

# Namibia - Namibia Census of Agriculture 2013/2014 - Communal Sector

**Namibia Statistics Agency, Ministry of Agriculture, Water and Forestry**

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## Identification

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### SURVEY ID NUMBER

NAM-NSA-NCA-CN-2013-2014-v02

### TITLE

Namibia Census of Agriculture 2013/2014 - Communal Sector

### SUBTITLE

Third round

### ABBREVIATION OR ACRONYM

NCA- CN 2013-2014 for "Namibia Census of Agriculture - Communal Sector 2013-2014"

### COUNTRY

Name	Country code
Namibia	NAM

### STUDY TYPE

Agricultural Census [ag/census]

### SERIES INFORMATION

The censuses are conducted every ten years in accordance with the international standards and best practices .The Namibia Census of Agriculture (NCA 2013/14), is the third Agricultural Census to be conducted . The 1994/95 Census was the first Agricultural Census taken after independence. The 2004/2005 Agricultural Census was planned and carried out but could not be published due to technical issues. The Census collects indicators that help monitors national and international development agenders such as National Development Plans (NDPs), Harabee Prosperity Plan (HPP), Sustainable Development Goals (SDGs), Agenda 2063 etc.

### ABSTRACT

The Namibia Census of Agriculture (NCA) 2013/14 covered the communal and commercial farming sectors throughout the country. The objective of the NCA 2013/14 is to obtain baseline agricultural production and structural variables for the communal and commercial farming sectors at the national and regional levels. The census will provide statistics to improve planning and decision-making in the agricultural sector and satisfy the information needs of the socio-economic database being set up by the Namibia Statistics Agency (NSA).

### KIND OF DATA

Sample survey data [ssd]

### UNIT OF ANALYSIS

The study was done on the population for the communal sector and a significant number of agricultural households in the rural communal areas of Namibia including the semi-urban areas around the urban centers. The census collected detailed data on crop production, crop storage, livestock production and fish farming. The unit of analysis is individuals, agricultural household, agricultural holdings, parcels and plots.

## Version

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### VERSION DESCRIPTION

v2.1 Edited, cleaned, revised anonymised, datasets for public users.

### VERSION DATE

2015-11-23

### VERSION NOTES

Not Applicable

## Scope

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### NOTES

### THEMES

#### CHAPTER 1: INTRODUCTION

This study presents information on the background, objectives, methodology, response rate, liability of estimate, financial and technical support of the Census.

#### CHAPTER 2: AGRICULTURAL HOUSEHOLDS DEMOGRAPHIC CHARACTERISTICS

This study deals with the demographic characteristics and economic status of the agricultural household members. Provide information for each individual person in the household. From section 2 onwards information will be collected from only the ten (10) sampled agricultural holdings

#### CHAPTER 3: LAND USE

This study collected information on land under different land uses. The type of holding, means of acquisition of parcels and plots, ownership of parcels and plots, holding characteristics, production and area of major crops such as sorghum, maize and millet/mahangu.

#### CHAPTER 4: ACCESS TO EXTENSION SERVICES AND FACILITIES

This study presents information on agricultural extension services received by the holdings.

#### CHAPTER 5: EQUIPMENT AND INFRASTRUCTURE

The information required is on type(s) of means of transportation the agricultural holding owns, can borrow or can hire. Furthermore, information on whether the holding has any storage facilities and the storing capacity was captured.

#### CHAPTER 6: ACCESS TO CREDIT FACILITIES

This chapter presents information on households who received loans for agricultural purposes, as well as purpose, source and period of loan received and type of collateral, etc.

#### CHAPTER 7: FARM MANAGEMENT

This study presents information on the use of fertilizers, types of seed used, the use of pesticides, use of irrigation and the types of inputs used.

#### CHAPTER 8: AQUACULTURE/FISH FARMING

This gives information on the fish farming carried out by the holding. The fish farming system used, source and number of fingerlings stocked by type, quantity of fish harvested, period aquaculture has been practised and the number of workers in aquaculture.

#### CHAPTER 9: FORESTRY

This study covers one of the important resources the country is endowed with, namely forestry. This chapter collects information on the use of forest land, and the purpose of agro-forestry

#### CHAPTER 10: FOOD SECURITY

This study provides information on the agricultural households who experience food shortage, presence of food shortage, number of meals taken per day, months in which food shortage occurred, reason for food shortage and immediate response to alleviate food shortage.

