

Cassava as a Subsistence and Commercial Crop in Eastern Indonesia

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INTRODUCTION

- Cassava is a root crop commonly used as a food and a source of starch for various industries
- Indonesia is third largest cassava producer but also a large importer of starch
- A major problem is high cost of transportation considering Indonesia is a large archipelago with 16,056 islands

INDONESIA



INTRODUCTION

- Indonesia is a tropical country with regional differences in land conditions and environments
- In the west (e.g., North Sumatra) climate is equatorial with higher rainfall
- In the east (e.g., Nusa Tenggara Timur = NTT) climate is monsoonal with wet and dry seasons

OBJECTIVE

- The objective was to analyze the role of cassava as a subsistence and commercial crop on the island of Flores in eastern Indonesia



RESEARCH METHODS

- The study was conducted in Sikka Regency, Flores, NTT, selected to represent areas where cassava is a major staple food
- There were 2 surveys:
 - Value Chain Survey, interviewing groups of farmers in three villages, traders, and small-scale processors in 2016
 - Household Survey, interviewing 114 cassava farmers selected by simple random sampling and field observation in 2017



Number of survey respondents

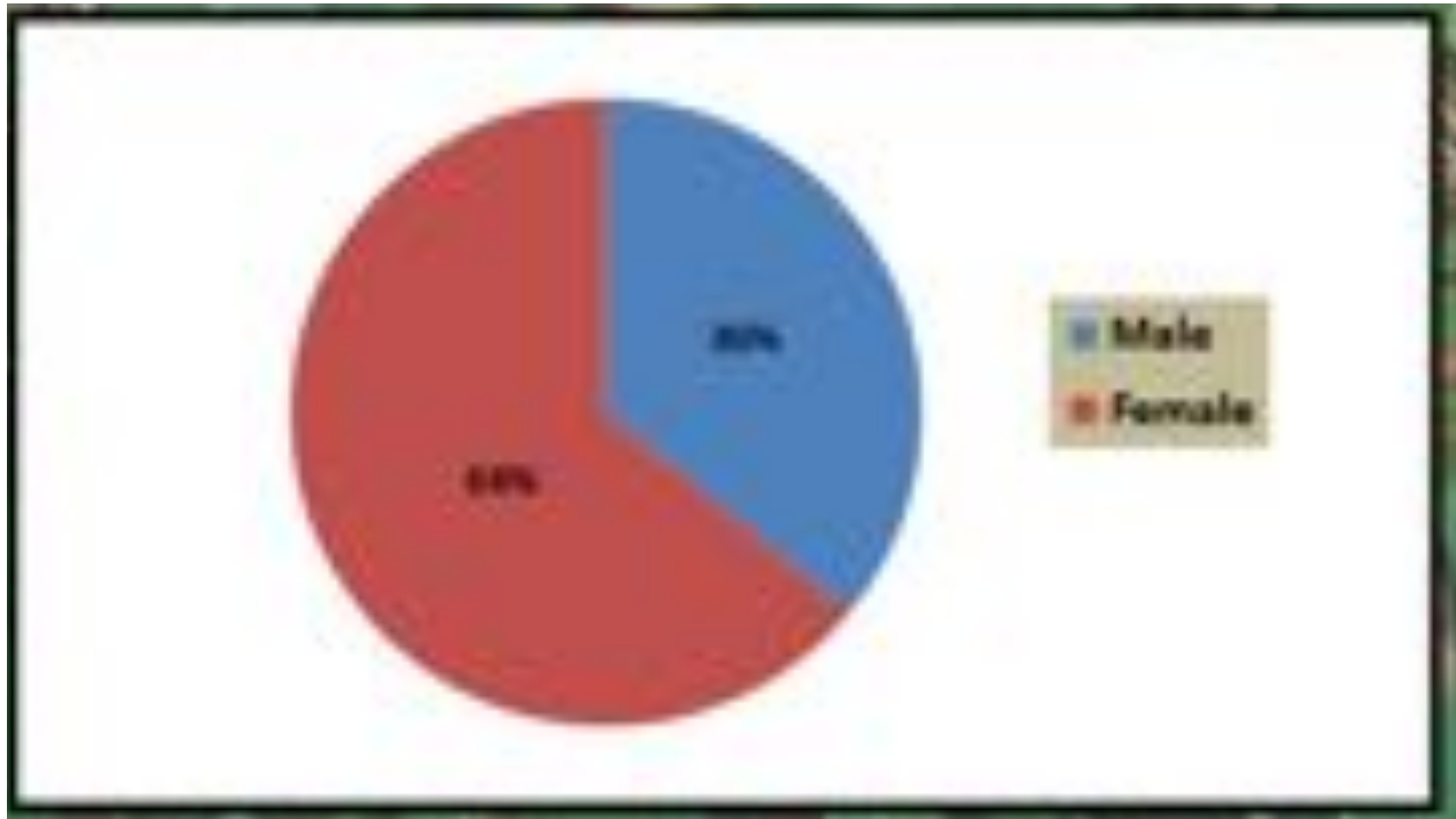
Sub-District	Village	No.	Total	%
Nitta	Tebuk	26	38	33.3
	Bloro	11		
	Lusitada	1		
Kangae	Habi	18	60	52.6
	Tanaduen	19		
	Namangkewa	1		
	Langir	22		
Koting	Koting A	16	16	14.0
Total			114	100

