



RESEARCH  
PROGRAM ON  
Livestock

*More meat, milk and eggs by and for the poor*

# Overview of ILRI's smallholder pig value chain efforts in Lira district

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Stakeholders Meeting on Ugandan Pigs, Hoima, Uganda, 10-11 July 2017



# Background

- Smallholder pig value chains in Uganda identified as a high-potential target to translate research into major interventions:
  - Stimulate pro-poor transformation and generate benefits at scale.
- High potentials for growth due to rising demand for pork
  - Highest per capita consumption in Eastern Africa at 3.4Kg
  - 4% increase in pig population from 2010 – 2014 (3.4 – 3.5 mn)



# Background

- Smallholder pig value chain activities
  - commenced in 2011
- Funding support
  - Catalysing emerging smallholder pig value chains (2011-2014): initiated activities in 3 districts
  - More Pork by and for the poor: Catalysing emerging pig value chains for food security and poverty reduction (Apr 2014 – Mar 2017): expanded activities into Hoima and Lira districts



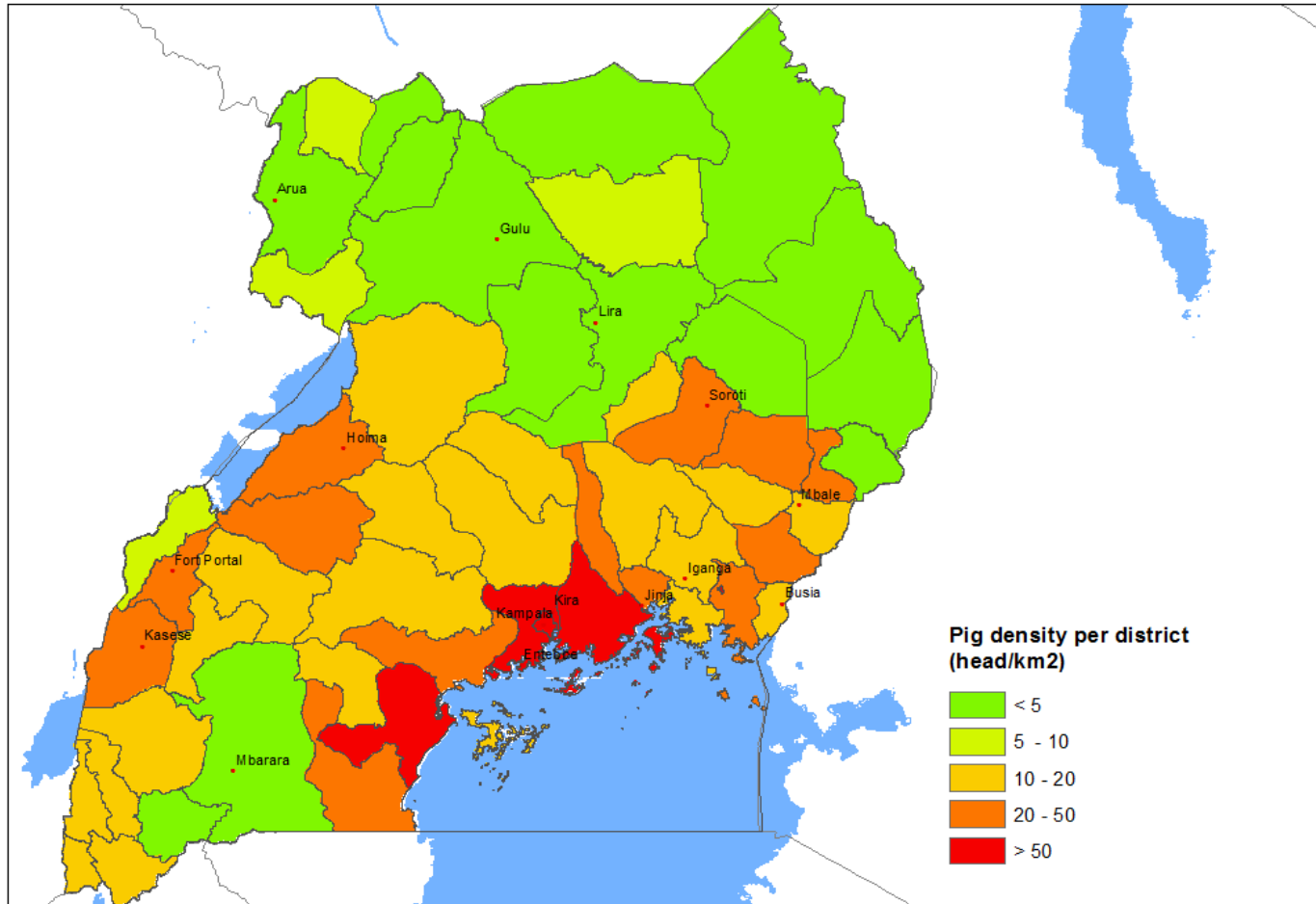
# Partnerships

- *Public sector:* MAAIF, district local governments of Kamuli, Masaka, Mukono, Hoima & Lira
- *Research/education institutions:* NARO, NaLIRRI, Makerere University (COVAB, CAES, CNS), Gulu University, SLU, Iowa State University, BOKU
- *NGOs:* VEDCO, SNV, Veterinaries Without Borders
- *Private sector:* PPM, Union of Pig Coops of Greater Masaka, Wambizzi Coop., Devenish Nutrition
- *Other:* ADINA Foundation

