Planning Agricultural Censuses and Surveys

Administrative Tasks and Activities

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Process Overview

➢ Objective
  o Provide an overview of the census and survey activities

➢ Outline
  o Census and survey processes compared
  o Identify activities and tasks necessary for data collection
  o Indentify data collection strategies
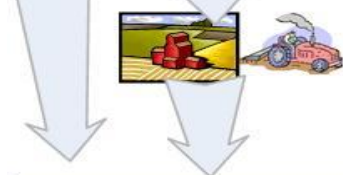 o Monitoring the data collection process

Resource: Information on how to develop and conduct an agricultural census was taken from the paper, *World Programme for the Census of Agriculture 2010.*
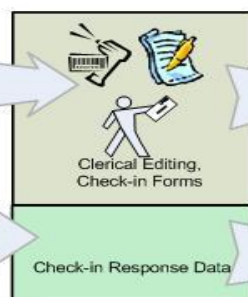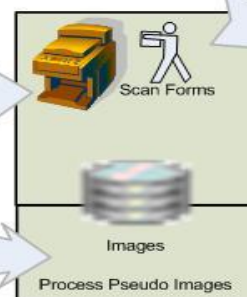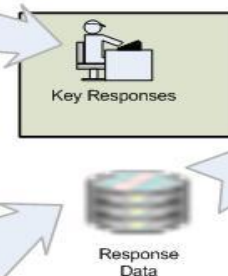
Census and Survey Activities

Preparation

Meta Data
Barcode
Questionnaires, Labels
HQ, FOs staffs
http://
Instruments
List and Samples
Print and Mail

Collection

Checkin

Imaging

Data Entry

Receive mails

cati web capi

fax emai

Receipt

Clerical Editing, Check-in Forms

Check-in Response Data

Special Handling

Scan Forms

Images
Process Pseudo Images

Key Responses

Response Data

Processing

Validate Standard Format Response Data

Load Images and Response Data to databases

Archive Form Materials/ Data

Quality Control
Admin & Evaluation

Close out

Census   versus   Surveys
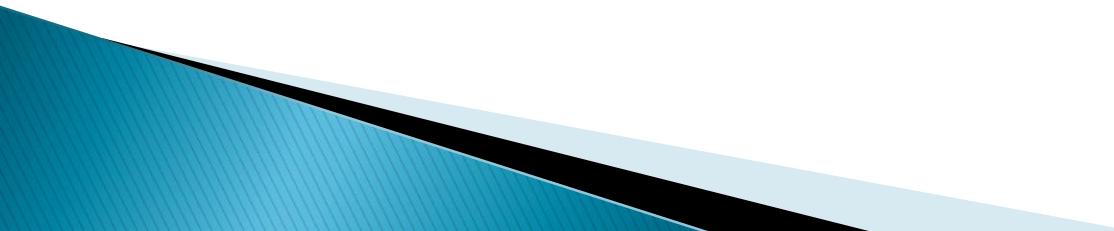
Census	Surveys
o Conducted periodically	o Sample of farms based on specific characteristics
o ALL known farms counted	o Data collection weekly, monthly, quarterly, or annual based on needs
o Response is mandatory and required by law	o Response is generally voluntary
o Comprehensive survey instrument collecting crop acreages & production, livestock inventories, expenditures, demographic characteristics, etc….	o Surveys generally contain content related to one specific topic or area – crops, livestock, economics, chemical use, etc.
o Planning and content testing begins immediately following completion of previous Census.	o Regular specifications process to review content and make changes.