Respondents by age group

Age Group	Number	Percent
27-33	5	4.4
34-40	14	12.3
41-47	28	24.6
48-54	20	17.6
55-61	15	13.2
62-68	10	8.8
69-75	5	4.4
76-82	3	2.6
Total	114	100.0

RESULT AND DISCUSSION

Number of Respondents (based on gender)



Number of respondents based on gender

Status	Number	Percentage
Male	41	36%
Female	73	64%
Total	114	100%

RESULTS AND DISCUSSION

- Farms size is small: average 0.9 ha
- Cassava is one of the main crops in Sikka
- At higher elevations cassava is cultivated within an agroforestry cropping pattern
- At lower elevations cassava is intercropped with maize and beans
- Farmers cultivate cassava for subsistence consumption, to sell as a food crop, and for livestock feed

Cropping Patterns

Zone	Cropping pattern
Higher elevation, inland	Cassava in agroforestry system with coconut, cacao, cashew, tamarind, banana, lontar palm, candlenut (<i>kemiri</i>), pepper, nutmeg (<i>pala</i>), mango, avocado, maize
Lower elevation, coastal	Cassava intercropped with maize and beans

Cassava in agroforestry system









Cassava in coastal intercropping system with maize and pigeon pea

Intercropping trials in coastal zone



Cassava Production

- The inputs used in cassava production:
 - Stakes (from previous year's cultivation)
 - Labour
 - household labour
 - mutual cooperation with other farmers
 - hired labour
 - Fertilizer
 - Most farmers did not use fertilizer
 - Some used subsidised fertilizer for maize