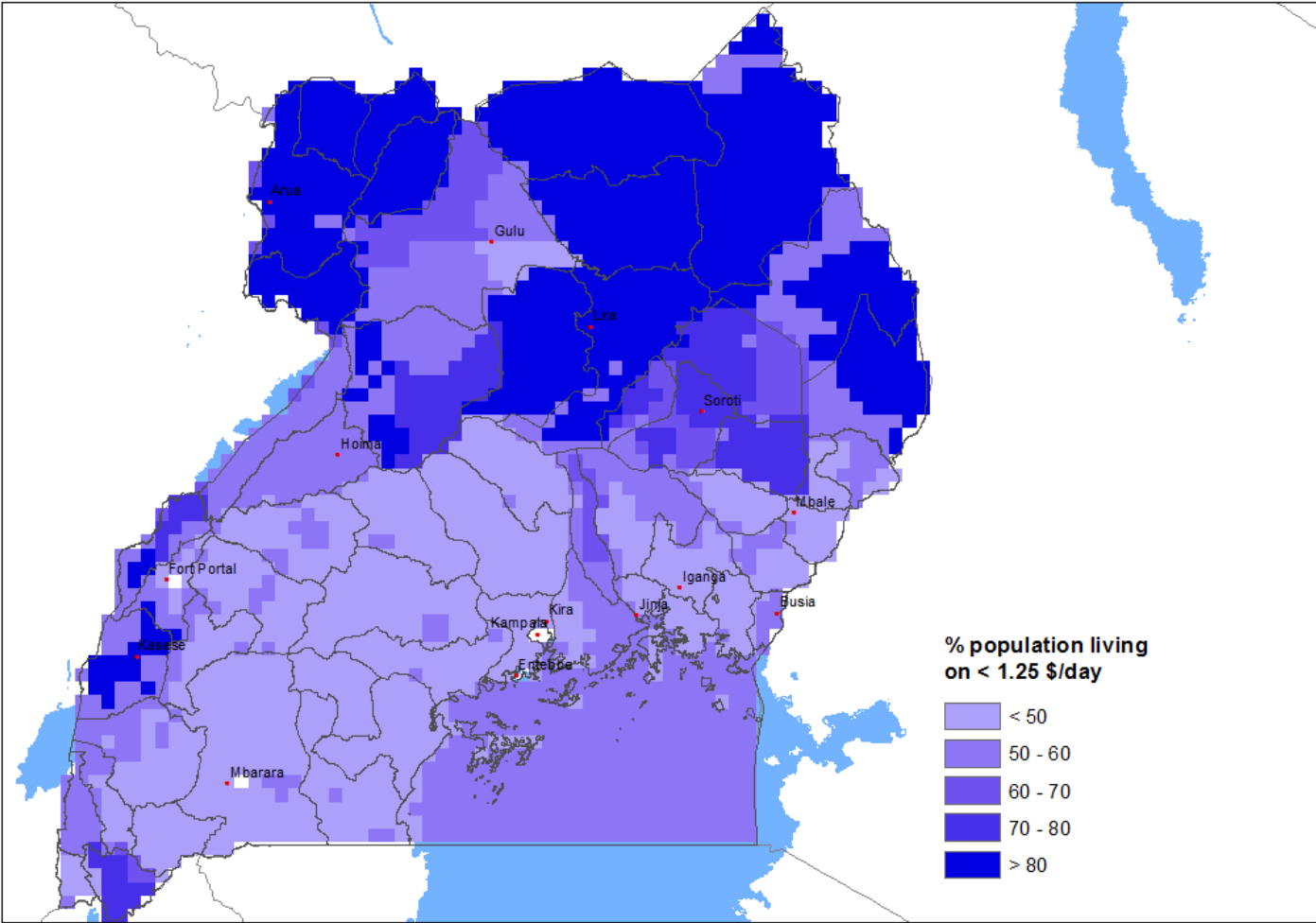


# Selection of target sites

- Using geographical targeting using GIS characterization (pig density, poverty level and market access)



