

SIAP

Statistical Institute for Asia and the Pacific

Global strategy for agriculture and rural statistics

Regional Training Course on Sampling Methods for Producing Core Data Items for Agricultural and Rural Statistics

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SAMPLING FRAMES (TYPES, SOURCES & USES)

- The success of any census or survey depends to a large extent on the quality of the frame (List, Map or other means) used to identify the statistical units in the population.
- The idea would be to have a complete list of all statistical units, with prior information for each of them on particular characteristics before starting the census or survey.
- Registers of statistical units (eg agricultural holdings, agricultural service establishments or households) are not available in most countries.

- **Consequently many surveys are based on multi-stage sampling schemes due to insufficient prior information on sampling units resulting in the need for large, costly samples.**
- **A population census should provide list of agricultural households for the Agriculture Census, in turn, an Agriculture Census should provide frame for other Agricultural Surveys whose statistical units are Agricultural Holdings.**

- **Sampling frames may be available as lists of districts, lists of Tehsils/ Taluks in a district and a list of villages in a tehsil/ taluk.**
- **Such frames are easily available and are more or less stable and do not change much over time.**
- **Lists of agricultural holdings or agricultural establishments or households change rather fast and need to be updated carefully by going from house to house and collecting the information required from every holding, establishment or household by interviewing the owner or his close associate so that the information collected is reliable.**

QUESTIONNAIRES OR SCHEDULES TO BE USED

- **It is necessary that the questionnaire or schedules used for collecting data/ information is well designed for achieving the objectives of a survey.**
- **The success of Agricultural census and surveys depends upon the proper design of the questionnaire.**
- **The framing and wording of questionnaires should take into consideration the caliber of the enumerators and respondents and should be simple and clear.**
- **Before designing a questionnaire, data requirements of different users must be ascertained and the extent to which these can be accommodated in the questionnaire should be determined.**

AGRICULTURAL CENSUS

- **Agricultural census is not conducted every year in all countries: There is an interval of up to 5 years between 2 Agricultural Censuses and therefore census information needs to be updated for the current survey.**
- **Last Agricultural Census information may become out of date and may be updated using the current data.**
- **For the purpose selecting a sample it is necessary that the population to be sampled can be subdivided into a finite number of distinct and identifiable units called sampling units**
- **It is irrelevant for the purpose of sampling what the sampling units are. They maybe natural units such as individuals in a human population or fields in a crop survey, natural aggregates of such units like families or villages, or artificial units such as a row of plants, or a plot of specified size in sampling a field.**

PREPARING A SAMPLING FRAME

- **What is essential for the purpose of sampling is a list of all sampling units in the population. Such a list is called a **FRAME** and**
- **Provides the basis for the selection and identification of the units in the sample. Examples of a frame are list of farms, and a list of suitable area segments, like villages in India or counties in the United States. The or county forms the sampling unit and provides the means for further selection of farms, fields or plots.**

COMMON SHORTCOMINGS OF A SAMPLING FRAME

- **The availability of a suitable frame is often one of the major problems. If available the frame may be incomplete or out of date or contain duplicates. If this is the case, every attempt should be made to remove the defects before using the frame for the purpose of selecting a sample.**