

Approaches to measuring asset ownership and control in Agricultural Censuses and Surveys

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Technical Meeting on Measuring Asset Ownership from a Gender Perspective

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Introduction

This meeting, and indeed the EDGE Initiative itself are, in part, the direct result of the increasing recognition of the need to address the gender gap in asset ownership and control, and to augment support to national statistical systems to produce gender statistics that will facilitate this process. This is especially true for the agricultural sector (particularly the smallholder sector), where it is now recognised that the gender gap imposes real costs on society in terms of lost agricultural output, food security and economic growth (FAO 2011).

As part of its contribution to the EDGE Initiative, FAO will conduct a review of how data on 'ownership' and 'management' of land have been collected in the agricultural censuses conducted from 2006-2015 under the Programme for the World Census of Agriculture (WCA), details of which will be presented later in the paper. The review will identify:

- How land ownership has been defined/collected
- Where data are collected at individual/parcel level
- Use of sub-holding or joint holding concepts and how operationalized
- Note other relevant indicators collected at individual/sub-holding level
- Compare WCA methods to other initiatives (e.g., LSMS-ISA, Gender Asset Gap Project, etc.)

The review results will be supplemented by other materials, including: work on gender statistics from previous WCA rounds; re-tabulation of existing agricultural census and survey data to produce sex-disaggregated data and gender-sensitive indicators at national level, and; methodological tools and training materials produced from these experiences. This review has barely begun and even preliminary results are currently unavailable.

As a prelude to the discussions that will take place at this meeting over the next four days, the remainder of this presentation will:

- Highlight key aspects of the FAO Programme of the World Census of Agriculture (WCA) for the investigation of the gender gap in agricultural land ownership/management;
- Present some background information and first impressions from the very preliminary analysis to date of national experiences with collecting data on agricultural land ownership and management at different levels during WCA 2010 round;
- Present tools for collecting sex-disaggregated data on agricultural land ownership and management that FAO has developed in collaboration with National Statistics offices based on successful national practices (especially in Africa) in order to highlight strengths and weaknesses during discussion in this session;

- Offer some tentative issues for discussion on how to measure land ownership and management at individual level;

Gender and Land Ownership Aspects of Agricultural Censuses under WCA 2010

As mentioned in the introduction of this report, the FAO will review how data on 'ownership' and 'management' of land have been collected in the agricultural censuses during the WCA 2010 round. It would therefore be useful to review key features of agricultural censuses and relevant items contained in the WCA 2010 guidelines before discussing national experiences with data collection, which we have only just begun to review, and presenting existing tools for collecting sex-disaggregated data on land ownership at individual,

A census of agriculture is a statistical operation for collecting, processing and disseminating data on the structure of agriculture, covering the whole or a significant part of the country. This normally involves collecting key structural data (e.g., size of holding, land tenure, land use, crop area harvested, irrigation, livestock numbers, labour and other agricultural inputs, etc.) by complete enumeration of all agricultural holdings, in combination with more detailed structural data using sampling methods. Since they are usually undertaken only once every ten years, agricultural censuses have not normally included data that change from year to year, such as agricultural production or agricultural prices (FAO 2005).

Fundamental concepts for the agricultural census are those of the agricultural holding and the agricultural holder.

Agricultural holding is the statistical unit of observation in agricultural censuses and is defined as:

An economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form, or size. Single management may be exercised by an individual or household, jointly by two or more individuals or households, by a clan or tribe, or by a juridical person such as a corporation, cooperative or government agency. The holding's land may consist of one or more **parcels** that share the same production means, such as labour, farm buildings, machinery or draught animals. Parcels are further divided into **plots** (FAO, 2005: 21).

Agricultural holder is: "a person who makes major decisions regarding resource use and exercises management control over the agricultural holding operation. The holder has technical and economic responsibility for the holding and may undertake all responsibilities directly, or delegate responsibilities related to day-to-day work management to a hired manager". (FAO, 2005: 23)

The World Census of Agriculture (WCA) is a ten-year, world-wide programme of agricultural censuses promoted by FAO that involves well over 100 participating countries. In the current round (WCA 2010), which covers the period of 2006-2015, the programme has two components; a) the **Agricultural census** itself, that provides basic structural data and sampling frames for agricultural surveys usually through a complete enumeration of agricultural holdings, and; b) the **Agricultural survey programme**, which covers the various ongoing and in-depth sample surveys to be undertaken after the agricultural census, using the census as a frame. FAO recommends two types of census data items: **Primary items**, which are a limited set of key data items suitable for complete enumeration, and; **Secondary items**, which are additional items suitable for enumeration by sample surveys that countries may wish to include as a supplement to the main census or for sampling frame purposes (FAO 2005).