# Selection of target sites-poverty level



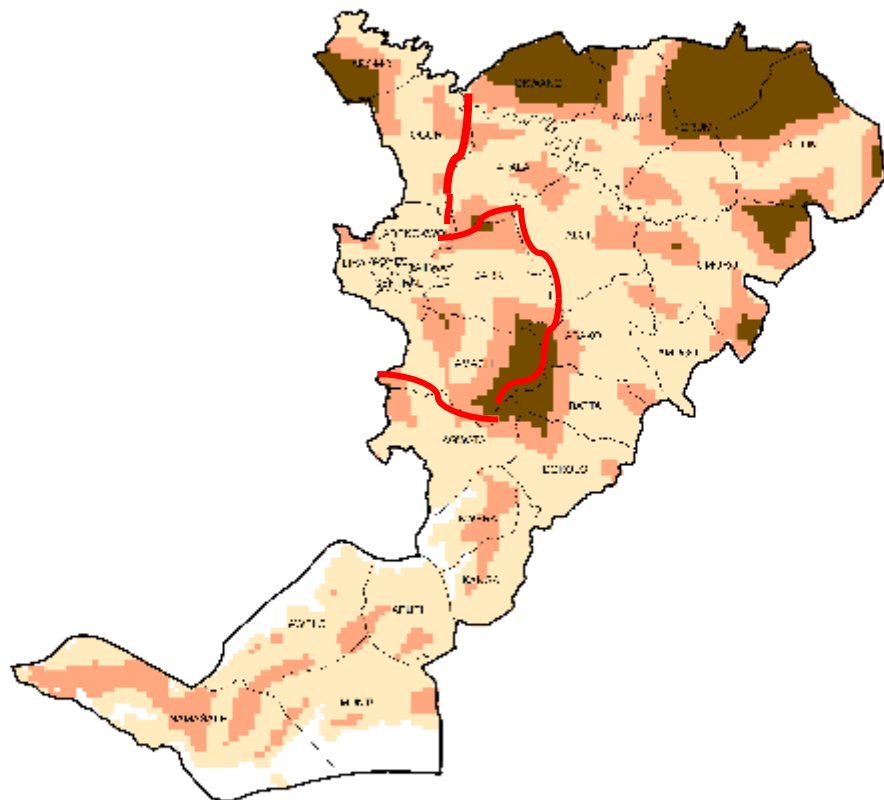


# Selection of target sites

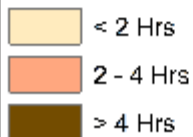
- ❑ Step 2: Stakeholder consultation of step 1 and definition of “soft” criteria.
- ❑ Step 3: Minimum checklist to gather data for more specific site selection (counties and sub-counties).
- ❑ Step 4: Analysis of steps 1-3 and final site selection.



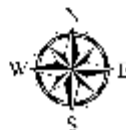
Lira district : Market access in hours (50k)



**Legend**



0 15 30 60 Kilometers



# Project sites in Lira district

Sub-county	Domain
Ojwina	Urban-Urban
Adyel	Urban-Urban
Adekokwok	Rural-Urban
Barr	Rural-Rural



# Value chain and diagnostic assessments

- Identify constraints and opportunities in the value chain
  - entry points for interventions
- Methodology
  - Micro-level assessments (value chain actor levels)



# Value chain and diagnostic assessments – approx. 560 value chain actors

## Inputs and service providers

- Questionnaire surveys:
  - Feed stockists
  - Village veterinarians
  - Agroveter stockists
  - Village boar owners

## Pig farmers

- Focus group discussions
- Individual interviews

## Post-production nodes

- Questionnaire surveys:
  - Live pig traders
  - Butchers
  - Pork retailers
- Food demand and intra-household Dietary Survey





