

# Sweetpotato product development in Rwanda:

## Lessons Learned to Date



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# Outline



- Project introduction
- Raw material supply chain
- Processor/private sector collaboration
- Processing technology development
- Product presentation and marketing

# Objectives



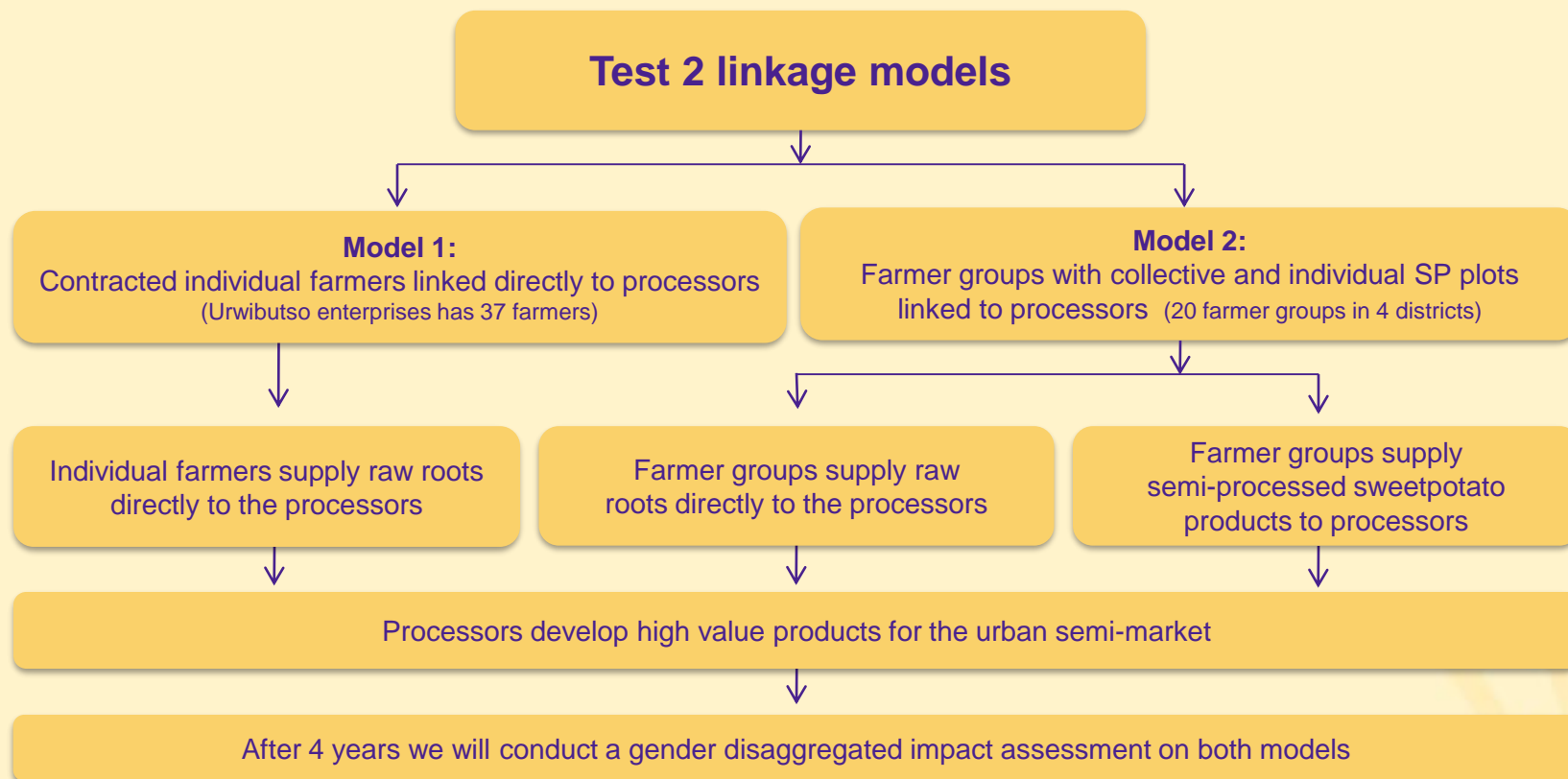
1. To develop, compare, and evaluate the relative efficiency of two sweetpotato product value chains and their potential to increase farmer income with gender equity
2. To re-position white and orange fleshed sweetpotato (OFSP) and its products in the rural, urban and semi-urban consumer markets.

