



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## HOUSEHOLD-LEVEL HUNGER AMONG 3,394 SMALLHOLDER FARMERS IN GHANA'S NORTHERN REGION ACROSS FOUR 'HUNGER SEASONS'

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Photo: K. Ragsdale, Mississippi State University



## Gender Impacts Research

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- **USAID Feed The Future Soybean Innovation Lab (SIL)**
- **Multi-year project to increase sustainable soybean production across Sub-Saharan Africa**
- **Empower smallholder men AND women farmers to improve agricultural productivity and food security**
- **Bring women farmers' access to resources is vital for productivity on par with men to help feed the world's growing population**





## Ghana's Northern Region

- **74% of men and women engage in agricultural production, primarily as smallholder farmers<sup>1</sup>**
- **Poverty rate = 22%<sup>2</sup>**
- **Moderate-to-severe hunger rate = 31%<sup>2</sup>**
- **Stunting rate = 39% among children 0-59 months<sup>2</sup>**

<sup>1</sup>Ghana Statistical Service (GSS). (2013). 2010 population and housing census: regional analytical report—Northern Region (June, 2013). [http://www.statsghana.gov.gh/docfiles/2010phc/2010\\_PHC\\_Regional\\_Analytical\\_Reports\\_Northern\\_Region.pdf](http://www.statsghana.gov.gh/docfiles/2010phc/2010_PHC_Regional_Analytical_Reports_Northern_Region.pdf)

<sup>2</sup>Zereyesus YA, Ross KL, Amanor-Boadu V, Dalton TJ. (2014). Baseline Feed the Future Indicators for Northern Ghana 2012. Manhattan, KS: Kansas State University. [http://pdf.usaid.gov/pdf\\_docs/pnaed041.pdf](http://pdf.usaid.gov/pdf_docs/pnaed041.pdf)



## Methods

- **We compare results from the Household Hunger Scale<sup>3</sup> administered as part of larger surveys to 3,394 smallholder farmers across:**
  - **Four districts: Chereponi, Karaga, Saboba, and Tolon**
  - **Four years: 2014, 2016, 2017, and 2018**
  - **Four 'hunger seasons': T1, T2, T3, and T4**

**T1:** Hunger season begins (Survey: MAY 2014, N=675)

**T2:** Hunger season peaks (Survey: JUN-JUL 2016, N=832)

**T3:** Hunger season ends (Survey: AUG-SEP 2017, N=983)

**T4:** Hunger season peaks (Survey: JUL 2018, N=904)

<sup>3</sup>Ballard T, Coates J, Swindale A, Deitchler M. (2011). Household Hunger Scale: Indicator Definition and Measurement Guide. Washington, DC: Food and Nutrition Technical Assistance II Project, FHI 360.



## Household Hunger Scale (HHS)<sup>3</sup>

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- **Measures 3 Hunger Events (HE):**
  - **HE1:** No food in home due to lack of resources to get food
  - **HE2:** Household member(s) went to sleep hungry
  - **HE3:** Household member(s) went all day and night without food
- **Categorizes household-level hunger as:**
  - **Occasional:** HE1, HE2, or HE3 occurred 1-2 times in past 4 weeks
  - **Moderate:** HE1, HE2, or HE3 occurred 3-10 times in past 4 weeks
  - **Severe:** HE1, HE2, or HE3 occurred 11+ times in past 4 weeks

<sup>3</sup>Ballard T, Coates J, Swindale A, Deitchler M. (2011). Household Hunger Scale: Indicator Definition and Measurement Guide. Washington, DC: Food and Nutrition Technical Assistance II Project, FHI 360.



## Creating the HHS Score

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1. Recoded OCCASIONAL = **RARELY**, MODERATE = **SOMETIMES**, and SEVERE = **OFTEN**
2. Combined RARELY and SOMETIMES = **RARELY OR SOMETIMES**
3. Coded zero occurrence = **NEVER**
4. New frequency categories:
  - **NEVER** (0 times), coded 0
  - **RARELY OR SOMETIMES** (1-10 times), coded 1
  - **OFTEN** (11+ times), coded 2
5. Add responses from all 3 Hunger Events (HE1+HE2+HE3) to **CREATE HHS SCORE**
  - Ranges from 0 to 6



## Demographics (N = 3,394)

	% (n)
<b>Gender</b>	
<b>Males</b>	<b>50.2 (1,703)</b>
<b>Females</b>	<b>49.8 (1,691)</b>
<b>Married</b>	<b>81.3 (2,761)</b>
<b>Dual-adult household of married couple</b>	<b>78.0 (2,648)</b>
<b>Muslim</b>	<b>64.8 (2,199)</b>
<b>Less than primary education</b>	<b>72.5 (2,460)</b>





## HHS Indicators

- **Categorical HHS Indicator:**

**Two cutoff values: >1 and >3**

HHS Score	HH-Level Hunger Categories
0-1	Little to no hunger in the household
2-3	Moderate hunger in the household
4-6	Severe hunger in the household



## Summary of Results I: T1 – T4

In the past 4 weeks:

	T1 %	T2 %	T3 %	T4 %
HE1: No food in home due to lack of resources to get food	29.0	21.3	14.3	28.5
HE2: Household member(s) went to sleep hungry	27.3	19.3	9.4	31.2
HE3: Household member(s) went all day and night without food	21.5	14.2	6.7	15.8

