



**REPUBLIC OF NAMIBIA**

**Report on the**

# **Annual Agricultural Surveys**

**1996 - 2003**

**BASIC ANALYSIS OF COMMUNAL AGRICULTURE**

**Central Bureau of Statistics  
National Planning Commission  
Private Bag 13356  
WINDHOEK**

**NOVEMBER, 2004**

## TABLE OF CONTENTS

	.....	Page
LIST OF TABLES .....		3
FOREWORD .....		4
Chapter 1: BACKGROUND .....		5
1.1 Introduction .....		5
1.2 Scope/Coverage .....		5
1.3 Sample Design .....		5
1.4 Data Collection .....		6
1.5 Training of Field Staff .....		6
1.6 Field Operation/Enumeration .....		6
1.7 Data Processing .....		6
1.8 Survey Results .....		7
Chapter 2: MAIN RESULTS .....		8
2.1 Introduction .....		8
2.2 Agricultural Households and Activity .....		8
2.3 Population Planting .....		11
2.4 Active Population .....		13
2.5 Ownership of Implements .....		14
2.6 Input Use .....		16
2.6.1 Seed Use .....		16
2.7 Fertilizer and Manure Application .....		23
2.8 Area Planted and Number of Fields .....		25
2.9 Production .....		28
2.9.1 Cereal Crops .....		28
2.9.2 Livestock .....		29
2.9.3 Cattle .....		30
2.9.4 Other Livestock .....		32
2.10 Sources of Income .....		34
Chapter 3: CHARACTERISTICS OF HOLDINGS .....		36
APPENDIX .....		49
A. Concepts and Definitions .....		49
B. Survey Questionnaires .....		51

## **LIST OF TABLES**

	.....Page
Table 1: Number of PSU's and Agricultural Holdings by Region.....	6
Table 2: Households Planting by Region and Cropping Season.....	9
Table 3: Total Population Planting by Region and Cropping Season.....	11
Table 4: Active Population of Households Planting.....	13
Table 5: Ownership of Implements by Households Planting by Cropping Season....	15
Table 6: Total Area Planted to Mahangu Seed by Region .....	17
Table 7: Total Area Planted to Sorghum Seed by Region .....	19
Table 8: Total Area Planted to Maize Seed by Region .....	21
Table 9: Agronomic Practices Administered per Area by Region.....	23
Table 10: Area Planted by Region and Season.....	25
Table 11: Number of Fields Planted by Region and Season.....	26
Table 12: Cereal Production by Region and Cropping Season.....	28
Table 13: Number of Cattle Owned by Type and Region.....	30
Table 14: Summary of Total Cattle Owned by Type and Season.....	31
Table 15: Number of Other Livestock Owned by Type and Region.....	32
Table 16: Summary of Other Livestock Owned in Namibia by Season.....	33
Table 17: Percentage of Households by Source of Income and Region.....	34
Table 18: Summary Percentage of Households by Source of Income and Region.....	35
Table 19: Distribution of Holdings by Size and Category .....	36
Table 20: Summary Table of Distribution of Holdings by Group Categories .....	42
Table 21: Cereal Production per Person and Workers per Yield by Group .....	43

## **FOREWORD**

The Central Bureau of Statistics (CBS) has conducted Annual Agriculture Surveys (AAS) since the agricultural season 1996/1997, The Namibia Agricultural Census (NAC) that was conducted during the 1994/1995 agricultural season preceded the start of the Annual Agriculture Surveys (AAS).

This final report is the last in a series since the publication of the first AAS results for the 1996/1997 agricultural surveys. The report primarily concentrates on both the findings and analysis of the seven survey results. Due to certain unforeseen conditions coupled with some technical problems, the 2000/2001 Annual Agricultural Report could not be published on time. As a result, and for cost saving purposes, the results for all the seven Annual Agricultural Surveys since 1996/97 are consolidated in this report and as such marks the final report for the first round of Annual Agricultural Surveys. A full-scale Namibia National Census of Agricultural will follow this during the 2004/2005 agricultural seasons. Another reason for the delay in the timely release of the previous AAS reports was the pressing need for gender desegregations in the presentation of agricultural statistics; such an endeavor required more time.

Generally, this report presents the basic and major findings of the agricultural surveys and highlights the dominant features of communal agriculture in the six northern regions of Namibia, namely; Caprivi, Kavango, Ohangwena, Omusati, Oshana, and Oshikoto. Thus, the publication puts together a time series of agricultural statistics relating to the communal areas for the surveys conducted.

It is indeed a pleasure to present this publication of the first round of Annual Agricultural Surveys conducted since 1996/1997. The report provides an un-interrupted, comprehensive time-series of data over the years from 1996 to 2003. It is also the first report of its kind whereby agricultural statistical data has been disaggregated by gender. Efforts have been made to present the findings in as simple a form as possible with the hope that it will assist planners and decision makers in formulating, implementing and monitoring effective development plans for the agricultural and rural sectors of the Namibian economy.

The entire series of the Annual Agricultural Survey field operations have been entirely supported by the Namibian Government under capital budget arrangements. The Central Bureau of Statistics and the Department of Planning within the Ministry of Agriculture, Water and rural Development have closely consulted and cooperated in the execution and success of the survey operation over the years.

I would like to acknowledge and express my sincere appreciation to all those who have contributed to the success of this exercise. They include, in particular the subsistence farming community; the regional Governors and Councillors; the Central Bureau of Statistics and the Directorate of Planning within the Ministry of Agriculture, Water and Rural Development, whose support and cooperation have enabled the publication of these survey results.

.....

Hon. Immanuel Ngatjizeko (MP)  
Director General: National Planning Commission  
November, 2004

# **CHAPTER 1: BACKGROUND**

## **1.1 INTRODUCTION**

Agriculture is the second most important economic sector (besides mining) in the Namibian economy. Though its contribution to the overall economic activity is small (about 6 percent of GDP), the sector is the main source of livelihood for the majority of the Namibian population, mainly for the subsistence rural areas. It is estimated that more than 70 percent of the population in the country depend to a greater extent, on the agricultural sector. Prior to the independence of Namibia, most agricultural services and efforts were directed towards supporting commercial agriculture.

The largely ignored communal farming sector consists of, and supports about close to 100,000 households (about 770,000 persons). The major requirement at independence was to provide statistics to enable description and analysis of activities of the largely poor farm population in the sector. The Survey is meant to provide statistical information relating to agriculture nationally, regionally and by sector. The main aim, amongst others, was to enable analysis and evaluation of the sector performance, for the assessment of policy measures relating to the sector.

The Central Bureau of Statistics (CBS) in the National Planning Commission Secretariat (NPCS), in collaboration with the Directorate of Planning (DoP) in the Ministry of Agriculture, Water and Rural Development (MAWRD), conducts the Annual Agricultural Survey (AAS). As an institutional arrangement, the survey is undertaken by the CBS.

Since the first round of survey in 1996, seven Annual Agricultural Surveys have been conducted up 2003. The surveys are conducted to gather agricultural information to provide a time series on areas planted/harvested, and also data on the production and yield of selected crops. This report presents a summary of the surveys' data providing a time series of survey results. All efforts have been made to disaggregate and present the data by gender.

## **1.2 SCOPE/COVERAGE**

The survey relates to agriculture and the rural sector of the Namibian economy covering agricultural households on a sample basis. The survey covers the six regions that make up the Northern Communal regions of Namibia, namely; Caprivi, Kavango, Ohangwena, Omusati, Oshana, and Oshikoto.

Basic data on area planted, production and yield of pearl millet (mahangu), sorghum and maize, as well as a limited range of data on livestock, are collected during the survey for each agricultural unit (farming household) in the sample.

## **1.3 SAMPLE DESIGN**

A two-stage sampling procedure is used to select holdings. At the first stage, a sample of Primary Sampling Units (PSU's) was selected from the Master Sample Frame (MSF) based on the 1991 Population and Housing Census. At the second stage, a sample of 12 agricultural holdings was selected from within each of the sampled PSU's.

On average, the survey was conducted on 118 Primary Sampling Units (PSU's), comprising about 1,400 agricultural holdings. The survey was designed to provide data at regional level. The sample is considered large enough to provide sufficiently reliable regional estimates.

Table 1 below shows the number of PSU's and of agricultural holdings included in the sample by region.

*Table 1: Number of PSU's and Agricultural Holdings by Region\**

<b>Region</b>	<b>1996 - 2003</b>	
	<b>PSU's</b>	<b>Holdings</b>
Caprivi	19	216
Kavango	20	240
Ohangwena	20	240
Omusati	19	226
Oshana	22	264
Oshikoto	18	216
<b>Total</b>	<b>118</b>	<b>1,402</b>

\*For the 1999/2000 Survey, Caprivi and Kavango Regions were not covered.

For purposes of comparison, the sample size has been kept more or less the same over time. In this way, estimation procedures are more or less standard, for consistency of results and accuracy. These sample sizes above allow derivation of sample estimates at the regional level with degrees of precision varying between 10 and 30 percent.

#### **1.4 DATA COLLECTION**

Personal face-to-face interview method was applied to collect the data from households. Thus, over a designated survey period, interviewers visited selected households to solicit for the required information, by asking the respondent(s) questions whose replies were recorded on a prescribed questionnaire.

#### **1.5 TRAINING OF FIELD STAFF**

Detailed instruction manuals for the survey are prepared to assist in the training. The manuals are useful for reference in the field and in the formulation of processing procedures. All staff concerned with the data collection, supervisors and enumerators is trained intensively for one week on interview techniques and survey procedures.

#### **1.6 FIELD OPERATION/ENUMERATION**

Field operations are under the overall control of the agricultural statistics sub-division unit of the CBS. For close control and supervision of the surveys, a team of four enumerators and one supervisor is formed. For mobility, each team was provided with a vehicle and other necessary survey equipment and material.

#### **1.7 DATA PROCESSING**

Data processing systems used were the IMPS programs, MS Access and MS Excel. Thus, the process was in three stages as follows:

- Data entry based on the IMPS programs;
- Data editing by “eye-ball” inspection and by use of the IMPS program;
- Tabulation involves the conversion of edited data files into MS Access.

In the process, queries are generated and query results sent to MS Excel for final tabulation and formatting. The final report was prepared using MS Word.

## **1.8 SURVEY RESULTS**

Basic results of the survey are presented in Chapters 2 and 3 of this report. In particular, the results relate to the synopsis presented in Chapter 2 and Characteristics of agricultural holdings detailed in Chapter 3.

## **CHAPTER 2: MAIN RESULTS**

### **2.1 INTRODUCTION**

The zone covered in each of the annual surveys comprised of the regions that form the Northern Communal Area of the country, namely Caprivi, Kavango, Ohangwena, Omusati, Oshana and Oshikoto. This section is a summary of agricultural households characteristics and their activities. The survey exercise concentrated on the northern six regions of the country because these are where the major communal agronomic practices are taking place. This is because there are no significant agro-practices at subsistence level within the other regions of the country where notable crop production in the major three subsistence crops growing of pearl millet/mahangu, sorghum, and maize is practiced.

It should further be noted that the two regions Caprivi and Kavango were not surveyed during the 1999/2000 agricultural survey due to reasons of over-flooding and poor harvesting. Thus, figures for this agricultural season for the two regions in all the tables are noted as NA, meant to stand for Not Available.

In addition, it is the first time in the presentation of these time-series data, that the figures in the tables are summarily disaggregated by gender. The tabulations were run and analysed according to the recorded numbers of men and women heads of households. A head of household is defined here as a person who is a member of a household and generally runs the affairs of the household. Normally, the head is looked upon by other members of the household as the main decision-maker.

A general observation is that the results show a big variation and disparities of participation in agricultural practices between men and women-headed households in the communal agricultural sector. Looking at the figures and comparing the tables over time, it can be safely concluded that there is a slight trend of closing the gap of disparity, although variations within representative figures over time still remain.

### **2.2 AGRICULTURAL HOUSEHOLDS PLANTING**

In the Annual Agricultural Surveys, an agricultural household is defined as an economic unit of agricultural production under single management, comprising all livestock kept and all arable land used, wholly or partly, for the purpose of agricultural production, without regard to title, legal form or size. The target population is defined according to the following criteria, concerning land and livestock, i.e. a households having planted any of the cereal crops; Pearl Millet (Mahangu), Sorghum, and Maize. To be included in the survey, an agricultural holding requires fulfilling the criteria.

Table 2: Estimated number of Households Planting by Region, Cropping Season And Sex of Head of Household.

	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		2001/2002		2002/2003	
Region	Women	Men												
<b>Caprivi</b>	3,737	7,874	3,786	7,552	5,510	5,290	NA	NA	6,601	5,090	7,053	5,782	6,948	5,608
<b>Kavango</b>	3,002	7,269	2,481	5,903	2,593	6,013	NA	NA	4,794	6,459	3,728	5,655	4,338	6,738
<b>Ohangwena</b>	11,235	17,552	9,857	17,027	11,653	14,292	9,461	16,495	9,453	16,618	12,597	13,570	10,643	16,573
<b>Omusati</b>	8,031	13,821	9,575	12,764	8,564	14,672	10,222	13,551	8,130	16,731	10,828	15,940	12,302	14,733
<b>Oshana</b>	5,192	9,358	5,722	10,568	6,085	10,441	7,869	8,613	7,248	8,955	7,750	8,763	8,213	8,385
<b>Oshikoto</b>	5,600	9,686	5,615	10,357	6,561	9,870	7,992	7,565	7,217	9,489	8,463	9,293	8,192	9,566
<b>Total</b>	<b>36,797</b>	<b>65,560</b>	<b>37,037</b>	<b>64,171</b>	<b>40,967</b>	<b>60,578</b>	<b>35,544</b>	<b>46,224</b>	<b>43,443</b>	<b>63,342</b>	<b>50,419</b>	<b>59,003</b>	<b>50,636</b>	<b>61,603</b>

Figure 2.1.1: Households Planting by Region  
Caprivi

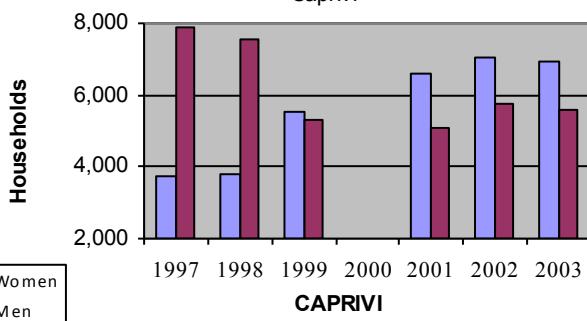


Figure 2.1.2: Households Planting by Region  
Kavango

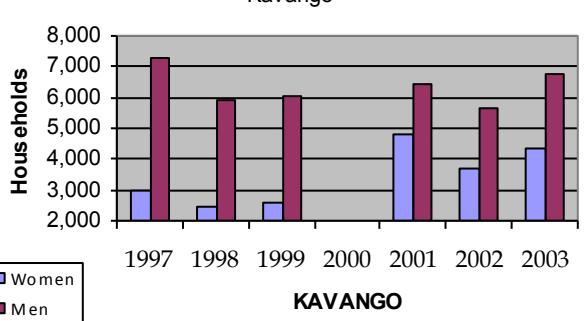


Figure 2.1.3: Households Planting by Region  
Ohangwena

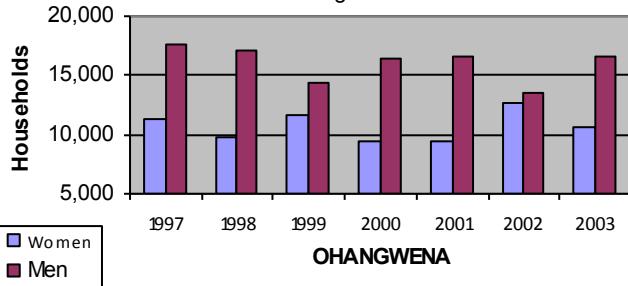


Figure 2.1.4: Households Planting by Region  
Omusati

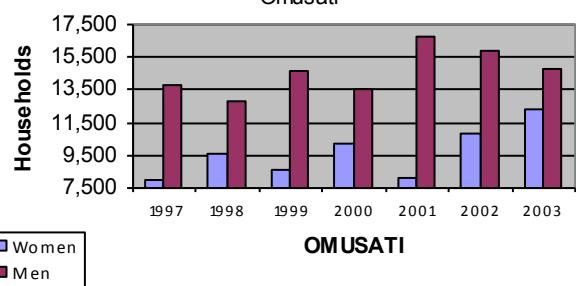


Figure 2.1.5: Households Planting by Region  
Oshana

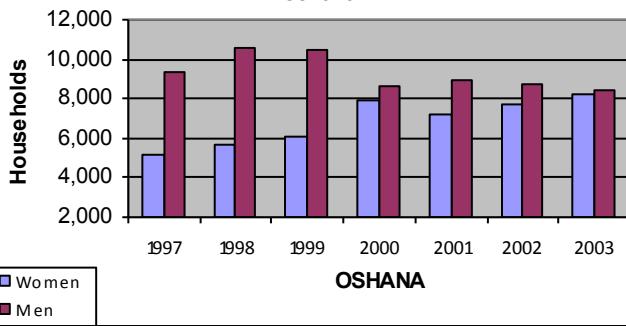
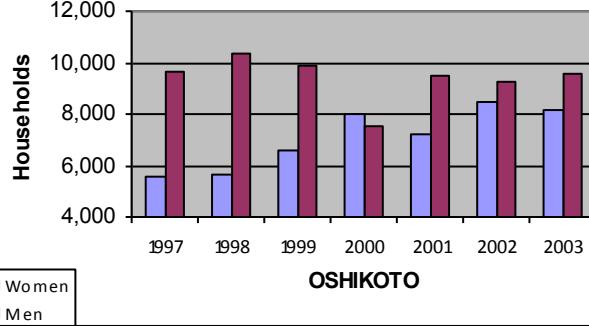


Figure 2.1.6: Households Planting by Region  
Oshikoto



The estimated figures show a similar trend of variation over the survey periods. Thus, comparing the results for the last two surveys, during the agricultural season 2001/2002, for all regions, an estimated 109,422 households reported having planted cereal crops compared to 106,786 who planted in the 2000/2001 seasons. This represents a marginal increase of 1.2 percent in the estimated number of households planting. It also shows that the men-headed households, which planted any crop, out-numbered the women-headed households by an average of 4 percent. However, the number of women-headed households planting increased from 43,000 in 2000/01 to 50,000 in 2001/02, representing a 5.4 percentage increase whereas the men-headed households decreased by the same percentage margin between the two years.

