

# Impact of Crop production Strategies on Household Food Security and Welfare in Malawi's Central Region



UCC

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## 1 Introduction

Policy, its transition and various stakeholders' interests shape agriculture in Malawi.

More recently, these influences support diversification.

The results is a shift away from tobacco and cotton production for export towards production of food

crops for consumption and local sale (such as groundnut and soya bean). Despite the external incentives, resources available to farmers largely influence production strategies - this is especially the case for the majority of resource poor farming households in Malawi, which are below the poverty line (Verduzco-Gallo et al. 2014).



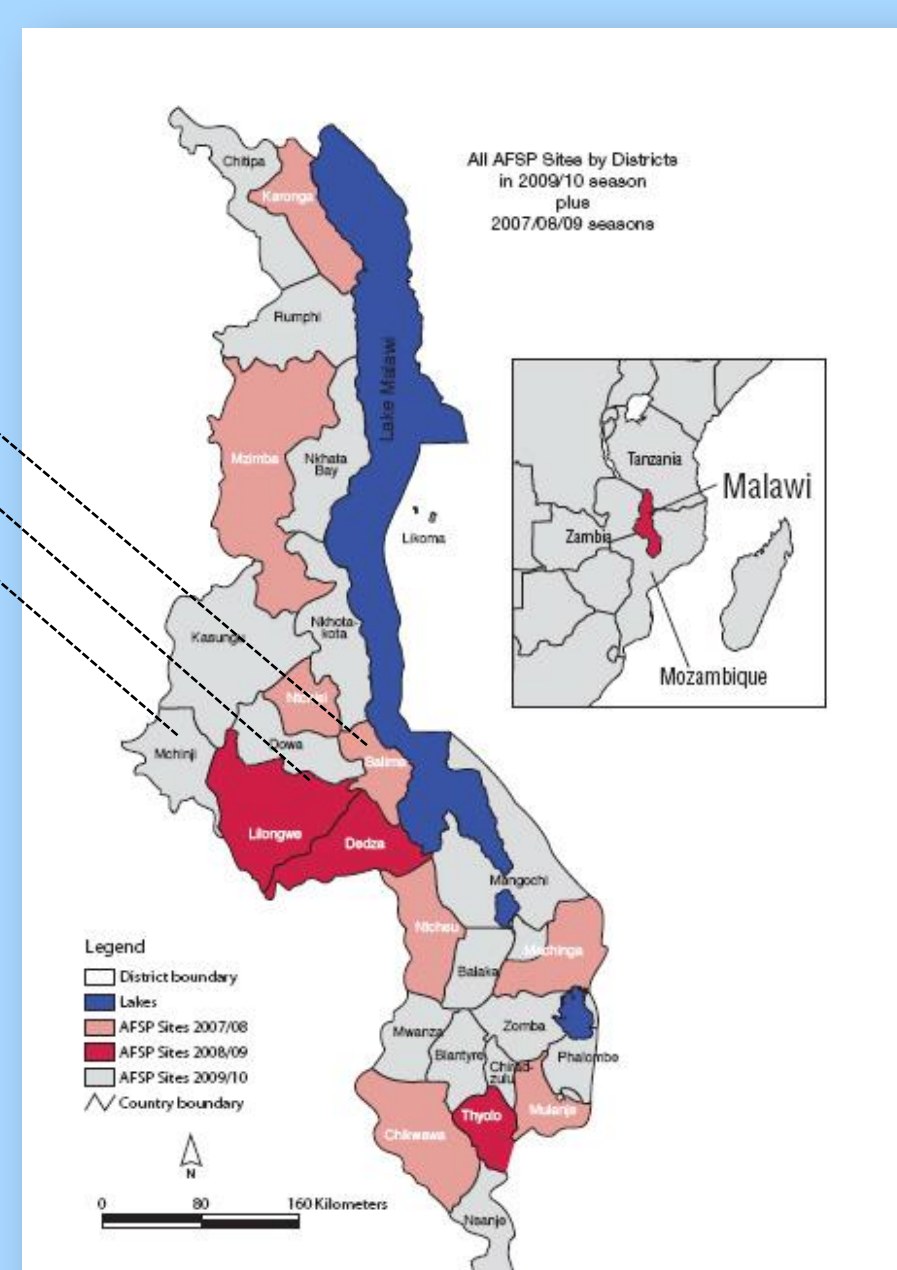
Figure 1: Groundnut buying station in Malawi

## 2 Methods

The research explores the importance of land allocation for export and food crop production, and its impact on food security as the recent evidence from the literature suggest their connection (Jones et al., 2014).

The household data were selected from a cross-sectional longitudinal survey (n=195) conducted in three districts in Malawi's Central Region from 2011-2013.

Figure 2: The research site included districts in Central Region: Lilongwe, Michinji and Salima



In the research, food security was measured through Household Diet Diversity Score (HDDS), and welfare through wealth groups, which are commonly used proxy indicators.