An added feature of WCA 2010 of particular interest for gender analysis is the inclusion of the concepts of the sub-holding and sub-holder (FAO 2005).

A **sub-holding** is defined as a single agricultural activity or group of activities (e.g., a field, a plot, a livestock operation, etc.) managed by a particular person or group of persons in the holder's household on behalf of the agricultural holder. There may be one or more than one sub-holding in a holding.

A **sub-holder** is a person responsible for managing a sub-holding on the holder's behalf. There is only one sub-holder in a sub-holding, but there may be more than one sub-holder in a holding. The sub-holder concept is broadly similar to the concepts of "plot manager" and "farm operator" used in some countries. During the 2000 Round of WCA (1996-2005), the sub-holder concept was found to be useful in Sub-Saharan Africa, where it was tried out in several censuses on an experimental basis.

Data on sub-holdings and sub-holders are recommended for inclusion in the supplementary component of the agricultural census under Theme 12: **Management of the holding**. As new concepts, the WCA 2010 guidelines note that countries will need to put considerable effort into developing suitable data collection methods and questions to identify sub-holdings and sub-holders in the agricultural census. The approach used by a country will depend on national agricultural practices and social and cultural conditions, taking into consideration the data collection methodology used for the rest of the agricultural census. Usually, a series of questions about each household member will be needed, to find out about the types of work each carried out on the holding and their role in managing agricultural production activities.

Gender is included in the list of themes in census recommendations. It should be noted that Gender is only one of several themes (e.g., aquaculture, time use, etc.) that countries must consider when setting the scope of the agricultural census. It often must compete with these themes for scarce resources in order to be included. For Gender analysis, the minimal core data items for inclusion are the **sex of the holder** (0003) and the **age of the holder** (0004). This will allow for not only tabulation of these features of the holding, but also cross-tabulation with other features of the recommended core data set (FAO 2005). In the theme 12 management of the holding, WCA 2010 guidelines recommend the collection of the **sex of the sub-holder** (1211) and the **age of the sub-holder** (1212) for each sub-holding (FAO 2005: 120).

Most of the information contained on land ownership in the agricultural census can be obtained under the topic of Land Tenure. Land tenure refers to the arrangements or rights under which the holder operates the land making up the holding. The WCA acknowledges that there are many forms of tenure around the world and that the distinction between legal and non-legal (customary?) ownership are often blurred. Broad guidelines are given, but it is acknowledged that countries must determine land tenure categories according to their local circumstances (FAO 2005: 80).

The land tenure categories according to the 2010 Programme of the World Census of Agriculture are recommended in the core module under the Item 0009. Item 0009 refers to whether the holding is operated under specific land tenure types. The recommended types are: a) **legal ownership or legal owner-like possession**; b) **non-legal ownership or non-legal owner-like possession**; c) **rented from someone else**, and d) **other types of land tenure**. These categories of possession have been introduced into the land tenure concept in the current WCA to address the issue of security of tenure. **Legal ownership or legal owner-like possession** describes land rights that provide statutory security of tenure. The ownership must be recognized by the state, and administrative structures must be in place to ensure that property rights are enforceable. **Non-legal ownership or non-legal**

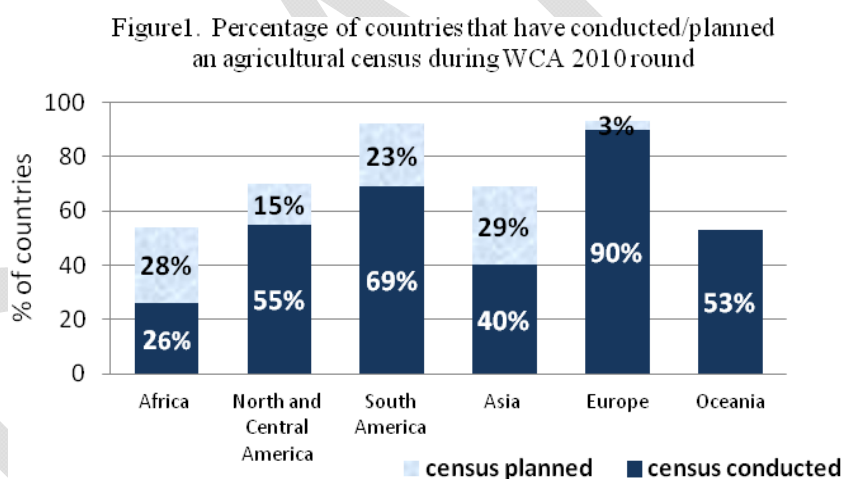
owner-like possession describes a variety of informal land tenure arrangements, which do not provide security of tenure, and where circumstances could arise where the holder may be dispossessed of the land.