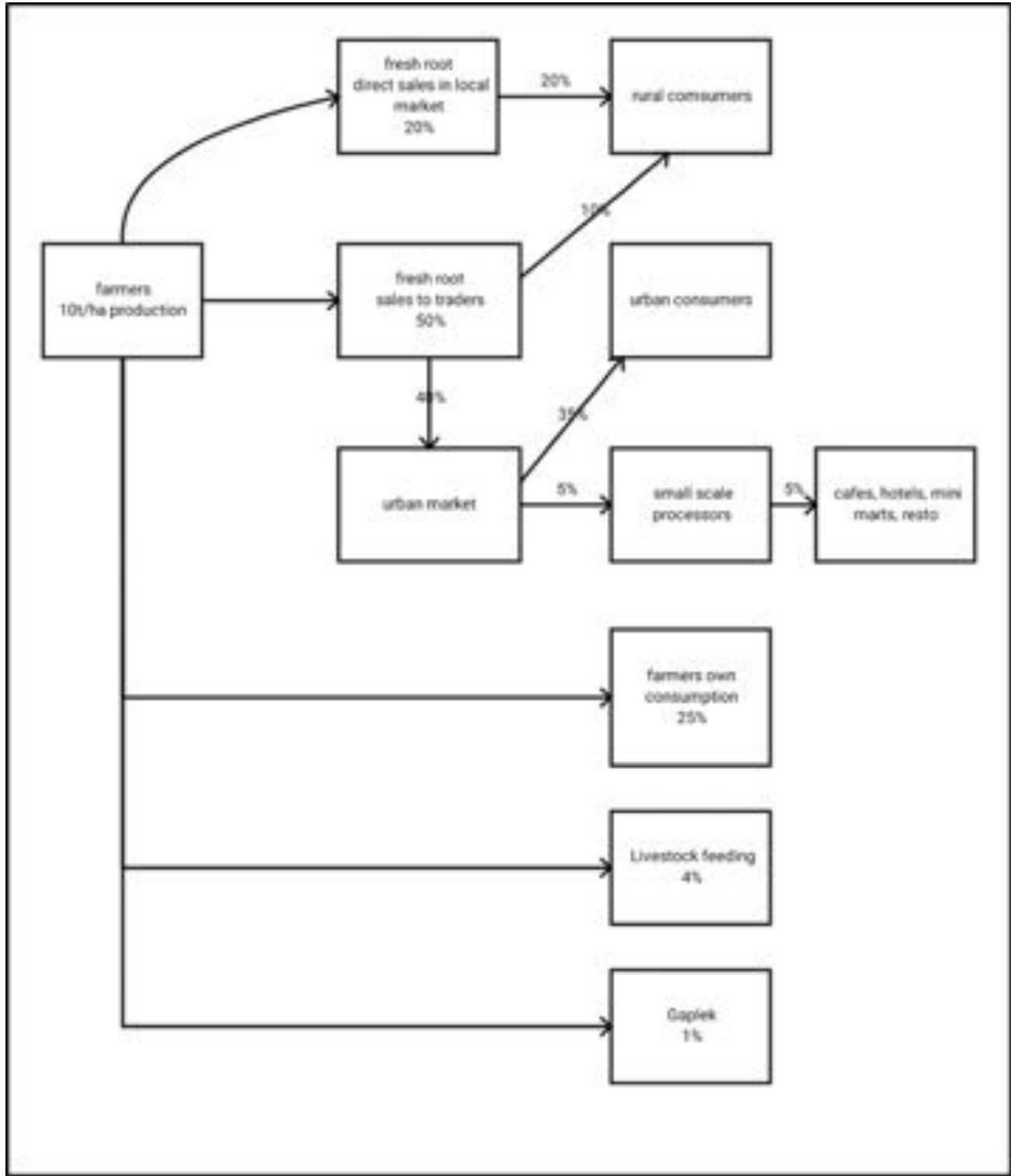
Cassava production

- Main pest is cassava mealybug - increasing



Cassava Utilisation

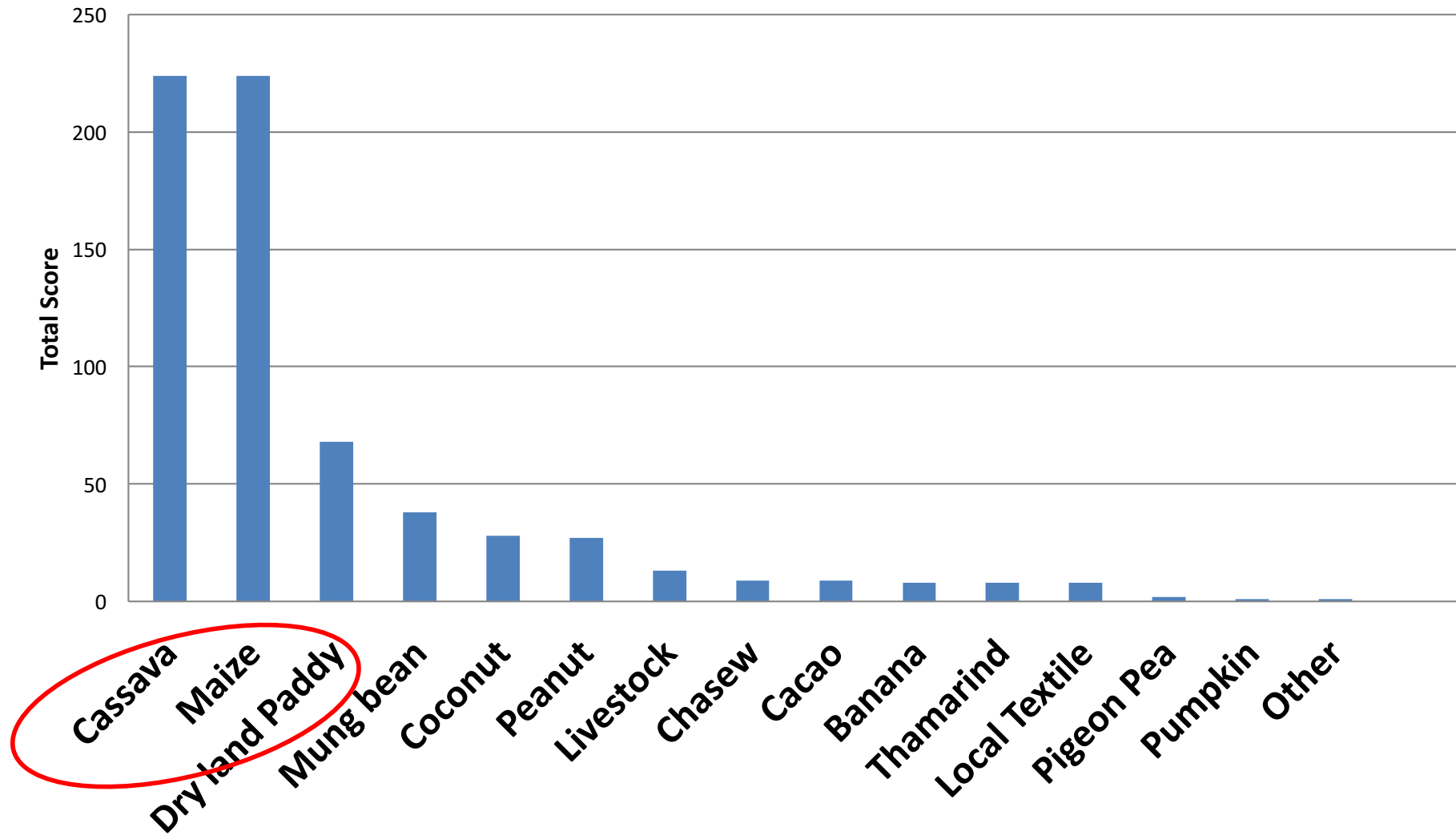
- Cassava mainly used as food, whether consumed by farm-household or traded in local markets
- Utilisation of cassava
 - 30% for home consumption, including food and livestock feed
 - 20% sold directly to local market
 - 50% sold to traders
- Farmers sell cassava gradually in small quantities (about 10-20 bundles, 1 bundle = 5-10 kg)
- There is no starch factory in Sikka Regency



