



Food and Agriculture  
Organization of the  
United Nations



**SDG Indicator 2.4.1**

# **Enumerators Manual**

**(Farm Survey Module)**

**08/08/2021**

Note: This enumerator manual was prepared in support to the farm survey data collection on SDG indicator 2.4.1 and has been revised in light of the cognitive tests conducted in Mexico, Kenya and Bangladesh in year 2018-19.

## List of acronyms:

**AGRIS** Agricultural Integrated Survey

**EGM** Expert Group Meeting

**FAO** Food and Agriculture organization of the United Nations

**FIES** Food Insecurity Experience Scale

**GHS** Globally Harmonized System on Classification and Labelling of Chemicals

**GSARS** Global Strategy to improve Agricultural and Rural Statistics

**HHPs** Highly Hazardous Pesticides

**ILO** International Labor Organization

**NSO** National Statistical Office

**IPM** Integrated Pest Management

**IRT** Item Response Theory

**ISCO** International Standard Classification of Occupations

**ISIC** International Standard Industrial Classification of the United Nations

**SDGs** Sustainable Development Goals

**WCA** World Programme for the Census of Agriculture

**SEEA** System of Environmental-Economic Accounting -Central Framework

**UN** United Nations

**UNESCO** United Nations Educational, Scientific and Cultural Organisation

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## Introduction:

This Enumerator Manual is developed to help enumerators and supervisors to administer the survey module designed for SDG indicator 2.4.1. It provides a detailed description of the survey instrument and reviews Standard Operating Procedures for each question. The purpose of this manual is to ensure that there is a common understanding of questions and response codes by all enumerators and supervisors.

Briefly, it details the following issues:

- Rationale behind inclusion of a particular module in the survey
- Definition of terms and the meaning behind the questions asked
- Guidance on the use of SKIP questions and FILTER questions
- Examples of commonly encountered instances where questions and responses may not be easy to administer and record respectively

The SDG indicator 2.4.1 “proportion of agricultural area under productive and sustainable agriculture” is measured using a farm survey. In this respect FAO has developed SDG 2.4.1. farm survey questionnaire specifically designed to collect information on SDG 2.4.1. The questionnaire consists of bear minimum questions and be administered standalone or customised to be attached as a module or integrated at appropriate places within current surveys at appropriate places. The ultimate objective of the survey module is to collect information on 11 different themes and sub-indicator that constitute the framework of SDG 2.4.1 at the agricultural holding level (details are given in table 1).

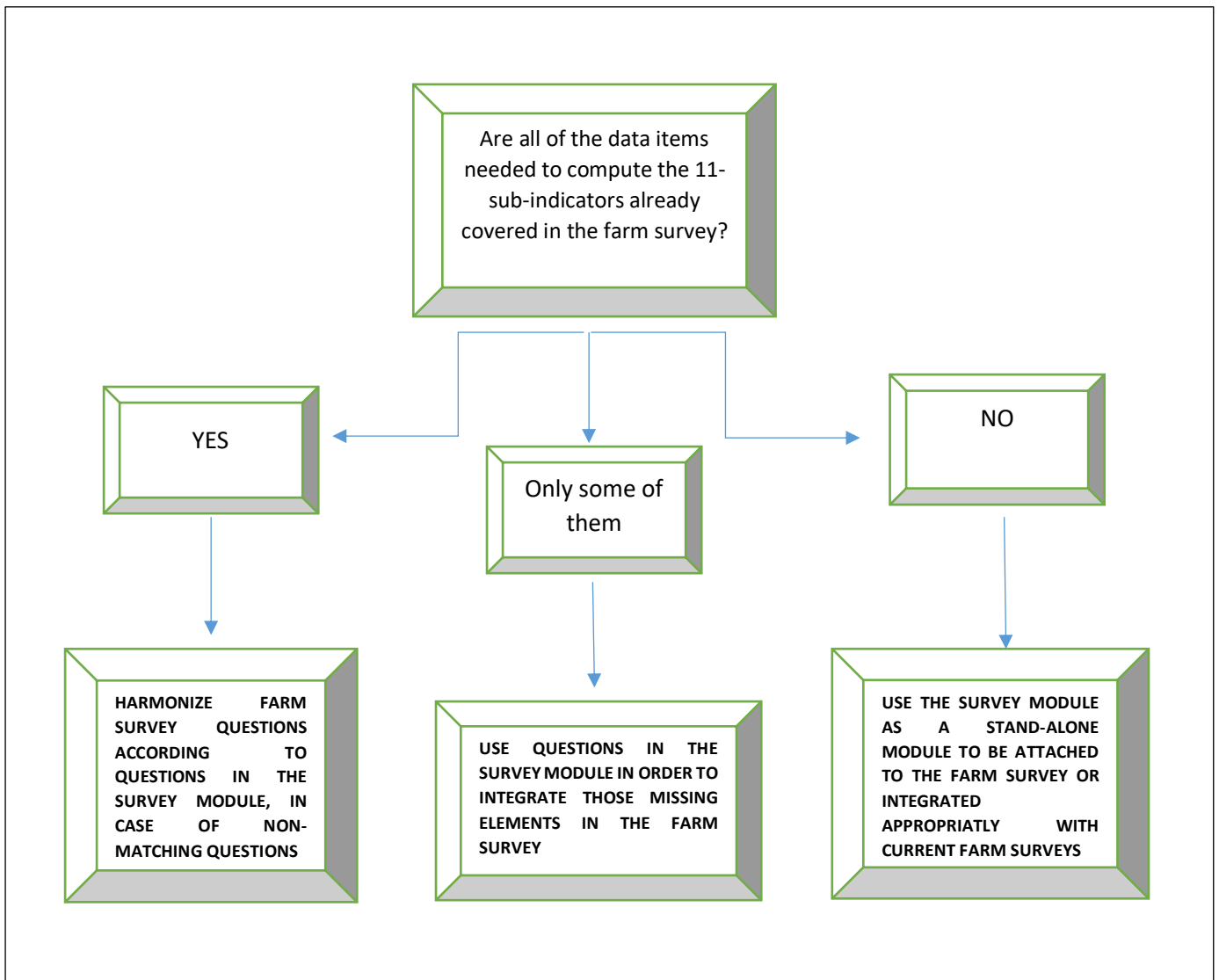
**Table 1. List of themes and sub-indicators**

No.	Themes	Sub-indicators
1	Land productivity	Farm output value per hectare
2	Profitability	Net farm income
3	Resilience	Risk mitigation mechanisms
4	Soil health	Prevalence of soil degradation
5	Water use	Variation in water availability
6	Fertilizer pollution risk	Management of fertilizers
7	Pesticide risk	Management of pesticides
8	Biodiversity	Use of agro-biodiversity-supportive practices
9	Decent employment	Wage rate in agriculture
10	Food security	Food Insecurity Experience Scale (FIES)
11	Land tenure	Secure tenure rights to land

This document is structured as follows: Section I presents the way survey questionnaire is organized and structured, as well as the main concepts attached to the module itself. Section II details each of the questions in the survey module; it clarifies the meaning underlying each questions and the way enumerators should record the corresponding information, which question to ask next and which question is to be skipped.

As highlighted above, the survey questionnaire can be integrated into existing farm surveys, either by 1) attaching the module itself to the farm survey, as a standalone module; or 2) by extracting from the module those missing elements that are not included or covered by existing farm survey. The diagram below summarizes the way the survey module can be used.

The possible ways the survey module can be used:



The questionnaire is comprised of 5 sections (i.e. I, II, A, B and C) and one additional introductory section to record information on the enumerators details (to be prefilled by the enumerators). Each section within the module collect information on the 11-sub-indicators across the three dimensions as per table 2 below.

**Table 2. Structure of the questionnaire:**

Sections	
Survey Preparation	
Section I	Introduction to the survey module and identification of the holding and holder
Section II	Area of the holding
Section A	Economic dimension of the holding
Section B	Environmental dimension of the holding
Section C	Social dimension of the holding

Data collected using the module are primarily structured at the agricultural holding level (the unit of observation for this indicator). Nonetheless, some of the information, particularly on agricultural production, are collected at the product level and is associated with the holding, thus leading to a greater degree of specificity of the agricultural holding itself (see section II).

**Specifications:**

1. Confidentiality: It is necessary that before starting the interview the enumerators ensure respondents that the information collected will remain strictly confidential. It is worth noting that in order to protect the confidentiality of respondents and their answers any sensitive information (i.e. information on the identification of the respondents and on the location of the agricultural holdings) will be hidden and removed from publicly available datasets.
2. Questions must be asked exactly as worded; changing words or phrases, adding or dropping words to a question must be avoided. Also, unless in case of a skip pattern, a question must always be asked, even when the answer is obvious to the interviewer: writing an answer without asking the question must be avoided at any time.
3. Each section of the module contains a specific recall period according to which the information is collected. The recall period is clearly expressed in the upper-left side of each section, as per example below:

<b>A.5</b>	Did the holding carry out other on-farm activities than crops and livestock? (Read the list)	
	<b>Reference year:</b>	<b>Last calendar year</b>
	(Fill in one circle only)	
	<input type="radio"/>	1 Yes
	<input type="radio"/>	2 No
		<a href="#">→ Go to A.7</a>

4. Most of the questions refer to the last calendar year prior to the date of the interview. Some sections, however, make reference to the last three calendar years. The last calendar year is a period of 12 months from January 1 to December 31. For example, if data collection is done in May 2018, the last calendar year will be from January 1 2017 to December 31 2017. Similarly, the last 3 calendar years will be from January 1 2015 to December 31 2017. Important to note is that questions from C.3 to C.10, i.e. question capturing information on Food Security are asked, instead, with reference to the last 12 months prior to the date of the interview.

The following sub-sections are meant to guide enumerators through the questions of this survey module. Each of the three sub-sections contains explanation on the meaning and content of questions, including which questions to ask next, and which questions are to be skipped.

**Survey Preparation:**

This section is mainly pre-filled. Before going to the field, the enumerators write his/her first name, surname, surveyor number, and start time and date of the survey.

Make sure you properly record the holding identification number before starting with the interview

**Section I: Introduction to the Survey Module and Identification of the Holding and Holder**

This section records information about the respondent and the holding. It is important to accurately fill the information on the location of the holding. This will help in reaching out to the respondent in the future to check and correct potential misreported values (if needed).

**TEXT TO READ:**

**TEXT TO READ:**  
Hello, my name is -----, I work for the -----, We collect data that the Government and other stakeholders use for planning purposes. I am vising you to collect data on your farm. This is part of a worldwide exercise to measure progress in agriculture organised together with the Food and Agriculture Organization of the United Nations. The information you provide will be treated confidentially. It will only be used for statistical purposes and will be put together with responses from other farmers for use in the formulation of programmes and policies to promote more productive and sustainable agriculture. This interview should take approximately one hour. We appreciate your participation in answering these questions.  
  
If you have any questions regarding this survey, you are welcome to telephone the number indicated on the visiting card of our organization that I leave for you here. I express my gratitude for your participation in this survey in advance.

Before starting the interview, the enumerators must go through the TEXT TO READ and introduce confidently and give time for the respondent to ask questions (if any) before proceeding with the interview. Enumerators should first explain to the respondent the reasons why s/he is administering the survey and, in simple terms, how the respondent’s agricultural holding has been pre-selected. It is important that the enumerator also assure the respondent that personal responses will not be disclosed, the information will be processed by a computer and statistical information produced will only be used in aggregated form.

**I.1 Record the following information about the respondent:**

I.1 identifies the respondent and is further broken down into three parts from **I.1.1** to **I.1.3**.

I.1 Record the following information about the respondent

<b>I.1.1</b>	First name	<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> </table>																							
<b>I.1.2</b>	Surname	<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> </table>																							

**I.1.3 Sex of the respondent**  
 1 Male  
 2 Female

**I.1.1 First name:**

Record the first name of the selected respondent.



### I.1.2 Surname name

Record the surname name of the selected respondent.

### I.1.3.Sex

Record the sex of the selected respondent. Codes for sex are 1 for male and 2 for female.

### I.1.4 What is your role on the agricultural holding?

This question is aimed at identifying the function of the respondent within the agricultural holding.

I.1.4 What is your role on the agricultural holding?

(Fill in the most appropriate)

- |                       |   |  |                        |
|-----------------------|---|--|------------------------|
| <input type="radio"/> | 1 | Holder (legal and/or economically responsible for the holding)               | → Go to I.2            |
| <input type="radio"/> | 2 | Co-holder (legal and/or economically co-responsible for the holding)         | → Go to I.2            |
| <input type="radio"/> | 3 | Manager (responsible for the day-to-day decisions on the farming operations) | → Go to I.2            |
| <input type="radio"/> | 4 | Household member working on the holding                                      | → Go to I.1.5          |
| <input type="radio"/> | 5 | Employee   | → Go to I.1.5          |
| <input type="radio"/> | 6 | Household member not working on the holding                                  | → End of the interview |
| <input type="radio"/> | 7 | Other (specify <input type="text"/> )  | → End of the interview |

The codes for the respondents are:

1. Holder (legal and/or economically responsible for the holding);
2. Co-holder (legal and/or economically co-responsible for the holding);
3. Manager (responsible for the day-to-day decisions on the farming operations);
4. Household member working on the holding;
5. Employee;
6. Household member not working on the holding;
7. Other (specify).

