

# KIRIBATI POPULATION CENSUS 2020: COMMENTS ON AGRICULTURAL COMPONENT OF DRAFT QUESTIONNAIRE

## A. MODULE J (AGRICULTURE)

### Background

FAO's World Programme for the Census of Agriculture 2020 sets out guidelines for countries to undertake agricultural censuses. Usually, the censuses are undertaken every ten years and collect a wide range of data on the structure of the agriculture sector.

There is a strong connection between the population and agricultural censuses, and countries are encouraged to explore the linkages between the two activities. Many countries find it useful to include an agriculture module in their population censuses either to complement data from the agricultural census or to collect agricultural data in lieu of an agricultural census. Kiribati is an example of the latter.

Where the population census is the primary source of agricultural data in a country, the focus is on including as much structural data on agriculture as possible, taking into account the need to keep the population census questionnaire to a manageable size. FAO indicates that the basic data requirements of an agriculture module are:

- Whether the household is engaged in any form of own-account agricultural production.
- Measures of farm size, including farm area and the number of livestock.

FAO also suggests that, if countries wish to enlarge the module, they should consider the following items:

- Main purpose of production.
- Total area of holding.
- Use of irrigation.
- Types of temporary crops.
- Types of permanent crops and whether in compact plantations.
- Number of animals (by livestock type).
- Presence of aquaculture.
- Presence of woodland.
- Engagement of household members in fishing activity.

### General remarks on draft of Module J

The draft module is well-designed and provides a good range of basic data on crops, livestock and fishing, consistent with FAO guidelines.

The draft questionnaire does not include the suggested items on irrigation, aquaculture and woodland. These may not be important in Kiribati. The important item missing is a measure of farm area. Various farm area concepts could be considered, and these are discussed later.

Area data are often difficult to collect in a census/survey. It would also be good to have the area or number of trees/plants for each crop, but this could be too difficult.

There are some differences in the terminology used in the questionnaire. The questions variously refer to “household members”, “household”, “holding” and “you”. It might be best to refer as much as possible to “this household”. In a few cases, the concepts used in the questions could be clarified, such as boats *owned* in Question FS4a-FS4f and livestock *raised* in Question LS1b.

The requirements for data on purpose of production should be reviewed. FAO recommends measuring the purpose of production for the agricultural holding as a whole. Many countries collect data on purpose of production for crops, livestock and fishing separately. In the draft questionnaire, this information is collected for each crop and each livestock type. This might be excessive; it would add to the number of questions asked and complicate the tabulation (purpose of production data would need to be presented for each crop and each livestock type). Also, the link with purpose of production data in Module E should be examined.

There are complex conceptual issues involved in collecting crop data. These are discussed later. This should be carefully looked at in finalizing the wording for Question FC1.

### **Question J1**

The question is meant to cover activities undertaken on the household’s own account. This is not specified in the question but is implied in the terms used to describe the activities: namely, *grow* crops and *raise* livestock. This should not include doing paid work on crops, livestock or fishing for someone else. No change to the question is needed.

### **Question FC1**

The question refers to crops that are in the field and ready for harvest at the time of the census. This might miss out on crops that are in between seasons or crops not ready for harvest.

In collecting crop data, a distinction is usually made between temporary crops (crops with a less than one-year growing cycle) and permanent crops (tree and other crops with a greater than one-year growing cycle). For temporary crops, data are collected on the crops *harvested* (or sometimes *planted*) during a 12-month period (such as the last 12 months). For permanent crops, data are collected in respect of the crops present on the day of enumeration.

The existing question refers to crops *grown* in the last 12 months. This could be interpreted as covering both temporary and permanent crops. At this stage, it might be best to retain this concept, provided there are suitable enumerator instructions.

Suggestion: Change the wording of Question FC1 to:

*FC1. Has this household grown any of the following crops in the last 12 months?*

Agricultural censuses usually seek to obtain data on all crops grown, even minor crops. For an agriculture module in a population census, data are usually limited to the major crops. The draft questionnaire has 12 crops plus “other”. This is about right in the circumstances.

Why has pandanus been excluded (it was included in the 2015 census)? Eggplant has been added.

### **Question FC1\_oth**

This allows for only one other crop. Should provision be made for more than one other crop? If so, it might be best to only identify those crops without collecting any data about them.

Suggestion: Consider including provision for identifying more than one other crop.

### **Question FC1a**

This question is asked for each crop grown. Normally, purpose of production is asked for crop activity as a whole. Is this additional level of detail necessary?

Suggestion: Delete Question FC1a. Instead, add a new question after Question FC1 to collect the purpose of crop growing (with the same categories as in the original question).

*FC2. What is the purpose of growing food crops?*

### **Question FC1b**

This question would be useful to get an idea of production if there was some data collected on the area of the crop. Without area data, it is not clear how this item will be used. Is the concept of frequency of harvest suitable for all crops? Are there crops with seasonal planting or harvesting patterns – for example, permanent crops with a fruiting season or seasonal vegetable crops?

