Household food access in rural South Africa: Lessons for emerging food security policy

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Substantial changes in household food security questions/info in GHS, 2007 versus 2010

	GHS 2007	GHS 2010
Food security status	Hunger scale (Adults/children)	Hunger scale (adults/children); Food access; Variety foods consumed; Coping strategies
Household livelihoods & demography	Farm workers; Small-farm households; Household size	Farm workers; Small-farm households; Household size
Living standards-expenditure	Total spending (quartiles); Food spending; Social grants	Total spending (quartiles); Social grants;
Agricultural production	Land access; Agricultural outputs	Farm activities; Agricultural outputs
Spatial information	Provinces; District councils	Provinces; Rural categories (formal/ex-homeland)

More South African households reported experiences of adult hunger, 2007- 2010

Hunger scale	2007		2010	
	N (Households)	%	N (Households)	%
Never	11,159,150	86.48	11,421,362	81.35
Seldom	377,640	2.93	816,029	5.81
Sometimes	1,111,649	8.61	1,380,332	9.83
Often	160,455	1.24	325,575	2.32
Always	95,340	0.74	96,892	0.69
Total	12,904,234	100	14,040,190	100

- Categorical response, but <10% per category 'Seldom to Always'
- Alternative, adopt a binary approach: 'hungry versus not hungry'

Household food security status based on hunger experiences and food affordability, 2007 and 2010

	2007		2010		2010 (Food affordability)		
Hunger	**N (M-HH)**	**%**	**N (M-HH)**	**%**	**Food affordability**	**N (M-HH)**	**%**
Never Hungry	11,2 m	86.48	11,4m	81.35	Enough food money	11 m	76.69
Adults Hungry	1,7m	13.52	2,6m	18.65	Insufficient food money	3,3 m	23.31
Total	12,9 m		14m			14,3 m	

- Analysts and policy makers stress the rural nature of food insecurity – little disagreement in terms of targeting food security policy
- However, rural household profiles matter, especially livelihood strategies of household head- 'net consuming versus net producing'

Background

- In 2007, for example, the headcount of farm worker households was in the order of 200,000 compared to 1 million small-farm households.
- This translates into a ratio of 16% to 84% at national level, but with considerable provincial variation.
- In 2010, the headcount more than doubled to 2,9 million households, with 89% of them classified as families involved in ‘subsistence agriculture’.
- Women headed 16.5% of farm worker households, but with a significantly larger proportion of them heading 46% of ‘subsistence farmer’ households.

Rural Household Food Insecurity: Descriptive overview

- Household food insecurity, irrespective the binary outcome/response variable, is concentrated among small-farm households and with female headed households consistently reporting significantly higher rates of food insecurity.
- Food insecure rural households fall in the bottom 25%, with roughly 5 members per household (national average = 3.6) and receive about 2 of the major social grants.
- They spend less on food (per ADEQ), yet their food expenditure share is significantly higher than 'food secure' household (0.67 compared to 0.59, Spearman rho 0.13, $p<0.01$).

Rural Household Food Insecurity: Descriptive overview

- Except for the consumption of cereal grains, families reporting a more frequent consumption of a greater variety of foods per week in 2010, were also more food secure.
- This gap was particularly stark when focusing on the number of servings a household consumed of fruits, meat and dairy products.
- On its own, the amount of land does not appear to consistently improve household food security- but this might be due to heterogeneity in land tenure across rural South Africa.
- However, families producing varieties of agricultural outputs reported lower rates of food insecurity than those without farm outputs.
- Furthermore, food insecure hungry families live predominantly in the rural parts of the former homelands rather than the commercial farming areas. It takes them more time to get to the nearest food market- with walking the main mode.

Binary logit: 2007 GHS (1)

- Being a farm household decreases the odds of experiencing hunger by a factor of 0.79- a farm worker household has a 21% greater odds of being hungry than a small farm household.
- As expected, the odds of experiencing hunger are higher among the poorest 50% than the richest half of sampled households. The odds ratio in this case is 1.42.
- for households in the 3rd quartile, the odds of experiencing hunger decreases by 36%, suggesting a sharp reduction in food insecurity for households with more means.

Binary logit: 2007 GHS (2)

- As the food expenditure share of households increase, the odds of being hungry rise. A standard deviation increase in the food spending share (0.23) raises the odds of hunger by 4.4%.
- Households further away from the nearest food market are more likely to be food insecure: for any additional 18 minutes to the nearest food market, the odds of a household experiencing hunger increases by 22%.
- The odds of experiencing hunger for a household using its privately owned vehicle to travel to the nearest food market is slightly less than 3%.

Difference in Predicted probabilities of hunger based on rural household profiles, 2007 GHS

	Small-farmers		Farm workers		
	Predicted Probability	**95% CI**	**Predicted Probability**	**95% CI**	**Difference in Predicted Probability**
Average household	0.1094	*[0.1061;0.1126]*	0.1353	*[0.1293;0.1413]*	-0.0259
Male-headed	0.1232	*[0.1195;0.1270]*	0.1519	*[0.1452;0.1585]*	-0.0287
Bottom 50%	0.126	*[0.1218;0.1301]*	0.1551	*[0.1481;0.1622]*	-0.0291
90 minutes from nearest food market	0.1919	*[0.1827;0.2011]*	0.2323	*[0.2202;0.2443]*	-0.0404

Source: StatsSA, 2008 (GHS 2007)

Difference in Predicted probabilities of food insecurity based on rural household profiles, 2010 GHS

	Small-farmers	Farm workers	Difference Predicted Probability	95% CI
Average household	0.1721	0.3511	-0.179	[-0.1909; -0.1671]
Male-headed	0.1823	0.3672	-0.1849	[-0.1971; -0.1728]
Bottom 50%	0.2271	0.4334	-0.2063	[-0.2192; -0.1934]

	Small-farmers	Farm workers	Difference Predicted Probability	95% CI
Average household	0.2352	0.2975	-0.0623	[-0.0731;-0.0515]
Male-headed	0.2531	0.3182	-0.0651	[-0.0763;-0.0539]
Bottom 50%	0.2801	0.3489	-0.0688	[-0.0806; -0.0571]