# Value chain assessment toolkit – for pig farmers

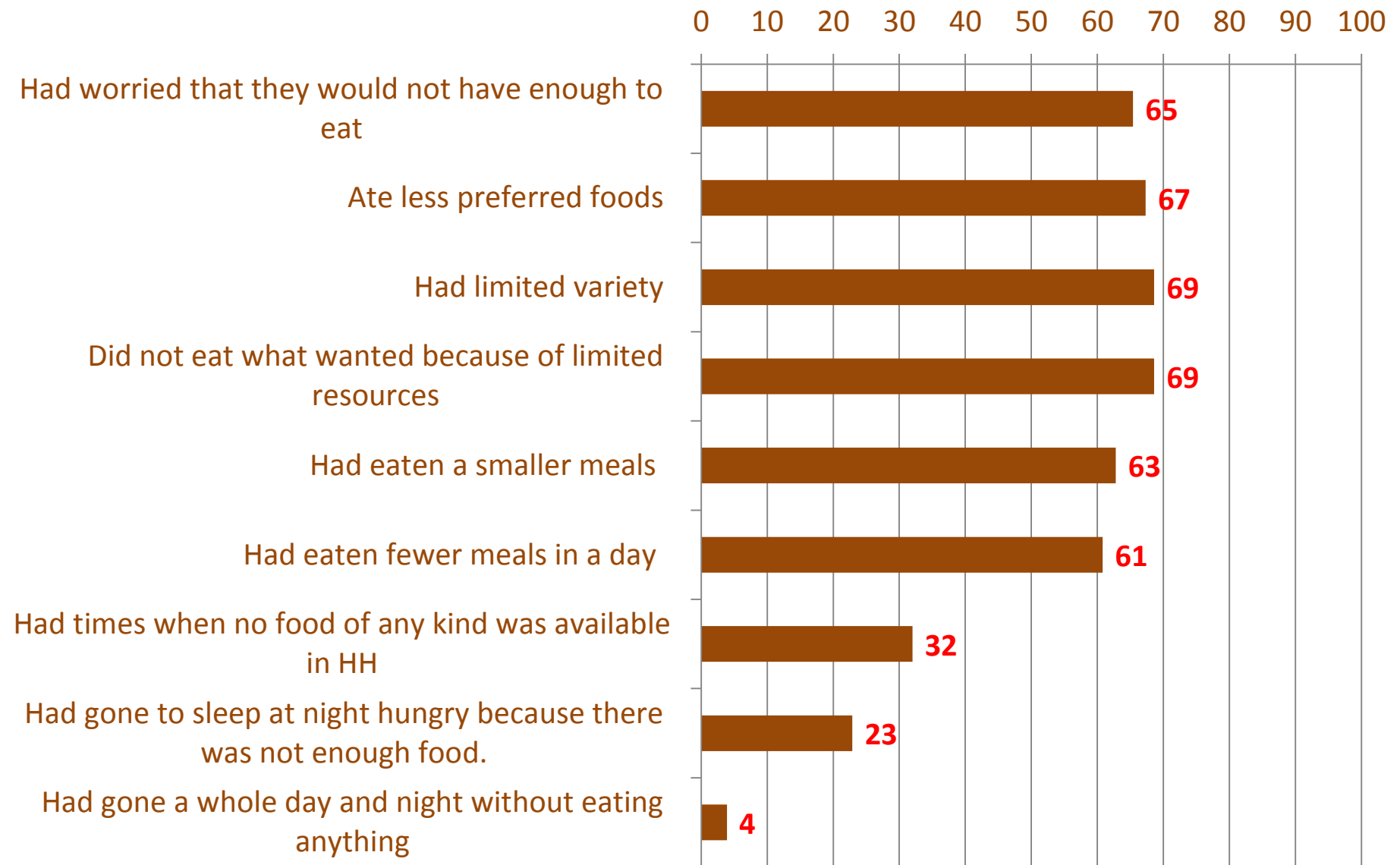




# The application of the VCA tool-kit using farmer FGDs



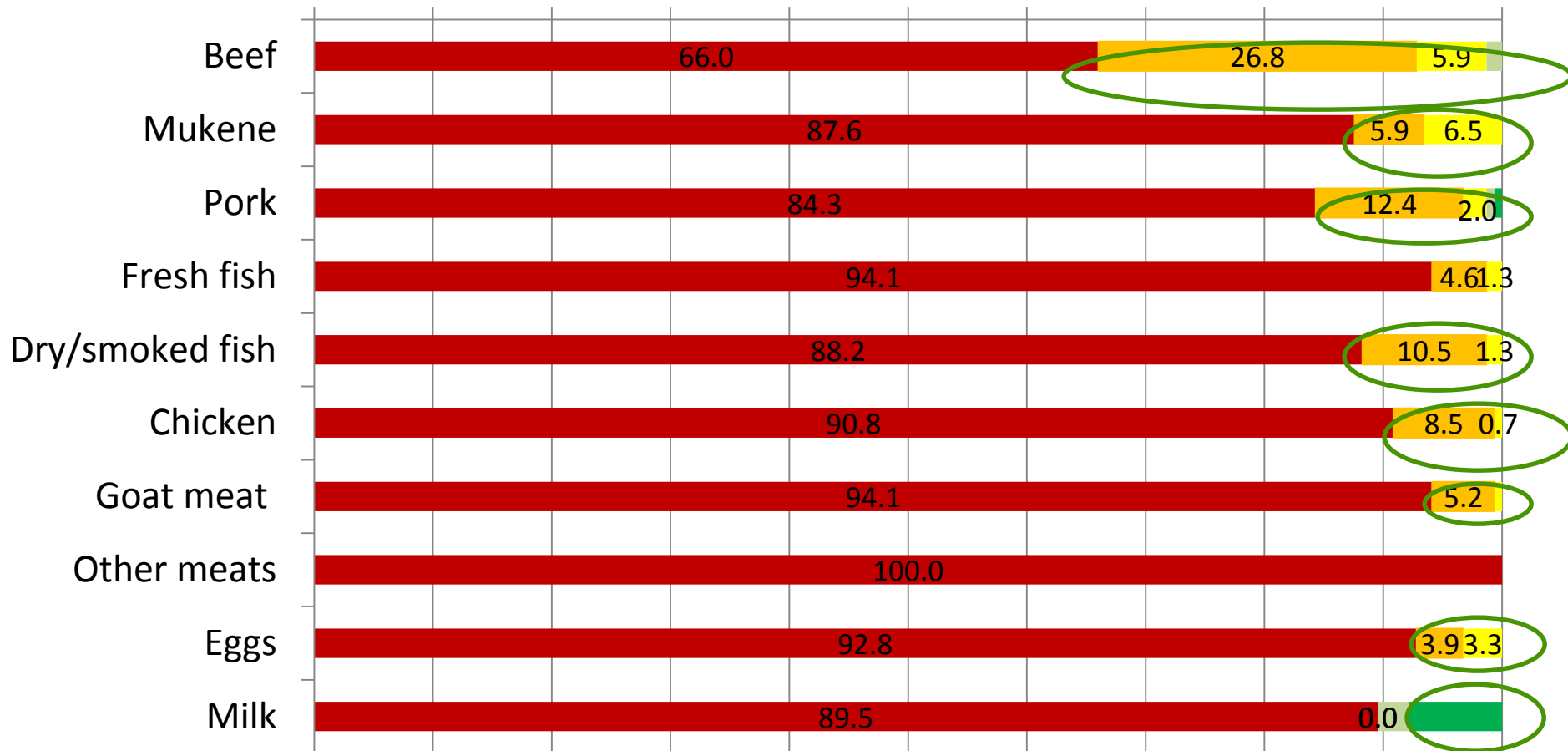
# Were Lira households food secure (2015)?