In order to collect reliable information on the agricultural holding, enumerators are recommended to select the holder or co-holder of the agricultural holding as respondents of the survey (i.e. **Codes 1 and 2**), since they are likely to be the most well informed individuals about the agricultural activities of the holding.

**Important notes:** In case the selected respondent is:

1. Manager of the agricultural holding (i.e. **code 3**):

**Enumerators do not ask questions in section C from C.3 to C.10 (on Food security).** Enumerators proceed by recording information on all other questions in the survey.

2. Household member working on the holding (i.e. **code 4**):

Enumerators further ask whether (or not) the household member working on the holding is able to answer questions related to the agricultural holding as well as household of the holder. This check is operationalized in the survey by asking question **I.1.5** to the household member working on the holding: “are you able to answer questions for the agricultural holding”? **If not, enumerators select another respondent and re-start the interview.**

3. Employee working on the holding (i.e. **code 5**):

Enumerators further ask whether (or not) the employee working on the holding is able to answer questions related to the agricultural holding. This check is operationalized in the survey by asking by asking question **I.1.5** to the selected employee: “are you able to answer questions for the agricultural holding”? **If not, enumerators select another respondent and re-start the interview. In case of**

**positive answer, instead, the interview should continue, but enumerators should not ask questions in section C from C.3 to C.10 (on Food security).**

4. Household member not working on the holding (code 6) or another respondent (code 7), the **enumerators will re-start the interview** after having reached another person who is more informed about the activities and characteristics of the agricultural holding.

### **I.1.5 Are you able to answer questions for the agricultural holding?**

- 1 Yes  
 2 No

→ Go to I.2  
→ End of the interview

This Yes/No question is only asked to respondent whose function in the agricultural holding is “Household member working on the holding” (Code 4 in question I.1.4) or “Employee” (Code 5 in question I.1.4). This question ascertains whether (or not) the selected respondent is well-informed about economic, social and environmental aspects of the agricultural holding. In case the respondent says “No” (Code 2), enumerator must find another more informed respondent and re-start the interview, ideally holder, co-holder or manager of the holding.

### **I.2 What is the legal status of the holder?**

(Fill in one circle only)

- 1 Civil person/natural person  
 2 Group of civil persons/natural persons  
 3 Legal person

The question collects information on the legal status of the holder, and, depending on the legal status, three codes are associated to three different options:

1. Civil person / natural person
2. Group of civil person/natural person
3. Legal person

Box 1 provide the definition for the above-mentioned three legal statuses of the holder (Source: Handbook on the Agricultural Integrated Survey - AGRIS, GSARS, 2017)<sup>1</sup>

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<sup>1</sup> <http://www.fao.org/3/ca6412en/ca6412en.pdf>

### Box 1: Legal status of the holder

#### **Civil (natural) person:**

In this case, one woman or man is legally, socially and economically responsible for her or his independent activity of production, and can be clearly identified by her or his name, surname and date of birth. Most often, this person is also technically responsible, although in some cases, a manager may be in charge of the day-to-day decisions or more (what to sow, when to sell, etc.). However, agricultural holdings whose holder has this legal status may fall outside the household sector if they behave as corporations and sell the main part of their production

#### **Group of civil (natural) persons:**

In this case, several civil persons (as defined above) have decided to pool means of production, totally or partially, to benefit each one of them. It generally concerns two or three persons; exceptionally, six or seven persons may be involved. These persons are collectively responsible for the holding. In some cases, these holdings are not within the household sector because the association between several holders (not living in the same household) must be registered under national legislation. Finally:

#### **Legal person:**

In this case, some natural and/or legal persons share the capital stock of a private company. This may also be a public company or a similar entity, such as a corporation, a cooperative, a governmental institution or a church. This form of organization falls outside of the household sector. The status involves formal registration according to the applicable national legislation.

### I.3 What type of holding is this?

(Fill in one circle only)

- 1 Household
- 2 Non-household

This question collects information on the type of operating holding, which must be adapted to existing national legal status and therefore should be established according to country-specific characteristics. The type of holding can be household or non-household, depending on the country-specific criteria that define a holding type. Box 2 below provides details on the main concepts underlying the legal status of the holding (Source: Handbook on the Agricultural Integrated Survey - AGRIS, GSARS, 2017). This question is asked to distinguish between holdings in the **HOUSEHOLD SECTOR** and holding in the **NON-HOUSEHOLD** sectors. Two approaches can be adopted according to the criteria listed below:

1. **Holdings in the Household sector** are those where the holder is a civil (natural) person or group of civil (natural) persons.
2. **A combination of the legal status of the holder and the holding** is used to refine the limits between the household and non-household sector holdings.

## Box 2: Legal status of the holding

As per AGRIS recommendations (pg. 108 <http://www.fao.org/3/ca6412en/ca6412en.pdf>), the legal status of the holding must be adapted to a list of national existing legal statuses. The sector to which the holding belongs may be classified as “**Household sector**” or “**Non-Household sector**”. The Household and Non-Household sectors can be defined using a combination of Q.I.2 and Q.I.3 categories, depending on the national context. A clear distinction between both sectors is crucial as many of the subsequent questions will be filtered through these two categories.

The System of National Account (SNA) 2008 defines the Household and Non-Household sectors from a production perspective as follows: (i) households without production activity; (ii) households with unincorporated enterprises; and (iii) households with quasi-corporations. Only households with unincorporated enterprises are included in the household sector, while those with quasi-corporations are classified in the non-household sector. The below definition are taken from the SNA 2008:

- **Unincorporated household enterprises** (UNSD, 2009, p. 4.155 to 4.156) Households may undertake agricultural activities and produce agricultural products for their own consumption, for barter, and for the market. They can range from a single person to a large enterprise employing people outside the household. The unincorporated household enterprise can also include partnerships where the partners belong to different households. When the liability of the partners for the debts of the enterprises is unlimited, the partnership must be treated as an unincorporated enterprise and remain within the household sector, as all of the assets of the household, including the dwelling itself, are at risk if the enterprise goes bankrupt. Partnerships whose partners enjoy limited liability are effectively separate legal entities and are treated as corporations.
- **Household with quasi-corporation** (UNSD, 2009, p. 4.42–4.43 and 4.156–4.157) The SNA 2008 (UNSD, 2009, p. 4.42–4.43 and 4.156–4.157) recognizes the existence of households as quasi-corporations. All household enterprises that can be treated as quasi-corporations are classified in the corporation sector and are therefore excluded from the household sector. These are households with agricultural activities which are operated and behave like privately owned corporations, even if they are not effectively separated legal entities. They should be treated as quasi-corporations provided that complete sets of accounts are available or can be compiled if

### I.4 Address of the holding

#### I.4 Address of the holding

I.4.1 Address (street)

I.4.2 Village, town

I.4.3 Region


This question is self-explanatory and is meant to collect information on the address i.e. town, (alternatively village or city) and region in which the holding is located.

### I.5 Holding’s number

I.5.1 Telephone number (cell phone) . . .

I.5.2 Telephone number (landline) . . .


Enumerators record the holding’s phone number (i.e. cell phone and landline).

## I.6 GPS coordinates of the holding

I.6.1 Longitude	. . . . .								
I.6.2 Latitude	. . . . .								

Enumerators record the GPS coordinates of the agricultural holding using a smart phone or GPS device (if available). If devices for obtaining GPS coordinates are not provided to enumerators, this information must be obtained by enumerators before going to the field, by accurately recording the longitude and latitude related to the centre of gravity of the holding (location at the centre of the agricultural area of the holding). If the holding’s buildings are at the centre of the holding, the coordinates of the farm building can be used.

It is important to accurately record the longitude and latitude of the area of the holding, in order for the enumerators to reach out to the respondent again in the future in case of misreported values.

## Section II: AREA OF THE HOLDING

This section collects information on the area of holding. Total area of holding is derived by summing the areas under each of the land use categories and under each land tenure arrangement. Data on land tenure types are collected at a holding level.

**Introduction to question II.1-II.4.** Questions from II.1 to II.4 collect information on the total area of the holding by land use type and land tenure type, including information on common land that are exclusively managed by the holding. It is important to notice that common land is included in the scope insofar as it is occupied exclusively (i.e. managed and used) by the agricultural holding.

### II.1 Report land tenure type of the agricultural area of the holding

Reference year: Last calendar year  
(Read all options and fill in all that apply)

		Area of the holding	Unit of measure
<input type="radio"/> 1	Owned and operated . . . . .		
<input type="radio"/> 2	Rented-in . . . . .		
<input type="radio"/> 3	Other (occupied, borrowed for free, including common land managed by the holding) . . . . .		
	<b>Total area of the holding</b>		
<input type="radio"/> 4	Owned and rented-out (not operated by the holding) . . . . .		

Land tenure refers to the arrangements or rights under which the holder operates the land that makes up the holding. This question refers to whether the agricultural holding is operated under specific land tenure types. A holding may have one or more tenure types.

Respondent should first inform the enumerators about each **land tenure type of the holding**. For each of them, it is then asked to record the area of the holding under a specific land tenure type, as previously specified. Four main types of land tenure arrangements are identified:

1. Owned and operated (code 1);
2. Rented-in (code 2);
3. Other (occupied, borrowed for free, etc.) (code 3);
4. Owned and rented-out (code 4).

The last column of question II.1 is used to record the unit of measurement according to which the area, under a specific land tenure type.

Once all information has been recorded, enumerators must calculate, in a block note, the total area of the holding by adding up the area that is owned and operated (code 1), rented-in (code 2) and other (code 3). The area of the holding that is rented-out is recorded but subtracted from this calculation as these areas are

not operated by the holding. Enumerators must record the total area of the holding by adding up the area from code 1, 2 and 3.

Box 3 below contains a definition of Land Tenure Type (FAO, 2010), whereas Box 4 and Figure 1 define the area of the holding with breakdown by parcels of land.

### Box 3: Land tenure type

The 4 main types of land tenure arrangements identified are:

1. **Owned and operated:** The holder or members of the holder's household possess title of ownership, which gives the holder the right to sell/mortgage/lease and determine the nature and extent of the use of the land parcels.
2. **Rented-in:** The land is held under conditions that enable it to be operated as if legally owned by the holder or members of the holder's household. This type of legal owner-like possession is where land is operated under long or short-term lease, with nominal rent.
3. **Other (occupied, borrowed for free, etc.):** The holder has operated the land without interruption for a long period without any form of legal ownership, title, long-term lease, or payment of rent or the land is operated under a system in which a rent-free land is received and retained as long as it is kept under cultivation by the recipient's personal and household labor, but which cannot be sold or mortgaged.

**The above three types of land tenure arrangements make up the total agricultural area of the holding. However, the agricultural holding may rent out some of the land owned by the holding to someone else:**

4. **Owned and rented-out:** Rented land to someone else means land that is rented or leased out by the holding to other persons/holdings, usually for a limited time period. Rental arrangements can short or long term and may take different forms. Land may be rented for an agreed sum of money and/or produce, for a share of the produce, or in exchange for services. Land may also be granted rent free.

### Box 4: Area of the holding by land tenure type

For the purposes of this questionnaire, a holding is divided into different land areas depending on the land tenure type under which a given land area is recorded. For each type of land tenure arrangement, interviewer must first write down all the land tenure type (e.g. owned, rented-in etc.) and then record the corresponding area under a given land tenure type (including the corresponding standard or non-standard unit of measurement).

In general, the agricultural area of the holding can be divided into parcels. A parcel is any piece of land, of one land tenure type, entirely surrounded by other lands, water, road, forest or other features not forming part of the holding or forming part of the holding under a different land tenure type. A parcel may consist of one or more fields or plots adjacent to each other. This implies that a distinction should be made between a parcel, a field and a plot. A field is a piece of land in parcel separated from the rest of the parcel by easily recognizable demarcation lines, such as paths, cadastral boundaries and/or hedges. A field may consist of one or more plots, where a plot is a part or whole of a field on which a specific crop or crop mixture is cultivated. Figure 1 below shows the total area of a given agricultural holding. Assuming that 2 parcel are owned (parcel 1 and 2), a third parcel is rented out (parcel 3) and a fourth parcel is rented-in, interviewer will report that total area owned as calculated by adding up the land size of parcel 1 and 2. The total agricultural area of the holding will also be comprised of the fourth parcel, the one rented-in. The area of the holding which is rented-out, instead, is made up of parcel 3 but will not be part of the total agricultural area of the holding. Therefore:

Total agricultural area of the holding = Parcel 1 + Parcel 2 + Parcel 4



- 5a Permanent crops (more than one year) under greenhouses or high shelters
- 5b Permanent crops (more than one year) outdoors or under low shelters
- 6 Permanent meadows and pastures
- 7 Farm buildings and farmyards
- 8 Forest and other wooded land
- 9 Aquaculture on the holding (area not counted elsewhere)
- 10 Other areas not elsewhere classified (unutilized, rocks, wetlands, including with natural vegetation)

Codes from 1a to 6 are used to calculate the agricultural area of the farm. It is important to know that the land area of the holding that is not cultivated but is covered by natural or diverse vegetation falls under the category of “Other areas not elsewhere classified” (Code 10).

