

Simple RMarkdown Baseline Report - Mbire

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1. Introduction

This document reports the results of a survey of 270 households conducted between the 12th and 17th of December 2022 in Wards 2, 3, 9, 12 and 17 of Mbire District (Fig.1).

2. Study area

Figure 1 displays the location of the surveyed farms.

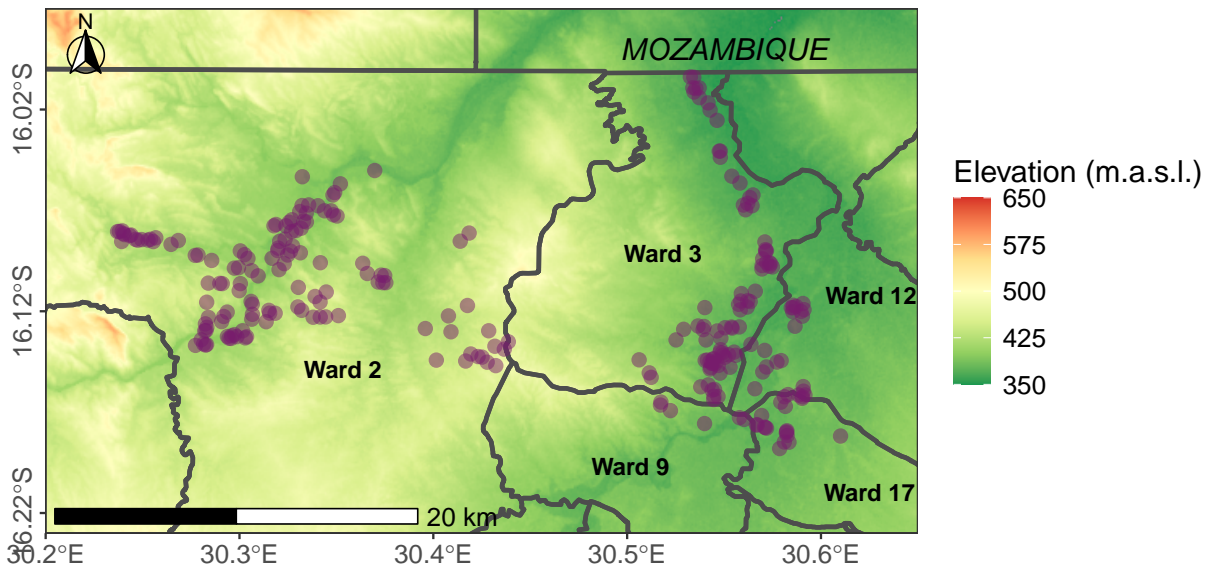


Figure 1: Location of the households surveyed in the Wards 2, 3, 9, 12 and 17 of Mbire District

3. Summary table

Table 1 compares mean characteristics of farms in Ward 2, and in Wards 3, 9, 12 and 17.

Compared to farms/households in Wards 3, 9, 12 and 17, farms/households in Ward 2 are characterized by heads of household statistically younger, and farms smaller with less cattle (Table 1). More farms in Ward 2 have an individual garden, while own production is the main source of food for a smaller percentage of farms. Similarly, farming is the main source of income for a smaller percentage of farms in Ward 2 than in Wards 3, 9, 12 and 17. Households in Ward 2 are food secure for a smaller proportion of the year but their dietary diversity is higher, when compared to households in Wards 3, 9, 12 and 17. Total cereal production and total equipment value are significantly lower for farms in Ward 2 tna farms in Wards 3, 9, 12 and 17.