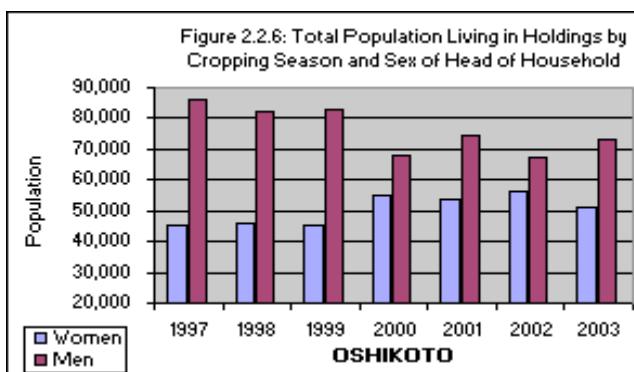
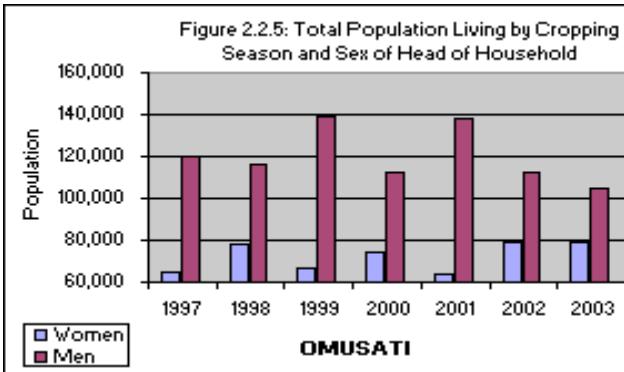
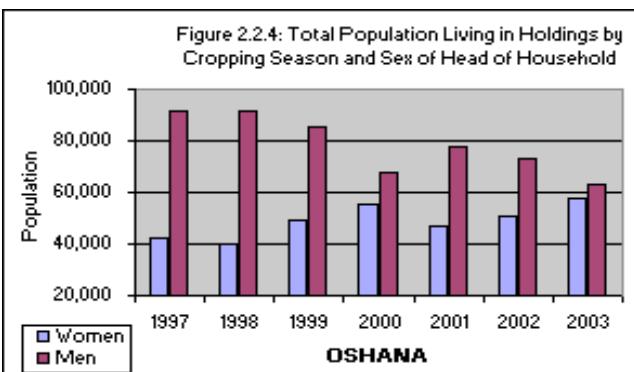
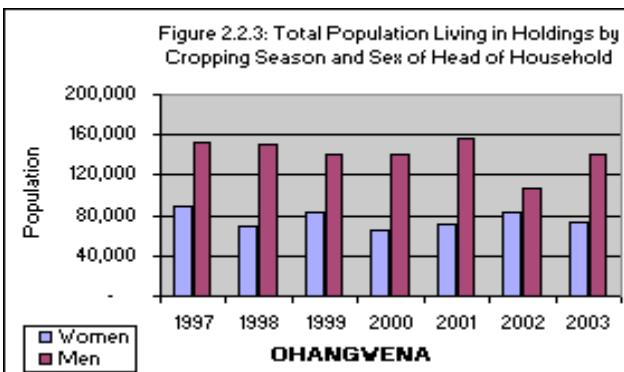
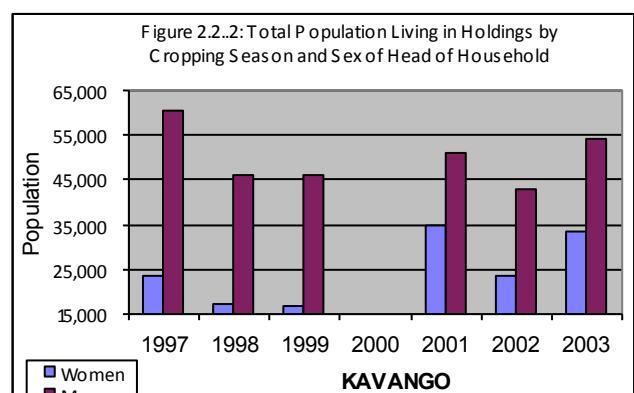
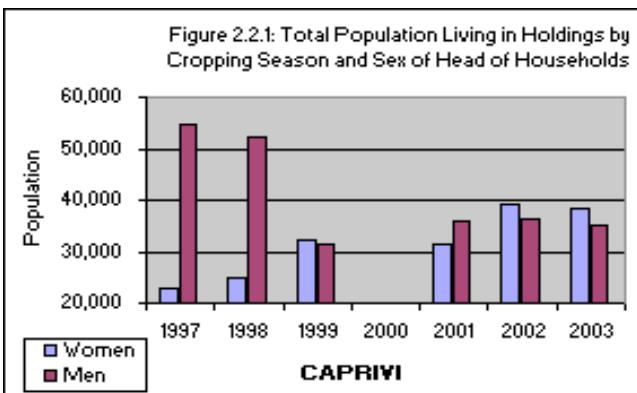
During both agricultural seasons, 2000/01 and 2001/02, the proportion of households planting was highest in Ohangwena and Omusati regions with an average of 27 percent for men-headed and 20 percent for women-headed households in Omusati and 25 percent men-headed and 24 percent for women-headed households in Ohangwena. The rest of the regions ranged between a low average of 15 percent men-headed households in 2000/01 for Caprivi and a high of 17 women-headed households planting in 2001/02 for Oshikoto.

On average, the total number of households planting varies between 37,000 and 51,000 women-headed households and 61,000 and 66,000 men-headed households. The number of men-headed households planting gradually decreased over the years as compared to the number of women-headed households increasing over the survey periods.

## 2.3 POPULATION PLANTING

Table 3: Estimated Total Population Living in Holdings by Region, Cropping Season, and Sex of Head of Household.

	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		2001/2002		2002/2003	
Region	Women	Men												
Caprivi	22,988	54,834	24,799	52,055	32,402	31,339	NA	NA	31,511	35,968	39,163	36,207	38,319	34,987
Kavango	23,765	60,570	17,394	46,038	16,748	46,213	NA	NA	34,808	51,150	23,469	42,800	33,622	53,996
Ohangwena	89,068	151,615	68,346	150,100	82,714	140,923	65,017	140,335	72,159	156,570	84,153	106,703	72,288	141,298
Omusati	64,834	119,615	78,225	116,371	67,117	138,852	74,606	112,136	63,500	138,113	78,918	111,966	79,184	104,872
Oshana	42,031	91,628	39,828	91,494	49,513	85,117	55,257	67,742	46,735	77,873	50,516	73,222	57,446	63,149
Oshikoto	45,375	85,883	45,690	82,175	45,378	83,052	53,899	62,924	53,662	74,249	56,132	66,998	51,249	73,120
<b>Total</b>	<b>288,061</b>	<b>564,145</b>	<b>274,282</b>	<b>538,233</b>	<b>293,872</b>	<b>525,496</b>	<b>248,779</b>	<b>383,137</b>	<b>302,375</b>	<b>533,923</b>	<b>332,351</b>	<b>437,896</b>	<b>332,108</b>	<b>471,422</b>



This table basically shows the same trend of development and progression as Table 2 above. The estimated total population in households that have planted some crop in 2000/01 was 836,298 households represented by 64 percent men- and 36 percent women-headed households as compared to an estimated total of 770,247 households in 2001/02 represented by 43 percent women- and 57 percent men-headed households.

The estimated proportions of the total population planting in the season 2000/01 were highest for Ohangwena with 29 and 24 percent for men- and women-headed households respectively, followed by Omusati with 26 and 21 percent for men- and women-headed households respectively. The lowest proportion of the estimated total population of households planting were recorded in Caprivi, Kavango, Oshikoto and Oshana, in that order ranging from a low of 7 percent in Caprivi for men-headed households to a high of 18 percent in Oshikoto for women-headed households in 2000/01.

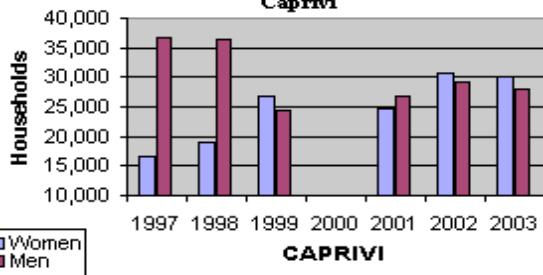
## 2.4 ACTIVE POPULATION

The active population comprises of all persons providing labor to produce economic goods and services, on an agricultural holding. Everybody old enough to work and who has worked during the time of the survey will be counted in the economically active population. Thus, any person(s) who does some work on the holding is considered active. The produce may not be intended for the market. However, a person who never or seldom participates in agricultural activity of the household is classified as not active.

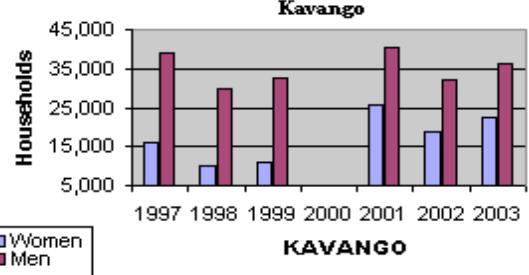
*Table 4: Estimated active Population Planting by Region, Cropping Season, and Sex of Head of Household.*

Region	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		2001/2002		2002/2003	
	Women	Men	Women	Men										
<b>Caprivi</b>	16,522	36,609	19,145	36,374	26,741	24,336	NA	NA	24,651	26,699	30,794	29,195	30,136	27,943
<b>Kavango</b>	15,859	38,825	9,933	29,851	10,962	32,596	NA	NA	25,797	40,297	18,706	31,948	22,586	36,078
<b>Ohangwena</b>	64,732	113,714	45,012	97,744	63,525	111,457	45,273	96,894	55,586	128,976	61,920	83,547	53,103	107,937
<b>Omusati</b>	47,206	87,541	55,422	80,964	49,403	101,834	51,848	81,293	54,088	118,210	63,830	92,987	64,052	86,810
<b>Oshana</b>	27,354	64,415	28,690	69,510	37,811	68,654	41,645	52,476	37,761	65,222	39,138	55,371	42,791	49,267
<b>Oshikoto</b>	31,723	59,061	30,290	59,878	33,063	62,529	39,975	47,838	43,922	60,952	55,859	45,501	41,162	58,101
<b>Total</b>	<b>203,396</b>	<b>400,165</b>	<b>188,492</b>	<b>374,321</b>	<b>221,505</b>	<b>401,406</b>	<b>178,741</b>	<b>278,501</b>	<b>241,805</b>	<b>440,356</b>	<b>270,247</b>	<b>338,549</b>	<b>253,8301</b>	<b>366,136</b>

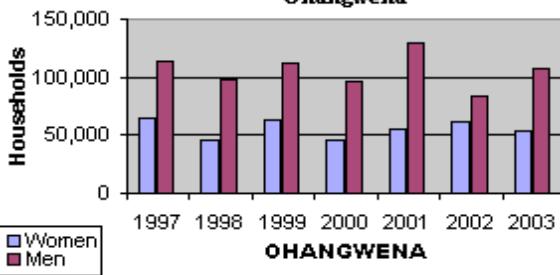
**Figure 2.3.1: Active Population Planting in Caprivi**



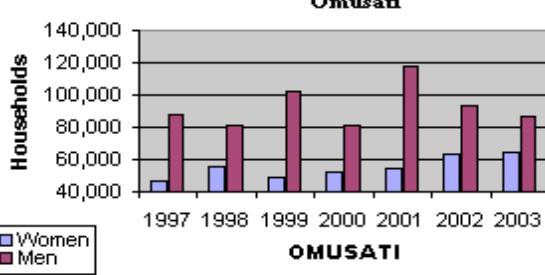
**Figure 2.3.2: Active Population Planting in Kavango**



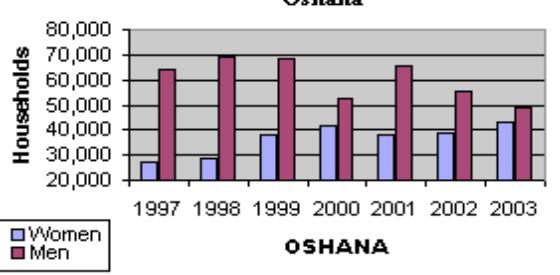
**Figure 2.3.3: Active Population Planting Ohangwena**



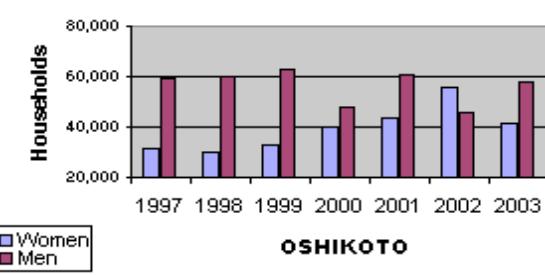
**Figure 2.3.4: Active Population Planting Omusati**



**Figure 2.3.5: Active Population Planting in Oshana**



**Figure 2.3.6: Active Population Planting Oshikoto**



The active population among households planting relates to the numbers that were available for agricultural labour. This is one of the most important variables in the measure of agricultural output produce because in subsistence farming practice, the area planted, i.e. size of the fields planted, is directly related and proportional to the number of people available to a household in the preparations; clearing, ploughing, fertilizing and seeding/planting of the fields.

For the agricultural season 2000/2001, the total active population among households was estimated to be 682,160 representing a 35:45 proportion of women-men-headed households. Of these, Ohangwena recorded the highest number of agriculturally active people among all the regions, showing a proportion of 29 percent active persons among men-headed households as compared to 23 percent of women-headed households. Omusati follows with 27 percent Men- and 22 percent women-headed households being active in agricultural economic activities on the holdings during the same season. Ohangwena and Omusati show a higher number of economically active persons in men-headed households than all the other regions for both the 2001 and 2002 agricultural seasons.

