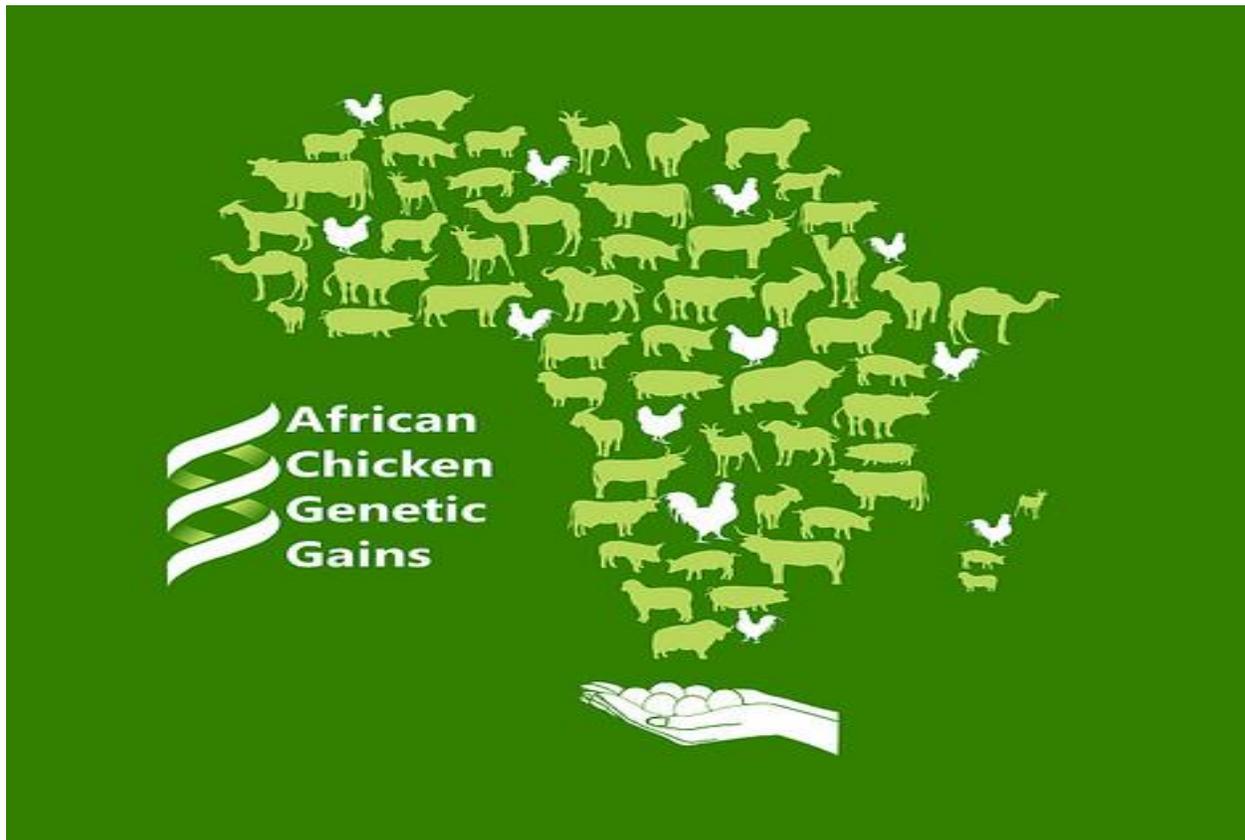


ACGG Producer Level Baseline Survey 2015 Data Collection Training Manual

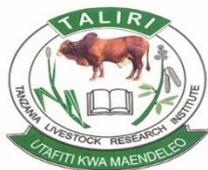


International Livestock Research Institute (ILRI)

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ACGG – Producer Level Baseline Survey

Training Manual

This document is produced for use by field officers, supervisors and survey coordinators involved in the baseline household survey for the African Chicken Genetic Gains (ACGG) project.

About the ACGG project

ACGG is a project working with diverse stakeholders including universities, national research institutes and the private sector to increase smallholder chicken production and productivity growth as a pathway out of poverty in sub-Saharan Africa. It is active in Ethiopia, Nigeria and Tanzania. The project intends to achieve this by empowering smallholder farmers, especially women, to access their preferred, but more productive chicken breeds that they can optimally manage in their specific agro-ecology and production systems. Increased production is predicted to lead to more access to meat and eggs in rural communities, which will result in increased household animal protein consumption. In Nigeria, the project works in 30 local government areas in 5 states.

The project is conducting a baseline survey intended to define and characterize current smallholder chicken production systems, chicken ecotypes, current realized productivity, husbandry practices, and the socio-economic status of poor smallholder farmers in Nigeria, Tanzania, and Ethiopia.

Roles & responsibilities of field officers, supervisors & survey coordinators¹

The field officers, supervisors and the Sub National Coordinators (SNCs) work in a team to achieve the objective of filling the agreed number of questionnaires, in the most efficient manner (time and resources) and in a way to obtain the highest quality data. However, in Tanzania the Sub National Coordinators (SNCs) are the field supervisors. Therefore, those responsibilities listed under the field supervisors are the roles and responsibilities of SNCs.

The **survey coordinator (SNC)** will be in charge of the overall operations. S/he will:

- ◆ Oversee the survey operations in all the sites and ensure that the survey program succeeds;
- ◆ Arrange adequate transport, accommodation etc. for the survey operations;
- ◆ Monitor the recruitment of field officers by ensuring that proper procedures are followed;
- ◆ Ensure that all field officers have been trained and deployed in accordance with the survey program;
- ◆ Provide logistical and administrative support to trainers during the training of supervisors and field officers and during the field operations;
- ◆ Facilitate deployment of supervisors and field officers to their work areas after training;
- ◆ Report on the progress of the survey to their Country Team and NPC; and
- ◆ Perform, as the situation may demand, any such duties that will facilitate the smooth execution of survey activities.

The **field supervisors** will: (In Tanzania the supervisors are SNCs)

- ◆ Lead the selection of the households to be surveyed (including replacement households), with the help of the Survey Coordinator ;
- ◆ Perform enumeration but fewer than the other field officers ;
- ◆ Ensure that the required number of households is surveyed in each project site;
- ◆ Lead and guide field officers ensuring that they are performing their work efficiently and according to instructions;
- ◆ Ensure that each questionnaire that is submitted is of the highest quality possible;

¹ Elements used from Tegemeo TAPRA Household Survey 2007 http://fsg.afre.msu.edu/kenya/2010_TAPRA_Enumeration_Manual.pdf

- ◆ Carry out the day-to-day supervision of enumeration work – support the field officers in case of queries from survey respondents;
- ◆ Maintain cordial atmosphere in the team, and with the local communities;
- ◆ Work closely with the Survey Coordinator in all matters pertaining to the survey operations;
- ◆ Report on the progress of the survey to the survey coordinator from time to time; and
- ◆ Perform, as the situation will demand, any such duties that will facilitate as far as possible the smooth execution of the survey activities.

To achieve this objective, the roles of the **field officers** are to:

- ◆ Attend the training course and all other scheduled meetings;
- ◆ Study this manual very carefully and remember the main points which are explained here. Become fully familiar with the questionnaire;
- ◆ Visit each household on their individual list (obtained from the supervisor) and conduct interview each selected household ;
- ◆ Ensure all questions are addressed and data entered into ODK on the tablet is of good quality;
- ◆ Submit the data to FormHub; and
- ◆ Maintain cordial atmosphere in the team, and with the local communities.

The field officers are **the key to the success of the survey!!** They are the single most important actor in the survey and they alone have a direct influence on the accuracy of the data collected.

Ethics and rules of conduct

Field officers and supervisors

As an interviewer, it is your responsibility to **keep completely confidential** anything you learn and observe during an interview. Never disclose any facts about anyone you interview to someone else. Respondents should be told that the information they provide will be used in statistical form only and that their names will not be associated with their answers when the data are analyzed.

Things you must do

- ◆ You must introduce yourself on every visit and explain to the respondent the reason for your visit before starting the interview;
- ◆ You must ask the questions in exactly the same way to each respondent and in the same order in which they are presented in the questionnaire and the tablet, since, if the interviews are to be comparable the question order needs to be standard from respondent to respondent;
- ◆ You must make every effort to carefully enter the data into the tablet, and try to avoid damage to the tablet by taking care of it;
- ◆ You need to review each questionnaire in the evening together with the Field Supervisor and make any corrections;
- ◆ You must attend to all 'call-backs' as early as possible, and must be punctual in keeping all appointments made; and
- ◆ You are solely responsible for all documents issued to you in connection with the survey, and you must ensure that they are secure at all times.

Things you must **not** do

- ◆ You must not solicit or permit any unauthorized person to assist you with your work. No matter how intelligent they are, they will neither have had the training nor the authority to participate in interviewing;
- ◆ You must not combine with the survey work any canvassing for personal gains, religious, political party or any other organization;
- ◆ Do not take any photos without permission – only take photos if you need to reference later (e.g. photo of a chicken to check breed type); and
- ◆ You should NEVER become involved in religious or political discussions while you are working.