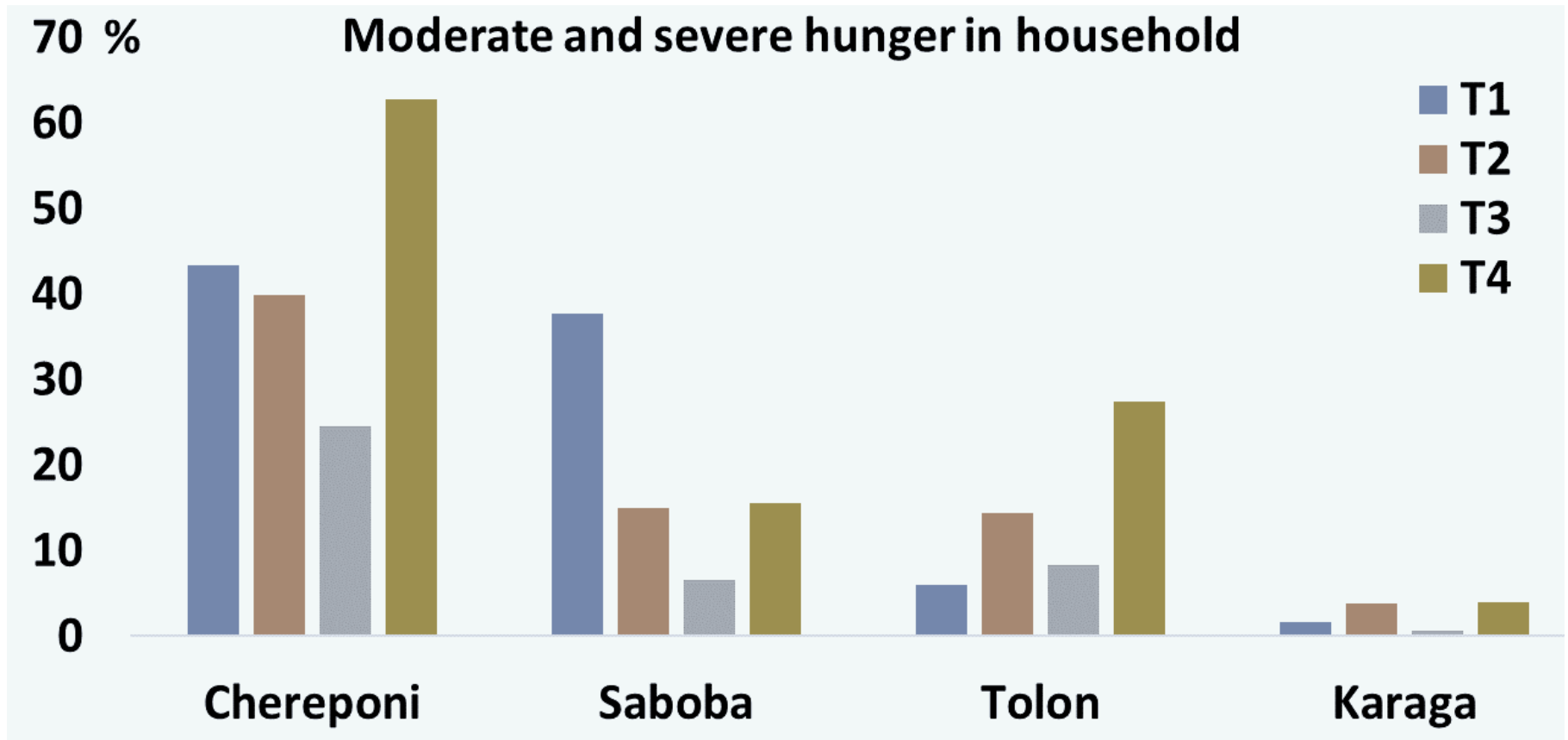
# Summary of Results II: T1 – T4

## Combined Hunger Events (HE) by survey results at T1-T4

	T1 %	T2 %	T3 %	T4 %
Little to no hunger in household (HHS Score = 0-1)	72.3	82.2	90.3	72.6
Moderate hunger in household (HHS Score = 2-3)	24.8	17.8	9.0	26.4
Severe hunger in household (HHS Score = 4-6)	2.9	0.0	0.7	1.0



## Summary of Results III





## Discussion

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- **May is the beginning of the ‘hunger season’ in Northern Ghana. Generally, hunger is greatest from May-July, as that is when many farmers have exhausted their food.**
- **June usually sees greater food insecurity than May in Northern Ghana. However, responses to food security questions on a survey conducted in June versus May could differ in a Muslim-dominated community, as June is the Holy Month of Ramadan.**
- **In Northern Ghana, holding a feast during Ramadan to break the daily fast is common in Muslim communities at both the household- and compound-levels. These daily feasts serve as part of the Ramadan ritual and showcase the act of sharing with family and relatives.**
- **In these communities, wealthy Muslims also organize large feasts for vulnerable community members to express their compassion. These feasts may serve as an informal ‘safety net’ to help mitigate food insecurity during the month of June.**



## Conclusion

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- **Periods of expected food scarcity did not explain Household-Level Hunger (HLH) variations across districts or years.**
- **Results suggest that site-specific time series research to identify drivers of local food insecurity are vital to detecting leverage points for addressing persistent HLH across this region.**
- **Collecting food insecurity data among smallholder farmers across times can help us better understand hunger variance from year-to-year and season-to-season.**
- **Food insecurity results should be locally contextualized to detect important sociocultural events that may influence participants' responses.**



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