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Smallholder Agricultural and Implications for Nutrition In Babile District, East Hararghe

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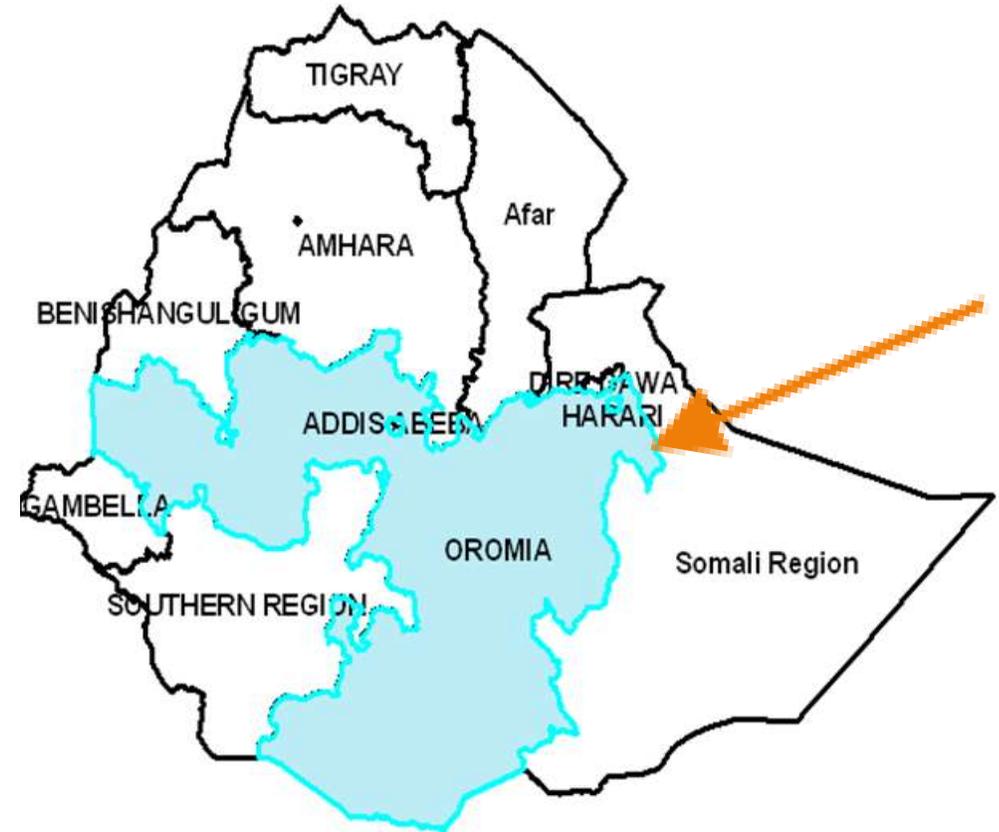
JULY 17, 2015, ADDIS ABABA



Background to the Study Area



- Agro-ecology: lowland (95%)
- Temperature: 24-28 °C
- Rainfall: 410-800ml per annum (semi-arid)
- Farming system is mixed crop-livestock farming





Objectives



- **Overall:** to explore the relationship between agricultural production and dietary outcomes
- **Specifically**
 - To understand the local agricultural production system
 - To examine household food consumption in terms of variety, quality, seasonality and sources of diet
 - To assess food gaps, shocks and coping mechanisms



Methodology



- Four food-insecure kebeles selected for study
- Total of 400 households were selected using systematic random sampling (38 FHH, 362 MHH)
- Household survey, focus group discussions, key informant interview and personal observation were used to collect data
- Data were collected twice in one year from the same respondents i.e. immediately after harvest and during the lean season.
- Mix of qualitative and quantitative analysis





Socio-Economic Characteristics



- Average size of land holding in the sample is 1.14 hectares per household (1.15 ha MHH, 1.05ha FHH)
- 16% of households have irrigated land, an average of 0.36 ha
- 25% of households rented-in land, average 0.5 ha
- Rented-in land is used to grow a mixture of cash and food crops, such as groundnuts, maize and sorghum





Agricultural Production



- **Major crops:** sorghum, groundnut, maize and khat
 - sorghum and maize for own consumption, groundnuts and khat largely for sale.
- Productivity of sorghum (742 kg/ha) and maize (840 kg/ha) remains very low compared to the national average
- Average livestock ownership is 3.5 Tropical Livestock Units (3.6 TLU for MHHs and 2.6 for FHHs)
- A large proportion of female headed households do not own oxen and depend on borrowed oxen or swapped labour for ploughing