Characteristic	**Overall** N = 266	**Ward 2** N = 132	**Ward 3 9 12 17** N = 134	**p-value**
Age of the head of the household	51.4 (15.7)	49.7 (16.0)	53.1 (15.3)	0.036
Female-headed households	23%	21%	25%	0.6
Education of the head of the household higher than primary	40%	45%	35%	0.14
Family size	5.6 (3.2)	6.0 (3.6)	5.3 (2.6)	0.10
Total cropped area (ha)	1.8 (1.5)	1.5 (1.3)	2.1 (1.6)	<0.001
Fallow land (ha)	0.7 (1.4)	0.6 (1.0)	0.9 (1.6)	0.2
Non-cereal crops (% total cropped area)	29.9 (29.1)	30.0 (30.8)	29.8 (27.5)	0.7
Total fertilizer used (kg)	87.0 (115.2)	72.9 (90.9)	101.0 (133.9)	0.14
Total manure + compost used (kg)	304.5 (626.1)	294.1 (653.2)	314.8 (600.5)	0.6
Cattle (n)	4.3 (8.9)	3.5 (8.7)	5.2 (9.1)	<0.001
Small ruminants (n)	10.4 (20.1)	9.4 (17.4)	11.4 (22.5)	0.7
Poultry (n)	11.7 (29.9)	10.0 (11.3)	13.3 (40.6)	0.4
Bee keeping	11%	7.6%	13%	0.2
Owning an individual garden	48%	55%	40%	0.020
Having access to a communal garden	2.3%	3.8%	0.7%	0.2
Own production as main source of food	75%	61%	90%	<0.001
Farming as main source of income	51%	38%	64%	<0.001
Proportion of the year being food secured	0.6 (0.3)	0.5 (0.3)	0.6 (0.3)	0.022
24H household dietary diversity score (0-12)	3.1 (1.1)	3.3 (0.9)	3.0 (1.2)	<0.001
Using a community seed bank	12%	1.5%	22%	<0.001
Using small grains	87%	86%	87%	>0.9
Using crop rotation	51%	49%	53%	0.6
Using intercropping	17%	11%	23%	0.018
Using cover crops	8.6%	6.8%	10%	0.4
Using mulching	9.8%	9.8%	9.7%	>0.9
Using integrated pest management	50%	43%	57%	0.027
Using compost and manure	17%	17%	17%	>0.9
Planting trees on-farm	14%	9.1%	19%	0.026
Retaining naturally regenerated trees on-farm	37%	44%	30%	0.024
Using homemade animal feed	26%	28%	23%	0.4
Producing fodder	4.5%	4.5%	4.5%	>0.9
Preserving fodder	4.1%	1.5%	6.7%	0.068
Using survival feeding	4.5%	4.5%	4.5%	>0.9
Total farm diversity (n species)	6.8 (3.7)	6.7 (3.4)	7.0 (3.9)	0.7
Total cereal production (kg/yr)	867.0 (962.0)	548.5 (464.6)	1,180.8 (1,196.4)	<0.001
Total livestock offtake (TLU/yr)	0.4 (1.3)	0.3 (1.0)	0.4 (1.5)	0.6
Equipment value (USD)	290.0 (689.5)	206.4 (308.1)	372.4 (916.5)	0.004

4. Crop management

4.1. Land allocation

Maize area doesn't increase with increasing total cropped area, but the areas in small grains and in other crops (other than maize, small grains and legumes) increase significantly (Figure 2).

