

## Using Remote Sensing Cropland Classification Data to Update Area Sampling Frame

Xinhua Yu\*

National Bureau of Statistics, Beijing, China [yuxh@stats.gov.cn](mailto:yuxh@stats.gov.cn)

The Rural Survey Department (RSD) of China National Bureau of Statistics (NBS) has begun to use remote sensing technology to estimate crop acreage. With the limitation on data availability of current satellite imagery, however, it is more proper to use semi-current or near-historical imagery classification results to update an area sampling frame which is constructed by combining latest land-use census data and the latest agricultural census data. The new methodology has been used to produce Utilized Cropland Data (UCD) based land-use data and remote sensing classification data. Based on the UCD, a new area sampling method based on multivariate stratification using classification data was tried and two different methods to estimate using design-based inference and model-based inference was compared for illustrate the advantage of the new design. The further improvement of the new design was also discussed.

**Key words:** Utilized Cropland Data; Classification Data; Area Frame Sampling.