# Hypotheses

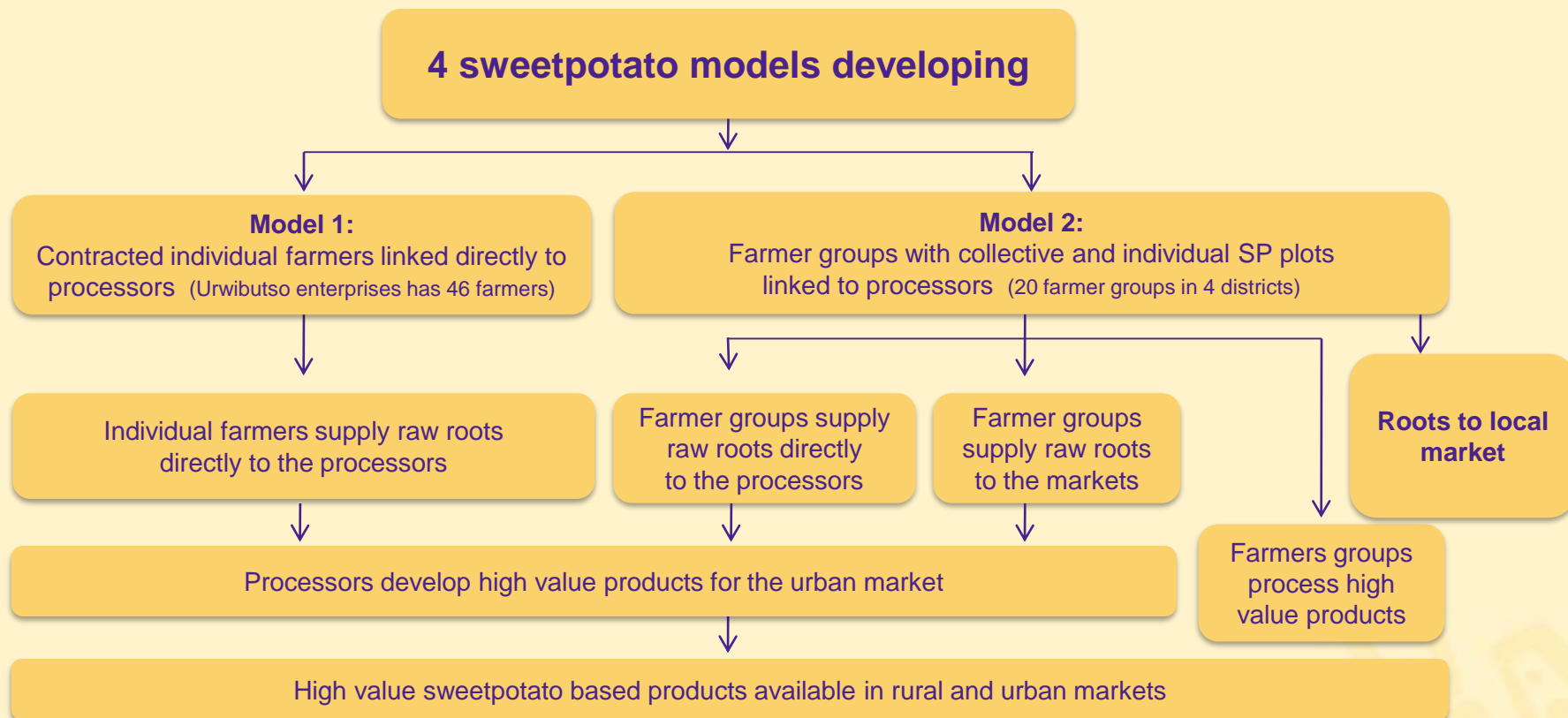


1. Private-sector led development of processed SP products results in increased farmer incomes (test 2 Models)
2. Partial/full processing of roots by farmers results in greater participation and revenues for women and youth farmers (compared to factory-based processing).
3. Effective marketing can establish SP as a high value crop in urban markets.