Primary Tasks

- Pre-Census/Survey Activities

- Census/Survey Management Proper

- Post Census/Survey Activities

Administrative Activities
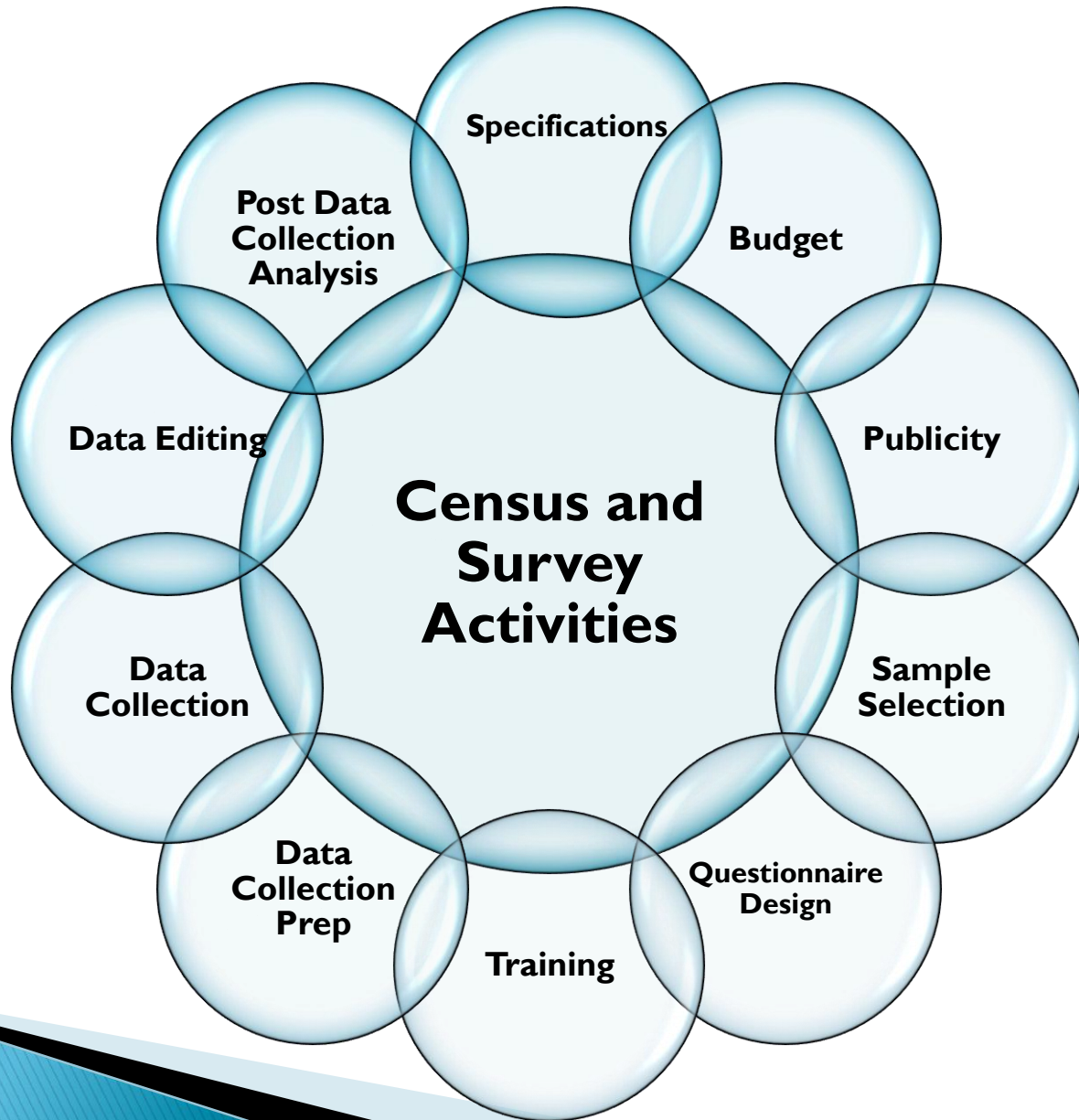
Planning

Specifications
Process

Specification Process

➢ A written plan that provides the description of the technical requirements for a census or survey data collection effort.

➢ Evaluate questionnaire content, edit, summary, analysis tools, etc.

➢ Safeguard overall quality.

➢ Define the triple constraints: time, scope and resources.

Budget

Budget

- Budgeting is the determination of costs associated with defined activities.
  - Procuring equipment
  - Staffing allocation
  - Training

- Budgets are highly dependent on length of survey and available resources.
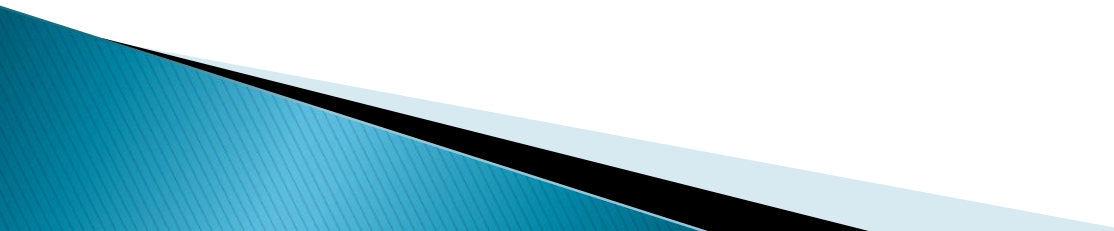
Publicity

