

EGERTON

UNIVERSITY



TEGEMEO INSTITUTE OF AGRICULTURAL  
POLICY AND DEVELOPMENT

# UPTAKE OF CROP INSURANCE IN THE FACE OF CLIMATE CHANGE

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*Kenya School of Monetary Studies, Nairobi*



# OUTLINE

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- Introduction
- Rationale
- Objectives
- Results
- Emerging Lessons
- Way forward

# Introduction

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- Climate variability & change is the greatest challenge of our time:
  - Affects input use
  - Causes decline in soil productivity
  - Affects water and nutrient availability and utilization
  - Reduces crop growth & yields
  - Leads to crop failure and livestock mortality
  - Decreases resilience of households that depend on rain-fed agriculture
- Recent trends indicate increasing frequency and severity of weather related shocks

# Introduction...

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- Huge financial expenses in disaster response activities
  - 1999-2011, average annual spending on food and non-food emergency amounted to USD 173.2 million
- County governments are faced with many competing priorities; climate change skills/personnel remains a challenge
- Income diversification and crop insurance can reduce adverse effects of climate variability and change

# Introduction...

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## □ General characteristics of insurance in Kenya

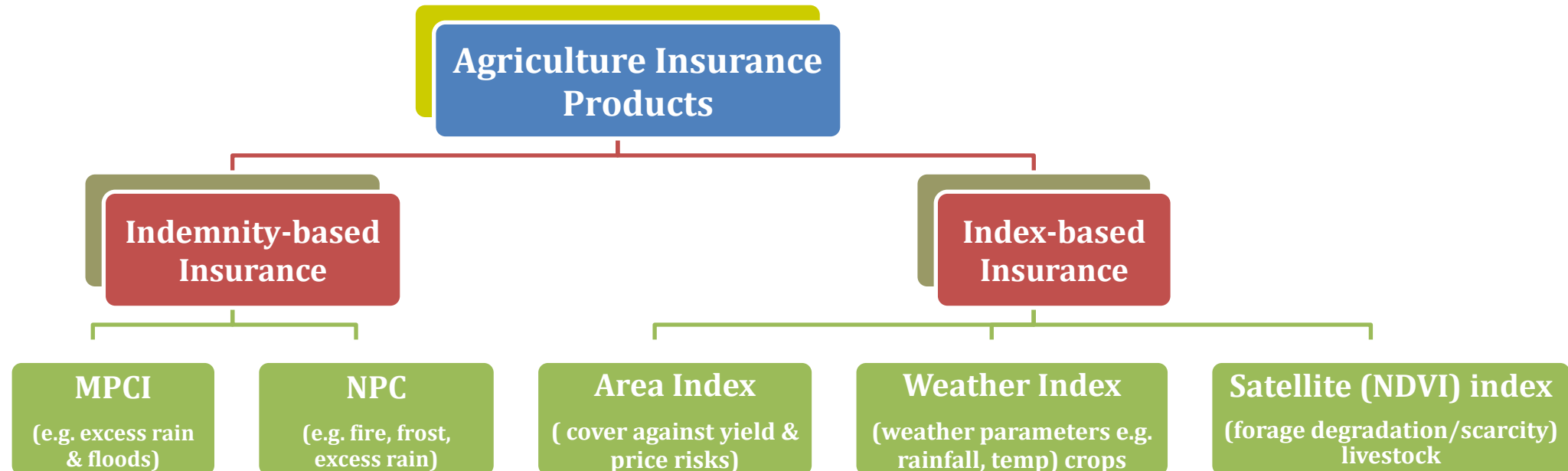
- Penetration estimated at 3% of GDP
- Predominantly in motor, fire and personal accident (mainly group medical cover)
- Only 7% of population has any form of insurance cover, mostly in formal sector

## □ Agricultural insurance market in Kenya

- Statistics on uptake of agricultural insurance not clear; risk transfer instruments limited
- Smallholders resort to risk minimization strategies

# Introduction...

## □ Ag-Insurance Products



# Rationale

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- Very little success has been achieved to move pro-poor index insurance beyond the piloting phase (Cole *et al.*, 2012).
- Dearth of information with regard to the quality of indexed products (Jensen *et al.*, 2014).
- Need to understand the uptake of the pro-poor innovative index-based insurance products.
  - Factors affecting uptake of crop insurance are yet to be fully understood partly because of lack of sufficient data.

