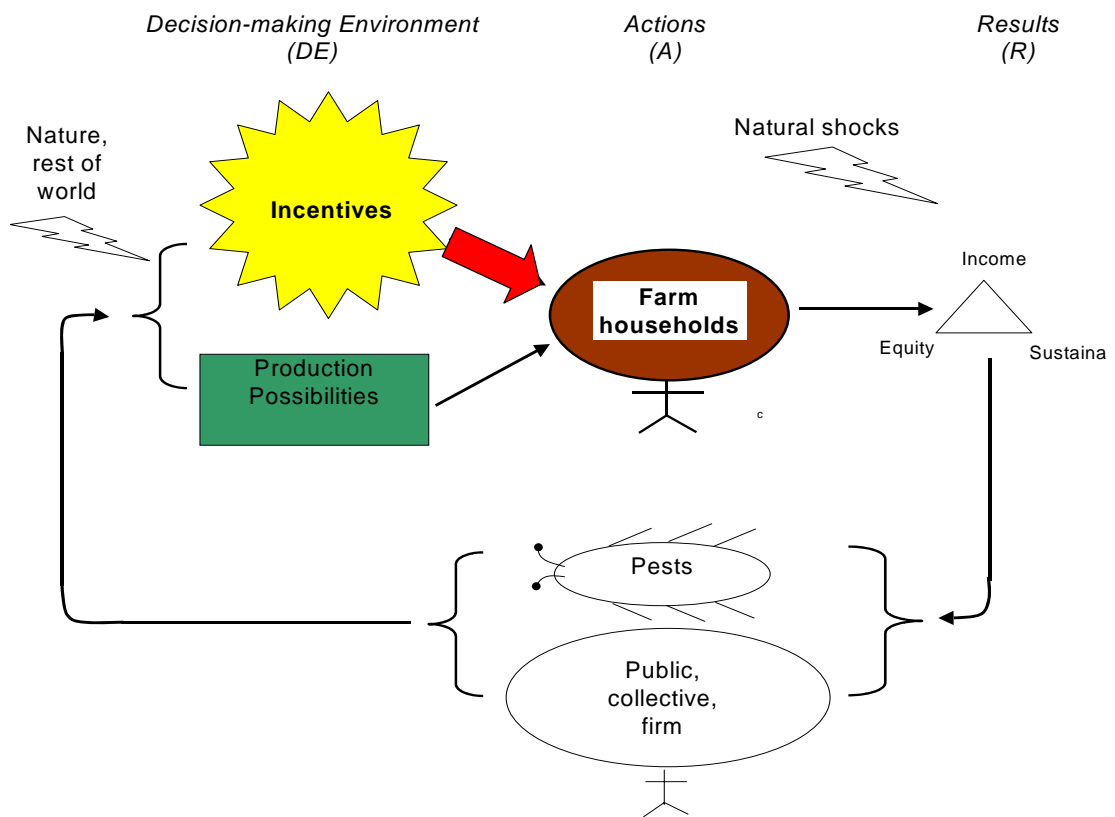
# Improved productivity: marketing



### The Dynamics of Agricultural Change

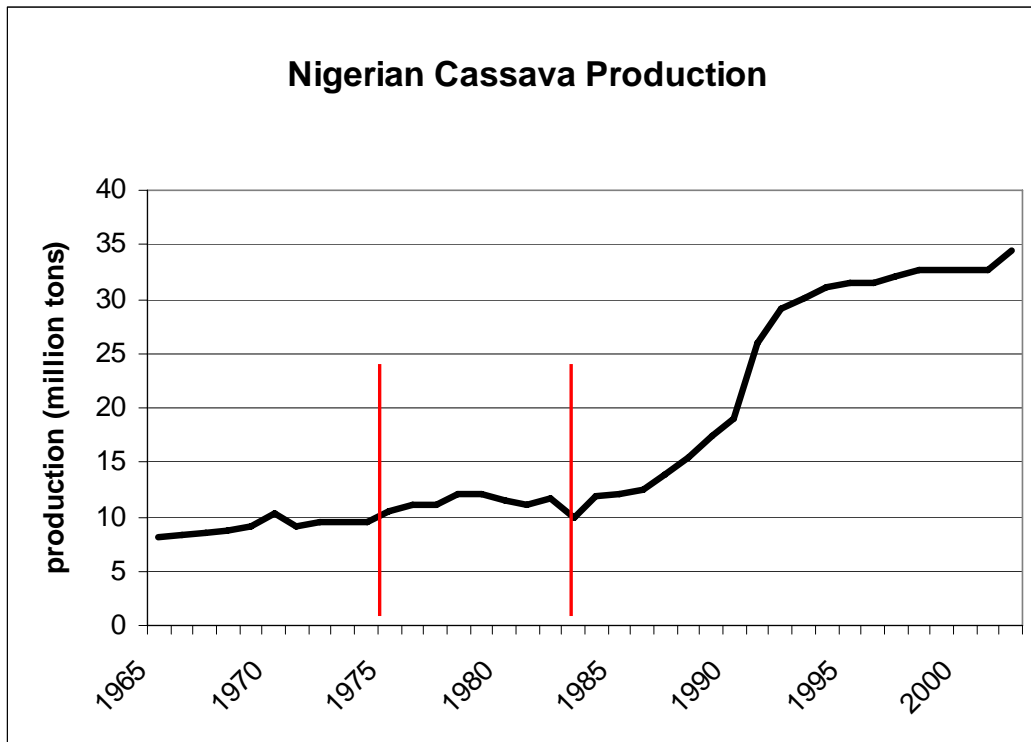


### The Dynamics of Agricultural Change

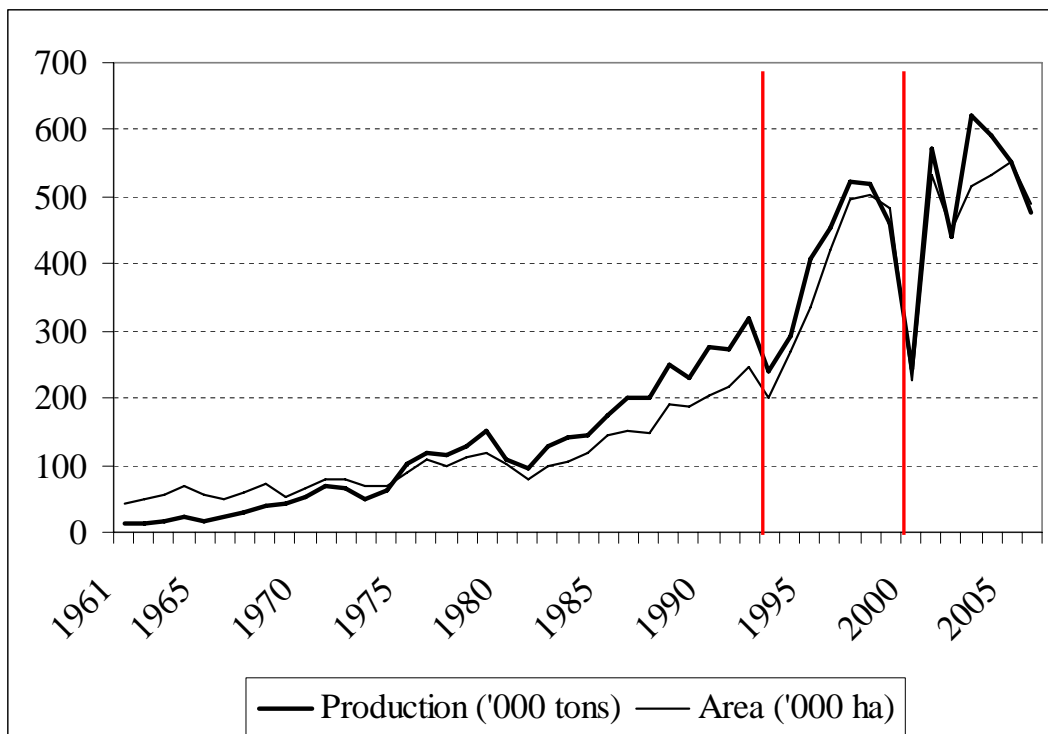




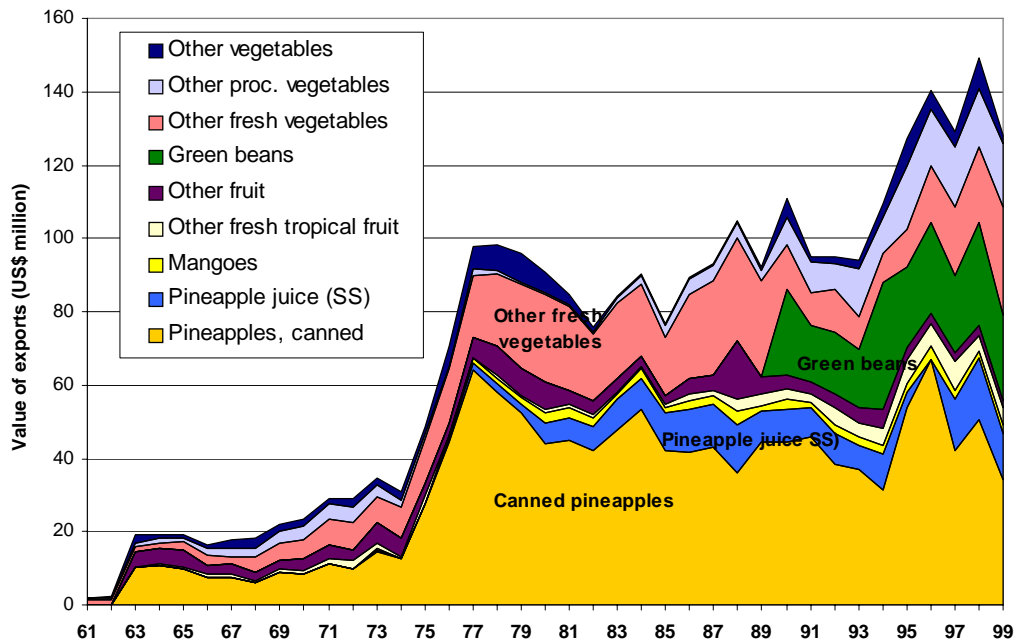
# Adequate incentives: Cassava Nigeria



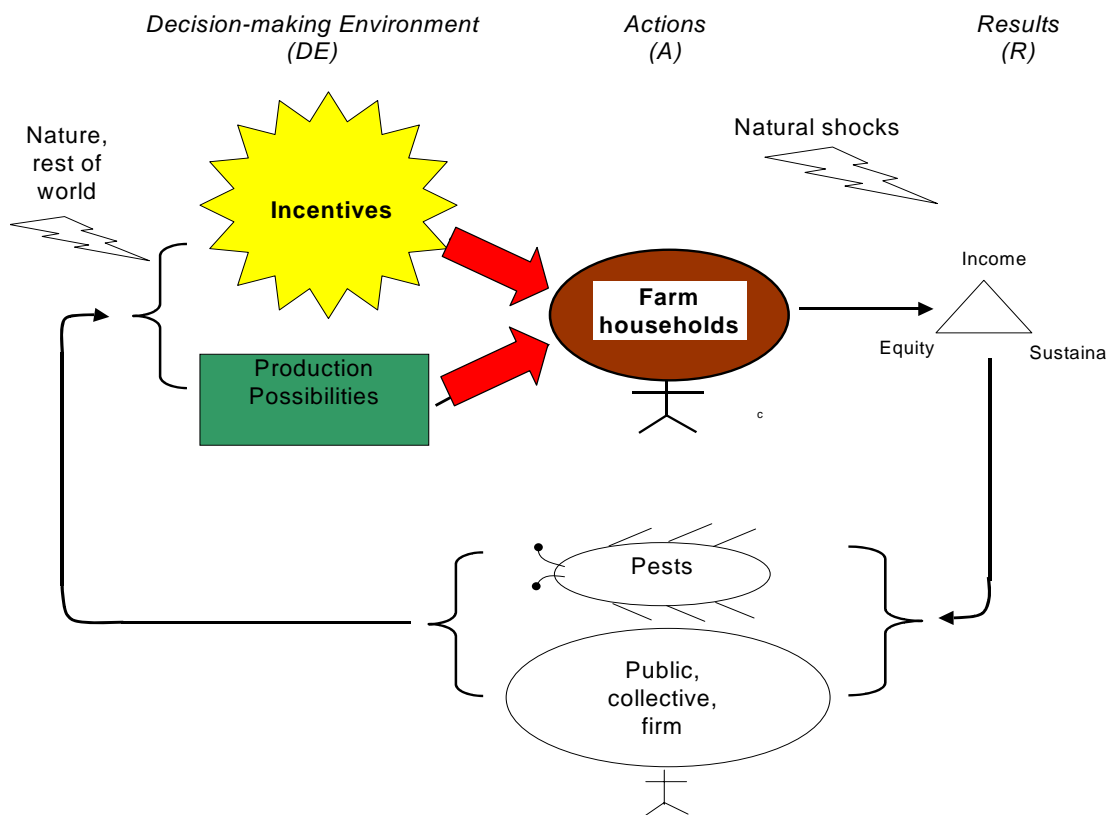
# Adequate incentives: Malian cotton



# Adequate incentives: growing markets



## The Dynamics of Agricultural Change



# Plan of Attack

1. Methods