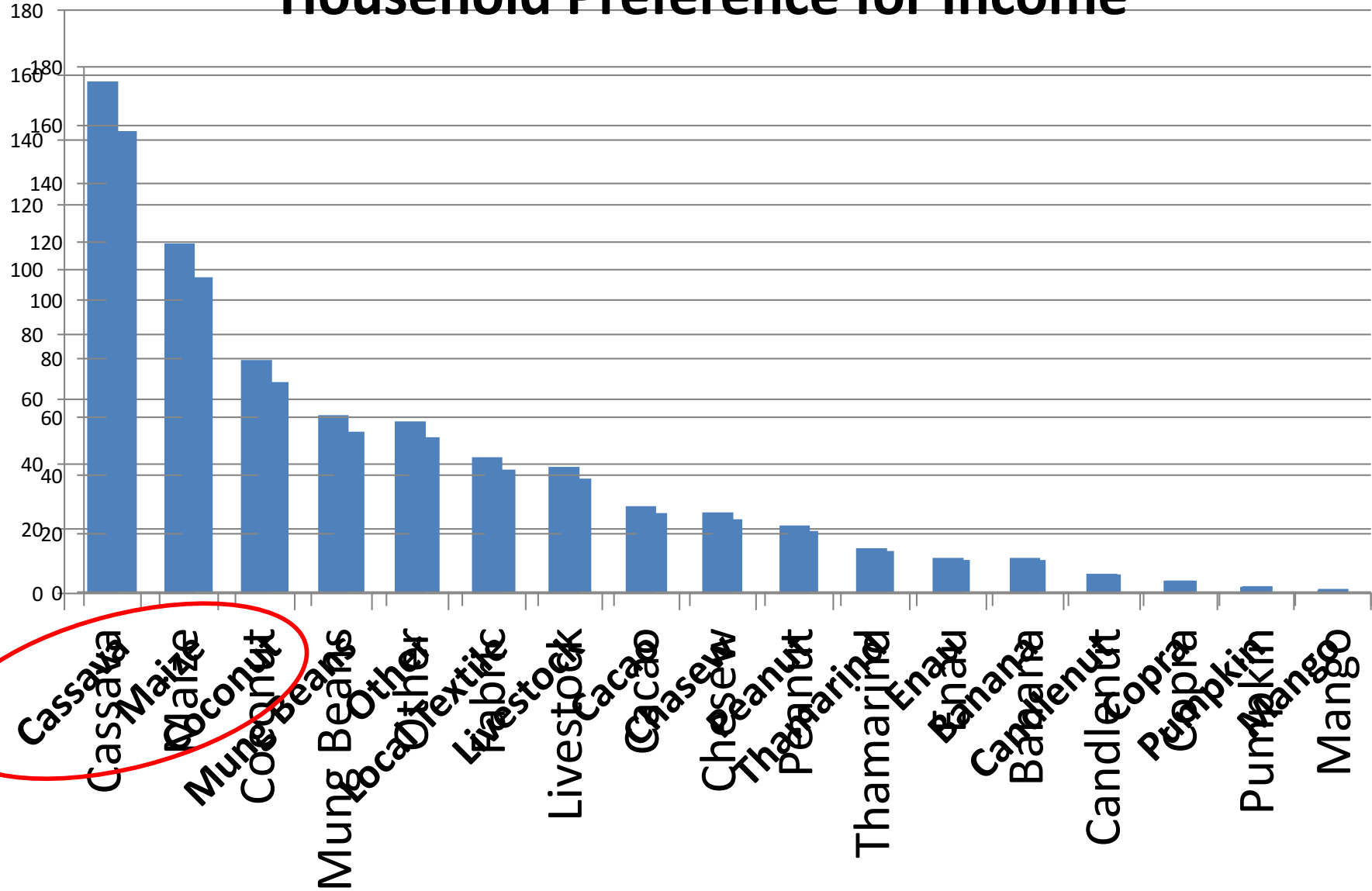




Household Preferences for Food Security



Household Preference for Income



Local Textile (Tenun)



Conclusion

- Cassava farming has an important role in food consumption and trade within Sikka
- Farmers use cassava for home consumption, livestock feed, and trade
- Can improve productivity of cassava as food crop
 - improved intercropping in low-elevation coastal zone
 - new, high-yielding sweet varieties for local consumption
 - pest and disease monitoring and control (mealybug)
 - investigation of possible processing industries (e.g., MOCAF ?, livestock feed ?)
 - Large-scale starch processing unlikely to be profitable

Here's to a prosperous future