# Objectives

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- To establish the most important risks faced by maize producers and the coping mechanism applied
- To assess level of farmer awareness about crop insurance & information channels used
- To determine factors that influence insurance uptake decisions



# Methodology

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## □ Study Area

- Embu & Laikipia counties
- Selected due to availability of a significant number of insured farmers

## □ Data

- 400 maize producing households in Embu and Laikipia counties interviewed
- 240 insured & 160 un-insured

## □ Insurance product

- Weather index-based insurance for maize

## □ Empirical Method

- Descriptive statistics
- Heckman 2-stage model to analyze insurance uptake decisions

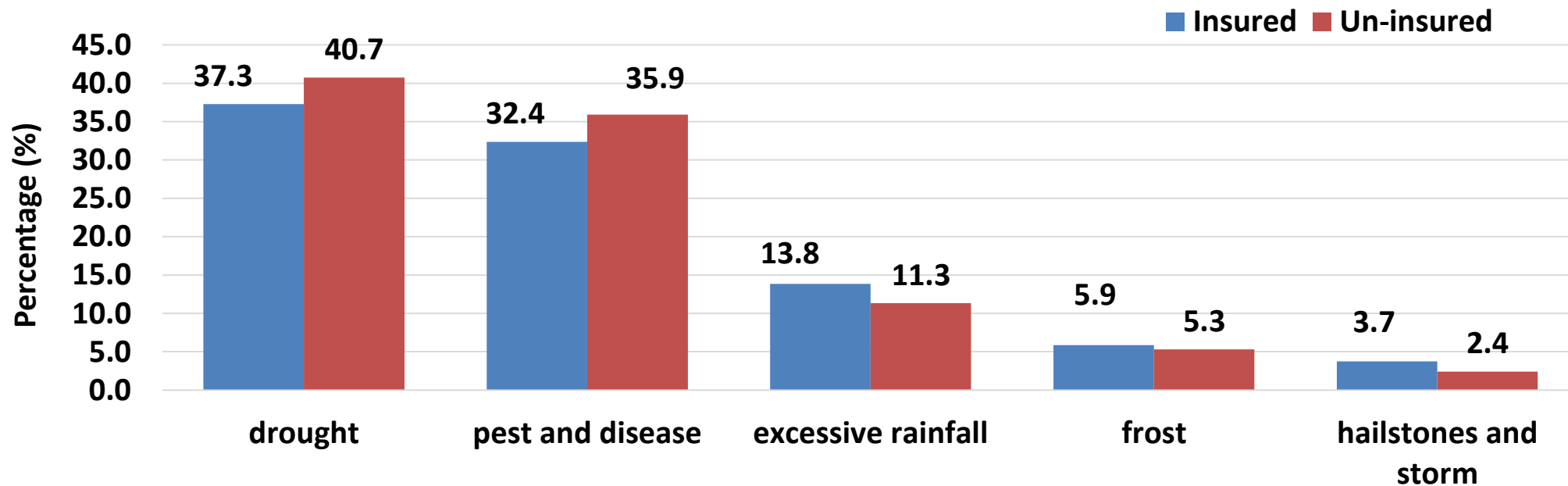


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# RESULTS

# Risk Sources and Trends

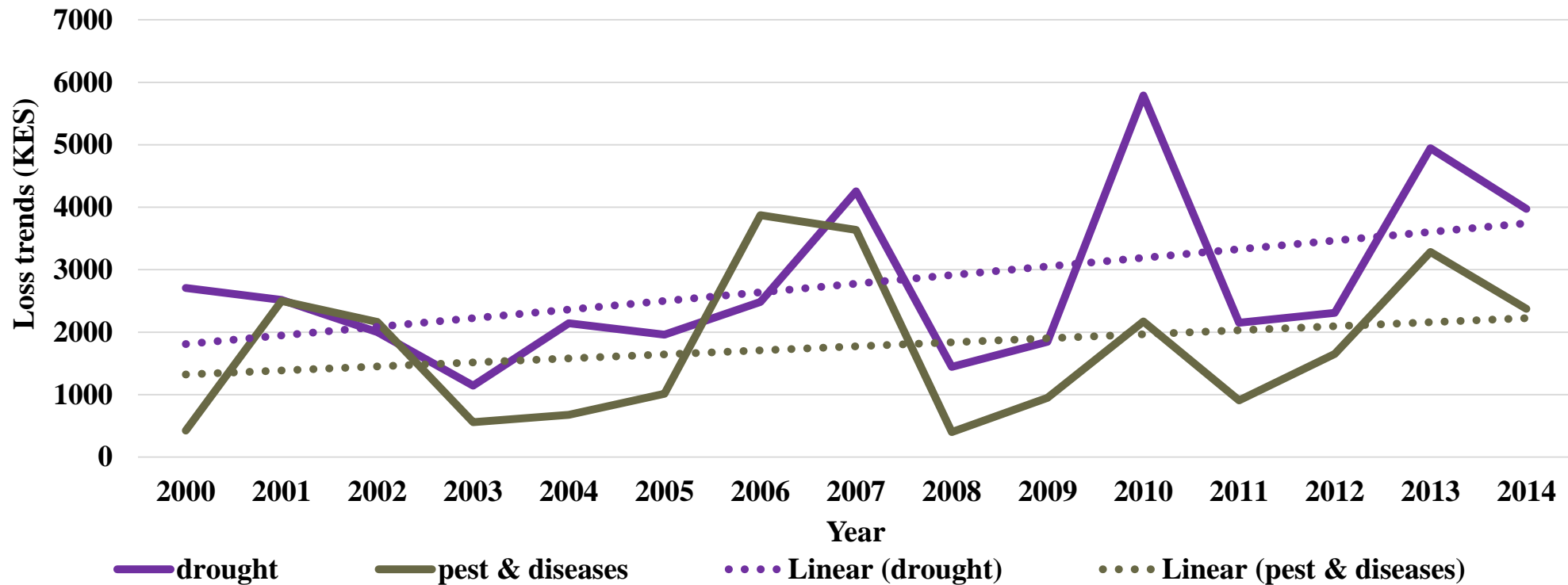
## □ Major causes of crop loss & damages