It is important to accurately collect the total area under a given land use type (see box 5). The aggregation of the agricultural land area associated with codes from 1 to 6 is used to calculate the denominator of sub-indicator 1: farm output value per hectare of land. Box 5 and 6 below provides a description of each land use type as per WCA 2020.



## Box 5: Definitions of land use types

The below Land Use Classification is based on the World Programme for the Census of Agriculture 2020 (WCA 2020) and harmonized with the System of Environmental-Economic Accounting (SEEA)-Central Framework, designed for covering the whole territory of a country. For the purposes of this survey, a slight adaptation was carried out in order to keep Greenhouses and Land in family gardens (both permanent and temporary) as a sub-category of lands under temporary/permanent crops. It is recommended that the above 10 basic land use classes are identified and listed in the survey. **It is important for the interviewers to get familiar with the classification of land use types and explain it to respondents. A definition of each land use types is as follows:**

- 1. Land under temporary crops** includes all land used for crops with a less than one-year growing cycle; that is, they must be newly sown or planted for further production after the harvest. Some crops that remain in the field for more than one year may also be considered temporary crops. For example, strawberries, pineapples and bananas are considered to be annual crops in some areas. Such crops could be classified as temporary or permanent according to the custom in the country.
- 2. Land under temporary meadows and pastures** includes land temporarily cultivated with herbaceous forage crops for mowing or pasture. A period of less than five years is used to differentiate between temporary and permanent meadows and pastures. If country practice differs from this, the country definition should be clearly indicated in census reports.
- 3. Land temporarily fallow** refers to arable land at prolonged rest before re-cultivation. This may be part of the holding's crop rotation system or because the normal crop cannot be planted because of flood damage, lack of water, unavailability of inputs or other reasons.
- 4. Land under permanent crops** refers to: land cultivated with long-term crops which do not have to be replanted for several years; land under trees and shrubs producing flowers, such as roses and jasmine; and nurseries (except those for forest trees, which should be classified under "forest and other wooded land"). Land under permanent meadows and pastures is excluded from land under permanent crops.
- 5. Land under permanent meadows and pastures includes** land used permanently (for five years or more) to grow herbaceous forage crops, through cultivation or naturally (as wild prairie or grazing land). Whether land under permanent meadows and pastures is cultivated or naturally grown has important environmental implications.
- 6. Land under farm buildings and farmyards** refers to surfaces occupied by operating farm buildings (hangars, barns, cellars, silos), buildings for animal production (stables, cow sheds, sheep pens, poultry yards) and farmyards. Area under the holder's house (including the yard around it) is also classified here if it makes up part of the agricultural holding
- 7. Forest land** is land spanning more than 0.5 ha with trees higher than 5 metres (m) and a canopy cover of more than 10 percent, or trees that are able to reach these thresholds in situ. It covers both natural and plantation forests. It includes forest roads, firebreaks and other small open areas, as well as areas that are temporarily not under trees (due to clear-cutting as part of forest management practice, abandoned shifting cultivation or natural disasters) but are expected to revert to forest within five years (in exceptional cases, local conditions may justify the use of a longer time frame). Windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 ha and width of more than 20 m are included. Forest tree nurseries that form an integral part of the forest should be included. **Other wooded land** is land spanning more than 0.5 ha with: (i) trees higher than 5 m and a canopy cover of 5 to 10 percent, or trees able to reach these thresholds in situ; or (ii) trees not able to reach a height of 5 m in situ but with a canopy cover of more than 10 percent (e.g. some alpine tree vegetation types, arid zone mangroves, etc.); or (iii) combined cover of shrubs, bushes and trees of more than 10 percent.
- 8. Area used for aquaculture** includes area (land, inland waters or coastal waters) for aquaculture facilities, including supporting facilities. Aquaculture refers to farming of aquatic organisms such as fish, molluscs, crustaceans, plants, crocodiles, alligators and amphibians. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc.
- 9. Other area not elsewhere classified** includes all other areas on the holding that are not elsewhere classified. It includes uncultivated land producing some kind of utilizable vegetable product, such as reeds or rushes for matting and bedding for livestock, wild berries, or plants and fruit. It also includes land which could be brought into crop production with a little more effort than that required for common cultivation practices. Also included under this category: land occupied by non-farm buildings; parks and ornamental gardens; roads or lanes (except forest roads, which are included in forest); open spaces needed for storing equipment and products; wasteland; land under water not used for aquaculture; and any other area not reported under previous classes (such as marshlands, wetlands, etc.)

### Box 6: Definitions of land use types

The nine land use classes can be grouped as follows:

Land use classes	Aggregated land classes			
1.Land under temporary crops	Arable lands	Crop land	Agricultural land	Land used for agriculture
2.Land under temporary meadows and pastures				
3.Land temporarily fallow				
4.Land under permanent crops				
5. Land under permanent meadows and pastures				
6. Land under farm buildings and farmyards				
7. Forest and other wooded land				
8. Area used for aquaculture				
9.Other area not elsewhere classified				

### Box 7: Measuring the land area

It is important to know that total area of holding is the area of all the land making up the agricultural holding. It includes all land operated by the holding without regard to title or legal form. **Thus, land owned by members of a household but rented to others should not be included in the area of the holding. Conversely, land not owned by members of a household but rented from others for agricultural production purposes should be included in the holding area.** In this question it is also asked non-agricultural areas of the holding, i.e. forest and other wooded land and area used for aquaculture which, despite not being used for agricultural purposes, belong to the holding.

Note that the area of holding may be zero, such as where the holding keeps livestock but has no land; this is called a landless holding.

In this question, interviewers will ask the farmer to estimate the size of the land area that belong to the holding itself over the last agricultural season, both agricultural and non-agricultural area. Interviewers make sure not to include the area which is rented out. The estimate of the total agricultural and non-agricultural area of the holding must reconcile with the total area of the holding which is owned, rented-in and other type of land tenure arrangement (which is not rented out), as per question A.1.

Many smallholders are likely to give areas as acres and as fractions of acres, probably not more detailed than  $\frac{3}{4}$ ,  $\frac{1}{2}$ , and  $\frac{1}{4}$  of an acre. Interviewers **MUST** convert the fractions to decimals as follows:  $\frac{3}{4}=0.75$ ,  $\frac{1}{2}= 0.50$  and  $\frac{1}{4} =0.25$ , and fill in the areas with two decimals. Interviewers **MUST** make sure that the decimals are correctly registered in order to avoid data entry errors at a later stage. Note the following conversions:

**1 acre  $\cong$  4000m<sup>2</sup>  $\cong$  0.4 hectares**

**1 hectare  $\cong$  10,000m<sup>2</sup>  $\cong$  2.5 acres**

If any local area measurement unit is used, it should be converted into acres before and then into hectares; and finally recorded in the last column. The following guidelines can be used:

- An acre is a measure on the ground of approximately 70 yard (yd) x 70 yd or half a standard football field;
- By casually walking round a square of 50 steps by 50 steps, one covers an area of approximately  $\frac{1}{4}$  or 0.25 acres;
- An area measuring 22 yd x 22 yd covers 0.1 acres; and
- An area measuring 16 yd x 16 yd covers 0.05 acres.

**with others)**

Reference year: Last calendar year

- 1 Yes  
 2 No

Common lands are defined as those lands used collectively by a number of persons, or by one person, but over which other people may have certain traditional rights, such as livestock grazing. Common lands are usually owned by the State, by local communities, etc.

This question is asked with reference to the last calendar year. It collects information on total area of the holding which is under common use. Enumerators record information on the common land area when used exclusively and managed by the holding.

**It is important to record only those common lands that are exclusively managed by the holding and not those used by different agricultural holdings without any management arrangement.**

**II.4 Do you confirm that the area calculated corresponds to the holding's total area (II.1=II.2)?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No → Go back to II.1

This Yes/No question ascertains whether the holding's total area recorded by the enumerators corresponds to the effective area of the holding, as reported in questions II.1 and II.2.

More specifically, this question is asked to double check whether the actual area of the holding corresponds to the total recorded area of the holding. This filter question allows for a Yes/No answer. In case of negative answer, enumerators go back to Section II and ask again questions from II.1 to II.4, making sure to properly record information on land use type and tenure. In case of positive answer, the enumerators proceed with the interview and ask questions in **section A**.

## Section A: Economic Dimension of the Holding

This section collects information on the agricultural production and provides a measure of the holding's economic situation. Information on the agricultural production (in monetary value) and other on-farm production, i.e. production that is not strictly agriculture related but linked to the holding's agricultural activities (e.g. processing of agricultural products) are recorded in this section, which is made up of 8 questions.

**Introduction to question A.1-A.6.** Questions from **A.1** to **A.6** collect information on crop and livestock harvested and produced quantities during the reference period. It also provides information on the main agricultural activity of the holding and it allows deriving the total value of agricultural production of the holding, including the value of production from other on-farm activities. Filter questions are added in order to avoid unnecessary burden to respondents.

### **A.1 From an economic perspective, what is the holding's main agricultural focus?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Mainly crop production (represents more than 2/3 of the total value of production)
- 2 Mainly livestock production (represents more than 2/3 of the total value of production) → Go to A.3
- 3 Mix of crop, livestock and other production activities (while each of them represent equal to or less than 2/3 of the total value of production)

This question aims to collect information on the main activities carried out by the holding over the last calendar year. It is important to ask about the main activities in terms of monetary value produced, not time spent. It might be the case that a given holding carried out two activities: the first one, say crop activity, is the one in which the person (holder) spend more time but it produces less monetary value than the one in which less time is spent (say livestock activity). In this case the main agricultural focus will be the one producing a greater monetary value, irrespective of time spent on the activity. Three codes are associated with this question

1. Mainly crop production (represents more than 2/3 of the total value of production)
2. Mainly livestock production (represents more than 2/3 of the total value of production)
3. A mix of crop and livestock production (while each of them represent equal to or less than 2/3 of the total value of production)

Enumerators skip question **A.2** if the main agricultural focus of the holding is livestock (code 2). Yet, enumerators skip question **A.3** if the main agricultural focus of the holding is crop (code 1). In case of holdings focusing on both livestock and crop activities (mixed production) enumerators will ask both question **A.2** and question **A.3**.

The definitions of crop and livestock activities, as per classification provided by the UN-ISIC (International Standard Industrial Classification of the United Nations) are given in Box 8. The definitions of sub-crop activities by ISIC are illustrated in Box 9. Finally, the definitions of sub-livestock activities are in Box 10.

### Box 8: Definition of major crop and livestock

According to the International Standard Industrial Classification (ISIC revision 4) of the United Nations (UN), Agricultural activities are mainly of two types: crop activities and livestock activities. The interviewer must ascertain that the respondent is familiar with the concept of crop and livestock production as per below example:

- ✓ The production of crop products: covering also the growing of genetically modified crops-- include growing of non-perennial crops and perennial crops, such as growing of cereals, leguminous crops and oil seeds in open fields, including those considered organic farming and the growing of genetically modified crops etc. Further typologies of crop production include growing of rice vegetables and melons, roots and tubers; growing of sugar cane, growing of tobacco; and finally growing of fibre crops.
- ✓ The production of animal products --covering also the raising of genetically modified animal—include raising of cattle and buffaloes; raising of horses and other equines; raising of camels and camelids; raising of sheep and goats; raising of swine/pigs; raising of poultry; and finally raising of other animals. Products derived from raising one or more of the above animals are also included in the livestock production.
- ✓ Mixed farming; i.e. mix of crop and livestock production, breaks with the usual principles for identifying main activity. It accepts that many agricultural holdings have reasonably balanced crop and animal production and that it would be arbitrary to classify them in one category or the other.