A holding may have one or more tenure types corresponding to each land parcel. For each parcel, similar land tenure data are recommended for collection in the Supplementary Module under items 0103 (**Land tenure**) and 0104 for rented parcels (**Terms of rental**) (FAO, 2005). In this supplementary theme, there is often scope for collecting information on the sex of the person responsible for management of the plot.

Preliminary Review of National Experiences

A review of the implementation of agricultural censuses for the WCA 2010 round (2006-2015), based on information available to FAO, shows that so far 102 countries¹ have already conducted an agricultural census and 42 are planning to carry out one during the next three years. This is expected to result in an unprecedented rate of participation of countries in a WCA round.

The figure of 102 countries that have already carried out a census during the first 7 years of the WCA 2010 round, represent a promising end of the round results. As presented in Figure 1, Europe is the region with the highest proportion of countries completing censuses (90%), followed by South America (69%), North and Central America (55%), Oceania (53%), Asia (40%) and Africa (26%).



It should be noted that, as a large scale periodic statistical operation the agricultural census takes a considerable amount of time from the planning phase, census execution and finalization of the census (post census work). The planning phase alone can take about two years and another two years to release the data. Therefore, it is not surprising that not all countries that have already conducted their agricultural census have yet to release their data.

Figure 2 and Table 1 below present the agricultural census material currently available to FAO for review in all regions at the time of this meeting. The grouping of countries by regions follows the standard recommended by the United Nations Statistics Division (UNSD) on the composition of macro-geographical (continental) regions viz. Africa, Americas, Asia, Europe and Oceania. However,

¹ Throughout this paper, for reader's convenience, under a country it will be meant either a country in the political sense of the word, or a territory which for statistical purposes has been considered as a separate entity having participated in a WCA round.

to be able to draw meaningful conclusions from an analysis of country practices, the countries in the Americas have been classified into two groups “America, North and Central” and “America, South”.

Figure2. Agricultural census materials currently available from WCA 2010 round

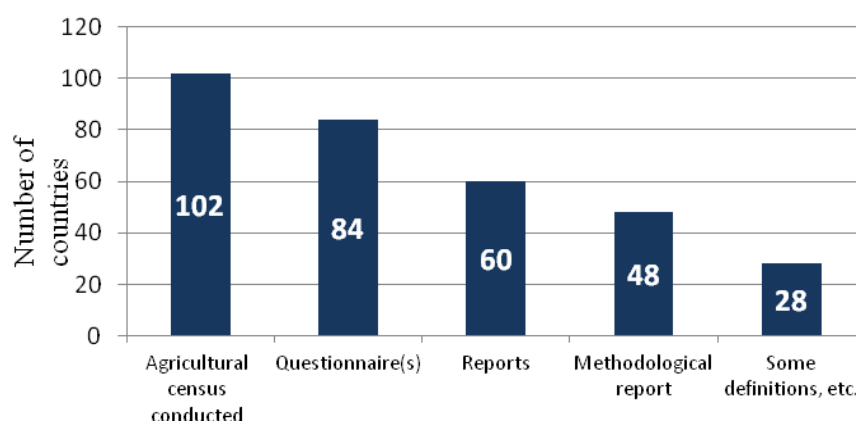


Table1. WCA 2010 Agricultural census material currently available by Region

Region	Agricultural census conducted	Questionnaire(s)	Reports	Methodological report	Some definitions, etc.
World	102	84	60	48	28
Africa	14	10	9	7	2
America, North and Central	15	14	11	6	4
America, South	9	8	5	4	3
Asia	19	11	6	2	7
Europe	35	31	20	29	3
Oceania	10	10	9	0	9

Table 2 below summarizes the availability to date of the data collected on land tenure/ownership, and sex - disaggregated data at holding level (Sex of Holder) and plot level (Sex of Holder/Plot Manager) by region during the WCA 2010 round (2006-2015). The majority of countries in each region collect data about land tenure. However, the number of countries that have collected data (any data) at plot level in each region is much lower. For example, in Europe no countries reported having collected information at plot level.

