

Characterizing Post-harvest losses in rural communities of Northern Nigeria: A panacea to reducing household food insecurity

By

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INTRODUCTION

- Food insecurity is a global phenomenon that all hands have being on deck to solve
- Nigeria is losing about 2.4 billion tonnes of food yearly to poor harvest and storage facilities (Olumeko,1999)
- Losses associated with these crops **limit the potential income of the farmers, threaten food security and exacerbate conditions of poverty** among rural households... (Thamaga - Chitja *et al* ., 2004)

INTRODUCTION

- Food security can be induced by increase in production and/or **reduction of losses**
- Major efforts have always been concentrated on the former to the neglect of the later
- According to Kaiya (2014), post-harvest loss (PHL) is the degradation in both **quantity** and **quality** of food produced from harvest to consumption

INTRODUCTION

- About 5-25% of fruits and vegetables leaving the farm gates are never consumed (Jobling, 2002)
- Post harvest losses in food can reach 50% of total food production (Watkins and Anubha, 2007)

INTRODUCTION

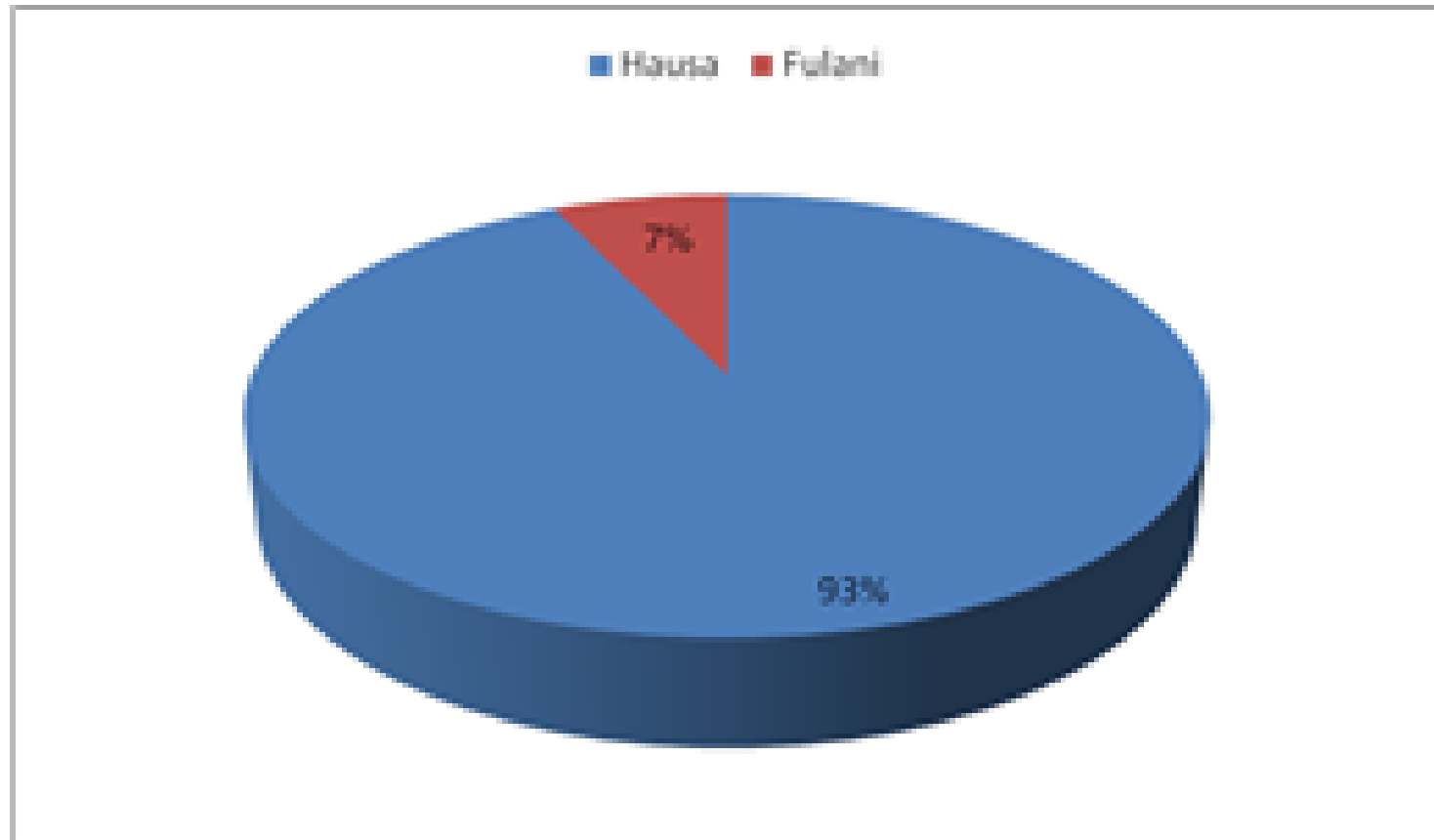
- The estimates from the Food and Agricultural Organisation puts global food loss and wastages at **32 percent** while in Sub Saharan Africa, PHL is estimated to be **37 percent** (Kaminski and Christiaensen, 2014).
- This study attempts to fill the knowledge gap on the incidence of PHL in northern Nigeria by characterizing PHL in the study area based on **crops affected, the stages** and **possible causes**.