# How frequently were households in LIRA consuming ANIMAL SOURCE FOODS?

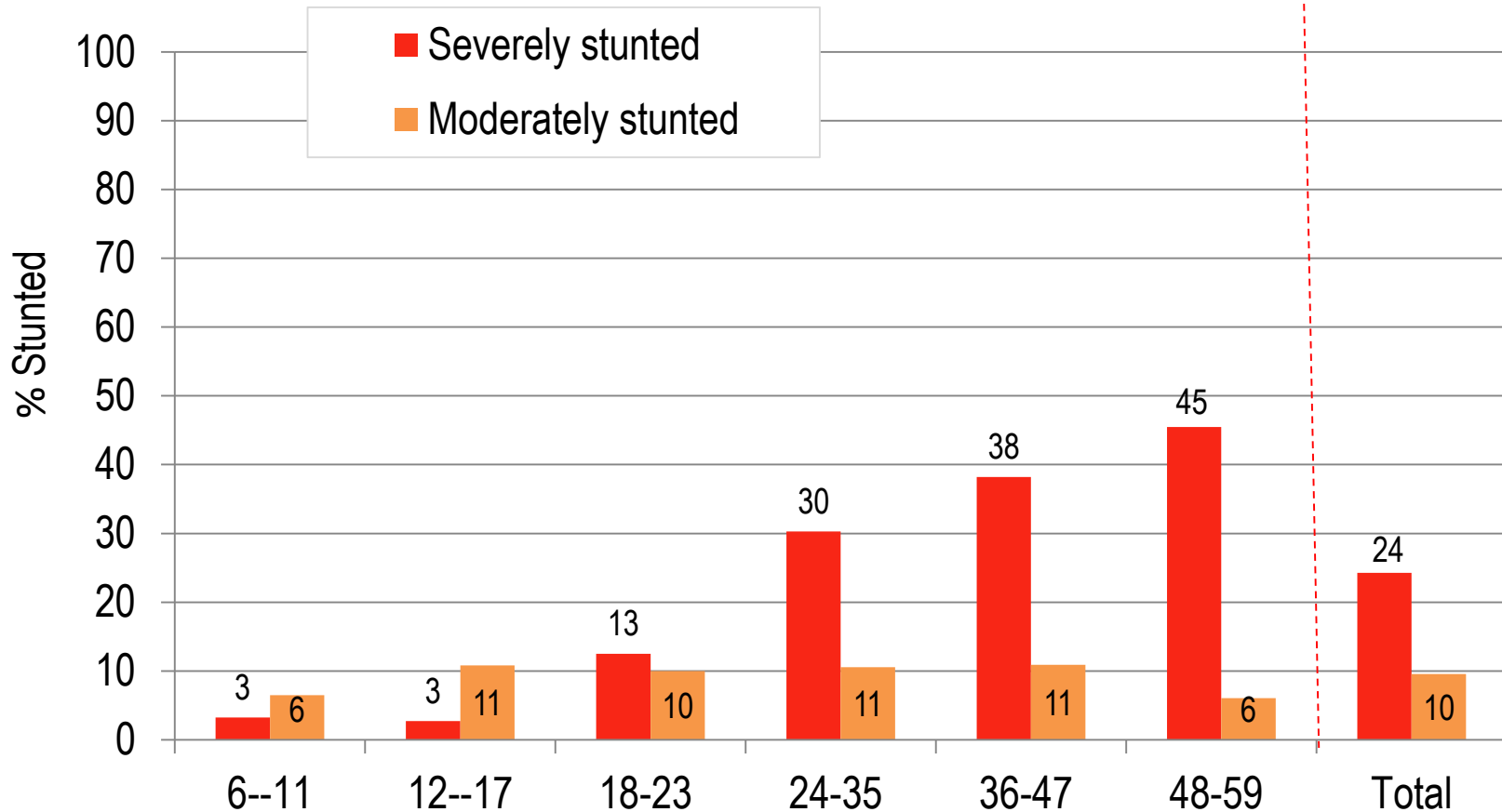
None Once 2-3 days 4-6 days Daily