Interviewing techniques

- ◆ Questions should be asked exactly as worded in the questionnaire and as per the training;
- ◆ If the respondent's answer to the initial question is not a complete and adequate answer, probe for clarification and elaboration in a non-directive way; that is, a way that does not influence the content of the answers that result;
- ◆ Answers should be recorded without interviewer discretion; the answers recorded should reflect what the respondent says; and
- ◆ The field officer should communicate in a neutral, nonjudgmental stance with respect to the substance of answers. S/he should not provide any personal information that might imply any particular values or preferences with respect to topics to be covered in the interview, nor should the interviewer provide any feedback to respondents, positive or negative, with respect to the specific content of the answers they provide.

Benefits to the participating households

Sometimes the respondent may ask to know how the household will benefit from participating in the survey. An interviewer should respond that this survey will help to inform later project activities in their village. Do not promise anything to the respondent.

Presentation

The respondent's first impression of you as the field officer will influence her/his willingness to co-operate in the survey. Your appearance gives the respondent's first impression of you, and the way you dress will determine the success of your interview and therefore before meeting the respondent, make sure that you are neat and appropriately dressed. In the event that the respondent and the interviewer know each other it is important that the interviewer behave in a professional manner that is as similar as possible to his/her behaviour with respondents that he/she does not know. On meeting the respondent, the first thing you should do is to exchange greetings. Next, you must introduce yourself, stating your name and what you want of the respondent. Make sure that you conduct yourself in a friendly and relaxed manner as you introduce yourself (*See a sample of the introduction message below*).

Neutrality

People tend to give answers that they think will please a stranger. It is therefore important that the interviewer remain absolutely neutral towards the subject matter of the interview. Thus, **do not show surprise, approval, or disapproval of the respondent's answer.**

Probing

- ◆ If you find that the respondent does not understand the question asked, ask the question again.
- ◆ If you realize that the answer given to the question is not consistent with other responses, ask the respondent to clarify the answer.

- ◆ If still the respondent seems not to understand the question or the response given contradicts earlier responses, the interviewer should seek clarification through asking indirect questions or some additional questions so as to obtain a complete answer to the original question.

Reluctant respondents

- ◆ There are rare cases of actual refusals of respondents to respond to interviews and in cases where you encounter such; your approach might have contributed.
- ◆ In such a case, speak politely to the respondent, to ensure their cooperation.
- ◆ Also be honest in your approach and never tell the respondent that you will take only ten minutes of his/her time when you know it will take about 2 hours to complete the interview.
- ◆ If the respondent does not have the time, make an appointment for a return visit.

Sampling information & survey coding

The tables below show the project villages to be sampled for the ACGG Producer Baseline Survey in each of the 3 countries, together with the number of households in each village. **Note that before making this manual open-access ONLY the names of Zones should remain in the tables – all other information should be coded only.**

NIGERIA

Zone Name (Sub-National Area)	Zone code	Name senatorial district	District Code	LGA Name	LGA code	Village name	Village code	Number of households to survey		
Zone 1 - Kwara State	KW	Kwara North	1	Moro	1		1	20		
				Edu	2		2	20		
							3	20		
		Kwara Central	2		Asa	3		4	20	
					Ilorin East	4		5	20	
								6	20	
		Kwara South	3		Isin	5		7	20	
					Ekiti	6		8	20	
								9	20	
		Zone 2- Rivers State	RV	Rivers East	4	Ikwerre	7		10	20
						Obio/Akpor	8		11	20
									12	20
Rivers South-East	5				Khana	9		13	20	
					Oyigbo	10		14	20	
								15	20	
Rivers West	6				Degema	11		16	20	
					Ahoada East	12		17	20	
								18	20	
Zone 3- Imo State				Owerri	7	Ngor-Okpala	13		19	20
						Ezinihite-Mbaise	14		20	20
									21	20
		Orlu			22	20				
					23	20				

	IM		8	Ohaji-Egbema			30	20				
				Oru-East	16		31	20				
				Okigwe	9	Obowo	17		33	20		
						Onuimo	18		34	20		
									35	20		
									36	20		
				Zone 4 - Nasarawa State	NS	Nasarawa West	10	Karu	19		37	20
								Nasarawa	20		38	20
						Nasarawa North	11	Akwanga	21		39	20
								Wamba	22		40	20
Nasarawa South	12	Lafia	23				41	20				
							42	20				
		Awe	24				43	20				
							44	20				
Zone 5 - Kebbi State	KB	Central	13			Aliero	25		45	20		
									46	20		
		North	14	Maiyama	26		47	20				
							48	20				
		South	15	Argungu	27		49	20				
				Dandi	28		50	20				
							51	20				
							52	20				
							53	20				
							54	20				
					55	20						
					56	20						
					57	20						
					58	20						
					59	20						
					60	20						
Total number of households for baseline:							1,200					

TANZANIA

Zone Name (Sub-National Area)	Zone code	Name of District	District Code	Village name	Village code	Number of households to survey
1. Southern humid and sub-humid	SH	Masasi	1		1	15
					2	15
					3	15
					4	15
		Newala	2		5	15
					6	15
					7	15
					8	15
		Ruangwa	3		9	15
					10	15

					11	15
					12	15
		Lindi rural	4		13	15
					14	15
					15	15
					16	15
2. Southern highlands	HL	Mbeya rural	5		17	15
					18	15
					19	15
					20	15
		Ileje	6		21	15
					22	15
					23	15
					24	15
		Njombe rural	7		25	15
					26	15
					27	15
					28	15
Wanging'ombe	8		29	15		
			30	15		
			31	15		
			32	15		
3. Central semi-arid	CS	Manyoni	9		33	15
					34	15
					35	15
					36	15
		Iramba	10		37	15
					38	15
					39	15
					40	15
		Bahi	11		41	15
					42	15
					43	15
					44	15
Chamwino	12		45	15		
			46	15		
			47	15		
			48	15		
4. Eastern sub-humid	ES	Kilombero	13		49	15
					50	15

					51	15
					52	15
		Mvomero	14		53	15
					54	15
					55	15
					56	15
		Korogwe	15		57	15
					58	15
					59	15
					60	15
		Muheza	16		61	15
					62	15
					63	15
					64	15
5. Lake zone	LZ	Maswa	17		65	15
					66	15
					67	15
					68	15
		Bariadi	18		69	15
					70	15
					71	15
					72	15
		Misungwi	19		73	15
					74	15
					75	15
					76	15
		Sengerema	20		77	15
					78	15
					79	15
					80	15
			Total number of households for baseline:			1,200

ETHIOPIA

Region Name (Sub-National Area)	Region code	Name of Zone	Name of District (Woreda)	District Code	Village (Kebele) name	Village code	Number of households to survey
Oromia	RM	East Shoa	Adami Tulu	1		1	20
						2	20
						3	20
			Dugda	2		4	20
						5	20

						6	20		
		West Shoa	Bako Tibe	3		7	20		
								8	20
		West Shoa	Dano	4		9	20		
								10	20
								11	20
		East Haraghe	Har0maya	5		12	20		
								13	20
								14	20
		West Haraghe	Darolabu	6		15	20		
								16	20
								17	20
		West Gojjam	South Achefer	7		18	20		
								19	20
								20	20
		Awi	Banja	8		21	20		
								22	20
								23	20
		North Gondar	Gondar Zuria	10		24	20		
								25	20
								26	20
		South Wollo	Kalu	11		27	20		
								28	20
								29	20
		Eastern Tigray	Kelteawlalo	12		30	20		
								31	20
								32	20
		South Eastern Tigray	Saharti-Samre	13		33	20		
								34	20
								35	20
		Central Tigray	Tahtaymachew	14		36	20		
								37	20
								38	20
		Central Tigray	Merebleke	15		39	20		
								40	20
								41	20
		Sidama	Dara	16		42	20		
								43	20
								44	20
		Wolaita	Bolosso Sore	17		45	20		
								46	20
								47	20
						48	20		

		Gurage	Meskan	17		49	20
						50	20
						51	20
		Silti	Hulbareg	18		52	20
						53	20
						54	20
		Kembata Alaba Tembaro	Doyogena	19		55	20
						56	20
						57	20
Addis Ababa	AA	Kolfe	KolfeW.3	20		58	20
						59	20
						60	20
		NefasSilk	NefasSilkW.1	21		61	20
						62	20
						63	20

There will be no unique household ID allocated in the field; it will be allocated when all the survey data are together in the database. The field officer will select the: State, Senatorial district, local government area and Village (Nigeria) or Region, District, Village (Tanzania) or Region, Zone, district and Kebele (called village in ACGG framework) (Ethiopia) in the ODK tool.

The structure of the code in the final database will be: **AABCCCC**

AA = 2 letters for the sub-national area (State, Region) name (see tables above); B = Country code (Nigeria = 1, Tanzania = 2, Ethiopia = 3); CCCC = Household code (from 0001 – 9999).

Introducing yourself

When you first enter the randomly sampled household selected for the survey you should introduce yourself with example text such as in the text box below.

Note that the field supervisor (or officer) should have already confirmed that the household keeps chicken and has kept chicken for the past 2 years!

The key aspects to cover are:

- ◆ Your name;
- ◆ Which project you are coming from and the main objectives of the project;
- ◆ Any information the farmer gives you will remain confidential and their name and personal information will not be shared outside of the project;
- ◆ The information s/he gives will directly benefit their community (and maybe themselves) through the other project activities in the community; and
- ◆ Ask if any questions – then ask for consent. They are free not to give consent and you will interview a different household.

