Workshop for the Caribbean on the FAO/UNFPA Guidelines: “Integrating Population and Housing with Agricultural Censuses; with Selected Country Practices”

Port of Spain, Trinidad and Tobago
10 – 12 June, 2013
www.cso.gov.tt

Agricultural Census and Agricultural Systems in Trinidad and Tobago

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Central Statistical Office
Ministry of Planning and Sustainable Development
Overview of Presentation

- History and Geography of Trinidad and Tobago
- Administrative Structure of Trinidad and Tobago
- Historical Review of Agricultural Censuses
- Statutory Authority to Conduct Censuses in Trinidad and Tobago
- Uses of Census Data in Trinidad and Tobago
- Differences between the 1982 and 2004 Agricultural Censuses and Critical Success Factors
- Planning for the 2014 Agricultural Census
History and Economy of Trinidad and Tobago

- Originally inhabited by the Amerindians of South America

- Re-discovery by Christopher Columbus in 1498.

- Trinidad and Tobago gained its independence on 31st August, 1962 and became a Republican State on 1st. August, 1976.

- Cosmopolitan and Plural societies in the English speaking Caribbean and the Western Hemisphere.

- Trinidad and Tobago possesses a Parliamentary Democracy and Governance is based on the Westminster Model.

- Petrochemical and Gas Base Economy. In 2012 the Petrochemical and Natural Gas Sectors accounted for approximately 45% of real GDP while Agriculture accounted for 0.7%. 
Trinidad and Tobago is the most southerly isles of the English speaking Caribbean.

Located at Latitude 10.50 North 61.50 West Longitude, the twin island states are bounded by the Caribbean Sea in the North, Gulf of Paria in the West, Atlantic Ocean in the East and the Columbus Channels in the South.

Trinidad and Tobago also lies at the north-eastern corner of Venezuela, from which it is separated by the Gulf of Paria.

It has a land area of approximately 5,128 square kilometers.

The total population of Trinidad and Tobago based on the 2011 Population and Housing Census was 1,328,019.
In order to be able to function effectively, Census and Survey operations are supported by appropriate legislation.

The legal authority to take a Census or Survey in Trinidad and Tobago is governed by the Statistics Act, chapter 19:02 of the revised laws of Trinidad and Tobago 1981.

The Statistics Act clearly outline the functions of the Director of Statistics or his Representative and sets the parameters for the collection, compilation and dissemination of official statistics.

Within this context, one of the Core Functions of the CSO is Statistical Coordination, that is co-ordination of the National Statistical System.
Present Vision and Mission Statement for the CSO

The Vision Statement

To be the premier information and research institution, committed to being a learning and innovative organization, staffed by well motivated personnel and enhanced through continuous quality improvement, to provide timely high quality and relevant goods and services, utilizing state of art technology for customer satisfaction.

The Mission Statement

The mission of the Central Statistical Office is to facilitate informed decision-making, through the timely provision of a quality, relevant, user-oriented and dynamic statistical service, coordinating statistical activities and promoting the adherence to statistical standards.

The Shared Values

Satisfied customers
Learning organization
Innovative
Motivated staff
Use of state of the art technology
Ongoing research and development
Continuous quality improvement

The Core Functions of the CSO

Data collection – collection of accurate primary and secondary data in a timely and efficient manner
Data processing – the transformation of raw data into information
Data Dissemination – publication of a range of statistical products in anticipation of and in response of user requirements
Marketing – building public awareness of available statistical products and promotion of interface with users
Monitoring and evaluation – development of statistical products and services, stimulation of discussion and monitoring and evaluation of all major functions
Consultancy and Training – provision of expert service on a commercial basis
Statistical Coordination – Coordination of the National Statistical System
AGRICULTURE STATISTICS SYSTEM OF TRINIDAD AND TOBAGO

PRODUCERS

• Central Statistical Office (CSO)
• Ministry of Food Production (MoFP)
• National Agriculture Marketing Development Company (NAMDEVCO)
• Agricultural Development Bank of Trinidad and Tobago (ADB)
• Trinidad and Tobago Agri-Business Association (TABA)
• University of the West Indies (UWI)
• Tobago House of Assembly (THA) (Division of Agriculture)