Method of Data Collection

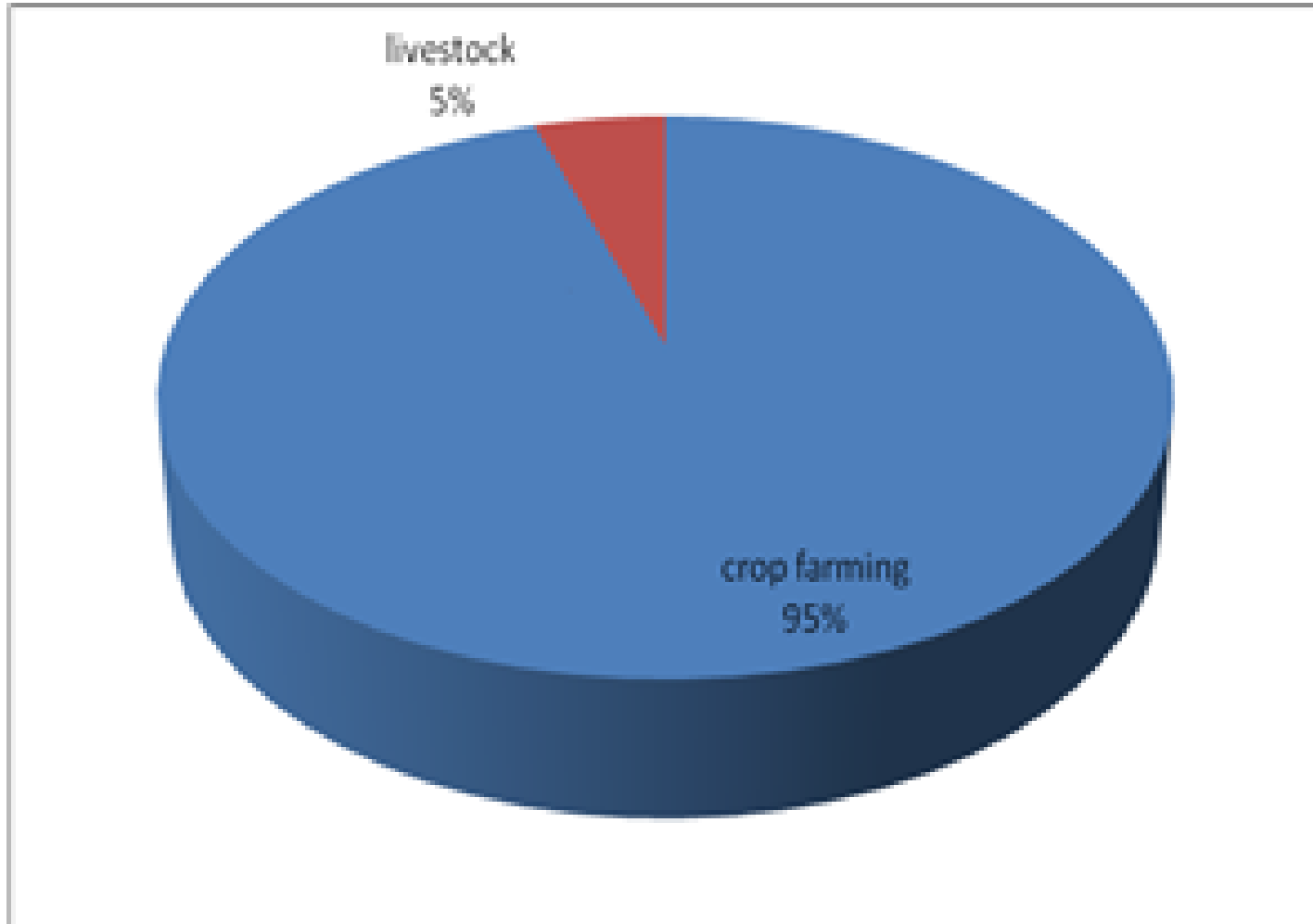
- Data were obtained via focus group discussion (FDG) with crop farmers randomly selected from 21 Villages across Northern Nigeria. The FGD sessions involved 8-10 participants per village, with a moderator and note taker to facilitate the process. Data were analysed using descriptive statistics