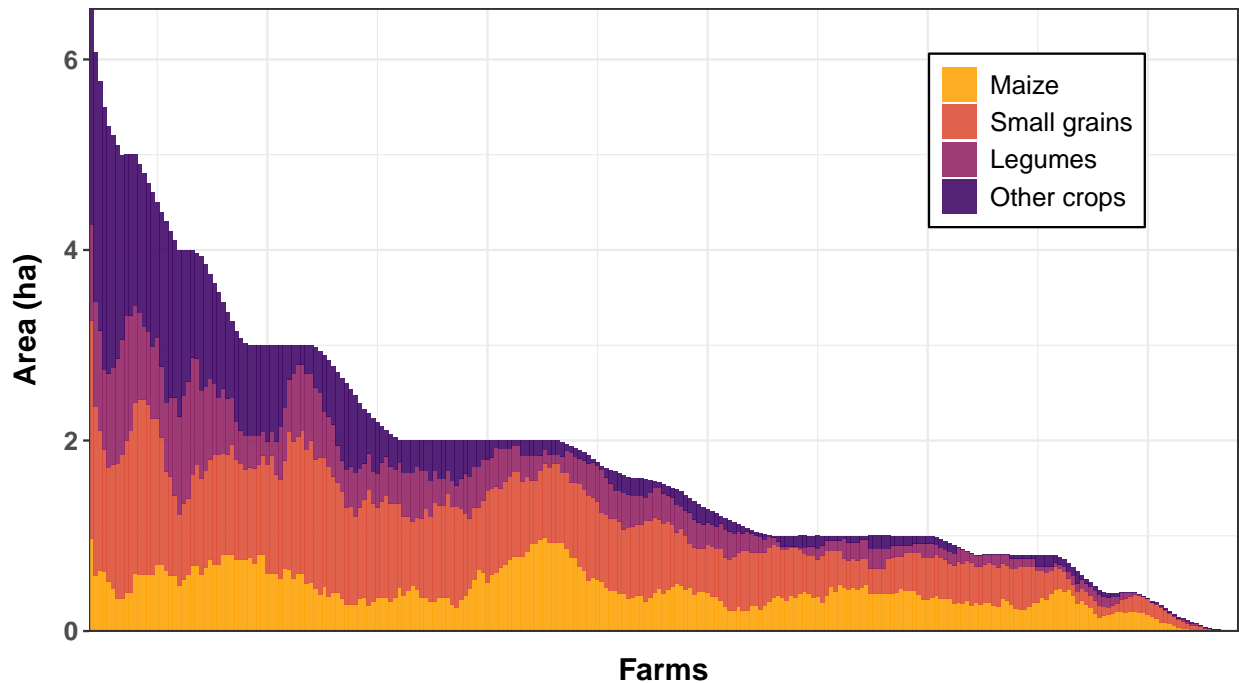


Figure 2: Land allocation

4.2. Intercropping

Pumpkin is the main species intercropped, followed by cowpea, watermelon and local cucumber (Figure 3).

4.3. Maize residue use

The large majority of maize residue is either grazed in the field or harvested for feed (Figure 4).

5. Food security

Food security is the lowest between October and January (Figure 5).

6. Soil health

The majority of farmers in Mbire perceive soil fertility to be declining and almost half of the population surveyed perceives soil erosion to be worsening. However, the majority of farmers felt tree cover and soil compaction were either stable or improving.