AGRICULTURE STATISTICS DATASETS

USERS

• Central Statistical Office
• Ministry of Food Production
• NAMDEVCO
• ADB
• TABA
• University of the West Indies and other Research Institutions
• Tobago House of Assembly (Division of Agriculture)
• International Institutions (UNFAO, IICA, CARICAOM)
• Private Business and Individuals
• Farming Community and Others
AGRICULTURE STATISTICS SYSTEM OF TRINIDAD AND TOBAGO

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• University of the West Indies (UWI)
• Tobago House of Assembly (THA) (Division of Agriculture)

METHOD OF DATA COLLECTION

PRIMARY:
* Censuses
* Continuous Sample Surveys
* Ad Hoc Sample Surveys

SECONDARY:
* Administrative Records

TYPES OF DATA PRODUCED

• Crop and Livestock
• Farmer Profile Information
• Macroeconomic Indices
• Trade Aggregates
• Financial Information
• Agro-Business Information
• Market Information (GAP)
AGRICULTURE STATISTICS SYSTEM OF TRINIDAD AND TOBAGO

PRODUCER OF DATA

• Central Statistical Office (CSO)
• Ministry of Food Production (MoFP)
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• Agricultural Development Bank of Trinidad and Tobago (ADB)
• Trinidad and Tobago Agri-Business Association (TABA)
• University of the West Indies (UWI)
• Tobago House of Assembly (THA) (Division of Agriculture)

PRODUCER’S DIRECT DISSEMINATION TO USERS

• Data Dissemination
• Data Dissemination
• Data Dissemination
• Data Dissemination
• Data Dissemination
AGRICULTURE STATISTICS SYSTEM OF TRINIDAD AND TOBAGO

CSO’s SUBJECT MATTER DIVISIONS

- NATIONAL ACCOUNTS
- ECONOMIC STATISTICS
- POPULATION STATISTICS
- AGRICULTURE STATISTICS

METHOD OF DATA COLLECTION

- ASSE and Agriculture Statistics from Agric Division
- Monthly Sample of Retail Food Prices Administrative Record
- Continuous Sample Survey of the Population (CSSP)
- Censuses and Sample Surveys in Agric. Div.

AGRICULTURE STATISTICS PRODUCED

- AGRICULTURE GDP AND OTHER NATIONAL ACCOUNTS AGGREGATES
- TRADE IMPORTS AND EXPORTS
- RETAIL FOOD PRICE INDEX
- AGRICULTURAL EMPLOYMENT
- CROP, LIVESTOCK AND OTHER STATISTICS
ORGANIZATIONAL CHART OF THE AGRICULTURE DIVISION OF THE C.S.O.

Senior Statistician

Statistician II (vacant)

Statistician I (vacant)

PSIP TCA

Agriculture Report

LIVESTOCK PSO

Broiler & Eggs Survey
  SO II
  SO I
  Stat. Asst. I
  TCA

Pig Survey
  SO I

Small Ruminants
  SO I
  TCA

Administrative Surveys
  SO II
  Cocoa & Coffee
  Fertilizers
  Citrus
  Abattoirs
  Milk Production
  Copra
  Agro Chemicals
  Feed Mills
  Sugar
  Hatcherries

Crops
  SO III

Food Crop Survey
  Trinidad
  SO I (vacant), TCA

Food Crop Survey
  Tobago
  SO I (vacant)

Christophene & Watercress, Pineapple & Pawpaw Survey
  TCA

Semi - Annual Survey
  Statistical Assistant II
  (vacant), TCA (vacant)
  Ducks
  Apiculture
  Aquaculture
AGRICULTURE STATISTICS SYSTEM OF TRINIDAD AND TOBAGO

METHOD OF DATA COLLECTION

PRIMARY:
* Continuous Surveys (Sample, Censuses)

SECONDARY:
* Administrative Surveys

DATA PROCESSING

AGRICULTURE DIVISION
INFORMATION TECHNOLOGY UNIT

AGRICULTURE STATISTICS PRODUCED

• CROP, LIVESTOCK AND OTHER TYPES OF ADMINISTRATIVE DATA
  - Area Under Production
  - Production
  - Quantity Sold
  - Prices
  - Employment
  - Farming Problem