In addition, land tenure classifications used by countries vary considerably, many being different from those recommended. Some countries tried to introduce their specific land tenure classifications. Some of them restricted themselves only to owned and rented land, grouping all other types into the category “others” or not even mentioning them at all.

Table 2: Availability of land tenure/ownership data, and sex-desegregated data collected at holding and plot level

Characteristics	Africa (10 countries sampled)		Asia and Oceania (21 countries sampled)		Europe (21 countries sampled)		America North and Central (13 countries sampled)		America, South (8 countries sampled)	
	number	%	number	%	number	%	number	%	number	%
Data available at holding level:										
Countries that collected data on land tenure/ownership/mode of acquisition	10	100%	17	89%	19	90%	13	100%	8	100%
Countries for which is possible to generate SDD on tenure	5	50%	2	12%	0	0%	13	100%	0	0
Data available at plot level:										
Countries that collected land tenure/ownership/mode of acquisition at plot level	7	100%	8	100%	0	0%	4	31%	3	75%
Countries that collected SDD at plot level	4	57%	0	0%	0	0%	0	0%	0	0

Based on a rapid review of the ten African census questionnaires available at FAO we have identified a number of types of land tenure/ownership/access. All 10 countries studied in Africa have collected data at holding level on land tenure/ownership/mode of acquisition. Out of these ten countries, seven countries (Burkina Faso, Mozambique, Niger, Rwanda, Seychelles, Togo and Uganda) have collected data on land tenure at plot level. Five of these countries (i.e., Burkina Faso, Mozambique, Niger, Togo and Uganda) appear to have collected data on the sex of the holder, making it possible to generate sex-disaggregated data on tenure at the level of the holding. Four of seven countries (Mozambique, Niger, Togo and Uganda) appear to have collected data on the sex of the plot manager.

In Tanzania, the Sample Census of Agriculture 2008/09 identified the following types of land ownership: **Area owned; Area under customary law; Area bought from others; Area rented from others; Area borrowed from others; Area shared** –cropped from others, and; **Area under other forms of tenure**. The area of land under each type of tenure arrangement as reported by the respondent was listed, allowing for comparison of data from earlier WCA rounds. This section of the questionnaire also contained a question, “Is there any female who owns land or has customary rights to land ownership in this household (Yes=1; No=2). Unfortunately, the inability to link this information with specific individuals or parcels limits the analysis to the proportion of holdings/households where a women has rights to some (unspecified amount) of agricultural land.

In **Asia and Oceania** 21 census questionnaires were studied: 11 census questionnaires from Asia and 10 census questionnaires from Oceania. In Asia, ten of eleven countries have collected data on land tenure at holding level and only four countries (Lao PDR, Myanmar, Nepal and Thailand) have collected data on land tenure forms at plot level. In Oceania, all ten countries sampled have collected data on land tenure at holding level and only five countries (Cook Island, Fiji, Niue, Samoa and Vanuatu) have collected data on land tenure at plot level.

The most frequent types of tenure identified were:

- **Owned:** Owned; Owner-like possession; Family owned;
- **Rented:** For a quantity of production; For an agreed amount of money; Exchange of services; Rental agreement; Other rental agreements;
- **Leased:** Freehold leased land; Crown lease; Leased customary land, and government land.

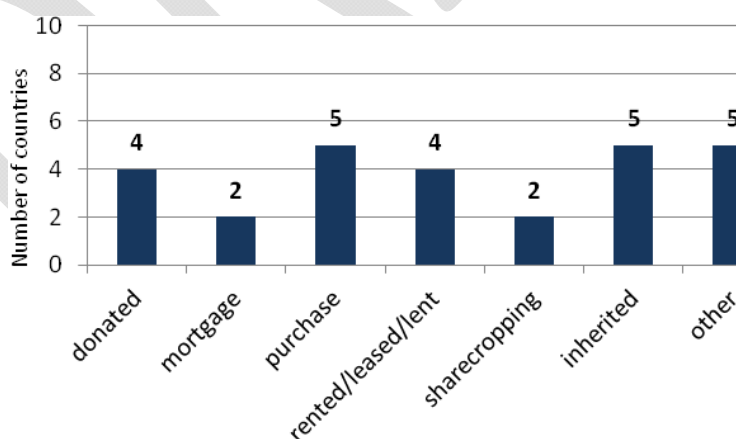
In **Myanmar**, the Census of Agriculture 2010 identified three types of land tenure:

1. **Owner-like:** refers to the legal ownership-like possession that provides statutory security of using the land.
2. **Trespassed/squatter:** lands belonging to the government but occupied without permission to use the land
3. **Other land tenure types:** various types, including land registered to other household but rented by the holder.

