

ENUMERATOR MANUAL OF INSTRUCTIONS CENSUS 2009/2010

1. INTRODUCTION

Every tenth year, Lesotho conducts the Agricultural Census (AC) as part of an all-World programme organized under the auspices of the Food and Agricultural Organization (FAO) of the United Nations. The seventh decennial census of Agriculture will be conducted during the year 2009/2010.

For effective government economic policy decision and formulation of sound and realistic development programmes, government needs reliable statistics concerning the agricultural resources in the country, the present status of their utilization and potentialities, so as to further development. Such information is also needed by international organizations, particularly those that are contributing to various development projects in agriculture, operators of private businesses and farmers and their associations. The government of Lesotho has made great efforts to sustain and improve agriculture in the country. Main emphasis has been on areas of crop production, livestock production and agro-based industries.

The Bureau of Statistics (BOS) which was established in 1965 is charged with the responsibility of collecting, processing, analyzing and disseminating statistical information by conducting of censuses and surveys. For agricultural variables that are subject to frequent and seasonal changes, BOS conducts Agricultural Production Surveys (APS), which provides agricultural statistics annually. Decennial censuses are conducted to generate data on variables that do not change much over time and also serve as an indispensable base for checking and reliability of current national statistics.

2. OBJECTIVES

2.1 General objectives

Data collected by Agricultural Census will provide government planners, decision-makers as well as general users with detailed timely, reliable and relevant agricultural information at the national, district and zone level on crops, livestock, farm-inputs, farm implements, land utilization and population engaged in agriculture. This information will be for policy formulation, planning and decision-making, sound and realistic development programme formulation, monitoring and evaluation.

The 2009/2010 Agricultural Census will also provide benchmark data to the Bureau of Statistics data bank that can be accessible to the users.

2.2 Immediate objective

The Agricultural Census is going to provide basis for formulating and executing timely food security measures to alert policy-makers about food situation within the country in order to reduce the risk of food crisis, permit timely and orderly planning of imports/exports and promote national and international cooperation in food matters.

Information collected and analyzed will include the following:

1. Household members and their socio-economic characteristics
2. Land under cultivation Crops:
 - a) Area under maize, sorghum, wheat, peas, beans, etc: and crop mixtures.
 - b) Yield of major crops by season; and
 - c) Total production of major crops by season.
3. Area under crop failure
4. Livestock;
 - a) Number of animals classified by species, age, sex and use
 - b) Changes in stock since last season (birth, purchase, sale, slaughtering, deaths and other losses of animals);
5. Purchased inputs in agriculture
6. Quantity and type of fertilizers by crop
7. Quantity and type of pesticides and insecticides used by crop
8. Structural information on the holding: equipment, building, hired workers etc.

3. SCOPE AND COVERAGE

The Agricultural Census covers agricultural activities on holdings held under different systems of land tenure. The relevant information is to be collected from a sample of agricultural holdings, representing each administration district and each ecological zone in the country. The census covers both summer and winter crops planted during 2009/2010 agricultural year. Because of the nature of the Agricultural Census, since it runs for the whole year, it is a sampled census with more increased sample size than that of APS to allow for more coverage and variation.

It covers not only crops grown in the fields, but also includes vegetables and fruits grown in the yards and fields surrounding the homestead. The livestock kept by sampled households irrespective of ownership are included and those mafisad¹ out are excluded.

The types of holding covered include peasant farms, large farms, prison farms, school farms, projects etc.

¹ Mafisad: animals owned by one person but kept by somebody else.

4. SAMPLE

A stratified multi-stage sampling scheme is adopted for the selection of the sample for the census. Large enumeration areas constitute primary sampling units (PSUs) and individual agricultural holdings (farming households) constitute secondary sampling units (SSUs) for estimation of land use, crop areas and livestock population. Fields under specific crops form the secondary sampling units for estimation of crop yield. Two sub-plots for crop cutting in each selected field form the tertiary sampling units for yield estimation. 120 PSUs in rural areas that cover over 2,292 holdings are selected. A maximum of 10 fields for each of the main crops per PSU constitute the sample for the crop cutting part of the census, which covers both winter and summer seasons. The PSUs have been selected with probability proportional to size, the size estimate being obtained from the 2006 Population and Housing Census. In each PSU, about 27 agricultural households are selected through systematic sampling from a list of all agricultural households.

The same sampling method applies to the urban areas where 40 PSUs are selected but no fields are selected for crop cutting.

5. METHOD OF DATA COLLECTION

Data on crop areas is obtained through actual measurement of all fields on selected holdings. Data on yields for major crops is obtained by harvesting sample plots. Information on households' characteristics, livestock, crop failures, use of fertilizers and protective chemicals and the farmer's estimates of the yields of different crops, are collected through interviews with the sampled holder.

Collection of data shall be done in three phases-

In the first phase all agricultural holdings in the sampled PSUs are listed. From these lists, the sample of holdings is selected.

In the second phase-

- a) The household members are listed;
- b) All fields operated by the sampled holdings and planted with winter crops, or left fallow for this season, are measured;
- c) Their livestock numbers are ascertained;
- d) Crop cutting of subplots for winter wheat and peas are made; and
- e) Information is collected on use of fertilizers and protective chemicals applied to winter crops; crop failures; data on farmer's estimate of yield even on crops not subject to crop cutting; and data on machinery, buildings and workers on the holding.

In the third phase-

- a) All fields of the sampled holdings planted with summer crops or left fallow in summer are measured.
- b) Forecasting on crop production.
- c) Crop cutting of subplots for maize, sorghum, beans, and summer wheat and peas and for any other crops for which crop cutting is undertaken during this year is made; and
- d) Information on use of fertilizers and protective chemicals applied to summer crops as well as crop failure, and data on crops not subject to crop cutting are collected.

5. ORGANISATION

The Bureau of Statistics under the Statistics Act of 2001 conducts the Agricultural Census. Thus planning, organization, data collection, data processing, analysis and tabulation as well as administration and financial responsibility rest with the Bureau of Statistics. About 160 specially trained enumerators who are called field assistants will carry out the fieldwork under the supervision of field officers. Each enumerator is in charge of one PSU. One senior field officer in each of the ten districts, and statistician from Headquarters shall assist.

6. CONCEPTS AND DEFINITION

Primary sampling unit (PSU): This is a statistical area/unit identifiable by geographical boundaries defined by physical features and important landmarks, delimited in terms of a certain size of population living in villages within the area.

Agricultural Holding: An agricultural holding is an economic unit of agricultural production under single management. It consists of all livestock kept and all arable land used for agricultural production, regardless of the title. For the purpose of Agricultural Census, the agricultural holdings are restricted to those that meet one or more of the following conditions:

- (a) Having or operating at least one field of arable land
- (b) Raising one or more cattle
- (c) Raising three or more goats and/or sheep or pigs

Holding without land and without cattle and less than three goats or sheep or pig are not included in the census as they are not considered to be agriculturally active.

Agricultural Holder: The person who exercises management control over the agricultural holding operation and who takes major decisions regarding resource use.

Household:

- (a) A **one-person household** is a person who occupies the whole or part of one housing unit and makes provision for his own food or other essentials for living.
- (b) A **multi-person household** is a group of two or more persons who occupy the whole or part of one housing unit and make joint provisions for food or other essentials for living. Domestic servants living in the same housing unit are included in a multi-person household.

Farming household: a household according to the above definition, where one or more persons are holders. In peasant farming, there will normally be a one-to-one correspondence between the household and the holding. Holdings can however also be operated by institutions, projects etc.

Field: this is a piece of arable land cultivated by a holder, even if planted with different crops. An individual holding may have one or more fields.

Plot: this is a portion of a field planted with crops, e.g. Maize or Sorghum or a crop mixture, e.g. Maize-Beans mixture.

Sub-plot: this is the small area within the field where crop cutting is performed.

8. TRAINING OF ENUMERATORS

Before the fieldwork of the Agricultural Census, each enumerator has to undergo training provided at Bureau of Statistics. The enumerator will be taught the aims of the Agricultural Census methods and techniques of field measurement, crop cutting and procedures of collecting other data on holdings. Special attention will be devoted to the practical field work and filling in of forms. The enumerator is expected to be attentive to all aspects of training; otherwise he/she will face many difficulties in actual fieldwork. Therefore, it is essential that during training, enumerator should ask questions and seek clarity on any point.

9. EQUIPMENT AND FORMS

Before the start of fieldwork, each enumerator will be supplied with the following equipment and forms:

a) Equipment

One measuring tape
One compass
One spring balance
One canvas bag
Ten wire pegs
Two poles
Six plastic bags (for grain)
One crop-cutting instrument
One pair of grass shears
One clipboard
Two pencils and one rubber, and
One shorthand notebook

b) Forms- Rural

Form AC1- (Household listing)	(once)
Form AC2i – (household members)	(once)
Form AC2ii- (Field ownership)	(two seasons)
Form AC3- (Area measurement)	(two seasons)
Form AC4- (Field listing)	(two seasons)
Form AC5i- (Operations and Costs)	(two seasons)
Form AC5ii-(Inputs and Costs)	(two seasons)
Form AC5iii-(Harvesting, Storage and Costs)	(two seasons)
Form AC6- (Crop failures & Pre-harvest losses)	(two seasons)
Form AC7- (Crop cutting)	(two seasons)
Form AC8- (Farmer's yield estimate)	(two seasons)
Form AC9- (Availability and Utilization of Cereals in the household)	(two seasons)
Form AC10- (Livestock inventory)	(two seasons)
Form AC11- (Structural information)	(once)

c) Forms-Urban

Form UAC1- (Household listing)	(once)
Form UAC2 – (household members)	(once)
Form UAC3- (household possession)	(two seasons)
Form UAC4- (Area measurements)	(two seasons)
Form UAC5- (Operations and inputs)	(two seasons)
Form UAC6- (Production)	(monthly)

- d) **Crop Forecasting-** (Form 1-Maize, Form 2- Sorghum) (once)
- e) **Other materials**

List of sampled holdings
List of fields selected for crop cutting
Copy of instruction manual
Letter of introduction
Identification Card (ID)

The enumerator has to ensure that he/she has all equipment and forms needed before he goes to the field. He/she has to look after his/her equipment properly. He/she must bear in mind that if an item of equipment is lost or damaged, he/she will have the cost deducted from his salary.

10. ENUMERATORS' DUTIES DURING FIELDWORK

Contact with village chiefs/councilors and heads of selected holdings: before any enumeration could start in a village, the enumerator should contact and introduce himself to the chief/councilor of the area and the headman of the village or the representatives. He should present the letter of introduction to solicit their support. He should explain to them in detail the purpose and the importance of the Agricultural Census. He has to explain the random and impersonal selection of the holdings to be studied and the responsibility of the selected farming households to provide accurate information.

When the cooperation of the village headman is secured, the enumerator will proceed to locate the selected holdings from the list given to him by his supervisor. The headman or his representative will introduce the enumerator to the holders and help to explain to them the purpose of the Agricultural Census. When selected holding is located, the enumerator will ask for the head of holding (whose name is written on the list). He will greet him and explain to him briefly:

- a) Who he is and what authority he represents;
- b) The purpose of his present and future visits;
- c) Why this particular holding was chosen; and
- d) What is exactly required from the head of the holding?

If the head of the holding is not present, the enumerator should wait for him or talk to his/her spouse or other member of the household who is 18 years or above.

In this way, the enumerator must contact the heads of all the selected holdings of each PSU and get their consent for the Agricultural Census. He must not decide to substitute any holdings on the list with the holding next-door or any other holding. If the head of a

selected holding refuses to cooperate, the enumerator should refer the matter to the local chief who will be able to secure the holder's cooperation. If the chief is not successful, the enumerator should immediately inform his supervisor who will advise him on what to do.

It is very important to assure the holders that the information that is needed will be kept confidential and will not be used for taxation purposes or limitation of size of their holding. From the first contact with the villagers, the enumerator has to try to win their confidence, as it will facilitate his future work. An enumerator who has shown respect and politeness to the people will always achieve better results than one who is arrogant and impolite.