## 3 Results

The higher the score of HDDS, the more diverse the diet of the household members.

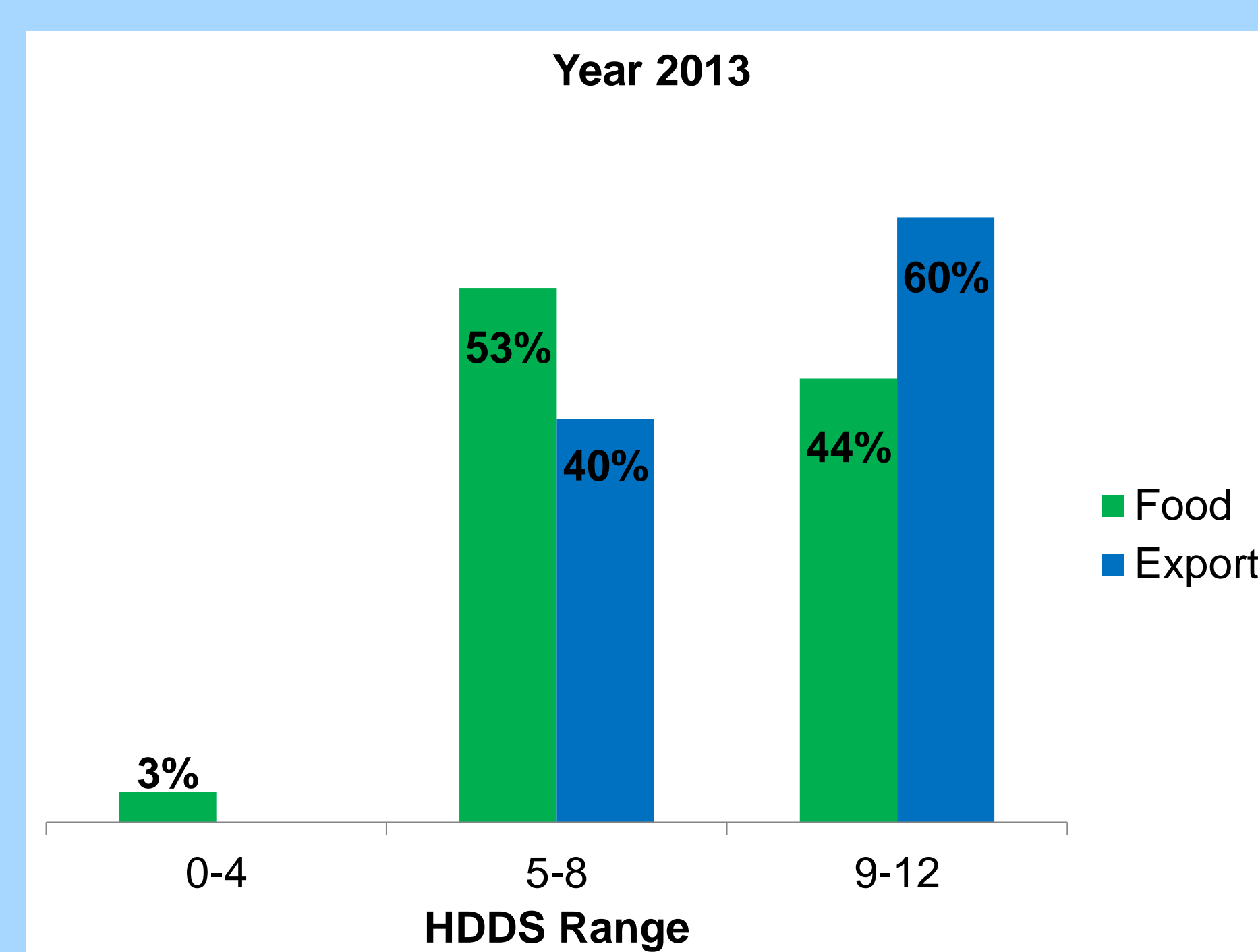
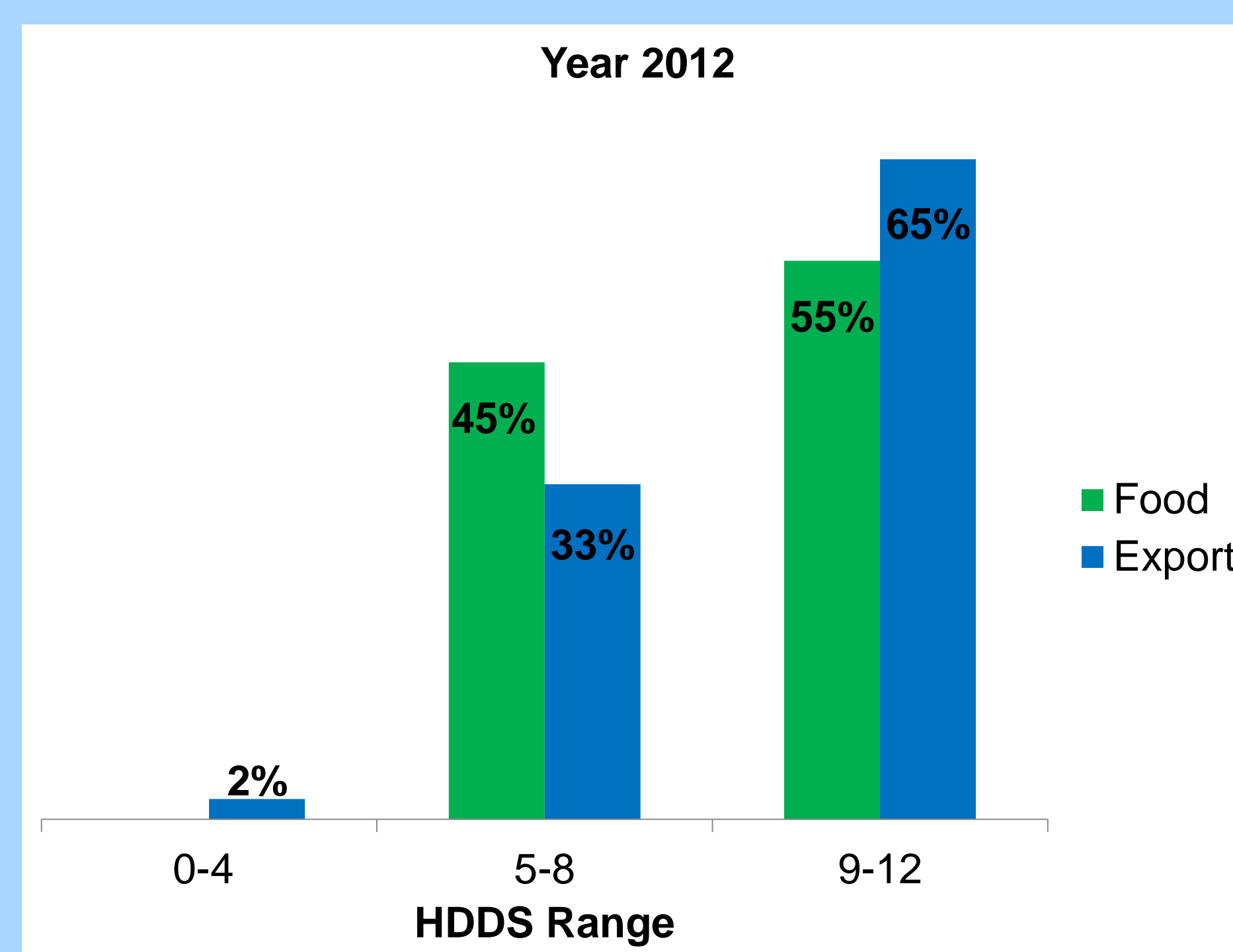
The HDDS is constructed by asking, "In the past 7 days, have you or any household member eaten...?"

