



Tabulations and Analysis from Linked Population and Housing, and Agricultural Censuses

(See Ch 8 and Annex 3 of the Guidelines)



Outline

- Usefulness of linkage for tabulation and analysis
- Tabulations with core agricultural items
- Tabulations with supplementary agricultural items
- Use of linked data for analysis



Usefulness of linked data

- Integration or linkage of the two censuses provides the opportunity to **produce various types of cross tabulation between agricultural variables and demographic variables**
- This provides possibility of **adding tabulations and analysis of the agricultural dimensions to normal population and housing tabulation and analysis** which otherwise could not be produced from the data if the two censuses were conducted independently.
- This wider tabulation and analysis considerably **increases the scope of policy issues that can be addressed** and the usefulness of both censuses for users (value for money)



Usefulness of linked data

- The agricultural module of the population and housing census (few questions or extended module) may provide **some agricultural data when no census of agriculture is conducted**
- The module might be used to produce **tables on very small-scale agricultural production by households** (including urban agriculture/horticulture activities) that may be **outside the scope of an agricultural census**



Data tabulations for farm households

- Linking of the two censuses makes it possible:
 - to identify farm households
 - to provide many of the population and housing census tabulations not only for all households but also separately for farm and non-farm households
- This will be useful for analysis of many demographic and social aspects in relation to engagement in own-account agriculture



Core agricultural items which may be used in the tabulation

- Cross-tabulation of household demographic characteristics with farm **household status** measured as:
 - ✓ whether a household is a farm household (i.e. engaged in own-account agricultural activities)
 - ✓ or is not a farm household
- Cross tabulation of farm household demographic characteristics with **area of land** used for agricultural purposes as farm size characteristics
 - ✓ Where collection of area data is not feasible, number of plots may be used as farm size indicator



Suggested population and housing census items to be tabulated against farm household status

The “Guidelines” recommend to tabulate the following characteristics against **farm household status** (farm household/non-farm household)

- *Demographic characteristics*
 - ✓ Total number of members
 - ✓ Number of children (aged<15)
 - ✓ Number of adults (aged>15)
 - ✓ Sex of household head
- *Living conditions characteristics*
 - ✓ Ownership of selected assets (TV, radio, cellular phone etc.)
 - ✓ Main source of energy for lighting and cooking
- In combination to above characteristics, farm households may be additionally tabulated against **area of land** used for agriculture



Suggested tabulations for **farm households**

The “Guidelines” recommend the following tabulations for farm households

- *Demographic characteristics*
 - ✓ Persons in farm households by sex, age and educational attainment
 - ✓ Persons of school age in farm households by sex, age and school enrolment
 - ✓ Persons of working age in farm households by sex, age and activity status
 - ✓ Persons of working age in farm households by sex, age and main occupation
 - ✓ Women (aged >15) in farm households by age groups and number of children ever born, and number of children ever born and surviving
 - ✓ Women (aged >15) in farm households by age groups and mean number of children ever born, and mean number of children ever born and surviving



Suggested tabulations from the **supplementary questionnaire (1)**

For supplementary items, summaries of agricultural data (to update or supplement existing data from the agricultural census) can be provided:

- *Agricultural holder tables – farm households by:*
 - ✓ Selected household assets (radio, TV, phone, stove etc.), sex of holder and age of holder
 - ✓ Main source of energy for lighting and cooking, sex of holder and education attainment of holder
 - ✓ Total number of household members, number of children (<15), number of adults (>15) sex of holder and age of holder
 - ✓ Total number of household members, number of children (<15), number of adults (>15) sex of holder and national/ethnic group of holder
 - ✓ Area of agricultural land, sex of holder and age of holder



Suggested tabulations from the supplementary questionnaire (2)



- *Purpose of production tables – farm households by:*
 - ✓ Area of agricultural land and main purpose of production
 - ✓ Household composition and main purpose of production
 - ✓ Household size and main purpose of production
- *Land use tables – farm households by:*
 - ✓ Selected household assets (radio, TV, phone, stove etc.) and area of agricultural land
 - ✓ Main source of energy for lighting and cooking and area of agricultural land
 - ✓ Total number of household members, number of children (<15), number of adults (>15) and area of agricultural land
 - ✓ Area of agricultural land and land use
 - ✓ Main purpose of production and land use
- *Other land use tables :*
 - ✓ Area by area of agricultural land and land use



Suggested tabulations from the supplementary questionnaire (3)