Hello. My name is XXX and I work for the African Chicken Genetic Gains (ACGG) project. The main aim of the project is to reduce poverty in the country by increasing the productivity and production of chicken and its products. The project aims to achieve this by working with various stakeholders to identify and avail highly productive chicken under local conditions.

The project has decided to operate in 30 local government areas in the country. Your community is one of those involved and will directly benefit from this information as we look at how to improve chicken production in the country. In each of the local government areas, a few farmers have been randomly selected to participate in the baseline survey, and you are one of these.

I came here to ask you some questions related to your livelihood activities including poultry-keeping if you have any. The baseline survey is for research purposes, and your responses will be aggregated with those from other farmers in the country to get a general overview of the livelihoods including chicken keeping. The information you provide is confidential. This means that we will not publish the information with your name, or give out this information to someone else. If you have any questions, don't hesitate to ask. Please note that participation is voluntary.

'Can we now continue with the survey'?

Note that even if the answer is No to consent then you should have already collected the name of the household head and registered this 'no consent' into the tablet data collection tool form for NO CONSENT.

Definitions

Household

- ◆ After introduction, the task is to define the household which will be interviewed. For this survey, a household is defined as follows:
 - A household is a group of individuals, usually related, that conduct activities (farming and non-farming) together and pool their resources from their activities. They usually cook and eat together.
- ◆ Once the household has been defined, data to be filled in the questionnaire relate to all the individuals in this household.

Example: one father with 3 married sons

Option 1: the father and his wife live with ONLY one of their sons and his family. They cook and eat together and share resources. The father, his wife, their son and daughter-in-law and grandchildren constitute one household. When filling in the questionnaire, data on assets, crops, livestock and income etc. are for these members.

Option 2: the father and wife live with all their 3 sons and families, cooking and eating together and sharing resources. All of them (father, wife, 3 sons and daughters-in-law and all the grandchildren) constitute one household. When filling in the questionnaire, data on assets, crops, livestock and income etc. are for these members- which means that if 2 sons for example work outside the farm, their salaries need to be added up in the Other Income table.

Option 3: the father and his wife live in their house. As their sons are staying away they loan another house on the compound to a nephew who stays there with his wife. They eat together most days but they do not pool resources – the nephew works in town and does not share his salary with the uncle; the wife farms some land separate from her uncle. The household to interview is only the father and his wife, do not include the nephew and his wife.

- ◆ More definitions are provided at the end of this document.

Poultry

- Poultry = chicken, ducks, Guinea fowl, turkey etc.

Exotic and Improved Exotic Chicken breeds

Chicken Breed	Exotic (E) / Improved Exotic (IE)	Chicken Breed	Exotic (E) / Improved Exotic (IE)
Koekoek	E	Rhode Island Red	IE
Kuroiler	E	White leghorn	IE
Giriraja/Girirani	E	Fayoumi (Egypt)	E
Hendrix	E	Harco	E
ShikaBrown	E		
Funaab-Alpha	E	Exotic / Improved Exotic crossbreed	

Special coding for questions

In most cases the ODK tool is designed to minimize the number of 'special codes' required. However, below are the special codes field officer should enter for different types of response.

- Unknown (household cannot tell you the answer) = **-99**
- Household refuses to answer the question = **-88**
- Answer is 'Not applicable' = **-77**
- Answer is 'missing' (this should only happen if you forgot to ask the question!) = Blank

Where the answer is categorical (e.g. 0 = No, 1 = yes) then 'unknown', 'refuse to answer' and 'not applicable' will be shown as text options. However, for numeric data (e.g. age, income) it is not possible to add codes and field officer will need to use the coding values above.

- Other (specify) – If 'Other' is selected for a categorical response the field officer **MUST** describe / specify what the 'Other' is in the space below the question.

Please remember that for answers which are true ZERO's (e.g. a child age when they are less than one year old, the cost of transportation when a farmer walks an animal to market etc.) should be entered as ZERO (0) and not any of the codes above.

Clarifying information for each module

A. Household identification

- ◆ First confirm that the household keeps and has kept chicken for at least the past 2 years. If no, request supervisor for a new household.
- ◆ Use the definition of a household above to establish the limits of the household you are interviewing (e.g. do the questions include the adult children, all houses in the compound or just one etc.).
- ◆ If household does not consent to be interviewed first complete the NO CONSENT form and then go back to supervisor to request a replacement household; Note that you will start a new questionnaire in the ODK tool for the new household after obtaining their consent.
- ◆ Start & End Time captured automatically by the ODK tool in tablet
- ◆ You will need to be standing in open-air in order to capture the GPS coordinates – this is done at the start of the survey.
- ◆ It is **strongly preferable** for the respondent to be the person who takes care of the chicken or is at least knowledgeable of how these animals are managed. If it is culturally standard that if the household head is male then he must answer the questions it is ideal to ensure the person who takes care of the chickens (often the woman) is at least present and helping to answer the questions.

D. Chicken production

Purpose & Objectives for keeping poultry

- ◆ Ask whether the household keeps the various species of animals and select all that they keep.
- ◆ Then rank the objectives for which they keep the animals. The ranking of objectives is at the species level, starting with the most important objective in rank 1. For example, if a farmer keeps chicken for meat sale, egg sale and meat consumption in decreasing order of importance, and keeps turkeys only for ceremonial purposes; you will fill it as follows.
- ◆ If the farmer says they have same preference for more than one objective try to probe for the more important and enter this as the higher rank. Make sure you only use an objective ONCE in the 3 ranks.

D5 For what purpose and objectives do you raise poultry?

Species	Household keeps species? (0=No, 1=Yes)	If household keeps species rank the top 3 most important objectives (1= most important)		
		Rank 1	Rank 2	Rank 3
Chicken	1	3	4	1
Guinea fowl	0			
Duck	0			
Turkey	1	6	-77 (N/A)	-77 (N/A)
Others, specify []	0			
a) Objectives	1= for meat consumption, 2 = for egg consumption, 3 = for meat sale, 4 = for egg sale, 5 = for chick sale, 6= for ceremonies / festivals, 7 = to give away, 8 = for cock fighting, 9 = live adult chicken sales, Other (specify), -77=Not applicable			

D6 Rank in order your preference for different breed types of bird – [, , ,] (1=local, 2=improved local, 3=exotic, 4=improved exotic, 5=crossbred (local x exotic))

- ◆ Enter the appropriate ranking of breeds - select from the most preferred breed type to the last e.g. [5,1,2,3,4]
- ◆ Even if a farmer does not keep all the breed types explain that they may rank any breed types that they know. If they do not know and can't rank then enter -77 (not applicable) after farmer has selected all the breed types they know (e.g. 3,1,2,-77,-77 is a farmer who only wanted to rank exotic, local and improved local but doesn't know what they think of improved exotic and cross-bred).
- ◆ If they say they have no preference try to probe by asking the breed types they keep and whether these are their preferred.

D7 For the most preferred type of bird why do you prefer this breed type? [, ,] (Code a – enter all that apply)

a) Reason: 1=produces a lot of eggs, 2=produces better tasting eggs, 3=produces eggs with harder/thicker shell, 4=has a large body size & weight – for meat, 5=the meat tastes better, 6=produces chicks with high survival rate, 7=is feed efficient, 8=is beautiful / good physical appearance, 9=is good fighter, 10=has less illnesses, 11=lives a long time, Other (specify)

- ◆ Enter all the reasons for preferring the most preferred breed type - i.e. the rank 1 from D6 question.

Chicken Inventory

D1 How long has chicken been kept in the household (*in years*)? []

D2 Do you currently keep exotic / crossbred birds? [] (0=No, 1=Yes)

D3 If No, Have you had exotic/improved birds in the past? [] (0=No, 1=Yes).

D4 Fill in the table below, number of chicken refers to those present in the flock at the time of the survey.

- ◆ Select the types of breeds kept by the household and proceed to fill the numbers of these breeds currently owned. For example, if a household keeps local chicken only (composed of 1 cock, 3 hens, no growers and 7 chicks), the figures will be filled as shown below.
- ◆ To clarify the columns in training we define: Column 3 = male chickens older than 6 months, Column 4 = female chickens older than 6 months (regardless of whether they are laying), Column 5 = Male chickens 2 – 6 months, Column 6 = Female chickens 2 – 6 months, Column 7 = chickens less than 2 months old.