For the agricultural season 2001/2002, the total economically active population among households was estimated to be 608,796 representing a 44:39 proportion of women-men-headed households, indicating an increase of about 9 percent from the previous year. Of these, Ohangwena recorded the highest number of agriculturally active people among all the regions for the 2001/02 agricultural season, showing a proportion of 25 percent active persons within men-headed households whereas the percent of women-headed households remained the same as the previous year. Omusati follows with 27 percent men- and 24 percent women-headed households being active in agricultural activities on the holdings during the same season. There is obviously no significant variation in the numbers of economically active populations between the two agricultural seasons. In Caprivi and Oshikoto, the number of economically active persons headed by women, proportionally outnumber the men-headed households during both the 2000/01 and 2001/02 agricultural seasons.

## **2.5 OWNERSHIP OF IMPLEMENTS**

Implements used and/or required for agricultural production are another important input variable contributing to the success or failure of the agricultural economic output because these facilitate and enhance the overall process of production. The major implements required for success for a better harvest output in communal subsistence farming are *inter-alia* a plough, draft power, and a milling machine.

Table 5: Ownership of Implements by Number of Households Planting, by Season and Sex of Head of Households.

Region	Season	Plough		Oxen		Milling Machine	
		Men	Women	Men	Women	Men	Women
<b>Caprivi</b>	1996/1997	3,689	976	3,071	1,262	0	0
	1997/1998	3,166	1,471	3,019	1,421	0	0
	1998/1999	2,626	2,264	2,836	2,669	0	0
	2000/2001	3,164	3,550	2,835	3,162	0	0
	2001/2002	3,564	3,278	3,893	2,937	0	0
	2002/2003	3,330	3,215	3,726	2,847	0	0
<b>Kavango</b>	1996/1997	3,630	1,385	3,268	1,250	46	15
	1997/1998	3,640	780	3,210	628	63	0
	1998/1999	3,121	1,071	2,898	945	106	27
	2000/2001	3,770	1,964	3,568	1,477	109	0
	2001/2002	3,317	1,730	2,971	1,789	0	0
	2002/2003	4,150	1,616	3,824	1,238	0	0
<b>Ohangwena</b>	1996/1997	10,384	3,047	6,832	1,730	283	0
	1997/1998	11,758	2,276	5,969	652	113	27
	1998/1999	9,148	3,751	6,841	1,490	272	0
	1999/2000	10,525	3,019	6,396	1,161	355	0
	2000/2001	10,201	2,345	5,158	821	150	0
	2001/2002	9,152	4,768	5,895	1,961	278	35
	2002/2003	10,775	2,359	6,132	1,328	564	0
<b>Omusati</b>	1996/1997	10,667	4,622	3,330	751	200	0
	1997/1998	10,914	5,749	2,603	576	1,911	1,399
	1998/1999	11,486	4,953	3,934	330	129	302
	1999/2000	9,317	5,293	2,451	353	519	63
	2000/2001	13,008	4,916	3,068	693	97	97
	2001/2002	12,698	6,438	3,949	848	122	89
	2002/2003	10,818	7,905	2,606	797	203	0
<b>Oshana</b>	1996/1997	2,748	834	821	408	110	200
	1997/1998	3,217	1,026	1,317	155	172	0
	1998/1999	3,231	1,559	1,002	591	53	79
	1999/2000	4,329	1,474	290	0	57	23
	2000/2001	4,003	1,426	228	44	33	26
	2001/2002	3,803	1,340	645	163	228	0
	2002/2003	2,944	1,491	151	167	51	43
<b>Oshikoto</b>	1996/1997	5,289	1,845	2,786	574	0	0
	1997/1998	5,874	2,223	3,001	1,151	38	181
	1998/1999	5,281	1,454	2,481	0	338	238
	1999/2000	4,693	1,801	2,477	725	58	0
	2000/2001	4,831	2,120	2,883	958	173	134
	2001/2002	5,628	2,807	2,962	1,193	0	0
	2002/2003	5,505	2,147	2,925	721	0	184

Ownership of agricultural implements was measured in terms of milling machines, ploughs, and oxen, the most commonly used aids in production by communal farmers. Of these three implements, the most commonly owned and used are ploughs and oxen whereas very few households own milling machines. This may be because milling machines are rather expensive to acquire or not readily available. Almost all, or close to equal numbers of both men and women-headed households in the Caprivi do own a plough but do not own a milling machine.

It is notable that the number of men-headed households owning ploughs dramatically decreased between the 2000/01 to 2001/02 agricultural seasons whereas the number of women-headed households owning the same drastically increased between the two agricultural years. This also proves to be true for women-headed households in ownership of oxen within all the regions except for Caprivi. A higher number of men- than women- headed households recorded ownership of ploughs in all the regions during the 2001/02 survey. The highest numbers of ownership of ploughs standing at 12,698, was recorded for men-headed households in the Omusati region during the 2001/02 agricultural season. However, more men-headed households did record ownership of oxen than women-headed households during the same year in all the regions.

This table shows an extreme variation between the numbers of households owning agricultural implements from one year to another for both men- and women-headed households. For example, in Oshikoto and the Kavango, though some ownership of milling machines was recorded in 2000/01, non-was recorded for the 2001/02 agricultural season including Caprivi. Such disparities may be attributed to the variations in the randomness of the sampling procedure whereas the sample in one year may include populations owning implements or the variables under study and exclude the same from one survey/year to another.

## **2.6 INPUT USE**

In order to produce agricultural output, farmers use inputs. The inputs include seeds, fertilizers, and compost manure.

### **2.6.1 SEED USE**

The seeds used are analyzed according to area planted to cereal crops. It should be noted that the area planted to any variety of seed under study is considered to be proportional to the quantity of seeds used. This would mean that the bigger the area planted to any seed variety, the bigger the amount of seed used. The table below shows the use of various types of seeds of planted cereal crops, focusing on Mahangu, Sorghum and Maize. The seeds used are traditional, improved or a mixture of the two. Generally, in the communal areas, traditional seed is most common, with sorghum and maize the leading ones. Improved seed is used mostly for mahangu. Mixed seed is used mostly in Ohangwena, Oshana and Oshikoto and Omusati as compared to Caprivi and Kavango.

Table 6: Total Area Planted (Ha) to Mahangu Seed by Region, Season, and Sex of Head of Household.

Region	Season	Traditional		Improved		Improved+Traditional	
		Women	Men	Women	Men	Women	Men
Caprivi	1996/1997	2,212	4,805	604	3,698	929	2,108
	1997/1998	547	1,841	604	2,676	642	590
	1998/1999	4,768	5,140	1,318	1,304	1,526	947
	2000/2001	3,819	1,788	1,517	1,275	2,433	2,069
	2001/2002	2,018	1,589	685	1,238	592	563
	2002/2003	2,033	1,422	616	1,099	466	527
Kavango	1996/1997	1,547	4,980	3,709	9,766	1,787	6,521
	1997/1998	1,640	2,473	430	2,671	602	2,647
	1998/1999	1,835	5,073	437	1,794	971	2,556
	2000/2001	3,034	4,965	1,577	3,541	2,800	3,162
	2001/2002	1,663	3,007	1,085	1,216	1,446	3,567
	2002/2003	2,559	4,083	1,017	1,993	2,516	3,913
Ohangwena	1996/1997	11,590	25,339	893	2,630	11,669	21,322
	1997/1998	10,578	26,113	279	2,258	6,376	21,959
	1998/1999	11,796	32,588	1,781	1,403	10,836	12,862
	1999/2000	9,237	25,492	1,218	3,638	9,782	21,024
	2000/2001	7,788	26,299	2,142	1,503	6,270	15,453
	2001/2002	14,214	31,019	3,160	2,485	10,631	13,117
	2002/2003	11,553	31,977	2,889	3,713	4,220	7,563
Omusati	1996/1997	7,244	11,393	2,570	8,354	14,921	29,804
	1997/1998	12,011	15,077	5,114	6,794	14,515	23,528
	1998/1999	9,197	19,372	1,589	9,235	12,911	28,838
	1999/2000	12,331	14,033	4,034	6,307	11,351	25,383
	2000/2001	7,992	14,922	2,584	9,195	9,108	20,946
	2001/2002	12,314	16,832	2,949	9,114	12,827	18,924
	2002/2003	15,699	15,664	2,369	10,538	10,779	17,436
Oshana	1996/1997	4,517	5,638	1,236	3,486	6,333	14,341
	1997/1998	6,083	11,993	2,572	3,007	6,349	16,941
	1998/1999	9,333	15,437	1,402	2,974	6,263	13,756
	1999/2000	7,460	9,154	1,855	4,841	8,288	13,293
	2000/2001	5,168	8,519	2,893	3,955	8,355	12,774
	2001/2002	7,091	8,115	3,635	5,140	6,629	9,727
	2002/2003	11,378	9,317	3,269	5,282	6,375	8,169
Oshikoto	1996/1997	3,964	5,222	1,647	2,926	13,210	32,515
	1997/1998	7,720	14,549	1,179	2,378	8,000	20,982
	1998/1999	9,027	17,260	1,676	2,523	8,425	15,550
	1999/2000	14,014	14,916	1,508	2,161	7,032	13,968
	2000/2001	7,224	12,467	1,372	3,591	11,431	16,630
	2001/2002	9,887	13,709	2,621	2,176	9,727	14,897
	2002/2003	12,972	23,184	1,404	1,011	5,997	11,979

Table 6 follows a general trend indicating that for all three variety types of mahangu seeds, a higher number of men- than women-headed households are recorded having planted any variety of mahangu seed over the survey periods. This table also shows that in general, the majority of households using mahangu seed prefer the traditional type of seed first, followed by the combined variety of improved and traditional and lastly the improved type of seed in that order, except for Oshikoto and Oshana that shows a preference in the use of a mixture of improved and traditional seed.

The total area planted to mahangu seed in Ohangwena was highest at about 74,000 hectares in 2001/02 as compared to 65,000 hectares in 2000/01 in the Omusati region followed by Ohangwena with a high of 60,000 in 2001/02 and 58,000 in 2000/01 and then about 53,000 hectares in Oshikoto for both years. Oshana then followed with 42,000 hectares planted in 2000/01 compared to 40,000 hectares in 2001/02. The lowest figures for areas planted to mahangu seed were recorded for Kavango 19,000 hectares in 2000/01 and 12,000 hectares in 2001/02 as compared to area planted in the Caprivi with a high of 13,000 hectares in 2000/01 and a low of 7,000 hectares planted to mahangu seed in 2001/02.

It can also be noted that, throughout all the years, 2002/03 recorded the highest number of total area planted to mahangu seed comparatively for all the regions. Once again, the men-headed households slightly outnumbered the women-headed households in the use of mahangu seed, especially mixed type of mahangu seed.

Table 7: Total Area Planted to Sorghum by Region, Season, and Sex of Head of Household.

Region	SEASON	Traditional		Improved		Improved & Traditional	
		Men	Women	Men	Women	Men	Women
Caprivi	1996/1997	6,686	2,527	314	143	981	448
	1997/1998	2,816	941	198	120	39	71
	1998/1999	4,510	3,648	1,127	546	135	123
	1999/2000	NA	NA	NA	NA	NA	NA
	2000/2001	3,378	3,137	210	438	939	1,430
	2001/2002	1,623	2,366	-	110	-	-
	2002/2003	1,594	2,313	-	106	-	-
Kavango	1996/1997	5,914	2,491	3,175	136	829	132
	1997/1998	1,958	860	151	14	209	16
	1998/1999	2,728	597	433	8	-	51
	1999/2000	NA	NA	NA	NA	NA	NA
	2000/2001	4,453	2,284	745	172	111	229
	2001/2002	469	136	-	-	-	-
	2002/2003	67	107	-	-	-	-
Ohangwena	1996/1997	36,369	15,193	764	198	6,664	2,475
	1997/1998	28,544	9,584	2,177	82	3,254	1,490
	1998/1999	33,219	14,967	587	123	5,696	4,558
	1999/2000	29,006	11,858	1,302	869	7,077	962
	2000/2001	33,134	10,927	1,488	2,061	4,510	1,072
	2001/2002	-	-	-	-	-	-
	2002/2003	276	-	-	-	-	80
Omusati	1996/1997	34,166	17,643	3,457	449	6,544	3,173
	1997/1998	37,506	21,849	1,433	2,350	5,177	4,703
	1998/1999	46,395	18,581	2,220	-	2,355	777
	1999/2000	32,267	23,093	5,163	1,318	4,330	849
	2000/2001	39,965	16,313	1,124	264	3,872	2,275
	2001/2002	787	242	-	-	-	-
	2002/2003	224	63	47	-	35	-
Oshana	1996/1997	19,853	10,104	228	108	2,268	870
	1997/1998	17,313	8,873	408	11	1,509	1,008
	1998/1999	23,725	14,834	301	156	2,319	713
	1999/2000	18,918	12,052	1,462	958	3,851	2,097
	2000/2001	19,925	11,426	1,421	1,043	3,726	3,751
	2001/2002	168	-	-	-	-	-
	2002/2003	-	8	-	-	-	-
Oshikoto	1996/1997	25,917	15,366	1,985	31	8,826	1,292
	1997/1998	25,062	10,523	1,141	1,171	6,371	1,268
	1998/1999	21,894	10,496	970	86	2,391	1,808
	1999/2000	23,552	17,263	1,737	895	3,965	2,421
	2000/2001	22,100	14,189	2,707	318	6,204	2,822
	2001/2002	599	81	-	49	-	-
	2002/2003	919	523	-	-	233	-

Table 7 indicates that for all three variety types of sorghum seeds, a higher number of men- than women-headed households recorded having planted any variety of sorghum seed. This table also shows that in general, the majority of households using sorghum prefer the traditional seed followed by the combined variety of improved and traditional and lastly the improved seed in that order. It is notable that over the years, only traditional type of seed of sorghum was planted except in the Caprivi where small sizes of area was recorded having planted some improved variety of sorghum seed.

Table 8: Total Area planted to Maize Seed By Region, Cropping Season, and Sex of Head of Household.

Region	SEASO N	Traditional		Improved		Improved & Traditional	
		Men	Women	Men	Women	Men	Women
Caprivi	1996/1997	6,882	2,236	1,479	158	498	1,308
	1997/1998	4,694	1,884	1,811	402	118	51
	1998/1999	4,165	2,659	369	228	436	33
	1999/2000	N/A	N/A	N/A	N/A	N/A	N/A
	2000/2001	5,529	7,021	274	475	452	644
	2001/2002	6,276	4,651	184	444	5	422
	2002/2003	6,203	4,618	184	442	4	384
Kavango	1996/1997	10,106	3,157	3,213	2,276	1,236	632
	1997/1998	3,513	1,668	55	14	483	193
	1998/1999	5,245	1,507	122	53	209	101
	1999/2000	NA	NA	NA	NA	NA	NA
	2000/2001	8,544	5,855	285	-	183	126
	2001/2002	611	278	109	-	12	-
	2002/2003	665	312	19	5	-	-
Ohangwena	1996/1997	5,032	4,009	-	219	-	161
	1997/1998	1,324	433	-	-	-	-
	1998/1999	758	724	368	585	-	-
	1999/2000	11,237	2,110	35	-	2,333	-
	2000/2001	13,161	3,812	71	126	113	-
	2001/2002	-	-	-	-	-	-
	2002/2003	-	-	-	-	-	-
Omusati	1996/1997	6,302	1,158	1,130	191	-	-
	1997/1998	5,284	1,599	-	333	-	-
	1998/1999	6,778	2,443	-	-	-	-
	1999/2000	18,513	8,259	1,416	408	-	-
	2000/2001	19,850	8,629	2,163	189	902	123
	2001/2002	174	24	-	-	-	-
	2002/2003	170	-	-	-	-	-
Oshana	1996/1997	1,047	616	347	227	151	-
	1997/1998	1,737	164	-	-	90	-
	1998/1999	737	32	42	-	-	-
	1999/2000	4,602	2,062	129	-	326	380
	2000/2001	7,291	6,227	888	38	24	29
	2001/2002	-	-	-	-	-	-
	2002/2003	-	-	-	-	-	-
Oshikoto	1996/1997	7,793	2,081	1,688	265	1,355	464
	1997/1998	4,414	735	202	-	-	-
	1998/1999	2,628	1,469	-	-	673	272
	1999/2000	11,157	5,640	1,450	513	2,039	153
	2000/2001	17,809	10,504	1,179	870	2,174	471
	2001/2002	-	129	36	-	-	-
	2002/2003	-	-	-	-	-	-

Table 8 shows that for all three variety types of maize seeds, a higher number of men- than women-headed households recorded having planted any variety of maize seed. This table also shows that in general, the majority of households using maize seed prefer the traditional type of seed first, then the combined variety of improved and traditional and lastly the improved type of seed in that order.