Source: Household Survey 2014

# Risk Sources & Trends...

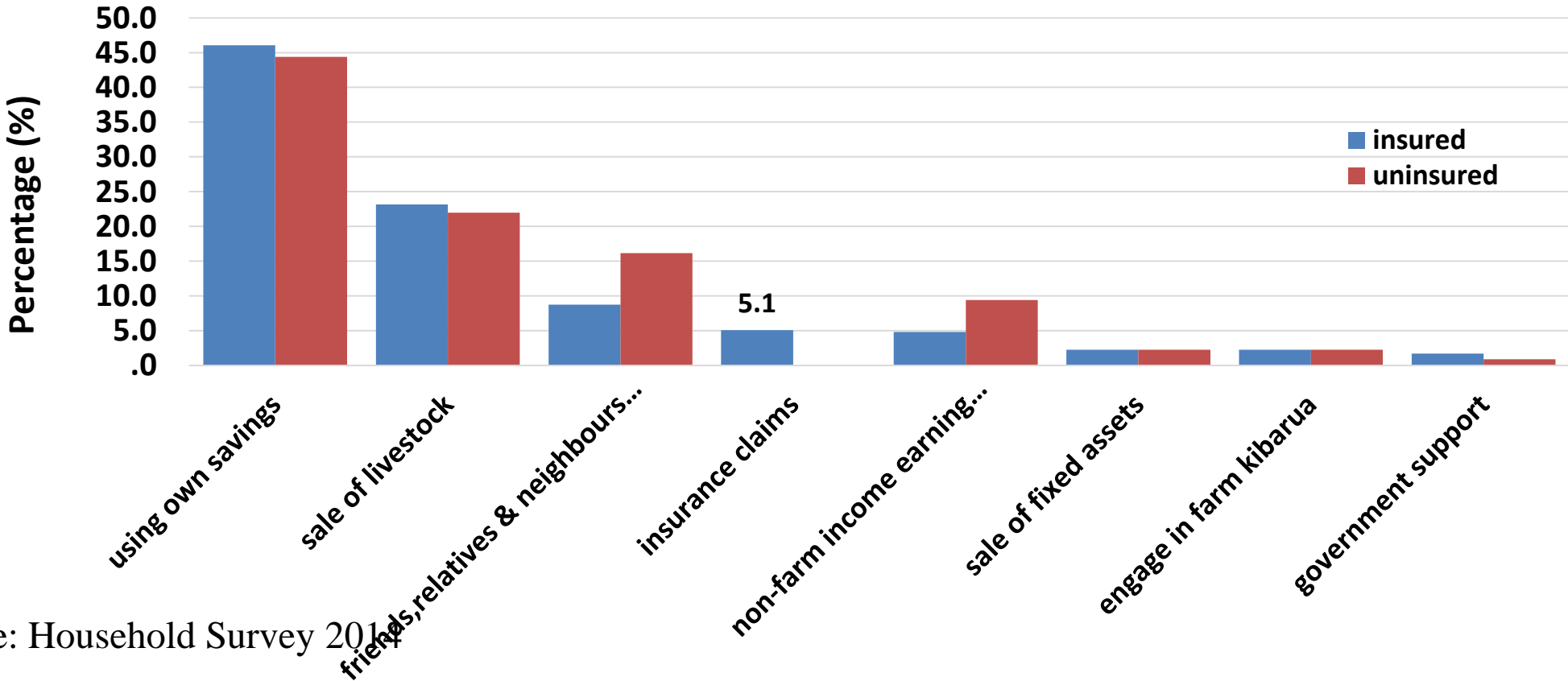
## Reported loss trends 2000-2014