Chicken Breed Type (code a)	If exotic which breed? (code)	Number of Cocks	Number of Hens	Number of Growers		No. of chicks	Total number of birds	Source of foundation stock (code b)
				Male	Female-Pullet			
1	-77 (N/A)	1	3	0	0	7	11	1
a) Chicken breed type – 1=local, 2=improved local, 3=exotic, 4=improved exotic, 5=crossbred (local x exotic) (if code 3 or 4 specify breed(s) –only for this question!!)						b) Source of foundation stock code (main)		
Exotic breeds (specify if code a = 3 or 4):	1=Koekoek (SA) 2=Kuroiler (India) 3=Giriraja/Girirani 4=Hendrix 5=ShikaBrown	6=Funaab-Alpha 7=Rhode Island Red (IE) 8=White leghorn (IE) 9 = Fayoumi (Exotic - Egypt) 10 = Harco (Exotic)	11= Hampshire (exotic) 12= Barred Plymouth Rock (exotic) 13= Black Australorp 29 = exotic or improved exotic cross; Other (specify)	1. Purchase 2. Inherited 3. Custody	5. Gift (family, schools, government, neighbour, or NGO) Other (specify)			

Chicken Entries

D8 Were there any “entries” of chicken in the last 3 months? [] (0 = No, 1 = Yes)

- ◆ ‘Entries’ of chicken means chicken that entered or came into the household e.g. through purchase, hatched, received as gifts etc.
- ◆ If yes fill D9 - Record all events in the **last 3 months**. Prices are **total costs** (NOT by bird).
- ◆ If no, ODK will skip this table.
- ◆ If chicken entering household were purchased, all the columns must be filled, but if the chicken were not purchased, ODK will skip purchase and transport details, and move automatically to the next Type of entry.
- ◆ For example, if a household hatched some chicks and purchased some hens, you may have the following entries:

Type of entry (code a)	Chicken Type (code b)	Breed Type (code)	Number of birds	If purchased...						Transportation details...			
				Marketing channel (d)	Number purchased	Total cost of birds	Mode of payment (e)	Reason for purchase (f)	Whose decision to purchase (g)	Mode of transport (h)	Distance to place of purchase (km)	Who pays (code i)	Cost of transport
2	2	1		1	2	600	1	2	2	1	0	1	0
1	5	1	7	Skipped in ODK automatically as Type of Entry = NOT PURCHASED									
a) Type of entry			1 = Birth / hatched on farm, 2 = Purchased, 3 = Loaned, 4 = Gift, 5 = Obtained as dowry, Other (specify)										
b) Chicken Type			1=Cock, 2 = Hen, 3 = Grower – male, 4 = Grower – female (pullet), 5 = chicks, Other (specify)										
d) Marketing channel			(IF PURCHASED) 1= Fellow farmer / individuals; 2=Traders; 3= Village market; 4=City market; other (specify, e.g. NGO)										
e) Mode of payment			1=Cash, 2=Credit – delayed single payment, 3= Credit – delayed >1 payment, 4=Credit - access to goods/services on credit, 5=in-kind, Other (specify)										
f) Reason for purchase			1=Home consumption, 2=For breeding/brooding, 3= For laying, 4=Festival, Other (specify)										
g) Whose decision			1 = household male, 2 = household female, 3 = joint household (male & female), 4 = non-household member, Other (specify)										
h) Mode of transport			1 = walking (with bird), 2 = owned car/truck/motorcycle, 3 = hired car/truck/motorcycle, 4=seller brings the bird with his/her own transport, other (specify)										
i) Who pays			1= Self, 2= Seller pays, Other (specify)										

Chicken Exits (including marketing)

D10 Were there any “exits” of chicken in the last 3 months? [] (0 = No, 1 = Yes)

- ◆ Exits of birds refers to the chicken that left the household e.g. due to sale, death, given away etc.
- ◆ If yes, fill in the table for D11 - Fill one row for each Breed x Chicken Type x Type of exit combination, record all events in the **last 3 months**. Prices are **total costs** (NOT by bird).
- ◆ You will only fill the columns on ‘if sold’ if reason for exit is sale, otherwise in ODK these will be skipped automatically to the next reason for exit.

Type of exit (code a)	Chicken Type (code b)	Breed Type (code)	Number of birds	If sold...						Transportation details...			
				Marketing channel (d)	Number sold	Total money received	Mode of payment (e)	Reason for sale (f)	Whose decision to sell (g - above)	Mode of transport (h)	Distance to place of sale (km)	Who pays (code i)	Cost of transport
6	1	1		3	1	300	1	2	2	1	1.4	1	0
3	2	1	2	Skipped in ODK automatically if Type of Exit = NOT SALE									
a) Type of exit			1 = Died - disease, 2= Died – accident, 3= Died – killed by predators, 4=Died – old age, 5=Died – unknown cause, 6=Sale – live chicken, 7=Sale – slaughtered chicken, 8=Loaned out, 9=Slaughtered for home consumption, 8 = Gifted out, 9= Lost, strayed, 10=Stolen, 11=Sacrifice – festival, Other (specify)										
b) Chicken Type code			1=Cock, 2 = Hen, 3 = Grower – male, 4 = Grower – female (pullet), 5 = chicks, Other (specify)										
d) Marketing channel (code e & g, see above)			(IF SOLD) 1= Fellow farmer / individuals; 2=Traders; 3= Village market; 4=City market; 5 =butchery, 6=slaughterhouse, 7=restaurant, 8=shop, other (specify, e.g. NGO)										
f) Reason for sale			1= Cash – sales as a business, 2 = Cash - for general household needs (e.g. to buy food), 3 = Emergency Cash (e.g. to pay medical bills), 4= to decrease flock size, 5= selling less productive/old birds, 6=sacrificial month / festival, other, specify (e.g. dowry)										
h) Mode of transport			1 = Walking (with bird), 2 = owned car/truck/motorcycle, 3 = hired car/truck/motorcycle, 4=buyer takes the bird with his/her own transport, other (specify)										
i) Who pays			1= Self, 2= Buyer pays, Other (specify)										

E. Marketing – not include bird sales (D)

◆ This section covers sale of chicken eggs and other products excluding chicken birds (which have already been covered).

E1 Have you sold any chicken eggs in the last 3 months? [] (0 = No, 1 = Yes)

E2 If yes, select the type of chicken breed for which the eggs were sold in the last **3 months** only.

◆ Note that if the farmer keeps several chicken breeds, but did not categorize the eggs per breed type, select mixed breed.

◆ If the cost of transporting sold eggs is borne by others rather than the farmer, the cost of transport question is skipped.

◆ Total received will be calculated in the analysis – it will use the price per egg x days per week x eggs sold per day combined with clutch length and number of clutch per year (from Productivity section) to calculate numbers of eggs sold (and income from these) over 3 months.

Chicken Breed Type (code)	Marketing channel (code d)	Average price per egg	Average no. days sold per week	Average no. eggs sold on each of these days	Mode of payment (code e)	Reason for sale (code f)	Whose decision to sell (code g)	Transportation details...			
								Mode (code h)	Distance to place of sale (km)	Who pays (code i)	Cost of transport
1	1	20	1	1	1	2	2	1	1	1	0

For all codes use Table above – Chicken Exits (& Entries for code e & g) N.B. Chicken Breed Type can be 6 = ‘Mixed’ if eggs mixed together)

E3 Have you sold any other chicken products in the last 3 months? [] (0 = No, 1 = Yes)

E4 If yes, select all the chicken products sold and fill the subsequent fields.

- ◆ Probe for all possible products
- ◆ The code for units 'number' is applicable for products like cock fighting.
- ◆ Quantity is the NUMBER OF UNITS
- ◆ If the cost of transporting the product is borne by others rather than the farmer, the cost of transport question is skipped.
- ◆ Total received will be calculated in the analysis – it will use the Quantity x money received per unit sold to provide total income for 3 months.

Type of product (code a)	Marketing channel (code d)	Chicken Breed Type (code)	Total Amount sold in past 3 months		Money received per unit sold	Mode of payment (code e)	Reason for sale (code f)	Whose decision to sell (code g)	Transportation details...			
			Unit (code b)	Quantity					Mode (code h)	Distance to place of sale (km)	Who pays (code i)	Cost of transport
1	1	1	4	4	500	2	2	1	4	0	2	-77 (N/A)
a) Type of product			1= chicken waste / manure , 2 = feathers, 3 = cock fighting, Other (specify)									
b) Unit			1=Number, 2=1kg, 3=10kg bag, 4=25kg bag, Other (specify)									
For all other codes use Table above – Chicken Exits (N.B. Chicken Breed Type can be 6 = 'Mixed' if manure and/or feathers mixed together)												

E5 which household member provided the answers for Section E? [] (1= household head, 2= spouse (if head is male), 3= other household male, 4=other household female, 5=joint (household head & spouse), 6=other specify) and was this person / people the most appropriate / knowledgeable? [] (0 = No, 1 = Yes)

F. Chicken productivity

F1 Do you have chickens that lay eggs usually? [] (0 = No, 1 = Yes).

- ◆ If yes, state the productivity of your birds (**by breed type**) in the following table – use recall in the past 3 months to help the household complete:
- ◆ For a reminder of the meaning of terms used in this table, look at the glossary at the end of this document.
- ◆ If breed type is exotic /improved exotic and hen lays eggs all year round enter – 77 (not applicable) in later columns. If farmer does not know enter – 99.

