Health Status of Farming Households and Crop Productivity: Evidence from Malaria Infected Households in Nigeria

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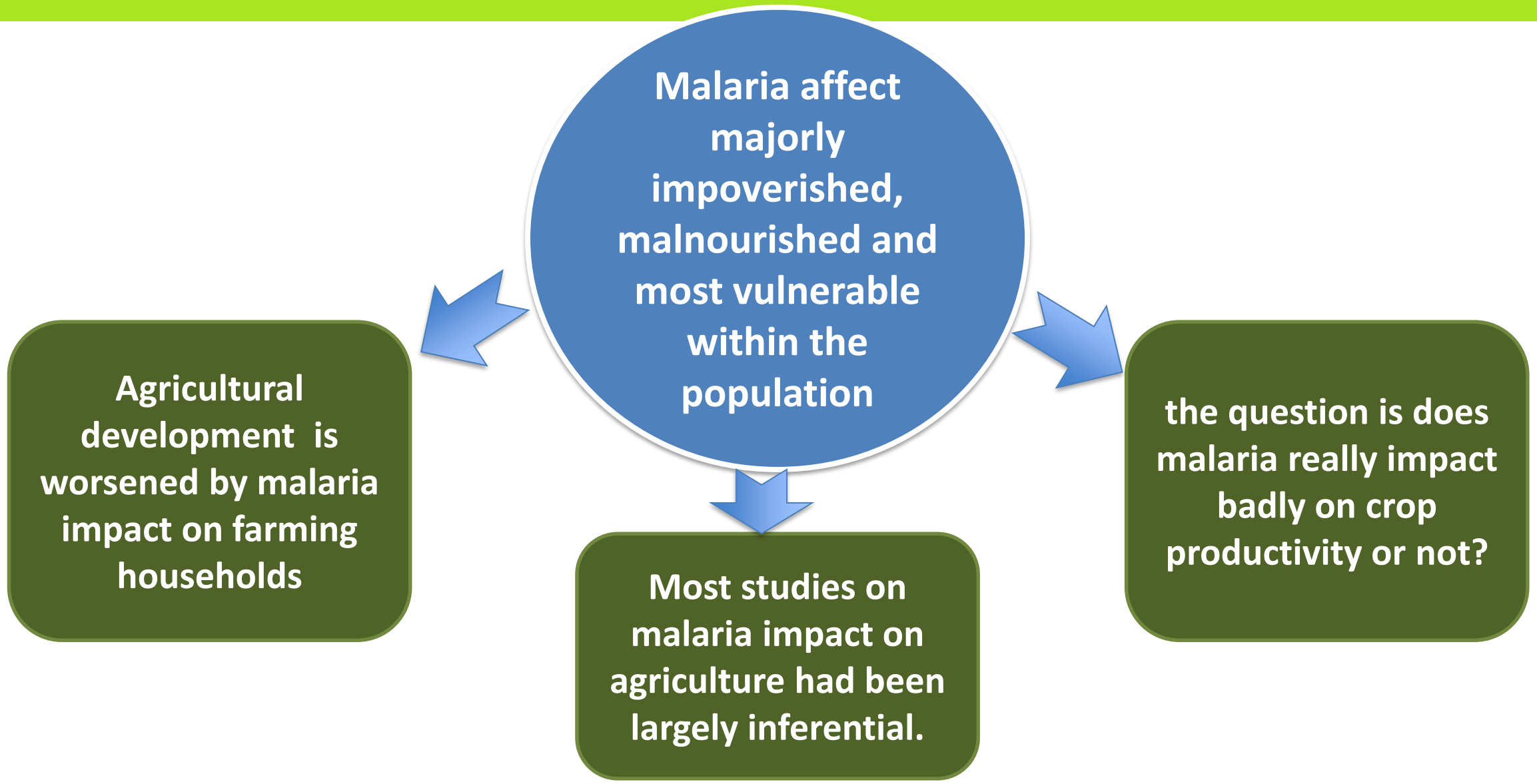
Problem Statement