2. Lessons

a. What has to happen?

**b. How?**

## 2b. How?

- Public goods plus private incentives
- Patience and perseverance
- Think regionally

## Public vs private: many options are possible

	Public	Private	Public and private	Public → private
Technology	<ul style="list-style-type: none"><li>• Cassava</li><li>• Maize</li><li>• Cotton</li></ul>	<ul style="list-style-type: none"><li>• Conserv. farming</li></ul>	<ul style="list-style-type: none"><li>• Improved fallows</li><li>• Dairy</li></ul>	
Marketing		<ul style="list-style-type: none"><li>• Horticulture</li><li>• Cassava</li></ul>	<ul style="list-style-type: none"><li>• Dairy</li></ul>	<ul style="list-style-type: none"><li>• Maize</li><li>• Cotton</li></ul>

## Key public goods

- Research
  - Open pollinating varieties
  - Vegetatively propagated crops
  - Orphan crops
- Disease control
- Infrastructure
- Policies

## 2b. How?

- **Public goods plus private incentives**
- Patience and perseverance
- Think regionally

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- Public goods plus private incentives
- **Patience and perseverance**
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## Patience and perseverance

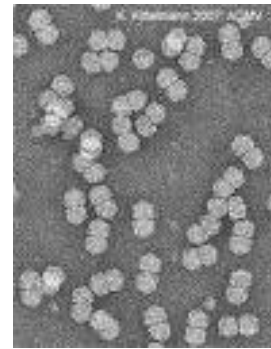
- Dairy: 80 years
- SR52: 28 years
- TMS cassava: 18 years + 7 years

## Patience and perseverance

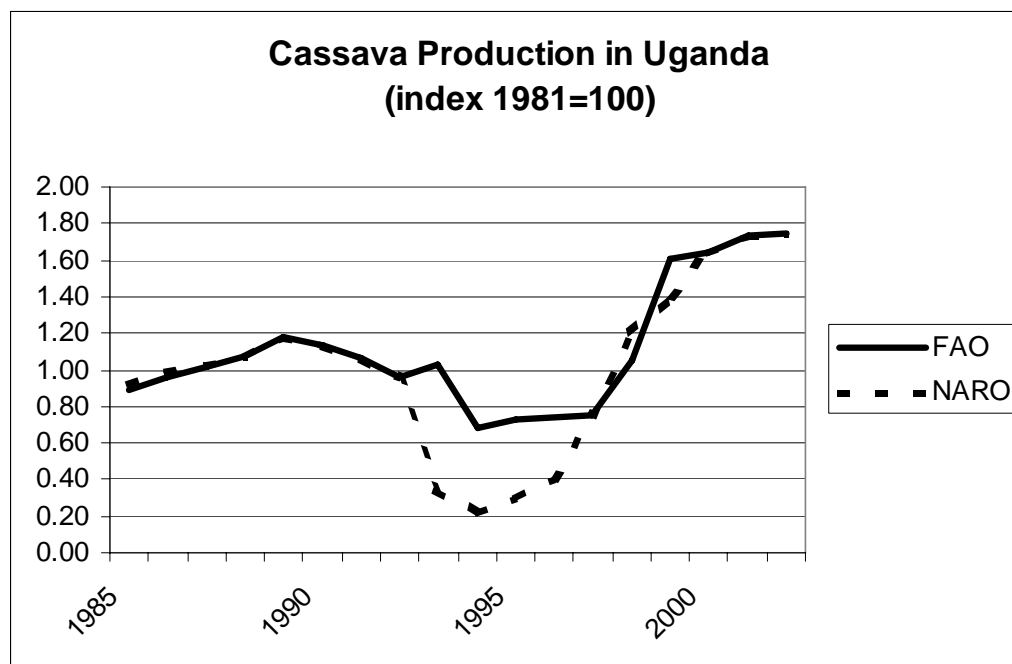
- Dairy: 80 years
- SR52: 28 years
- TMS cassava: 18 years + 7 years