Source: Household Survey 2014

# Coping Mechanisms

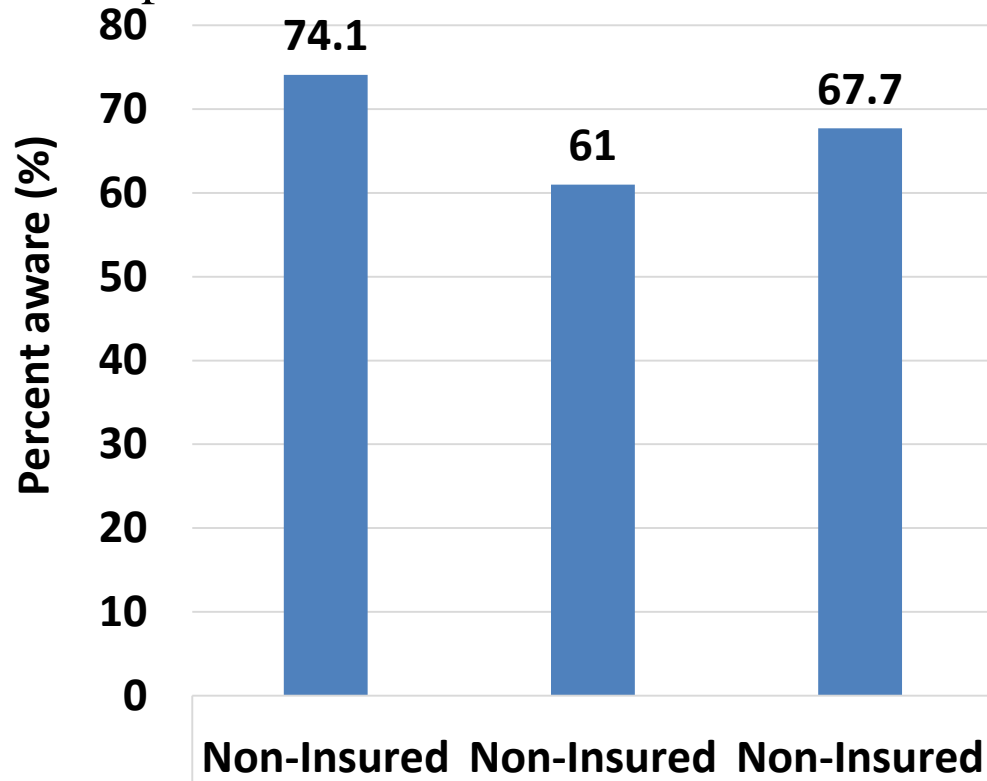
## □ Coping mechanisms used by households