Available at: [https://unstats.un.org/unsd/publication/seriesm/seriesm\\_4rev4e.pdf](https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf)

### Box 9: Definitions of key terms (Crops)

- ✓ **Production of annual field crops (cereals, oilseeds, protein crops, root crops, tobacco, cotton, etc.):**  
This group includes the growing of perennial crops, i.e. plants that lasts for more than two growing seasons, either dying back after each season or growing continuously. Included is the growing of these plants for the purpose of seed production.
- ✓ **Production of vegetables, mushrooms, flowers, ornamental plants, etc.**  
This class includes the production of all vegetative planting materials including cuttings, suckers and seedlings for direct plant propagation or to create plant grafting stock into which selected scion is grafted for eventual planting to produce crops.  
**This class includes:**  
Growing of plants for planting  
Growing of plants for ornamental purposes, including turf for transplanting  
Growing of live plants for bulbs, tubers and roots; cuttings and slips; mushroom spawn  
Operation of tree nurseries, except forest tree nurseries
- ✓ **Production of grapes for wine**  
Growing of wine grapes and table grapes in vineyards
- ✓ **Production of other perennial crops (cacao, coffee, etc.)**  
**This class includes:**  
Growing of rubber trees  
Growing of Christmas trees  
Growing of trees for extraction of sap  
Growing of vegetable materials of a kind used primarily for plaiting
- ✓ **Mixed cropping (no dominance of a specific crop activity)**  
Country level definition may be used.

### Box 10: Definitions of key terms (Livestock)

✓ **Raising ruminant livestock for meat (cattle, sheep goats)**

This class includes:

- raising and breeding of cattle, buffalo, sheep, goat, etc.

✓ **Raising non-ruminant livestock for meat (pigs, poultry, etc.)**

This class includes:

- raising and breeding of poultry:

✓ **Production of eggs**

Self-explanatory

✓ **Production of milk**

Self-explanatory

✓ **Mixed livestock (no dominance of a specific livestock activity)**

Country level definition may be used.

### **A.2 What was the total value of crops and its by-products produced by the holding?**

Reference year: Last calendar year

(Fill in all that apply)

Name the 5 main crops and crops by-products produced by the holding and their total value (maximum 5)

	Crop name	Area	Unit of measure	Quantity Produced	Quantity unit of measure	Average or latest Price per unit	Total Value of Production
<input type="radio"/>	1						
<input type="radio"/>	2						
<input type="radio"/>	3						
<input type="radio"/>	4						
<input type="radio"/>	5						

	Crop by-products name	Quantity Produced	Quantity unit of measure	Average or latest Price per unit	Total Value of Production
<input type="radio"/>	1				
<input type="radio"/>	2				
<input type="radio"/>	3				
<input type="radio"/>	4				
<input type="radio"/>	5				

This question collects information on total value of crop and its by-products, which is total quantity of each crop and by-product produced multiplied by its respective average or last farm gate price. Total monetary value of crops and by-product is obtained by adding up the total monetary value of all the crops (and its by-product) harvested by the holding. This question also collect information on the area used for a given crop and the number of varieties of the same crop on a given area.

In question **A.2**, enumerators will fill in two tables. The first one is meant to record the quantity and corresponding prices of crops produced by the holding. The second records the quantity and prices of its by-product produced. Data is collected on maximum of 5 crops and 5 by-products.

In question **A.2**, each row refers to one Crop or By-Product. If the holding grows multiple crop commodities, they should be listed separately (for example, maize and beans will be on different rows).

**NOTE. Question A.2 is about crop and its by-products. Do not include livestock animal and its by-products. Skip this question if the main agricultural focus of the holding is livestock (code 2 in question A.1)**

- List up to 5 major crops produced by the holding (1<sup>st</sup> column).
- Report area used to cultivate the listed crops (2<sup>nd</sup> column).
- Record the unit of measurement of the area used for each crop (3<sup>rd</sup> column).
- Quantity produced for each crop (4<sup>th</sup> column).
- Unit of measurement of the quantity produced for each crop (5<sup>th</sup> column).
- Average or last farm gate price (6<sup>th</sup> column). The price must be aligned with the unit of measurement used to record the quantity of a specific crop and/or by-products (e.g. price per Kg, grams etc.). In case the crop or its by-products are self-consumed, implicit price are used as if the commodities were sold in the market.
- Total value of production in local currency unit (7<sup>th</sup> column).

### Box 11: Crops

Comprehensive list of crop commodities needs to be established at the country level. Nonetheless, list of crop commodities can be extracted from the ISIC rev.4 classification, see table below:

Crops	
Avocado	Orange
Banana	Paprika
Beans.	Pawpaw/papaya
Cabbage	Peach.
Cassava	Pearl millet
Coffee	Pigeon pea
Cotton	Pineapple
Custade apple	Rice
Finger millet{	Sorghum
Fodder trees	Soybean
Ground bean	Sugar cane
Groundnut.	Sunflower
Guava	Sweet potato
Lemon	Tanaposi
Maize	Tea
Mango	Tobacco
Mexican apple	Tomato
Naartje (tangerine)	Wheat
Onion	Other (specify)

#### Example: Crop by-products:

Wheat - Stalks
Rice – Straw / Husk
Cotton – Sticks
Sugar cane – Tops
Maize – Stalks / straw
Mustard – Straw

### A.3 What was the total value of livestock and its products production of the holding?

Reference year: Last calendar year

(Fill in all that apply)

Name the 5 main livestock and livestock products produced by the holding and their total value (maximum 5)

	Livestock animal name	Number of heads at the beginning of the years (Stock + Live births)	Number of heads bought or received during the year	Number of heads given away, dead, or slaughtered during the year	Number of heads sold, paid to labor, rented out or exchanged during the year	Number of heads at the end of the year	Average or latest Price per unit	Total Value of Production
<input type="radio"/> 1								
<input type="radio"/> 2								
<input type="radio"/> 3								
<input type="radio"/> 4								
<input type="radio"/> 5								

	Livestock product name	Quantity Produced	Quantity unit of measure	Average or latest Price per unit	Total Value of Production
<input type="radio"/> 1					
<input type="radio"/> 2					
<input type="radio"/> 3					
<input type="radio"/> 4					
<input type="radio"/> 5					

This question is asked with reference to the last calendar year and records information on total value of livestock production, which is the quantity of each animal sold (or its by-products) multiplied by the corresponding average or last farm gate prices. Total value of livestock production is obtained by adding up the monetary value of each single livestock and its by-product produced by the holding.

In question **A.3**, enumerators will fill in two tables. The first one is meant to record the number of animals owned by the holding. The second one records the amount of products that are produced by the raising of different types of animals.

**Table 1 of question A.3** (Livestock animals' names):

**Each row refers to one animal** owned by the holding. If the holding has multiple animals, they should be listed separately in each row (for example, cattle, goat etc.).

**NOTE.** Table 1 of question **A.3** is about livestock animals. **Do NOT include livestock by-products.** Skip this question if the main agricultural focus of the holding is crop (**code 1 in question A.1**)

The enumerators begin by asking the respondent for the number of each type of [ANIMAL] owned by the holding as of start date of the last agricultural year. **If additional animals have been added within the last calendar year, they should be included in the count. If animals have been sold or slaughtered during the past calendar year, they should be excluded.**

- List up to 5 major livestock animals (first column). The enumerator must begin by asking the respondent to break down the number of animal owned by species.
- Number of animals born in the last agricultural year (second column).
- Number of animals received as a gift or bought (third column).
- Number of animals died and slaughtered (fourth column).
- Number of animals sold, used as pay or wages for labor, given to landlord as rent or given for other reasons or exchanged (fifth column).
- Average or last market price per head of animal. In case animals were not sold over the last agricultural year, an implicit farm gate price **should be used. This is done by asking the respondent "what would have been the price if you had sold that animal"?**
- Total value of production of the livestock is recorded in the last column.



**Table 2 of question A.3 (Livestock products):**

**Each row refers to one livestock product produced.** If the holding has produced multiple products by the raising of animals, they should be listed in separate rows (e.g. milk, eggs, etc.).

NOTE. Table 2 of question A.3 is about livestock product. Do NOT include livestock animals. Skip this question if the main agricultural focus of the holding is crop (code 1 in question A.1)

- Enumerators begin by asking the respondent to list up to 5 major livestock product (first column).
- The amount of products produced by the raising of animals over the last calendar year prior to the date of the interview is recorded in the second column.
- These measurements should be in standard international units (such as litres or kilograms), not in local units.
- Once the amount of products has been recorded the respondent should inform the enumerator about the average or last farm gate price of each product – recorded in local currency unit – in the last calendar year. The price must be aligned with the unit of measurement used to record the amount of animal products produced by the holding (e.g. price per Kg, grams, litres, etc.)

**Box 12: Livestock animals and by-products**

In general, a comprehensive list of livestock animals and livestock products must be established at the country level, taking into account country specificities. Nonetheless, list of livestock animals and livestock products can be extracted from the ISIC rev.4 classification, as per the below table:

<b>Livestock Animals</b>	<b>Livestock By-Products</b>
Calf	Milk
Steer/heifer	Chicken eggs
Cow	Guinea fowl eggs
Bull	Meat
Ox	Skins and hides
Donkey/mule/horse	Manure
Goat	Other (specify)
Sheep	
Pig	
Chicken-layer/	
Chicken-broiler	
Local-hen	
Local-cock	
Turkey/guinea fowl	
Duck	
Dove/pigeon	
Other (specify)	

**A.4 For each species of animal (max. 3) that are raised on this agricultural holding, list the different breeds and the number of animals they represent**

Reference year:    Last calendar year  
 (Leave it blank if none)

		Species Name	Breeds/Crossbreed Name	Number of animals
○	1	.....	1	
		.....	2	
		.....	3	
○	2	.....	1	
		.....	2	
		.....	3	
○	3	.....	1	
		.....	2	
		.....	3	

This question is asked with reference to the last calendar year. In this question enumerators must record all of the animal species that belong to the holding in the first column. For each animal species, the different breeds are reported in the second column, with the corresponding total number of each breed are recorded in the third column. The percentage can be calculated accordingly. The example in Box 13 below clarifies how data should be collected and recorded. It is important to report only the national list of locally adapted breeds, as agreed with country experts.

Note: if no animals are raised in the holding, enumerators must leave question **A.4** blank

### Box 13: Definitions of key terms

According to FAO (<http://www.fao.org/dad-is/en/>), there are around 8,800 livestock breeds of 38 different species in the world, providing a diversity of products and services.

Table below provides the list of animal species from the Domestic Animal Diversity Information System (DAD-IS) of FAO. For each animal species, each country has its own animal breeds.

Alpaca	Horse
American Bison	Llama
Ass	Nandu
Bactrian camel	Partridge
Buffalo	Peacock
Cassowary	Pheasant
Cattle	Pig
Chicken	Pigeon
Chilean Tinamou	Quail
Deer	Rabbit
Dog	Sheep
Dromedary	Turkey
Duck	Vicuna
Emu	Yak
Goat	
Goose	
Guanaco	
Guinea fowl	

The following example is extracted from the list of animal species and breeds in Malawi, using information available at <http://www.fao.org/dad-is/browse-by-country-and-species/en/>.

	Species Name	Breeds/ Crossbreed Name	Number of heads	%
<input type="radio"/>	1 Cattle	1 Boran 2 Friesian 3 Simmental	3 4 10	
<input type="radio"/>	2 Chicken	1 Ross 2 Ross Indian River 3 Tokai	21 4 1	
<input type="radio"/>	3 ...	1 2 3		

**A.5 Did the holding carry out other on-farm activities than crops and livestock production? (e.g. aquaculture, agroforestry etc. read the list)?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

→ Go to A.7

The objective of this Yes/No question is to collect information on whether (or not) the holding has diversified its agricultural activities (as identified in question A.2 and A.3: crop and livestock) by carrying out activities that, despite not being of agriculture type, are strongly associated to the main crop and/or livestock activities of the holding. On-farm activities that are not crops and livestock generally comprise of on-farm processing of agricultural products (e.g. manufacture of crude vegetable oil: olive oil, soybean oil, palm oil, sunflower seed oil, cottonseed oil, rape, colza or mustard oil, linseed oil, etc.).

Box 14 below lists all on-farm activities carried out by the holding and which are not crop or livestock production. Enumerators must read out the below on-farm activities after having asked question A.5

The following codes are associated with question A.5. Skip question A.6 if code in A.5 is 2 (No).

- 1 Yes  
 2 No

**Box 14: Other On-farm activities**

Other on-farm activities may represent a substantial share of the holding's activities (in terms of income). The question is limited to the holding's activities and excludes the activities of household members and/or external workers carried out outside of the holding. A comprehensive list of relevant activities is illustrated below.