**→ SLOW MAGIC**

# Pests and diseases constantly mutate



## Mutating pests and disease require sustained research



## 2b. How?

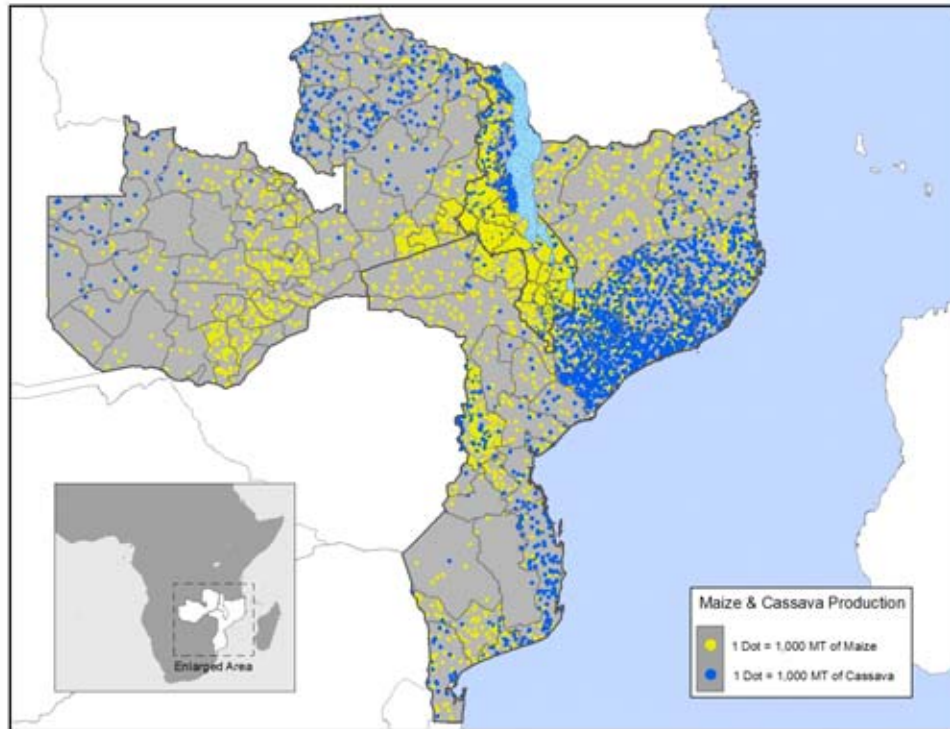
- Public goods plus private incentives
- Patience and perseverance
- **Think regionally**

