

Strengthening Methodological Architecture with Multiple Frames and Data Sources

James M. Harris, Director, Research and Development Division
National Agricultural Statistics Service, United States Department of Agriculture
mark.harris@nass.usda.gov

Cynthia Z.F. Clark, Administrator
National Agricultural Statistics Service, United States Department of Agriculture
cynthia.clark@nass.usda.gov

Abstract: The United States Department Agriculture, National Agricultural Statistics Service has long conducted statistical surveys and published official statistics on almost every aspect of agriculture. Survey frames include both a list of farm establishments and an area frame which are often combined to produce multiple frame estimates. The survey results have also been compared to administrative records on the disposition of commodities. The disposition of the commodities or other intermittent administrative records, which are often received sometime after the survey results are published, must align with the published results. An example, *Hog and Pig* inventories which are published quarterly while slaughter administrative information that matches the inventories is available six to seven months later. NASS has utilized balance sheets and other analysis tools in an expert review process to align the published result to the administrative information. However, the tools lack the statistical rigor that is required by the U.S. Office of Management and Budget (OMB) statistical standards, lack statistical measures of error, and are somewhat analyst dependent. This paper will describe efforts to combine the multiple frame survey results and other data sources using rigorous, statistically defensible methodologies that strengthen the overall results and meet OMB guidelines.