RESULTS

Major Ethnic Groups



Economic Activities



Major Food crops

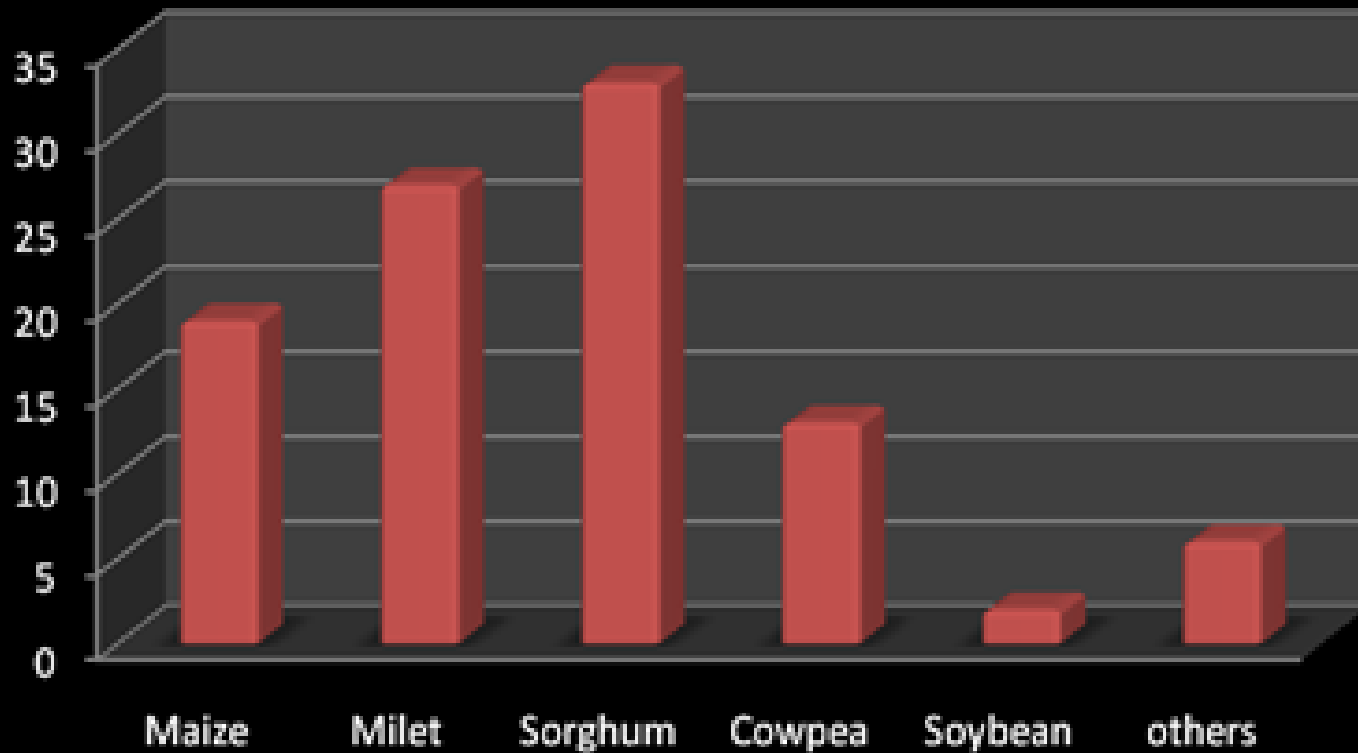


FIGURE 3: MAJOR FOOD CROPS

Membership of Farmers' Association

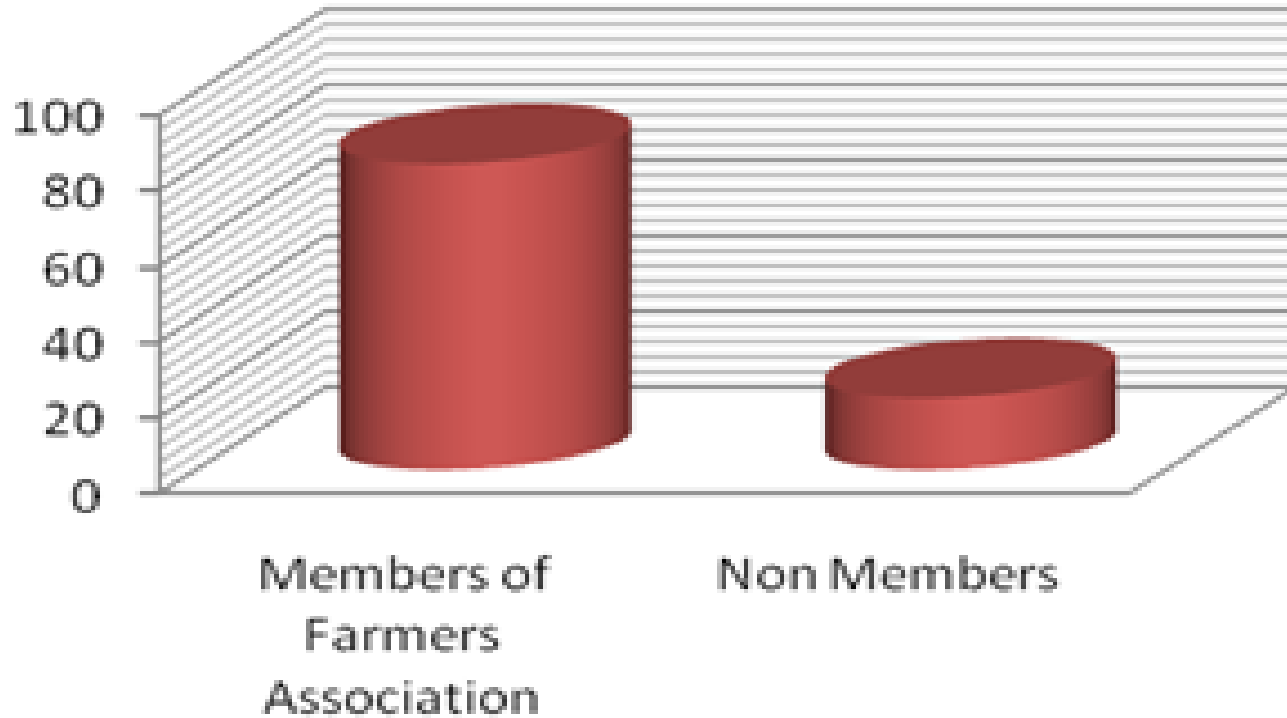


FIGURE 4: MEMBERSHIP OF ASSOCIATION

CAUSES OF FOOD SHORTAGES IN NORTHERN NIGERIA

Cause	Frequency*	%
Insect Pest attack before harvest	09	42.9
Post Harvest Loss	18	85.7
Disease outbreak	10	47.6
Flooding/Drought	08	38.1

