APPSA 2nd SCIENTIFIC CONFERENCE

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AN ANALYSIS OF POST-HARVEST LOSS LEVELS OF POTATOES, TOMATOES AND PEACHES (HVC): A CASE OF MOHALE'S HOEK, MASERU, LERIBE AND MOKHOTLONG DISTRICTS

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GOVERNO DE ANGOLA

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INTRODUCTION

Background:

- It is estimated that 699,049 persons are food insecure in Lesotho (LVAC Report, 2024)

Why?

- Fluctuating crop and livestock production and productivity

Why? Climate Change Impact and Poor Agriculture Management Practices

But!

- Post-harvest loss causes and loss levels exacerbate the situation, especially with highly perishable HVC

INTRODUCTION CONT...

Problem

- Globally, Post Harvest Losses amount to $940 billion (i.e. an equivalent of M16,920 billion) annually. (FAO, 2013)
- The waste resulting from PHL accounts for 10-15 % in developing countries (Nita and Aradhita, 2022)
- The World Bank, (2011) estimated that post-harvest losses in Sub-Saharan Africa are valued at $4 billion/M72 billion annually, equivalent to feed at least 48 million people.
- Heterogeneity of post-harvest food handling management practices, diseases outbreaks, market access and lack of storage facilities are a threat to food security now in future

Objectives:

- Identify factors that contribute to post-harvet losses of potato, tomato and peaches
- To compare potato, tomatoe and peach physical post-harvest loss level
- To compare potatoes, tomatoes and peach economic post-harvest loss level
- To recommend potatoe, tomato and peach post-harvet reduction strategies

methodology

METHODOLOGY

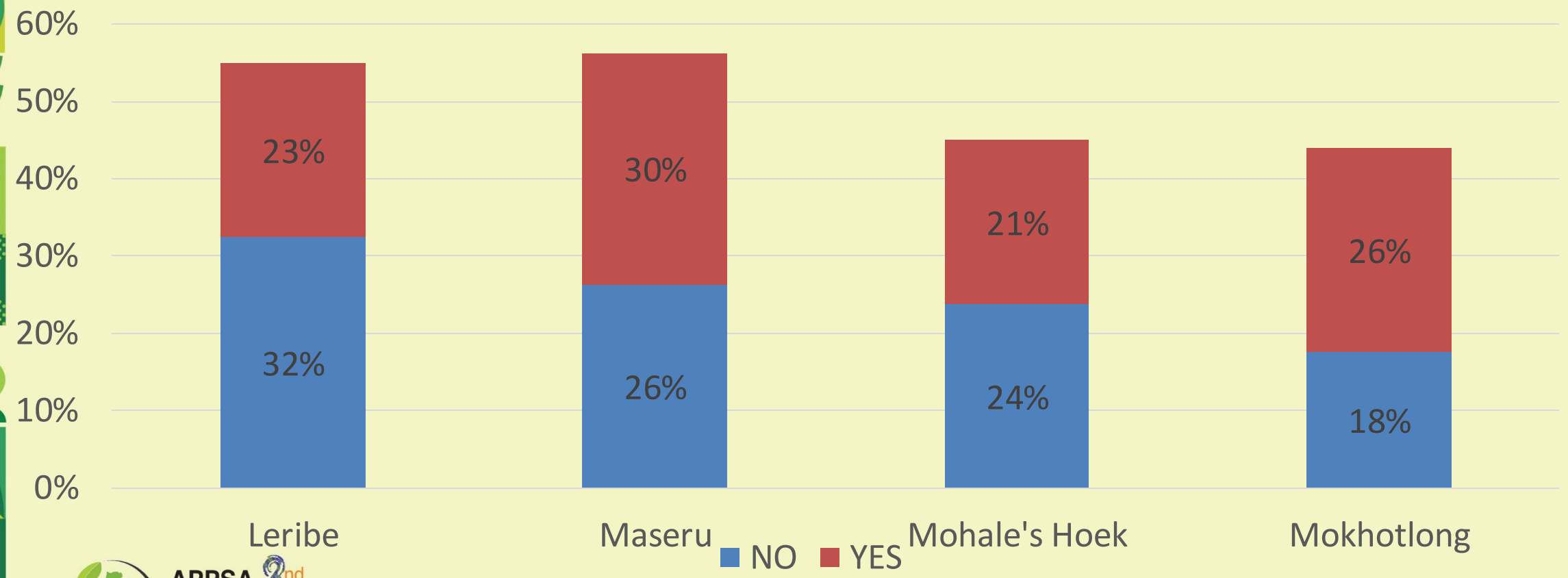
- SPSS used for descriptive, chi-square and One-way ANOVA for mean loss comparison
- Study population of potatoes, tomatoes and peaches farmers was purposively selected from RCs by Extension Staff for a **sampling frame**
- Stratified sample frame of 630 farmers – by 4 districts
- Within each strata (i.e. district), a systematic random sampling technique was applied.
- Primary data from a sample of 586 farmers used. Average prices for computing PHL economic loss value from DOM
- Data were collected by the 5 PHL working team. Thanks to Funding from APPSA, DAOs, Extension Staff and survey farmers participation