# Comparison of value chain models



# Models developing





# Raw material supply chain



- Build a reliable supply of sweetpotato roots through the year
- Quality planting material of the right varieties for different locations
- Growing calendar that is normally under the mercy of rain fed agriculture

# Raw material supply chain



- Roots quality
  - Time of harvesting (Too early or too late)
- Grading before delivery
  - Trainings and education
- Farmers self processing in training and commercially, assist in understanding roots quality concerns

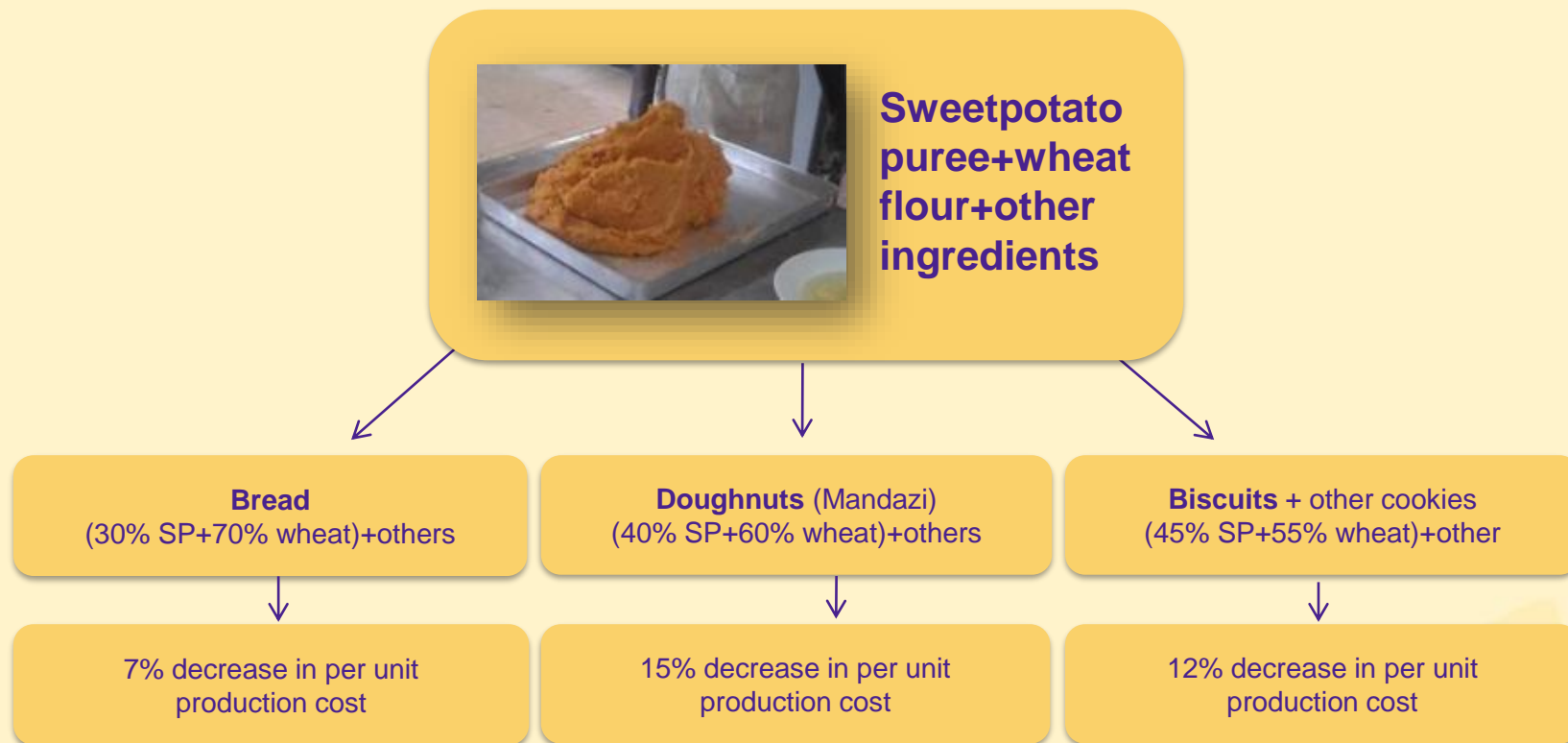


# Processor/private sector collaboration



- Several considerations
  - Experienced Vs New (creation)
  - Large Vs Small
- All these have consideration in the level of investment
  - Machinery, technical backing, supply chain development, marketing support

# Does it make economic sense to incorporate sweetpotato puree into bakery products?



# Processing technology development

## Sweetpotato flour

- Pro
  - Easy to utilize because its like other flours
  - Easy to transport
  - Easy to store
- Con
  - Currently expensive
  - Difficult to control processing quality
  - Loss of Vit A

