



Agricultural Practices and Implications for Nutritional Status of Rural Households: Evidence from South-eastern Tigray, North Ethiopia

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Objectives of the study

Overall Objective

- to understand the social and economic factors that influence agricultural practices and nutritional status of rural households

Specific Objectives

- (1) To understand agricultural production and disposal by rural households in south-eastern Tigray
- (2) To explore seasonal food consumption of rural households
- (3) To understand the relationship between the agricultural production system and households food and nutrition security



Methodology

- ❑ Enderta and Hintalo-Wajerat *woredas* were selected based on vulnerability and food insecurity criteria.
- ❑ 400 households were selected proportionately from the 4 kebeles
- ❑ **Data collection methods:** 2-round household survey, FGD, & KII
- ❑ Data were collected during the **High** (post-harvest) and **Low** (pre-harvest) food availability seasons
- ❑ **Methods of data analysis:**
 - Descriptive statistics
 - Quantitative scores for diversity & consumption behaviour (HDDS, HFIAS, FCS & CSI)
 - Multivariate analysis
 - Qualitative analysis



The Study Area



One of the 4 villages: Andi Woyane



A typical rural house, SE Tigray

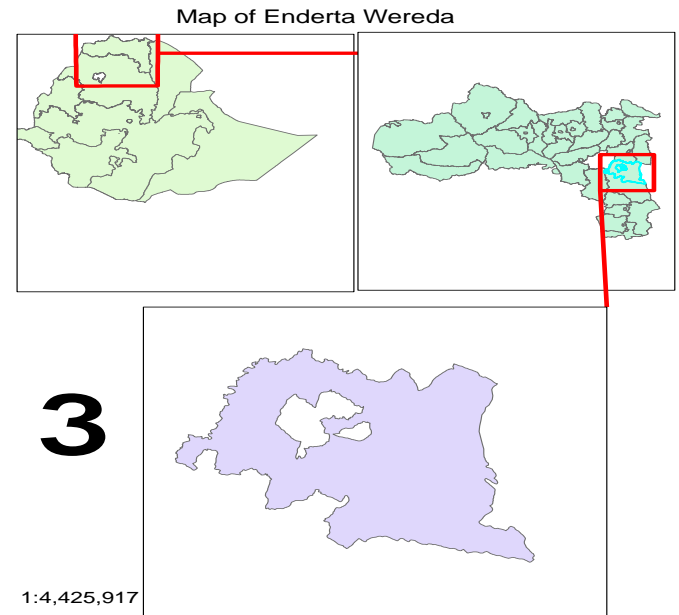


Enumerator at work



Household Characteristics

- ❑ Sex of household head: **16.0% (64) FHH** and **84.0% (336) MHH**
- ❑ Average age of household head: **46.1 years**
- ❑ Average adult equivalent: **4.9 (range 4.5- 5.2)**
- ❑ Adult Literacy: **41.0% males, 18.2% females**



Land holding and rentals (area in ha)

Description	Total (All sites)	Village (Kebele/Tabia)			
		Andi Woyane	Mahbere Genet	Meseret	Tsehafti
	n=388	n=75	n=88	n=105	n=120
Land holding:					
Average land holding – Overall	0.84	1.14	0.60	1.24	0.48
Average land holding – FHH	0.66	0.78	0.63	1.16	0.35
Average land holding- MHH	0.88	1.20	0.60	1.25	0.50
Average rented-in land:	0.33	0.30	0.20	0.50	0.30