Publicity Materials

- Cover letters
- Industry support letters
- News release
  - Audio (Radio Broadcast)
  - Video
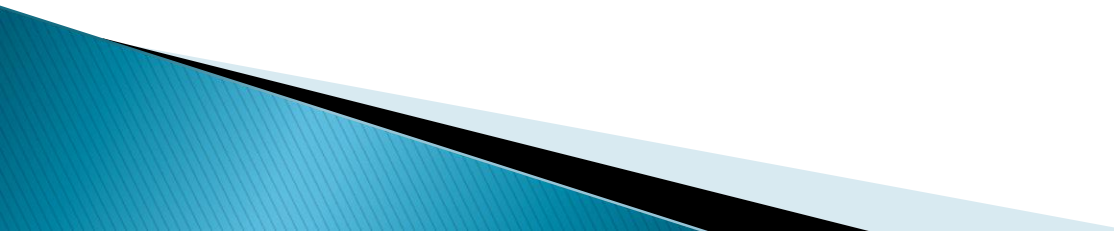- Fact sheets highlighting reasons to respond

Every report counts!

Publicity Materials

➢ **What** is this about?

➢ **When** will it be conducted?

➢ **Why** is it important?

➢ **How** are the data used?

What Is This About?

➢ State the frequency of the census/survey.

➢ Data collected for reference period.

➢ Data source for numerous agriculture and community decisions.
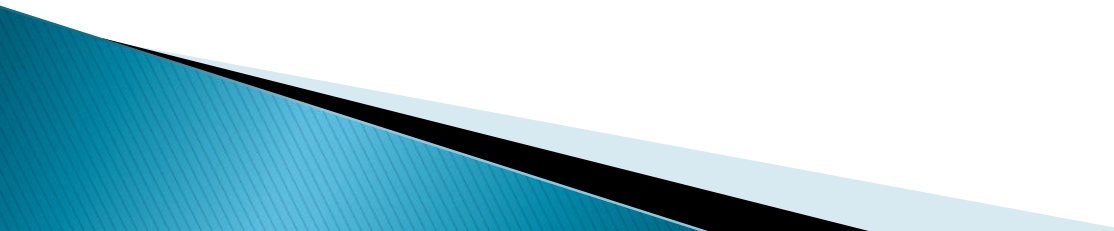
What Questions Are Asked?

➢ Provide copy of the questionnaire or report form.

➢ Highlight latest trends or key areas of interest.
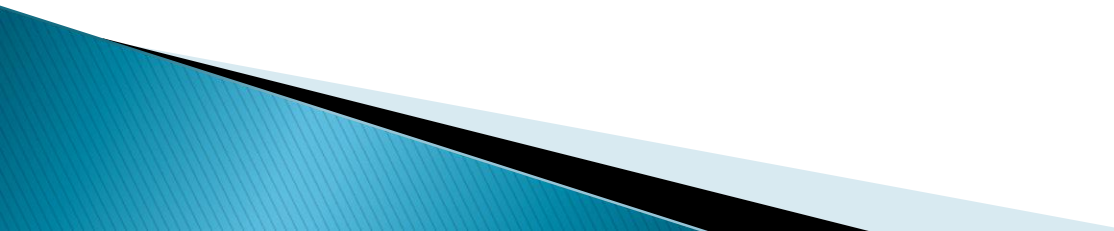
  o Organics

  o Energy

When Will This Occur?

➤ Indentify data collection period both starting and ending date.

➤ Indentify frequency of the census or survey.

Why Is It Important?

➢ Census/Survey produces reliable, accurate, official statistics.

➢ Producers have a voice with policymakers.

➢ Educate public about food availability and safety.

Message for the Producer

➢ Producers make their *voice be heard* by participating.

➢ Every response *improves the accuracy* of the published data.

➢ Farmers and ranchers are the *only ones* who can provide these data.

Data Is Confidential!