Actual data collection

The Agricultural Census is to be carried out throughout the agricultural year 2009/2010 and the enumerator has to visit selected households several times from 1st of August 2009 to 31st of July 2010. Different information is to be collected at different times and the willingness of the holders to cooperate may deteriorate if the enumerator does not bear in mind the following principles of the Agricultural Census taking:

- a) The Agricultural Census requires information about the affairs of the farmers and therefore information given by them or obtained by the enumerator must be kept **strictly confidential**;
- b) The enumerator should always be polite and patient when interviewing people and try his best to built good cooperation with the holder.
- c) When working in the field belonging to a holder, the enumerator should take care not to damage crops or waste grain when cutting the sample plots.

The enumerator should always keep in mind when collecting information that he has to record only authentic and accurate data, no matter how long it takes him to obtain the information. **He should never try to "make up" any data, because if he "fabricates" information he will be spotted easily by his supervisor and will be dismissed from the job.** The success of Agricultural Census depends largely on an enumerator's seriousness in the fieldwork, his appreciation of the importance of the information collected in relation to national development and his ability to obtain true facts in the field.

When in difficulty the enumerator should as far as possible try to solve problems on his own initiative, but if he is unable to cope with the problem, he should refer it to his supervisor who has to visit him regularly.

11. REFERENCE PERIOD

An agricultural year in Lesotho for Agricultural Census commences on 1st August 2009 and ends on 31st July 2010. All information on fields and crop yields is to be recorded as it is on the day of enumeration. During the Agricultural Census period, the enumerator will record this information on a day or days that he considers most convenient and appropriate to secure accurate information. Data on the winter season relate to the period from 1st August to 30th March. Information on livestock numbers should relate to the situation on 1st August 2009 while data on changes in stock should relate to the period from 1st February 2010.

12. FILLING IN OF AGRICULTURAL CENSUS FORMS

The enumerator will have different types of forms to fill in at different times of the year. The specimens of forms are given in this manual. When filling the forms, he has to follow the following principles:

- a) Forms have to be filled in with a pencil neatly and clearly.
- b) All figures should be entered in arithmetic numerals (0, 1, 2, 3...). If no figure is to be entered, a zero is written. No space on the form should be left blank.
- c) The units of measurement in some forms are given for individual items, such as kg, metres, bags, heads of livestock etc. The enumerator should check carefully the required unit for each individual item while entering the figures.
- d) In some forms the required information should be given as codes, as explained on the form.
- e) If there is no enough space on the form, the enumerator should continue with a second form. In such cases, the pages should be numbered. E.g. page 1 of 2, page 2 of 2 etc.
- f) Corrections on the entries should be made clearly and on the spot where recording of data is done, and should not be done at the home of the enumerator.
- g) After a completion of a particular Agricultural Census form for one holding, the enumerator must check all entries on the form and make sure that all details are recorded properly.
- h) Sometimes explanations regarding the answers on the interview are needed. Such explanations should be written in the margins of the form.

13. HOW TO HANDLE SCHOOLS, PRISONS AND PROJECTS

The forms AC-1 or UAC-1 (Household listing) and AC-2 or UAC-2 (Household members) are not needed for these types of holdings. All other forms will be used. When asked for “head of holding” for these types of holdings write the name of the institution and the person who is responsible for the operation of the farm, for example, the manager, the headmaster, etc.

14. IDENTIFICATION INFORMATION ON ALL FORMS

At the top of each form the identification information should be filled in. This information helps to locate the origin of data from district up to the household and field levels. Some identification information is common to all forms, while some is used only for certain forms. Always give the requested information on all forms. It is important that the same codes are used on all forms for the same household.

- a) **Village:** Write down the name of the village in which you are enumerating, as supplied by the supervisor and verify with chief or household head. (E.g. Ha Potjo, Ha Motjoka, Lithabaneng, etc.)
- b) **Chief:** Again write down the name of the chief (In full) of the village you are enumerating.
- c) **Head of holding:** Here write down the name of the household head in full as supplied by your supervisor or by the household head.
- d) **Holding number:** This is the household number. All the selected households are numbered and the supervisor supplies the numbers. Each selected household will have the same number throughout the entire agricultural year for all forms.
- e) **Location of field:** write down the name where the field is located as supplied by the household. This is the name commonly known by most of the villagers, (e.g. Thoteng, Nokeng, etc.)
- f) **District:** fill in the code number of the district in which you are located as supplied by your supervisor (this is a two digit number) for example 01 for Botha Bothe, 02 for Leribe etc.
- g) **Constituency:** fill in the code number of the constituency in which you are operating in.
- h) **Community council:** fill in the code number of the community council in which you are operating in.

- i) **Zone:** Fill the code number of the agro-ecological zone as supplied by your supervisor (one digit number).
- j) **PSU:** Primary Sampling Unit (PSU) sometimes called a cluster. The number distinguishes one PSU from other PSUs in the same district and the same ecological zone.
- k) **Field Number:** write down the number as it appears in the form AC-3 (two digit numbers).
- l) **Season:** write down W for winter and S for summer depending on the season you are referring to.
- m) **Crop:** Tick the relevant crop or crop mixture.

Example of how the identifying information to be filled in is below.

Lesotho Agricultural Census 2009/2010

Form AC-4 This information is confidential
According to the statistics Act 2001

Bureau of Statistics
P.O. Box 455
Maseru, LESOTHO

Area measurement

CROPS (tick)		District	<input type="text"/>	<input type="text"/>
		Constituency	<input type="text"/>	<input type="text"/>
Maize	<input type="checkbox"/>	Peas	<input type="checkbox"/>	Community Council
Sorghum	<input type="checkbox"/>	Maize/Beans	<input type="checkbox"/>	Zone
Wheat	<input type="checkbox"/>	Beans/Sorghum	<input type="checkbox"/>	PSU
Beans	<input type="checkbox"/>	Other (specify)	<input type="checkbox"/>	Season (winter =W, summer=S)
			<input type="text"/>

15. FORM AC-1: HOUSEHOLD LISTING

This form is for listing all households and schools within the selected PSU. The main purpose of the form is to enable us to do the second stage of sampling (i.e. selection of households which are to be the Agricultural Census target during the 2009/2010 agricultural year).

Identification particulars: fill in as explained below.

Column 1 **Serial number:** write down a serial number of each household in the order they are visited, i.e. the first household will be number 001, the second 002, the third 003, etc in three digits.

Column 2 **Head of household:** write down the name and the surname of the household head as supplied by the household head or any other member of the household who is 18 years of age and above. The villagers should commonly know this name. (*Except child headed households*)

Column 3 **Sex:** state whether the household head is male or female by writing 01 for male and 02 for female.

Column 4 **Number of fields owned:** write down the total number of fields belonging to the household, excluding kitchen garden. It should be clear that the fields belonging to the household are those belonging to any member of the household. It should be noted that fields that are rented out are also included in the count. Fields that belong to the household but are sharecropped should be included.

Column 5 **Number of fields rented in:** Similarly write down the number of fields that are presently rented in (not owned but fully operated by the household).

Column 6 **Poultry:** write down the number of poultry (*all kinds of poultry that the household had should be included*).

Column 7 **Number of cattle:** write down the number of cattle belonging to the household and include those mafisad in and mafisad out should be excluded.

Column 8 **Number of sheep:** write down the number of sheep belonging to the household and include those mafisad in and exclude those mafisad out.

Column 9 **Number of goats:** write down the number of goats belonging to the household. Again, goats mafisad in should be included while those mafisad out should be excluded.

Column 10 **Pigs** write down the number of pigs belonging to the household. Again, pigs mafisad in should be included while those mafisad out should be excluded.

Column 11 **Holding number:** this column should be left blank. This is for office use only.

LESOTHO AGRICULTURAL CENSUS 200 9/2010

Page.....of.....

Form AC-1	This information is confidential according to the Statistics Act 2001	Bureau of Statistics P.O. Box 455, Maseru, 100. Lesotho.
Rural Household Listing		

Village:.....	District	<input style="width:100%; height:20px;" type="text"/>
	Constituency	<input style="width:100%; height:20px;" type="text"/>
Chief/Headman:.....	Community Council Zone	<input style="width:100%; height:20px;" type="text"/>
	PSU	<input style="width:100%; height:20px;" type="text"/>



Serial No.	Name of Household Head	Sex 01=Male 02=Female	No. of Fields owned	No. of Fields rented in	Do you have poultry? If Yes; How many?	No. of Cattle	No. of Sheep	No. of Goats	No. of Pigs	Holding No.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
										Office Use

Enumerator's name:.....Signature:.....Date:.....

Field Officer's name:.....Signature:.....Date:.....

16. FORM AC-2(i): HOUSEHOLD MEMBERS

This form requires information about the household members and the related socio-economic and demographic characteristics e.g. age, sex, occupation, educational status etc. This form will be filled once in the early stage of AC year.

Column 1: This column gives a **serial number** for each household member.

Column 2: **Name of household member:** write the names and surnames (use block letters). Write first the name of the household head, then the names of other usual members including those who are temporarily away (i.e. those who are at hospitals, schools, prisons, cattle post, etc).

Column 3: **Relationship to head:** Show the relationship to the head by writing the code. The list of codes is as follows:

01= Head

02= Spouse

03= Child

04= Sibling

05= Son/daughter-in-law

06= Grandchild/Great grandchild

07= Parent/Parent-in-law

08= Grand parent

09= Other relative

10= Not related

Column 4 **Age:** write down the age in completed years of all household members. For those who are less than a year old, enter "00".

Column 5: **Sex:** Write 01 for male and 02 for female.

Column 6: **Main Activity:** This question refers to all members of the household who are six years and above. For those who are less than six years old, fill in "98" which is "not applicable". The main occupation of the members of the household should be given as one of the following codes: (*if a member has more than one activity state the one he/she spend most of his time doing*)

98= Not applicable

01= Employer- These are persons who are working in their *own business or farms and also employ other persons* to assist them and pay them wages or salaries in cash or in kind, these people should be five or more. The following are examples: A farmer who employs a tractor driver, a farm hand etc.

02= Own account worker- These are persons who are *not working for others for wage or salary* but run their own business, workshops farms etc. and do not employ others in their enterprises. Ordinarily, such persons will have their own place of business and determine their own hours of work programme.

03= Wage/Salary earner- this is an individual who is employed and get paid either at the end of the fortnight or month.

04= Unpaid family workers- These are persons who normally assist in the *family business* but *do not* receive any pay or profit for the work done.

05= Casual worker- a person employed temporarily with a contract having limited entitlements to benefits and little or no security of employment.

06= Job seeking- a person who once worked but is currently out of a job, actively looking for a job for at least a month or more.

07= Job seeking for the first time-this is a person searching for employment for the very first time, e.g. a new graduate seeking employment.

08= Homemaker- a person who is considered active; he/she does household activities as well as other income generating activities such as selling vegetables from the backyard gardens. Enumerators have to probe in order to find out these extra activities.

09= Housewife- a person who is only engaged in household activities.

10= Retired

11= Old age benefits- person who receive pension for old age.

12= Student- a person who enrolled or attends classes at a school, college or university.

13= Disabled

14= Farmer (Subsistence farming)

15= Other (specify).....

Column 7: **Domestic worker or Herdboy:** Write 01 for domestic worker, 02 for herdboy and 98 if not applicable.

Column 8: **Educational level attained:** give the code number for the highest level of education attained of each member of the household according to the following codes, for those aged two years and above;

- | | |
|---------------------------------------|---|
| 98= Not applicable | 06= Diploma/Certificate after High school |
| 01= Pre School | 07= Vocational training after High school |
| 02= Standard 1 to 7 | 08= Graduate |
| 03= Form A to Form E | 09=Post-graduate |
| 04= Diploma/Certificate after primary | 10=Non-formal education |
| 05= Vocational training after primary | 11=None |
| 12= Other (specify)..... | |

Column 9: **Contribution to farming activities:** write 01 for yes for members who contribute to field or any other farm work. The person may work on farm all the time or may go to fields during certain period only, e.g. during weeding time, during planting time. Write 02 for no, for members who do not work on farm at all and 98 for those less than six years.