<b>1. On-farm processing of agricultural products:</b>
• Grain milling: production of flour, groats, meal or pellets of wheat, rye, oats, maize (corn) or other cereal grains
• Rice milling: production of husked, milled, polished, glazed, parboiled or converted rice; production of rice flour
• Processing and preserving of fruit and vegetables
• Manufacture of crude vegetable oil: olive oil, soya bean oil, palm oil, sunflower seed oil, cottonseed oil, rape, colza or mustard oil, linseed oil, etc.
• Manufacture of wine
• Distillation of spirit drinks
• Manufacture of tobacco products (cigars, chewing tobacco, etc.)
• Processing and preserving meat
• Manufacture of dairy products
• Manufacture of leather and related products
<b>2. Selling of holding's products at the market/shop (incl. preparation, packaging and transport of processed products)</b>
<b>3. Production of forestry products</b>
<b>4. Production, processing and preserving of fish, crustaceans and molluscs</b>
• Production of fish, crustaceans and molluscs
• Processing and preserving of fish, crustaceans and molluscs
<b>5. Production of renewable energy</b>
<b>6. Contractual work for other holdings using the production means of this holding</b>
<b>7. Accommodation, restaurant, catering and other leisure/educational activities</b>
<b>8. Making handicrafts</b>
<b>9. Training of animals</b>
<b>10. Management and/or administration for the agricultural holding</b>
<b>11. Other (specify)</b>
<b>12. None</b>

Reference year: Last calendar year  
(Fill in all that apply)

Name the main 5 on-farm productions (other than crops and livestock) and their total value (e.g. aquaculture, agroforestry etc.)

	Other on-farm products name	Quantity Produced	Quantity unit of measure	Average or latest Price per unit	Total Value of Production
<input type="radio"/> 1					
<input type="radio"/> 2					
<input type="radio"/> 3					
<input type="radio"/> 4					
<input type="radio"/> 5					

This question collects information on total value of production from other on-farm, which is the quantity of each on-farm products multiplied by the corresponding average or last farm gate price. Total value of on-farm production is obtained by adding up the monetary value of each single on-farm product produced by the holding over the last calendar year. In question **A.7**, each row refers to one on-farm product.

**NOTE. Question A.6 is about on-farm products. Do NOT include crops, livestock animal and its products. Skip this question if the code in question A.5 is 2 (no) and go to A.7.**

- Enumerators must begin by listing up to 5 major on-farm products produced by the holding (first column).
- In the second column, records unit of measurement.
- The third column records the quantity produced of each listed on-farm product
- Fourth column capture the average or last farm gate price for each on-farm product. The price must be aligned with the unit of measurement used to record the quantity of commodities (e.g. price per Kg, grams etc.). In case some on-farm products were only own-consumed, the recorded price should be the price if those products would have been sold in the market.
- The last column records the total value of production.

The list of on-farm products is given in box 15 below.

**Box 15: Example of other On-Farm Products**

Production of:	Flour
Production of:	Meal
Production of:	Pellets of wheat
Production of:	Rye
Production of:	Oats
Production of:	Maize
Production of:	Other cereal grains
Production of:	Husked
Production of:	Milled
Production of:	Polished
Production of:	Glazed
Production of:	Parboiled or converted rice
Production of:	Production of rice flour
Production of:	Fruit
Production of:	Vegetables
Manufacture of:	Olive
Manufacture of:	Vegetable oil
Manufacture of:	Soybean
Manufacture of:	Palm
Manufacture of:	Sunflower
Manufacture of:	Cottonseed
Manufacture of:	Wine
Manufacture of:	Tobacco
Manufacture of:	Dairy products
Manufacture of:	Leather
Processing and preserving:	Meat

**Introduction to Question A.7.** Question A.7 records information on profitability of the holding. Such information is meant to measure, monitor and assess the economic performance of the holding over the past three calendar years.

**A.7 How often was this holding profitable? (Profitable means that value of production was greater than total cost both fixed and variable)**

Reference year: Last 3 calendar years

(Fill in one circle only)

- 1 Unprofitable for all three years
- 2 Profitable in one out of the three years
- 3 Profitable in two out of the three years
- 4 Profitable in three out of the three years

This question is asked to record information on how many times over the past 3 calendar years prior to date of the interview the agricultural holding made profit. The concept of profit implies that the total revenues were greater than fixed and variable costs of production, as per below formula.

$$\pi_i = (\text{Revenue } i.e. p_i * q_i) - (\text{total cost of production}_i) \quad [1]$$

Where  $\pi_i$  is the profit of the  $i$  – th holding,  $(p_i * q_i)$  is the revenue of the holding (farm gate prices multiplied by quantity produced). A profitable holding implies that the difference between revenues and cost of production is non-negative (either 0 or greater than 0).

The enumerators should ask question A.7 carefully and record the information on how often the agricultural holding was profitable. The enumerators should ensure the total cost of production also comprises the fixed and variable costs associated with production. Four codes are possible for this question:

- 1      **Unprofitable for all three years**
- 2      **Profitable in one out of the three years**
- 3      **Profitable in two out of the three years**
- 4      **Profitable in three out of the three years**

#### **Box 16: Definition of key terms**

**Profitable** agricultural holdings are those having a positive profit. Profitability here is measured using **Net Farm Income** that the holding is able to earn from farming operations. The focus of **Net Farm Income** sub-indicator is on income from farming operations as opposed to total income of the holding household which may include income from other sources e.g. employment in local businesses by other family members, tourism activity, etc. While these other sources of income are important in the context of assessing the sustainability of living in rural areas, they are not of direct relevance in the assessment of the sustainability of agriculture.

**Gross Farm Income** refers to the monetary and non-monetary income received by farm. Its main components include cash receipts from the sale of farm products, direct program payments to producers, other farm income (such as income from custom work), value of food and fuel produced and consumed on the same farm, and change in value of year-end inventories of crops and livestock.

**Net farm Income** refers to the return (both monetary and non-monetary) to farm operators for their labor; management and capital, after all production expenses have been paid (that is, Gross Farm Income minus production expenses). It includes net income from farm production, the value of commodities consumed on the farm, depreciation, and inventory changes.

In order to make sure that respondents are aware about the distinction between **Gross** and **Net Farm income** (i.e. profit), interviewers can ask again how many times during the past 3 years the value of products sold was greater than the total operating cost of the business. Further, interviewers can ask how much did the holding spend on all operating expenses during year 1, 2 and 3 and write the corresponding value of expenses in a block note. In the same way, interviewers ask how much did the holding received during years 1, 2 and 3 in monetary value form sales of the all commodities produced. The Net Farm Income can be calculated as the difference between self-reported sales and self-reported total operating expenses.

Estimating profitability at a farm level will generally require compilation of basic farm financial records, i.e. daily, weekly, monthly or seasonal transactions in an organized way. In general, large commercial farms maintain detailed financial records however, in case of medium farms and small subsistence agriculture, record keeping is seldom practiced and in most of the countries it doesn't exist at all. Where the detailed data ideally required are not available at farm level especially in case of small holders and household sector, then:

- Estimates will be developed based on farmer declaration of outputs and inputs quantity (and appropriate prices) and/or sales and purchases.
- Depreciation, variation in stocks and taxes will be neglected in this case.

### Box 16 (cont'd): Definition of key terms

If the required information is available, Net Farm Income is better calculated according to the methodology developed by Statistics Canada (available at <https://www150.statcan.gc.ca/n1/en/pub/21-010-x/21-010-x2014001-eng.pdf?st=8V1ikX6>). The following formula is applied:

$$NFI = CR + Y_k - OE - Dep + \Delta In \quad [1]$$

Where:

- **NFI = Total Net Farm Income**
- **CR = Total farm cash receipts including direct program payments**
- **$Y_k$  = Income in kind**
- **OE = Total operating expenses after rebates (including costs of labor)**
- **Dep = Depreciation charges**
- **$\Delta$  Inv = Value of inventory change.**

The below table enlists all costs and revenues associated with agricultural production, as per formula 1 above.

Total revenues = Total farm cash receipts + Direct program payments + Income in kind + Change in inventory	Cost = Operating + Fixed cost + depreciation	Net farm Income
<ul style="list-style-type: none"> <li>• Revenue = Quantity X Prices                             <ul style="list-style-type: none"> <li>- Crops</li> <li>- Livestock</li> <li>- other on-farm activities / products</li> </ul> </li> <li>• Direct program payments</li> <li>• Income in kind</li> <li>• Value of inventory change</li> </ul>	<ul style="list-style-type: none"> <li>• Operating Expenses:                             <ul style="list-style-type: none"> <li>- Labor expenses (Cash wages)</li> <li>- Fertilizers expenses</li> <li>- Pesticides expenses</li> <li>- Fuel expenses</li> <li>- Electricity expenses</li> <li>- Costs for feeding animals</li> <li>- Irrigation cost</li> <li>- Taxes</li> <li>- Others (see pag.30-32 of the above link)</li> </ul> </li> <li>• Depreciation charges</li> </ul>	<p><b><math>NFI = revenues - cost</math></b></p>

**Introduction to question A.8.** Question A.8 collects information on external shocks or unforeseen events-- that negatively affected the holding. It is important to solicit more than one coping strategy, if applicable. Filter questions are added in order to avoid unnecessary burden for the respondents.

#### **A.8 Did this holding have access to or availed any of the following mechanisms for protection against external shocks (e.g. drought, floods, pests, market failure, prices and others)?**

Reference year: Last calendar year

(Read all options and fill in all that apply)

- This holding had access to or availed credit (i.e. formal and/or informal) for protection against external shocks
- This holding had access to or availed insurance for protection against external shocks
- Neither the holding had access to nor availed any of the above mechanisms for protection against external shocks

This question collects information on mechanisms that allow the holding to protect itself from potential external shocks. Four types of shocks are listed. Enumerators read and explain these shocks given in **Box 17** before continuing.



### Box 17: External shocks

1. **Drought:** A prolonged period of abnormally low rainfall, leading to a shortage of water.
2. **Flood:** An overflow of a large amount of water beyond its normal limits, especially over what is normally dry land.
3. **Pest:** A destructive insect or other animal that attacks crops, food, livestock, etc. This can include also heat waves
4. **Market shock:** Any demand or supply side shocks that alter the price matching equilibrium in the market e.g. price reduction for the commodities produced by the holding.

The following codes are associated with question **A.8**:

- 1 This holding had access to or availed credit (i.e. formal and/or informal) for protection against external shocks
- 2 This holding had access to or availed insurance for protection against external shocks
- 3 Neither the holding had access to nor availed any of the above mechanisms for protection against external shocks

### Box 18: Shocks coping strategies

1. **Credit:** Credit may have been obtained from a formal/informal sources, such as a banks, relatives or a local money lenders. There has to be an explicit agreement between the lender and the borrower (holding) detailing the terms and conditions of the loan i.e. time of repayment and interest charge on top of the principal amount etc.
2. **Insurance:** Preventive protection measure to protect the holding against external shocks.

## Section B: Environmental Dimension of the Holding

**Skip B.1 to B.16, if A.1=2.** This section collects information on the environmental dimension of the holding and its agricultural area. The aspects covered in this dimension includes: prevalence of soil degradation threats, management of pesticides, management of fertilizers, variation in water availability and adoption of biodiversity-supportive practices.

**Introduction to question B.1-B.2:** These questions are asked in order to collect information on whether the holding has experienced one or more among four listed threats during the past three calendar years. These are: Soil Erosion, Reduction of Soil Fertility, Waterlogging and Salinization of Irrigated Land.

### **B.1 Have you experienced any of the following soil degradation threats on your holding?**

This question is asked with reference to the last 3 calendar years and ascertain if one or more of the threats listed below were experienced by the holding.

Reference year: Last 3 calendar years

(Fill in all that apply)

- 1 Soil erosion (loss of topsoil through wind or water erosion)
- 2 Reduction in soil fertility
- 3 Waterlogging
- 4 Salinization of irrigated land
- 5 Other (specify )
- 6 None of the above

[→ Go to B.3](#)

**Respondents are requested to identify one or more of the above threats. The enumerators must go to question B.3 if the code is 6 “None of the above”.**

#### Box 19. External threats

**Soil Erosion:** Erosion refers to the wearing away of a field's topsoil by the natural physical forces of water and wind. These can be affected, accelerated or reduced as a function of farming activities such as tillage.

**Reduction in soil fertility:** Fertility refers to the capacity of a soil to provide crops with essential nutrients without reduction in productivity over the years. Reduction in soil fertility implies a situation in which the capacity of the soil to provide crops with essential plant nutrients tends to reduce from one year to the other.

**Waterlogging:** Refers to a situation of water stagnation on the land surface or excessive volume of water on the land surface, affecting production.

**Salinization of irrigated land:** Salt accumulation on the land surface.

### **B.2 What is the total area of the holding affected by any of the threats identified above?**

Reference year: Last 3 calendar years

Total area affected

Area								Unit of measure	

Once information on threats have been collected in question B.1, enumerators record the corresponding total agricultural land area affected by one or more of the soil degradation threats.

**Note number 1:** The enumerators carefully record the total area affected by one or more threats by ensuring that the reported affected area is NOT GREATER than the total agricultural area (check question A.2).