*Multiple response allowed

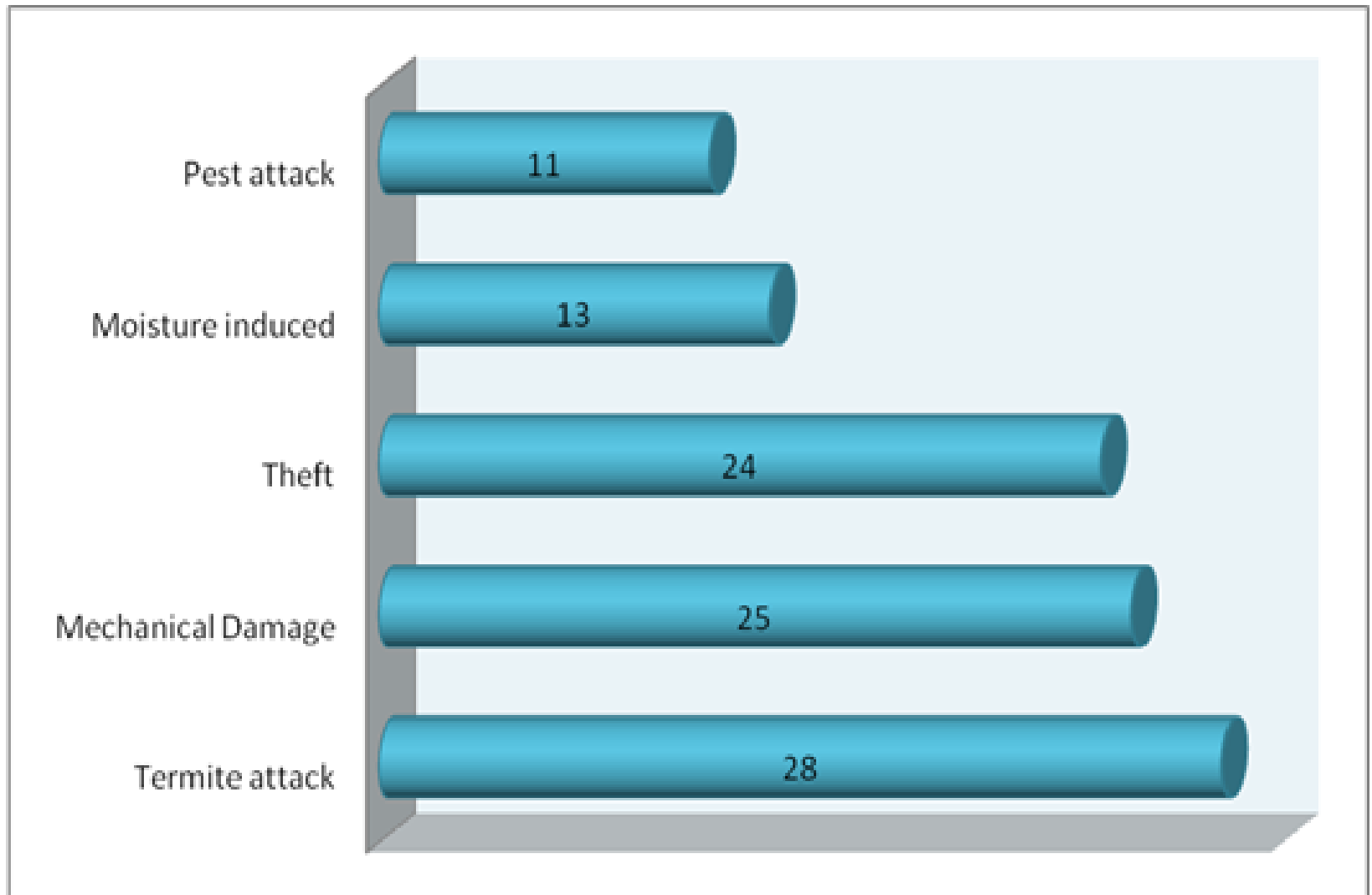
Food Crops affected by PHL in rural communities of Northern Nigeria