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%





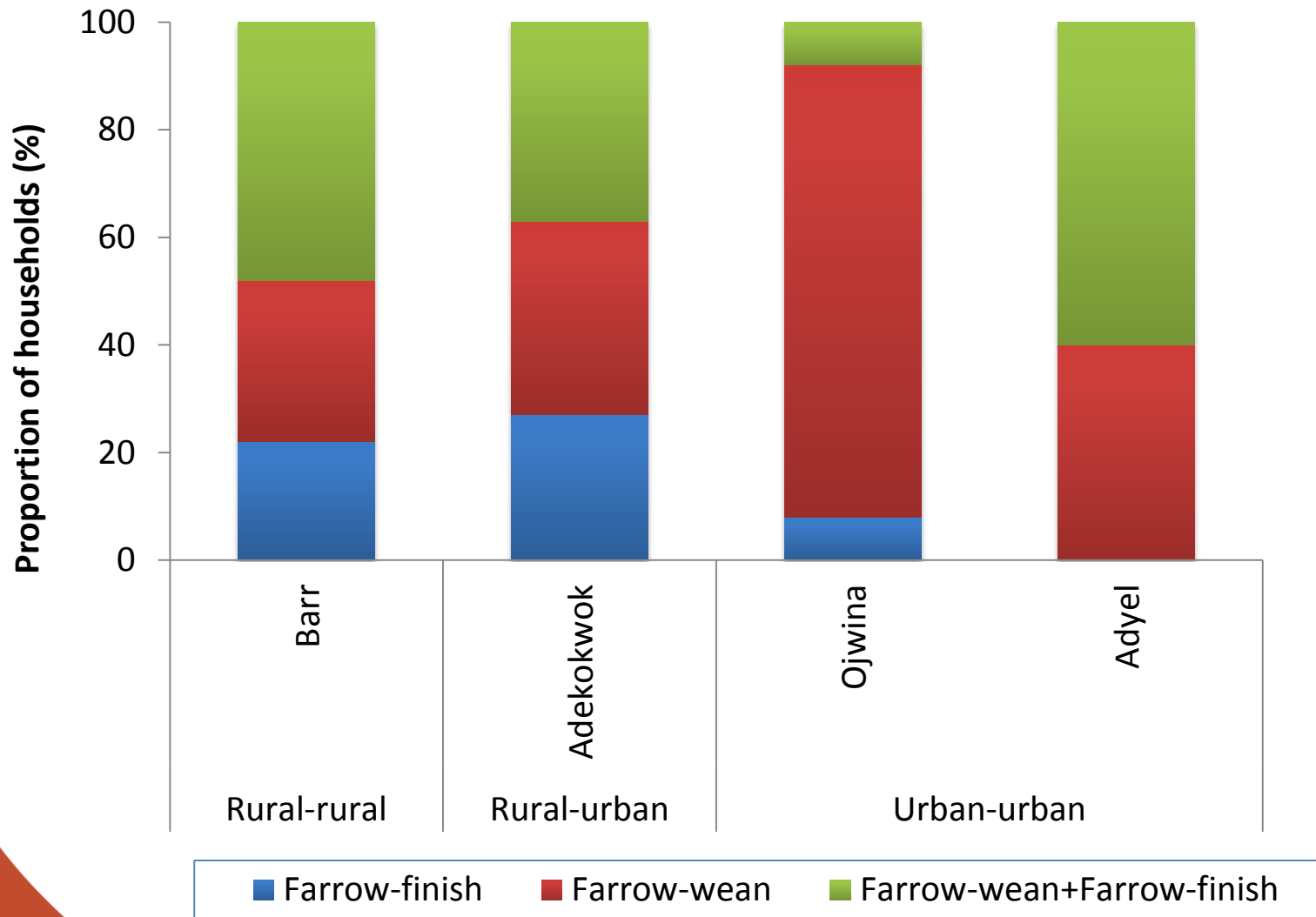
# Proportion of children that are stunted (6-59 months)