**Note number 2:** It might be the case that the two soil degradation threats have affected two separate areas of the holding or the same area of the holding may have been affected by two different threats. Enumerators must report the total area affected, irrespective of whether this is the sum of two different areas of land affected by two different threats, or the same area affected by two different threats.

**Introduction to question B.3-B.5:** These questions gather data to estimate areas under irrigation. The data gathered in this section includes irrigated area, water used and irrigation methods. Skip B3 to B.5 if the farm only carries out livestock activities.

**B.3 Did this agricultural holding use water to irrigate crops?**

Reference year: Last 3 calendar years

(Fill in one circle only)

- 1 Yes (indicate the irrigated area or a percentage of the total area of the holding irrigated)
- 2 No, I don't need irrigation → Go to B.5
- 3 No, I can't afford irrigation → Go to B.5
- 4 No, there is no water available → Go to B.5

Area /Percentage

--	--	--	--	--	--

Unit of measure

--	--	--	--	--	--

This question records information on irrigation during the last 3 calendar years. Four answers are possible for this question, with their corresponding codes provided bellows:

- 1** Yes (indicate the irrigated area or percentage of the total area of the holding irrigated)
- 2** No, I don't need irrigation
- 3** No, I can't afford irrigation
- 4** No, there is no water available

If water was used to irrigate crop (code 1), enumerators ask and record the total area, including the unit of measurement (or the percentage of total area) that was irrigated. Enumerators carefully record the total irrigated area by ensuring that the reported irrigated area is not greater than the total agricultural area.

**Note: enumerators skip questions B.4 and B.5 if the answer given to question B.3 is 2, 3 or 4.**

**Box 20: Water for irrigation**

Water for irrigation may come from various sources, including rivers, dams or wells and water reservoirs, etc. "Irrigation used on the holding" means that water (other than rain) is applied to crops at least once during the entire reference period (last 3 calendar years). Those who reported that the holding used water to irrigate their crops must also inform the interviewer about the land area that was irrigated. The land area irrigated corresponds to the one(s) in which one or more crops were cultivated during the past 3 years, i.e. **the agricultural area irrigated at least once during the reference period**. If the respondent says that crops were irrigated through rain or not irrigated at all, interviews should move to question B.6 (FAO, 2015, para 8.3.2).

**B.4 Are you observing any reduction in water availability from well or other sources i.e. lake, canal and river?**

Reference year: Last 3 calendar years

(Fill in one circle only)

- 1 No, water is always available in sufficient quantity when I need it → [Go to B.6](#)
- 2 Yes, water level in my well(s) is progressively going down
- 3 Yes, water in river, lake or canal is getting scarce and I can't have reliable supply when I need it
- 4 I do not know

This Yes/No question gather information on progressive reduction in water availability from the well or other sources. Codes associated with question B.4 are:

- 1** No, water is always available in sufficient quantity when I need it
- 2** Yes, water level in my well(s) is progressively going down
- 3** Yes, water in river, lake or canal is getting scarce and I can't have reliable supply when I need it
- 4** I do not know

Enumerators go to question **B.6** if the code associated with question B.4 is 1 (No, water is always available in sufficient quantity when I need it).

**Box 21: Sources of Irrigation**

Water can be sourced using different methods:

- 1. Well irrigation is a method of irrigation where underground water is tapped through a well (tube well, open well).
- 2. Water supplied directly by diverting it from the river through canals, or pumping it from a river, lake or groundwater.
- 3. Water can be applied on the field through canals (gravity), sprinklers or micro-irrigation (drip).

**B.5 Are there organizations dealing with water allocation in the area where this holding is located?**

Reference year: Last 3 calendar years

(Fill in one circle only)

- 1 Yes, and they are working well
- 2 Yes, but they are not working well (specify why)
- 3 No, there are none
- 4 No, I don't know

This question collects information on the organizations (both formal and informal) responsible for water allocation in the area where the holding is located. This question also collects information on whether such organization work efficiently. The codes associated with this questions are as follows:

- 1 Yes, and they are working well
- 2 Yes, but they are not working well (specify)
- 3 No, there are none
- 4 No, I don't know

**Note: enumerators must briefly record why organization are not working well (code2). It is advisable to use key terms while explaining the reason why organizations are not working well.**

**Box 22: Water allocation**

In many countries, water allocation to farms is implemented by organization mandated to ensure the delivery of water to different users according to established rules. These organisations are usually called 'Water users organizations', 'water boards', 'Water Districts', etc. They can be public, owned by farmers, or private operators.

**Introduction to question B.6-B.9.** These questions gather information on the use of any synthetic or mineral fertilizer or animal manure/slurry for crops by the holding, its awareness of environmental risks and potential measures adopted to mitigate the risks associated with the use of synthetic and mineral fertilizers

**B.6 Did this agricultural holding use any synthetic or mineral fertilizer or animal manure/slurry for crops?**

Reference year: Last calendar year

(Fill in one circle only)

1 Yes

2 No

[→ Go to B.10](#)

This Yes/No question records information on the use of synthetic or mineral fertilizers during the past calendar year. A definition of synthetic /mineral fertilizers is given in Box 23. While Box 24 provides an explanation of environmental risks associated with the use of synthetic /mineral fertilizers for crops.

**Note: if the answer is “no” (code 2) enumerators must go to question B.10.**

**Box 23: Synthetic or mineral fertilizers**

The most commonly used **synthetic or mineral fertilizers** for agricultural production are:

**1. NITROGEN FERTILIZERS**

- Sodium nitrate
- Ammonium sulphate
- Ammonium nitrate
- Urea
- Ammonium phosphate, dibasic
- Ammonium phosphate , monobasic

**2. POTASSIUM (POTASH) FERTILIZERS**

- Potassium chloride (murate of potash)
- Potassium nitrate.
- Potassium sulphate.

**3. PHOSPHATE FERTILIZERS**

- Di-calcium phosphate, anhydrous
- Bone meal
- Rock phosphate (fluoroapatite)
- Single superphosphate
- Triple superphosphate

**4. CALCAREOUS**

- Calcium carbonate (limestone)
- Calcium oxide (quicklime)

Country customization of the list of synthetic and mineral fertilizers is highly advisable in this question. Note that the survey does not request that the farmers indicate which fertilizer they use.

**Animal manure/slurry for crops**

5. **Manure** is animal faeces rich in nutrients, sometimes mixed with chemicals that is spread on the ground as fertiliser.
6. **Slurry** is created from cow manure and water and provides a natural fertiliser that farmers can use to encourage the growth of grass and other crops. **Slurry** is usually stored in a tank or lagoon before it is applied to farmland as fertiliser.

## Box 24: Environmental risks associated with excessive use of synthetic and mineral fertilizers

### Depletes the Quality of the Soil

Using too much of fertilizers in the soil can alter the fertility of the soil by increasing the acid levels in the soil.

### Pollution of Water bodies

Using too much of fertilizers in the soil leads to eutrophication. Fertilizers contain substances like nitrates and phosphates that are flooded into lakes and oceans through rains and sewage. These substances prove to become toxic for the aquatic life, thereby, increasing the excessive growth of algae in the water bodies and decreasing the levels of oxygen. This leads to a toxic environment and leads to death of fish and other aquatic fauna and flora. Indirectly, it contributes to an imbalance in the food chain as the different kinds of fishes in the water bodies tend to be the main food source of various birds and animals in the environment.

### Climate change

Fertilizers consists of substances and chemicals like methane, carbon dioxide, ammonia, and nitrogen, the emission of which contribute to a great extent in the quantity of greenhouse gases present in the environment. This in turn leads to global warming and weather changes. In fact, nitrous oxide, which is a by-product of nitrogen, is the third most significant greenhouse gas, after carbon dioxide and methane.

## **B.7 Are you aware of the environmental risks associated with the excessive use or misuse use of fertilizer?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

This Yes/No question collect information on holder's awareness of environmental risks associated with the use of synthetic and mineral fertilizers.

## **B.8 Did this agricultural holding take specific measures to mitigate the environmental risks associated with the use of synthetic and mineral fertilizers?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

[→ Go to B.10](#)

This Yes/No question collect information on specific measures taken by the holdings to mitigate environmental risks associated with the use of synthetic and/or mineral fertilizers. Enumerators go to question B.10 if answer to B.8 is 2 (No)

## **B.9 If so, which specific measures did the agricultural holding take or adopt?**

Reference year: Last calendar year

(Read all options and fill in all that apply)

- 1 Follow protocols as per extension service or retail outlet directions or local regulations, not exceeding recommended doses  
 2 Use organic source of nutrients (including manure or composting residues) alone, or in combination with synthetic or mineral fertilizers  
 3 Use legumes as a cover crop, or component of a multi/crop or pasture system to reduce fertilizer inputs  
 4 Distribute synthetic or mineral fertilizer application over the growing period  
 5 Consider soil type and climate in deciding fertilizer application doses and frequencies  
 6 Use soil sampling at least every 5 years to perform nutrient budget calculations  
 7 Perform site-specific nutrient management or precision farming  
 8 Use buffer strips along water courses.

The following codes are associated with the list of measures to mitigate environmental risks. Box 25 explains the key terms explaining each of the below listed specific measures.

1	Follow protocols as per extension service or retail outlet directions or local regulations, not exceeding recommended doses
2	Use organic source of nutrients (including manure or composting residues) alone, or in combination with synthetic or mineral fertilizers
3	Use legumes as a cover crop, or component of a multi/crop or pasture system to reduce fertilizer inputs
4	Distribute synthetic or mineral fertilizer application over the growing period
5	Consider soil type and climate in deciding fertilizer application doses and frequencies
6	Use soil sampling at least every 5 years to perform nutrient budget calculations
7	Perform site-specific nutrient management or precision farming
8	Use buffer strips along water courses

It is important to note that more than one specific measure (taken to mitigate environmental risks associated with the use synthetic and mineral fertilizers) can be specified.

**Note: enumerators must briefly explain what are the measure taken or adopted. It is advisable to use key terms while explaining other measure taken or adopted to mitigate environmental risks associated with the use of synthetic or mineral fertilizers.**

#### Box 25: Key terms

**Follow protocols as per extension service or retail outlet recommendations or local regulations:** These are country- or region-specific protocols released by official bodies or retailers and that provide information on doses to apply and application modalities.

**Organic sources of nutrients:** Nutrient sources are generally classified as organic, mineral or synthetic. Organic nutrient sources are manures, bulky organic manures or organic fertilizers. Most organic nutrient sources, including waste materials, have widely varying composition and often only a low concentration of nutrients, which differ in their availability

**Legumes as a cover crop:** Legumes capture nitrogen from the air and store it in the root zone, thus contributing to nitrogen fertilisation. Commonly used legumes include:

- Winter annuals, such as crimson clover, hairy vetch, field peas, subterranean clover and many others
- Perennials like red clover, white clover and some medics
- Biennials such as sweet clover

**Site-specific nutrient management (SSNM):** a technology that provides guidance to farmers on the distribution of nutrient requirements across plots. SSNM provides savings for farmers through more efficient fertilizer use.

**Soil Sampling:** It involves measuring soil properties correctly through standard laboratory techniques and precise sampling methods. Soil test are used to asses fertility and is analysis of a soil sample to determine nutrient content, composition, and other characteristics such as the acidity or pH level.

**Buffer strips:** A buffer strip is an area of land maintained in permanent vegetation that helps to control soil and water quality and has other environmental benefits  
[https://www.aberdeenshire.gov.uk/media/8127/2015\\_09bufferstripsplanningadvice.pdf](https://www.aberdeenshire.gov.uk/media/8127/2015_09bufferstripsplanningadvice.pdf)



**Introduction to question B.10-B.16.** Question from B.10 to B.16 data on those holdings that, during the past agricultural season have applied pesticides on their agricultural production, as well as on the awareness of the potential risks associated with the use of pesticides and specific measures to mitigate the environmental and health risks associated with the use of pesticides.

**B.10 Did this agricultural holding use any pesticides for crop or livestock production?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

[→ Go to B.17](#)

This Yes/No question collect information on whether (or not) agricultural holdings used pesticides for their crop or livestock production. **Note: if the answer given is “no” (code 2) enumerators go to question B.17 and skip questions from B.11 to B.16.**

**B.11 What type of pesticides did this agricultural holding used?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Moderately or slightly hazardous  
 2 Highly, extremely hazardous or illegal pesticides

This question collects information on whether agricultural holding used highly/extremely hazardous pesticides/ illegal pesticides or moderately/slightly hazardous pesticides for their crop production.

**A definition of highly hazardous and moderately hazardous pesticides is given in box 26.**

**Box 26: Definition of pesticides and highly hazardous pesticides**

Pesticides products are substances applied to prevent, destroy or control a harmful organism (a “pest”) or disease, or protect plants or plant products during production, storage and transport or protect crops.

