

*Workshop on Strategic Planning for Agriculture and
Fisheries Statistics in the Pacific*

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**AGRICULTURAL CENSUS:
FROM A TONGAN
EXPERIENCE**

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2015 Tonga National Agricultural Census

INTRODUCTION

What is Agricultural Census?

An **agricultural census** is the procedure of systematically acquiring and recording **information** about households of a given **population** with all their **agricultural** productions, assets, activities and processed products

What's the difference between Census and Survey?

CENSUS	SURVEY
Census involves asking questions from the entire population	Survey involves taking out samples from the population that represent the population best from the point of view of the goal of the survey
Census is time consuming and takes a long time to generate results	Survey is quick and gives results quickly
Census is an enormous exercise requiring lots of money and a high number of personnel	Survey is rather inexpensive
Census is obviously more accurate	Survey is somewhat less accuracy
More General	More specific and more details

Why agricultural census important in Tonga?

- **Provide benchmark information for Food Security purposes**
- **Provide basic information for Sector Economic Plan**
 - **Enable Government to make well-informed decision on agricultural development policy for Tonga**
 - **Enable international agencies (FAO; World Bank; IMF; etc) to make well-informed decision on investment in Tonga's agricultural sector**
 - **Enable growers/farmers to make well-informed decision on agricultural development/investment**

- ⦿ **Provide Update and Realistic information for Policy and Administrative Decision Makers**
- ⦿ **Enable Government to have an up-to-date census frame that could be used to design annual sample survey**
- ⦿ **Contribute to the developments of Agricultural Census in other Pacific islands**

The 2015 Tonga National Agriculture Census Methodology

- **Preparatory Stage**: proposals, budget & planning, resources and equipments, etc.
- **Set Project Timeline**
- **Supervisors and Enumerators**
 - Recruitments
 - Responsibilities
 - Trainings
 - Manuals
 - Supervisor , Enumerators , Appendix 6, Appendix 7, Area
- **Census Instruments**
 - Questionnaires
 - Listing Forms
 - Village Forms
 - PES Form
- **Confidentiality of public data**

Uses of Codes

- Less writing required
- Easy to decipher when decoding through data entry
- Long writing is prone to errors

Examples:

[Identification of Holding](#)

[Crop Lists](#)

[Choice Lists](#), etc.

Household Lists and Maps

- [Household Lists](#)
- [Household map](#)

WHAT TO BE CAPTURED FROM AN AGRICULTURAL CENSUS?

➤ 1. IDENTIFICATION

- Holding ID: Village No. + Census Block No. + Household No.
- Village Name
- Head of Household

➤ 2. DEMOGRAPHIC HOUSEHOLD BIODATA

- Names of household members
- Gender
- Age of household members
- Relationship to Head of Household
- Educational Level

A1. CROPS:

- ① **Land Issues** – status of **ownerships**, **leased and rented**, number of **parcels**
- ① **Tax Allotments** – **Town/Bush Allotments**, **Size of Land area** (poles, acres, etc.), **Land tenure**, **Land Locations**, **Land Use**
- ① **Existing Crop Varieties** – **List of all crops** in the cropping area, **Method and Type** of planting, **Size of crop area** (acres)
- ① **Harvested Crops** – **List of harvested crops** in the last 12 months, and **quantitative estimations of harvested produces**

A2. LIVESTOCK:

- ① **Breeds**: Cattle, Horses, Pigs, Goats, Chickens, etc.
- ① **Life stages**: e.g. Pigs: piglets, weaner, barrow, sow, boar)
- ① **Numbers**: individual counts for each life stages category in each livestock breed
- ① **Disposal**: Consumed, Social Obligations, Sold, Lost
- ① **Veterinary Services**: Yes or No

A3. FISHERIES:

- **Fishing Type**: the **type of fishing** the household is engaging, Avg. weekly no. of trips, Avg. person hour/trip, Avg. weekly catch, Avg. weekly value of sold fish
- **Main purpose**: the main purpose of the household fishing activity
- **Main species harvested**: list of main species catches (e.g. tuna & pelagic fish, lobster, shellfish, sea cucumber, seaweed, ornamental fish, reef finfish, sea urchins, others)
- **Type of fishing habitat**: the fishing ground e.g. flat reef, lagoon, sea grass, reef slope, open sea)
- **Time of fishing**: when fishing are done e.g. day, night or both

A4. FORESTRY:

- Numbers and Intended Use of trees/shrubs in Holding e.g. food sources, timbers, soil improvements, high value woods, fuel, shade/shelter/windbreaks, boundaries, handicrafts, medicinal, conservations, ornamentals, etc.

A5. HANDICRAFTS:

- Raw Material productions: Proportions of raw materials buy or selling
- Total handicrafts produced: Proportions of Total finished products sold and values
- Engaged in group productions of handicrafts for the purpose of *katoanga* and estimated values if yes

A6. OTHER INFORMATION:

- **Labour**: Use of group or permanent labours, labour gender, working hours, rate and benefits if paid
- **Machinery & Equipments**: List of all equipments owned in Farming, Fishing, Transport, Energy supply, and Livestock activities
- **Agricultural Income and Loan**: Proportion of income comes from the agricultural sector activities, loan amount, sources, purposes and rate of repayment
- **Opinions and prioritising current Challenges in the agricultural sector**: Lack of production inputs, lack of finance sources, lack of management skills, lack of markets, lack of new technologies and infrastructures

CHALLENGES AND DIFFICULTIES

➤ Unpreparedness

- results in frequent delaying of census activities
- may have an impact with the collected data accuracy

➤ Spatial distances and Remoteness

- may affect communications and trip arrangements

➤ National events

- may draw away large population from outer islands e.g. coronation and church conference events in July

➤ Delays due to resources unavailability

- unavailability of resources (human, funds, tools, etc.) may delay all planned census activities

LESSONS LEARNT:

- **Preparation time should be sufficient:**
 - required much time in preparations (e.g. 2 – 3 years ahead in preparations)
 - public familiarisations with the questions to be asked
 - census promotions and publicity required much time
 - budget allocations should be in hand
- **Stability of implementing staff to conduct the census**
 - keep and use the same staff throughout the census during implementations
 - be neutral throughout the census period
- **Get the right people, the right time, and right tools and equipments**

CONCLUSION AND RECOMMENDATIONS

- **Give sufficient time in preparations for an agricultural census**
- **Promotion exercises and public programs should be very active in outlining the questions to be asked to get the public familiar with the questions as to give the most accurate information**
- **Carry out annual surveys between census years as to have estimated benchmark data for the next census program**
- **Reduce the gap of census interval to not more than 10 years period**
- **Require sufficient time for supervisors' and enumerators' training**

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