Chicken breed type (code)	Age of sexual Maturity (<i>weeks</i>)		Average No. of <u>eggs</u> per <u>clutch</u>	Average No. of <u>days</u> per <u>clutch</u>	No. of times the hen <u>hatches</u> in a <u>year</u>	Average no. eggs per brood	No. of chicks <u>hatched</u> per brood	No. chicks per brood <u>surviving to separation from hens</u>
	Hen	Cock						
1	24	32	13	16	4	12	9	7

Breeding – Bird Selection Practices

F2 Do you select specific chickens for breeding purposes? [] (0 = No, 1 = Yes)

- ◆ If yes, select whether the farmer selects hens, cocks or both for breeding purposes.
- ◆ If no, the section is skipped automatically.
- ◆ Provide up to 5 characteristics used to select birds for breeding – if farmer selects less than five ranked characteristics enter ‘not applicable’ (-77) for the remaining traits. Start with the most important as 1st trait.
- ◆ Explain the terms to farmer in non-technical ways. E.g. ‘egg productivity’ just means for the farmer is it important that his/her hens lay a lot of eggs every year.

F3 If yes, complete the table below:

Sex of chicken	Whether selects for breeding? (0=No, 1=Yes)	What characteristics do you use to select? (code a) (Please in order of importance – 1 st trait = most important, 2 nd trait = 2 nd most important, enter up to 5 traits).				
		1 st trait	2 nd trait	3 rd trait	4 th trait	5 th trait
Hens	1	10	12	16	17	18
Cocks	0	Skipped automatically in ODK				

a) Selection characteristics / traits

1=Body size / weight, 2=Growth rate, 3=Feed requirements, 4=body/feather colour, 5=Leg length, 6=Comb shape/type, 8=wing span, 9=homestead recognition, 10=chick production rate, 11=clutch length, 12=egg size/weight, 13=cold tolerance, 14=heat/drought tolerance, 15=temperament, 16=scavenging ability, 17=Brooding / Hatching ability, 18=egg productivity, 19 = Rearing / Mothering ability, Other (specify), -77=Not applicable

Trait preference

F4 Irrespective of whether you select specific chickens for breeding please complete the table below:

- ◆ This question asks for traits that a farmer considers important for a good hen and cock (both sex are requested as it is not dependent on breeding – just that the farmer knows both chicken hens and chicken cocks).
- ◆ Provide up to 5 traits for each – ranked in order from most important trait (1st) to least important trait (5th). If farmer provides ranking of less than 5 traits enter N/A (-77) for the remainder.

Sex of chicken	What do you think are the qualities/attributes of a good chicken (cock & hen)? (code a) (in order of importance – 1 st trait = most important, 2 nd trait = 2 nd most important, enter up to 5 traits).				
	1 st trait	2 nd trait	3 rd trait	4 th trait	5 th trait
Hens	1	4	6	10	-77 (N/A)
Cocks					

a) **Qualities / Attributes:** 1=produces a lot of eggs, 2=produces better tasting eggs, 3=produces eggs with harder/thicker shell, 4=has a large body size & weight – for meat, 5=the meat tastes better, 6=produces chicks with high survival rate, 7=is feed efficient, 8=is beautiful / good physical appearance, 9=is good fighter, 10=has less illnesses, 11=lives a long time, Other (specify), -77=Not applicable

Culling

F5 Do you cull chickens? [] 0=No; 1=Yes

- ◆ If a farmer does not practice culling, culling criteria question F6 is skipped.

F6 If yes, on what criteria do you select animals for culling: [1, 2, 5,] (code a – select all that apply)

- ◆ Select all the culling criteria a farmers uses (no ordering / ranking)
- ◆ Note that the meaning of ‘low vitality’ was trained as non-technical; i.e. “lacking in energy / life”. The technical meaning is a combination of fertility / survivability of offspring.

a) Criteria	1=old age, 2=poor egg production/productivity, 3= low body weight, 4=low vitality, 5=poor egg quality, 6=bad plumage/body colour, 7=not broody, 8=disease concerns (in flock or bird), Other (specify)
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F7 If you cull based on ‘old age’ at what age do you usually cull? [36] Months

G. Chicken Management

Housing

- ◆ Select all chicken breed types kept by a farmer and enter housing day and night details for wet and dry season.
- ◆ If the chicken are not provided specific chicken housing at ANY time, G4 will be automatically skipped (see example).
- ◆ If different ages of chicken are kept separately then ask the question with respect to adult chickens only
- ◆ If chicken are kept ‘in the home on a perch / platform’ then can enter this information under Other (Ethiopia situation). Note though that if chickens are kept in the home and within a cage / basket then select code 2 = Kept in home

G1 Chicken Breed Type (code)	G2 Housing system – Dry season* (code b)		G3 Housing system – Wet season* (code b)		G4 If specific housing, indicate		
	Day	Night	Day	Night	Construction cost	When built (year)	Used for other breed/ species (code c)?
1	0	2	0	2	Automatically skipped		
2	0	1	0	1	3,000	2002	1
b) Housing system	0=Free range (no housing), 1= Chicken house (coop/hut) made from mud/iron sheet/wood/rocks/bricks, 2=Kept in home (e.g. kitchen), 3=Confined in individual cage, 4= Confined in basket (e.g. bamboo), Other (specify)						
c) Used for other breed / species?	0=no, 1= for all POULTRY species kept by the household, 2= for all breeds of chicken only, 3=with other livestock species						

*Season in this case refers to whether it is a dry or wet season

G5 If the housing system is in baskets or cages, how frequently in a week do you clean or move the basket to another location? [2] (Number of times)

- ◆ If the housing system is not basket or cage, use code -77 (not applicable). If basket / cage kept in home (e.g. in Ethiopia) still enter information.

G6 If you are supplied with a new breed of chicken, Will you be willing to a separate housing structure for them? [] 0=No; 1=Yes

- ◆ This is a question useful for the program management team to look at potential for farmers to be interested in participating in the on-farm activities of the project.

Feeding

G7 Do you give supplementary feed (i.e. any feed not obtained from scavenging) to your chickens at any time of the year? [] (0=No, 1=Yes)

Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sept	Oct	Nov	Dec

G7b If yes, tick months when supplementary feed given (tick all that apply):

G8 If no, why? (Enter all that apply) [, , ,] (Enter in ANY order)

Codes: 1=Lack of awareness about supplementary feed, 2=Unavailable feed, 3=High cost of feed, 4=Time shortage, 5=Lack of money to buy feed, 6=Others (specify)

G9 If yes, complete the table below on supplementary feeding types and methods for your chickens.

- ◆ If no supplementary feeding is given, this section is automatically skipped.
- ◆ Enter 1 row per Chicken type x Feed type combination
- ◆ If the feed is not purchased the right-hand columns of the table are skipped in ODK (see example)

Feed type? (code b)	Chicken Type (code a)	What time do you provide the feed (Code g)?	Any processing before feeding? (code c)	Method of feeding (code d)	Is the feed: 0=From own farm, 1=Purchased, 2=Both?	If purchased...				
						Number of months / year purchased	Average monthly cost during months when purchased (incl. process)	Marketing channel (code e)	How do you transport the feed?(code f)	Average monthly cost of transport (0 if Free)
6	5	5	1	2	1	4	2000	2	4	0
7	6	7	2	2	0	Automatically skipped by ODK				
a) Chicken type		1=Cock, 2 = Hen, 3 = Grower – male, 4 = Grower – female (pullet), 5 = chicks, 6 = all chickens, Other (specify)								
b) Feed type		1=Grains, 2=Vegetables, 3=Root crops, 4=Legumes, 5=Oil seeds, 6=Commercial feed (e.g. wheat bran, oilseed by-products, mash), 7=Kitchen waste, Other (specify)								
c) Processing type		1=No processing, 2=Chopped, 3=Ground, Other (specify)								
d)Feeding method		1=Put into containers, 2=Thrown on ground for collective feeding, Other (specify)								
e)Marketing channel		1= Fellow farmer / individuals; 2=Traders; 3= Village market; 4=City market; Other (specify, e.g. NGO)								
f) Mode of transport		1= Walking (carrying feed), 2 = owned car/truck/motorcycle, 3 = hired car/truck/motorcycle, 4=seller brings the feed with his/her own transport, Other (specify)								
g) Feeding time		1=Morning only, 2=Afternoon only, 3=Evening only, 4=Morning &/or Afternoon, 5=Morning &/or Evening, 6=Afternoon &/or Evening, 7=Morning, Afternoon and/or Evening, 8 = Always available / ad libtum								

G10 If yes, do you have difficulty with obtaining the feed during anytime of the year? [] 0=No; 1=Yes

G11 Do you purchase feed? [] 0=No; 1=Yes (check table above).