They contain at least one active substance and have one of the following functions:

- Protect plants or plant products against pests/diseases, before or after harvest
- Influence the life processes of plants (such as substances influencing their growth, excluding nutrients)
- Preserve plant products
- Destroy or prevent growth of undesired plants or parts of plants

**The meaning of pesticide must clearly be explained by interviewers to respondents and an ideal list of pesticides by brand and type used in the country should be read out in order for the respondent to clearly understand what a pesticide product is.**

According to FAO (<http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/code/hhp/en/>) a considerable proportion of the pesticides still being used in the world can be considered highly hazardous, because they have a high acute toxicity, have known chronic toxic effects even at very low exposure levels, or are very persistent in the environment or in organisms, for example. In particular, in developing countries, Highly Hazardous Pesticides (HHPs) may pose significant risks to human health or the environment, because risk reduction measures such as the use of personal protective equipment or maintenance and calibration of pesticide application equipment are not easily implemented or are not effective.

Highly hazardous pesticides are classified according to the World Health Organization Recommended Classification of Pesticides by Hazard ([http://www.who.int/ipcs/publications/pesticides\\_hazard\\_2009.pdf](http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf)), as having one or more of the following characteristics:

- Pesticide formulations that meet the criteria of classes IA or IB of the WHO Recommended Classification of Pesticides by Hazard; or
- Pesticide active ingredients and their formulations that meet the criteria of carcinogenicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
- Pesticide active ingredients and their formulations that meet the criteria of mutagenicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
- Pesticide active ingredients and their formulations that meet the criteria of reproductive toxicity Categories 1A and 1B of the Globally Harmonized System on Classification and Labelling of Chemicals (GHS); or
- Pesticide active ingredients and formulations listed by the Rotterdam Convention in its Annex III; or
- Pesticides listed under the Montreal Protocol; or
- Pesticide active ingredients and formulations that have shown a high incidence of severe or irreversible adverse effects on human health or the environment.

Illegal pesticides are those pesticides that have been banned in most countries worldwide because of their persistence in the environment and human toxicity. The list of illegal pesticides is generally made available by national authorities.

**B.12 Are you aware of the environmental and health risks associated with the use of pesticides?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

This Yes/No question collect information on holder's awareness of potential environmental and health related-risks associated with the use of pesticides.

**B.13 Did this agricultural holding take specific measures to protect people from health-related risks?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

[→ Go to B.15](#)

This YES/No question collect information on whether specific measures were taken by the holding to mitigate health-related risks associated with the use of pesticides.

**Note: if the answer given is "no" (code 2) enumerators go to question B.15.**

**B.14 Which of the following measures did this agricultural holding adopt to protect people from health-related risks?**

Reference year: Last calendar year

(Read all options and fill in all that apply)

- 1 Adherence to label directions for pesticide use (including use of protection equipment)  
 2 Maintenance and cleansing of protection equipment after use  
 3 Safe disposal of waste (cartons, bottles and bags)

A detailed list of specific measures to protect people from health-related risks is specified in question B.14. Each of the below specified measures is defined in box 27 to facilitate the respondent's comprehension of question B.14. Codes associated with potential measures taken are as follows:

- 1 Adherence to label directions for pesticide use (including use of protection equipment)  
2 Maintenance and cleansing of protection equipment after use  
3 Safe disposal of waste (cartons, bottles and bags)

**Note: enumerators must briefly explain what are the measures adopted. It is advisable to use key terms while explaining other measure adopted to protect people from health-related risks associated with the use of pesticides.**

### Box 27: Definitions of key terms

All pesticides are toxic to some or all living organisms. They are designed to prevent, destroy or control specific plants or animals that threaten crops or other useful resources. However, if beneficial insects or crops are exposed to pesticides they too may be destroyed, and farm animals, wildlife or people may become ill or die after exposure to even very small quantities of pesticide. The following measures allow preventing people from health-related risks.

**Adherence to label directions for pesticide use:** In many countries, pesticide labels are legal documents in that they are required by law to be put on a pesticide package. Generally, also the (minimum) content and format of the label is defined by law. In such cases, all pesticide labels, and any modifications or variations, need to be approved by the responsible authority. As a result, pesticide labels are enforceable and it will be a violation to use a pesticide product in a manner inconsistent with its labelling. Adherence to label recommendations implies that the agricultural holding follows the regulations mandated by the national authority while using pesticides (see also <http://www.fao.org/3/a-i4854e.pdf>)

**Use of personal protection equipment:** the following equipment items are recommended to be used while applying pesticides:

- Protective eyewear – Use of safety glasses with brow, front, and temple protection; or a face shield; or fully-enclosed goggles; or a full-face respirator.
- Goggles – Use of a fully-enclosed, chemical-splash resistant goggles or a full-face respirator.
- Full-Face Respirator – use a tight-fitting, full-face respirator.
- Chemical-resistant coveralls – A one- or two-piece suit that the manufacturer specifies to be resistant to certain chemicals.

**Safe disposal of waste (cartons, bottles and bags):** pesticide containers must take into account all the specific requirements related to the safe handling of pesticides. Containers should allow safe storage, transport, preparation and use of the product, as well as rinsing and disposal of the empty container

### **B.15 Did this agricultural holding adopt specific measures to avoid environment-related risks?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

→ [Go to B.17](#)

This Yes/No question collect information on whether specific measures were taken by the holding to avoid environment-related risks associated with the use of pesticides.

**Note: if the answer given is “no” (code 2) enumerators go to question B.17.**

**B.16 Which of the following measures did this agricultural holding adopt in relation to pest control? (plant pest and animal diseases)**

Reference year: Last calendar year

(Read all options and fill in all that apply)

- 1 Adherence to label directions for pesticide application
- 2 Adjustment of planting time
- 3 Application of crop spacing
- 4 Application of crop rotation
- 5 Application of mixed cropping
- 6 Application of inter-cropping
- 7 Perform biological pest control
- 8 Use of biopesticides
- 9 Adopting pasture rotation to suppress livestock pest population
- 10 Systematic removal of plant parts attacked by pests
- 11 Maintenance and cleansing of spray equipment after use
- 12 Use one pesticide no more than two times or in mixture in a season to avoid pesticide resistance.

A detailed list of specific measures adopted by the holding to avoid environment-related risks is further specified in this question and defined in Box 28 to facilitate the respondent's comprehension. Codes associated with potential measures adopted are as follows

- 1 Adherence to label directions for pesticide application
- 2 Adjustment of planting time
- 3 Application of crop spacing
- 4 Application of crop rotation
- 5 Application of mixed cropping
- 6 Application of inter-cropping
- 7 Perform biological pest control
- 8 Use of biopesticides
- 9 Adopting pasture rotation to suppress livestock pest population
- 10 Systematic removal of plant parts attacked by pests
- 11 Maintenance and cleansing of spray equipment after use
- 12 Use one pesticide no more than two times or in mixture in a season to avoid pesticide resistance

**Note: enumerators must briefly explain what measure are adopted. It is advisable to use key terms while explaining other measure adopted to avoid environment -related risks associated with the use of pesticides**

### Box 28: Definitions of key terms

**Planting time:** The period of the year that is warm enough for plants to grow. **Adjusting the planting time implies** that a farmer adjusts the period for time to grow in accordance with awareness of a pest's life cycle, which stages are most likely to cause economic damage, and when best to monitor is essential when planning a pest management program. Pest life cycle diagrams indicate when the various pests stages are likely to be found in the crop, management considerations, and critical monitoring periods (available at <https://ipmguidelinesforgrains.com.au/ipm-information/making-informed-control-decisions/pest-life-cycles/>).

**Perform biological control:** Aims to reduce plant pathogens and limit pests such as insects, parasitic nematodes and weeds. In its narrowest sense, biocontrol suppresses pest organisms by using other organisms.

**Crop rotation, mixed cropping or inter-cropping for breaking the pest cycle:** mixed cropping and crop rotation embrace one of the principles of conservation agriculture. Planting of the same crop each season - as sometimes practiced in conventional farming is minimized by planting the right mix of crops in the same field, and rotating crops from season to season. This allows a breakdown of survival and multiplication cycles of pests, diseases and weeds resulting in higher yields and maintenance of soil fertility.

**Preservation of natural biological control services:** is a method of controlling pests such as insects, mites, weeds and plant diseases using other organisms. It relies on predation, parasitism, herbivory, or other natural mechanisms, but typically also involves an active human management role. It can be an important component of integrated pest management (IPM) programs.

**Adherence to label directions for pesticide use:** in many countries, pesticide labels are legal documents in that they are required by law to be put on a pesticide package. Generally, also the (minimum) content and format of the label is defined by law. In such cases, all pesticide labels, and any modifications or variations, need to be approved by the responsible authority. As a result, pesticide labels are enforceable and it will be a violation to use a pesticide product in a manner inconsistent with its labelling. Adherence to label recommendations implies that the agricultural holding follows the regulations mandated by the national authority while using pesticides (see also <http://www.fao.org/3/a-i4854e.pdf>).

**Introduction to question B.17-B.20.** These questions gather data on the level of adoption of biodiversity-supportive practices by the holding at ecosystem, species and genetic levels.

**B.17 In this agricultural holding, are there areas covered by natural or diverse vegetation? including one or a combination of the following:**

Reference year: Last calendar year

(Fill in all that apply, leave it blank if "None of the above")

- 1 Natural pasture or grasslands
- 2 Wildflower strips
- 3 Stone or wood heaps
- 4 Trees or hedgerows
- 5 Natural ponds or wetlands
- 6 None of the above

→ Go to B.19

This question is asked with reference to the last calendar year. Enumerators must list all options related to natural and diverse vegetation as reported below from code 1 to code 5. Once one or more of the natural or diverse vegetation options are filled in questions B.17, enumerators record the area of the holding which is not cultivated as it is covered by one or a combination of the above listed natural or diverse vegetation options in question B.17.

**Note: if the answer given is coded 6 (none of the above) enumerators go to question B.19 and skip next question B.18**

**Box 29: Definitions of key terms**

**Natural pasture or grasslands** (<http://www.fao.org/docrep/005/x7660e/x7660e0b.htm>): Natural pasture takes many forms, all of which have in common only that the herbage has not been sown. Most is grazed, but some is used for hay, which is made on sites as different as meadows, almost sheer clearings on hillsides, subtropical forest land closed for regeneration, alpine grassland, steppes, or a host of other uncultivated lands. In its narrow sense, “grassland” can be defined as ground covered by vegetation dominated by grasses, with little or no tree cover.

**Wildflower strips:** Can be defined as flower strips of a wild or uncultivated plant or the plant bearing it. They are known to attract and conserve a large diversity of insects, as they provide them food resources such as pollen and nectar, as well as shelter and overwintering sites.

**B.18 What is the total area of the holding covered by any of the natural or diverse vegetation identified above? (Please cross check with II.2)**

Reference year: Last calendar year

Total area covered

Area					Unit of measure				

This question is asked with reference to the last calendar year. Enumerators record the area of the holding which is not cultivated because it is covered by natural or diverse vegetation identified in question B.17.

**It is important to the total area of the holding covered by natural or diverse vegetation MUST not be greater than the total area of the holding. Yet, this question must be filled if and only if it is reported the area of the holding whose land use type is “other” (code 10 in question II.2).**

**B.19 Are you using medically important antimicrobials as growth promoter for your livestock?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know

This Yes/No question collect information on the use of antimicrobials as growth promoter for livestock. The definition of antimicrobials is reported in the box below. Enumerators do not ask this question if the agricultural holding does not have any animal (farm carries out only crop activities).

### Box 30: Definition of key terms

**Antimicrobials:** The term “antibiotic growth promoter” is used to describe any medicine that destroys or inhibits bacteria and is administered at a low, sub therapeutic dose. The use of antibiotics for growth promotion has arisen with the intensification of livestock farming. Antimicrobials are products that kill microorganisms or keep them from multiplying (reproducing) or growing (<https://animalantibiotics.org/dig-deeper/industry-glossary/>). According to the National Office of Animal Health (NOAH, 2001), antibiotic growth promoters are used to “help growing animals digest their food more efficiently, get maximum benefit from it and allow them to develop into strong and healthy individuals”. Although the mechanism underpinning their action is unclear, it is believed that the antibiotics suppress sensitive populations of bacteria in the intestines (<http://www.fao.org/tempref/docrep/fao/007/y5159e/y5159e05.pdf>).

The use of antibiotics has become common in the livestock production around the world. The growth-promoting effects of antibiotics are undisputed, but the collateral and long-term effect are debatable.

### **B.20 What is the percentage of the agricultural area on which crop rotation or crop/pasture rotation involving at least two different crops/pastures of two different plant genus is practiced?**

Reference year: Last three calendar years

(Leave it blank if not practiced)

1 Percentage of agricultural area

Percentage Area

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This question is asked with reference to the last 3 calendar years and it records the percentage of agricultural area of the holding in which crop rotation and/or pasture rotation is practiced for at least two different crops/pastures of two different plant families is practiced.