☐ 56.9% of rentals were from female landholders

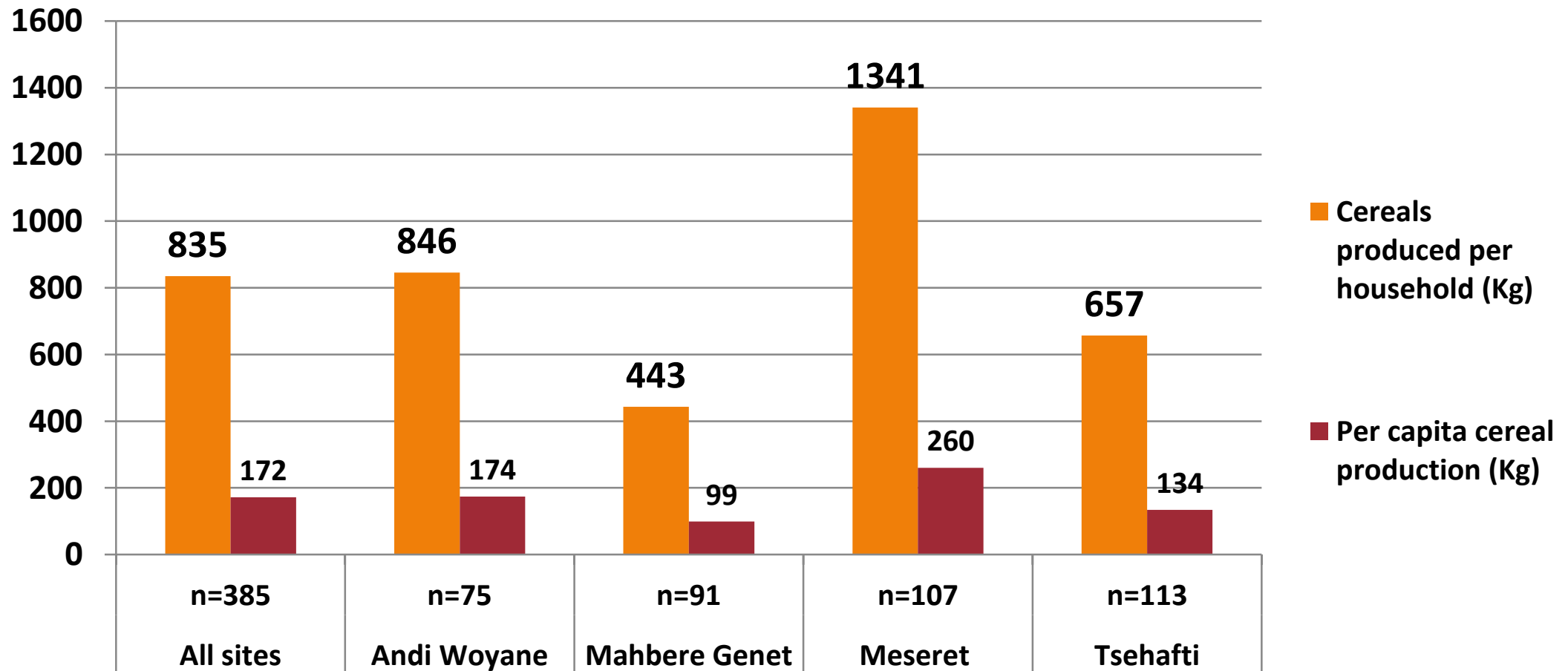
Total Livestock Unit (TLU) & ploughing oxen per household

Description	Average (All sites)	t-test
	n=400	
Total Livestock (TLU)		
Mean TLU	4.04	0.000***
FHH	1.61	0.000***
MHH	4.51	
Ploughing oxen		
Mean all households	1.29	0.000***
FHH	0.39	0.000***
MHH	1.46	

Cereal production by Kebele (per HH and per capita)



Average yield of cereals = 813 kg per ha



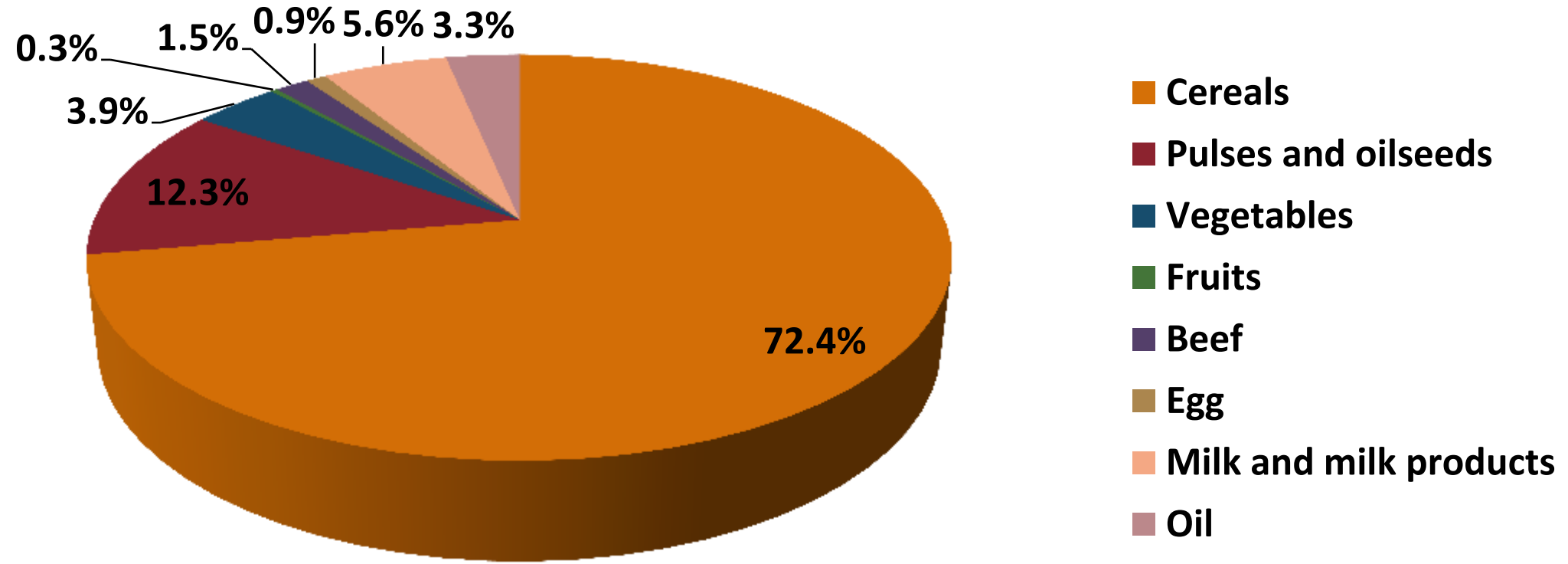
Average household income (Ethiopian Birr)