G12 If yes, do you have issues with quality of feed you usually purchase? [] 0=No; 1=Yes; -77=Not applicable (should skip if No above)

G13 If you are supplied with a new breed of chicken, Will you be willing to give supplementary feed to them? 0=No; 1=Yes

G14 Do you provide your chickens with water in a container / trough? [] 0=No; 1=Yes

Health

G19 Did you carry out any vaccination or routine medication of chicken in the past 12 months? 0=no; 1=yes

- ◆ This question refers to regular vaccination (either government campaigns or on the initiative of the farmer)
- ◆ If no, this section is skipped automatically, but if yes, select all diseases/routine activities carried out.
- ◆ In Tanzania Fowl Pox may be a regular vaccination activity for extension – enter under Other and specify: Fowl Pox

Disease	Vaccination / Routine Medication in the past 12 months? (0=No; 1=Yes)	Vaccination / Routine Medication provider (code a)	Total cost of Vaccination/routine medication in the last 12 months (0 = None)
Newcastle Disease	1	1	0
Infectious Bursal Disease (Gumboro)	1	2	10000
Coccidiosis	0	Skipped in ODK automatically	
Other (specify) []	0	Skipped in ODK automatically	
Deworming	1	0	
Delousing	0	Skipped in ODK automatically	
a)Vaccination provider	0 = Self, 1=Government extension, 2=Private provider(e.g. para-vet, shop, company), 3=Cooperative or farmer group, 4= Research / training institute, 5 = NGO/Project, 6 = Other farmer / neighbour, 7= Local healer, 8=Certified vet, Other (specify)		

G15 Have you experienced any chicken disease outbreaks in the last 3 months? [] 0=No; 1=Yes. If yes, how many? []

- ◆ If no, the section that follows is skipped.
- ◆ If yes, G16 table is completed: 1 row per event - Detailed Chicken Disease Management Overview (in the last 3 months)
- ◆ Enter the number of disease events in the last 3 months, one row for each disease occurrence / event
- ◆ Include only the cost of treatment and not vaccination – unless performed on remaining health birds at the same time
- ◆ If no action was taken, the details on treatment are skipped.

Event num.	Event Month	Number of chickens that got sick	How many of these died?	What breed type of birds were most severely affected (code)?	Symptoms (code a – select all that apply)	What disease? (code b)	What action did you take? (code c)	If treated, who provided the services (code d)	What was the total cost of this service (including cost of drugs)?*	If treatment including drugs how effective was it? (1=Poor, 2=Fair, 3=Good, -77=N/A)
1	June	2	2	3	1,3,5	5	0	Automatically skipped by ODK		
2	July	5	3	5	11, 12	4	1	0	2000	2
a)Symptoms	1= Diarrhoea - bloody, 2=Diarrhoea – green/white, 3= Circling, 4= Coughing and sneezing, 5= Decreased egg production, 6= Dehydration, 7= Drowsiness and weakness, 8= Head edema, 9= Lack of appetite (anorexia), 10= Nasal discharges, 11= Respiratory problems, 12= Soft shells and deformed eggs, 13= Swelling of the joints, 14= Twisting head and neck, 15= Vent picking, 16= weight loss, 17 = Spots, Other (specify)									
b)Disease	-99 = Don't know, 1= Avian influenza (bird flu), 2= Coccidiosis , 3= Fowl Cholera , 4= Infectious Bursal Disease (Gumboro), 5= Newcastle disease, 6=Infectious Bronchitis, 7=Pullorum (Salmonella), 8 = Fowl Pox, 9 = Parasitic diseases, Other (specify)									
c) Action taken	0 = Nothing, 1=Treated myself – with traditional medicine, 2 = Treated myself - modern medicine (antibiotics, anthelmintics, aspirin etc.), 3=Got an 'expert' in to treat them, 4=Killed them immediately – and consumed, 5=Killed them immediately – did not consume, 6=Sold the live chickens immediately, Other (specify, e.g. quarantine)									
d) Service Provider	0=Myself, 1=Certified Vet, 2=Para-vet, 3=Vet technician, 4=Community health worker, 5=Other Farmer / Neighbour, 6=Local healer, Other (specify)									

G17 If household had events in table above but no paid service provider then ask: **Do you have access to paid health services?** [0] 0=No; 1=Yes

G18 **If NO**, if you had access to paid health services for chicken, would you pay for these services? [0] 0=No; 1=Yes

G20 which household member provided the answers for Section F & G? [5] (1= household head, 2= spouse (if head is male), 3= other household male, 4=other household female, 5=joint (household head & spouse), 6=other specify) and was this person / people the most appropriate / knowledgeable? [1] (0 = No, 1 = Yes)

H. Labour allocation for chicken activities

- ◆ Use household recall from the **previous 1 week (7 days)**.
- ◆ Select yes in multiple select option for all activities carried out. Activities selected No will have all columns in the table skipped in ODK
- ◆ If activity was performed, enter “Number of people” and “MINUTES / person” – total over 7 days, for adult males, females, children and hired females and males.
- ◆ Note – include under ‘hired females’ and ‘hired males’ **any paid employees** even if they may be defined as part of the household (see Section B)!

Type of Chicken activity	Household						Non-Household			
	Adult Males		Adult Females		Children (< 15 yrs)		Hired Females		Hired Males	
	Num. people	Mins / person	Num. people	Mins / person	Num. people	Mins / person	Num. people	Mins / person	Num. people	Mins / person
Purchasing inputs (including live birds)										
Feeding (collecting & preparation)	2	60	0	0	0	0	3	45	0	0
Watering bird										
Cleaning of bird shed/shelter										
Collection of Farm Yard Manure (FYM)										
Egg collection	0	0	0	0	1	30	0	0	0	0
Selling birds / bird products (incl. egg)										
Selling of FYM										
Disease control / Caring for sick birds										
Other: []										

H2 How many hired/paid labourers do you have working (*sometimes*) on chicken activities (confirm with table above)? []:

- ◆ If no workers were hired, enter ‘0’ and the subsequent questions will be automatically skipped by ODK.

For hired / paid labour costs relating to chicken activities complete the table below:

- ◆ This table is intended to capture the gender aspects of labor allocation in poultry management
- ◆ For labour paid in kind (e.g. through food etc.) try to put a monetary value for the in-kind payment

First Name	Gender of worker (1=male,2=female)	Labour Type (code a)	Hours / week		Payment type (code b)	Wage* per week	How many weeks employed per year?
			Total Hrs	Hrs on chicken			
Okey	1	2	60	4	1	1400	12
Vivan	2	1	40	2	1	1400	52
a)Labour type		1=Permanent, 2=Temporary 3=Casual					
b)Payment type		1 = Cash, 2 = In-kind, 3 = Both, Other (specify)					

I. Training and extension

I1: Have you received any extension visits or training in the last 12 months? [] 0=No; 1=Yes

- ◆ If no, the subsequent questions will be automatically skipped. If yes, complete the table I2 below
- ◆ Fill yes or no on availability of all the services, or don't know if that is the case.
- ◆ If a service is not available, fill no and the subsequent questions are skipped, otherwise fill the number of times
- ◆ **Note that 'extension' here is not only government but includes all potential sources of information**

Type of service	Used in past 12mths? (0=No, 1=Yes)	If yes, no. visits / training events in the <u>last 12</u> <u>months?</u>	If yes, who used the service / attended training? (code b)	If yes, provider type (code c – select all that apply)	If yes, <u>average</u> <u>cost</u> per visit / training? (put 0 if Free)	Level of satisfaction (code d)	If extension provider is government, where do you meet usually? (code e)
Extension visits							
Chicken management (feeding, housing & H2O)	1	5	1	1	0	4	2
Chicken health	0	Skipped automatically					
Chicken breeding (incl. breed improvement)	1	4	3	4	0	3	-77
Marketing – Chickens & chicken products	1	2	2	3	0	1	-77
Training							
Chicken management (feeding, housing & water)	1	3	2	5	0	5	
Chicken health	1	2	1	2	2000	4	
Chicken breeding (incl. breed improvement)	0	Skipped automatically					
Marketing – Chickens & chicken products	0	Skipped automatically					
b) Who used the service / attended training?	1 = household male, 2 = household female, 3 = joint household (male & female), 4 = non-household member, Other (specify)						
c) Training / Extension Provider	1=Government extension, 2=Private provider(e.g. para-vet, shop, company), 3=Cooperative or farmer group, 4= Research / training institute, 5 = NGO/Project, 6 = Other farmer / neighbour, 7= Local healer, 8=Certified vet, Other (specify)						
d) Level of satisfaction	1= Very dissatisfied, 2= Dissatisfied, 3= Neutral /not sure, 4= Satisfied, 5= Very satisfied						

e) Place where met extension agent	1=At agents office, 2=At my farm / compound, 3=At regular meetings (at least once per month), 4=At co-operative meetings, 5=At demonstration farms, Other (specify)
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B. Household Roster