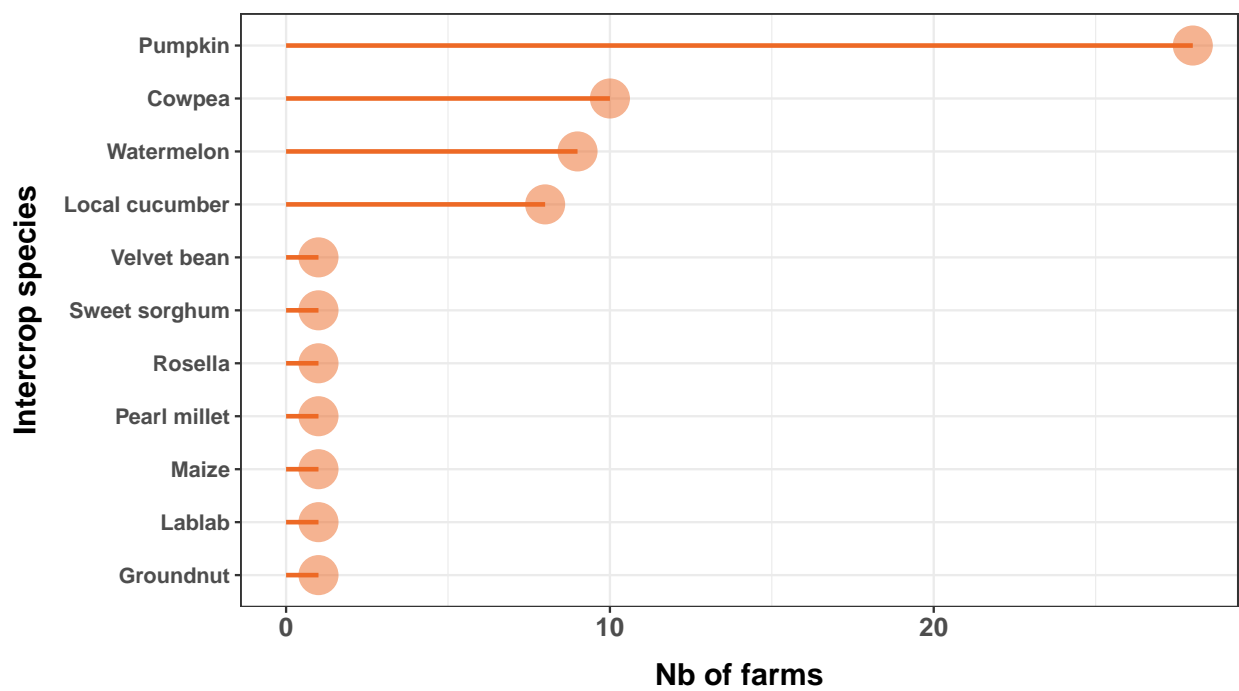


Figure 3: Major intercrop species

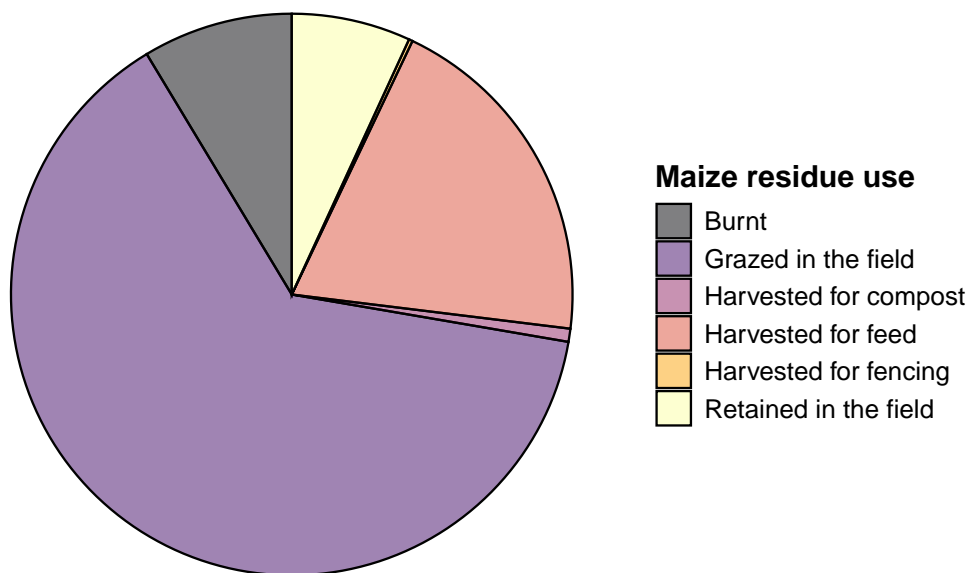


Figure 4: Maize residue use

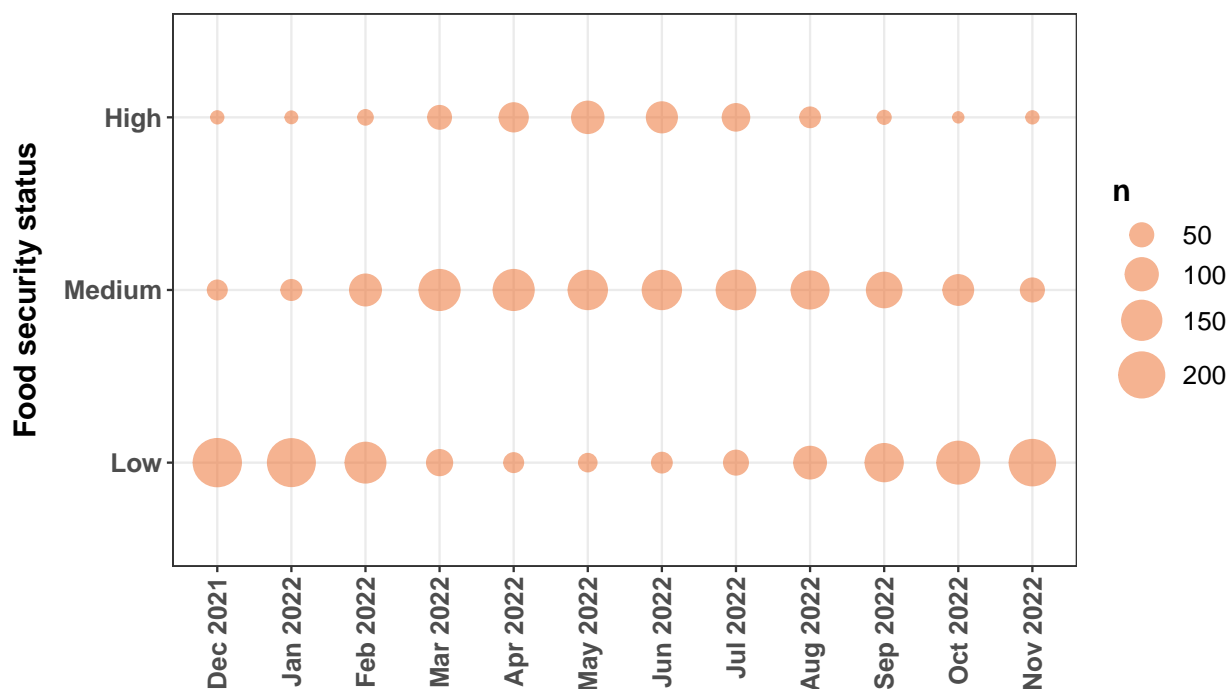