Description	Income per HH	Income per adult equivalent
High season	<i>n=400</i>	<i>n=400</i>
Farm income	4,521(46%)	923
Off/non-farm income	5,313 (54%)	1,084
Total Household income	9,834	2,007
Household income-FHH (n=64)	5,842	1,826
Household income-MHH (n=336)	10,594	2,037
Low season (past 6 months)	<i>n=390</i>	<i>n=390</i>
Farm income	2,327 (38%)	475
Off/non-farm income	3,804 (62%)	776
Total Household income	6,131	1,251
Household income-FHH (n=64)	4,327	1,352
Household income-MHH (n=326)	6,485	1,247

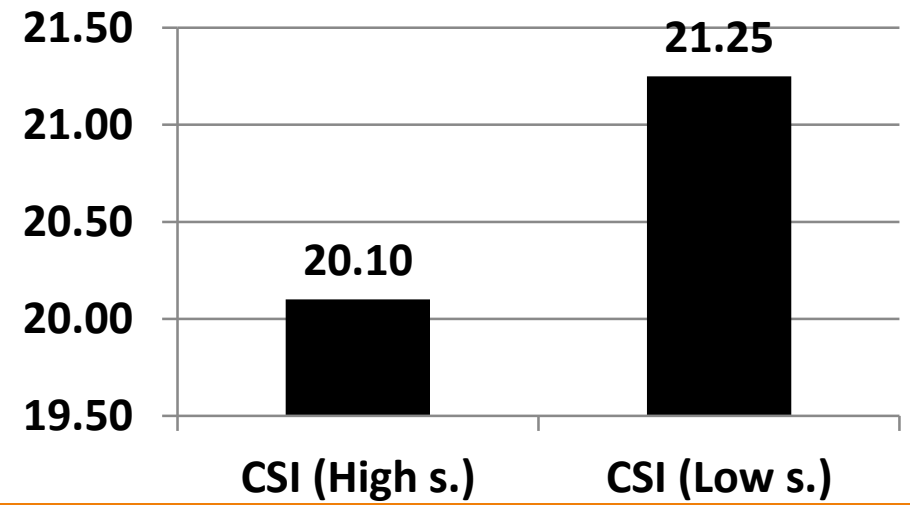
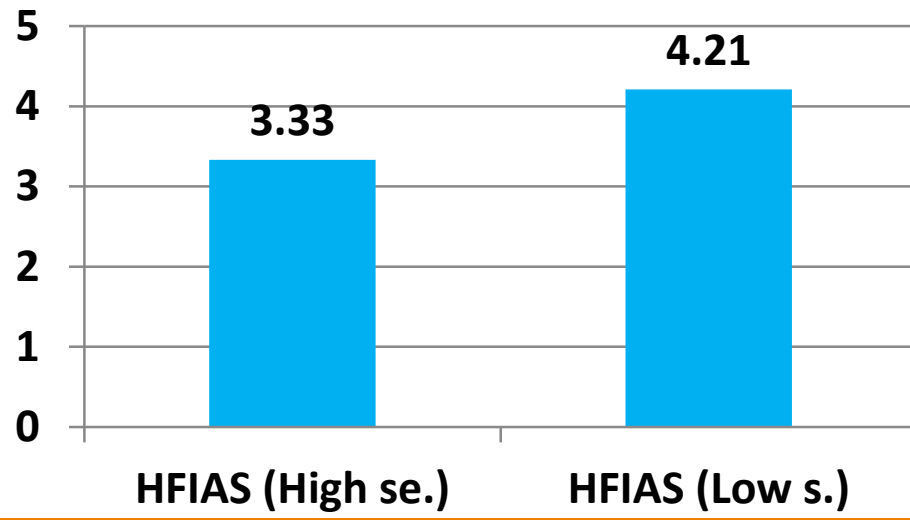
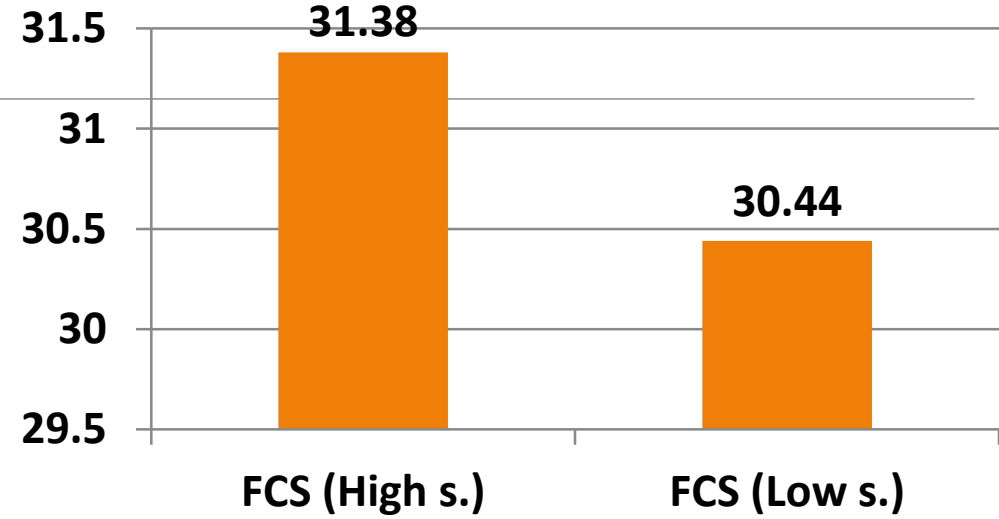
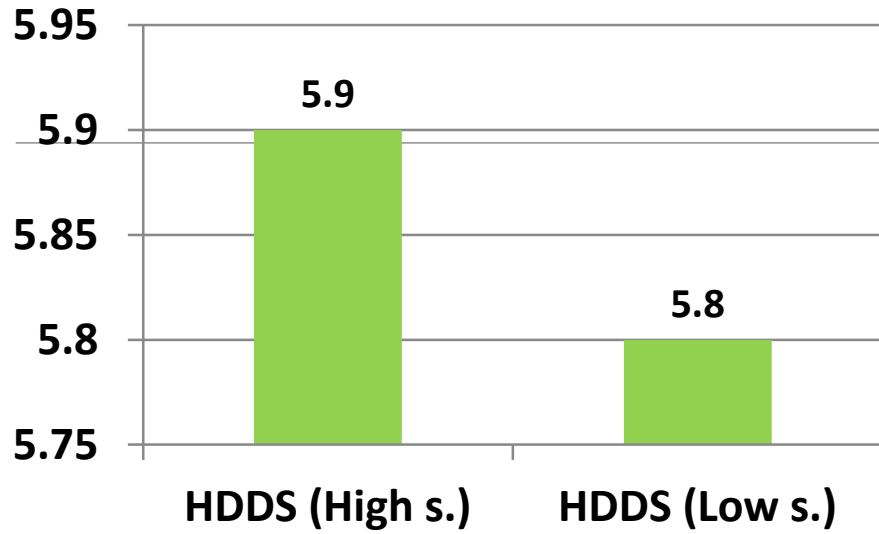
Average food consumption at low season (by value)



Note: food accounts for 77% of total household expenditure



Results of various food security indicators (mean values)



Regression results for household dietary diversity at high season

- ❑ Multivariate linear regression analysis was used to capture the relationship between dietary diversity and various socio-economic factors
- ❑ **Age of household head, education of mother, total cultivated land and use of irrigation** were found to be **significantly associated** with dietary diversity at high season
- ❑ **Age of household head** was **negatively** associated with dietary diversity
- ❑ **Education of mother, total cultivated land and use of irrigation** were **positively** associated with dietary diversity

Conclusions

- Food insecurity levels (HFIAS) are high in the surveyed areas (44.5%)
- There was no significant seasonal difference in terms of household dietary diversity.
- Food security levels are significantly higher in the post-harvest season, based on HFIAS and CSI.
- Food diversity and frequency (as measured by FCS) were significantly lower for female-headed households in both high and low season, across all four kebeles
- Factors associated with dietary diversity in the study area were age of household head, education of mother, total cultivated land and use of irrigation.



- THANK YOU -