#### CHAPTER 11: OTHER ECONOMIC ACTIVITY

This study collected information on the type of economic activities, as well as other income sources other than agriculture, the agricultural household population is engaged in.

#### CHAPTER 12: LABOUR INPUTS

This study covers information on agricultural household members by status of employment, paid employees.

#### CHAPTER 13: USAGE AND DISPOSITION OF CROPS

This study aims to present a broad indicator of the extent to which agricultural holdings are participating in the market economy. The quantity of crop production sold, and the Post Harvest Losses encountered by the agricultural households

during harvest was captured.

## Chapter 14: LIVESTOCK

This study presents information on livestock such as cattle, sheep, goats and pigs, as well as poultry. Domestic animals such as dogs and cats are excluded unless they are being raised for food or other agricultural purposes.

### TOPICS

<b>Topic</b>
INTRODUCTION
AGRICULTURAL HOUSEHOLDS DEMOGRAPHIC CHARACTERISTICS
LAND USE
ACCESS TO EXTENSION SERVICES AND FACILITIES
EQUIPMENT AND INFRASTRUCTURE
ACCESS TO CREDIT FACILITIES
FARM MANAGEMENT
AQUACULTURE/FISH FARMING
FORESTRY
FOOD SECURITY
OTHER ECONOMIC ACTIVITY
LABOUR INPUTS
USAGE AND DISPOSITION OF CROPS
LIVESTOCK

### KEYWORDS

<b>Keyword</b>
Agricultural inputs
Crop production
Land use
Harvest
Livestock
Labour
Crop yield
Irrigation
Storage facilities
Economic activity
Apiary
Aquaculture
Forestry
Crop
Seed
Holding
Household

Farming
Fertilizers
Field
Parcel
Plot
Agriculture
Census
Holder

## Coverage

### GEOGRAPHIC COVERAGE

The geographical coverage for the NCA-CN 2013/2014 covers only the agricultural households and the population living in those households who are engaged in subsistence farming activities, thus the coverage for the communal sector is only the rural areas and the semi-urban areas.

### UNIVERSE

The NCA-CN 2013/2014 is designed to cover all the agricultural households members regardless of age who reside in the holding on the day of enumeration.

## Producers and sponsors

### PRIMARY INVESTIGATORS

Name	Affiliation
Namibia Statistics Agency	Ministry of Economics Planning
Ministry of Agriculture, Water and Forestry	N/A

### PRODUCERS

Name
NOT APPLICABLE

### FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
The Government of the Republic of Namibia	GRN	Funding
Food and Agriculture Organization of the United Nations	FAO	Funds and Technical support
African Development Bank	AfDB	Funding

## Sampling

### SAMPLING PROCEDURE

#### Sample size

A total sample size of 10,550 agricultural households was determined to give reasonably reliable estimates at the regional level for the most important variables. The proportional allocation of this sample did not yield the minimum sample size for some of the sparsely populated regions hence a power allocation with some adjustments had to be carried out as a compromise procedure while keeping the overall national sample fixed.

In general, 10 agricultural households were sampled from each of the selected PSUs thus having a larger spread of the

sample across the population of agricultural households. However, in some of the southern regions having less communal farming activities, the sample size per PSU was raised to 16 agricultural households.

#### Sample design

A stratified two stage cluster sample design for the communal sector was used. At the first stage, primary sampling units (PSUs) were selected with Probability Proportional to Size (PPS) from the sampling frame based on the Enumeration Areas of 2011 Population and Housing Census. The size measure of a PSU in the sampling frame was the number of agricultural households which was derived from the questions included in the 2011 Population and Housing Census as per the World Programme of Agriculture 2010 (WCA 2010) Handbook recommendations.

The main strata was the regions which are also the primary domains of estimation. The frame units (PSUs) were further stratified implicitly by the constituencies within the regions. The list of agricultural households prepared within a selected PSU formed the secondary sampling frame from which a sample of agricultural households was selected systematically.

A third stage of sampling was introduced to measure objectively the average yields of the three major crops namely; Maize, Sorghum and Millet for the purpose of estimating the production instead of the farmer's estimates. Hence a crop cutting experiment was conducted to measure the average yield of these crops. A list of plots under each of these crops in a sampled PSU was made using the plot information of the selected households within the PSU. These lists then formed the sampling frames for each of the crops in the PSU.