- *Land tenure tables – farm households by:*
 - ✓ Area of agricultural land and land tenure
- *Irrigation tables – farm households by:*
 - ✓ Area of agricultural land and presence of irrigation
 - ✓ Presence of irrigation, sex of holder and age of holder
 - ✓ Total number of household members, number of children (<15), number of adults (>15) and presence of irrigation
- *Temporary crop tables*
 - ✓ Number of farm households growing each temporary crop by area of agricultural land
- *Permanent crop tables*
 - ✓ Number of farm households with each permanent crop by whether in compact plantation and area of agricultural land



Suggested tabulations from the supplementary questionnaire (4)

- *Livestock tables– farm households by:*
 - ✓ Area of agricultural land and number of livestock of a given type
 - ✓ Selected household assets (radio, TV, phone, stove etc.) and number of livestock of a given type
 - ✓ Main source of energy for lighting and cooking and number of livestock of a given type
 - ✓ Total number of household members, number of children (<15), number of adults (>15) and number of livestock of a given type
- *Other livestock tables:*
 - ✓ Number of animals by area of agricultural land and number of livestock of a given type
- *Aquaculture tables – farm households by:*
 - ✓ Area of agricultural land and presence of aquaculture
- *Forestry tables – farm households by:*
 - ✓ Area of agricultural land and presence of forestry



Analysis from linked data

Tabulations of linked data provides the opportunity to conduct various types of demographic and social and economic analysis in the farm household sector

The Guidelines provides some example of analysis

- **Fertility** in the farm household sector
- **Gender** analysis in the farm household sector
- **The elderly** in the farm household sector



Fertility in the farm household sector (1)

- There is a consensus that household fertility and poverty are related:
 - *The households with a large number of children are more likely to be poor than those with smaller number*
 - *However, the nature of the causality between household size and poverty is not entirely clear*
- Possibility to identify the farm household sector provides a unique opportunity to further analyze the issues of fertility and poverty
- In most countries farm households sector is likely to be homogenous in relation to several variables making it easier to isolate the impact of fertility on household welfare



Fertility in the farm household sector (2)

- The household child/adult ratio can be used as an approximate indicator of fertility
- Several welfare indicators may be tabulate against this characteristic such as
 - ✓ Construction materials of housing units
 - ✓ Ownership of selected assets (radio, TV, cellular or fixed telephone, refrigerator etc.)
 - ✓ Education of adult members
 - ✓ School enrolment among school age children
 - ✓ **Total area of land used for agricultural purposes**
- Other variables that may be considered are:
 - ✓ Household composition
 - ✓ **Labour force participation of household members (agric and non agric)**



Gender analysis in the farm household sector (1)

Whether a household is a farm household or not, may have a number of implications for gender relations within the household

Here are three aspects which may be analyzed:

- *Incidence of unpaid family work by women, boys and girls, by age and sex*
 - ✓ related to the need to involve household members in work on the family farm or in caring for household's livestock
- *Marital/union status of the head of household, by age and sex*
 - ✓ related to a greater need of household head to get married or remarry in order to have an additional family worker
- *School attendance of boys and girls, by age*
 - ✓ related to the fact that children may be required to help with family work, causing them to be withdrawn from school at early age



Gender analysis in the farm household sector (2)

Household headed by women can be studied separately:

- Opportunities for women to remarry after losing a spouse may be more restricted
- If they remarry, there is a greater chance that head of holding function will pass to the new spouse
- Restrictions of women's ability to inherit property
 - ✓ Holder responsibility may be taken on by another family member to protect the family holding
- This may lead to lower incidence of female holder in farm households than in non-farm households



The elderly in the farm household sector



- In many developing countries, the aging population remains in rural areas while young adults migrate to urban cities or outside the country
 - ✓ Older persons may find themselves without traditional family support and adequate financial resources
 - ✓ Older persons in rural areas often lack basic services
 - ✓ Aging farmers may not have access to financial and infrastructure services
 - ✓ Potentially lack adequate training in the latest farming methods
 - ✓ Older women in rural areas are particularly vulnerable
- The Madrid International Plan of Action in Ageing called on governments to strengthen the capacity of ageing farmers through continued access to financial and infrastructure services and training



The elderly in the farm household sector



- The results of the agricultural census, together with the population and housing census, can illustrate the situation of older farmers
- Tabulations by age/sex of farm operator/agricultural holder in combination with the following characteristics are relevant:
 - ✓ Size of household
 - ✓ Size of agricultural holding (or land used for agricultural purposes)
 - ✓ Highest education attainment of farm operator/agricultural holder
 - ✓ Household income (if included in the census)
 - ✓ National/ethnic group of farm operator/agricultural holder
 - ✓ Main occupation of farm operator/agricultural holder
 - ✓ Industry of farm operator/agricultural holder
- Taken together, the information in these tables will generally provide a good picture of the characteristics of older farm operators/agricultural holders for policy makers and planners





THANK YOU!