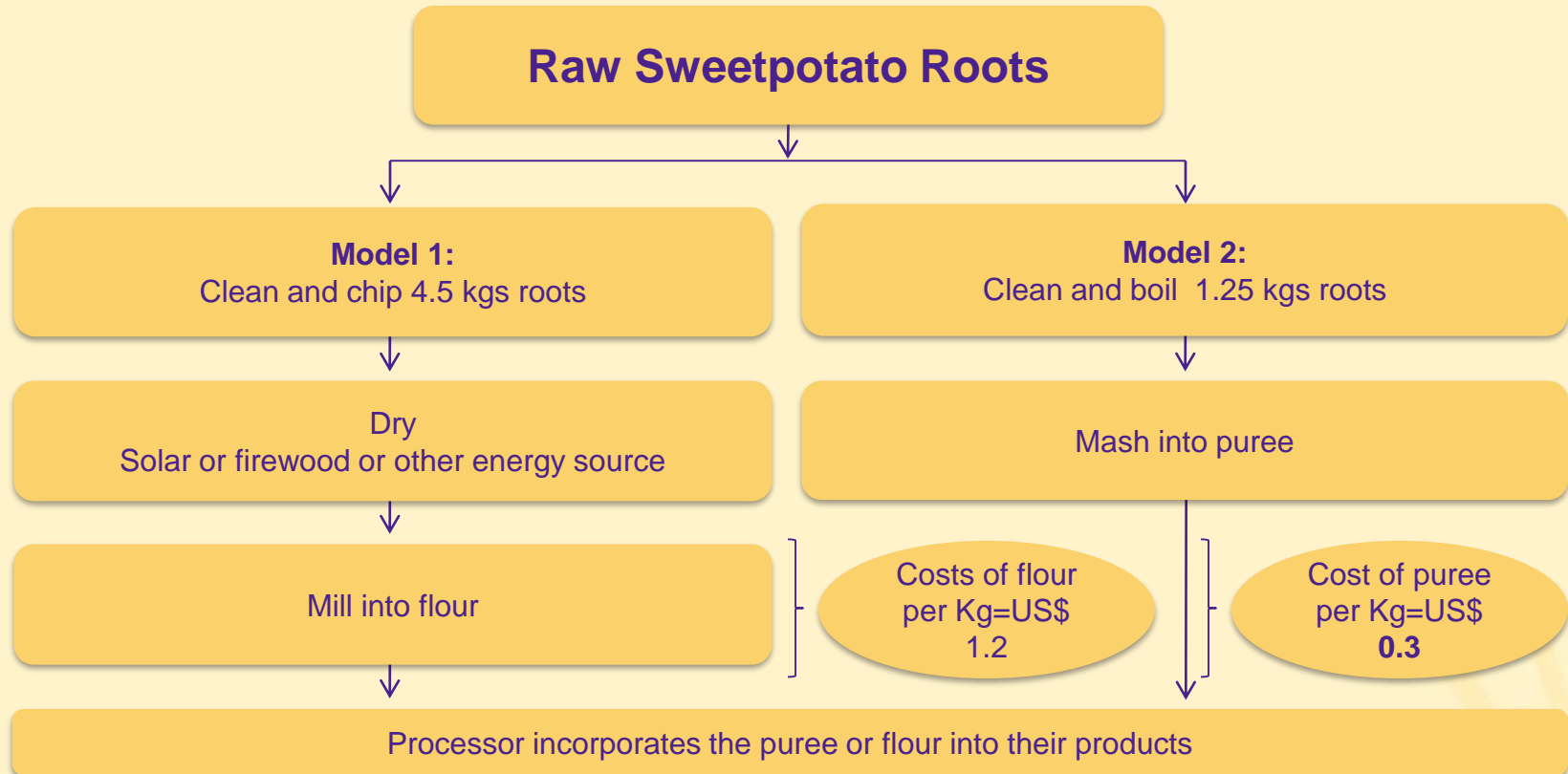


## Sweetpotato puree

- Pro
  - Easy to make
  - Easy to manipulate into dough
  - Better retention of color (vit A)
- Con
  - Difficult to store
  - Dough quality varies with variety



# Processing technology development



# Product development



- Baked products
  - Bread, biscuits, cakes, doughnuts, etc
- Juice

# Baked products



- Choice of the form of sweetpotato utilization is important early
- Equipment choices
- Initial research is key to getting a winner
- Good technical backing
- Consumer sensory testing



# Sweetpotato juice

- This has been more challenging than baked products
- Development of juice is not just about tweaking of ingredients but full innovation
- This has revolutionized our thinking about products production process

# Juice innovation



# Product range from juice innovation





# Product presentation

- Product presentation gives a message
- Generally we buy
  - Dreams
  - Aspirations
  - Image
  - Attributes (healthy alternative vit A)

# Biscuits Nutrient Analysis (per 100 grams)



Parameter	Wheat :SP (60:40)
Moisture (%)	6.4 ± 0.2
Ash (%)	1.4 ± 0