### Think regionally: technology

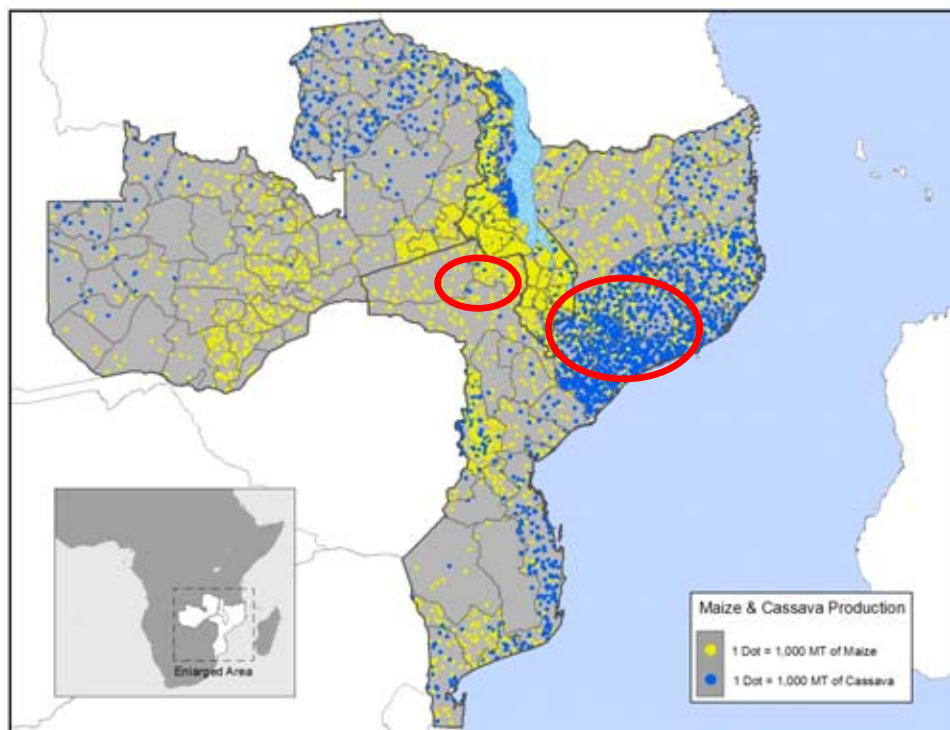
- Cotton
- Maize
- Cassava
- Dairy
- Improved fallows
- Conservation farming



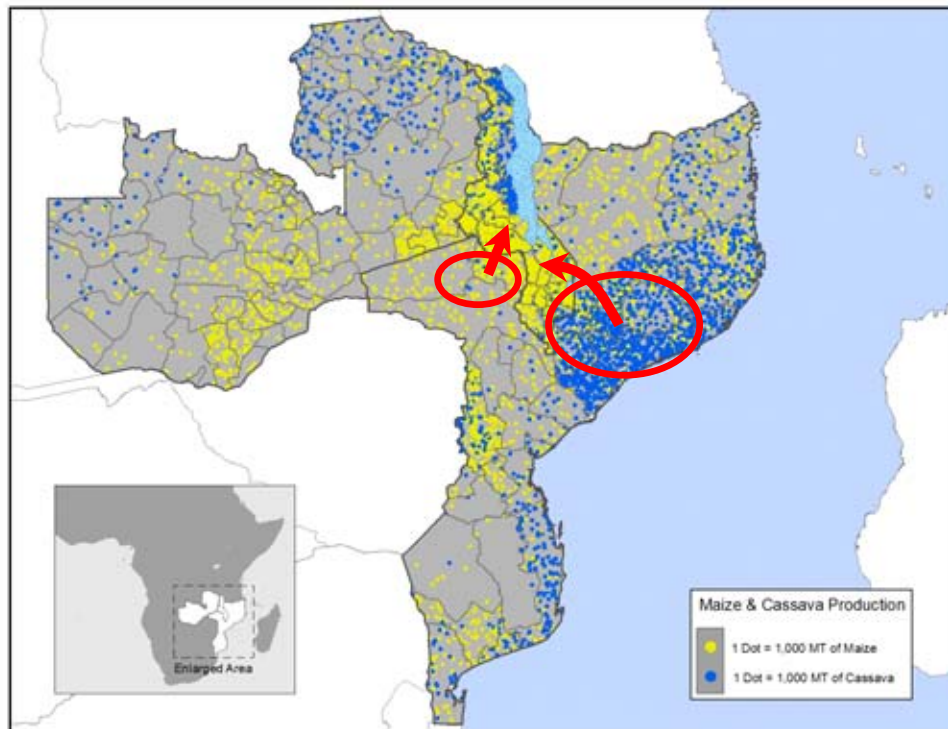
# Think regionally: trade



# Think regionally: trade



# Think regionally: trade



## Conclusions

- Success is possible
- What has to happen?
  - Improved productivity
  - Adequate incentives
- How
  - Public goods plus private incentives
  - Patience and perseverance
  - Think regionally