- ◆ ODK will begin by asking the number of members in the household, in order to create the necessary number of rows for each member. In some cultures, it is not acceptable to count household members. In this case you may need to ask indirectly, by asking them about members in the household as you count silently.
- ◆ Member of the household is NOT THE SAME as member of the family; for example, if an employee lives in the house with the family and eats together they ARE a member of the household (note their salary will be part of the household expenditure and therefore ‘pooled resources’). **The maximum is set to 25 members** – in some polygamous communities it is possible the number may go over this. In this situation enter the maximum possible (25) and ensure you capture at least all the adults and preferably teenagers in the household – i.e. if you need to leave out X people from the roster information make them the youngest children.
- ◆ To qualify as a household member for this roster the person must live at the residence **at least 3 months per year.**
- ◆ The only exception is when the household head is based away from the household (e.g. working in town) – even if their time in the household is less than 3 months per year we still include them in the roster as they are providing resources & leadership.
- ◆ Remember the definition of a household as a group of individuals, usually related, that conduct activities (farming and non-farming) together and pool their resources from their activities. They usually cook and eat together.
- ◆ First establish total number of people in the household [____] (this allows ODK to provide the correct number of rows for the table)
- ◆ B2 Name: Can enter the full name or just the first name of the member
- ◆ B3 Relationship to household head: Note that if the household head is female then there will be no ‘spouse’ (in the project countries a woman will only be a household head if widowed or divorced).
- ◆ B4 Gender: Use codes to describe the gender of the household member. Ensure that everybody’s gender is recorded accurately.
- ◆ B5 Age (years): Obtain each person’s age in completed years, that is, his/her current age. If a child has not yet reached his/her first birthday (completed a year), write 0. E.g. a child who is 11 months old is coded as 0 and a child whose age is given as 3.5 years is considered to be 3 years. Round down the age of a household member rather than rounding up. If the respondent is unwilling to reveal the age of the household members, then try to estimate their age approximately – the important thing is to confirm whether then are infant (<6 years), child (6 – 17 years), adult working age (18 – 65 years; 18 – 45 to capture reproductive age women) or adult retired age (> 65 years).
- ◆ B6 Education: Capture the number of years of formal schooling (unless below 6 years of age – if so then question will have been skipped). Koranic and “abnet” schooling counts as formal schooling, kindergarten is not formal schooling.
- ◆ ‘Source of livelihood’ is like the most important activities for the household member in terms of money and/or time (e.g. for a child going to school – pupil would be primary source of livelihood). Code up to THREE in decreasing order of importance – these are the main activities occupying their time and/or

providing sources of income. If a person has only one main activity (e.g. Student) then enter 'Not Applicable' for the 2nd and 3rd activity. If they say two activities are both equally important ask which activity brings them the most money (i.e. = Primary).

- ◆ Check that you have included everyone by asking: 'Are there any other members, who usually live here, but are away now?' (Probe for people at work, children in day-schools, and house-help who reside with the household). If the answer is "yes", add those names to the list. Note that you may need to go back to the question of 'number of household members' and change this in order to add extra members.

B1 ID	B2 Name	B3 Relationship to HH head (code a)	B4 Gender (1=male, 2=female)	B5 Age (years)	B6 Number of years of schooling (N/A if age < 6 years)	B7 Sources of livelihood (<i>Rank top 3 in order</i>) (code b)		
						B7a Primary	B7b Secondary	B7c Tertiary
1	James Bond	1	1	42	12	1	2	3
2	Jane Bond	2	2	36	10	6	-77 (N/A)	-77 (N/A)
3	Vivian Bond	3	2	8	1	16	3	-77 (N/A)
4	Bob Bond	3	1	3	-77 (N/A)	15	-77 (N/A)	-77 (N/A)
a) Relationship to HH Head		b) Main source of livelihood (ACTIVITY) – primary, secondary, tertiary						
1 = Head		1 = Crop farming (incl. food & cash crops; feed & fodder; gardening / vegetable and fruit production)						
2 = Spouse (if household head male)		2 = Livestock keeping (incl. cattle, sheep & goat and renting out livestock for draft power / breeding)						
3 = Child		3 = Poultry keeping						
4 = Sibling		4 = Livestock and livestock product trading						
5 = Parent		5 = Trading in non-livestock agricultural products (e.g. groundnuts)						
6 = Grandchild		6 = Formal salaried employment (incl. civil servant, private sector employee, non-farming labourer, domestic work in external house)						
7 = Other relative		7 = Livestock herder						
8 = Non-relative (including employees who live in house)		8 = Self-employed business - trade (non-ag., e.g. small shop owner, includes natural products - charcoal, firewood, water, roadside grass etc.)						
Other (specify)		9 = Self-employed business – services (non-ag., e.g. carpentry, barber, healer, dress-making, etc.)						
		10 = Farm labourer on other farm						
		11 = Fisherman						
		12 = Old/Retired						
		13 = Domestic work in own home						
		14 = Not working/unemployed						
		15 = Infant \ child < 6 years						
		16 = Student/ pupil						
		17 = Disabled						
		Other (specify)						
		-77 = Not applicable						

J. Group Membership & access to credit

J1 Is any household member a member of a group? [] 0=No; 1=Yes. If yes, how many groups? []

- ◆ First list all the groups that members (one or more) of the household are part of – 1 row per group
- ◆ A group usually has some form of 'registration' or formal list of members
- ◆ Note that the list does NOT include the religious group / membership of the family – do not refer to religious affiliation tribe / caste etc.
- ◆ If a group is a cooperative, choose the type as the main focus, but if it performs both production and marketing, use the combination (code 7 or 8) that apply
- ◆ Annual membership fee is the yearly subscription fees as a member (if paid monthly, it should equal monthly fee*12)

- ◆ How many women or men in the household belong to this group refers to the number with membership in the particular group, enter 0 if no men or women are members. For example if only 1 man is a member of a group but no woman is a member, you will enter 1 for men column and 0 on women's column.

Name of group	Type of group (code a)	What function(s) of the group does the member use regularly (>=once/month) (code b – up to 3)	How many men in the household belong to this group?	How many women in the household belong to this group?	What is the annual fee per person (None=0)
Bure Cooperative	4	2, 3, 1	1	0	1200
ACSI	2	4,1,2	0	1	0
a) Type of group		b) Main functions used			
1 = social/ welfare & community development groups 2 = savings and credit groups 3 = agricultural producer groups 4 = livestock (incl. chicken) producer groups 5 = agricultural marketing groups 6 = livestock (incl. chicken) marketing groups, 7 = 4 + 6, 8 = 3 + 5, Other (specify)		0=None used regularly 1= provides access to market for livestock & livestock products (incl. chicken) 2= provides access to inputs and services for livestock production (incl. chicken) 3= provides training / advisory for livestock production (incl. chicken) 4= provides access to market for crops		5= provides access to inputs and services for crop production 6= provides training / advisory for crop production 7= provides ways to save money and get credit 8= social functions and networking Other (specify)	

J3 Complete the table below relating to Access to Credit:

- ◆ This is intended to assess their ability to access and use credit for investment
- ◆ Ask whether they have used any of the lending sources and fill yes or no, if yes, select all they have used. If no, select 'NO LENDING' only and the subsequent questions are skipped.
- ◆ Example of informal lender - a local lender in the village who is not 'registered'; Micro-finance organisations are formal lenders.

Accessible Lending Sources	Has any member of your household taken any loans (cash or in-kind) from this source in the <u>past 12 months</u> ? (0 = no, 1 = yes, -99 = don't know)	If yes, what type of loan (code a)	Who made the decision to borrow? (code b)	Who makes the decision about what to do with the money/ item borrowed from this source? (code b)	What was the intended use for the loan? (code c)
NGO	0			Skipped automatically	
Informal lender	0			Skipped automatically	
Formal lender (bank / financial institution)	-99			Skipped automatically	
Friends / Relatives	1	1	5	5	5
Savings / credit groups	1	1	1	5	2
Other (specify) []					
NO LENDING	0				
a) Loan Type	1=Cash, 2 = In-kind, 3 = Cash & in-kind				
b) Decision	1=Household head, 2=Spouse (if household head male), 3=Other household member – male, 4=Other household member – female, 5=Joint (household head & spouse), Other (specify)				

c) Use of loan	1 = Farm inputs / equipment, 2 = Livestock purchase & management (incl. chicken), 3 = Business, 4 = School fees, 5 = Household items, 6 = Purchase land / build house, Other (specify)
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K. Food security and consumption

K3 Dietary Diversity and Food Consumption

The table on the following page is completed to assess food consumption for individuals in the household: Adult male (usually the head of household if present), Adult female (usually the spouse or head of household if present) and an Index child (less than 5 years).

Note: The female adult should answer for the index child. If two or more children qualify to be indexed please select the oldest child who is closest to but less than 5 years. If there is no child under or equal 5 years DO NOT FILL IN THE INDEX CHILD SECTION.

- ◆ This part is meant to understand nutritional quality and diversity of food in the households;
- ◆ HOW OBTAINED REFERS TO THE LAST 7 DAYS ONLY
- ◆ If there is no child under 5 years, skip the part for index child;
- ◆ The examples are not exhaustive and are meant to enable the farmer and interviewer understand; and
- ◆ The number of times consumed in the last 7 days refers to the number of times consumed the types of foods in a group. For example, a meal consumed once in a week composed of maize and beans will be made of consuming cereals once and legumes once.

Is there an adult male present to complete table? [] (0 = No, 1 = Yes)

Is there an adult female (between ages of 18 and 45) present to complete table? [] (0 = No, 1 = Yes)

Is there a child < 5 yrs in the household? [] (0 = No, 1 = Yes)

- ◆ If any of the above are No then the relevant columns in the below table will not appear.