## 2.7 FERTILIZER AND MANURE APPLICATION

Table 9: Agronomic inputs Applied to each planted Field by Region, Season, and Sex of Head of Households.

Region	Season	Ploughed		Fertilised		Compost	
		Women	Men	Women	Men	Women	Men
<b>Caprivi</b>	1996/1997	5,820	15,143	-	-	2,376	2,319
	1997/1998	3,569	8,361	-	-	34	111
	1998/1999	7,503	9,306	-	-	-	-
	2000/2001	11,928	7,604	-	775	1,291	1,037
	2001/2002	11,300	11,649	-	1,101	211	202
	2002/2003	10,990	11,203	-	1,107	205	192
<b>Kavango</b>	1996/1997	6,833	20,411	1,462	205	854	2,051
	1997/1998	2,168	7,919	39	110	530	1,183
	1998/1999	3,023	8,501	111	207	54	432
	2000/2001	7,190	10,435	-	46	230	364
	2001/2002	4,448	8,618	-	-	16	223
	2002/2003	6,106	10,373	-	81	126	55
<b>Ohangwena</b>	1996/1997	13,142	35,548	957	1,695	17,106	42,231
	1997/1998	8,558	42,312	949	1,162	6,245	32,135
	1998/1999	15,893	39,859	993	984	14,429	40,806
	1999/2000	16,462	46,150	-	381	15,926	43,706
	2000/2001	10,401	39,761	569	40	10,890	32,139
	2001/2002	18,817	42,099	3,597	10,178	13,683	22,457
	2002/2003	12,594	38,647	515	609	8,045	31,321
<b>Omusati</b>	1996/1997	20,219	44,566	994	2,457	16,427	34,865
	1997/1998	26,266	44,871	1,161	4,170	18,942	30,102
	1998/1999	20,128	55,544	778	8,381	13,503	46,041
	1999/2000	25,796	43,708	3,500	3,200	15,790	34,900
	2000/2001	16,219	44,679	1,996	3,224	11,678	32,238
	2001/2002	26,344	45,356	1,101	3,453	16,979	33,189
	2002/2003	27,754	43,629	2,062	3,608	14,270	31,555
<b>Oshana</b>	1996/1997	4,610	10,835	122	1,415	4,810	13,351
	1997/1998	13,710	28,887	248	1,586	7,008	19,887
	1998/1999	14,566	27,637	1,725	1,131	6,046	16,787
	1999/2000	15,626	25,545	1,498	1,467	9,351	19,900
	2000/2001	14,006	23,378	1,070	3,043	10,221	18,785
	2001/2002	15,497	22,302	1,773	2,651	9,353	17,543
	2002/2003	18,553	21,368	606	661	13,545	16,715
<b>Oshikoto</b>	1996/1997	15,947	36,902	966	3,948	9,010	27,087
	1997/1998	14,049	34,186	394	1,507	6,779	26,189
	1998/1999	14,502	31,712	1,122	1,081	10,088	25,070
	1999/2000	21,045	30,312	858	1,982	14,132	24,919
	2000/2001	19,301	31,298	1,031	1,323	13,078	26,137
	2001/2002	21,023	30,806	2,062	1,065	15,407	27,159
	2002/2003	18,530	36,390	747	1,242	12,820	28,410

Table 9 shows the number of men- and women-headed households for each region that have ploughed their fields and it also indicates the number of households that used some manure/compost and some chemical to fertilize their fields. A general trend once again indicates that for all three variables under study, a higher number of men-headed households recorded having ploughed, used compost and fertilizer than women-headed households over all the survey periods.

The data also show that in general, the majority of households did plough their fields before planting. However, it is notably more common for a higher percentage of households to use compost or manure than chemical fertilizers for agro-input purposes. Of these, a higher proportion of men- than women-headed households recorded using chemical fertilizers within all the regions for all the survey years.

## 2.8 AREA AND NUMBER OF FIELDS PLANTED

Table 10: Area Planted (in ha) by Region, Cropping Season, and Sex of Head of Household

	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		2001/2002		2002/2003	
Region	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Caprivi	6,365	17,183	9,770	4,091	9,965	9,436	NA	NA	9,295	13,076	11,704	11,677	11,264	11,342
Kavango	7,208	21,891	8,440	2,882	9,568	3,436	NA	NA	12,078	7,868	8,991	4,608	10,741	6,516
Ohangwena	24,152	49,291	50,330	17,232	47,518	24,524	50,310	20,237	43,255	16,201	46,621	28,213	43,529	18,742
Omusati	24,735	49,551	45,399	31,641	57,444	23,697	45,748	27,717	45,326	19,684	45,929	28,357	44,412	29,245
Oshana	12,202	23,465	32,143	15,078	32,166	16,998	27,338	17,603	25,248	16,416	23,177	17,356	22,767	21,030
Oshikoto	18,925	40,663	37,908	16,899	35,333	19,128	31,044	22,554	32,688	20,026	31,417	22,494	37,327	20,896
Total	93,587	202,044	183,990	87,823	191,994	97,219	154,440	88,111	167,890	93,271	167,839	112,705	170,040	107,771

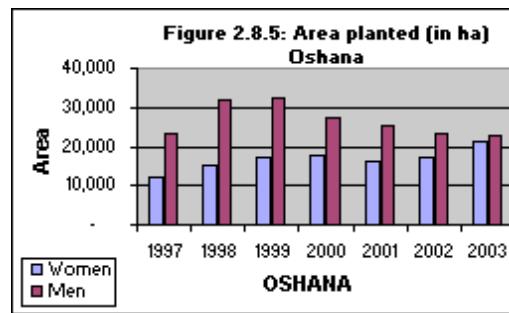
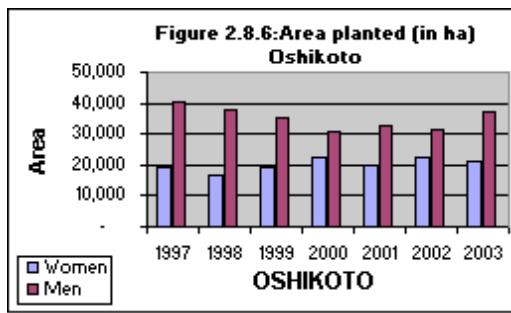
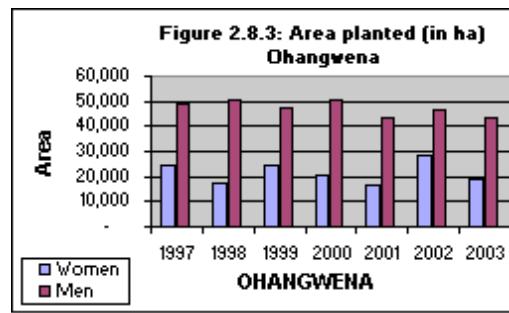
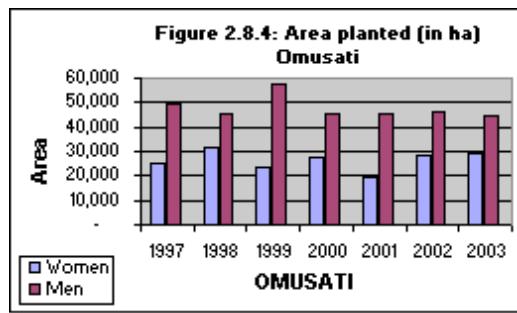
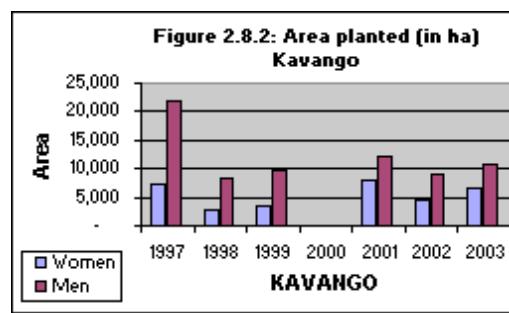
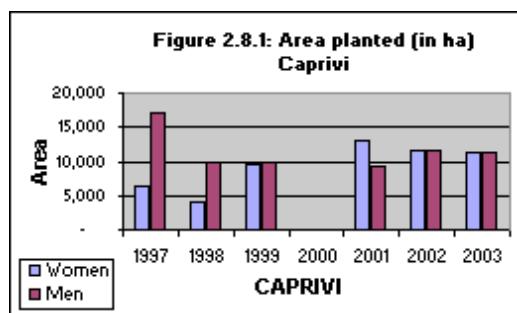
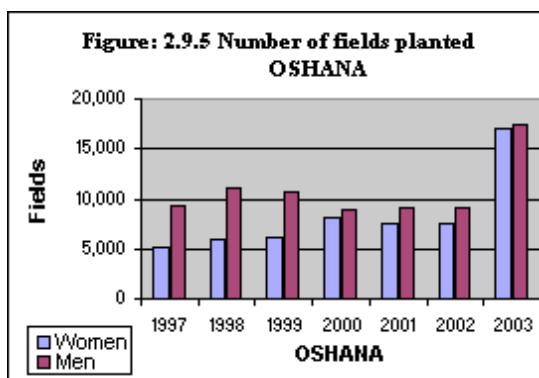
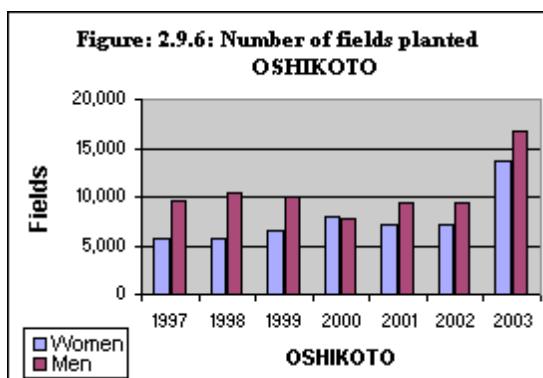
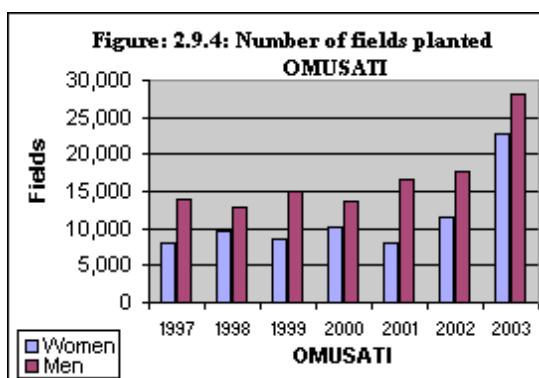
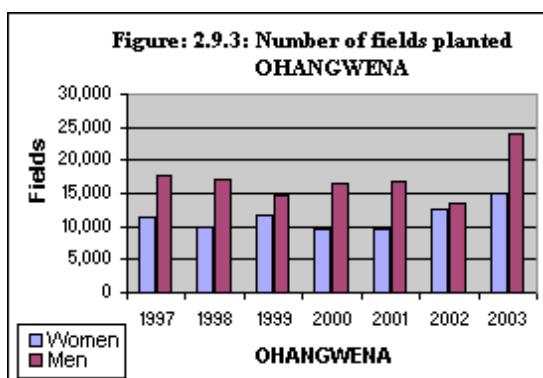
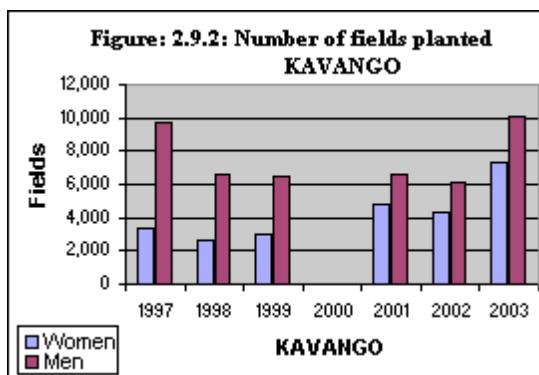
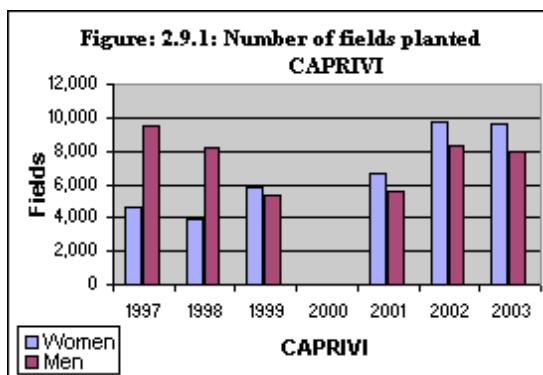


Table 11: Number of Fields Planted by Region, Cropping Season, and Sex of Head of Household

Region	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		2001/2002		2002/2003	
	Women	Men												
Caprivi	4,626	9,473	3,871	8,201	5,767	5,360	NA	NA	6,652	5,544	9,751	8,319	9,573	7,985
Kavango	3,350	9,688	2,669	6,603	2,977	6,507	NA	NA	4,794	6,602	4,283	6,169	7,370	10,060
Ohangwena	11,285	17,670	9,995	17,027	11,653	14,633	9,461	16,619	9,453	16,750	12,597	13,569	15,049	23,995
Omusati	8,031	13,821	9,575	12,764	8,564	14,991	10,222	13,551	8,130	16,731	11,476	17,641	22,651	28,058
Oshana	5,192	9,369	5,932	11,004	6,217	10,670	8,112	8,976	7,435	9,062	7,435	9,062	17,120	17,476
Oshikoto	5,815	9,686	5,615	10,497	6,620	9,943	7,992	7,659	7,217	9,489	7,217	9,489	13,603	16,706
Total	38,299	69,707	37,657	66,096	41,798	62,104	35,787	46,805	43,681	64,178	52,759	64,249	85,366	104,280



During the agricultural season 2000/01, the total area planted to cereals crops was 261,161 on 107,859 fields within all the regions. Of these, the area planted by women-headed households was 167,890 hectares (64%) on 43,681 fields (41%) compared to 93,271 hectares (36%) on 64,178 fields (60%) by men-headed households. On average, comparing all the regions, the area planted by women-headed households were much bigger than the area planted by men-headed households except in the Caprivi region. But, the number of fields planted by men-headed households were much bigger than the area planted by men-headed households except in the Caprivi region.

During the 2001/02 agricultural season, the total area planted to cereals crops was 280,544 on 117,008 fields in all the regions. Of these, the area planted by women-headed households was 167,839 hectares (58%) on 52,759 fields (45%) compared to 122,705 hectares (42%) on 64,249 fields (55%) by men-headed households. The figures indicate that there was, on average a significant increase in the area planted by women-headed households from 2000/01 to 2001/02. By average, the number of fields planted by men-headed households in all the regions were bigger in size than area planted by men-headed households except in the Caprivi and Kavango regions.

## 2.9 PRODUCTION

### 2.9.1 Cereal Crops:

Cereal production relates to cereals including mahangu, sorghum and maize.