Column10: **Residential status:** Does the household head reside on the holding for more than three weeks of the month or resides outside the holding? Code “01” if household head resides on the holding, code “02” if resides outside the holding but he/ she is in Lesotho and “03” if household head resides outside Lesotho but present in RSA. Then write “04” if the household head is outside Lesotho and still outside RSA.

Column 11: **Income:** Write down the annual income level of all members of the household. For those who qualify but do not have any income and persons less than six years write 00.

Column 12: **Sources of income:** This refers to the household and not to individual members. Start with the source, which the household considers more important to the household. The following codes are used:

- | | |
|--------------------------|------------------------|
| 01= Subsistence farming | 02= Cash crop |
| 03= Livestock | 04= Livestock products |
| 05= Mine remittance | 06= Wage/ Salary |
| 07= Pension Fund | 08=Block farming |
| 09= Other (specify)..... | |

Form AC-2(i)	This information is confidential according to the Statistics Act 2001	Bureau of Statistics P.O. Box 455, Maseru, 100, Lesotho.
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Rural Household Members

Village:.....

Chief/Headman:.....

Household Head:.....



District	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Constituency	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Community council	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Zone	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PSU Holding No.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Serial No.	Name of Household members starting with the h/h head	Relationship to h/h head	Age	Sex	Main activity for those 6 Yrs+ within the past twelve months	Domestic worker or Herd boy?	Educational level attained for those 2yrs +	Contribute to farming? Those 6 Yrs +	Residential status of h/h head	Income Level	Sources of income for the holding starting with the main
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CODES		01=Head 02=Spouse 03=Child 04=Sibling 05=Son/Daughter-in-law 06=grandchild/great grand child 07=Parent/Parent in law 08=Grandparent 09=Other relative 10=Not related	Enter age in completed yrs. If age is less than 1yr enter 00	01=Male 02=Female	98=Not applicable 01=Employer 02=Own account worker 03=Wage/salary 04=Unpaid family worker 05=Casual worker 06=Job seeking 07=Job seeking for the first time 08=Home maker 09=Housewife 10=Retired 11=Old age benefits 12=Student 13=Disabled 14=Farmer 15=Other (specify).....	01=Domestic worker 02=Herd boy 98=Not applicable	01=Pre-school 02=Std 1-7 03=Form 1-5 04= Dip/Cert after primary 05= Vocational training after primary 06=Dip/Cert after high school 07=Vocational after high school 08=Graduate 09=Post graduate 10=Non-formal educ. 11=None 12=Other (specify)..... 98=Not applicable	01=Yes 02=No 98=Those less than 6 years	01= Present 02=Elsewhere in Lesotho 03=Outside Lesotho but in RSA 04=Outside Lesotho & RSA	It should be annually. Write 00 for those less than six years and non income earners.	01=Subsistence farming 02=Cash crop 03=Livestock products 04=Livestock products 05=Mine Remittance 06=Wage/Salary 07=Pension Fund 08=Block farming 09=Other (specify).....

Enumerator's name:.....Signature:.....Date:.....

Supervisor's name:.....Signature:.....Date:.....

17. AC-2 (ii): FIELD OWNERSHIP

This form is for listing all fields owned or operated by the sampled household, all fields fully operated by the household, all fields lost by the household during the season and kitchen garden (kitchen garden is a small piece of land close to the house used for planting vegetables).

Column 1: Field number: Write down the field number in an ascending order for all fields owned/rented in and operated by the sampled household. Remember to include kitchen gardens always at the end of the listing.

Column 2: Location: Write down the full name of the place where each field is located as commonly known by villagers. Kitchen gardens will be named kitchen garden.

Column 3: Type of operation: write down the code for type of operation for each field:

- | | |
|---|-----------------------------------|
| 01= Fields owned and owner operated | 04= Fields not owned but operated |
| 02= Fields owned and sharecropped with others | 05= Not owned but rented in |
| 03= Fields owned but operated by project | 06= Fields owned but rented out |
| 07= Block Farming | |

Column 4: How was field acquired: Use the following codes.

- | | |
|--|-------------------------|
| 01= Allocated by the chief/ community council (CC) | 03= Allocated by family |
| 02= Inherited | 04= Bought |
| 05= Other (specify)..... | |

Column 5: Newly allocated: State whether the field has been newly allocated this season; write 01 for yes and 02 for no.

Column 6: Has field size changed: State whether the field has changed in size this season. Use the following codes:

- 00= the field has not changed 01= the field has expanded 02= the field has contracted

Column 7: Loss of land: State whether the farmer has lost any land this season. The following codes are used:

- 00= No land lost
- 01= Field reallocation by chief/ community council

02= Sheet Erosion- A very slow-acting form of erosion whereby a thin film of water transports soil particles by rolling them along the ground.

03= Rill Erosion- Removal of soil by running water with formation of shallow channels that can be smoothed out completely by normal tillage.

04= Gully/Donga Erosion- Erosion of soil by running water.

05= Riverbank Erosion- is the gradual removal of rock material from the river banks and bed.

06= Other reasons (Specify).....

Column 8: **Unproductive land:** State whether land is unproductive due to what reason. The codes are provided below:

01= Soil Salinity- loss of mineral salts (Bolila)

02= Water-logging

03= Soil erosion

04= Natural infertility of soil

05= Other reasons (Specify).....

Column 9: If any land has been lost, indicate by writing **W** for whole, or **P** for part, if not whole or part, write 98 for not applicable.

Column 10: **Soil Control measures:** State whether the field has Cut-off drains/Diversion furrows. Write 01 if they exist, 02 if not.

Column 11: **Terraces:** are there any terraces on the field? Write 01 for yes and 02 for no. If yes:

- State the width of the terraces
- Whether it draws water from the field
- State if the terraces are vegetated with any of the following:
 - 01= Natural grasses (*Specify*) (NG).....
 - 02= Natural grasses and fruit trees (NGFT)
 - 03= Fodders (F)
 - 04= Fodders and fruit trees (FT)

For an example of AC 2(ii) refer to next page

LESOTHO AGRICULTURAL CENSUS 2009/2010

Page..... of

Form AC-2(ii)

This information is confidential according to the Statistics Act 2001

Bureau of Statistics
P.O. Box 455,
Maseru 100
Lesotho

Field Ownership

Village:.....

District

--	--

Head of Holding:.....

Constituency

--	--

Community Council

--	--

Season (Winter=**W**, Summer=**S**)

Zone

--

Holding No.

--	--

PSU

--	--

Field No	Location	Type of operation	How was field acquired	Newly allocated this season (01=Yes/02=No)	Has field size changed this season?	Loss of land	Unproductive Land	Whole or part lost (W or P or 98 if N/A)	Soil Control Measures (01=Yes,02=No)	Are Terraces there in the field?		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
										W	D	V
CODES	Type of operation		Acquisition of field		Has field size changed		Loss of Land		Unproductive land		Width (metres)m	
	01= Owned and owner operated 02= Owned and share cropped 03= Owned, operated by project 04= Not owned but operated 05= Not owned but rented in 06= Owned but operated by Block Farming 07= Not owned but operated by Block farming 08= Owned but rented out		01= Allocated by chief / CC 02= Inherited 03= Allocated by family 04= Bought 05=Other (specify).....		00= No, it has not changed 01= Yes, expanded 02= Yes, contracted		00= No land lost 01= Field reallocated by chief/CC 02= Sheet erosion 03= Rill erosion 04= Gully/Donga erosion 05= River Bank erosion 06= Other reasons (specify).....		01=Soil salinity 02=Water-logging 03=Soil erosion 04=Natural infertility 05=Other reasons...		0-1= 01 1-2= 02 2+ = 03 Draw water out 01=Yes 02=No Vegetation on terrace 01=NG 02= NGFT 03=F 04=FFT	

Enumerator's name:.....Signature:.....Date:.....

Supervisor's name:.....Signature:.....Date:.....

18. FORM AC-3: AREA MEASUREMENT

Procedure of the area measurement

The production of crops is estimated in the following ways: the area of the fields and plots under different crops are measured, and the yields of the crops are measured through crop cutting. When the total area under maize for example, is multiplied by the average yield per area unit, an estimate of the total production is obtained. Therefore, both the areas and the yields of different crops are measured in the AC.

Fields to be measured

All fields operated by the sampled households should be measured during the two crop seasons of the year. These fields include:

- (i) Fields belonging to the household and being cultivated by the household.
- (ii) Fields belonging to the household but temporarily fallow. (Less than 3 years)
- (iii) Fields belonging to the household and being cultivated by the household under partnership with others (fields share-cropped).
- (iv) Fields which belong to any other household but which are wholly operated by the sampled households.

The kitchen garden should be measured if it is normally used for planting. It should be noted that fields belonging to the household are those owned/operated by one or more of the household members. Note that fields which belong to the selected household but which are operated by another household should not be measured.

Equipment to be used

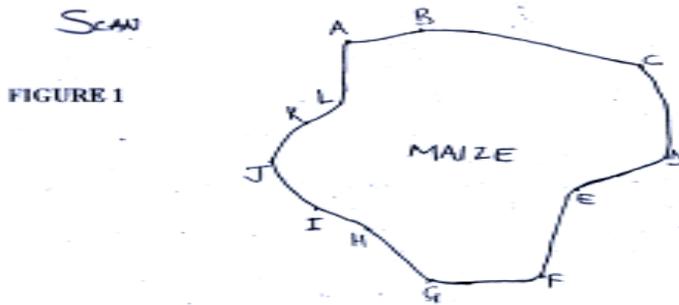
The following equipment is used for area measurement:

1. Note book, pencil, and eraser
2. Forms for area measurement (Form AC 3)
3. Measuring tape, 50 meters
4. Compass
5. At least ten wire-pegs
6. A programmable calculator to compute the areas

The importance of sketches

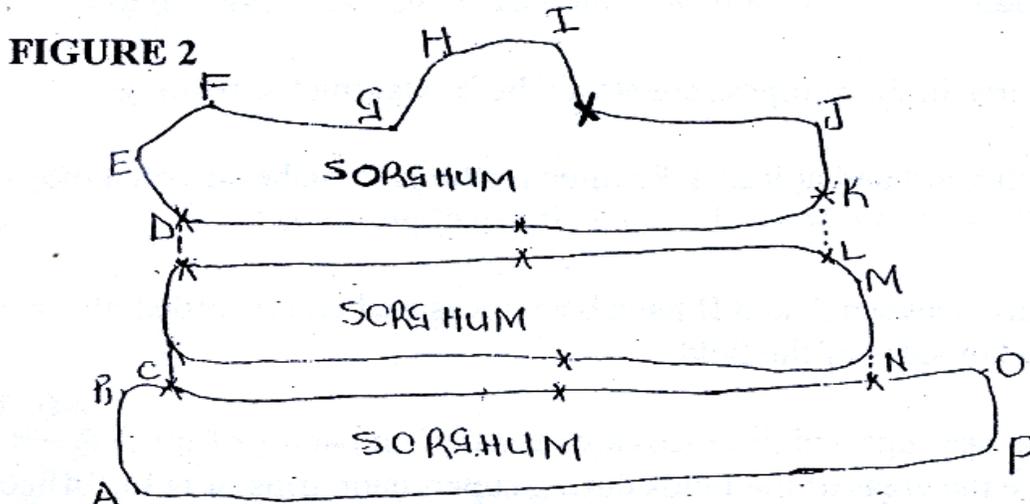
On arrival at field, and before starting the measurement, the enumerator should walk around the field to familiarize himself with the shape of the field, and determine its breaking points. Fruit trees planted on the field should be recorded. A sketch is made in the notebook before the measurements are made; a final sketch is made in the form AC3.

Sometimes, a field or plot does not have all its sides in straight lines. Measure each side after figuring out as many straight sides as the field can allow. See an example of such a field in figure 1.