Three plots were then randomly selected from each of the crop lists. If the list contained less than 3 plots then all were included in the experiment. An area was marked within the selected plot according to the FAO guidelines. Matured crops inside this marked area were cut and the weights from wet as well as dry grains were recorded. Grains were weighted while wet as well as dry. These figures were then used to estimate the average yield of each of the crops.

#### RESPONSE RATE

Response rates were computed for each region and the overall response was 95.9 percent.

#### WEIGHTING

Since the PPS selection is and unequal probability selection the sample data has to be weighted. These weights which are generally called sample weights or base weights are the inverse of the inclusion probability.

Although the expected sample agricultural households was the responding households would be less than this number. Since the non-response was not too large and the reasons seem to suggest that there are no remarkable differences between the responding and non responding households, the responding households ( were taken as a random sample of the selected households. This will affect the probabilities and accordingly the weight and therefore the non response adjusted weight is

## Data collection

#### DATES OF DATA COLLECTION

Start	End	Cycle
2014-02-02	2014-07-17	6 months

#### DATA COLLECTION MODE

Face-to-face [f2f]

#### SUPERVISION

The interviewers were divided into teams of 4 interviewers for which one supervisor is assigned to every team of 4 interviewers. Thus one supervisor and 4 interviewers form one team. Number of interviewers were 708 and supervisors were 177.

The role of the Team Supervisor (TS) will visit enumerators on a regular basis during the enumeration period in order to "spot-check" and/or complete check of the questions in CAPI. Supervisors also supply thier enumerators with the materials and instructions, and try to help them with any problems during the field work.

Personnel from the Head Office team paid visits to the field on an on-going regular basis. During these visits, spot-checking of the performance of interviewers and supervisors were carried out.

## DATA COLLECTION NOTES

### Data collection

Data collection and capturing carried out during the NCA 2013/14 was done following international best practices. The enumeration was conducted face-to-face using Computer Assisted Personal Interview (CAPI) replacing the conventional paper questionnaire (PAPI). This approach helped to minimize errors during data capturing and fast tracking data processing. In contrast, information on crop cutting was collected on paper forms and captured in MS Excel at a later stage.

### Procedures

A technical subject-matter planning team, consisting of staff members from NSA and MAWF was established to guide the entire census process from planning to implementation. A two day user-producer workshop with various stakeholders was conducted where the draft questionnaire, structure of the census; census methodology; definitions and concepts; and the activity plan were discussed and agreed upon. It was agreed in principle that the census will strictly follow the recommendations from the 2010 Round of the World Census of Agriculture (WCA) document of the FAO. The pilot survey was carried out during December 2013 and the survey instruments were finalized shortly after that.

In January 2014, a one week Training-of-Trainers (ToT) followed by a two week intensive training period for enumerators and team supervisors was conducted in four training venues. A team of four enumerators assigned to one supervisor were constituted and dispatched in the field across the whole country.

The Communal sector census was officially launched on 17 February 2014 and was conducted in two phases. The first phase which started on the 17 February 2014 entailed listing of all households and the interview that lasted for five days. The second, which started during May 2014 covered the crop cutting phase that was used as inputs in the calculation of the yield. The entire data collection in the field work lasted until end of July 2014.

A full publicity program was put in place to sensitize respondents and reduce non-response rate during the census. Each team started by paying a courtesy call to regional and local authorities in order to obtain support of various authorities. In addition, rigorous publicity was done through the print and electronic media country-wide.

### DATA COLLECTORS

Name	Abbreviation	Affiliation
Namibia Statistics Agency	NSA	Ministry of Economic Planning
Ministry of Agriculture Water and Forestry	MAWF	

## Questionnaires

### QUESTIONNAIRES

Computer Assisted Personal Interview (CAPI) replaced the conventional paper questionnaire.

## Data Processing

### DATA EDITING

Data editing took place at a number of stages throughout the processing, including: Office editing and coding, Data editing and data cleaning using Stata 13 and CPro 5.0, These phases were carried out over a period of 18 months. Out of this period, the designing of tabulation programs, and the generation, verification and correction of tables lasted for 10 months.