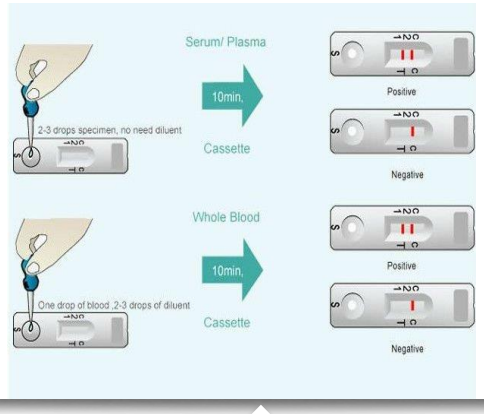
Objectives of the study

Determine the effect of malaria on crop productivity in a longitudinal cohort of farming households in the study area

Specific objectives

- Determine the incidence of malaria in the Kabba /Bunu LGA
- Compare crop productivity among households based on malaria incidence;
- Identify the determinants of malaria incidence among farming households; and
- Assess the intensity and determinant of welfare loss among malaria-affected households

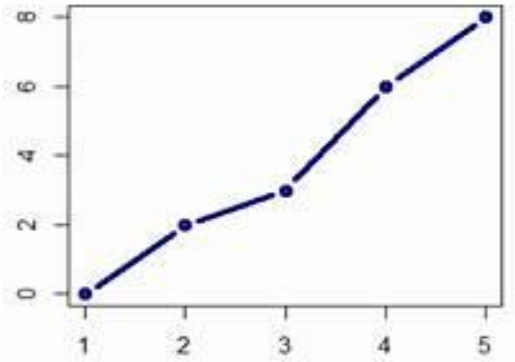
Study Area: Kabba/Bunu Local Government Area of Kogi State in Nigeria



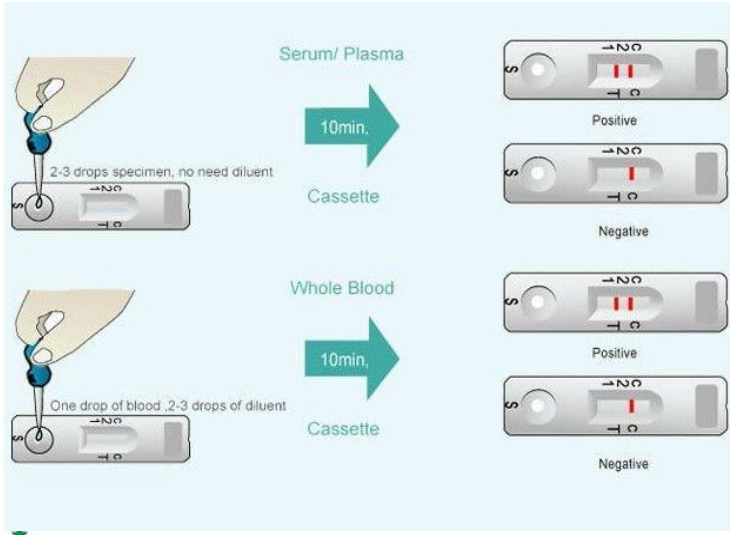
Location	Sample	Method	Monthly farm Visit
Kabba/Bunu	72 Farming Households	Rapid Diagnostic Test (RDT)	Farming and C/Service