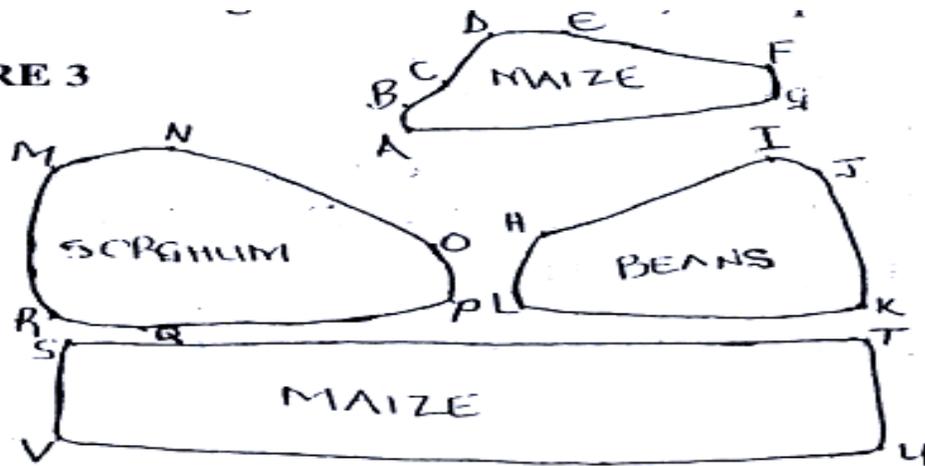
If the field contains several plots with different crops, each plot should be measured separately. There is room on the form for measurement of five plots. If this is not enough, continue on a second form. The form has room for fields with seven sides. In the case where field has more than seven sides, continue recording the results in the next section of the form.

A field, which is divided into parts by footpaths, ridges, dongas etc. but where the parts contain the same crops, they may be measured as one plot. In this case, the width of the footpaths, ridges etc. should be measured on at least three places and the length should also be measured. These data should be recorded on the sketch in the form; an example is indicated in figure 2.



Sometimes the field is divided into a number of irregular plots as a result of contour strips as illustrated in Figure 3. In such cases each plot will have to be measured independently.

FIGURE 3



Measurement procedure

The measurement should start at the North-West corner of the field, or at the corner which is close to the North-West corner. A pole is placed at this point, which we denote by point "A". The assistant, standing at point A, holds the loose end of the measuring tape. The enumerator holding the roll of the measuring tape and few pegs starts walking along one side of the field in a clockwise direction until he comes to the next corner, point "B", a peg is fixed at this point. The distance between points A and B should be read on the tape and be recorded by the enumerator.

If the length of the side A-B is more than 50 metres, it is necessary to measure the distance in parts. In that case, a peg is fixed in the ground at the 50-metre mark and the measurement continues from this point.

After the distance between A and B has been measured, what remains is to read the compass bearing from A to B. The enumerator standing at point A aims the compass towards the peg at point B. After waiting for a few minutes to let the compass stabilize, bearing is read as follows:

1. Hold the compass at eye level and compass should sit flat and steady in the hand.
2. Look through eyehole on the compass and make sure that metal line is up right not bent to the side.
3. Make sure that the readings in the compass are steady before taking the readings.
4. Read the readings leftward and at least take three readings to make sure that they are correct.

After the distance and bearings between **A** and **B** have been measured and recorded, the same process is repeated for the other sides of the field.

The readings of the compass bearings and distances are recorded on page 1 of form AC3. The supervisor will calculate the areas of the fields during supervision trips or at his office. Usually the distance measurement and compass bearing will not close the sides properly and this is detected in the calculations as a “closing error”. If this is larger than 2%, a new measurement of the same field must be done.

Some practical hints

- Never hold any metal objects close to the compass when the readings are taken; this will cause error in the measurements. For example, do not use metal poles, and do not hold any metal pegs in your hand when reading the compass.
- If the compass is tilted too much when the bearing is taken, the metal line will not be straight and therefore it will be difficult to read the bearings.

Crop mixtures

For mixtures, the enumerator estimates the percentage proportion of individual crop. For example, if the field is planted a mixture of maize and beans, it is the discretion of the enumerator to give either 70% to maize or 30% to beans, or otherwise depending on the proportion he/she observed during inspection.

Fruit Trees

Information on fruit trees is filled immediately after field measurement is done.

Type of Tree: write the type of trees that are planted in the field including those planted at the contours and borders of the field.

Number Productive: count the number of productive trees by type and write their number in space provided.

Number of unproductive: count the number of trees that are not productive by type and write their number in space provided.

Fruit sold: ask the household if they sell fruits from these productive trees. If they sell them, tick in the space provided.

Unit Used for selling: only household who sell their fruit will be asked this question. Indicate the unit that household uses to measure fruits when selling. It can be a tin, a basin etc.

Price per unit: ask the household how much they charge per unit when selling fruits.

For Example of AC 3 refer to next page

Form AC- 3

This information is confidential according to the Statistics Act 2001

Bureau of Statistics
P.O. Box 455,
Maseru 100
Lesotho

Area Measurement

Village:.....	District	<input type="text"/>	<input type="text"/>
Head of Holding:.....	Constituency	<input type="text"/>	<input type="text"/>
Location of Field:.....	Community Council	<input type="text"/>	<input type="text"/>
Holding No.....	Zone	<input type="text"/>	
Field No.	PSU	<input type="text"/>	<input type="text"/>

Season (Winter = W, Summer = S):.....

Area Measurement data

Plot	Side	A-B	B-C	C-D	D-E	E-F	F-G	G-H	Cl. err	AREA	Crop
	Angle										
	Length										
	Angle										
	Length										
	Angle										
	Length										
	Angle										
	Length										
	Angle										
	Length										

For Mixtures estimate the proportion occupied by each crop, also ask about the quantity of seed used

CROP	% ESTIMATE

Fruits trees planted on the field

No	Type of Tree	Number Productive	Number Unproductive	Do you sell fruits? (Y/N)	Unit used for selling	Price per unit
1						
2						
3						

Enumerator's name:.....Date:.....Signature.....

Supervisor's name:.....Date:.....Signature.....

19. FORM AC-4: FIELD LISTING

The purpose of the form is to list all fields planted with the same type of crop for the sampling of fields for crop cutting. Note that on this form the enumerator will list all fields planted with the same crop in the same PSU. This will enable the supervisor to do the selection of fields on which crop cutting is to be conducted. For example, all fields planted sorghum in the PSU will be listed in one copy of this form, and all maize on another copy.

Below is the identification particulars, the supervisor will have to tick on which crop-cutting experiment is to be carried out.

Column 1: **Serial number:** numbering of fields by crop

Column 2: **Holding number:** write down the holding number of the household, as it appears in forms AC 2 and AC 3.

Column3: **Head of holding:** write down the name of the household head as it appears in forms AC 2 and AC 3.

Column4: **Field no.:** write down field number of the field you are referring to as it appears on forms AC 2 and AC 3

Column 5: **Field location:** write down the field location as it appears in forms AC 2 and AC 3.

For example of form AC-4 refer to next page

20. FORM AC-5 (i): OPERATIONS AND COSTS

This form is intended to record the different methods of operation and costs used for each crop by the household for ploughing, Disking, planting and weeding. The same form will be used for both seasons (winter and summer).

1. Operations.

Ploughing/Disking: there are four different methods of operation which a farmer may use for ploughing/disking his field. He can choose one method or a combination of any of the four methods. If for each crop he used different methods in the same crop, list them against space provided starting with the methods in which the farmer consider as the most important. The following codes are used:

01= Own tractor

02= Hired tractor

03= Own oxen

04= Hired oxen

05= Combination (Give codes)

06= Others (Specify).....

Planting: as in ploughing, the farmer may choose different methods for planting each crop. Code the methods used, starting with the method which the farmer consider as the most important. The following codes are used:

01= Own planter ox drawn

02= Hired planter ox drawn

03= Own planter tractor drawn

04= Hired planter tractor drawn

05= Manual

06= Others (Specify).....

Weeding: similarly in weeding different methods may be used, codes are provided.

01= Own tractor

02= Hired tractor

03= Own oxen

04= Hired oxen

05= Own labour

06= Hired labour

07= Combination (Give codes)

08= Other (Specify).....

Refer to an example of form AC-5(i) next page

LESOTHO AGRICULTURAL CENSUS 2009/2010

Form AC-5(i)

Operation and Costs

This information is confidential according to the Statistics Act 2001

**Bureau of Statistics
P.O. Box 455,
Maseru, Lesotho.**

Village:.....

District

--	--

Head of Holding:.....

Constituency

--	--

Community Council

--	--

Holding No.

--	--

Zone

--	--

PSU

--	--

Season: (Winter=W, Summer=S)

--

(Put crop code in appropriate column)

Operations	Field No	Type of Operations	Crop	Area	Method Used	Amount (In maloti)	Method Used Codes
Ploughing							01=Own tractor 02=Hired tractor 03=Own oxen 04=Hired oxen 05=Combination (codes.....) 06=Others (specify)
Disking							01=Own tractor 02=Hired tractor 03=Own oxen 04=Hired oxen 05=Combination (codes.....) 06=Others (specify)
Planting							01=Own planter ox drawn 02=Hired planter ox drawn 03=Own planter tractor drawn 04=Hired planter tractor drawn 05=Manual 06=Others (specify)

Operations	Field No	Type of Operations	Crop	Area	Method Used	Amount (In maloti)	Method Used Codes
Weeding							01=Own tractor
							02=Hired tractor
							03=Own oxen
							04=Hired oxen
							05=Own labour
							06=Hired labour
							07=Combination (codes.....)
							08=Other (Specify).....

Type of Operation

- 01** Owned and owner operated
- 02** Owned and Share cropped
- 03** Owned but Operated by Project
- 04** Not Owned but Operated
- 05** Not Owned but Rented in

Crops Codes

- 01-** Maize
- 02-** Wheat
- 03-** Sorghum
- 04-** Beans
- 05-** Peas
- 06-** Beans and Sorghum
- 07-** Maize and Beans
- 08-** Maize and Sorghum
- 09-** Other (specify)
- 14-** Fallow

Enumerator's name:..... Date:..... Signature:.....

Supervisor's name:..... Date:..... Signature:.....

21. FORM AC-5 (ii): INPUTS AND COSTS

Inputs in this form refer to fertilizers (organic and inorganic), seeds and pesticides. Codes for the different inputs are included in the form.

Page 1 of 2 of AC 5 (ii)

Column 1: **Inputs** commonly used.

Column 2: **Field Number**: write down the field number.

Column 3: **Amount (in maloti)**: ask the farmer how much he/she has paid per unit. For example if paid M15.00 per 50 kg of pesticides, fill in “M15.00” in this column.

Column 4: **Type**: in this column write down the code for pesticide used. The following codes are used for pesticides:

00=Not Used

06= Aphicide

01= Malathion

07= Dithane M45

02= Metasystox

08= Cutworm bait

03= Ripcort

09= Phostoxin tablets

04= Karate

10= Thiodan

05=Lanacol

11=Combination (Give codes).....

12= Others (Specify)..... For pesticides: write down the commercial name of the pesticide, as written on the bag, tin, bottle etc. The following are codes for some of the pesticides:

Column 5: **Crop**: write down the code of the crop.

Crops Codes

01=Maize

06=Beans and Sorghum

02=Wheat

07=Maize and Beans

03=Sorghum

08=Maize and Sorghum

04=Beans

09= Other (specify).....

05=Peas

Page 2 of 2 of AC 5 (ii)

Column 1: **Inputs** commonly used.

Column 2: **Field Number**: write down the field number.

Column 3: **Amount (in maloti)**: ask the farmer how much he/she has paid per unit. For example if paid M15.00 per 50 kg of inorganic & organic fertilizers and seeds, fill in “M15.00” in this column.

Column 4: **Quantity of Input**: in this column write down the number of units used e.g. if three quarters of a pocket is used in a field, enter $\frac{3}{4}$.

For fertilizer state number of pockets used, for seed write down number of bags, bottles, tins etc.

Column 5: **Kind of container**: the enumerator is expected to state the unit used e.g. bag, tin, pocket, etc.

Column 6: **Size**: the size of the unit should be stated, for example “60 kg, 20 litres”.

Column 7: **Type**: Record the codes of the type used.