Individually reported data are *strictly confidential* by law (Title 7, U.S. Code)

Questionnaire Design

Questionnaire Design

➤ Ensure questions are easily understandable by respondents
- o Clear instructions
- o Common terminology
- o Questions asked in a logical order and consistent
- o Questions are relevant to desired publication
- o Adaptable to all data collection modes

Questionnaire Design cont

➢ Office of Management and Budget (OMB) Clearance
- required for all Federally funded data collection efforts
- 9 month process of public notice and docket review
- approval typically for 3 years

Sample Selection
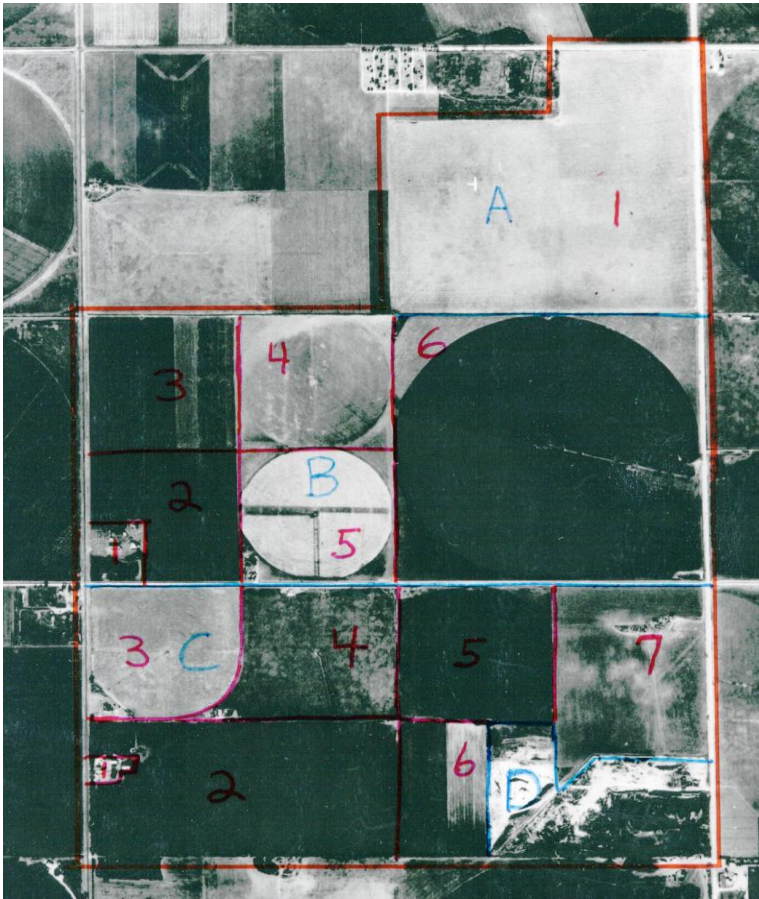
Sample

- Define target population

- Frame definitions

- Coverage

- Probability/Non-probability

- Sample Size (surveys)

- Estimators

A Good Design:

1. **Produces estimates that address the main goals of the census/survey**

2. **Produces estimates that are statistically defensible**

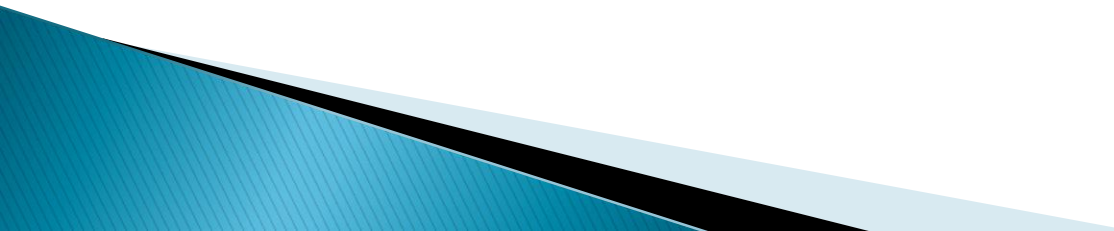3. **Provides estimates of the precision of the estimates**

Training and Instructions

Necessary…

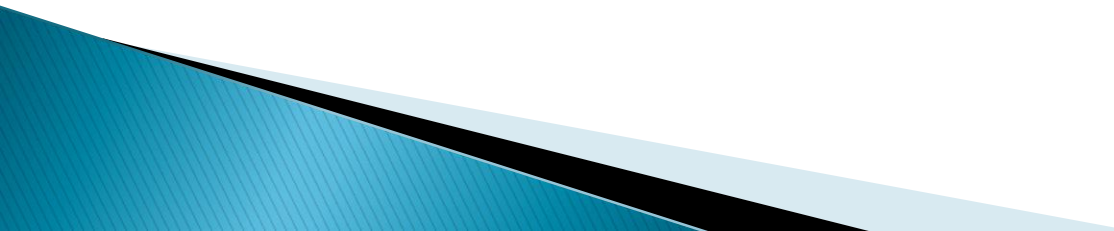To assure understanding of census/survey purpose and consistency of procedures across all the Nation