Figure 5: Food security situation in the 12 months preceding the interview

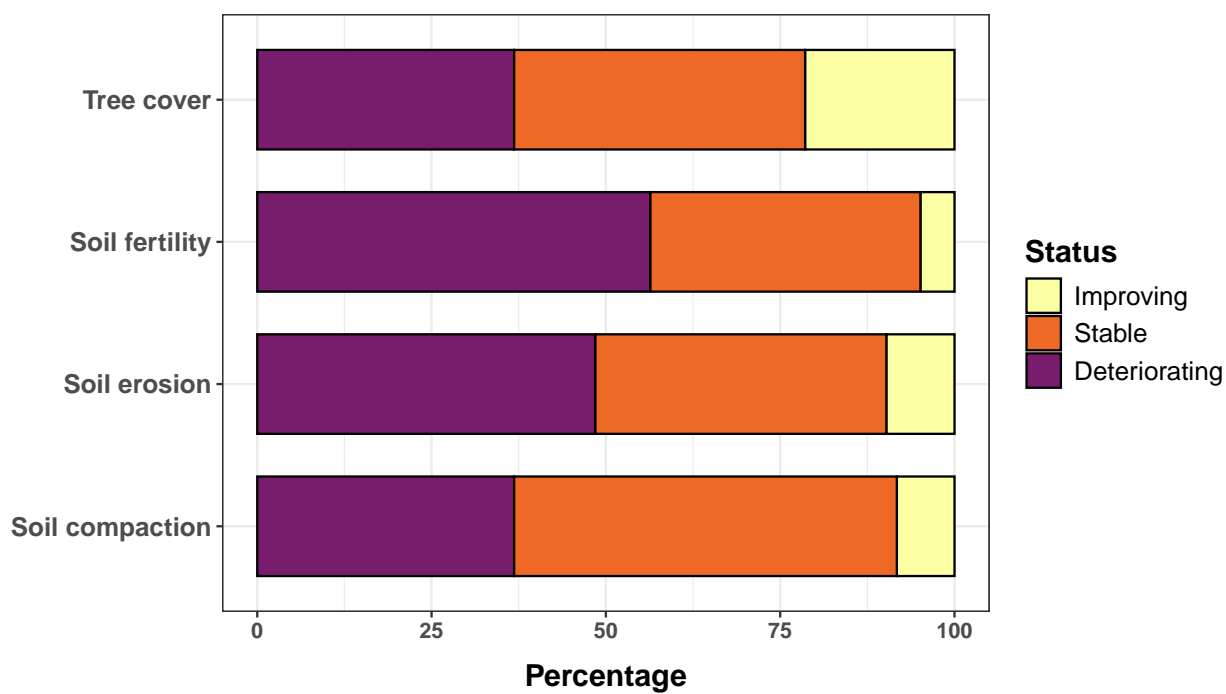


Figure 6: Perception of Change in soil health