*Table 12: Cereal Production (tons) by Region, Type of Crop, Cropping Season, and Head of Household*

Region/crop	1996/1997		1997/1998		1998/1999		1999/2000		2000/2001		20001/2002		20002/2003	
	Women	Men	Women	Men	Women	Men								
<b>Caprivi</b>														
<i>Mahangu</i>	550	2,086	559	1,068	5,325	883	NA	NA	1,652	3,749	1,030	999	966	967
<i>Sorghum</i>	1,032	1,803	161	512	351	548	NA	NA	1,001	1,084	702	1,669	1,878	2,303
<i>Maize</i>	2,128	3,524	611	1,278	715	1,178	NA	NA	1,944	1,850	2,140	1,888	1,829	723
Total	3,710	7,413	1,331	2,858	6,391	2,610	NA	NA	4,598	6,683	3,871	4,556	4,673	3,994
<b>Kavango</b>	Women	Men	Women	Men	Women	Men								
<i>Mahangu</i>	762	2,296	427	1,544	1,281	4,306	NA	NA	1,174	2,688	726	1,958	2,775	5,173
<i>Sorghum</i>	91	287	39	142	196	122	NA	NA	203	691	52	148	369	486
<i>Maize</i>	245	595	157	470	325	681	NA	NA	763	903	127	197	46	94
Total	1,098	3,177	624	2,156	1,801	5,109	NA	NA	2,139	4,281	905	2,303	3,190	5,753
<b>Ohangwena</b>	Women	Men	Women	Men	Women	Men								
<i>Mahangu</i>	4,523	7,503	2,901	8,614	5,036	12,964	2,409	10,810	3,347	11,650	3,728	6,775	2,465	7,118
<i>Sorghum</i>	709	3,654	615	1,683	1,377	2,825	225	1,196	570	1,729	-	-	184	863
<i>Maize</i>	43	17	1	70	9	78	10	146	65	275	-	-	210	506
Total	5,275	11,175	3,517	10,367	6,422	15,867	2,644	12,152	3,983	13,654	3,728	6,775	2,858	8,488
<b>Omusati</b>	Women	Men	Women	Men	Women	Men								
<i>Mahangu</i>	12,491	30,674	4,715	9,742	4,473	14,620	3,190	6,922	8,808	18,753	7,561	8,371	5,706	7,022
<i>Sorghum</i>	1,025	5,539	977	1,605	317	2,262	808	1,112	2,085	3,791	135	705	269	930
<i>Maize</i>	51	134	123	7	12	54	54	336	242	1,452	1	66	7	24
Total	13,566	36,346	5,814	11,354	4,803	16,937	4,052	8,370	11,135	23,996	7,697	9,142	5,982	7,975
<b>Oshana</b>	Women	Men	Women	Men	Women	Men								
<i>Mahangu</i>	3,675	11,433	2,579	5,042	3,486	6,341	5,153	6,852	5,673	8,319	1,900	3,992	2,616	4,435
<i>Sorghum</i>	559	2,581	284	892	529	1,236	799	987	1,116	2,070	172	448	233	346
<i>Maize</i>	15	204	2	137	0	21	13	51	223	542	1	12	19	16
Total	4,248	14,217	2,865	6,071	4,016	7,598	5,965	7,889	7,012	10,931	2,073	4,452	2,868	4,797
<b>Oshikoto</b>	Women	Men	Women	Men	Women	Men								
<i>Mahangu</i>	4,394	12,916	3,613	6,988	6,109	16,884	6,678	7,054	4,611	9,401	3,873	4,676	3,593	6,808
<i>Sorghum</i>	713	2,798	328	962	6,901	6,012	649	2,887	518	1,207	9	80	210	439
<i>Maize</i>	14	100	1	15	90	78	342	745	723	514	1	1	1	5
Total	5,121	15,814	3,941	7,964	13,101	22,974	7,669	10,686	5,853	11,123	3,883	4,757	3,803	7,251

According to the results of the survey, during the 2000/01 agricultural season, women-headed households produced a total of 34,720 tons of cereals whereas the men-headed households produced a total of 70,668 tons of cereal. This gives an average cereal yield of 372.2 kgs per hectare for Women-headed households and 420.9 kgs per hectare for men-headed households. The men-headed households thus produced more cereal in 2000/01 than the women-headed households by an average margin of about 12 percent. During the same season, the share in total production was highest for men-headed households in Omusati at 34 percent and for women-headed households at 32 percent.

For the 2001/02 agricultural season, women-headed households produced a total of 22,158 tons of cereals whereas the men-headed households produced a total of 31,985 tons of cereal. This gives an average cereal yield of 196.6 kgs per hectare for women-headed households and 190.6 kgs per hectare for men-headed households. Thus, on average, the women-headed households produced more cereal in 2001/02 than the men-headed households by a margin of about 3 percent. Production of mahangu was the highest by men-headed households followed by production of sorghum during both agricultural seasons. There was virtually no significant production of sorghum and maize in the Ohangwena and Oshikoto regions during the 2001/02 agricultural season.

Production figures were relatively higher during the 2002/03 cropping season compared to previous year for both male- and female-headed households. The highest production figures were recorded in Omusati and Ohangwena for both 2001/02 and 2002/03.

## **2.9.2 Livestock**

Livestock covered in the surveys included cattle, goats, sheep, pigs, donkeys/mules, and horses. Poultry are mainly chickens. The Tables below show the distribution of livestock owned by type and region in the agricultural season's 1996/97 through 2002/03. Ownership of livestock is distributed over all regions covered by the survey.

Ownership of livestock (as used in the AAS) is to be distinguished from raising livestock. For the former, farmers that keep livestock are assumed to be owners. Generally, however, for purposes of agricultural statistics, "raising" livestock is the preferred concept. Raising for the purpose of the surveys, means the management of the livestock, regardless of who owns them. In this sense, raising of livestock relates to the management by the agricultural holding and not to ownership. In the AAS, the concept of ownership is used for the livestock numbers on holdings.

### 2.9.3 Cattle

Table 13: Number of Cattle Owned by Type and Region.

Region	Season	Bulls	Female Calves	Cows	Male Calves	Heifers	Oxen	Tollies	Barren Cows	Total	Cattle
									Male	Female	
<b>Caprivi</b>	1996/97	2,433	18,098	54,466	13,574	10,930	20,535	10,345	1,825	<b>46,887</b>	<b>85,319</b>
	1997/98	1,755	11,883	35,801	6,374	6,247	16,794	2,148	1,108	<b>27,071</b>	<b>55,039</b>
	1998/99	3,905	24,339	59,017	17,369	16,128	24,757	15,043	2,660	<b>61,074</b>	<b>102,144</b>
	2000/01	4,282	20,331	92,358	18,430	12,135	23,151	13,182	1,429	<b>59,045</b>	<b>126,253</b>
	2001/02	3,527	21,989	65,149	16,684	20,210	28,738	14,585	1,303	<b>63,534</b>	<b>108,651</b>
	2002/03	3,534	21,208	62,503	16,042	19,279	27,457	13,737	1,311	<b>60,770</b>	<b>104,301</b>
<b>Kavango</b>	1996/97	2,281	12,170	36,782	8,860	8,909	18,411	6,010	1,432	<b>35,562</b>	<b>59,293</b>
	1997/98	1,975	10,800	32,090	7,627	8,908	15,697	3,322	3,772	<b>28,621</b>	<b>55,570</b>
	1998/99	3,420	12,691	33,323	9,823	5,217	15,185	4,356	1,464	<b>32,784</b>	<b>52,695</b>
	2000/01	3,957	20,372	45,708	13,133	4,827	17,785	6,214	5,277	<b>41,089</b>	<b>76,184</b>
	2001/02	3,760	12,569	40,465	8,935	7,276	17,661	7,534	745	<b>37,890</b>	<b>61,055</b>
	2002/03	6,664	18,732	53,004	11,942	10,350	35,536	9,048	2,061	<b>63,190</b>	<b>84,147</b>
<b>Ohangwena</b>	1996/97	13,221	24,093	62,534	28,889	22,821	32,559	13,850	953	<b>88,519</b>	<b>110,401</b>
	1997/98	9,592	17,869	51,198	17,232	28,625	18,279	17,262	1,224	<b>62,365</b>	<b>98,916</b>
	1998/99	13,763	32,067	68,395	31,622	27,054	27,159	28,937	2,757	<b>101,481</b>	<b>130,273</b>
	1999/00	14,087	27,047	62,860	21,890	22,284	40,891	14,422	1,756	<b>91,290</b>	<b>113,947</b>
	2000/01	8,670	18,433	61,939	16,323	20,371	30,923	21,116	1,208	<b>77,032</b>	<b>101,951</b>
	2001/02	5,112	15,944	46,057	10,303	15,581	30,898	11,397	1,118	<b>57,710</b>	<b>78,700</b>
	2002/03	6,669	15,111	40,647	13,396	14,253	23,665	12,784	299	<b>56,514</b>	<b>70,310</b>
<b>Omusati</b>	1996/97	9,626	11,452	40,799	10,207	12,015	11,204	17,057	1,460	<b>48,094</b>	<b>65,726</b>
	1997/98	8,395	14,849	46,143	15,682	32,842	6,839	16,324	23,125	<b>47,240</b>	<b>116,959</b>
	1998/99	17,355	29,876	69,626	23,350	31,176	33,030	18,286	2,911	<b>92,021</b>	<b>133,589</b>
	1999/00	7,401	20,711	53,892	19,198	19,042	20,357	15,240	986	<b>62,196</b>	<b>94,631</b>
	2000/01	11,955	22,968	57,256	17,982	31,030	14,823	23,709	1,043	<b>68,469</b>	<b>112,297</b>
	2001/02	11,033	20,068	52,974	17,950	20,254	15,095	16,138	2,338	<b>60,216</b>	<b>95,634</b>
	2002/03	14,228	14,731	46,652	12,936	21,924	10,987	19,165	1,269	<b>57,316</b>	<b>84,576</b>
<b>Oshana</b>	1996/97	5,749	5,566	22,362	5,143	5,746	2,146	3,762	786	<b>16,800</b>	<b>34,460</b>
	1997/98	3,476	6,196	24,640	5,604	8,224	3,914	4,247	2,334	<b>17,241</b>	<b>41,394</b>
	1998/99	8,247	15,950	30,735	12,228	8,974	6,967	8,277	908	<b>35,719</b>	<b>56,567</b>
	1999/00	3,510	10,951	33,303	8,688	8,021	1,695	7,654	1,627	<b>21,547</b>	<b>53,902</b>
	2000/01	5,685	14,088	29,314	8,012	12,344	5,201	6,675	511	<b>25,573</b>	<b>56,257</b>
	2001/02	3,769	7,935	25,784	7,645	10,179	4,888	9,156	263	<b>25,458</b>	<b>44,161</b>
	2002/03	4,388	6,695	24,631	10,021	7,098	4,367	6,691	170	<b>25,467</b>	<b>38,594</b>
<b>Oshikoto</b>	1996/97	4,798	15,854	43,900	13,542	16,040	9,459	9,901	2,691	<b>37,700</b>	<b>78,485</b>
	1997/98	6,098	14,862	39,999	15,194	13,886	11,385	11,457	546	<b>44,134</b>	<b>69,293</b>
	1998/99	6,044	18,592	52,862	12,555	13,494	11,109	8,548	755	<b>38,256</b>	<b>85,703</b>
	1999/00	5,374	14,619	34,164	11,294	18,582	16,758	10,239	545	<b>43,665</b>	<b>67,910</b>
	2000/01	5,090	17,725	50,411	15,340	18,607	16,968	13,409	615	<b>50,807</b>	<b>87,358</b>
	2001/02	6,979	16,643	51,060	14,030	20,561	17,128	20,165	626	<b>58,302</b>	<b>88,890</b>
	2002/03	4,818	16,454	38,636	11,818	18,444	11,283	14,230	678	<b>42,149</b>	<b>74,212</b>

*Table 14: Summary of Total Cattle owned in Namibia by type.*

<b>Season</b>	<b>Bulls</b>	<b>Female</b>	<b>Cows</b>	<b>Male</b>	<b>Heifers</b>	<b>Oxen</b>	<b>Tollies</b>	<b>Barren</b>	<b>Total</b>	<b>Cattle</b>
		<b>Calves</b>		<b>Calves</b>					<b>Male</b>	<b>Female</b>
<b>1996/97</b>	38,109	87,232	260,844	80,216	76,460	94,316	60,923	9,147	<b>273,562</b>	<b>433,684</b>
<b>1997/98</b>	31,293	76,460	229,871	67,714	98,732	72,908	54,759	32,109	<b>226,672</b>	<b>437,171</b>
<b>1998/99</b>	52,734	133,515	313,959	106,949	102,042	118,208	83,447	11,455	<b>361,335</b>	<b>560,971</b>
<b>1999/00</b>	30,371	73,328	184,218	61,071	67,929	79,702	47,556	4,913	<b>218,698</b>	<b>330,390</b>
<b>2000/01</b>	39,638	113,916	336,986	89,219	99,313	108,852	84,306	10,083	<b>322,015</b>	<b>560,300</b>
<b>2001/02</b>	34,180	95,148	281,490	75,545	94,061	114,409	78,975	6,393	<b>303,110</b>	<b>477,091</b>
<b>2002/03</b>	40,302	92,932	266,074	76,156	91,940	113,295	75,655	5,789	<b>305,406</b>	<b>456,140</b>

In Namibia, there were 707,246 cattle recorded owned during the Agricultural Season 1996/97, compared to 663,843 in 1997/98 and 922,306 in 1998/99. In the Season 1999/00 (excluding Caprivi and Kavango), there were, 549,088 cattle in the Northern Communal Areas of Namibia, out of which 58 percent were female (calves, cows and heifers).

Within the time series of data, over the period 1996 through 2003, an all high total number of 922,306 cattle owned was recorded for the 1998/99 season and a low of 549,088 in 1999/00 survey, this was due mainly to the exclusion of Caprivi and Kavango from the survey during that year.

Cows are recorded to be substantially more in all the regions followed by female calves and oxen. However, in the 2000/01 season, a bigger number of cows (23%) and female calves (18%) were recorded in the Caprivi than any other region. Also, during 2001/02, a bigger number of cows and female calves (at 23% for both) were recorded.

Between 2001/02 and 2002/03, the numbers of all types of livestock remained fairly constant except for the number of bulls which show a marginal increase of about 8 percent.

## 2.9.4 Other Livestock

Table 15: Number of other Livestock Owned by Type and Sex of Head of Household per Region per Season.

Region	Season	Goats		Sheep		Pigs		Donkeys		Horses		Poultry	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
<b>Caprivi</b>	1996/1997	11,131	4,589	224	0	1,217	780	202	0	0	0	34,689	11,850
	1997/1998	11,078	61,652	0	135	247	407	464	155	0	0	28,136	10,098
	1998/1999	16,315	20,237	0	0	2,636	2,619	71	0	0	380	40,444	31,604
	2000/2001	17,631	14,277	131	0	1,629	263	200	298	263	132	59,638	35,070
	2001/2002	19,880	7,040	0	498	851	745	0	639	106	487	56,794	171,394
	2002/2003	19,235	6,344	0	451	770	854	0	935	73	532	55,158	158,297
<b>Kavango</b>	1996/1997	40,788	12,690	0	0	2,469	1,638	0	0	28	0	57,261	18,636
	1997/1998	38,679	7,550	45	0	3,733	1,120	468	320	218	0	64,807	20,415
	1998/1999	45,284	13,913	0	0	3,983	595	404	81	94	0	39,520	14,554
	2000/2001	37,023	11,155	396	639	2,777	3,086	887	97	333	0	72,778	31,114
	2001/2002	17,714	13,916	324	0	2,476	1,902	821	518	275	112	57,226	33,918
	2002/2003	38,959	14,687	0	0	1,291	2,137	2,354	163	226	0	53,183	39,008
<b>Ohangwena</b>	1996/1997	264,814	109875	1,064	1,229	9,111	5,559	13,014	2,672	228	1,304	144,491	69,940
	1997/1998	258,465	82,609	1,017	0	13,386	6,739	21,201	1,400	1,219	0	157,873	85,582
	1998/1999	221,862	126901	5,891	2,216	14,583	11,775	14,784	6,207	841	0	165,343	102,439
	1999/2000	213,289	72,500	329	122	15,926	6,005	19,758	6,843	640	0	161,141	64,711
	2000/2001	183,009	61,116	3,053	0	14,534	2,634	20,201	3,954	1,195	0	160,635	48,213
	2001/2002	179,598	13916	0	678	10,770	7,570	18,318	5,458	218	0	131,136	99,863
	2002/2003	217,810	69,804	1,145	0	10,675	6,693	21,281	3,211	164	0	149,704	85,796
<b>Omusati</b>	1996/1997	174,356	91,231	11,566	5,187	11,669	6,504	28,067	7,784	92	0	122,919	56,717
	1997/1998	190,559	92,604	15,557	5,758	12,251	8,639	48,338	9,874	442	0	136,822	91,456
	1998/1999	241,259	88,591	20,469	3,084	17,344	7,297	41,859	9,200	1,271	340	155,290	67,931
	1999/2000	219,291	79,238	17,685	3,213	15,119	5,676	21,615	9,990	715	531	126,316	73,370
	2000/2001	217,362	65,927	10,129	2,158	14,128	5,660	36,087	11,238	488	186	137,811	65,909
	2001/2002	191,851	105851	8,545	3,703	12,343	10,657	41,669	18,109	1,204	1,291	156,568	117,127
	2002/2003	249,139	121,529	18,034	2,777	18,429	10,679	35,194	16,110	1,146	0	175,420	112,884
<b>Oshana</b>	1996/1997	99,171	30,228	4,036	727	8,259	3,098	9,869	2,088	0	0	77,835	31,586
	1997/1998	104,642	44,680	1,128	1,048	9,252	4,004	8,484	2,501	246	0	113,475	48,104
	1998/1999	147,590	79,505	3,410	1,645	10,503	6,047	11,979	3,350	0	0	121,128	66,990
	1999/2000	110,019	88,423	5,581	904	10,843	7,056	12,889	2,107	868	0	90,033	52,255
	2000/2001	76,400	49,268	2,839	1,572	7,936	5,411	13,351	2,531	895	0	94,592	52,447
	2001/2002	100,003	55,058	10,469	265	6,987	2,323	6,987	2,323	0	0	104,310	57,856
	2002/2003	91,799	64,247	5,228	958	7,872	6,006	9,211	5,567	0	0	100,757	66,799
<b>Oshikoto</b>	1996/1997	120,883	60,555	1,093	14,025	5,281	2,101	18,271	1,810	283	104	111,022	46,139
	1997/1998	156,153	59,808	361	0	7,273	3,578	16,540	3,386	222	0	124,580	66,086
	1998/1999	152,438	61,522	210	603	7,871	4,701	17,212	1,995	215	0	104,120	63,724
	1999/2000	129,361	73,044	1,286	48	5,685	6,972	11,905	5,515	58	131	84,498	76,050
	2000/2001	113,158	61,004	127	183	8,007	4,276	14,650	4,153	419	0	103,759	66,142
	2001/2002	103,648	76,142	0	0	7,481	6,090	11,686	18,922	197	0	116,282	87,255
	2002/2003	130,783	75,952	546	108	9,867	4,093	22,418	3,630	257	0	98,861	71,888

Table 16: Summary of other Livestock owned by Type Season..