# Key results from consumption and household dietary surveys among pig keeping households

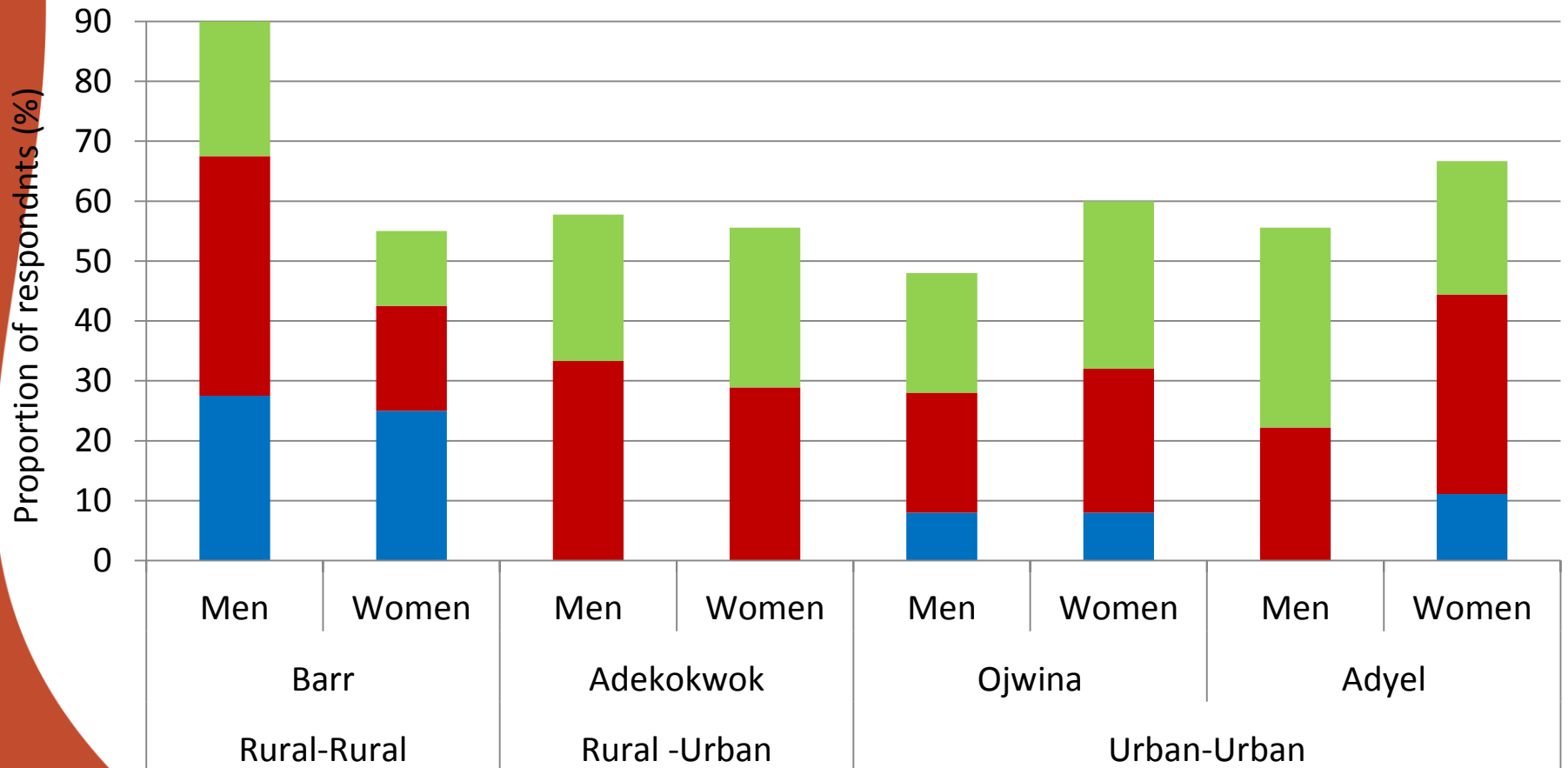
- Level of food insecurity is high in Lira
- Households are not frequently consuming a variety of foods (have limited dietary diversity)
- Diets are bulky with limited intake of animal source foods
- Under-nutrition is common

# Description of pig production systems



# Marketing outlets for finishers

■ Fellow Farmers      ■ Butchers      ■ Local traders



# Pig feeds

- The major pig diets comprise kitchen waste, vegetable waste, swill and crop residues.
- No land is set aside for fodder crop growing.
- Only 5% use commercial feeds.



# Feed related constraints and interventions

<b>Major constraints</b>	<b>Key opportunities and intervention areas</b>
<ul style="list-style-type: none"><li>- Inadequate feed quantity.</li><li>- Poor access to commercial feeds.</li><li>- Knowledge gaps to support on farm feed formulation.</li></ul>	<ul style="list-style-type: none"><li>- Formulating homemade pig diets</li><li>- Utilize abundant crop residues sweetpotato vines, sunflower, cassava etc.</li><li>- Utilize crop by-products such as cotton seed cake.</li><li>- Incorporate forages in pig diets pig feed</li></ul>



# Forages established on farmer fields in Lira district

Trifolium Decorum	Trifolium tembese (poor germination)
Lablab purpureus (Good germination)	Desmodium intortum
Desmodium uncinatum	Vicia vilosa (Drought intolerant)
Lupinus, angustifolius	Demathus vergatus

# Pig management practices

Value chain domain	Sub County	Tethering (%)	Free range (%)	Housed (%)
Rural-Rural	Barr	62	13	25
Rural-Urban	Adekokwok	48	31	21
	Ojwina	29	24	47
Urban-Urban	Adyel	39	15	46

# Pig management practices



- Less than 50% of the farmers deworm pigs and carry out parasite spraying

# Pig health constraints

- Disease is the main cause of deaths ( Barr 53%, Adekokwok 54%, Adyel 44% Ojwina 50%)
- Main disease challenge – ASF (several outbreaks)
- Sero-prevalence of *Taenia solium* cysticercosis in Lira

Sub-county	No. of pigs	No. positives	Prevalence, %(CI95)
Ojwina Division	46	3	6.5 (2.9-13.9)
Barr	143	12	8.4 (3.5-15.2)
Lira	29	1	3.4 (0.6-8.5)
Adyel	42	2	4.8 (1.6-11.3)
Adekokwok	60	4	6.7 (2.9-13.9)
<b>Total</b>	<b>320</b>	<b>22</b>	<b>6.9 (2.9-13.9)</b>