CROPS	FREQUENCY*	%
CEREALS (maize, sorghum, millet)	16	76.2
LEGUMES (cowpea, soyabean)	04	19.0
FRUITS/VEGETABLES	01 *Multiple response allowed	4.8

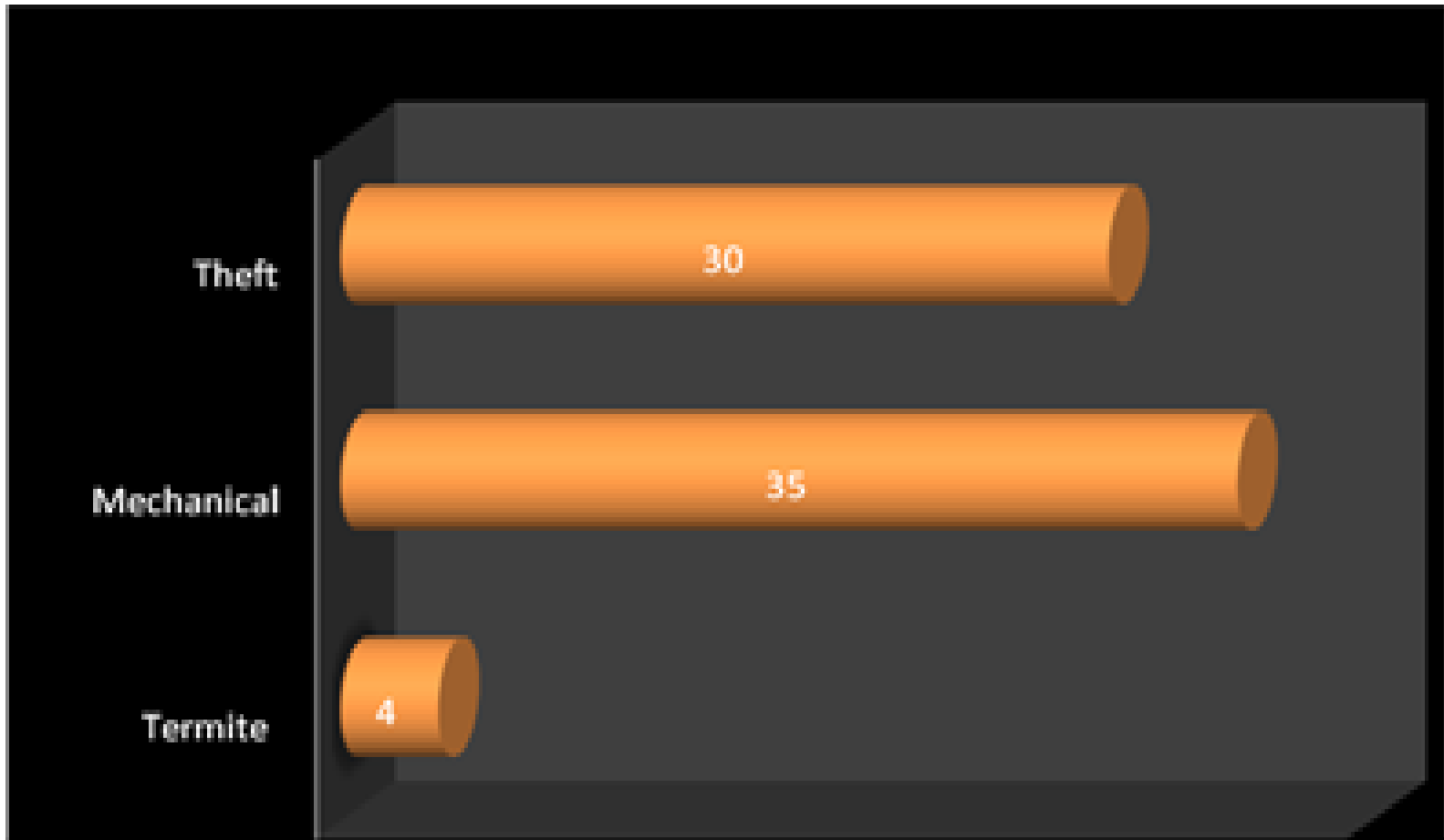
Stages of post harvest losses in rural communities of Northern Nigeria