Again, for Myanmar, we were unable to determine in our initial review whether sex of holder, sub-holder or plot manager were collected. However, according to the paper presented at APCAS 2010 meeting by the representative from Myanmar, the agricultural census contains the legal status, age and sex of the holder (FAO 2010). This would permit analysis at holding level, but not at individual or plot level. It was also reported that Demographic characteristics and gender Issues would be investigated as a supplementary module (No. 14), but we currently do not have information on the status of this census activity.

In addition to data on land tenure and land ownership, several countries in Africa reviewed collected data on mode of acquisition at either holding or plot level. The categories and frequencies for this data domain are depicted in Figure 3.

Figure 3. Modes of acquisition of land at holding and plot level in Africa



Five countries (Burkina Faso, Mozambique, Niger, Rwanda, Togo) out of 10 in Africa have collected data on **types of acquisition** of land at holding and plot level. The acquisition modes identified were: Donated; Mortgage; Purchase (with title, without title); Rented/Leased/lent ; Sharecropping , and; Inherited. It should be noted that Burkina Faso is the only country that provides information on land tenure as well as mode of acquisition of land at holding and plot level. In the rapid analysis done in order to prepare for this meeting, it appears that the census does not appear to report the

sex of the plot manager. We have some doubt as to whether the sex of the plot manager was actually omitted from the questionnaire, and intend to verify this.

In **Rwanda** - National Agricultural Survey (NAS) 2008, collected the following forms of acquisition of land, based on local categories: Inheritance; Purchase; Gift received; Free use; Sharecropping; Rent; Voluntary sharing; Donated by the State, and; Other. Most of the farms were acquired by inheritance, purchased or received as gift. Other modes of acquisition including sharecropping/rent, free usage, voluntary division (sharing), constitute 12% of the agricultural total area. However, there appears to be no ability to generate sex-disaggregated data at either the holding or plot level from the census.

During the 2008/09 Census of Agriculture in Uganda, the types of ownership collected were: Owned; Rented for agreed amount of money &/or produce; Rented for share of produce; Rented in exchange for services; Other (specify) Information was also collected on parcel ownership. An agricultural household may use a parcel (land) it owns or rented in for in kind or monetary return. A parcel may be rented for: an agreed amount of money, produce, or services. Of the parcels that were within EA, 93% were owned by the agricultural households while the rest were rented in for some reward in kind or for monetary exchange. Fortunately, one of the data items collected was that of the sex of the person responsible for the parcel. We would need to see a copy of the census report to determine whether these data were analyzed as part of the census program.

Presentation of Examples of Data Collection Tools

Given the preliminary nature of the WCA assessment, a ready source of “good practices” for sex-disaggregated data collection on ownership available to us at FAO come from existing FAO toolkits and training materials. These were developed from the collaborative work with national agricultural statistical systems during the latter stages of WCA 2000 round (1996-2005) and the early stages of WCA 2010 (2006-2015).

Perhaps the most accessible source for such tools is the Agri-Gender Statistical Toolkit prepared by the FAP Gender and Development Officer for the Africa Region in collaboration with statisticians in the FAO Statistical Division and National offices (FAO 2013). The Agri-Gender Statistics Toolkit presents examples of gender relevant questions and tables jointly developed by national statisticians and FAO for agricultural censuses undertaken in Africa between 1993 and 2006 (FAO 2013).

This section of the paper will present selected examples of nationally-developed tools to collect data on access to land, area cultivated and land tenure status by sex of the holder or sub-holder taken from the Access to Land and Water section of the toolkit.

Example1 taken from Niger presents a listing of all plots/fields used by the holding and allows for an easy identification of the sex of **holder** and any **sub-holders (column 4)**. It forms the basis of all cross-tabulation illustrating gender specific differences in agricultural production. The example further specifies whether the sub-holding is an individual or family plot (**column 5**), is cultivated or left fallow (**column 6**), the cropping system used (**column 7**), the land tenure status (**column 8**) and geographical characteristics of the holding and plots (**column 9**).