Source: Household Survey 2014

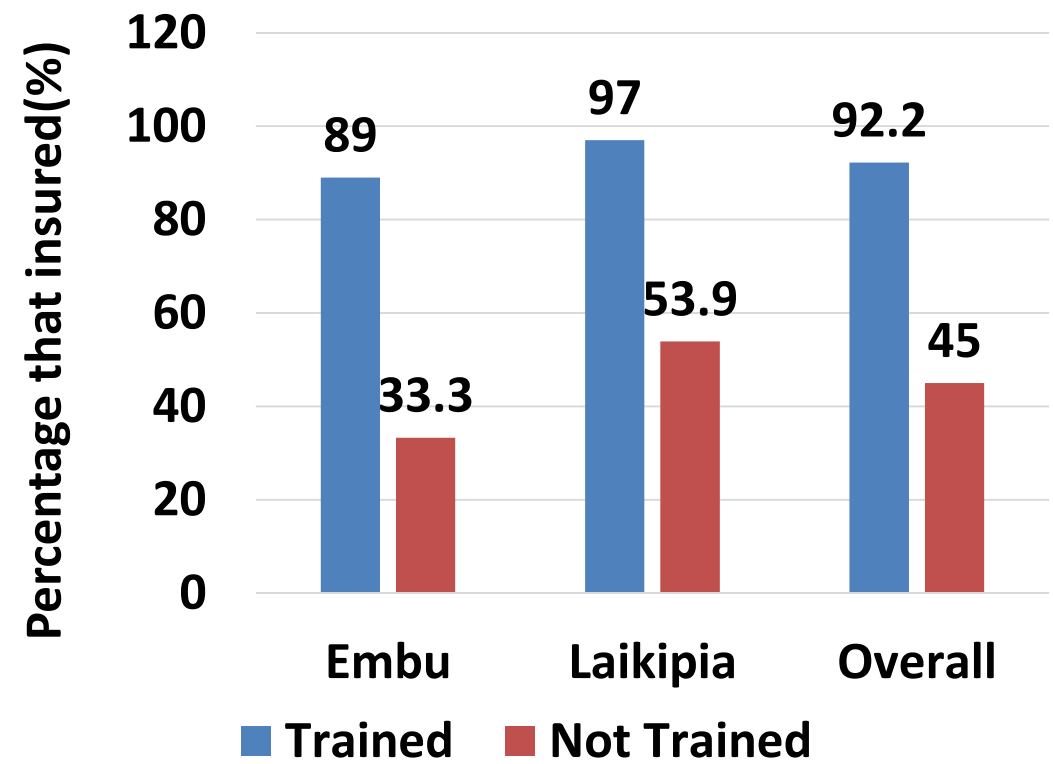
# Awareness of crop insurance

- Percentage of non-insured that are aware of crop insurance



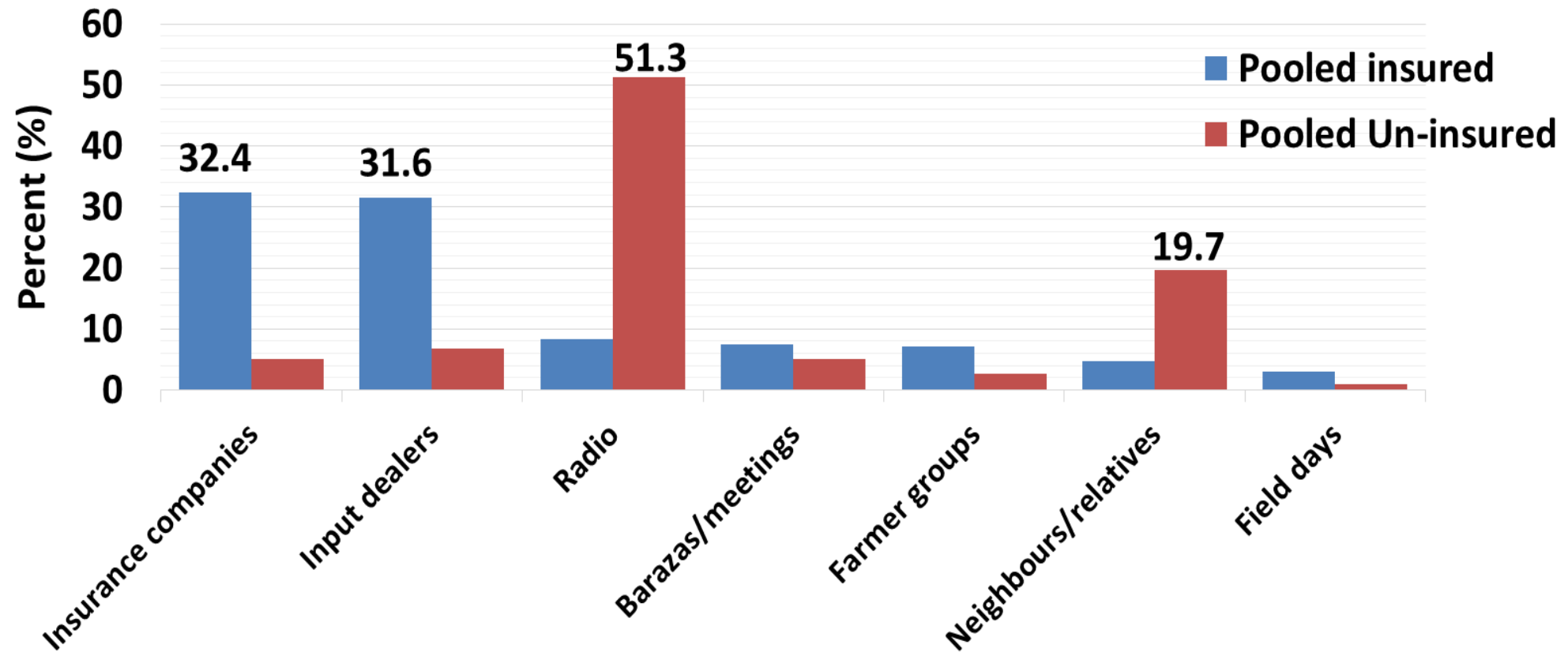
Source: Household Survey 2014

- Training vs uptake of insurance



Source: Household Survey 2014

# Crop insurance information sources



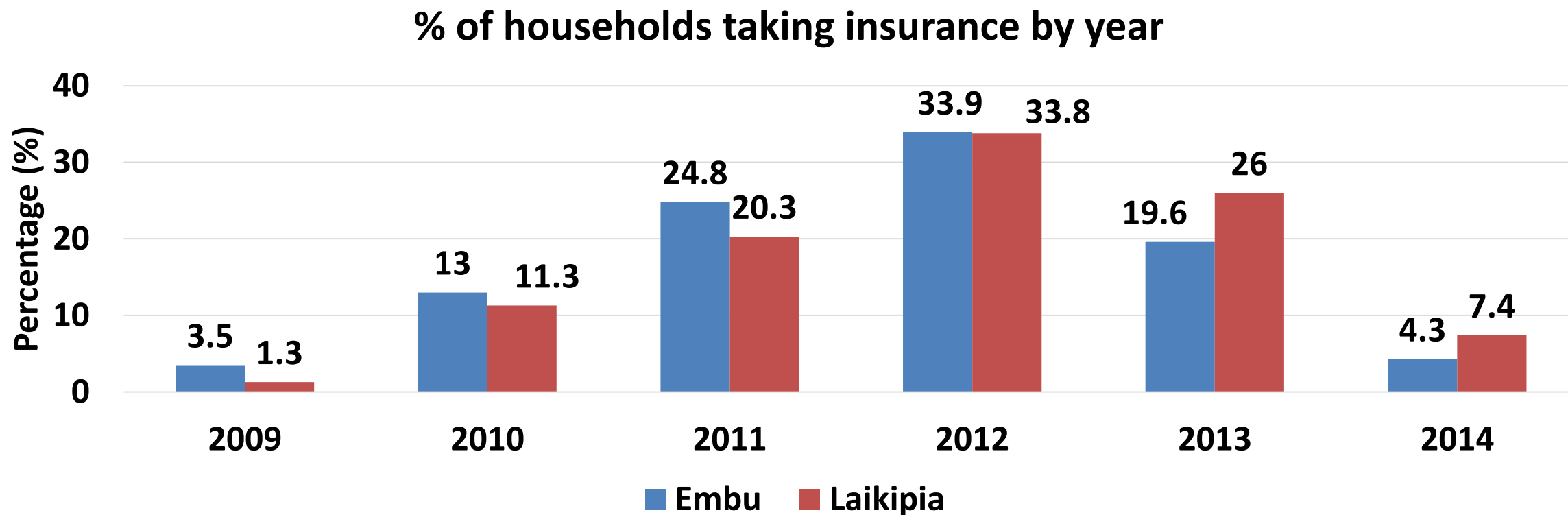
# Insurance Uptake

<b>VARIABLES</b>	<b>Uptake decision (Yes=1)</b>	<b>Intensity decision (premium in KES)</b>
<i>Aware of crop insurance (1=yes)</i>	<b>+</b> <sup>***</sup>	<b>+</b> <sup>***</sup>
<i>HH received insurance training (1=yes)</i>	<b>+</b> <sup>***</sup>	
<i>Education level of HH head (years)</i>		<b>-</b> <sup>*</sup>
<i>Land allocated to maize (acres)</i>	<b>+</b> <sup>**</sup>	<b>+</b> <sup>*</sup>
<i>Distance to input market (km)</i>	<b>-</b> <sup>***</sup>	
<i>Distance to weather station (km)</i>	<b>+</b> <sup>***</sup>	
<i>Owns a savings account (1=yes)</i>	<b>+</b> <sup>**</sup>	
<i>Exposure to drought</i>		<b>-</b> <sup>*</sup>
<i>Maize farming system (1=inter-crop, 0=pure-stand)</i>		<b>-</b> <sup>**</sup>
<i>Agro-potential region (1=medium, 0=low)</i>	<b>-</b> <sup>*</sup>	