STAGES	FREQUENCY*	%
HARVESTING	14	66.7
POST-HARVEST HANDLING	08	38.1
STORAGE	19	90.5
PROCESSING	15 *Multiple response allowed	71.4

Nature of PHL during Harvesting



Nature of PHL during Post Harvest Handling



Post-Harvest Handling

Some wheat left on the field after harvesting



Harvested crops kept before threshing: Prone to termite attack, fire outbreak and theft



Threshing

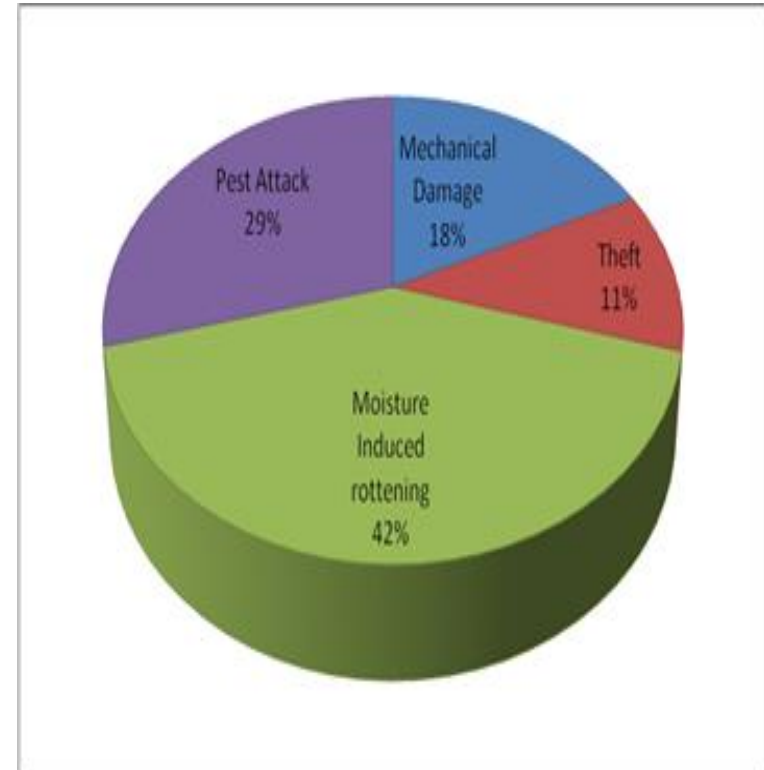


Women winnowing on the field



Causes of Postharvest loss during storage

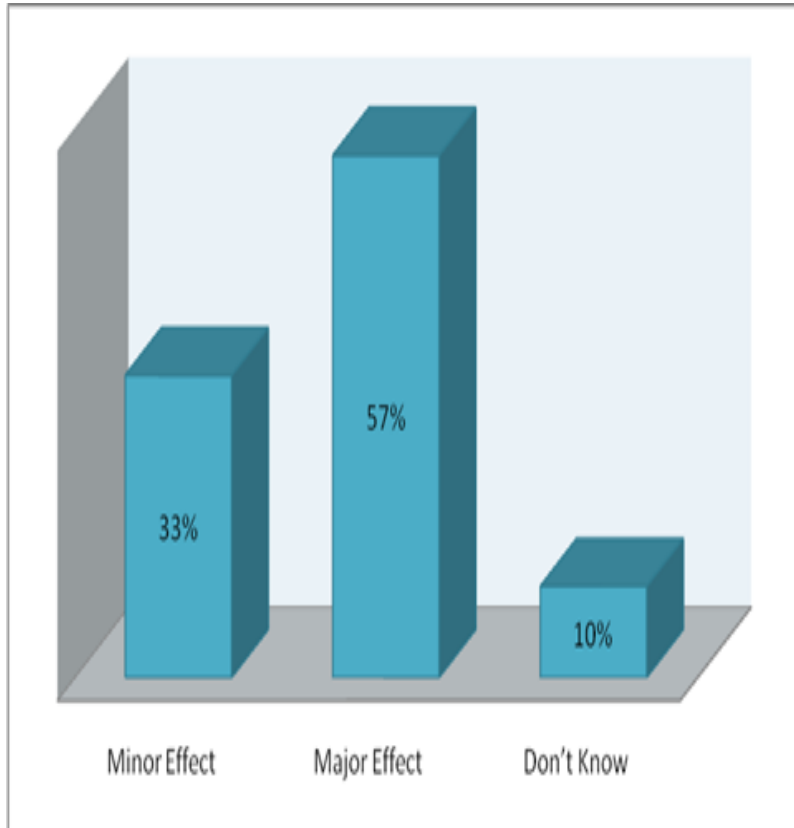
Local storage facility prone to rodent, termite and fire