INVENTAIRE DES PARCELLES DU MÈNAGE AGRICOLE					
Identification champs, parcelles		Nom et prénoms du responsable de la parcelle	Sexe du responsable de la parcelle	Type de gestion de la parcelle	
1	2	3	4	5	
<i>Inscrire le numéro d'ordre du champ</i>	<i>Inscrire le numéro d'ordre de la parcelle</i>	<i>Inscrire d'abord le nom, puis les prénoms du responsable de la parcelle en commençant par le Chef de Ménage</i>	<i>1 = Masculin 2 = Féminin</i>	<i>1 = Individuel 2 = Collectif</i>	
___	___		___	___	
___	___		___	___	
___	___		___	___	
<i>Etc.</i>					

Suite: INVENTAIRE DES PARCELLES DU MÈNAGE AGRICOLE			
Passé culturel de la parcelle	Système de culture	Mode d'acquisition	Type de relief
6	7	8	9
<i>1 = Cultivé 2 = Jachère</i>	<i>1 = Culture pure 2 = Cult. associé</i>	<i>1 = Héritage 2 = Achat 3 = Fermage ou métayage 4 = Prêt 5 = Don 6 = Autre</i>	<i>1 = Plaine ou plateau 2 = Bas-fonds 3 = Versant colline montagne</i>
___	___	___	___
___	___	___	___
___	___	___	___
<i>Etc.</i>			

It should be noted that more insight into intra-household differences in access to land can be obtained if data are also collected in relation to the area managed by male and female sub-holders.

Example 2 from Benin provides **sub-holding level** information relating to the use of land for cultivation purposes. Cross-tabulation of the outcomes with the sex of the sub-holder (**column 189**) can reveal whether significant differences exist between male and female sub-holders in terms of the acreage of land cultivated (**column 186**) with specified crops (**column 185**) during different agricultural seasons (**column 184**). It also captures **holding level** information on the total area cultivated during the first agricultural season (**variable 190**), the second agricultural season (**variable 191**), the estimated area of land that has been left fallow for less than two years (**variable 192**) and the total area of land used or available for cultivation purposes (**variable 193**). Cross-tabulation of the outcomes with the sex of the holder can reveal whether differences exist between male and female holders in terms of the area of land brought under cultivation.

15. RECAPITULATIF DES CHAMPS ET PARCELLES DE L'EXPLOITATION							
No champ	No parcelle	Saison (code)	Culture principale (code)	Superficie en hectares	No Responsable de mise en valeur de la parcelle	Nom du responsable de la parcelle	Sexe du responsable
182	183	184	185	186	187	188	189
____	__	__	____	____	____	__
____	__	__	____	____	____	__
____	__	__	____	____	____	__
____	__	__	____	____	____	__
Etc.							
Total (1)				____	____		

Source: République du Bénin – Premier Recensement National de l'Agriculture (xxxx) – Questionnaire 2: Section 15

Example 3 from Ivory Coast (Côte d'Ivoire) collects **holding** and **sub-holding level** information on fields and plots managed by agricultural households. It presents a listing of all plots/fields used by a holding (**columns 3 and 4**), the **sex of the holder and any sub-holders** (**column 2**) and the sizes of the sub-holdings' (**columns 6 and 16**). It also provides insight on variables such as the ownership status (**column 7**), geological characteristics of the land (**column 9**), the means by which the land was obtained (**column 12**), the main purpose of use (**column 8**), the use of irrigation techniques (**column 10 and 11**), the kind of labour used (**column 14**), the main crops produced (**columns 17 to 19**) and the use of agricultural inputs (**column 20**).

4.1 Champs (y compris les jachères de moins de 4 ans)

No propr. ou gestionnaire de la parcelle	Sexe du propr. ou gestionnaire 1 = Mas. 2 = Fem.	No Champ	No parcelle	Lieu-dit	Superficie mesurée en ha	Statut de propriété 1 = propriété avec titre 2 = propriété sans titre 3 = location 4 = prêt 5 = autre	Principales utilisations 1 = cult. pérenne 2 = cult. annuelle 3 = pâturage 8 = jachère 16 = autres (somme des codes)	Relief 1 = plaine 2 = Plateau 3 = Bas-fond 4 = Montagne	Irrigation 1 = oui 2 = Non
1	2	3	4	5	6	7	8	9	10
					____	__	____	__	__
					____	__	____	__	__
					____	__	____	__	__
					____	__	____	__	__

Suite:

Principal mode d'approvisionnement en eau 1 = irrigation par aspersion 2 = irrigation par gravité 3 = autres	Mode d'acquisition de la parcelle 1 = héritage 2 = don 3 = achat 4 = troc 5 = échange 6 = autres 0 = non concerné	Mode de faire-valoir de la parcelle 1 = direct 2 = fermage 3 = métayage 4 = prêt	Personnes travaillant sur la parcelle 1 = C.E. 2 = épouse(s) 3 = Autres membres-ménage 4 = M.O. salariée (somme des codes)	Type de labour 0 = sans labour 1 = manuel 2 = tracté 3 = motorisé	Superficie (déclarée) en ha	Cultures présentes (3 principales) codes			Utilisation des intrants 1 = semences sélectionnées 2 = engrais 3 = produits phytosanitaires 0 = non concerné (somme des codes)
						1 ^{ère} Culture (principale)	2 ^{ème} Culture (secondaire)	3 ^{ème} Culture (tertiaire en	

						<i>ou pure)</i>	<i>en association)</i>	<i>association)</i>	
11	12	13	14	15	16	17	18	19	20
					,				
					,				
					,				
					,				

Source: République de Côte d'Ivoire - Recensement Général de l'Agriculture 2000/2001 – Questionnaire parcelles: Section 4

Example 4 from Tanzania allows for detailed data collection on the tenure status of land “owned” by the households. Cross-tabulation with the sex of the head of the household will illustrate whether differences exist between male and female headed households in terms of the tenure status and area “owned” by the household.

4.1 Details of area “owned” by the household in the 2002/03 agricultural year. Give area reported by the respondent in acres.			
Area in acres			
4.1.1	Area leased/certificate of ownership	.	4.2 Was all land available to the household used during 2002/3? (Yes =1, No = 2)
4.1.2	Area owned under customary law	.	
4.1.3	Area bought from others	.	4.3 Do you consider that you have sufficient land for the household (Yes =1, No =2)
4.1.4	Area rented from others	.	
4.1.5	Area borrowed from others	.	
4.1.6	Area share-cropped from others	.	4.4 Do any female members of the household own or have customary right to land (Yes = 1, No = 2)
4.1.7	Areas under other forms of tenure	.	
Total Area		.	

For our discussions, it is important to note that, as the questions pertain to the overall **holding level**, data can only be presented by sex of the holder. This will bring about an under-reporting of areas managed by female farmers who are a member of a male headed holding, as their areas will be attributed to the male head of the holding. Question 4.4 may give some insight into female farmers’ access to land, but does not relate to the areas that they cultivate. Furthermore, it is not clear whether “customary right to land” includes allocation of land by a husband to his wife/ves.

Example 5: distances from the fields to the homestead may have an impact on the kind of crops produced and agricultural techniques applied. Fields located closer to the homestead are usually cultivated more intensively and receive more agricultural inputs compared to those located further away, often because of transportation and time constraints. Moreover, fields located close to the homes facilitate multiple tasking. This is particularly beneficial to women farmers who often have to juggle with their time in order to perform the many agricultural and domestic activities that fall under their responsibility.

This example from Tanzania can provide sex-specific information on the accessibility of fields managed by male and female household members if the sex of the field manager is added to the question as a variable.

6.0 Access and use of land resources

6.1		<i>In the following table indicate the distance to the different fields used by the household</i>			
		<i>Distance (in kilometres) from field to:</i>			
S/N	Field number	Sex of the field manager 1 = Male 2 = Female	Homestead	Nearest road	Nearest market
6.1.1	1	□□	□□	□□	□□
6.1.2	2	□□	□□	□□	□□
6.1.3	3	□□	□□	□□	□□

Distance codes

- 1= Less than 100 m
- 2 = Between 100 and 300 m
- 3 = Between 300 and 500 m
- 4 = Between 500 and 1 km
- 5 = Between 1 and 2 km
- 6 = Between 2 and 3 km
- 7 = Between 3 and 5 km
- 8 = Between 5 and 10 km
- 9 = Over 10 km

Source: United Republic of Tanzania – Agricultural Sample Census 2002/2003 - Small holder/Small Scale Farmer Questionnaire: Section 6

Example 6 from the Gambia allows for the collection of detailed data on the location of fields managed by male and female holding members and the main crops grown on these fields. It is interesting from a gender perspective to determine whether differences can be observed between the location of fields managed by male holding members and those managed by female holding members as well as differences in the type of crops grown on these fields. It is advised to add variable d'' to the example above in order to determine whether fields managed by women are equally accessible as those managed by men.

6. How many fields are farmed by members of this holding? Give the sex of the field manager, main crops grown this year and last year.