Fat (%)	15.0 ± 0.2
Carbohydrates (%)	68.1
Crude fiber (%)	0.4 ± 0.2
Protein (%)	8.6 ± 0.1
B-Carotene mg/100g	5.4 ± 0.4
Energy (KJ)	1,858.9

Beta-carotene converts into  
Retinol Activity Equivalents (RAE)  
in OFSP: 12 units BC: 1 unit RAE

5.4 mg/100 gms = 450 RAE

4 biscuits	43 gms	
RAE (micrograms)	193 ugs	
	Required	% of
	RAE Daily	Daily Req.
Child under 9 years old	400	48%
Non-pregnant woman	700	28%
Adult men	900	21%

USA standards: a product must  
meet 20% of daily needs to be marketed  
as an excellent source of Vitamin A

# Product packaging

- Name choice- Akarabo Golden Power Biscuit
- Packaging design – Pull all the tops
- Packaging materials
- Market segmentation in product presentation to the customers



# Our products packaging



# Packaging presentation



# Communication

- Media mix
  - TV, Radio, Newspaper, online, newsletter,
- Road shows
- How do you inform?
  - Radio shows, demonstrations, field visits
  - Launch
  - Advertisement



# Launch of Akarabo Golden Power Biscuits



# Advocacy activities

## Mandazi day



## OFSB based products at Nyirangarama





# Dancing at the launch event





# Other materials