Training of Statisticians

➢ National Workshops - offsite

➢ Remote Training Sessions - Teleconferences NetConferences

➢ Regional Training Schools – offsite

➢ Videos

Training of Enumerators

➢ Formal Survey Specific Workshops

➢ Informal Survey Specific Workshops

➢ Mini Workshops

➢ Videos

Enumerators – Who are they?

➢ Field
- Farmers
- Retired Farmers
- Farmers wives
- Retired farmers wives
- Connected to Agriculture

➢ Office
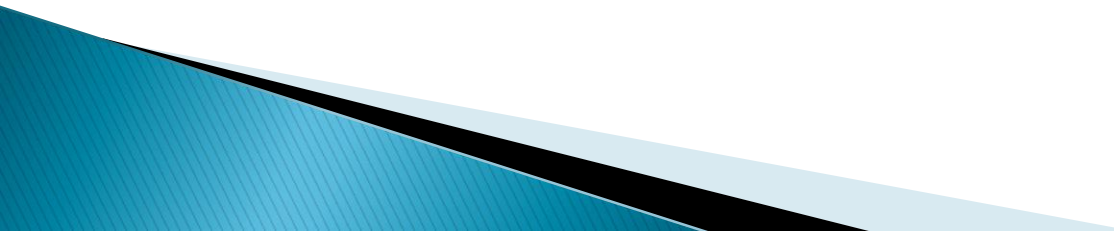◦ Suburban or urban
◦ Non-Ag
✓ Require special training to familiarize with ag industry
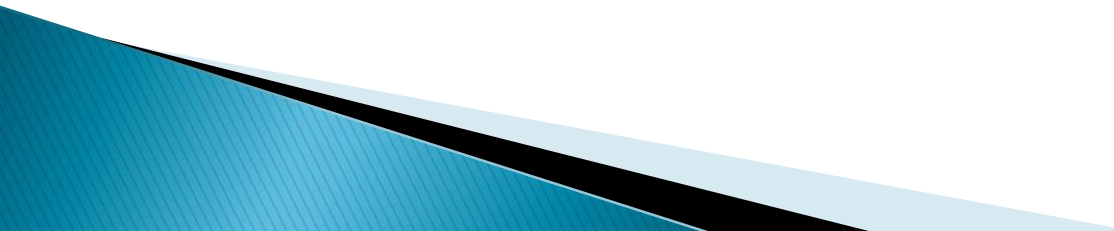
Training of Office Staff

- Office Staff
  - Task assignments
  - Office Training Session
    - Overview
    - Review survey calendar and due dates
    - Work scheduling
    - Conflicts
    - Survey changes
    - Team

Administration Manual

➢ Developed and distributed for consistency in data collection procedures

➢ Detailed instructions of activities required to manage the data collection effort

➢ Specific editing and reviewing procedures
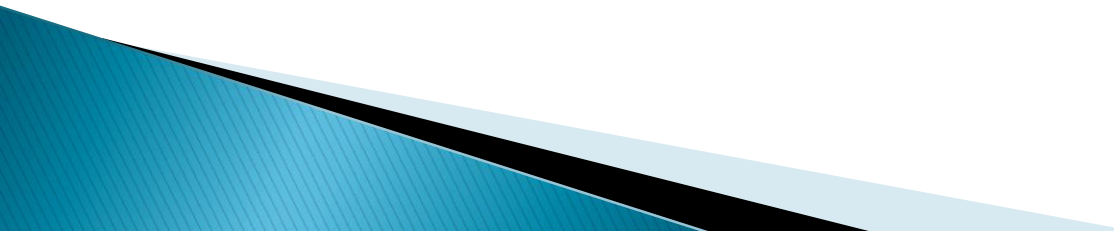
Interviewer's Manuals