Season	Goats		Sheep		Pigs		Donkeys		Horses		Poultry	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1996/1997	711,143	309,168	17,983	21,168	38,006	19,680	69,423	14,354	631	1,408	548,217	234,868
1997/1998	759,576	348,903	18,108	6,941	46,142	24,487	95,495	17,636	2,347	0	625,693	321,741
1998/1999	824,748	390,669	29,980	7,548	56,920	33,034	86,309	20,833	2,421	720	625,845	347,242
1999/2000	671,960	313,205	24,881	4,287	47,573	25,709	66,167	24,455	2,281	662	461,988	266,386
2000/2001	644,583	262,747	16,675	4,552	49,011	21,330	85,376	22,271	3,593	318	629,213	298,895
2001/2002	612,694	271,923	19,338	5,144	40,908	29,287	79,481	45,969	2,000	1,890	622,316	567,413
2002/2003	747,725	352,564	24,953	4,294	48,905	30,463	90,458	29,616	1,866	532	633,082	534,672

For the two agricultural seasons 2000/01 and 2001/02, the table shows a general increase in the number of households owning other types of livestock except for the number of pigs owned which shows a 50 percent average decline over the same two periods for both men- and women headed households. It is also clear that goats, then poultry followed by pigs (in that order), are most commonly owned by agricultural households all regions.

During the 2000/01 agricultural season, a higher number of men-headed households (71%) against women-headed households (29%) have recorded owning goats in all the regions. This compares to 69% men-headed households and 31% women-headed households in the 2002 agricultural season, representing a variable proportion of 3% between men- and woman-headed households between the two survey years.

For both the 2000/01 and 2001/02 agricultural seasons, men-headed households were higher than the women-headed households in ownership of pigs. Very few sheep are owned in the Caprivi and the Kavango as compared to the other regions. Horses are not commonly owned in the northern communal agricultural sector.

## 2.10 SOURCES OF INCOME

Agriculture is an important source of income among agricultural households in Namibia. Other major sources of income identified during the agricultural surveys are pension, remittances, and wages from work. Table 17 below shows the number of households by common source of income, region. Agricultural year desegregated by sex of heads of household.

Table 17: Number of Households by Source of Income, Region, Season and Sex of Head of Household

Region	Season	Agriculture		Pension		Remittances		Wages	
		Men	Women	Men	Women	Men	Women	Men	Women
Caprivi	1996/1997	2,761	1,185	1,749	680	2,070	1,675	1,294	197
	1997/1998	4,810	3,088	678	348	406	213	1,657	137
	1998/1999	3,808	3,402	609	803	297	618	576	654
	2000/2001	2,768	3,374	655	1,519	604	738	1,062	970
	2001/2002	2,533	3,314	958	1,986	193	314	2,064	1,411
	2002/2003	2,493	3,281	901	1,997	170	317	2,010	1,329
Kavango	1996/1997	820	339	1,273	680	2,482	1,229	2,693	754
	1997/1998	3,139	1,419	618	359	501	146	1,645	557
	1998/1999	3,485	1,299	752	328	152	443	1,624	524
	2000/2001	2,823	2,128	1,422	1,420	548	678	1,666	567
	2001/2002	2,715	1,891	1,304	1,068	526	506	1,109	233
	2002/2003	2,605	1,478	1,910	1,069	533	1,338	1,755	710
Ohangwena	1996/1997	5,430	3,077	6,298	7,283	866	165	4,959	710
	1997/1998	3,805	2,590	6,538	5,335	2,016	866	4,669	1,066
	1998/1999	4,631	4,527	5,669	5,063	514	723	3,423	1,340
	1999/2000	4,295	2,866	7,122	5,383	1,079	862	3,999	351
	2000/2001	3,804	3,249	5,909	5,382	1,263	290	5,641	532
	2001/2002	3,727	3,216	5,630	5,360	1,708	1,380	2,505	2,641
	2002/2003	5,117	2,531	6,062	5,026	1,821	1,760	3,573	1,326
Omusati	1996/1997	5,281	4,006	4,384	3,625	284	.	3,871	400
	1997/1998	2,874	2,168	4,913	6,370	344	297	4,634	740
	1998/1999	3,826	2,716	5,513	4,763	57	580	5,127	451
	1999/2000	2,229	3,203	5,998	5,666	1,924	576	3,400	778
	2000/2001	3,650	2,356	6,876	4,133	938	910	5,268	731
	2001/2002	4,106	1,865	6,472	5,943	1,445	1,550	3,811	1,429
	2002/2003	4,684	3,448	5,585	7,251	591	1,102	3,874	622
Oshana	1996/1997	2,375	2,187	3,153	2,569	835	269	2,995	167
	1997/1998	3,428	1,570	3,181	2,908	1,295	696	2,665	548
	1998/1999	2,257	1,470	3,455	3,189	1,073	852	3,656	573
	1999/2000	1,079	2,072	4,198	3,759	886	1,178	2,449	860
	2000/2001	1,794	2,546	3,579	3,463	419	684	3,164	555
	2001/2002	2,273	2,309	3,461	3,989	425	946	2,603	506
	2002/2003	1,650	2,021	3,417	4,262	340	1,490	2,936	441
Oshikoto	1996/1997	2,549	1,419	2,805	3,123	582	496	3,751	562
	1997/1998	2,212	1,637	3,647	3,155	1,282	447	3,215	376
	1998/1999	3,226	1,745	2,973	3,269	344	789	3,093	758
	1999/2000	1,412	923	2,117	5,042	724	1,637	3,313	390
	2000/2001	2,072	2,113	3,130	3,377	853	528	3,433	1,199
	2001/2002	3,872	2,971	3,250	3,382	514	1,211	1,657	899
	2002/2003	2,285	3,282	3,479	3,497	589	660	3,213	753

*Table 18: Summary of the average number of agricultural households classified by source of income by sex of heads of Households for all the regions for each survey year.*

Season	Agriculture		Pension		Remittances		Wages	
	Men	Women	Men	Women	Men	Women	Men	Women
1996/1997	19,215	12,213	19,661	17,959	7,120	3,835	19,564	2,790
1997/1998	20,267	12,472	19,574	18,475	5,844	2,666	18,485	3,425
1998/1999	21,233	15,158	18,971	17,416	2,438	4,005	17,499	4,300
1999/2000	9,015	9,063	19,435	19,850	4,613	4,253	13,161	2,378
2000/2001	16,911	15,766	21,571	19,294	4,626	3,829	20,234	4,554
2001/2002	19,227	15,566	21,075	21,729	4,811	5,906	13,749	7,119
2002/2003	18,834	16,041	21,354	23,101	4,043	6,666	17,361	5,181

According to the survey, agriculture and pension are two major sources of income among agricultural households in northern Namibia. On average, about 30 percent of agricultural households depend on agriculture itself as a source of income while 38 percent depend on pensions. For the 1999/00-survey year, the two averages are 36 percent and 33 percent respectively.

Based on the 2000/01 surveys, for all the regions, out of a total number of 32,677 households, about 52% men-headed households and 48% women-headed households recorded being depended on agriculture as compared to 53% men-headed households 47% women-headed households depending on pension pay-outs as the main source of income.

Based on the 2001/02 survey, for all the regions, out of a total number of 34,793 households, about 55% men-headed households compared to 45 women-headed households recorded being depended on agriculture as compared to about 50% fore both men- and women-headed households depending on pension pay-outs as the main source of income.

Based on the 2002/03 surveys, for all the regions, out of a total number of 34,875 households, about 54% men-headed households and 46% women-headed households recorded being depended on agriculture as compared to 48% men-headed households 52% women-headed households depending on pension pay-outs as the main source of income.

It should also be noted that, across the survey years, a high significant number of men-headed households (over 75%) recorded being depended on wages as a major source of income. However, the summary table shows an increase (about 48%) in the number of women-headed households that depend on wages between the 2000/01 and 2001/02 agricultural seasons. Thus, there seem to be a gradual increase over the time series in the number of women-headed households that record being dependent on wages as a main source of income within the surveyed regions over the survey period.

## CHAPTER 3: CHARACTERISTICS OF HOLDINGS

Various characteristics of the holdings, including the number of persons; number of family workers; area planted to crops, are recorded during the Surveys. Among the characteristics, area planted is important. The area is used to classify the households by size category (according to area planted).

Based on the classification of farming households by the size category of area planted to cereal crops there are identified three broad groups of holdings.

Group Category I - Holdings with less than one-hectare land of area planted.

Group Category II - Holdings with between one and four hectares of land area planted.

Group Category III - Holdings with over four hectares of land area planted.

*Table 19: Distribution of Holdings by Size Category (area planted,) and Sex of Head of Household per Region.*

### CAPRIVI

	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1997										
Group I	1,486	2,793	40	35	594	1,260	9	7	0.40	0.45
Group II	2,071	3,799	55	48	4,571	7,691	72	45	2.21	2.02
Group III	180	1,282	5	16	1,200	8,232	19	48	6.68	6.42
All Groups	3,737	7,874	100	100	6,365	17,183	100	100	1.70	2.18
1997/1998										
Group I	2,263	4,500	60	60	1,014	1,993	25	20	0.45	0.44
Group II	1,488	2,576	39	34	2,898	4,775	71	49	1.95	1.85
Group III	35	475	1	6	179	3,001	4	31	5.13	6.32
All Groups	3,786	7,552	100	100	4,091	9,770	100	100	1.08	1.29
1998/1999										
Group I	2,308	2,230	60	60	1,379	1,284	15	13	0.60	0.58
Group II	2,577	2,462	39	34	4,609	5,247	49	53	1.79	2.13
Group III	624	598	1	6	3,447	3,433	37	34	5.52	5.74
All Groups	3,786	7,552	100	100	9,435	9,964	100	100	2.49	1.32
2000/2001										
Group I	2,403	2,074	36	41	1,278	1,092	10	12	0.53	0.53
Group II	3,583	2,549	54	50	7,184	5,053	55	54	2.01	1.98
Group III	615	467	9	9	4,613	3,150	35	34	7.50	6.75
All Groups	6,601	5,090	100	100	13,076	9,295	100	100	1.98	1.83
2001/2002										
Group I	2,880	2,591	41	45	1,489	1,332	13	11	0.52	0.51
Group II	3,563	2,731	51	47	6,932	6,122	59	52	1.95	2.24
Group III	611	460	9	8	3,256	4,249	28	36	5.33	9.24
All Groups	7,053	5,782	100	100	11,677	11,703	100	100	1.66	2.02
2002/2003										
Group I	2,842	2,557	41	46	1,465	1,304	13	12	0.52	0.51
Group II	3,555	2,546	51	45	6,935	5,599	61	50	1.95	2.20
Group III	551	505	8	9	2,942	4,361	26	39	5.34	8.63
All Groups	6,948	5,608	100	100	11,342	11,264	100	100	1.63	2.01

## KAVANGO

<b>Kavango</b>	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1977										
Group I	1,451	2,255	48	31	687	1,145	10	5	0.47	0.51
Group II	1,137	3,550	38	49	2,416	8,358	34	38	2.12	2.35
Group III	415	1,464	14	20	4,105	12,388	57	57	9.90	8.46
All Groups	<b>3,002</b>	<b>7,269</b>	<b>100</b>	<b>100</b>	<b>7,208</b>	<b>21,891</b>	<b>100</b>	<b>100</b>	<b>2.40</b>	<b>3.01</b>
1997/1998										
Group I	1,542	3,167	62	54	826	1,341	29	16	0.54	0.42
Group II	860	2,338	35	40	1,492	4,644	52	55	1.73	1.99
Group III	79	398	3	7	564	2,454	20	29	7.15	6.17
All Groups	<b>2,481</b>	<b>5,903</b>	<b>100</b>	<b>100</b>	<b>2,882</b>	<b>8,440</b>	<b>100</b>	<b>100</b>	<b>1.16</b>	<b>1.43</b>
1998/1999										
Group I	1,390	3,126	54	52	662	1,536	19	16	0.48	0.49
Group II	1,068	2,500	41	42	1,961	5,258	57	55	1.84	2.10
Group III	135	386	5	6	813	2,774	24	29	6.00	7.19
All Groups	<b>2,593</b>	<b>6,012</b>	<b>100</b>	<b>100</b>	<b>3,436</b>	<b>9,568</b>	<b>100</b>	<b>100</b>	<b>1.32</b>	<b>1.59</b>
2000/2001										
Group I	1,963	2,044	41	32	1,101	1,134	14	9	0.56	0.55
Group II	2,531	3,738	53	58	4,303	7,142	55	59	1.70	1.91
Group III	300	676	6	10	2,464	3,802	31	31	8.21	5.62
All Groups	<b>4,794</b>	<b>6,459</b>	<b>100</b>	<b>100</b>	<b>7,868</b>	<b>12,078</b>	<b>100</b>	<b>100</b>	<b>1.64</b>	<b>1.87</b>
2001/2002										
Group I	2,181	2,758	59	49	1,186	1,370	26	18	0.54	0.50
Group II	1,353	2,511	36	44	2,466	5,109	54	69	1.82	2.03
Group III	194	386	5	7	956	956	21	13	4.93	2.48
All Groups	<b>3,728</b>	<b>5,655</b>	<b>100</b>	<b>100</b>	<b>4,608</b>	<b>7,435</b>	<b>100</b>	<b>100</b>	<b>1.24</b>	<b>1.31</b>
2002/2003										
Group I	1,821	2,198	42	33	1,110	1,172	17	11	0.61	0.53
Group II	2,357	4,153	54	62	4,550	7,220	70	67	1.93	1.74
Group III	159	388	4	6	856	2,349	13	22	5.38	6.05
All Groups	<b>4,338</b>	<b>6,738</b>	<b>100</b>	<b>100</b>	<b>6,516</b>	<b>10,741</b>	<b>100</b>	<b>100</b>	<b>1.50</b>	<b>1.59</b>