The following codes are used for inorganic fertilizers:

00=Not Used	06= 2:3:2 (22)
01= Double supers	07= Lime
02= Single supers	08= Urea
03= 3:2:1 (35)	09= 3:2:1: (32)
04= 3:2:1 (25)	10= 3:2:1: (30)
05= Lime ammonium Nitrate (LAN)	11= Other (Specify).....

Important Note: there is a difference in concentration of nutrients between e.g., 3:2:1 (35) and 3:2:1 (25). Check with the bags left so that the correct type is recorded.

The following codes are used for organic fertilizers:

00=Not Used

01= ash

02= kraal manure

03= Poultry manure

04= Other (specify).....

The following codes are used for seed type:

01= Own crop

02= Bought locally

03= Hybrid

04= Others (specify).....

Main purpose of planting crop: ask the farmer what was his/ her main purpose of planting the crop. Specify the purpose on space provided.

Main Purpose Codes

01= Consumption

02= Selling

03= Both consumption and selling

04= Other (specify).....

Refer to an example of form AC-5(ii) next page

LESOTHO AGRICULTURAL CENSUS 2009/2010

Form AC 5(ii)

This information is confidential
according to the Statistics Act 2001

**Bureau of Statistics
P.O Box 455
Maseru, 100 Lesotho.**

Inputs and Costs

Village:.....	District	<input type="text"/>	<input type="text"/>
Head of Holding:.....	Constituency	<input type="text"/>	<input type="text"/>
	Community Council	<input type="text"/>	<input type="text"/>
Holding No. <input style="width: 40px; height: 20px;" type="text"/>	Zone	<input style="width: 40px; height: 20px;" type="text"/>	
Season: (Winter=W, Summer=S) <input style="width: 40px; height: 20px;" type="text"/>	PSU	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>

(Put crop code in appropriate column)

Inputs	Field No.	Crop	Type	Amount in Maloti	Type Code
Pesticides					01=Malathion
					02=Metasystox
					03=Ripcort
					04=Karate
					05=Lanacol
					06=Aphicides
					07=Dithane
					08=Cutworm bait
					09=Phostoxin tablets
					10=Thioden
				11=Combination (codes.....)	
				12=Other (specify).....	

Crops Codes

- | | |
|---|---|
| <p>01=Maize
02=Wheat
03=Sorghum
04=Beans
05=Peas</p> | <p>06=Beans and Sorghum
07=Maize and Beans
08=Maize and Sorghum
09=Other (specify).....</p> |
|---|---|

Inputs	Field No	Crop	Quantity (input)	Kind of container	Unit Size	Type	Amount (maloti)	Codes (Type)
Inorganic Fertilizer								00=Not Used
								01=Double supers
								02=Single supers
								03=3:2:1 (35)
								04=3:2:1 (25)
								05=LAN
								06=2:3:2 (22)
Organic Fertilizer								07=Lime
								08=Urea
								09=3:2:1 (32)
								10=3:2:1 (30)
								11=Other (specify)
							
								00=Not Used
Seed								01=Ash
								02=Kraal Manure
								03=Poultry Manure
								04=Other (specify)
							
							01=Own crop	
							02=Bought locally	
							03=Hybrid	
							04=Others (specify)	
							

The main purpose of planting each crop: (put appropriate codes)

Crop	Main Purpose

Main Purpose Codes

- 01=Consumption
- 02=Selling
- 03=Both consumption and selling
- 04=Other (specify).....

Enumerator's name:..... Date:..... Signature:.....

Supervisor's name:..... Date:..... Signature:.....

22. FORM AC- 5 (iii): HARVESTING AND STORAGE COSTS

1. Harvesting: Cutting the crop, gathering, bundling and stacking when done manually. If done mechanically it is with harvester. Write down the crop codes as given in the Form AC 5 (iii).

Amount recorded in column 3 entails the costs of cutting the crop, gathering, bundling and stacking when done manually. If done mechanically it is with harvester. Threshing/shelling. In this process the grains are separated from the husk as in the case of peas or from the plant to which they are attached as in the case of maize, this should be manual or mechanical (thresher).

Cleaning/winnowing: This is the process of cleaning the grain by blowing away the chaff from it.

2. Storage: The storage costs of the crops consists of one or more of the following weevil insecticides², rodenticides³, hired building/ store or own storage or other expenses incurred for storage.

Refer to an example of form AC-5(iii) next page.

² weevil insecticides: Moriana oa Ts'upa

³ Rodenticides: Moriana oa litoeba

LESOTHO AGRICULTURAL CENSUS 2009/2010

Form AC-5(iii)

Operations and Cost

This information is confidential according to the Statistics Act 2001

**Bureau of Statistics
P.O Box 455;
Maseru, Lesotho.**

Village:.....	District	<input type="text"/>	<input type="text"/>
Head of Holding:.....	Constituency	<input type="text"/>	<input type="text"/>
	Community Council	<input type="text"/>	<input type="text"/>
Holding No. <input type="text"/>	Zone	<input type="text"/>	
	PSU	<input type="text"/>	<input type="text"/>
Season: (Winter=W, Summer=S) (Put crop code in appropriate column)	<input type="text"/>		

Operations and Costs	Field No.	Amount in Maloti	Crop	Crop Codes
Harvesting				01=Maize
				02=Wheat
				03=Sorghum
				04=Beans
				05=Peas
				06=Beans and Sorghum
				07=Maize and Beans
Storage				08=Maize and Sorghum
				09=Other (specify).....

The cost of Harvesting includes the cost of:

2. Cutting the crop, gathering, bundling and stacking when done manually. If done mechanically it is with harvester.
3. Threshing/shelling: In this process the grains are beaten to separate them from husk as in the case of peas or from the plant to which they are attached as in the case of maize. This should be manual or mechanical (thresher).
4. Cleaning/winnowing: This is the process of cleaning the grain by blowing away the chaff from it.

The Storage costs consist of one or more of the following:-

1. Weevil insecticides
2. Rodenticides
3. Hired building/ store and
4. Own storage
5. Others (specify).....

Enumerator's name:..... Date:..... Signature:.....

Supervisor's name:..... Date:..... Signature:.....

23. FORM AC-6: CROP FAILURES AND PRE-HARVEST LOSSES.

This form is used for listing fields under crop failure and causes of crop failure. Crop failure means that the farmer was not able to harvest anything at all from the field due to reasons stated below.

A separate form will be used to record each crop through the entire PSU, i.e. fields from several households should be listed in one form. In this case the enumerator must tick the crop he is referring to at the top of the form.

Column 1: **Holding number:** write down the number of the holding as it appears on form AC 2(i).

Column 2: **Head of holding:** write down the name of the household head as it appears in AC 2 (i).

Column 3: **Field number:** write down the number of the fields as they appear in form AC 2(ii).

Column 4: **Field location:** write down the name of the field location as appears in form AC 2(i).

Column 5: **Area:** write the area of the field as it appears in form AC 3.

Column 6: **Reason for crop failure:** at the bottom of this form are the codes to use when giving the reason for complete crop failure. If there are more than one reason, write the main reason.

01= Frost

02= Hail

03= Flood

04= Drought

05= Pests

06= Weeds

07= Animals

08= Other reasons (specify).....

Refer to an example of form AC-(6) next page.

This information is confidential according to the Statistics Act 2001

Crop failures & pre-harvest losses

CROPS (tick)

- Maize Peas
- Sorghum Maize/Beans
- Wheat Beans/Sorghum
- Beans Other (specify)
-

District

Constituency

Community Council

Zone

PSU

Season (winter =W, summer=S)

Holding no.	Head of Holding	Field no.	Field Location	Area	Reason for crop failure
(1)	(2)	(3)	(4)	(5)	(6)

CODES: REASON FOR CROP FAILURE

01= Frost 03= Flood 05= Pests 07= Animals
 02= Hail 04= Drought 06= Weeds 08= Other (specify).....

Enumerator's name:.....Date:..... Signature:.....

Supervisor's name:.....Date:.....Signature:.....

24. FORM AC 7: CROP CUTTING

Purpose of the Crop Cutting

Crop cutting is a means of estimating the yield of a crop by harvesting two randomly located sample plots in selected fields. As stated earlier, for estimation of the production of a crop, two components are necessary, namely the area and the yield per unit area. The procedure of area measurement of fields has already been explained in AC 3. The procedure of locating sample plots and harvesting them for the purpose of yield estimation is explained in this section.

Crop cutting will be carried out in a sub-sample of fields selected from those, which have already been measured. Ten fields for each of the main crops of wheat and peas in winter and maize, sorghum, beans, wheat and peas as well as some crop mixtures in the summer will be selected. Two subplots will be harvested on each field. The enumerator will issue a list of selected fields giving the identification of the holding, the field numbers and their locations. These data is based on information given by the enumerator during area measurement (form AC 3) and field listing (form AC 4).

Some of the procedures described in the instructions might seem confusing or complicated, it should be stressed, however, that reliable estimates can only be obtained if all the instructions are followed, and all the work is performed exactly as described in the manual.

Each enumerator will be supplied with crop cutting instruments to demarcate a fixed area of ten square meters. The crop on this area is to be harvested and weighed.

How the subplots are randomly placed on the field

Please note that the following steps 1-7 should be taken in time before harvest.

1. Make a sketch of the field indicating the maximum length and the maximum width of the field. These data should be taken from the copy of the area measurement which the enumerator has retained (in his notebook) or just measure the length and width again.
2. On the sketch, draw one horizontal axis **X**, and one vertical axis **Y**. The vertical axis should be at right angle to the horizontal axis, it is convenient to draw the sketch such that one long, straight side of the field coincides, as far as possible, with the **X**-axis; see the example on form AC 7.
3. Use the of random numbers table to select a random number x between 1 and the maximum length of the field. In the example (form AC 7), the maximum length is 250 metres and the decimals should be deleted. This means a random number not more than 250 should be selected and therefore the random number must be searched between 001-250. (*take 125 as the first selected random number*)

4. A table of random numbers, including instructions for their use, is included as Appendix 1 to this manual.
5. Similarly, use the table of random numbers to select a random number y between 1 and the maximum width of the field. The width of the field in the example is 90 metres and the random number can be searched between 01-90. . (*take 58 as the second selected random number*)
6. In the provided example the selected random numbers are 125 on the horizontal axis x and 58 on the vertical axis y. these are the random numbers for subplot no 1 (P1).
7. Measure the length equal to the first random number (125) along the x axis and where it ends, get into the field at right angle measuring the distance equal to the second random number (58). Where it ends will be the center of the sub-plot 1.
8. Repeat steps 3-7 above to select two random numbers for subplot 2. Continue on the random number table to select numbers for subplot 2 (P2). In the example, the random numbers will be 99 on the horizontal x axis, and 27 on the vertical y axis.

Use the measuring tape to locate selected points P1 and P2 in the field and put a peg at each point. These points are going to be the centers of subplots, with the radius 1.78 metres, inside the boundaries of the field. A new point has to be selected in the case that both previously selected numbers cross the boundaries of the field for that subplot and therefore, select a new pair of random numbers.

Monitoring the field

Once P1 and P2 have been marked, the field should be visited from time to time to check if the poles or marks are still there. During these visits, the ripening stage of the crop should also be assessed. Consult the farmer on when he plans to harvest the field.

Sometimes it happens that farmers do not harvest their crops at once but pick single cobs, which have fully matured before the rest of the other cobs. It is very important that you ask the farmer to leave all cobs close to the marker, so that they can be harvested and weighed by you. Therefore, ask the farmer not to harvest anything within about three full steps around each marker.

Harvesting the subplots

When the crop has fully matured and the farmer has announced that he will soon harvest his field, it is time to harvest the subplots. This is done in the following way:

1. Bring the crop cutting instruments to the field, remove the marker you have left in the field, and put the center-pole of the crop-cutting instrument in its place. Make sure that you press the center-pole firmly into the ground. If the marker is gone, you will have to locate points P1 and P2 again, based on your notes.

2. While moving the arm of the crop cutting instrument around the center-pole, cut all stalks, which are inside the circle, which is formed by the arm. Care must be taken not to leave any plant inside the circle, or to include any plants outside. If the pointer of the tool touches the base of a plant the following rule should be applied:

Include the plant in the sample if half or more of the base is inside the pointer, otherwise leave the plant and do not take it into the sample. If the field contains trees, bushes or other obstacles, the arm can be folded up to pass them. The harvesting should be done in the same way, and using the same tools, as the farmer harvests the rest of the field.