- Developed to assist enumerators in properly collecting the data

- Provide general background and purpose of the survey

- List equipment and materials to be used

- Documents standard procedures for completing the questionnaire

- Explain why each question is asked

Data Collection Preparation
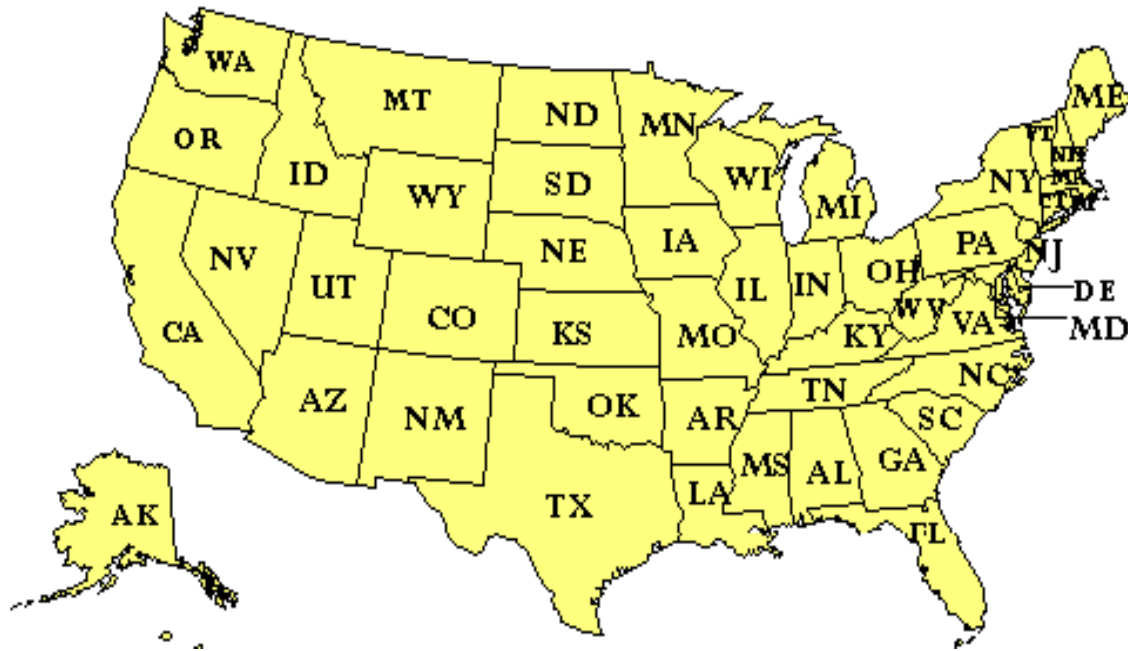
Data Collection Methods

➤ Mail

➤ Phone Interview

➤ Personal Interview

➤ Computer Assisted Telephone Interview (CATI)

➤ Electronic Data Reporting (EDR)

➤ Field Work (Objective Yield)

Data Collection Strategies

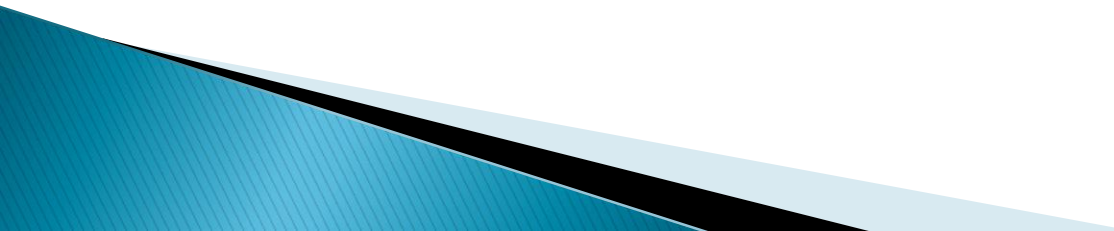| Mode	Pros	Cons
Mail	Inexpensive	Lowest response rate
EDR	Inexpensive	Low response rate
	Quick response	Computer accessibility
Phone	Personal interaction	Easy for respondent to refuse
	CATI interactive edit	
Face-to-face	Great personal interaction	Most expensive mode
	Lowest refusal rate	

Solution = A combination of the different modes can optimize response rates while minimizing expenditures
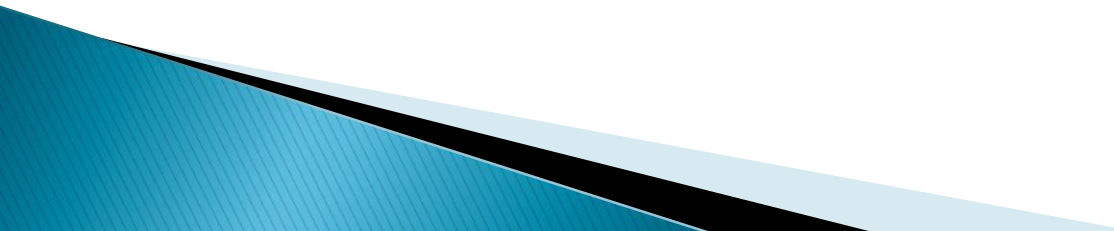
How Much of Your Sample Should be Phone / Field Enumerated?