In the same way as for Question FC1a, the data would need to be presented in the tables crop by crop (i.e., 13 tables).

Suggestion: Review the use and importance of Question FC1b.

### **Questions FC3 and FC4**

No comment.

### **Question LS1**

Why have ducks been omitted (they were included in the 2015 census)? Otherwise, no comment.

### **Question LS1\_oth**

This provides for only one other type of livestock. Are there likely to be more?

### **Question LS1a**

This question is asked for each type of livestock. Normally, countries have a single question on the purpose of production for the livestock activity as a whole.

The use of the word “holding” in the question might not be clear to enumerators or respondents.

Suggestion: Retain this question for each livestock type. Reword the question as:

*LS1a. What is the purpose of raising %rostartitle%?*

### **Question LS1b**

The reference period for this question is the day of enumeration. Many countries have a problem collecting livestock data because the livestock owner might not be the one raising the livestock. Is this a problem in Kiribati? In any case, it is good for the question to specifically refer to the number of animals “currently being raised” or similar words. Also, the use of the word “holding” might not be clear.

Suggestion: Reword the question as:

*LS1b. How many %rostartitle% is this household currently raising?*

### **Question FS1**

The corresponding questions for crops and livestock refer to “purpose” while this question refers to “main purpose”.

### **Questions FS2 and FS3**

It might be better to use “this household” rather than “you” in these questions.

### **Questions FS4a-FS4f**

FAO has two concepts for agricultural and fishing equipment: equipment *owned* and equipment *used* in a specific reference period. In Kiribati, the owned concept might be suitable. The word *own* rather than *have* should be used in the questions.

## Possible new questions

### (a) Number of trees/plants/area for each crop

In full agricultural censuses, data are usually collected on how much of each crop has been planted/harvested/grown. Often, area data are difficult to report because of mixed cropping, scattered crops, and lack of land records.

There are several different area concepts – *area planted* and *area harvested* (for temporary crops), and *area currently under permanent crops*. These can be difficult to apply. Where there are multiple plantings of crops – e.g., several plantings of vegetable crops on a piece of land during the year – they need to be counted multiple times. Area is also difficult to report for mixed and scattered crops.

Instead of area, countries sometimes collect data on the number of trees or plants, which is usually easier to collect.

This item might be too difficult for the Kiribati census.

### (b) Farm area

Farm area is useful to tabulate agricultural data according to farm size (e.g., small and large farms). It also enables the total farm area to be estimated. It is recommended that some sort of farm area measure be considered for the inclusion in the census.

One issue with measuring land area is the difference between land *owned* and land *operated*. Agricultural censuses/surveys usually collect data on land operated. A household operates land if it carries out agricultural production activities on that land, regardless of ownership. The land operated concept should be used in Kirabati.

There are several options for measuring farm area.

*Area of land used for growing crops.* Under FAO terminology, this is called *cropland*, and includes all land under crops or temporary pastures, plus fallow land. This would be easier to report than the area of each crop, but there are still difficulties in cases where crops are grown irregularly around the household's land, such as scattered tree crops.

*Area of agricultural land.* FAO defines agricultural land as cropland plus permanent pastures. Thus, it includes land used for both crop and livestock purposes. This could be a bit easier to report than cropland, but there could still be difficulties with scattered crops.

*Area of all the household's land.* This would include agricultural and non-agricultural land. It is commonly referred to as the *size of holding* and is often used in tabulations of agricultural censuses/surveys. It is easier to collect than previous measures.

One option is to collect area data in ranges, such as <0.25 acres, 0.25-0.49 acres, etc. This could make the reporting easier, but area data would not be able to be aggregated.

Suggestion: Examine the feasibility of adding a new question to get the area of cropland or agricultural land or size of holding.

*What was the land area used by this household for growing crops in the last 12 months?*

or

*What was the land area used by this household for crop or livestock purposes in the last 12 months?*

or

*What is the land area operated by this household (including agricultural and non-agricultural land)?*