3. When all plants have been harvested, the crop should be threshed and weighed with the provided spring balance. Since the crop will not have dried completely and moisture content is still high, the weight should be recorded as raw weight in the form. The crop should be left for few days in the sun to dry completely before taking the dry weight. The results should be noted in the column "Dry weight" of form AC 7. Note that the produce from the two subplots should be treated separately. If a thin plastic bag is used when weighing the sample, the weight of the bag can be ignored.
4. After the samples have been threshed, they should be weighed and the weights of the dried grains should be recorded on form AC-7.

Crop mixtures

For mixtures, the enumerator estimates the percentage proportion of individual crop. For example, if the field is planted a mixture of maize and beans, it is the discretion of the enumerator to give either 70% to maize or 30% to beans, or otherwise depending on the proportion he/she observed during inspection.

Refer to an example of form AC-7 next page.

25. FORM AC-8: FARMER'S YIELD ESTIMATE

The purpose of this questionnaire is to collect information on the entire harvest of all crops on the holdings, even those holdings, fields and crops for which no crop cutting was done. The information should be collected after the household has harvested all crops in the field.

Column 1: **Field no.:** In this column write down the field number as it appears on forms AC 2 and AC 3.

Column 2: **Field Location:** write down the location of the field as it appears on forms AC 2 and AC 3.

Column 3: **Crop:** write the name of the crop that was planted on the field. If there are several crops planted on the same field, write each crop on a separate line. Also for mixed crops, each crop should be written on a separate line.

Column 4: **Entire harvest:** write down the entire harvest in units of the crop from this field. It should be clear that the unit should be of known size, e.g. bags.

Column 5: **Kind:** write down the kind of unit in which the entire harvest is measured, e.g. bags.

Column 6: **Size:** here the size of the unit should be given in kg, e.g. if the weight of a bag filled with maize is 60 kg, write 60 kg.

Column 7-8: these two columns should be left blank; they are for **office use only**.

Part 2 of the form: ask the farmer if he/she sells his produce. If he/she does sell, indicate the crops he/she sells, unit of selling and the price per such unit.

Refer to an example of form AC-8 next page

Form AC-8

This information is confidential according to the Statistics Act 2001

Bureau of Statistics
P.O. Box 455,
Maseru LESOTHO.

Farmer's Yield Estimate

Village:..... District

Head of Holding:..... Constituency

Location of Field:..... Community Council

Holding No..... Zone

Season (Winter = W, Summer = S) PSU

Field No	Field Location	Crop	Entire Harvest	Unit		Crop code	Entire Harvest in Kg
				Kind	Size		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Office use

Do you sell crop production? 1=Yes, 2=No If yes; give price per unit

Crop	Price	Unit

INTRUCTIONS: Fill in one line per field if the field has been measured as one unit, and there is only one crop fill in one line for every part of the field if the parts carry different crops.

FOR MIXTURES: Give harvest of each crop on a separate line.

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

26. FORM AC-9: AVAILABILITY AND UTILIZATION OF CEREALS

This form is used to collect information on availability of cereals at household level at the end of the Government Marketing year. **Note: Marketing year starts on the 01/04/2009 and ends on the 31/03/2010.** This form is to be filled on the 1st of April, for it takes only one day to collect this information. **Data will be collected from all sampled households in each PSU.**

(i) **“Previous stocks on 31/03/09”**. Ask the household on the stocks that were available in the household at the beginning of the marketing year 2009/2010.

(ii) **“2009 production or harvest”**. Ask the household the amount of cereals harvested in the 2008/09 crop season.

(iii) **“Purchase in 2009/2010 (01/04/09-31/03/2010)”**. Ask whether any cereals had been bought during the 2009/2010 marketing year.

(iv) **“Received as a gift in 2009/2010”**. The household should indicate if it received any gifts in the form of cereals during the 2009/2010 marketing year.

(v) **“Incoming exchange with other commodities”**. The incoming exchanges with other commodities are those cereals that the household received in exchange for other commodities even with other cereals. For example if a household received a bag of maize in exchange for a bag of sorghum or sheep. Record only those cereals that the household had received.

A. “TOTAL AVAILABILITY” this is the sum of all cereals that were available for the household in the given period of time. That is, **(i + ii + iii + iv + v)**

(vi) **“sold in 2009/2010”**. The household should indicate if it has sold any cereals during the 2009/2010 marketing year.

(vii) **“Given to friends and relatives”**. Ask the household the amount of cereals given to friends or relatives during the 2009/2010 marketing year.

(viii) **“Outgoing exchange with other commodities”**. The outgoing exchanges are the cereals that the household has given out in exchange for other commodities (i.e. those that were battered out). For example, if the household gave out a bag of sorghum in exchange with a bag of maize or sheep. Record only the cereals that the household has given out.

(ix) **“Other uses (seeds, feed, etc)”**. Ask the household on the amount of cereals used for other purposes beside household consumption. **Care should be taken not to include seeds that have been bought elsewhere.**

(x) “Closing stocks at 31/03/2010”. Ask the household the amount of cereal stock held at the end of marketing year.

B. “TOTAL UTILIZATION”. This is the sum of all the cereals the household used during the given marketing year. That is, (vi + vii + viii + ix + x)

(XI) TO (XIV) is for office use .

Refer to an example of form AC-9 next page.

LESOTHO AGRICULTURAL CENSUS 2009/2010

Form AC – 9

This information is confidential according
to the Statistics Act 2001

Bureau of Statistics
P.O. Box 455,
Maseru, 100 Lesotho

AVAILABILITY AND UTILIZATION OF CEREALS IN THE HOUSEHOLD

Village:.....	District	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
Head of Holding:.....	Constituency	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
	Community Council	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
Holding No. <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	Zone	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
	PSU	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>

TITLES	MAIZE		SORGHUM		WHEAT	
	KIND	SIZE in UNITS	KIND	SIZE in UNITS	KIND	SIZE in UNITS
(i) Previous stocks on 31/03/2009						
(ii) 2009 Production						
(iii) Purchases in 2009/2010 (01/04/2009 – 31/03/2010)						
(iv) Received as a Gift in 2009/2010						
(v) Incoming Exchange with other commodities/services						
A. TOTAL AVAILABILITY (i + ii + iii + iv + v)						
(vi) Sold in 2009/2010 (01/04/2009 – 31/03/2010)						
(vii) Given to friends/relatives 2009/2010						
(viii) Outgoing Exchange with other commodities/services						
(ix) Other uses (seeds, feeds etc.) in 2009/10						
(x) Closing Stock on the 31/03/2010						
B. TOTAL UTILIZATION (vi + vii + viii + ix + x)						

THIS SECTION IS FOR THE OFFICE			
TITLES	MAIZE	SORGHUM	WHEAT
(xi) Consumed as food (A – B)			
(xii) Consumption per week (xi/weeks since 01/04/2009)			
(xiii) Expected consumption to (xii * week before 31/03/2010)			
(xiv) Expected Stocks at 31/03/2010			

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

27. FORM AC-10: LIVESTOCK INVENTORY

The purpose of this form is to collect information on livestock of selected holdings. One form should be filled in at the beginning of the AC year. The information on page 1, 2, and 3 relate to August 1st. The information on page 4 refers to changes in stock during the last six months (1st August 2009 to 31st January 2010).

Page 1

The form requires the number of cattle, sheep, goats, and pigs on the holding, specified by age, class and sex. The numbers should be in the boxes provided. The enumerator must carefully check if the sum of the numbers for males and females under a specified age/class tallies with the total numbers for that age/class. In case of difference, he should investigate and find out the correct numbers. The total numbers of cattle, sheep, and pigs have to be recorded at the end, and the enumerator must check again that these totals agree with the sum of their components. In the event of difference, he should find out the correct number after necessary probing.

Ask the household about the number of litters during the last 6 months stating the number of litters for each pig in the provided box.

Page 2

Form AC-10 requires the number of horses and donkeys, subdivided by age group and sex. The cows and oxen should be subdivided by use (milk, draught etc). Ram and hammers are recorded on this page. Also the milk production (in litres) should be reported, as well as months of milked and calving interval for each cow milked both at cattle post and household home.

Page 3

Form AC-10 requires the number of chicken and poultry, and also the number of eggs produced in the last 3 days. The number of dogs, cats and mules should also be filled in. On this page, mortality by age, sex and species during the last six months is required.

Page 4

The form AC-10, requires information on stock change that have taken place during the last six months. For each kind of cattle, sheep, goats, horses, donkeys and pigs, the number of animals six months ago should be reported. The increases during the last six months should be reported: animals purchased, born and received as mafisad. Also, the decreases in stock numbers due to deaths, theft, slaughter, barter, lobola etc should be reported. The enumerator should make sure that, for each category, the number now is equal to the number six months ago plus the total increase minus the total decrease. Also, the total number of cattle, sheep, goats, horse, donkeys and pigs should be the same as the total given on page 1 and 2 of the form.

Form AC-10

This information is confidential according to the Statistics Act of 2001

Bureau of Statistics
P.O.Box 455,
Maseru, 100 LESOTHO

Livestock Inventory

Village:.....

District

Head of Holding:.....

Constituency

Community Council

Holding No.....

Zone

PSU

Season (Winter = W, Summer = S)

List of all livestock owned by the household

CATTLE
Calves under 1 year
Calves 1 but under 2 years
Cattle 2 years and over
ALL CATTLE

Male		

Female		

Total		

SHEEP
Lambs under 1 year
Sheep 1 year and over
ALL SHEEP

Male		

Female		

Total		

GOATS
Kids under 1 year
Goats 1 year and over
ALL GOATS

Male		

Female		

Total		

PIGS
Pigs under 6 months
Pigs 6 months and over
- of which breeding soars
- of which other pigs
ALL PIGS

Total		

No. of Litters during the last 6 months													
Details of litters for each Pig													
Pig No.	1	2	3	4	5	6	7	8	9	10	11	12	
No. of Litters													

List of all livestock owned by the household

HORSES
Horses under 1 year
Horses 1 but under 2 years
Horses 2 years and over
ALL HORSES

Male		

Female		

Total		

DONKEYS
Donkeys under 1 year
Donkeys 1 to under 2 years
Donkeys 2 years and over
ALL DONKEYS

Male		

Female		

Total		

COWS AND OXEN
Kept mainly for drought
Kept mainly for meat
Kept mainly for milk
Kept mainly for drought & milk
TOTAL

Cows/ Tsoetse		

Oxen/Pholo		

Bulls/Poho		

RAMS AND HAMMEL
Rams
Hammels
TOTAL

Number		

MILK PRODUCTION
Yesterday
Day before yesterday

Numbers of cows milked		

Milk produced In litres		

Milk Sold to Lesotho Dairy(lt)		

Details of Lactation and Calving intervals for each cow milked at household's home													
Cow no.	1	2	3	4	5	6	7	8	9	10	11	12	
Months milked													
Calving interval (in months)													

Details of Lactation and Calving intervals for each cow milked at household's Cattle Post													
Cow no.	1	2	3	4	5	6	7	8	9	10	11	12	
Months milked													
Calving interval (in months)													

List of all livestock owned by the household

Chicken and Poultry
Improved
Broilers
Grower Pullets
Laying Hens
Others
Total Improved
Unimproved
Koekoeks
Laying Hens
Others
Total Unimproved

Number		

Number of Eggs produced last 3 days

--	--	--

Number of dogs

--	--	--

Number of mules

--	--	--

Number of cats

--	--	--

Mortality during past six months

CATTLE
Under 1 year of which
- Weaned before death
- Unweaned before death
1 to under 2 years at death
2 years and over at death
Total number died

Male	

Female	

Total		

SHEEP
Under 6 months of which
-Weaned before death
-Unweaned before death
6 months to 1 year at death
1 year and over at death
Total number died

Male	

Female	

Total		

GOATS
Under 6 months of which
- Weaned before death
- Unweaned before death
6 months to 1 year at death
1 year and over at death
Total number died

Male	

Female	

Total		

Stock changes during past six months

No. at beginning of	Cattle			Sheep			Goats			Horses			Donkeys			Pigs		
INCREASES																		
Purchased: Imported																		
Domestic																		
Purchased: Total																		
Number born																		
Mafisad, Lobolad in etc																		
TOTAL INCREASE																		
DECREASES																		
Deaths due to disease:																		
Imported																		
Domestic																		
Total disease																		
Deaths due to other causes																		
TOTAL DEATHS																		
Stolen (theft)																		
Slaughtered																		
Sold: Exported																		
Domestic																		
Bartered, Lobolad out, etc																		
TOTAL DECREASE																		
No. at end of																		

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

Livestock Definitions

Breeding Soars: these are pigs aged six months and over.