**\*, \*\* & \*\*\*, represents significance levels at 10%, 5% and 1% respectively**

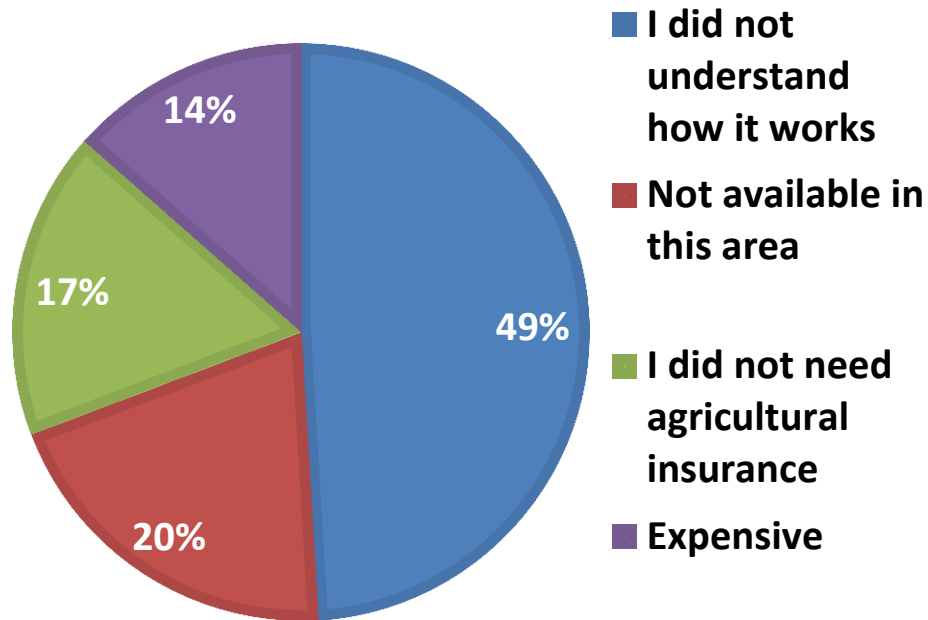


# Insurance uptake trends



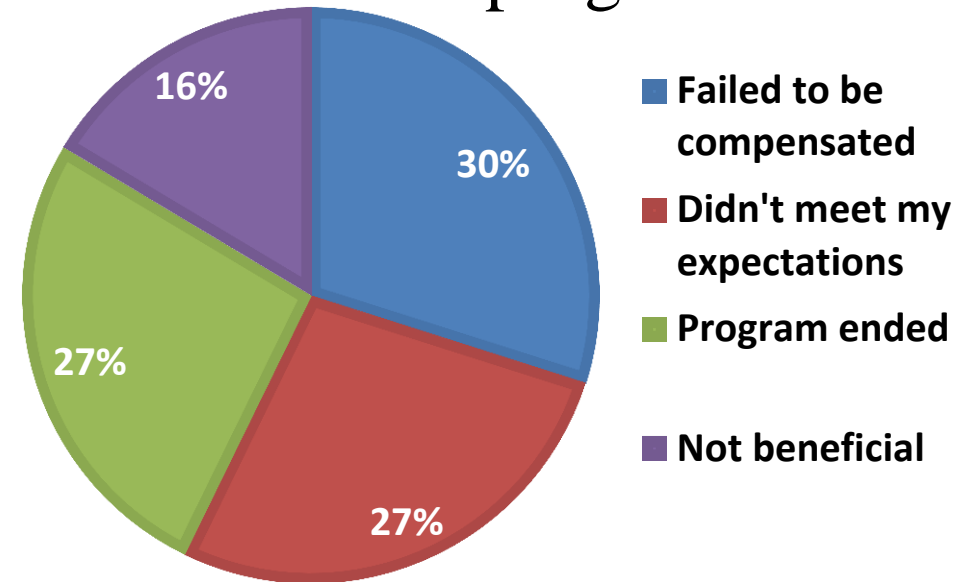
# Reasons for non-participation

## Reasons for non-uptake



Source: Household Survey 2014

## Reasons for dropping-out of the insurance program



Source: Household Survey 2014

# Emerging Lessons

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- Uptake levels are still low and declining
- Complexity of insurance concept among smallholder farmers is a major set back
- Knowledge dissemination on how crop insurance works is critical for its uptake
- Insurance marketing strategy is currently focusing mainly on formal channels
- Transparency in calculation of premium rates and compensation procedures not clear
- Decision to target crop enterprise to insure is not participatory
- Little/no involvement of county government organs

# Way forward

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- Develop different insurance products suitable for varying socio-economic conditions of farmers
  - Participatory approach should be used to tailor farmer specific insurance products while accelerating product acceptance by farmers
- Continued training on the importance of crop insurance as a factor of production
- Integrate crop insurance with other sustainable risk reduction and transfer measures
  - Acts as a twin strategy to reduce impact of the climate change on household livelihood

# Way forward

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- Government support to promote uptake through:
  - education campaigns
  - smart (targeted) subsidy programs for the poor & vulnerable
  - provision of relevant legislations that promote growth of micro-insurance sector
  - Investment in key infrastructure facilities to enable private sector to thrive in the agricultural insurance arena
- Bundling of crop insurance with other services like credit to encourage more farmers to buy crop insurance
  - Provision of multiple financial solutions to household needs



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**Thanks for Your Attention**