### METHODOLOGY NOTES

CAPI Data entry application design using CPro 5.0

Back up of raw data

Tabulation (summary tables ) using Stata 13 and MS Excel

## Data Appraisal

### ESTIMATES OF SAMPLING ERROR

Sampling errors have been calculated for 15 selected indicators. The sampling errors are based on the variances of the estimated figures which in turn depend on the sample sizes and the variation observed in the population units.

### DATA APPRAISAL

N/A

## Access policy

### CONTACTS

Name	Affiliation	Email	URL
Namibia Statistics Agency	Ministry of Economic Planning	inf@nsa.org.na	www.nsa.org.na

### CONFIDENTIALITY

The Namibia Census of Agriculture 2013/14 was conducted under the provisions of the Statistics Act No.9 of 2011.

### ACCESS CONDITIONS

The datasets has been anonymized and is available as a Public Use Dataset, accessible to all. It is accessible to all for statistical and research purposes only, under the following terms and conditions:

1. The data and other materials will not be redistributed or sold to other individuals, institutions, or organizations without the written agreement of the Namibia Statistics Agency.
2. The data will be used for statistical and scientific research purposes only. It will be used solely for reporting of aggregated information, and not for investigation of specific individuals or organizations.
3. No attempt will be made to re-identify respondents, and no use will be made of the identity of any person or establishment discovered inadvertently. Any such discovery would immediately be reported to the Namibia Statistics Agency.
4. Any books, articles, conference papers, theses, dissertations, reports, or other publications that employ data obtained from the Namibia Statistics Agency will cite the source of data in accordance with the Citation Requirement provided with each dataset.

### CITATION REQUIREMENTS

Namibia Statistics Agency (2015). Namibia Census of Agriculture 2013/2014 /Communal Sector Report, Version 1.0 of the public use dataset (November 2015), Windhoek, Republic of Namibia.

Website: [www.nsa.org.na](http://www.nsa.org.na)

### ACCESS AUTHORITY

Name	Affiliation	Email	URL
Namibia Statistic Agency	Ministry of Economics Planning	info@nsa.org.na	www.nsa.org.na

## Disclaimer and copyrights

### DISCLAIMER

The Namibia Statistics Agency bears no responsibility for use of the data or for interpretations or inferences based upon public uses.

### COPYRIGHT

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## Metadata production

NAM\_NSA\_NCA\_2014\_v01

PRODUCERS

Name	Abbreviation	Affiliation	Role
Namibia Statistics Agency	NSA	Ministry of Economics Planning	Producer

DATE OF METADATA PRODUCTION

2015-11-23

DDI DOCUMENT VERSION

Version 1.0 ( November 2015)

## Data Dictionary

Data file	Cases	Variables
HOUSEHOLD_NAMIBIA_cor_w_tab2_finvrai_16_2_2017_	53728	110
Land_Use_NAMIBIA_cor_w_tab_14_3_17	37775	96
section_4_cor_w_tab	9960	119
section_5_cor_w_tab	17241	24
section_6_cor_w_tab	14127	28
section_7_cor_w	9581	26
section_8_cor_w	1046	32
section_8_cor_w_tab	1046	32
section_10_3_10_cor_w_tab	36	35
section_10_11_15_cor_w	29929	25
section_10_16_18_cor_w	49879	22
section_11_cor_w	1813	39
section_12_cor_w	39866	25
Section_13_1_to_8_cor_w_tab	7212	45
Section_13_9_to_13_cor_w	10406	25
Section_13_14_to_19_cor_w	11431	26
Section_13_20_to_28_cor_w	7344	29
Section_14_1_6_cor_w	2139	27
Section_14_1_7_12_cor_w	2206	27
section_15_cor_w_tab	9974	41
section_16_cor_w	48884	30
section_17_cor_w_tab	6178	92
section_18_1_cor_w_t1801	4275	20
section_18_1_cor_w_tab	13798	29
section_18_2_cor_w_tab	9797	26
section_18_3_cor_w_tab	2595	26
section_18_4_cor_w_tab	12452	26
section_18_5_cor_w_tab	8593	29
section_18_6_cor_w_tab	10979	27
section_18_7_cor_w_tab	10222	28
section_18_8_cor_w_tab	13587	29
section_18_9_cor_w_tab	25785	30
section_18_11_cor_w_tab	29925	12
section_18_12_cor_w	29925	12

**section\_18\_12\_cor\_w\_tab**

29925

12

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