The research finds evidence of positive relationship between production strategies, food security and welfare.

	2011		2012		2013	
	n	SD	n	SD	n	SD
Low	7.7	1.849	7.42	1.729	7.63	2.316
Middle	8.34	2.127	8.91	1.636	8.46	1.873
High	9.4	2.160	9.86	1.565	10	1.517

Table 1: HDDS of wealth groups per year

Households that cultivate export cash crops have higher HDDS, and have higher welfare levels as opposed to households growing food crops.



Graph 1: Comparison of HDDS with different strategies: export crops vs. food crops in the year 2012 (n 'Food' = 123, n 'Export' = 49) and 2013 (n 'Food' = 122, n 'Export' = 45).

## 4 Conclusions

The research results suggest that:

- Different crop production strategies influence household HDDS and welfare level
- Households growing export crops show higher dietary diversity levels and are generally wealthier than households growing food crops

Limitations: data collection was carried out at the end of the main harvest (June/July) when food would likely be most plentiful and increased cash availability due to crop sales and increased demand for casual labor allows for increased food purchases. Thus, the HDDS was measured at the time of year when food security would be at its best.

## 5 Further research

Further research needs to comprehensively examine strategies' efficiency by addressing the differences between production and market risks (e.g. price and transaction costs) that both strategies face, and explore how those risks influence income levels and expenditure allocation of rural households.

## 6 References

1. Jones, A. D., Shrinivas, A. and Bezner-Kerr, R. (2014). Farm production diversity is associated with greater household dietary diversity in Malawi: Findings from nationally representative data. Food Policy 46 (2014) 1-12
2. Kennedy, G., Ballard, T., and Dop, M. (2006) Guidelines for Measuring Household and Individual Dietary Diversity. Food and Agricultural Organisation (FAO)
3. Verduzco-Gallo, I., Ecker, O. and Pauw, K. (2014). Changes in Food and Nutrition Security in Malawi. IFPRI Working Paper 06, June 2014

Picture source: Malawi districts  
<http://factsreports.revues.org/2082>

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