Tools of Data Analysis

a Create Survey → b Collect Data → c Analyzed Result



Sample and result Collection from Households



Analytical Techniques

Descriptive statistics

Inferential statistics,

Ordinary Least Squares

Binary Logistic regression model

Fig 1: Cropping Pattern of Farmers in the Sample Communities

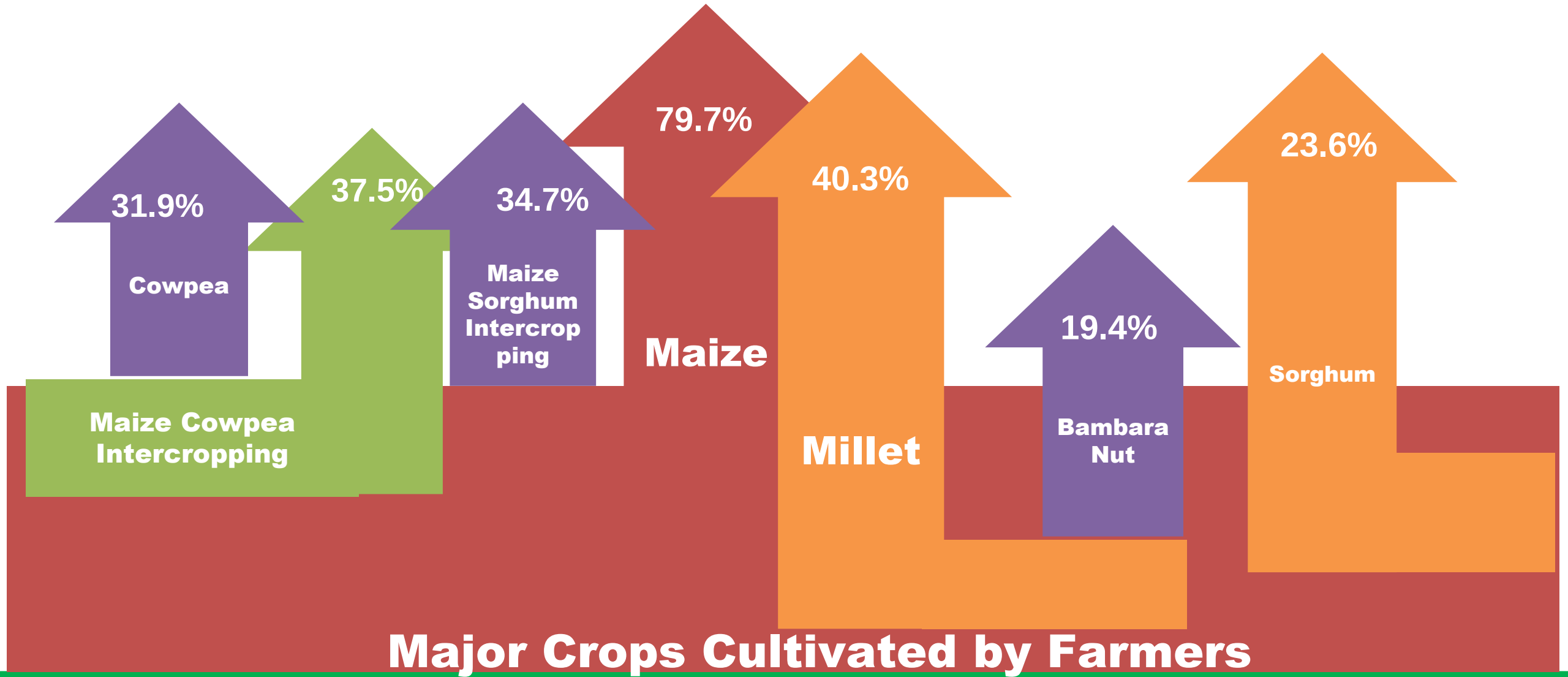


Table 1: Distribution of 358 Episodes of malaria by Household composition

Month	Children	Male Adult	Female Adult	Total (% Monthly contribution)
May	39	13	12	64 (17.9)
June	25	8	8	41(11.5)
July	21	13	6	40 (11.2)
August	21	12	11	44 (12.3)
September	5	10	8	23 (6.4)
October	44	18	16	78 (21.8)
November	26	12	6	44 (12.3)
December	15	5	4	24 (6.7)
Total	**196 (55%)**	**91 (25%)**	**71 (20%)**	**358 (100)**