Other pigs: should include male and female pigs which are no longer littering or female pigs which are strictly kept for mat only.

Number of litters: number of births for all breeding soars during the past six months.

Calving interval: difference in months between last two young calves of the cows milked yesterday and the day before yesterday.

Lactation period: numbers of months a cow was milked (this refers to the cows milked yesterday and day before yesterday).

Broilers: chickens kept for meat only.

Grower pullets: chickens kept for egg production and should be less than 16 weeks only.

Weaned: Animals which are no more suckling.

Mortality: Death due to natural causes.

Milk sales: whether the household sells milk to the dairy.

28. FORM AC-11: STRUCTURAL INFORMATION

This form is used for collecting data concerning structural information of the household. This information includes legal status of the holding, machinery and equipment, building, hired workers and so forth. The information will be collected at the end of AC year.

1. Legal Status of Holding:

The enumerator should state the ownership of the holding by ticking the appropriate box for one household, two or more households, prison farms, school, projects or other institutions.

2. Machinery and Equipment at the holding:

Column 1: **Item** is the type of machinery or equipment for which information is required.

Column 2: **No. at the holding:** write on the appropriate line the total number of each item (machinery and equipment), which are found on the holding during the time of interview irrespective of who is the owner. That is, the total number of tractors, ploughs, harrows, planters, etc.

Column 3: **No. Fully owned:** Indicate how many of each items are fully owned by the household.

Column 4: **No. shared with others:** Indicate how many of each of the items are partly owned by the household. (i.e. which are shared with others).

Column 5: **No. Borrowed:** Indicate how many items were borrowed.

Column 6: **No. Rented:** Indicate how many items were rented.

3. Building (Except Residential Building):

Column1: Building Number.

Column 2: **Tenure:** State by coding whether the building is owned, rented or specify any other form of tenure. The codes are:

01 = Owned

02 = Rented

03 = Others (specify).....

Column 3: **Purpose:** State by coding the purpose for which the building is used, as shown below:

- 01 = Keeping livestock
- 02 = keeping poultry
- 03 = Storage for products
- 04 = Storage for equipment
- 05 = Mixed purposes
- 06 = Office
- 07 = Other (specify).....

Column 4: **Type of Building:** State the type of material used to build each of the buildings. Use the following codes:

- 01 = Bricks
- 02 = Mud
- 03 = Stones
- 04 = Iron sheets
- 05 = Others (specify).....

4. Investment during the Agricultural Year

Ask if the household has repaired or bought any new machine/equipment during the AC year. If yes, fill in part A of section 4, but if no fill in part B

Part A:

Column 1 **Item:** Write the type of machine/equipment which information is filled for.

Column 2 **Number:** Fill in the number of items bought or repaired during the year.

Column 3 **Price in Maloti:** Indicate price of the item in Maloti or Price paid when repairing the machine/equipment.

Part B:

Ask if the household has renovated or built new farmhouse during the AC year. If yes, fill in part B of the section 4, but if no fill in section 5.

Column 1 **New Building:** Write the type of the building which was newly build during the AC year.

Column 2 **Price in Maloti:** Indicate total expenses incurred when building such building in Maloti.

Column 3 **Renovated building:** Write the type of the building which was renovated during the AC year.

Column 4 **Price in Maloti:** Indicate total expenses incurred when renovating such building in Maloti.

5. Auxiliary Activities: Ask if the household is involved in one of the agricultural activities listed below. Write 01 for Yes (if it is involved) or 02 for No (if not involved). The agricultural activities are: forestry, fishery, agriculture projects and irrigation. Poultry should be fifty or more.

6. Hired Farm Workers: Write down the number of hired farm workers, subdivided by permanent and occasional workers, by sex and their salary per month. Note that the unpaid family workers should not be included.

7. Access to irrigating water: Find out whether the household have access to irrigating water. Code 01=Yes

02=No

If yes, what is the source of such water? State the appropriate code.

01= Dam –three meters or more of depth

02= Pond – less than three meters of depth

03= River

04= Plastic tank

05= Stone tank-Roof water harvesting tank

06= Stone tank-Spring development

07= Stone tank-Underground water storage tank

08= Ground water

09= Private pipe

10= Community pipe

8. Desertification: this is the state whereby the land becomes dry to an extend that it cannot be easily cultivated or cannot be cultivated at all (sebataolo).

State the cause of formation of (sebataolo). Use the following codes;

01= Drought

02= Uncontrolled burning

03= Cultivation activities

04= Exotic\Invasive Species

05= Overgrazing

06= Other (Specify).....

LESOTHO AGRICULTURAL CENSUS 2009/2010

Form AC-11

This information is confidential according
to the Statistics Act of 2001

**Bureau of Statistics
P.O.Box 455,
Maseru, 100 LESOTHO**

Structural Information

Village:.....	District	<input type="text"/>
Head of Holding:.....	Constituency	<input type="text"/>
	Community Council	<input type="text"/>
Holding No.....	Zone	<input type="text"/>
	PSU	<input type="text"/>

- 1. Legal Status of Holding (Tick)**
- One Household**
 - Two or More Households**
 - Prison Farm**
 - School Farm**
 - Project**
 - Other (Specify).....**
- 2. Machinery and Equipment at the holding**

Items	No. at the holding	No. fully owned	No. shared with Other holdings	No. used but Not owned	No. rented
Tractors					
Ploughs					
Harrows					
Planters					
Cultivators					
Sprayers					
Harvesting machines					
Trucks/Vans					
Scotch Cart					

3. Buildings –excluding residential buildings

Building No.	Tenure	Purpose	Type of building
1.			
2.			
3.			
4.			
5.			
6.			

CODES	01. Owned 02. Rented 03. Other (Specify)..... ...	01. Keeping livestock 02. Keeping poultry 03. Storage for produce 04. Storage for equipment 05. Mixed purpose 06. Office 07. Other (Specify).....	01. Brick 02. Mud 03. Stones 04. Iron sheets 05. Other (Specify)
-------	--	---	---

04. Investment during Agricultural Year 2009/2010

(A) . Did you buy/repair any farm machinery/equipment? 01=Yes, 02=No if yes fill below:

Items	Number	Price in Maloti

(B). Did you renovate or build farm buildings? 01=Yes, 02=No If yes fill below:

New Buildings	Price in Maloti	Renovated Buildings	Price in Maloti

5. Auxiliary Items/Activities

Is this household involved in forestry?

Is this household involved in fishery?

Does the household have access to irrigation?

Is this household involved in poultry?

Is the household involved in Bee-Keeping Activity?

01=Yes	02=No
<input type="checkbox"/>	<input type="checkbox"/>

6. Hired workers

	Males	Females	Total Earnings
Permanent			
Occasional			

7. Access to Irrigating water

Does household have access to irrigating water? 01=Yes 02=No

If yes, what is the source of such water? (Tick)

1. Dam

2. Pond

3. River

4. Plastic tank

5. Stone tank- Roof water harvesting tank

6. Stone tank- Spring development

7. Stone tank- Underground water storage tank

8. Ground water

9. Private pipe

10. Community pipe

<input type="checkbox"/>

8. Desertification-

Is the field experiencing any form of desertification? Write 01 for yes, 02 for no.

If yes, state the cause using the codes below:

01= Drought

02=Uncontrolled burning

03=Cultivation activities

04=Exotic/invasive species

05=Overgrazing

06= Other (Specify).....

INSTRUCTIONS FOR URBAN FORMS

1. Form UAC -1: Household listing

In the same manner as form AC-1 of rural PSUs, the main purpose of this form is to enable us to do the second stage of sampling (*household selection*) in the urban areas.

Identification particulars: Fill in as explained below.

Column 1 **serial number**: write down a serial number of household in the order they are visited, that is, the first household will be 001, the second 002, and the third 003 and so on.

Column 2 **Head of household**: write down the name and surname of the household head as supplied by the household head or any other member of the household who is 18 years of age and above. This name should be commonly known by the neighbours.

Column 3 **Sex**: state whether the household head is male or female by writing 01 for male and 02 for female.

Column 4 **Do you have a kitchen garden?**: write 01 for yes if household has a kitchen garden, which is a small piece of land close to the house and normally used for planting vegetables and write 02 for No, if the household does not have any kitchen garden.

Column 5 **Do you have poultry?**: write down the number of chicken including ducks which the household has.

Column 6 **Do you operate any fields?**: write down the number of fields the household operates including those rented in and those share cropped with other households.

Column 7 **Number of cattle**: write down the number of all cattle belonging to the household. Those mafisad in should be included but mafisad out should be excluded.

Column 8 **Number of sheep**: write down the number of sheep belonging to the household. Again sheep mafisad out should be excluded.

Column 9 **Number of goats**: write down the number of goats belonging to the household. Include those mafisad in and those mafisad out should be excluded.

Column 10 **Number of pigs**: write down the number of pigs belonging to the household and include those mafisad in but exclude those mafisad out.

Column 11 **Holding number**: this column should be left blank. This is for office use only.

Refer to the next page for an example of form UAC-1

Form UAC-2(i)	This information is confidential according to the Statistics Act 2001	Bureau of Statistics P.O. Box 455, Maseru, 100. Lesotho.
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Rural Household Members

Village:.....

Chief/Headman:.....

Household Head:.....

District:

--	--

Constituency:

--	--

Community council:

--	--

EA:

--	--

Holding No.:

--	--

Serial No.	Name of Household members starting with the h/h head	Relationship to h/h head	Age	Sex	Main activity for those 6 Yrs+	Domestic worker or Herd boy?	Educational level attained for those 2yrs +	Contribute to farming? Those 6 Yrs +	Residential status of h/h head	Income Level	Sources of income for the holding starting with the main
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CODES											
		01=Head 02=Spouse 03=Child 04=Sibling 05=Son/Daughter-in-law 06=grandchild/great grandchild 07=Parent/Parent in law 08=Grandparent 09=Other relative 10=Not related	Enter age in completed yrs. If age is less than 1yr enter 00	01=Male 02=Female	01=Employer 02=Own account worker 03=Wage/salary 04=Unpaid family worker 05=Casual worker 06=Job seeking 07=Job seeking for the first time 08=Home maker 09=Housewife 10=Retired 11=Old age benefits 12=Student 13=Disabled 14=Farmer 15=Other (specify)..... 98=Not applicable	01=Domestic worker 02=Herd boy 98=Not applicable	01=Pre-school 02=Std 1-7 03=Form 1-5 04= Dip/Cert after primary after primary 05= Vocational training after primary 06=Dip/Cert after high school 07=Vocational after high school 08=Graduate 09=Post graduate 10=Non-formal educ. 11=None 12=Other (specify)..... 98=Not applicable	01=Yes 02=No 98=Those less than 6 years	01= Present 02=Elsewhere in Lesotho 03=Outside Lesotho but in RSA 04=Outside Lesotho & RSA	It should be annually Write 00 for less than six years and non income earners	01=Subsistence farming 02=Cash crop 03=Livestock products 04=Livestock products 05=Mine Remittance 06=Wage/Salary 07=Pension Fund 08=Block farming 09=Other (specify).....

Enumerator's name:.....Signature:.....Date:.....

Supervisor's name:.....Signature:.....Date:.....

2. Form UAC-2: Household members

This form is filled in the same way as the rural form AC-2 is filled. Example of UAC-2 refers to the previous page.