It is important that enumerators only record the percentage of agricultural area in which at least two crops are rotating on the same land. A definition of crop rotation is given in the box below.

### Box 31: Definition of key terms

**Crop rotation:** The practice of growing different crops in succession over a given time span on the same land, predominantly to preserve the productive capacity of the soil. Crop rotation implies simply dividing the growing space into a number of distinct areas, identify the crops to grow and then keep plants of the same type together in one area. Every year the plants grown in each given area are changed, so that each group (with its own requirements, habits, pests and diseases) can have the advantage of new ground.

**Introduction to question B.21-B.22.** Questions from **B.21 and B.22** collects information on organic farming practices, i.e. it ascertains whether the farm is producing agricultural products which have been produced, in accordance with specific technical specifications (standards) and have been certified as “organic” by a certification body.



**B.21 Did the holding produce crops and/or livestock that are certified organic or undergoing the organic certification process during the reference period?**

- 1 No → Go to C.1  
 2 Yes

This yes/no question is asked with reference to the last calendar year and it aims at ascertaining whether the holding produced certified crop or livestock or its undergoing certification process. A definition of certified organic crops and livestock is provided in box 32. Codes are 1 for yes and 2 for no

**Box 32: How can certified organic crop/livestock be defined?**

According to the AGRIS manual (FAO, 2017, p.112) the definition of certified organic crops must be established at country level, following local regulations and practices.

In general, certified organic farming practices means that the farm is producing agricultural products which have been produced, stored, processed, handled and marketed in accordance with specific technical specifications (standards) and have been certified as “organic” by a certification body. Some bodies allow certification of a part of a farm as long as organic and non-organic products are not mixed, while others require whole-farm certification. Certification can be given through a third-party accredited certification body or authority, or through Participatory Guarantee Systems (PGSs). Third-party certification bodies are accredited to a particular market (that is, the certification ensures that the production systems meet the regulations applying to a particular market) and certification by a certification body enables producers to export products labelled as organic to that market (being certified does not allow access to all markets). A PGS is based on the active participation of stakeholders and only recognized within a single country. It thus provides certification of organic production only for local markets, and not for export (FAO, 2015, para. 8.6.16).

An FAO webpage on certified organic crop can be browsed at <http://www.fao.org/organicag/oa-faq/oa-faq2/en/>

**B.22 Answer the following questions about the holding's organic certification.**

- Report the holding's Organic Registration Number  
 Report the name of the certifying body


1. Report the holding's Organic Registration Number
2. Report the name of the certifying body

Data collectors record the holding's Organic Registration Number and the certification body that has certified organic farming practices adopted by the holding. Skip this question if **B.21 was 1**.

## Section C: Social Dimension of the Holding

This section collects information on the social dimensions of the holding. The data items collected in this section covers; decent work, food security and secure rights to land tenure.

**Introduction to question C.1-C.2.** Questions from C.1 to C.2 gather information about unskilled hired labor used on agricultural holdings.

### C.1 Did this agricultural holding hire any workers for carrying out simple and routine tasks?

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes  
 2 No

→ Go to C.3

This Yes/No question collect information on the employed unskilled workers. An explanation of unskilled workers is given in Box 33 below.

**Note: if the answer given is “no” (code 2) enumerators go to question C.3.**

If the respondent uses vague terms in defining unskilled workers, ask him/her the exact type of job he/she did most of the time.

#### Box 33: Defining unskilled occupations

Occupation refers to the kind of work that a person does or the kind of the work he/she did, when he/she was working for the first time. This question is to enquire specifically about the nature of the job he/she is doing most of the time in the last agricultural year. The elementary occupation group is defined by the International Standard Classification of Occupation ('08) of the International Labor Organization. Workers employed by the holding under this occupation group are unskilled laborers that perform basic task for the holding. Interviewers should try to be as comprehensive as possible and they should avoid using the terminology as per ISCO classification, which is “elementary occupation/unskilled workers”. More specifically, interviewer should not ask whether the agricultural holding hired any unskilled workers. Rather, they should ask if any workers performing simple and routine farming tasks, requiring the use of simple hand-held tools and very often considerable physical effort, were employed in the past 12 months prior to the date of the interview. Tasks performed by laborers in this sub-major group usually include: digging, shovelling, loading, unloading, stacking, raking, pitching; spreading manure or fertilizers; watering and weeding; picking fruit, vegetables and various plants; feeding animals; cleaning animal quarters and farm ground. Agricultural holding that hired unskilled workers must also report the number of workers who were hired during the last agricultural season.

### C.2 How much did this agricultural holding pay on average in cash and/or in-kind to a worker performing simple and routine tasks per day (of 8 hours)?

Reference year: Last calendar year

(Read all options and fill in all that apply)

- 1 Daily average wage in local currency units . . . . .  
 2 Daily average wage paid in-kind and converted in local currency units . . . . .

Daily average wage				

This question collects information on the **average daily** payment (wages/salary) paid to unskilled workers. Enumerators should also record information about allowances and gratuities, which include allowances and per diems paid to employees. In case the time unit for payment is not the day, enumerators must ask the respondent to estimate the amount of wage paid on a daily basis. For instance, if payment is weekly, monthly, annual, etc., respondent must convert the corresponding amount into a daily measure, by providing an estimate of wage paid to a given unskilled worker.

NOTE: Payment can also be provided in-kind which must be converted into a monetary value. In estimating in-kind payments, the respondent should estimate what he or she would have to paid for the labor if products through which the payment was made (in-kind) were purchased in the market.

**Introduction to question C.3-C.10.** The set of eight Yes/No questions collect information about the level of food security in the household. The questions on food security should be asked to the holder and his/her household members. In case the respondent of the survey is a manager of the holding or an employee, then this section should not be asked as it is unlikely that they will be informed about the situation of food security of the holder and his/her household members.

**It is important to notice that the reference period for questions C.3-C.10 is not the last calendar year but the last 12 months prior to the date of the interview. This implies that if the interview is conducted on September 1 2018, the last 12 months will be from September 1, 2017 to August 31, 2018.**

**Before asking question from C3 to C.10 make sure to only ask them to household farms. Enumerators skip questions from C.3 to C.10 and go to question C.11 if the sampled holding belongs to the Non-household sector. Yet, do not ask this question to respondent's managers or employees (code 3 and 5 in question I.1.4)**

**C.3. During the last 12 months, was there a time when you (or any other member in the household) were worried that you would not have enough food to eat because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question refers to a state of being worried, anxious, apprehensive, afraid or concerned that there might not be enough food or that food will run out (because there is not enough money or other resources to get food). The worry or anxiety is due to circumstances affecting their ability to procure food, such as: loss of employment or other source of income, or other reasons for not having enough money; insufficient food production for own consumption; insufficient food available for hunting and gathering; disrupted social relationships; loss of customary benefits or food assistance; environmental or political crises. It is not necessary for the respondent to have actually experienced not having enough food or running out of food to answer yes to this question.

**C.4. Still thinking about the last 12 months, was there a time when you (or any other member in the household) were unable to eat healthy and nutritious food because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question asks the respondent whether s/he was not able to get foods they considered healthy or good for them, foods that make them healthy, or those that make a nutritious or balanced diet (because there was not enough money or other resources to get food).

The answer depends on the respondent's own opinion of what they consider to be healthy and nutritious foods. This question refers to the quality of the diet and not the quantity of foods eaten.

**C.5. Was there a time when you (or any other member in the household) ate only a few kinds of foods because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

The Yes/No question asks if the respondent was forced to eat a limited variety of foods, the same foods, or just a few kinds of foods every day because there was not enough money or other resources to get food. The implication is that the diversity of foods consumed would likely increase if the household had better access to food.

**Alternative phrases:**

- You ate meals with a limited variety of foods;
- You ate the same foods or just a few kinds of foods every day;
- You had to eat a limited variety of foods;
- You had to eat the same foods every day;
- You had to eat just a few kinds of foods.

This question refers to quality of the diet and not the quantity of foods eaten. It implies lack of money/resources rather than customary habits or other circumstances (i.e., health or religion) as the reason for limiting the variety of food.

**C.6. Was there a time when you (or any other member in the household) had to skip a meal because there was not enough money or other resources to get food?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question inquires about the experience of having to miss or skip a major meal (for example, breakfast, lunch or dinner depending on the norm for number and times of meals in the culture) that would normally have been eaten (because there was not enough money or other resources to get food.) This question refers to insufficient quantity of food.

**C.7. Still thinking about the last 12 months, was there a time when you (or any other member in the household) ate less than you thought you should because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question inquires about eating less than what the respondent considered they should, even if they did not skip a meal (because the household did not have money or other resources to get food). The answer depends on the respondent's own opinion of how much they think they should be eating. This question refers to quantity of foods eaten and not the quality of the diet. This question does not refer to special diets to lose weight or for health or religious.

**C.8. Was there a time when you (or any of the other member in the household) ran out of food because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This yes/no question refers to any experiences when there was actually no food in the household because they did not have money, other resources, or any other means to get food.

**C.9. Was there a time when you (or any of the other member in the household) were hungry but did not eat because there was not enough money or other resources for food?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question asks about the physical experience of feeling hungry, and specifically, feeling hungry and not being able to eat enough (because of a lack of money or resources to get enough food). It does not refer to special diets to lose weight or fasting for health or religious reasons.

**C.10. During the last 12 months, was there a time when the you (or any of the member in the household) went without eating for a whole day because of a lack of money or other resources?**

Reference year: Last 12 months

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 I don't know
- 4 I don't want to answer

This Yes/No question asks about a specific behaviour—not eating anything all day (because of a lack of money and other resources to get food). It does not refer to special diets to lose weight or fasting for health or religious reasons. Codes associated with this question are as follows:

- 1. Yes
- 2. No

**Box 34: Food Insecurity Experience Scale**

The items that compose the FIES module, ask people directly about having to compromise the quality and quantity of the food they eat due to limited money or other resources to obtain food. Each item refers to a different situation and is associated with a level of severity according to the theoretical construct of food insecurity underlying the scale. By asking the series of related questions that compose the FIES, it is possible to classify respondents at different levels of severity: “food secure” (those who answer “no” to all the questions about food insecurity-related experiences) or “food insecure” along a continuum of food insecurity severity, as shown below (see Ballard Terri J, Kepple Anne W. Cafiero C, FAO, 2013)

From Mild Food insecurity			... To Severe Food insecurity
Worrying about how to produce food	Compromising on quality and variety	Reducing quantities, skipping meals	Experiencing hunger

**Introduction to question C.11-C.14.** These questions collect information on how much land is owned by the holding and how it was obtained. These set of questions is crucial but sensitive, so interviewers should ask them carefully. It is sensitive because the head of the holding may think that the government has plans to confiscate his/her land or, alternatively, to compensate the holding they have only a small plot.

**C.11. Does the holder/holding have a formal document for any of the agricultural land that it holds (alternatively ‘possess, use, and occupy’) issued by the Land Registry/Cadastral Agency?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuses to respond

This question identifies whether there is a legally recognized document for any of the agricultural land that the respondent has declared to have, as well as the type of documentation held by the respondent for the

land owned. Documented ownership / tenure rights refer to the existence of any document an individual can use to claim ownership or tenure rights in law over the land.

Below is the list of formal documents issued by the Land Registry/ Cadastral Agency:

- 1 Title deed
- 2 Certificate of customary tenure
- 3 Certificate of occupancy  
Registered will or registered certificate of hereditary
- 4 acquisitions
- 5 Registered certificate of perpetual / long term lease
- 6 Registered rental contract

**C.12 Is the name of the holder or any other member of the holding is listed as an owner or use right holder on any of the legally recognized documents?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuses to respond

Because individual names can be listed as witnesses on a document, it is important to ask if the respondent is listed "as an owner" or "holder" on the document. It is recommended that the measure of documented ownership / tenure rights not be conditional on the respondent producing the document for the enumerator to confirm.

**C.13. Does the holder/holding have the rights to sell any of the parcel of the holding (alternatively 'parcel possessed, used or occupied')?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuses to respond

This question records information on whether the respondent believes that he/she has the right to sell any of the agricultural land s/he reports possessing. When a respondent has the right to sell the land, it means that he or she has the right to permanently transfer the land to another person or entity for cash or in kind benefits.

**C.14. Does the holder/holding have the rights to bequeath any of the parcel of the holding (alternatively 'parcel possessed, used or occupied')?**

Reference year: Last calendar year

(Fill in one circle only)

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuses to respond

This question obtains information on whether the respondent believes that he/she has the right to bequeath any of the agricultural land he/she reports possessing. When a respondent has the right to bequeath the land, it means that he/she has the right to give the land by oral or written will to another person(s) upon the death of the respondent.

**END OF SURVEY**

The enumerator thank the respondent and record the end time of the survey.

**End time of the survey:**       hour     minutes



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