Field order	Name field manager	Sex 1 = M 2 = F	Distance from compound in minutes walking 1 = 0 - 30 minutes 2 = 31 - 60 minutes 3 = 60 minutes +	Accessibility by 1 = Road 2 = Track 3 = Footpath 4 = Waterway 5 = Other (specify)	Main crop (code)	Second crop in intercropping (code)	Last year's main crop 2000 (code)
(a)	(b)	(c)	(d)	(d'')	(e)	(f)	(g)
1	□□	□□	□□	□□□	□□□	□□□

2	_/_	_/_	_/_	_/_/_	_/_/_	_/_/_
3	_/_	_/_	_/_	_/_/_	_/_/_	_/_/_
Etc.							

Source: The Republic of the Gambia – Agricultural Census 2001 – Form 3: Section 2

Conclusion

This paper has attempted to provide an introduction to the FAO support to National Agricultural Statistical Systems within the context of the Programme for the World Census of Agriculture (WCA), particularly in the areas of land tenure/ownership and sex-disaggregated for gender analysis. As a prelude to the discussions during this session of the meeting, the paper concludes with a summary of key points presented and issues for consideration by this meeting.

Within the framework of WCA, FAO supports National Agricultural Statistics systems to develop an integrated programme based on two key components: a) the **Agricultural census**, that provides basic structural data and sampling frames for agricultural surveys, and; b) the **Agricultural survey programme**, which covers the various ongoing and in-depth sample surveys to be undertaken after the agricultural census, using the census as a frame.

Key agricultural census concepts are:

- **Agricultural Holding:** economic unit (assets) of agricultural production under single management (+ parcels and plots)
- **Agricultural Sub-Holding:** a single agricultural activity or group of activities managed on behalf of the agricultural holder by a particular person/s in the holder's household
- **Agricultural Holder:** the person who makes major decisions regarding resource use and exercises management control over the agricultural holding operation.
- **Agricultural Sub-Holder:** the person responsible for managing a sub-holding on the holder's behalf

Important variables to collect at holding and sub-holding (and plot) level for gender analysis of ownership/management patterns include the **sex** and the **age** of the holder/sub-holder and, in some instances, the plot manager.

Information on the **legal status** of the holder will help determine whether the holding (and the household associated with it) belongs to the household or non-household sector.

FAO considers the agricultural census a potentially important source of information on gender and land ownership/management. So far, 102 countries have conducted agricultural censuses under the current round of WCA. There is a relatively high incidence of countries collecting information on land ownership/tenure/mode of acquisition at holding level (90-100%) and, interestingly, plot level (75-100%).

However, the very preliminary (and limited) examination of census experience suggests that the potential for the sort of analysis advocated by the EDGE thematic paper will be constrained by a several factors:

- Expected lower incidence of collecting data on the sex of holder/sub-holder/plot manager in agricultural censuses; real incidences are difficult to determine at this stage and need to be investigated further;
- A rather higher proportion of censuses are expected to report collection of sex and age of the holder, as these are recommended for the core census module; however, collecting sex

of the holder **only** will severely limit individual-level collection and analysis, as suggested by the EDGE thematic paper.

- Incidence of collection of data on the sex of the sub-holder and/or plot manager is expected to be rather lower; this will be due to the placement of these variables in supplementary modules, which can be foregone by countries due to lack of interest and/or cost considerations, and the lack of methodological development of the concept of sub-holder, which was included in the WCA only in the 2010 round;

The paper has also presented a selection of tools developed by FAO for sex-disaggregated data collection of land ownership/management information in agricultural censuses and supplemental surveys. These are drawn largely from the FAO Agri-Gender Statistical Toolkit. Most examples illustrate how to include the sex of the sub-holder/plot manager into the section on plot characteristics in the census/survey questionnaire, as well as indicate how this information can be analysed to investigate land ownership from a gender perspective.

In conclusion, this meeting, and particularly this session, may wish to consider the following issues/questions in its deliberations:

- What potential do agricultural censuses and other large-sample surveys have to investigate agricultural asset ownership from a gender perspective?
- As an asset-based approach to data collection on the structure of agriculture, what aspects in the FAO Census Programme (e.g., supplemental module items; sub-holder concept, etc.) facilitate the analysis of agricultural land ownership at individual level?
- Will such investigations, and their data intensive approaches, be limited to topic-specific, smaller sample, surveys?
- How useful for the EDGE pilot study are the examples from the FAO Agri-Gender Statistical Toolkit?
- What kind of further development/support will be required to gain added value from the agricultural census and related surveys in terms of the gender aspect of asset use?

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