AGRICULTURE REPORTS PRODUCED

• Quarterly Bulletins
• Annual Agricultural Report

1. Pigs (Trinidad and Tobago) Qtr
2. Pineapple (Trinidad only) Qtr
3. Paw-Paw (Trinidad only) Qtr
4. Watercress (Trinidad only) Qtr
5. Christophene (Trinidad only) Qtr
6. Rabbits (Trinidad and Tobago) Qtr
7. Goats (Trinidad and Tobago) Qtr
8. Sheep (Trinidad and Tobago) Qtr
9. Food Crop (Trinidad and Tobago) Bi Mon
10. Aquaculture (Trinidad only) Semi Ann
11. Apiculture (Trinidad and Tobago) Semi Ann
12. Ducks (Trinidad and Tobago) Semi Ann
13. Broiler (Trinidad and Tobago) Tri Ann
14. Eggs (Trinidad and Tobago) Tri Ann
METHOD OF DATA DISSEMINATION IN THE AGRICULTURE STATISTICS DIVISION

• Hard copy in the form of Quarterly Bulletin and Annual Reports

• Soft copy via CD’s

• Internet

• IHSN (International Household Survey Network) data dissemination platform.
CHALLENGES OF THE AGRICULTURE STATISTICS DIVISION

• Human Resource Constraints at all Levels.

• Insufficient and Untimely Release of Funding of PSIP Project.

• Outmoded data collection methods and technology used (manual).

• Insufficient number of Field Staff.

All of the above impacts severely on the timeliness of the data.
Historical Review of Agricultural Censuses

Trinidad and Tobago does not have a long history and well-established tradition of conducting Agricultural Censuses as compared to Population and Housing Censuses which go back to its first taking in 1844. The second Population Census was undertaken in 1851 and subsequent censuses were conducted at ten years intervals.

The first Agricultural Census was held in 1946 and was conducted as part of the Population carried out that year.

The second Agricultural Census, the 1963 Agricultural Census was held in 1964/1965 and conducted by the Central Statistical Office, in collaboration with the Ministry of Agriculture, Lands and Food Production.

The 1982 Agricultural Census was the third agricultural census and was carried out during the period June 14 to August 31, 1982. The Central Statistical Office, Ministry of Finance and Planning undertook the exercise, in collaboration with the Ministry of Agriculture.

The 2004 Agricultural Census represented the fourth census of agriculture conducted in Trinidad and Tobago and was done in collaboration with the Ministry of Agriculture, Land and Marine Resources

The 2014 Agricultural Census will represented the fifth census of agriculture conducted in Trinidad and Tobago and will be done in collaboration with the Ministry of Food Production and the THA.
Uses of Census Data in Trinidad and Tobago

- To analyse and measure changes in the structural attributes of Agriculture over time
- To determine the structure and composition of the holder’s household
- To construct frames for other types of Agri Censuses and sample surveys
- To facilitate an Integrated System of Food and Agriculture Statistics
- To provide benchmark data for improving current estimates of crop and livestock statistics
- To monitor the performance Agriculture Development Projects.
In terms of the MTPF (2011 -2014) one of the strategic priorities of the Government is Food Security and Agriculture Development

As such, the medium term objectives are:

1. Reduce the food import bill by 10% annually;
2. Reduce the rate of food inflation and sustain it within single digit figures;
3. Create sustainable, long-term productive employment in the sector to support a national unemployment level that is under 7%;
4. Increase the sector's contribution to GDP to 3% by 2014; and
5. Create a food secure nation.
Differences between the 1982 and 2004 Agricultural Censuses and Critical Success Factors

- The Concept of the Agriculture Household was introduced in the Questionnaire Design
- Data was analysed by Gender and published at the Community level
- Image Scanning Technology was Introduced (Cardiff Teleform Information Capture System)
- Census Questionnaire was Designed for Data to be Captured Electronically using Image Scanning Technology (OMR and OCR)
Differences between the 1982 and 2004 Agricultural Censuses and Critical Success Factors

- The SPSS software package was used for the Generation of Tabulations.

- Utilised a Disc Publishing System for the mass Production of Compact Discs (CDs) and for the easier Dissemination of the Reports.

- Ten Research Papers were presented at two data dissemination Seminars using the Census data.