- Positivity of pigs to *T. solium* cysticercosis is indicative that they are infected by the tapeworm. Public health risk to the consumers

# Pig health constraints

## Recommended best practices to control *Taenia solium* cysticercosis

- Confine pigs, avoid free rooming
- Centralize pig slaughtering at village and commune levels
- Enhance pork inspection
- Raise awareness of traders and butchers on best practices on pork handling and hygiene

# Capacity building of farmers on improved husbandry and biosecurity practices (RCT trials)

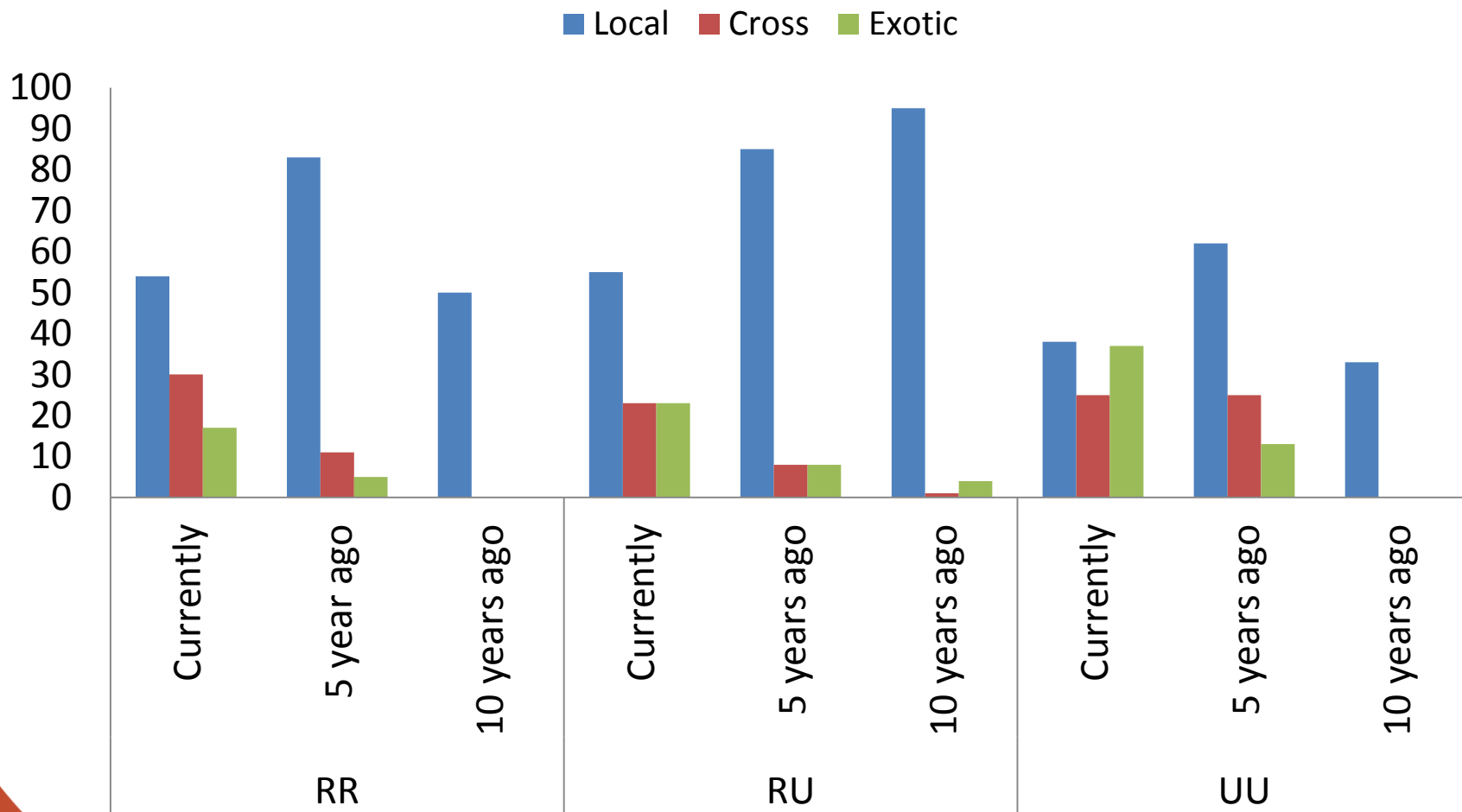
- 960 farmers (480 in Lira and 480 in Masaka) involved in the study
- Improved knowledge of pig farmers on biosecurity
- Reduced outbreaks in some areas following training
- Farmers are willing to take preventive action as they have observed the positive outcomes.



**Improvement of farmer's  
business performance and  
enforcement of disease  
control regulations**



# Changes in use of different pig breed types over the past 10 years



# Preferred breed types and constraints

- Both male and female farmer groups prefer improved breeds
- Main constraints to keeping preferred breeds:
  - difficult to access cross/exotic breeds
  - lack of knowledge on management
  - high costs of inputs



# Other on-going efforts

- Northern region pig Multistakeholder platform
- On-going PhD study on “Gender in pig trade and marketing in the pig value chain”

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