

## Sampling Summary

Holders are selected in three stages:

- First stage- Selection of 20 districts.  
2 districts were randomly selected from each of the 10 regions with probability proportional to size, using the district's population in 2000 as a measure of size.<sup>1</sup> Eleven metropolitan and municipal assemblies (Kumasi, Sunyani, Cape Coast, New Juaben, Accra, Tema, Tamale, Bolgatanga, Wa, Ho and Shama Ahanta East) were excluded from the study, given their urban predominance.
- Second stage – Selection of 800 Enumeration Areas (EAs).  
40 EAs were randomly selected with probability proportional to size in each district, using the list of EAs compiled by the 2010 Census as a sample frame, and projected total population as a measure of size.<sup>2</sup>  
There were 220 EAs were excluded and replaced due to their urban predominance, land disputes or inhospitable working environments. The replacement EAs were randomly selected with probability proportional to size.
- Third stage – Selection of 10 holders from each of the 800 EAs  
10 holders will be randomly selected in each EA from the full list of all holders within the EA using as a sample frame, the full list of all holders.<sup>3</sup>  
In order to observe intra-household dynamics, the 10 holders will be sampled from 8 different households, with a single holder chosen in 6 of the households, and two holders in each of the other two households.

<b>Number of regions in Ghana:</b>	<b>10</b>
<b>Number of districts sampled:</b>	<b>20 (2 per region)</b>
<b>Number of EAs sampled:</b>	<b>800 (40 per district)</b>
<b>Number of holders sampled:</b>	<b>8000 (10 per EA)</b>
<b>Margin of Error:</b>	<b>+/-5% at the district level</b>

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<sup>1</sup> 2010 population figures (estimated or published) were not available at the time when the first stage was drawn because the 2010 Census was still in the field collecting data.

<sup>2</sup> By the time when the second stage was drawn total population projections by EA for 2010, which were relied on in order to implement the 2010 Census, were made available to us by the Ghana Statistical Service.

<sup>3</sup> It should be noted that an agricultural *holding* is defined to include all the land that is used wholly or partially for agricultural production (including crops and livestock) under one technical (or operational) unit by one holder alone or with others without regard to title, legal form, size or location. A *holder* is defined as person who makes decisions regarding resource use and exercises management control over the agricultural holding operation. The holder has technical economic responsibility for the holding and may undertake all responsibilities directly or delegate responsibilities related of the day-to-day work management to a hired manager. He/she has the right to the outputs produced on the holding. The holder may have full responsibility for (as an owner) or may share this responsibility with others (as a tenant, partner, or sharecropper). A corporation (institutional farm) or organization (government, school, religious body, cooperative, etc.) may also qualify as a holder.