# OHANGWENA

	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1997										
Group I	1,723	1,436	15	80	1,362	840	6	2	0.79	0.58
Group II	8,162	12,366	73	9	16,296	29,450	67	60	2.00	2.38
Group III	1,350	3,749	12	11	6,495	19,000	27	39	4.81	5.07
All Groups	<b>11,235</b>	<b>15,439</b>	<b>100</b>	<b>100</b>	<b>24,152</b>	<b>49,291</b>	<b>100</b>	<b>100</b>	<b>2.15</b>	<b>3.19</b>
1997/1998										
Group I	1,910	1,643	19	10	1,374	1,077	8	2	0.72	0.66
Group II	7,611	12,304	77	72	14,404	32,135	84	64	1.89	2.61
Group III	337	3,080	3	18	1,455	17,117	8	34	4.32	5.56
All Groups	<b>9,857</b>	<b>17,027</b>	<b>100</b>	<b>100</b>	<b>17,232</b>	<b>50,330</b>	<b>100</b>	<b>100</b>	<b>1.75</b>	<b>2.96</b>
1998/1999										
Group I	1,535	1,819	13	13	1,158	1,090	5	2	0.75	0.60
Group II	9,213	8,707	79	61	19,183	22,526	78	47	2.08	2.59
Group III	906	3,765	8	26	4,182	23,902	17	50	4.62	6.35
All Groups	<b>11,653</b>	<b>14,292</b>	<b>100</b>	<b>100</b>	<b>24,524</b>	<b>47,518</b>	<b>100</b>	<b>100</b>	<b>2.10</b>	<b>3.32</b>
1999/2000										
Group I	2,877	1,253	30	9	2,002	848	10	2	0.70	0.68
Group II	5,709	11,709	60	85	12,031	29,246	59	58	2.11	2.50
Group III	874	3,534	9	6	6,203	20,217	31	40	7.10	5.72
All Groups	<b>9,461</b>	<b>13,836</b>	<b>100</b>	<b>100</b>	<b>20,237</b>	<b>50,310</b>	<b>100</b>	<b>100</b>	<b>2.14</b>	<b>3.64</b>
2000/2001										
Group I	2,809	2,983	30	18	1,753	1,720	11	4	0.62	0.58
Group II	6,346	9,800	67	59	13,215	20,986	82	49	2.08	2.14
Group III	298	3,834	3	23	1,233	20,548	8	48	4.14	5.36
All Groups	<b>9,453</b>	<b>16,618</b>	<b>100</b>	<b>100</b>	<b>16,201</b>	<b>43,255</b>	<b>100</b>	<b>100</b>	<b>1.71</b>	<b>2.60</b>
2001/2002										
Group I	2,809	1,375	21	9	1,451	882	5	2	0.52	0.64
Group II	9,291	9,291	70	63	20,697	20,479	73	44	2.23	2.20
Group III	1,157	4,152	9	28	6,065	25,260	21	54	5.24	6.08
All Groups	<b>13,258</b>	<b>14,819</b>	<b>100</b>	<b>100</b>	<b>28,213</b>	<b>46,621</b>	<b>100</b>	<b>100</b>	<b>2.13</b>	<b>3.15</b>
2002/2003										
Group I	1,925	1,952	18	12	1,304	1,048	7	2	0.68	0.54
Group II	8,555	11,644	80	70	16,309	25,982	87	60	1.91	2.23
Group III	164	2,977	2	18	1,129	16,499	6	38	6.90	5.54
All Groups	<b>10,643</b>	<b>16,573</b>	<b>100</b>	<b>100</b>	<b>18,742</b>	<b>43,529</b>	<b>100</b>	<b>100</b>	<b>1.76</b>	<b>2.63</b>

## OMUSATI

	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1997										
Group I	187	244	2	2	172	150	1	0	0.92	0.61
Group II	6,067	9,092	76	66	15,064	24,349	61	49	2.48	2.68
Group III	1,777	4,484	22	32	9,499	25,052	38	51	5.35	5.59
All Groups	<b>8,031</b>	<b>13,821</b>	<b>100</b>	<b>100</b>	<b>24,735</b>	<b>49,551</b>	<b>100</b>	<b>100</b>	<b>3.08</b>	<b>3.59</b>
1997/1998										
Group I	474	1,270	5	10	409	933	1	2	0.86	0.73
Group II	6,888	7,270	72	57	17,783	20,026	56	44	2.58	2.75
Group III	2,213	4,224	23	33	13,449	24,439	43	54	6.08	5.79
All Groups	<b>9,575</b>	<b>12,764</b>	<b>100</b>	<b>100</b>	<b>31,641</b>	<b>45,399</b>	<b>100</b>	<b>100</b>	<b>3.30</b>	<b>3.56</b>
1998/1999										
Group I	906	546	11	4	666	391	3	1	0.73	0.72
Group II	6,715	8,020	78	55	17,777	21,707	75	38	2.65	2.71
Group III	943	6,106	11	42	5,254	35,346	22	62	5.57	5.79
All Groups	<b>8,564</b>	<b>14,672</b>	<b>100</b>	<b>100</b>	<b>23,697</b>	<b>57,444</b>	<b>100</b>	<b>100</b>	<b>2.77</b>	<b>3.92</b>
1999/2000										
Group I	1,356	935	13	7	929	428	3	1	0.69	0.46
Group II	6,991	8,665	68	64	16,903	22,417	61	49	2.42	2.59
Group III	1,876	3,951	18	29	9,885	22,903	36	50	5.27	5.80
All Groups	<b>10,222</b>	<b>13,551</b>	<b>100</b>	<b>100</b>	<b>27,717</b>	<b>45,748</b>	<b>100</b>	<b>100</b>	<b>2.71</b>	<b>3.38</b>
2000/2001										
Group I	1,744	1,549	21	10	1,219	1,073	6	3	0.70	0.69
Group II	5,276	12,317	65	80	12,538	29,839	64	81	2.38	2.42
Group III	1,110	1,459	14	10	5,927	5,927	30	16	5.34	4.06
All Groups	<b>8,130</b>	<b>15,325</b>	<b>100</b>	<b>100</b>	<b>19,684</b>	<b>36,839</b>	<b>100</b>	<b>100</b>	<b>2.42</b>	<b>2.40</b>
2001/2002										
Group I	1,796	1,488	17	9	1,266	1,043	4	2	0.70	0.70
Group II	7,573	11,569	70	73	18,939	29,977	67	65	2.50	2.59
Group III	1,459	2,883	13	18	8,152	14,909	29	32	5.59	5.17
All Groups	<b>10,828</b>	<b>15,940</b>	<b>100</b>	<b>100</b>	<b>28,357</b>	<b>45,929</b>	<b>100</b>	<b>100</b>	<b>2.62</b>	<b>2.88</b>
2002/2003										
Group I	933	889	8	6	628	576	2	1	0.67	0.65
Group II	10,093	10,719	82	73	22,856	26,630	78	60	2.26	2.48
Group III	1,276	3,124	10	21	5,762	17,206	20	39	4.52	5.51
All Groups	<b>12,302</b>	<b>14,733</b>	<b>100</b>	<b>100</b>	<b>29,245</b>	<b>44,412</b>	<b>100</b>	<b>100</b>	<b>2.38</b>	<b>3.01</b>

## OSHANA

	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1997										
Group I	852	1,220	16	13	676	732	6	3	0.79	0.60
Group II	3,865	7,033	74	75	9,094	17,451	75	74	2.35	2.48
Group III	475	1,105	9	12	2,432	5,281	20	23	5.12	4.78
All Groups	<b>5,192</b>	<b>9,358</b>	<b>100</b>	<b>100</b>	<b>12,202</b>	<b>23,465</b>	<b>100</b>	<b>100</b>	<b>2.35</b>	<b>2.51</b>
1997/1998										
Group I	473	761	8	7	322	449	2	1	0.68	0.59
Group II	4,706	7,622	82	72	11,676	19,542	77	61	2.48	2.56
Group III	543	2,185	9	21	3,080	12,151	20	38	5.67	5.56
All Groups	<b>5,722</b>	<b>10,568</b>	<b>100</b>	<b>100</b>	<b>15,078</b>	<b>32,143</b>	<b>100</b>	<b>100</b>	<b>2.63</b>	<b>3.04</b>
1998/1999										
Group I	415	600	7	7	323	352	2	1	0.78	0.59
Group II	4,720	6,917	78	82	11,706	17,299	69	54	2.48	2.50
Group III	950	2,924	16	35	4,968	14,516	29	45	5.23	4.96
All Groups	<b>6,085</b>	<b>8,467</b>	<b>100</b>	<b>123</b>	<b>16,998</b>	<b>32,166</b>	<b>100</b>	<b>100</b>	<b>2.79</b>	<b>3.80</b>
1999/2000										
Group I	698	394	9	5	374	249	2	1	0.54	0.63
Group II	6,527	5,781	83	67	14,254	14,588	81	53	2.18	2.52
Group III	645	2,438	8	28	2,975	12,501	17	46	4.61	5.13
All Groups	<b>7,869</b>	<b>8,613</b>	<b>100</b>	<b>100</b>	<b>17,603</b>	<b>27,338</b>	<b>100</b>	<b>100</b>	<b>2.24</b>	<b>3.17</b>
2000/2001										
Group I	1,174	559	16	6	834	330	5	1	0.71	0.59
Group II	5,339	6,908	74	77	11,948	17,428	73	69	2.24	2.52
Group III	735	1,488	10	17	3,634	7,490	22	30	4.94	5.03
All Groups	<b>7,248</b>	<b>8,955</b>	<b>100</b>	<b>100</b>	<b>16,416</b>	<b>25,248</b>	<b>100</b>	<b>100</b>	<b>2.26</b>	<b>2.82</b>
2001/2002										
Group I	1,022	495	13	6	711	270	4	1	0.70	0.55
Group II	6,222	6,791	80	77	14,254	15,787	82	68	2.29	2.32
Group III	506	1,477	7	17	2,390	7,121	14	31	4.72	4.82
All Groups	<b>7,750</b>	<b>8,763</b>	<b>100</b>	<b>100</b>	<b>17,356</b>	<b>23,177</b>	<b>100</b>	<b>100</b>	<b>2.24</b>	<b>2.65</b>
2002/2003										
Group I	783	910	10	11	554	507	3	2	0.71	0.56
Group II	6,709	6,068	82	72	16,774	15,397	80	68	2.50	2.54
Group III	722	1,407	9	17	3,703	6,863	18	30	5.13	4.88
All Groups	<b>8,213</b>	<b>8,385</b>	<b>100</b>	<b>100</b>	<b>21,030</b>	<b>22,767</b>	<b>100</b>	<b>100</b>	<b>2.56</b>	<b>2.72</b>

# OSHIKOTO

	Households		Percent		Area (ha)		Percent		Average Area (ha)	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
1996/1997										
Group I	328	768	6	8	247	613	1	2	0.75	0.80
Group II	3,317	4,528	59	47	7,192	10,691	38	26	2.17	2.36
Group III	1,955	4,390	35	45	11,487	29,359	61	72	5.88	6.69
All Groups	<b>5,600</b>	<b>9,686</b>	<b>100</b>	<b>100</b>	<b>18,925</b>	<b>40,663</b>	<b>100</b>	<b>100</b>	<b>3.38</b>	<b>4.20</b>
1997/1998										
Group I	443	1,172	8	12	226	602	1	2	0.51	0.51
Group II	3,784	5,618	67	54	9,238	13,305	55	35	2.44	2.37
Group III	1,388	3,567	25	34	7,435	24,001	44	63	5.36	6.73
All Groups	<b>5,615</b>	<b>10,357</b>	<b>100</b>	<b>100</b>	<b>16,829</b>	<b>37,908</b>	<b>100</b>	<b>100</b>	<b>3.01</b>	<b>4.00</b>
1998/1999										
Group I	1,028	410	16	4	589	281	3	1	0.57	0.69
Group II	3,814	5,953	58	60	8,318	14,525	43	41	2.18	2.44
Group III	1,718	3,507	26	36	10,221	20,527	53	58	5.95	5.85
All Groups	<b>6,561</b>	<b>9,870</b>	<b>100</b>	<b>100</b>	<b>19,128</b>	<b>35,333</b>	<b>100</b>	<b>100</b>	<b>2.92</b>	<b>3.58</b>
1999/2000										
Group I	1,353	474	17	6	699	332	3	1	0.52	0.70
Group II	4,967	3,307	62	44	12,487	7,528	55	24	2.51	2.28
Group III	1,672	3,784	21	50	9,368	23,184	42	75	5.60	6.13
All Groups	<b>7,992</b>	<b>7,565</b>	<b>100</b>	<b>100</b>	<b>22,554</b>	<b>31,044</b>	<b>100</b>	<b>100</b>	<b>2.82</b>	<b>4.10</b>
2000/2001										
Group I	546	1,026	8	11	351	614	2	3	0.64	0.60
Group II	5,424	5,752	75	61	12,291	14,312	61	64	2.27	2.49
Group III	1,247	2,710	17	28	7,384	7,384	37	33	5.92	2.72
All Groups	<b>7,217</b>	<b>9,488</b>	<b>100</b>	<b>100</b>	<b>20,026</b>	<b>22,310</b>	<b>100</b>	<b>100</b>	<b>2.77</b>	<b>2.35</b>
2001/2002										
Group I	1,196	1,092	14	11	651	644	3	2	0.54	0.59
Group II	5,445	5,445	64	55	12,254	12,886	54	41	2.25	2.37
Group III	1,823	3,317	22	34	9,588	17,887	43	57	5.26	5.39
All Groups	<b>8,464</b>	<b>9,854</b>	<b>100</b>	<b>100</b>	<b>22,494</b>	<b>31,417</b>	<b>100</b>	<b>100</b>	<b>2.66</b>	<b>3.19</b>
2002/2003										
Group I	1,335	594	16	6	814	450	4	1	0.61	0.76
Group II	5,234	5,596	64	58	11,194	14,466	54	39	2.14	2.59
Group III	1,623	3,376	20	35	8,887	22,411	43	60	5.48	6.64
All Groups	<b>8,192</b>	<b>9,566</b>	<b>100</b>	<b>100</b>	<b>20,896</b>	<b>37,327</b>	<b>100</b>	<b>100</b>	<b>2.55</b>	<b>3.90</b>

*Table 20: Summary Table of Distribution of Holdings by Size Categories (All regions).*