➤ How much time do you have to collect the data?

➤ How many enumerators do you have available to work (field and phone)?
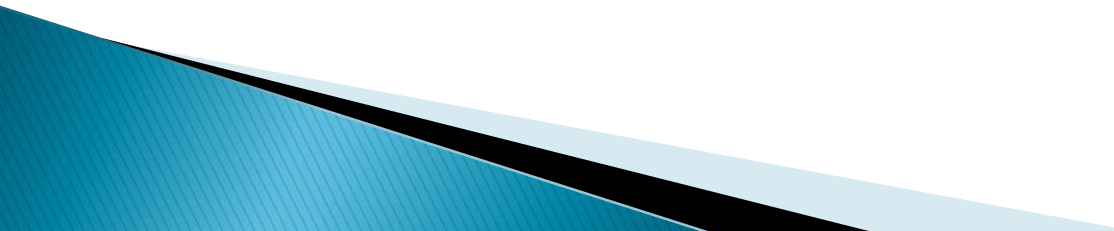
➤ How much money has been budgeted for the project?

Data Collection

Data Collection Instruments

➢ Questionnaires (forms)

➢ Computer Assisted Telephone Interviewing (CATI)

➢ Electronic Data Reporting (EDR)

Data Collection Issues

- Cost

- Time constraints

- Personnel

- Response Rates versus Respondent Burden

- National program versus State specific

Data Editing

➢ Edit questionnaires for reasonableness, completeness, and coverage
  o Manual and machine processes
  o Never too early to start looking at the data

➢ Key areas
  o Correct completion codes
  o Consistent imputation procedures
  o Verify large percent changes in reported data
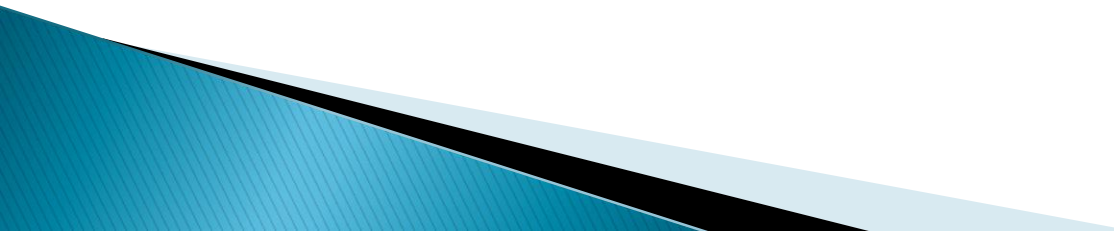
Monitoring

Management/Tracking System
Status Reports
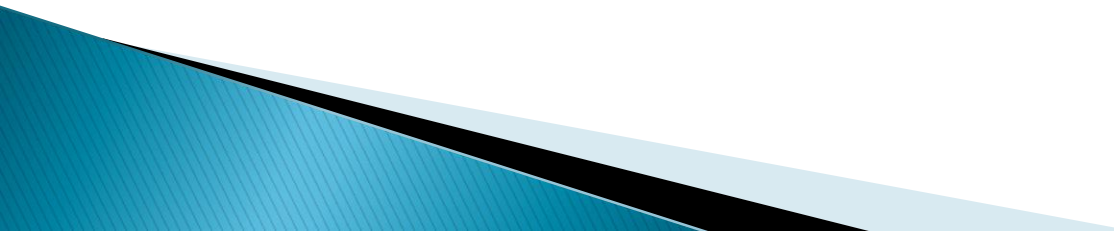Quality Control
Post-Survey Analysis

Monitoring Data Collection

- Office Process Flow

- Check-in and tracking activities

- Monitor status

- Non-Response follow-up (i.e. call outs)