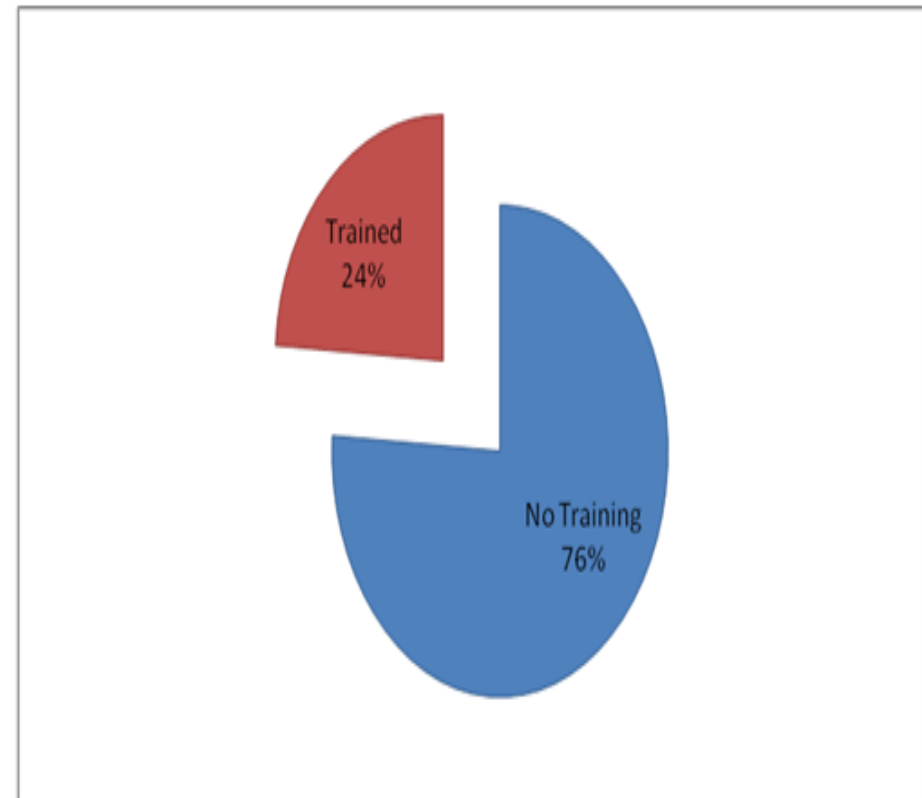
Severity of PHL stages

	Level of severity* (% of communities)		
STAGES	HIGH	MEDIUM	LOW
HARVESTING	46	16	38
POST-HARVEST HANDLING	06	17.9	74.6
STORAGE	49.3	09	40.3
PROCESSING	23	13	46

EFFECT OF PHL



TRAINING ON PHL



Recommendation

Improved small-scale storage facilities



Recommendation

Improved large-scale storage facilities



Recommendation

- Training of farmers on post harvest handling operations
- Provision of modernised labour saving post harvest handling equipments

THANK YOU
FOR LISTENING