Season per Group	Households		Percentage		Area Planted (ha)		Percentage		Average Area per Household (ha)	
1996/1997	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Group I	6,027	8,716	16.4	13.3	3,738	4,740	4.0	2.3	0.6	0.5
Group II	24,620	40,368	66.9	61.6	54,633	97,990	58.4	48.5	2.2	2.4
Group III	6,152	16,474	16.7	25.1	35,218	99,313	37.6	49.2	5.7	6.0
<b>All Groups</b>	<b>36,798</b>	<b>65,558</b>	<b>100.0</b>	<b>100.0</b>	<b>93,588</b>	<b>202,042</b>	<b>100.0</b>	<b>100.0</b>	<b>2.5</b>	<b>3.1</b>
1997/1998										
Group I	7,105	12,513	19.2	19.5	4,171	6,395	4.7	3.5	0.6	0.5
Group II	25,337	37,728	68.4	58.8	57,491	94,428	65.5	51.3	2.3	2.5
Group III	4,595	13,929	12.4	21.7	26,162	83,163	29.8	45.2	5.7	6.0
<b>All Groups</b>	<b>37,037</b>	<b>64,171</b>	<b>100.0</b>	<b>100.0</b>	<b>87,824</b>	<b>183,987</b>	<b>100.0</b>	<b>100.0</b>	<b>2.4</b>	<b>2.9</b>
1998/1999										
Group I	7,582	8,731	18.5	14.4	4,777	4,934	4.9	2.6	0.6	0.6
Group II	28,107	34,559	68.6	57.0	63,554	86,562	65.4	45.1	2.3	2.5
Group III	5,276	17,346	12.9	28.6	28,885	100,498	29.7	52.3	5.5	5.8
<b>All Groups</b>	<b>40,966</b>	<b>60,636</b>	<b>100.0</b>	<b>100.0</b>	<b>97,216</b>	<b>191,994</b>	<b>100.0</b>	<b>100.0</b>	<b>2.4</b>	<b>3.2</b>
1999/2000										
Group I	6,284	3,056	17.7	6.6	4,004	1857	4.5	1.2	0.6	0.6
Group II	24,194	29,462	68.1	63.7	55,675	73,779	63.2	47.8	2.3	2.5
Group III	5,067	13,707	14.3	29.7	28,431	78,805	32.3	51.0	5.6	5.7
<b>All Groups</b>	<b>35,545</b>	<b>46,225</b>	<b>100.0</b>	<b>100.0</b>	<b>88,110</b>	<b>154,441</b>	<b>100.0</b>	<b>100.0</b>	<b>2.5</b>	<b>3.3</b>
2000/2001										
Group I	10,639	10,235	24.5	16.5	6,536	5,963	7.0	4.0	0.6	0.6
Group II	28,499	41,064	65.6	66.3	61,479	94,760	65.9	63.6	2.2	2.3
Group III	4,305	10,634	9.9	17.2	25,255	48,301	27.1	32.4	5.9	4.5
<b>All Groups</b>	<b>43,443</b>	<b>61,933</b>	<b>100.0</b>	<b>100.0</b>	<b>93,271</b>	<b>149,024</b>	<b>100.0</b>	<b>100.0</b>	<b>2.1</b>	<b>2.4</b>
2001/2002										
Group I	11,884	9,799	23.3	16.1	6,754	5,541	6.0	3.3	0.6	0.6
Group II	33,447	38,338	65.5	63.0	75,542	90,360	67.0	54.3	2.3	2.4
Group III	5,750	12,675	11.3	20.8	30,407	70,382	27.0	42.3	5.3	5.6
<b>All Groups</b>	<b>51,080</b>	<b>60,812</b>	<b>100.0</b>	<b>100.0</b>	<b>112,703</b>	<b>166,283</b>	<b>100.0</b>	<b>100.0</b>	<b>2.2</b>	<b>2.7</b>
2002/2003										
Group I	9,639	9,100	19	15	5,875	5,057	5	3	0.6	0.6
Group II	36,503	40,726	72	66	78,618	95,294	73	56	2.2	2.3
Group III	4,495	11,777	9	19	23,279	69,689	22	41	5.2	5.9
<b>All Groups</b>	<b>50,636</b>	<b>61,603</b>	<b>100</b>	<b>100</b>	<b>107,772</b>	<b>170,040</b>	<b>100</b>	<b>100</b>	<b>2.1</b>	<b>2.8</b>

During the 1998/99 agricultural season, there were 16,313 agricultural holdings recorded in category Group I. This group category planted a total of 9,711 hectares, representing three percent of the total land area planted. In category Group II, there were 62,536 holdings that planted cereals, representing about 62 percent of the agricultural holdings. The group cultivated 150,116 hectares of land, representing 52 percent of the total area planted. There were 22,622 holdings within Group III. This is 22 percent of the total land holdings. The group category cultivated 129,383 hectares or 45 percent on the total area.

*Table 21: Cereal Production per Persons and Workers per Yield per Households by Group and Gender.*

CAPRIVI		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	35	45	52	67	209	312	462	781
<b>1996/1997</b>	Group II	102	213	158	290	749	1,184	370	537
	Group III	389	663	538	725	3,108	4,411	484	661
	Average	175	307	249	361	1355	1969	439	660
<b>1997/1998</b>	Group I	32	34	46	42	188	193	424	431
<b>1997/1998</b>	Group II	84	74	122	101	613	589	331	303
	Group III	65	63	85	100	908	500	144	97
	Average	60	57	84	81	570	427	300	277
<b>1998/1999</b>	Group I	55	33	72	40	276	178	298	298
<b>1998/1999</b>	Group II	104	368	133	463	680	2,122	319	1,186
	Group III	79	98	98	107	536	819	93	148
	Average	79	166	101	204	497	1,040	237	544
<b>2000/2001</b>	Group I	115	136	160	185	702	653	1,333	1,212
<b>2000/2001</b>	Group II	449	1,992	589	2,465	9,629	9,629	1,693	4,802
	Group III	6,334	189	8,050	231	58,803	882	8,714	118
	Average	2,299	773	2,933	960	23,045	3,721	3,913	2,044
<b>2001/2002</b>	Group I	45	50	56	63	244	228	475	440
<b>2001/2002</b>	Group II	113	151	137	189	796	796	355	437
	Group III	378	146	516	201	2,317	2,317	251	267
	Average	178	116	236	151	1,119	1,113	360	382
<b>2002/2003</b>	Group I	44	61	56	77	248	281	485	545
<b>2002/2003</b>	Group II	120	154	146	193	831	866	378	444
	Group III	407	151	567	208	2,464	1,446	285	271
	Average	114	122	143	155	712	673	355	412

KAVANGO		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	24	24	39	36	176	150	347	317
<b>1996/1997</b>	Group II	51	38	78	57	400	363	170	171
	Group III	85	129	132	132	929	1,128	110	114
	Average	53	63	83	75	502	547	209	201
<b>1997/1998</b>	Group I	21	44	33	77	158	266	373	496
<b>1997/1998</b>	Group II	70	27	107	50	545	217	274	125
	Group III	98	23	145	31	960	350	155	49
	Average	63	31	95	53	554	278	268	223
<b>1998/1999</b>	Group I	53	128	78	212	371	750	755	1,575
<b>1998/1999</b>	Group II	154	91	212	128	1,282	653	610	356
	Group III	203	67	284	99	1,924	449	268	75
	Average	137	95	191	147	1,193	618	544	669
<b>2000/2001</b>	Group I	379	48	479	66	2,666	337	4,807	602
<b>2000/2001</b>	Group II	97	71	126	97	783	515	410	303
	Group III	114	64	133	74	1,119	578	199	70
	Average	197	61	246	79	1,523	477	1,805	325
<b>2001/2002</b>	Group I	21	33	29	41	160	187	322	344
<b>2001/2002</b>	Group II	49	40	64	51	362	263	178	144
	Group III	266	68	346	79	2,473	727	380	147
	Average	112	47	147	57	998	392	293	212
<b>2002/2003</b>	Group I	53	39	82	59	394	271	739	445
<b>2002/2003</b>	Group II	207	126	305	188	1,559	966	897	500
	Group III	187	49	282	68	2,961	555	489	103
	Average	158	88	2,083	2,206	1,260	659	790	439

OHANGWENA		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	99	20	145	28	537	123	918	155
<b>1996/1997</b>	Group II	77	56	103	78	638	423	268	212
	Group III	52	99	67	125	573	1,192	113	248
	Average	76	58	105	77	583	579	433	205
<b>1997/1998</b>	Group I	32	57	61	82	188	261	286	362
<b>1997/1998</b>	Group II	74	45	115	70	646	337	247	178
	Group III	63	148	89	197	685	1,357	123	123
	Average	57	83	88	116	506	651	219	221
<b>1998/1999</b>	Group I	95	52	120	67	675	298	1,126	395
<b>1998/1999</b>	Group II	101	73	130	95	959	525	371	252
	Group III	139	148	169	189	1,670	1,243	263	269
	Average	112	91	140	117	1,101	689	587	305
<b>1999/2000</b>	Group I	64	31	91	40	431	185	637	265
<b>1999/2000</b>	Group II	66	41	96	62	553	299	221	142
	Group III	154	64	216	87	1,454	462	254	65
	Average	94	45	135	63	813	315	371	158
<b>2000/2001</b>	Group I	85	27	102	37	796	180	1,381	289
<b>2000/2001</b>	Group II	574	114	704	146	5,094	919	2,379	442
	Group III	127	76	152	85	1,378	548	257	132
	Average	262	72	319	89	2,423	549	1,339	288
<b>2001/2002</b>	Group I	39	30	49	41	235	175	259	259
<b>2001/2002</b>	Group II	46	42	60	58	358	281	141	126
	Group III	100	74	125	94	861	640	141	122
	Average	62	49	78	64	484	365	180	169
<b>2002/2003</b>	Group I	43	31	64	48	225	178	255	222
<b>2002/2003</b>	Group II	43	47	56	63	358	326	210	230
	Group III	33	26	43	33	384	360	130	102
	Average	41	44	53	60	347	300	180	205

OMUSATI		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	111	206	147	243	405	580	660	630
	Group II	177	162	247	221	1,349	1,159	504	467
	Group III	486	306	646	431	5,345	3,618	957	677
	Average	258	225	346	298	2,366	1,785	707	591
<hr/>									
<b>1997/1998</b>	Group I	46	141	73	180	247	900	337	1,044
	Group II	107	80	153	116	862	561	313	217
	Group III	94	57	134	77	1,129	689	195	113
	Average	82	93	120	124	746	717	282	458
<hr/>									
<b>1998/1999</b>	Group I	115	52	193	74	526	241	735	327
	Group II	100	68	92	92	781	531	288	201
	Group III	141	96	131	131	1,701	1,080	294	194
	Average	119	72	139	99	1,003	617	439	241
<hr/>									
<b>1999/2000</b>	Group I	21	69	24	109	46	357	100	520
	Group II	66	54	91	77	495	372	191	154
	Group III	90	51	125	70	1,022	516	176	98
	Average	59	58	80	86	521	415	156	257
<hr/>									
<b>2000/2001</b>	Group I	82	105	98	139	563	681	813	974
	Group II	293	221	340	255	2,429	1,641	1,003	690
	Group III	208	217	245	245	1,828	2,548	363	477
	Average	194	181	228	213	1,607	1,623	726	714
<hr/>									
<b>2001/2002</b>	Group I	59	73	77	98	339	339	250	482
	Group II	68	109	83	255	487	763	188	305
	Group III	129	75	152	92	1,125	896	217	160
	Average	85	86	104	148	651	666	218	316
<hr/>									
<b>2002/2003</b>	Group I	29	36	34	43	165	149	381	289
	Group II	82	81	97	99	521	521	227	132
	Group III	72	63	90	80	717	460	162	134
	Average	76	76	92	94	541	486	211	136

OSHANA		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	145	85	198	142	819	507	1,365	639
	Group II	112	85	161	127	1,140	733	459	311
	Group III	388	277	549	470	4,705	2,070	985	405
	Average	215	149	302	246	2,221	1,103	936	452
<b>1997/1998</b>	Group I	39	56	52	75	164	190	277	279
	Group II	65	72	85	98	541	476	211	192
	Group III	74	76	99	116	836	980	150	173
	Average	59	68	79	96	513	549	213	215
<b>1998/1999</b>	Group I	34	72	38	104	120	384	205	494
	Group II	95	77	122	103	741	604	296	244
	Group III	83	98	97	118	822	1,057	166	202
	Average	71	82	86	108	561	682	222	313
<b>1999/2000</b>	Group I	19	44	30	54	112	164	178	306
	Group II	105	122	136	162	750	848	297	388
	Group III	144	44	183	58	1,440	487	281	106
	Average	90	70	116	92	767	500	252	267
<b>2000/2001</b>	Group I	135	159	175	208	635	448	1,076	630
	Group II	599	295	726	356	4,906	2,047	1,945	915
	Group III	228	267	258	373	2,870	2,306	570	466
	Average	321	240	387	312	2,804	1,600	1,197	670
<b>2001/2002</b>	Group I	40	27	32	32	185	116	339	167
	Group II	65	43	85	55	519	283	223	124
	Group III	50	40	68	53	566	382	117	81
	Average	52	37	62	47	423	261	226	124
<b>2002/2003</b>	Group I	58	32	70	43	212	204	381	289
	Group II	74	51	96	69	575	330	227	132
	Group III	89	55	109	71	791	687	162	134
	Average	76	50	97	67	572	349	211	136

OSHIKOTO		Cereal Production per Person		Cereal Production per Worker		Cereal Production per Holding		Yield in kg/ha	
	Groups	Men	Women	Men	Women	Men	Women	Men	Women
<b>1996/1997</b>	Group I	48	27	71	46	278	112	348	148
	Group II	110	75	166	103	850	550	360	253
	Group III	252	165	356	246	2,667	1,668	399	284
	Average	137	89	198	132	1,265	777	369	229
<b>1997/1998</b>	Group I	33	55	46	86	188	281	366	550
	Group II	92	95	125	140	605	768	256	315
	Group III	113	71	155	113	1,218	656	181	122
	Average	79	74	109	113	670	568	268	329
<b>1998/1999</b>	Group I	60	63	75	73	278	210	406	367
	Group II	253	373	333	515	1,996	2,688	818	1,233
	Group III	322	182	433	258	3,131	1,532	535	257
	Average	212	206	280	282	1,802	1,477	586	619
<b>1999/2000</b>	Group I	59	49	74	60	305	202	436	391
	Group II	189	95	246	127	1,244	630	546	251
	Group III	166	277	220	395	1,699	2,550	277	455
	Average	138	140	180	194	1,083	1,127	420	366
<b>2000/2001</b>	Group I	40	46	49	55	222	311	371	484
	Group II	112	96	136	118	842	653	338	288
	Group III	237	356	293	430	2,234	3,684	341	622
	Average	212	166	159	201	1,099	1,549	350	465
<b>2001/2002</b>	Group I	25	17	27	22	104	103	177	189
	Group II	51	63	60	78	331	373	125	166
	Group III	99	104	123	125	913	948	169	180
	Average	58	61	70	75	449	475	157	178
<b>2002/2003</b>	Group I	32	27	44	37	119	120	156	197
	Group II	77	58	96	71	549	371	213	173
	Group III	133	142	169	180	1,216	1,049	183	191
	Average	99	74	125	92	758	464	194	182

## **APPENDIX A**

### **A. CONCEPTS AND DEFINITIONS**

#### **Introduction**

Definitions relating to the survey are important for the smooth execution of field procedures. They are important for comparison of the survey with others. Concepts and definitions used are based on internationally agreed standards.

#### **1.2 Qualified Respondent:**

As used in the survey, this is an adult member of the household who is knowledgeable about crop, land, livestock and poultry on the holding.

#### **1.3 Communal Agriculture:**

This covers agricultural activities (crop cultivation, livestock raising, and poultry rearing) on farms operated by family units on communal lands. Communal land is land that belongs to the community and which the community has user rights but no title.

#### **1.4 Holder:**

A holder is a person who exercises daily management control of an agricultural holding and its operation. The holder normally takes the current decisions regarding productive resource use such as: land, buildings, machinery, equipment, financial resources and participation in agricultural activity.

#### **1.5 Holding:**

A holding is an operational unit that consists of arable land (cultivated or fallow) and/or livestock. A holding is managed by a holder, who may or may necessarily be the owner of the land and livestock.

#### **1.6 Household:**

A household comprises persons who live together and share meals. The members of a household may be related or unrelated, but happen to live together in one or part of a housing or dwelling unit, sharing common catering arrangements. A person living alone may comprise a household.

#### **1.7 Head of Household:**

A head of household is a person who is a member of a household and generally runs the affairs of the household. The head of the household is looked upon by other members of a household as the main decision-maker of their every day affairs.

## **18 Agricultural Holding:**

An agricultural holding is an economic unit of agricultural production under single management, comprising all livestock kept and all arable land used, wholly or partly, for the purpose of agricultural production, without regard to title, legal form or size. The holding is the analytical unit used in agricultural statistics defining an establishment used for agricultural (crops and/or livestock) production.

## **1.9 Sampling Unit:**

This is the unit of selection, which may be Primary or Secondary in the AAS, PSU's are selected from a frame in the communal rural areas and communal small urban areas.

PSU's, refer to agricultural holdings, the units of reporting.

## **1.10 Locality:**

A locality is any place with one or more dwellings, either in a compact settlement or scattered houses. A locality may be a small or large village and small urban settlements.

## **1.11 Field/parcel:**

A field is a piece of arable land owned and/or operated as one unit by a holder. A field may be planted with only one crop (pure stand) or with mixture of crops. An individual holding may consist of one or more such fields. A parcel is an undivided block of land in the holding, which is entirely surrounded, by land and/or water that does not belong to the same holding. A parcel may contain one or several fields growing one or different crops, it may have been left idle or fallow, or it may be under pasture.

## **1.12 Target Population:**

The target population is one intended for coverage in a survey or census. In the AAS, the target population is defined according to a criterion, concerning land and/or livestock. This is to say at least one of the crops, mahangu, sorghum or maize have been planted or cultivated or some livestock (cattle, pigs, sheep or goats) rose by at least one member.

## **APPENDIX B**

### **B. SURVEY QUESTIONNAIRES AND FORMS**