3. Form UAC-3: Household possessions

Identification particulars will be as in other forms.

1. Ownership of Kitchen gardens and fields

Fill in the number of fields owned and operated by the owner, the number of fields not owned but operated by the selected household and the number of fields the household operates in cooperation with other households.

Fill in the number of kitchen gardens the household has, including the number of vegetable fields. These are fields where household has planted only vegetables not cereals.

2. Ownership of Poultry and Livestock

Fill in the number of dairy cattle, other cattle, merino sheep (improved), other sheep, angora goats (improved), other goats, improved pigs and other pigs (unimproved). Ask the household if they have poultry. Fill in their numbers by their categories as given in the form.

3. Fruit Trees and/or Orchards

Count the number of trees found in the holding. Categorize them according to their types.

Number bearing/productive: count the number of bearing trees found in the holding by type.

Number Non-bearing/non-productive: count the number of trees which are not bearing by type.

Kind: if household sells fruits from trees, fill in the kind of unit used to sell e.g. bag, tin.

Size: write the size of the unit which is used to sell fruits. e.g. 50kg, 20litres.

Price per unit: Fill in the price the household charges per unit when selling fruits.

4. Auxiliary items

Ask the household how many of the listed farming tools he/she owns. In the provided box fill-in number of each of the tools owned including number borrowed or rented in.

Ask the household if there is a water pipe in the yard. Write 01 for yes and 02 for No. Also ask if the household irrigates the garden. Write 01 for yes and 02 for no.

5. Access to Irrigation water

Ask the household if it has access to irrigation water. Write 01 for yes and 02 for No
If yes write down code of main source.

Form UAC - 3

This Information is Confidential according to the Statistics Act 2001

Bureau of Statistics
P. O. Box 455
Maseru, 100, Lesotho

Household Possessions

Village:.....	District	<input type="text"/>	<input type="text"/>
Chief/Headman:.....	Constituency	<input type="text"/>	<input type="text"/>
Household Head:.....	E.A. NO.	<input type="text"/>	<input type="text"/>
Season (Winter= W Summer= S).....	Holding No.	<input type="text"/>	<input type="text"/>

1. Ownership of Kitchen Gardens and Fields

No. Fields owned and operated	<input type="text"/>	<input type="text"/>
No. Fields not owned and but operated	<input type="text"/>	<input type="text"/>
No. Fields sharecropped	<input type="text"/>	<input type="text"/>

No. of Kitchen Gardens	<input type="text"/>	<input type="text"/>
No. of Vegetables Fields	<input type="text"/>	<input type="text"/>

2. Ownership of poultry and livestock

No. of Dairy cows	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Other cattle	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Merino sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Other sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Angora Goats	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Other Goats	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Improved pigs	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Other pigs	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Rabbits	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Dogs	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Cats	<input type="text"/>	<input type="text"/>	<input type="text"/>

No. of Improved chicken	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Of which broilers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Of which laying hens	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Of which grower pullets	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Other chicken	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of unimproved	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of koekoeks	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of laying hens	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of other chicken	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of ducks	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of turkey	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

3. Fruit trees/Orchards

Type of trees	Number bearing/ Productive		Non-bearing/ Non-Productive		Do you sell fruits? 01=Yes, 02=No If yes; give price per unit.		
					Unit		Price per unit
					Kind	Size	
No. of peach trees							
No. of apricot trees							
No. of apple trees							
No. of pear trees							
No. of plum trees							
No. of grape trees							
Other fruit trees							

4. Auxiliary items

- No. of wheelbarrows
- No. of tractors
- No. of scotchcart
- No. of digging forks /spades
- No. of rakes
- No. of hand-hoes
- Watering cans
- Hose-pipes

Owned Borrowed Rented

Owned	Borrowed	Rented

- Do you have water pipe in the yard? 01= Yes, 02= No
- Do you irrigate your garden? 01=Yes, 02= No
- Do you irrigate your garden? 01=Yes, 02= No

5. Access to irrigation Water

- Do you have access to irrigating water? 01= Yes, 02= No
- If yes, what is your main source?
- 01=Dam 05=Ground water
- 02=River 06= Private pipe
- 03=Plastic tank 07=Community pipe
- 04= Stone tank 08=Other (specify).....

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

5. Form UAC-4: Kitchen garden measurements

A kitchen garden is a small piece of land close to the house and normally used for planting vegetables. It should be measured along with all fields that are used for planting vegetables.

Before measuring the kitchen garden, prepare the sketch of the garden showing the shape and number of plots. Unlike in the fields where measuring tape and compass are used to take sides and angles, in vegetable/kitchen gardens use tape only. Measure the length and width of each plot in the case where each plot is planted a different crop, otherwise measure plots planted to the same crop together.

The area can be calculated by using “L* W” procedure.

If household has vegetable field(s), use compass and measuring tape to take angles and lengths as in Form AC-3. Example of form UAC-4 is shown below.

LESOTHO AGRICULTURAL CENSUS 2009/2010		Page.....of.....
Form UAPS - 4	This Information is Confidential according to the Statistics Act 2001	Bureau of Statistics P. O. Box 455 Maseru, 100 LESOTHO
Kitchen Garden Measurement		

Village:.....	District	<input style="width: 40px; height: 20px;" type="text"/>
Chief/Headman:.....	Constituency	<input style="width: 40px; height: 20px;" type="text"/>
Household Head:.....	E.A. NO.	<input style="width: 40px; height: 20px;" type="text"/>
Season (Winter= W Summer= S).....	Holding No.	<input style="width: 40px; height: 20px;" type="text"/>

Measurements of Plots

Plot no.	Side	Measure (meters)	Area	Crop	Plot no.	Side	Measure (meters)	Area	Crop
	Length					Length			
	Width					Width			
	Length					Length			
	Width					Width			
	Length					Length			
	Width					Width			
	Length					Length			
	Width					Width			
	Length					Length			
	Width					Width			
	Length					Length			
	Width					Width			

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

6. Form UAC-5: Operations, inputs and costs

In the same manner as in AC-5 of rural areas, this form is used to collect information on type of operations and inputs used in the vegetable gardens as well as amount spent on vegetable gardens.

Crop: list all crops planted in the plots. Be aware that Crop (A) for example, will remain the same in all other parts of the form.

1. Operations:

Ploughing: Code the method used for ploughing the kitchen garden. The household may use different methods of ploughing the garden, list all methods used.

Planting: Write the code for the planting method used in each crop. Codes should be written against crop numbers. For example, if crop A is tomato in the upper part of the form where crops are indicated, then write code for planting tomato against crop (A) in planting section.

Weeding: Write down the code for the weeding method used for each crop.

2. Inputs

This part is filled in the same way as in Form AC-5 inputs. If household has used more than one fertilizer or pesticide on one crop, codes must be written down against such crop.

3. Cost:

This part is filled in the same way as in Form AC-5 costs. For each method of operation and inputs used write down the cost incurred.

Main purpose of planting the vegetable: Ask the farmer what was his/ her main purpose of planting the crop. Specify the crops (e.g. crop A), and then write codes for the main purpose on space provided.

Form UAC- 5

This Information is Confidential according to the Statistics Act 2001

Bureau of Statistics
P. O. Box 455
Maseru, 100
LESOTHO

Operation, Inputs and Costs

Village:..... District

Chief/Headman:..... Constituency

Household Head:..... E.A. NO.

Holding No.

Season (Winter= W Summer= S)..... Plot No.

Crops: (A).....(B).....(C).....(D).....(E).....(F).....

1.Operations	Method Used			Amount in Maloti			Method used
	Crops	Method Used	Cost	Crops	Method Used	Cost	
Ploughing							01 Own Spade 02 Hired Spade 03 Own Digging Fork 04 Hired Digging Fork 05 Combination (codes.....) 06 Other (specify).....
Planting	Crop (A)			Crop (D)			01 Manual in rows 02 Manual Scattered 03 Hired Labour Manual in rows 04 Hired Labour Manual scattered 04 Combination (codes.....) 05 Other (specify).....
	Crop (B)			Crop (E)			
	Crop (C)			Crop (F)			
Weeding	Crop (A)			Crop (D)			01 Hired Labour 02 Own Labour 03 Hired labour and own labour 04 Other (specify)
	Crop (B)			Crop (E)			
	Crop (C)			Crop (F)			

The main purpose of planting the vegetable (put appropriate codes)

Crops	Main purpose

Main Purpose Codes

- 01=Consumption
- 02=Selling
- 03=Both consumption and selling
- 04=Other (specify).....

2. Crops	Inputs	Type Code	Quantity	Unit		Price per Unit	Amount
				Kind	Size		
	Inorganic Fertilizer						
	Organic Fertilizer						
	Seed						
	Pesticides						
	Inorganic Fertilizer						
	Organic Fertilizer						
	Seed						
	Pesticides						
	Inorganic Fertilizer						
	Organic Fertilizer						
	Seed						
	Pesticides						
	Inorganic Fertilizer						
	Organic Fertilizer						
	Seed						
	Pesticides						
	Inorganic Fertilizer						
	Organic Fertilizer						
	Seed						
	Pesticides						

CODES

Inorganic Fertilizer	Organic Fertilizer	Seeds	Pesticides
00 – None	00 – None	01 – Own Crop	00 – None
01 – Double Supers	01 – Ash	02 – Bought Locally	01 – Malathion
02 – Single Supers	02 – Kraal Manure	03 – Hybrid	02 – Metasystox
03 – 3:2:1 (35)	03 – Poultry Manure	04 – combination (codes.....)	03 – Ripcort
04 – 3:2:1 (25)	04 – Pig Manure	05 – other (specify).....	04 - Karate
05 – Lime Ammonium Nitrate.	05 – combination (codes.....)		05 - Lanacol
06 – 2:3:2 (22)	06 – other (specify).....		06 - Aphicides
07 – Lime			07 – Dithane M45
08 – Urea			08 – Cutworm bait
09 – 3:2:1 (32)			09 – Phostoxin tablets
10 – 3:2:1 (30)			10 – Thiodan
11 – combination (codes.....)			11 – combination (codes.....)
12 – other (specify).....			12 – other (specify).....

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....

7. Form UAC-6 Farm Products

This form is filled at the end of each month. The purpose is to collect information on vegetables and livestock products monthly. If possible, ask the household to keep the daily record of vegetables harvested during each month.

1. Vegetables

Column 1 **Plot no:** Write the plot number which you are going to fill information on. If its plot A, crop planted should be crop A that appeared in the previous Form UAC-5.

Column 2 **Vegetables:** Write the vegetable planted in the plot.

Column 3 **Entire harvest:** Fill in total harvest for the month you are taking.

Column 4 **Kind:** Indicate the unit used to measure harvest, e.g. tin, bag etc.

Column 5 **Size:** Indicate the size of the unit used, e.g. 20litres, 70kg etc.

Column 6 and 7 should be left blank, they are for office use.

From households who sell their vegetables indicate unit used for selling and price per unit.

2. Cows and Milk production

2.1 Cows: Indicate the number of cows kept and their purpose.

2.2 Milk Production: Fill in the amount of milk produced, unit used for selling and price per unit. If milk is sold to Lesotho Dairy fill in the quantity in litres

3. Poultry and Egg production

3.1 Poultry: This part is filled in the same way as in Form AC-10 page 4, but in this case for poultry

3.2 Egg Production: Determine the production of eggs.

Definitions:

Grower pullets: these are improved chicken that are between one-day and 16 weeks old. After 16 weeks they start laying eggs and automatically become **Layers**.

Broilers: these are improved chicken that are specifically kept for meat production, regardless of age.

Others: these refer to unimproved chicken which are not at laying stage and/or not laying hens.

For an example of UAC 6 see next page

3.2 Egg Production (unit- number of Eggs)

	Number	Unit
Total Production for past seven days		
Egg sold passed seven days		
(i) sold to institution		
(ii) sold to individual		
Eggs consumed during past seven days		
Eggs given away during past seven days		
Eggs spoiled during past seven days		
Eggs at the end of seven days		

Enumerator's name:.....Date:.....Signature:.....

Supervisor's name:.....Date:.....Signature:.....