SAMPLE SIZE ALLOCATION AND RESPONSE RATE OF COMMODITY PRODUCERS BY DISTRICT

DISTRICT	INITIAL SAMPLED	ACHIEVED SAMPLE	RESPONSE (%)
Leribe	68	182	267.6+
Maseru	224	157	70.1
Mohale's Hoek	160	137	85.6
Mokhotlong	178	110	61.8
TOTAL	**630**	**586**	**93.0**

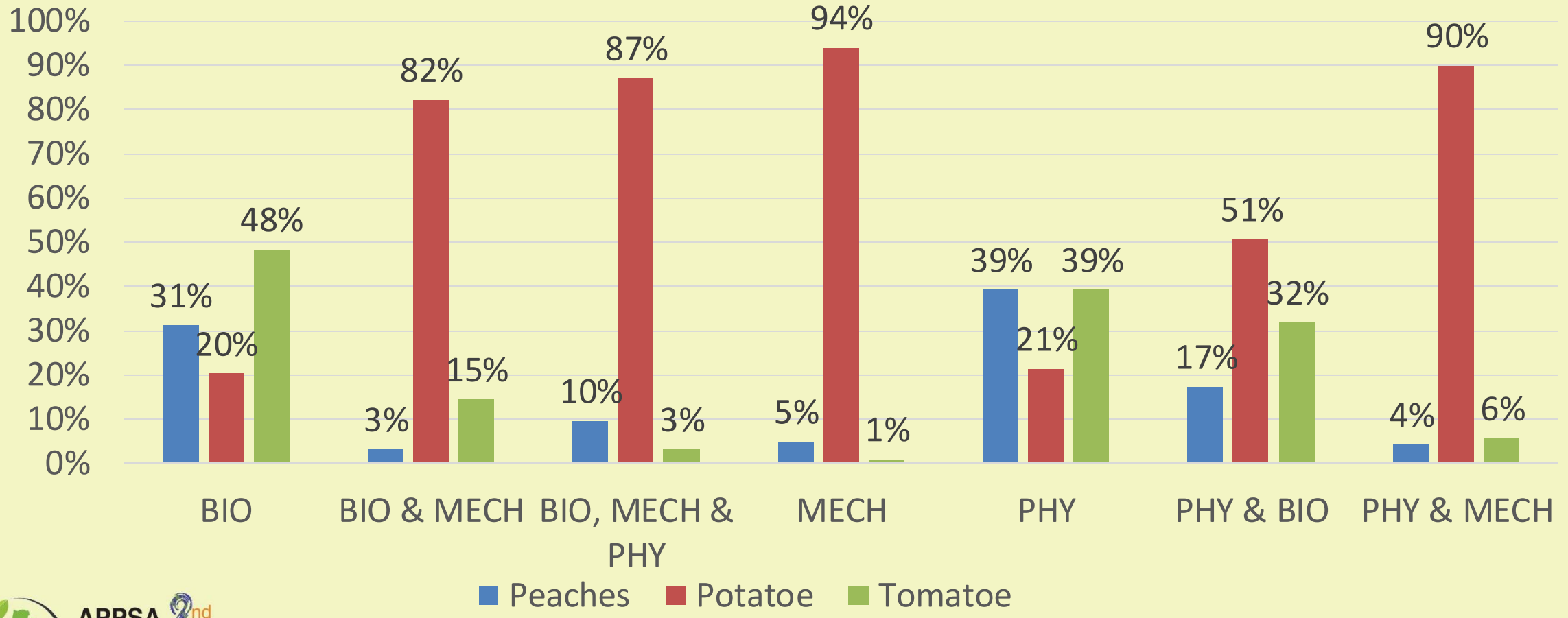
FINDINGS

TRAINING ON POST-HARVEST LOSSES



CAUSES OF LOSS CONT..

CAUSES OF LOSS DURING HARVESTING



Physical Mean loss level comparison between commodities

			Test for homogeneity of variance		ANOVA	
Target Commodity Groups	Mean	Std. Deviation	Leven Statistics	Sig	F	Sig
Potatoes	31.86	18.031	2.496	**.083**	**7.972**	**.000**
Tomatoes	23.76	18.377				
Peaches	30.00	19.567				
			Group difference			
Commodity groups groups	Mean difference	Sig			95% Confidence interval (LL - UL	
Potatoes-Tomatoes	**8.098***	**.000**			3.29	12.91

Monetary terms mean loss level comparison between commodities

			Test for homogeneity of variance		**ANOVA**	
Target Commodity Groups	Mean	Std. Deviation	**Welch Statistics**	Sig	F	Sig
Potatoes	360.65	204.106	9.28	**.0.000**	17.221	**.000**
Tomatoes	391.84	303.031				
Peaches	546.00	356.114				
			Group difference			
Commodity groups	Mean difference	Sig			95% Confidence interval (LL - UL	
Potatoes-Peach	**185.35***	**0.000**			81.564	289.127

POLICY RECOMMENDATIONS

- Farmers' access to appropriate farming harvesting equipment, especially for potatoes harvesting
- Strengthened pest and diseases control training programmes for farmers
- Enhanced farmers training on post-harvesting techniques eg. Food preservation
- Access to small-scale processing equipment
- Road-Infrastructure development, storage facilities and market information for diversified market access of these HVC, in particular deep rural areas

SCOPE FOR FUTURE RESEARCH

- Analysis of Nutritional Loss Value of these HVC
- Institutional Factors Influencing Farmers' choices of these HVCs
- Development of seed varieties that are more tolerant to biological factors contributing to losses

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