Fig2:Severity of malaria in 72-households with Malaria

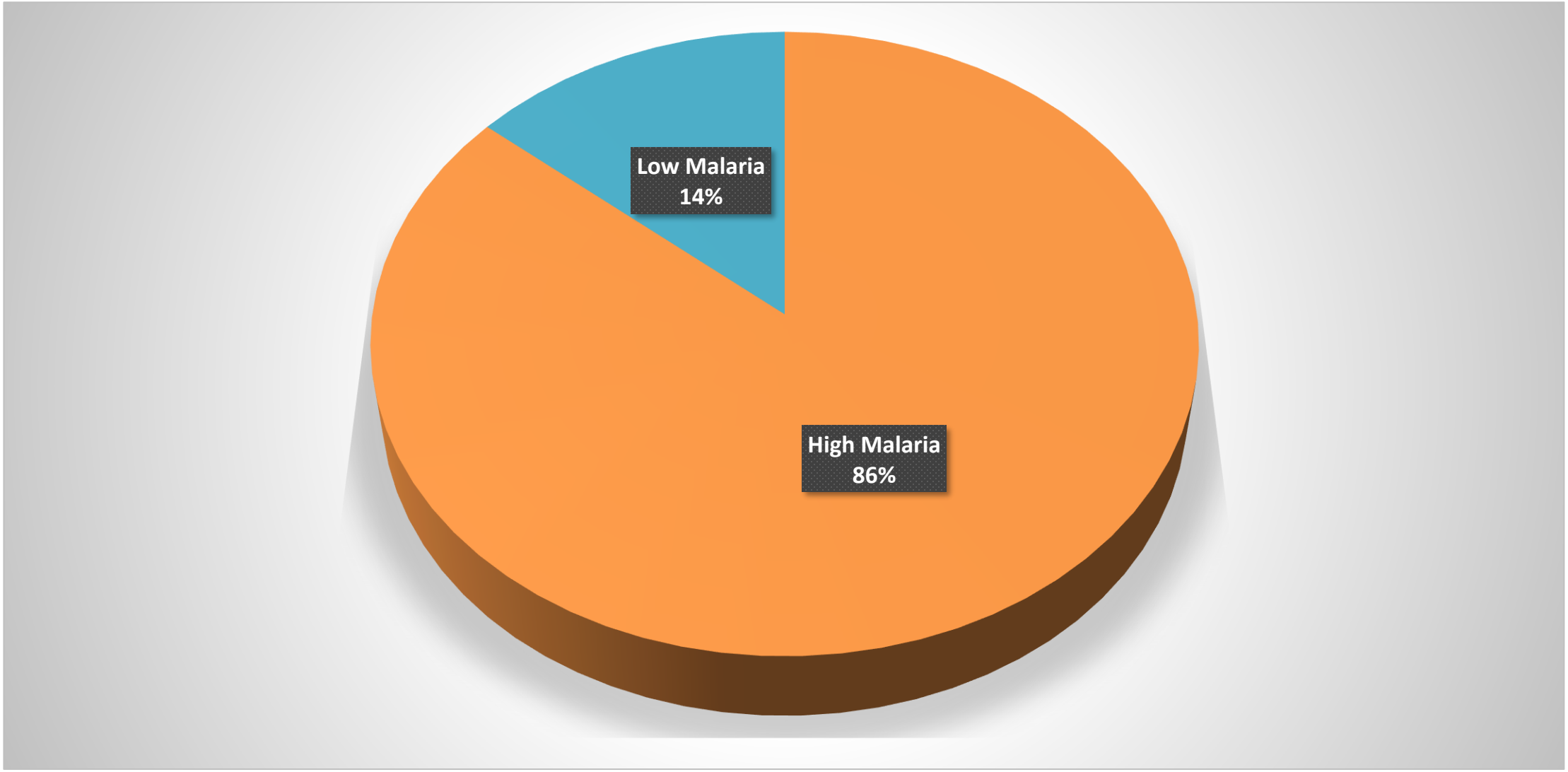


Fig3: Malaria Morbidity and Crop Productivity

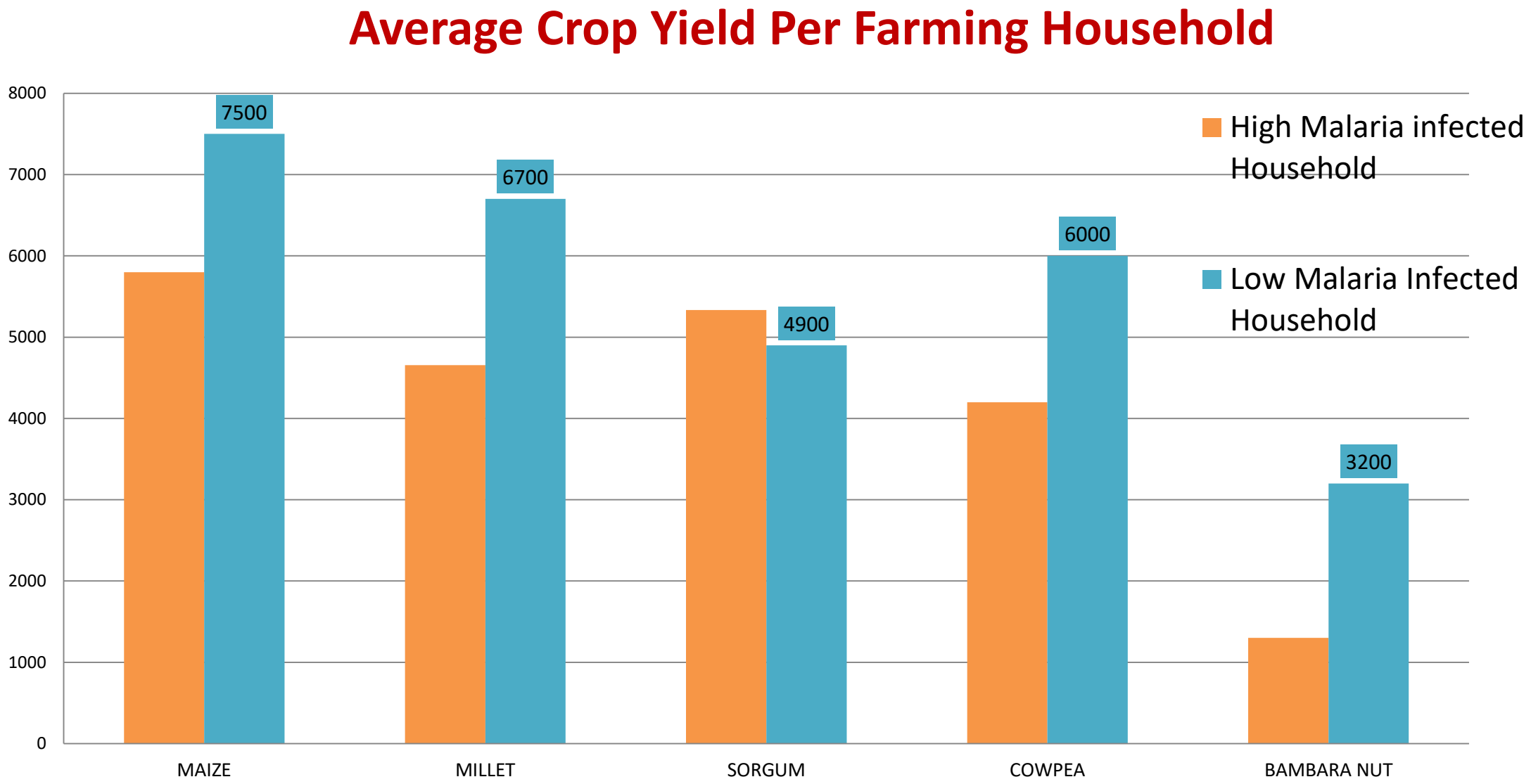


Table 2: T-test Comparing the Output Level Of High And Low Malaria Household

Malaria Incidence	Mean (SD)	T-value	P-value
High	4258 (1764)		
		3.030	0.039
Low	5660 (1674)		

Table3: Determinants of malaria infected farming households

Variable	Coefficient	Standard Error	P. value	Odds Ratio	95% Conf. Interval	
Sex	0.820	0.765	0.284	2.271	.507	10.173
Age	0.026	0.030	0.382	1.027	.968	1.089
Use of Mosquito net *	-1.523	0.669	**0.023**	0.218	.059	.810
Education *	-2.035	0.648	**0.002**	0.131	.037	.465
Constant	0.145	1.708	0.932	1.156		