- Preliminary Report was disseminated within seven(7) months of completion of field work (September, 2004)

- Final Reports were disseminated within fifteen(15) months of completion of field work

- Project was completed within Budgeted Expenditures

- Excellent and Experienced Leadership at the top driving the implementation process (passion to succeed)

- Recommended as best practice by the FAO at the 23rd Reunion del Grupo de Trabajo sobre Estadisticas Agropecuarias, Buenos Aires, Argentina, 8 al 10 Noviembre de 2005.
### 2004 Agricultural Census
**Distribution of Agricultural Holders**
**And Land Across Counties with Rates of Change**

<table>
<thead>
<tr>
<th></th>
<th>No. of Holders</th>
<th>Area (Hectares)</th>
<th>% Distr. Of Holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>19 111</td>
<td>30566</td>
<td>-37.5</td>
</tr>
<tr>
<td>Trinidad</td>
<td>18 142</td>
<td>28600</td>
<td>-36.6</td>
</tr>
<tr>
<td>St. George</td>
<td>3 484</td>
<td>4684</td>
<td>-25.6</td>
</tr>
<tr>
<td>Caroni</td>
<td>2 819</td>
<td>4977</td>
<td>-43.4</td>
</tr>
<tr>
<td>Nariva / Mayaro</td>
<td>2 313</td>
<td>2468</td>
<td>-6.3</td>
</tr>
<tr>
<td>St. Andrew/ St. David</td>
<td>2 456</td>
<td>3162</td>
<td>-22.3</td>
</tr>
<tr>
<td>Victoria</td>
<td>4 502</td>
<td>7184</td>
<td>-37.3</td>
</tr>
<tr>
<td>St. Patrick</td>
<td>2 568</td>
<td>6125</td>
<td>-58.1</td>
</tr>
<tr>
<td>Tobago</td>
<td>969</td>
<td>1966</td>
<td>-50.7</td>
</tr>
<tr>
<td>Avg. Annual % Change</td>
<td>2.1</td>
<td></td>
<td>1.97%</td>
</tr>
</tbody>
</table>
Presently, pre-enumeration planning activities are being undertaken for the 2014 Agricultural Census by the Agriculture Statistics Division of the Central Statistical Office.

To be Implemented in May\June, 2014 in collaboration with the Ministry of Food Production (MoFP) and the Tobago House of Assembly (THA).

Draft Census Proposal has been developed and is accompanied by:
- Budget
- Implementation Schedule
- Organisational Chart
- Logical Framework Matrix

Draft Proposal will be finalized following consultation with the Ministry of Food Production, the Tobago House of Assembly (THA) and other key Stakeholders and then submitted to Cabinet for approval.
METHODOLOGY OF THE 2014 AGRICULTURAL CENSUS

Complete Enumeration or Sampling

Source: FAO World Programme for Census of Agriculture 2010
Key Elements of the 2014 Agricultural Census

DEVELOPMENT OF THE 2014 AGRICULTURAL CENSUS FRAME:

- Development of the 2014 Agricultural Census Frame can be viewed within the context of an Integrated System of Censuses and Surveys

- Within the 2011 Population and Housing Questionnaire, the undermentioned labor force items relating to the agricultural household will be used to develop the AC frame
  - Main occupation
  - Industry of main occupation
  - Employment status in main occupation (limitations noted)

- The questionnaire data will be combined with data from the Visitation Record or Pre-Listing Record

- In addition, data from the MoFP Farmer’s Registration Programme and other key Stakeholders would also be used to develop the Final List Frame of all Agricultural Holders for the country
<table>
<thead>
<tr>
<th>Number of Persons</th>
<th>Business Places</th>
<th>Agricultural Holdings</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### MAIN LIVESTOCK CODE:

1. Poultry - Specify in Remarks
2. Pig
3. Cattle
4. Sheep & Goat
5. Rabbit
6. Aquaculture (Fish farming)
7. Apiculture (Bee-keeping)
8. Other – Specify in Remarks
FINAL THOUGHTS

• The CSO has a good history of undertaking Censuses in Trinidad and Tobago.

• International Methodologies and Classification are Used and constantly being updated despite its constraints.

• The Integrated Approach to Undertaking Population and Agricultural has many cost and field operation efficiencies and should be adopted by 2020.

• Administrative will to implement must be present.

• Head of NSO must champion the approach.

• The next round of Agricultural and Population must be properly sequenced and implemented using the Integrated Approach.

• We must embrace and adopt new statistical methods and approaches.

• CARICOM has a critical role to play in the successful implementation of the new approach.
THANK YOU