## SUMMARY OF PROPOSED QUESTIONS FOR MODULE J

Question	Include?	Remarks
J1 Has any household member conducted or undertaken any of the following activities in the last 12 months?	✓	Same as draft questionnaire.
FC1 Has this household grown any of the following crops in the last 12 months?	✓	Remove reference to harvesting in the draft question. Change “any household member” to “this household”.
FC1_oth Specify other food crops.	✓	Consider including more than one other crop. Make necessary changes in Survey Solutions if needed.
FC2 What is the purpose of growing food crops?	✓	New question. Ask this question for crops as a whole, rather than for each crop as in the draft questionnaire. Categories should be the same as in the draft Question FC1a.
FC1a How frequently does this household harvest <i>%rostertitle%</i> ?	?	Examine data needs. Change “do you” to “does this household”.
FC3 Does this household cut toddy?	✓	Same as draft questionnaire.
FC4 How many toddy trees does this household have?	✓	Same as draft questionnaire.
LS1 Is any member of this household currently raising any of the following livestock?	✓	Slight change in wording.
LS1_oth List all other types of livestock currently being raised.	✓	Consider including multiple other livestock types. Make necessary changes in Survey Solutions if needed.
LS1a What is the purpose of raising <i>%rostertitle%</i> ?	✓	Change of wording.
LS1b How many <i>%rostertitle%</i> is this household currently raising?	✓	Wording change.
FS1 What is the purpose of fishing?	✓	Slight change of wording.
FS2 What types of fishing method does this household use?	✓	Slight change of wording.
FS3 Where does this household normally fish?	✓	Slight change of wording.
FS4 Does this household own any of the following fishing boats?	✓	Same as draft questionnaire.
FS4a How many wooden fishing boats does this household own?	✓	Replace “have” with “own”.
FS4b How many aluminium fishing boats does this household own?	✓	Replace “have” with “own”.
FS4c How many fiberglass boats does this household own?	✓	Replace “have” with “own”.
FS4d How many canoes does this household own?	✓	Replace “have” with “own”.
FS4e How many double canoes does this household own?	✓	Replace “have” with “own”.
FS4f How many other fishing boats does this household own?	✓	Replace “have” with “own”.
What was the land area used by this household for growing crops in the last 12 months? or	?	Recommended new question. Consider feasibility.

	<p>What was the land area used by this household for crop or livestock purposes in the last 12 months?</p> <p>or</p> <p>What is the land area operated by this household (including agricultural and non-agricultural land)?</p>		
J2	What is the purpose of collecting forestry products?	✓	Same as draft questionnaire.

## **B. AGRICULTURE-RELATED ISSUES IN MODULE E**

### **Question E2**

Presumably, this question is needed to determine economic activity status. Purpose of production is also covered in Module J. Question E2 refers to *family consumption*, while Module J refers to *home consumption*.

### **Question E2b**

This question is asked for those with agricultural activity mainly or only for home consumption as identified in Question E2. Question E10 asks for similar data for all those with code 2 in Question E1 (which includes those covered by Question E2b). Is Question E2b necessary? How will it be coded?

### **Question E3**

This question is only for those who were not working as a main activity in Question E1 (codes 04 to 11) or those working in subsistence agriculture (codes 3 and 4 in Question E2). This is used to define *employed* persons for the purpose of occupation, industry, etc. On this basis, a person working in subsistence agriculture with secondary paid work is considered to be employed, while a person working in subsistence agriculture with no secondary paid work is not considered to be employed.

Agricultural censuses often ask secondary activity for all household members aged 15 years and over, including those with non-agricultural main jobs. This is of interest in agriculture in measuring other work carried out by farm workers to supplement farm income, and in measuring agriculture as a secondary activity.

### **Questions E6 and E7**

These questions do not cover subsistence agricultural workers without a secondary paid job, and therefore will be of limited interest in agricultural tabulations.

### **Questions E2c and E9**

Question E2c refers to the hours worked for those with agricultural activity mainly or only for home consumption in Question E2. The way the question is worded, it is not clear if the hours worked relates to the main activity in E2b or all agricultural work. Presumably, it is all agricultural work.

Question E9 refers to hours worked in “this job/business” for all employed persons. For market-oriented workers in Question E2, Question E9 will provide the hours worked on own farming. For subsistence agricultural workers in Question E2 with a paid secondary job in

Question E3, the hours worked in Question E9 refers to the job mentioned in Question E3 (not the subsistence agricultural work).

For agricultural tabulation purposes, interest will centre on the hours worked on agriculture both for subsistence and sale. The subsistence part will come from QE2c, while the market part will come from Question E9.

### **Question E10**

This question covers all those with main activity status working in agriculture in Question E1. This includes those working in subsistence agriculture. This will be useful for agricultural tabulations. For employed persons, the occupation and industry data in Questions E6c and E7c will provide similar data.

For agricultural purposes, it would be useful to ask Question E10 for all persons, regardless of their activity status in Question E1. This would allow analysis of all work carried out by household members on the family farm, including those with other jobs, studying, etc.

## **C. ADDITIONAL VALIDATION CHECKS IN SURVEY SOLUTIONS FOR MODULE J**

J1(crops) cannot be 'No' if E10(01) = 'Yes' for any household members.

J1(livestock) cannot be 'No' if E10(02) = 'Yes' for any household members.

J1(fishing) cannot be 'No' if E10(03) = 'Yes' for any household members.

At least one crop must be reported in FC1.

FC4 cannot be zero. Also, have a warning if FC4 is above a certain limit.

At least one livestock type must be reported in LS1.

FS2 must be 'Yes' for at least one of the fishing methods.

FS3 must be 'Yes' for at least one of the fishing locations.