Household Income



- Total cash income from farm and off/non-farm was 9,673 Ethiopian birr per annum, on average
- Combined income from crops (3,260 birr) and livestock (3,841 birr) accounts for two-thirds of households income
- Groundnuts constitute 63.7% of the crop income and 29% of farm income.
- Livestock income comes from a mix of animal sales and milk
- Female-headed households had, on average, 34.7% less than their male counter parts in terms of total cash income (FHH = 6,534 birr/annum, MHH = 10,003 birr/annum)





Food consumption



- Consumption is dominated by sorghum, maize, wheat and rice
- Consumption of animal source foods is minimal, except for milk
- Vegetables consumption other than onion and tomato also very limited
- Sources of food include own production, purchases, safety nets, food aid and gifts from neighbors and relatives
- Dietary diversity is generally low: households consumed average 6.24 food groups during post-harvest season and 5.92 during pre-harvest (over past month).
- 24% of households consumed less than five food groups per month during pre-harvest season (i.e. low dietary diversity)



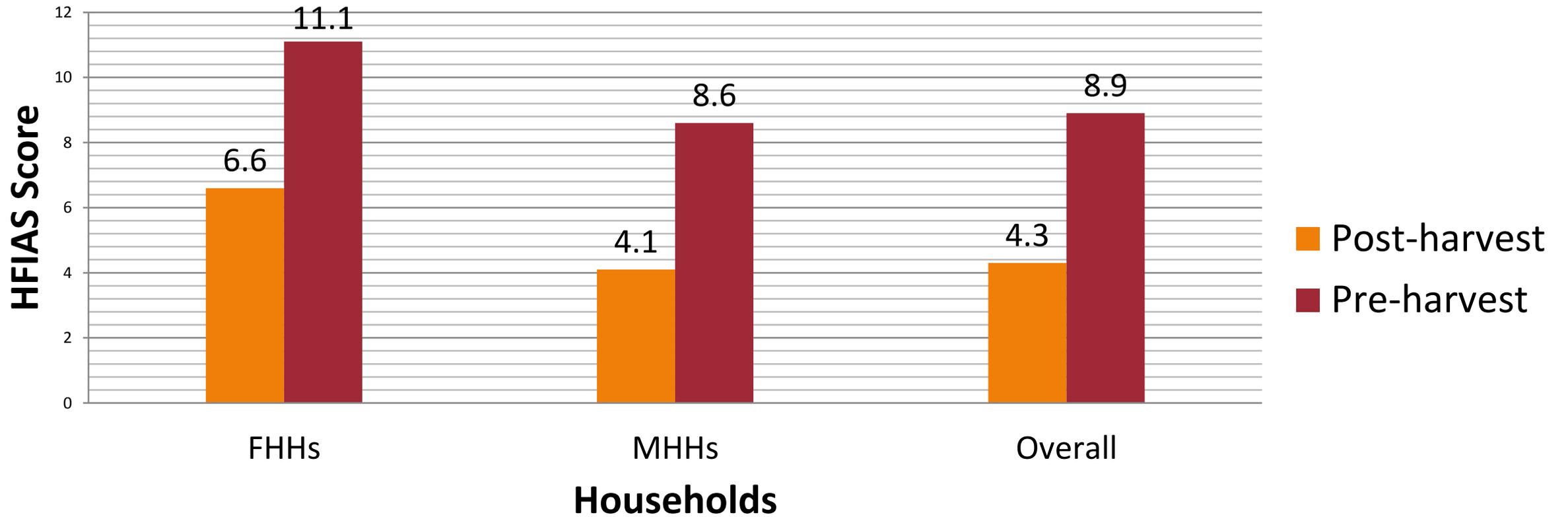
Households Experiencing Food Shortage



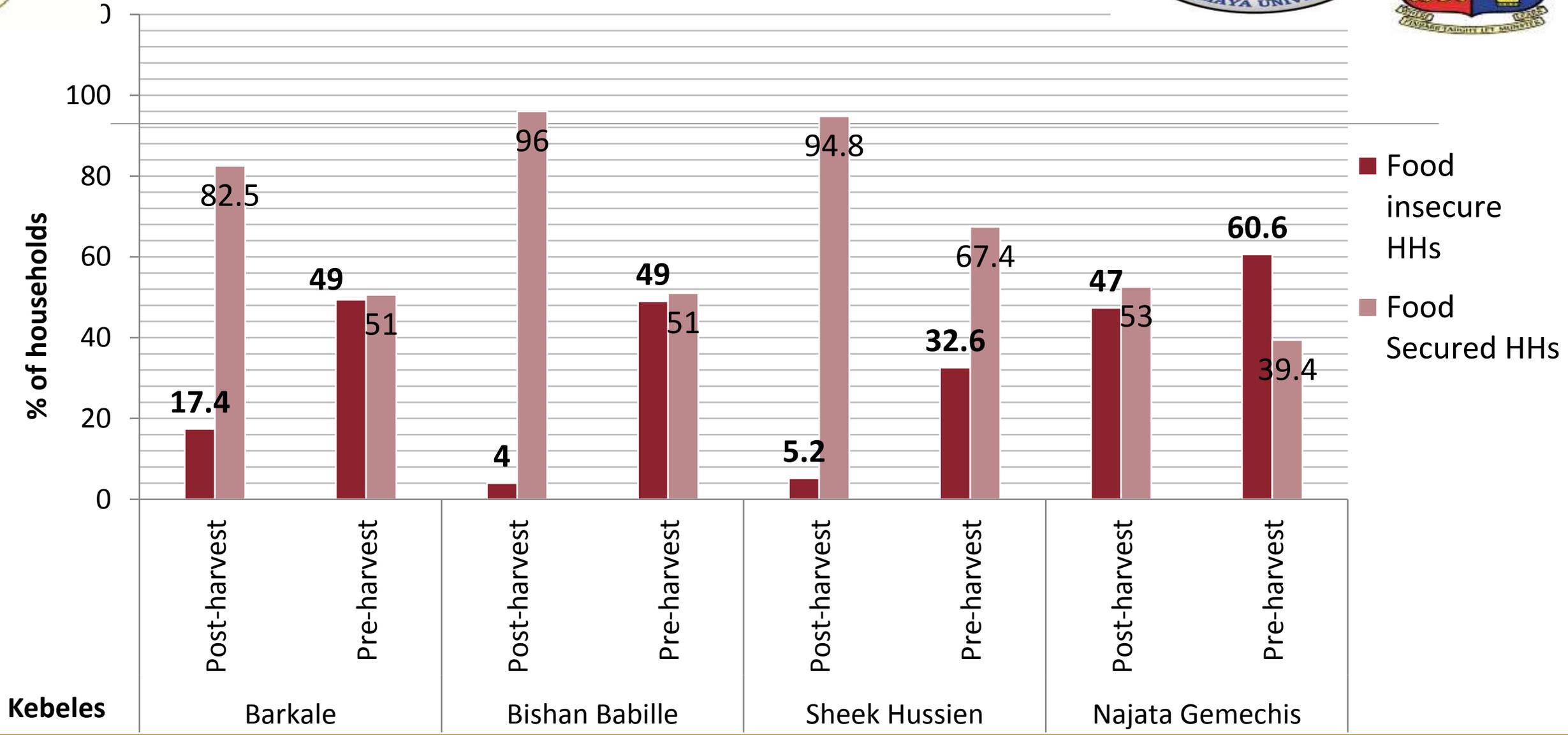
- 61.6% of households experience food shortage of at least one month
- Households on average run out of food for 1.2 months per year
- Female headed households had more months of food shortage than their male counterparts



Household Food Insecurity Access Scale (HFIAS)



Household Food Security (FCS)



Agricultural Production and Dietary Diversity

- A large majority of households (82.5%) with lower dietary diversity produced three or less types of crops in a year
- Close to 50% of households with higher diet diversity produced more than four crop types
- Econometric analysis (ordered probit) indicated that dietary diversity of households was positively and significantly associated with the following:
 - number of crops grown
 - livestock ownership
 - total cultivated land
 - cooperative membership and
 - educational status of households
- Dietary diversity was negatively associated with household size

Conclusions and Recommendations

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- Major seasonal differences between pre-harvest and post-harvest seasons in terms of household food insecurity (FCS); little seasonal difference in dietary diversity
 - The consumption of animal source foods, vegetables and fruits was minimal.
 - Nearly a quarter of households had low dietary diversity; more than half experienced food shortages
 - Female headed households had more months of food shortage.
 - Households growing a greater number of crops and owning more livestock have higher dietary diversity
 - Interventions aimed at ensuring food and nutrition security should pay attention to seasonality and gender differentials; and focus on diversification of production and improving knowledge on nutrition.



Thank you