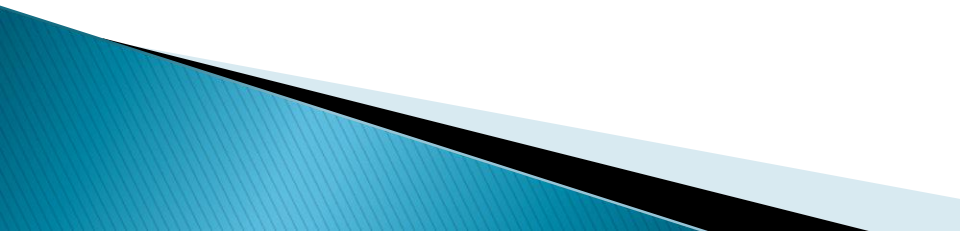- Quality control and evaluation (data and enumerator)

Management and Tracking

- Develop the ability to recognize when things ARE going smoothly.

- Develop the ability to recognize when things ARE NOT going smoothly
  - Be flexible
  - Shift resources where needed

Management and Tracking

- Microsoft Office Project software is an excellent aid in project management
- Office Project
  - Creates a time line for each task
  - Duration
  - Start and Finish dates
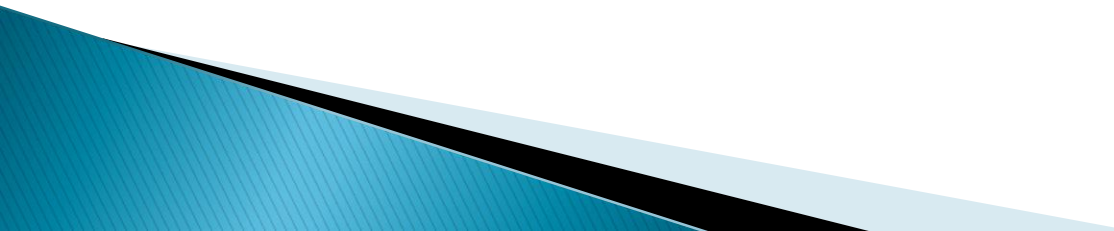 - Assign tasks
  - Keep track of task completion's

Management and Tracking

- Enumerator assignments and efficiency reports

- Generate labels, reports, and other files for census/survey processing

- Prepare non-responses for Computer Assisted Telephone Interview (CATI)

- Monitor completed questionnaires

Management and Tracking

➢ Office Management
  ◦ Check-in progress
    ✓ Percent returned by mail
    ✓ Percent completed by enumerators
    ✓ Percent keyed
    ✓ Percent in system to be edited
    ✓ Percent data validated
  ◦ Identify bottlenecks and resolve
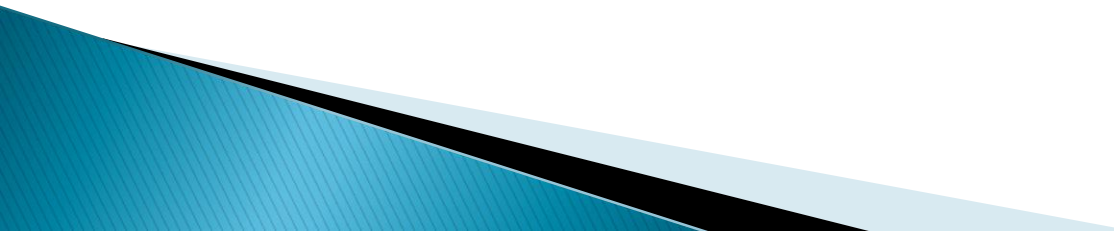 ◦ Due date is your ultimate goal

Status Reports

➢ Snapshot of the current status of each questionnaire

➢ Executed daily in Headquarters for a US Level summary

➢ Executed automatically with each edit

Quality Control

Formal check of the quality of data collection:

➤ Training and procedures

➤ Re-interview

➤ Publishable data

Post-Survey Activities and Analysis

➢ Evaluate Survey Performance
- o Timeliness
- o Quality
- o Efficiency

➢ Examine data collection costs and efficiency

➢ Review response rates and costs

➢ Evaluate classification of records and sample coverage

➢ Document Lessons Learned

Keys to a Successful Census or Survey

➤ Most successful surveys are a result of good planning

➤ Adequate and proper resources

➤ Remembering to do all essential tasks in the right order

➤ Well-developed schedule or plan

➤ Clear statement of purpose

➤ Understanding of survey methodology

Any Questions?

Contact:

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Resource: Information on how to develop and conduct an agricultural census was taken from the paper, *World Programme for the Census of Agriculture 2010.*