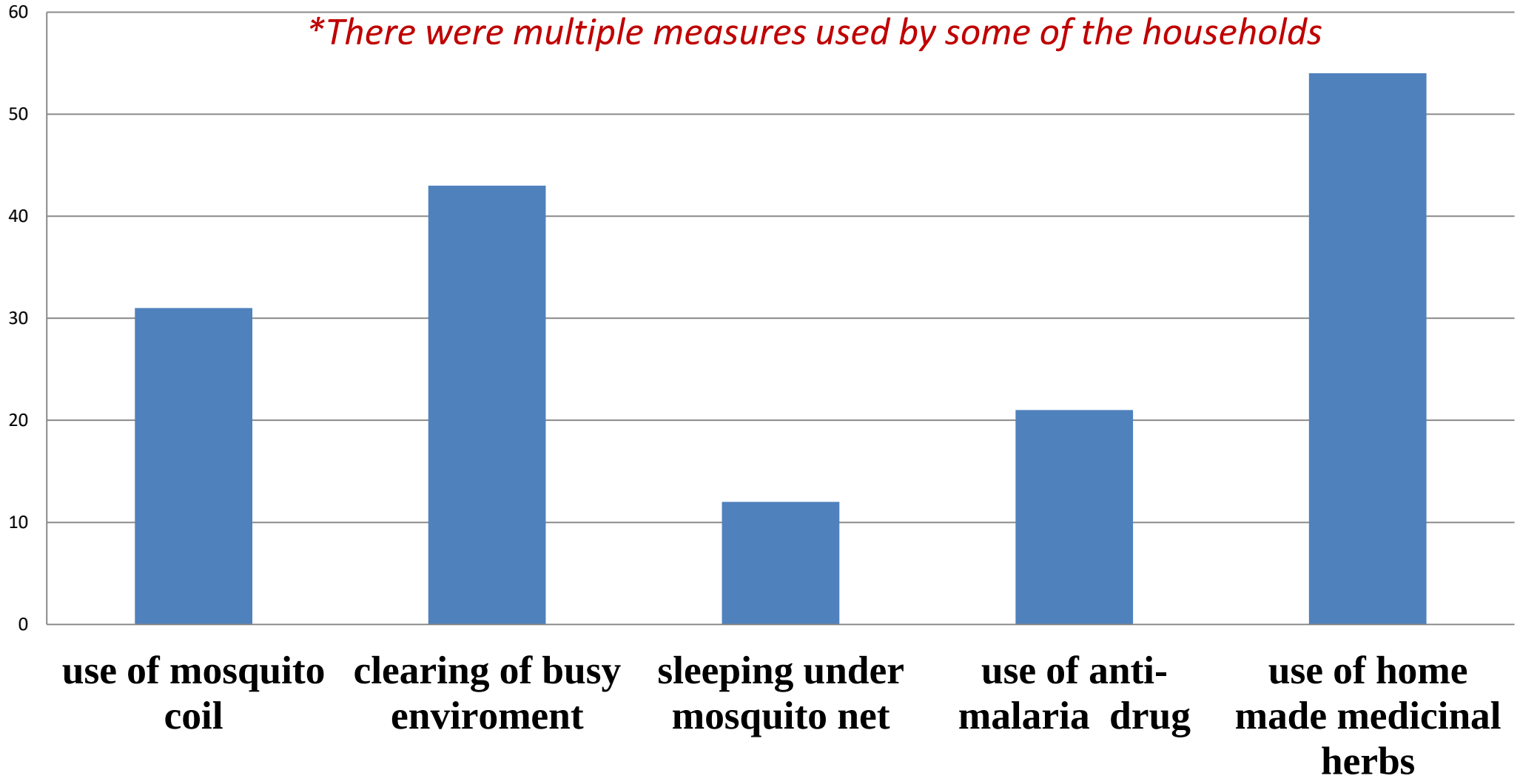
Table 4: Welfare Loss of malaria infected Farming Households

Cost of Malaria Incidence	Naira (₦)
Imputed cost of day loss	122,333
Cost of treatment	18,132
Cost of prevention	36,292
Cost of care given	2,132
Welfare loss	148,888 (US $409.03)

Table 5: OLS Results of the Determinant of Welfare Loss

MALARIA INCIDENCE			
Variables	**Coefficient**	**t-value**	**p-value**
Constant	10559.678	0.843	0.402
Adjusted household size	7404.556	4.012***	0.000
Level of education	-8881.271	-4.956***	0.000
Malaria incidence	84374	6.685***	0.000
Use of mosquito net	-1260.17	-2.727***	0.008
R^2	0.543	0	0
F	19.940		

Fig 4 : Protective Measures Used to Reduce Malaria Incidence in the Study Area*



Summary, Conclusion and Recommendation

- The study discover high incidence of malaria among farming households especially among children.
- Significant variables associated with malaria incidence were identified.
- The results show that LMIH are more productive than HMIH.
- The use of malaria control measures impacted greatly on the variability in the level of output.
- Need for Creating awareness on the use of insecticide treated mosquito net,
- Targeting the area for free net distribution and training on utilization will reduce malaria incidence and increase crop productivity

Thank you