Food group	Examples; always also consider other locally available food items	How was item obtained (code a)	Adult Male		Adult Female		Index child (< 5yr)	
			How many times consumed in last 7days?	Consumed in last 24hrs? (0=No; 1=Yes)	How many times consumed in last 7days?	Consumed in last 24hrs? (0=No; 1=Yes)	How many times consumed in last 7days?	Consumed in last 24hrs? (0=No; 1=Yes)
Cereal staples or food from cereals	<i>Millet, sorghum, maize, rice, wheat, other grains, bread, noodles, biscuits, teff, barley</i>	1	3	1	3	1	0	0
Vit A rich tubers & vegetables,	<i>orange veg: pumpkin, carrot, orange sweet potato</i>	0	Skipped automatically					
White tubers & roots	<i>Potatoes, yams & sweet potato, cassava, cocoyam, false banana or foods made from these</i>	2	2	1	2	1	2	1
Dark green leafy vegetables	<i>okra, amaranthus / spinach, rossell, leaf – water, bitter, baobab, ukazi, scentlf, sukuma wiki</i>	1	10	1	10	1	10	1
Other vegetables	<i>Tomato, onion, eggplant, cabbage, capsicum/pepper, mushroom, cucumber</i>	0	Skipped automatically					
Vit A rich fruits	<i>orange fruits: ripe mango, apricot, peach</i>	1	0	0	3	0	5	1
Other fruit	<i>Apple, banana, plantain, pineapple, avocado</i>	1	4	0	4	1	8	1
Organ meat (iron rich)	<i>Liver, kidney, heart, other organ meat (incl. intestine)</i>	2	1	0	1	0	1	0
Flesh meat	<i>Beef, pork, lamb, goat, rabbit, wild game, chicken, other poultry</i>	0	Skipped automatically					
Eggs	<i>Eggs</i>	1	4	1	4	1	7	1
Fish	<i>Fresh or dried fish or shellfish</i>	0	Skipped automatically					
Milk & milk prod.	<i>Milk, cheese, yoghurt, other milk prod</i>	2	2	0	2	0	7	1
Legumes, nuts, seeds	<i>Beans, peas (chickpeas), lentils, nuts</i>	0	Skipped automatically					
Oils and fats	<i>ANY oil, ANY butter</i>	2	14	1	14	1	14	1
Sweets	<i>Sweets, sugar, honey</i>	3	2	0	2	0	4	1
Spices, beverages, condiments	<i>Any other foods, coffee, tea incl. milk in tea</i>	2	21	1	21	1	21	1
a) Item source:		0 = Not obtained, 1=Mainly self-produced, 2=Mainly purchased, 3=Mainly Gift, Other (specify)						

	Adult Male	Adult Female	Index Child
Did you eat anything (meal / snack) outside of the home yesterday?	0=No; 1=Yes	0=No; 1=Yes	0=No; 1=Yes

Detailed Consumption of poultry products

- ◆ Fill in the number of birds and eggs **consumed** in the household in the last **3 months**
- ◆ This captures only chicken or eggs consumed in the household in the last 3 months
- ◆ First the ODK will ask to select all species consumed - if did not consume any birds or eggs in the last 3 months for a species the row will be skipped.
- ◆ If a category of household member does not consume a product, use code Other and specify e.g. “all members except grandparents”

Species	Total number of birds eaten in the household (<i>last 3 months</i>)				Total number of eggs eaten in the household (<i>last 3 months</i>)			
	Produced (A)	Purchased (B)	Total (A+B)	Who consumed (code)	Produced (C)	Purchased (D)	Total (C+D)	Who consumed (code)
Chicken	3	0	3	8	48	0	48	8
Guinea fowl	0	2	2	1	0	0	0	-77 (N/A)
Duck	Skipped as none consumed							
Turkey	Skipped as none consumed							
Other, specify []								
None	Skipped as none consumed							
Who consumed	1= adult males only, 2= adult females only, 3= Male children only, 4=Female children only, 5=Workers only, 6=All adults, 7=All children, 8=All household members, 9=All household members & workers, Other (specify)							

K1 Months of Adequate Household Food Provisioning (MAHFP)

In the last 12 months, did you have enough food to eat during all the months?	[0] 0=No, 1=yes, -88 = refuse answer
If no, which were the months in the last 12 months that you did have enough food to meet your family’s needs?	Jan [1] Feb [1] March [1] April [1] May [1] June [0] July [0] Aug [1] Sept [1] Oct [1] Nov [0] Dec [0]
WORKING BACKWARDS FROM THE CURRENT MONTH, PLACE A “1” if HAD ENOUGH AND “0” IF DID <u>NOT</u> HAVE ENOUGH.	

K2 Household Hunger Scale

Question	Response	Code
Q1. In the past [4 weeks/30 days], was there ever no food to eat of any kind in your house because of lack of resources to get food?	0=No (Skip to Q2), 1=Yes -88 = No answer	[0]
If yes, how often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)	[-77]
Q2. In the past [4 weeks/30 days], did you or any household member go to sleep at night hungry because there was not enough food?	0=No (Skip to Q3) 1=Yes -88 = No answer	[1]
If yes, how often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)	[1]
Q3. In the past [4 weeks/30 days], did you or any household member go a whole day and night without eating anything at all because there was not enough food?	0=No (Skip to end) 1=Yes -88 = No answer	[0]
If yes, How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)	[-77]

C. Assets

Land

- ◆ For each parcel of land owned or used by the household complete all the columns, each row for each parcel
- ◆ For landless households, they will only have 1 parcel where the residence / buildings are located
- ◆ A parcel is one contiguous (joined together) area of land. One parcel can contain more than one plot.
- ◆ In Nigeria, the local definition of a plot = 450 square meters.

C1 Parcel* ID	C2 Parcel Description / Name	C3 Size of this parcel	C4 Unit of land (code a)	C5 Tenure system (code b)	C6 If parcel is <u>owned</u> , who owns (code c)
1	Next to house	5	1	2	1
2	By the river	10	1	4	-77
a) Unit of Land		b) Tenure system		c) If owned, name on title/certificate:	
1= acre 2= ha 3= sqm2 Other (specify conversion in metric system)		1= Title deed 2= Owned but not titled 3= public land 4= Rented-in/ sharecropped 5=Rented out 6=Communal Other (specify)		1= household head 2= spouse (if household head male) 3= other household male 4=other household female 5=joint (household head & spouse) Other (specify)	

Household and agricultural equipment

- ◆ This should cover the most important assets owned by the household which include the type of asset, number of asset owned number owned by males or females or jointly by the household.
- ◆ Where plausible, probe the respondent for other valuable assets not on the list such as computer, digital camera, irrigation pump etc.
- ◆ Relative/average age of assets is asked to be able to factor in the effects of depreciation of assets when assessing the value during data analysis
- ◆ First select all the assets owned and then ODK will request number owned and who owned for all these assets (rows)

C7 Name of Asset	Relative / average age (number in this age group)*									C8 Total Number owned
	C9 Owned by men			C10 Owned by women			C11 Owned jointly			
	< 3 yrs	3-7 yrs	> 7 yrs	< 3 yrs	3-7 yrs	> 7 yrs	< 3 yrs	3-7 yrs	> 7 yrs	
Domestic										
Cooker (electric or gas)										
Stove (any type)										
Refrigerator										
Radio	1	0	0	0	0	0	0	0	0	1
Television										
DVD Player										
Mobile phone	1	0	0	0	1	0	0	0	0	2
Sofa set										
Sewing Machine	0	0	0	1	0	0	0	0	0	1
Mosquito nets	0	0	0	0	0	0	0	1	0	1
Transport										
Car/Truck										
Motorcycle										
Bicycle										
Cart (animal drawn)										

C7 Name of Asset	Relative / average age (number in this age group)*									C8 Total Number owned
	C9 Owned by men			C10 Owned by women			C11 Owned jointly			
	< 3 yrs	3-7 yrs	> 7 yrs	< 3 yrs	3-7 yrs	> 7 yrs	< 3 yrs	3-7 yrs	> 7 yrs	
Farm										
Hoes										
Machete (panga)	0	0	0	0	0	0	2	3	1	6
Spades/shovel										
Ploughs										
Sprayer pump										
Water pump										
Other (specify - e.g. jewellery)										
Other										

* For countries where ownership of assets is either 'only by men' or 'all jointly' then delete the irrelevant columns

Housing

- ◆ This table relates to the type of housing in the compound – most of questions can be answered from OBSERVATION ONLY
- ◆ Note that if the compound has more than 1 housing area for HUMANS then take the ownership and materials related to the MAIN HOUSE but including the number of rooms from ALL HOUSING FOR HUMANS.
- ◆ For Electricity respond YES if the house has supply to the house (either to mains, generator, solar etc.) – note this doesn't include the use of battery or oil lamps.

C12 Home ownership (code a)	C13 Number of rooms	C14 Floor material (code b)	C15 Wall material (code c)	C16 Roofing material (code d)	C17 Main water supply for domestic use (code e)	C18 Electricity supply to the house [0=No,1=Yes]
1	8	1	1	2	3	0
a) Home ownership		b) Floor material	c) Wall material	d) Roofing material	e) Water supply	
1= Owned 2=Rented 3=Borrowed -88 = Refuse answer Other (specify)		1= earth 2= cement 3= tiles Other (specify)	1= earth/ mud 2= wood/ bamboo/ iron sheets 3= cement/ bricks Other (specify)	1= grass 2= iron sheets/ asbestos 3= tiles Other (specify)	1=Wells, 2=hand pump, 3=Stream, 4=Canal, 5=Pond, 6=borehole, Other (specify)	

Livestock ownership

- ◆ C19 Does your household have any livestock (0 = No, 1 = Yes)? If response is yes, fill in C20.
- ◆ If a household does not own any livestock except chicken, select NO, and the livestock ownership section is skipped.
- ◆ If household owns livestock, select the types of livestock owned (note this does not include kept – i.e. looked after for someone else, animals which are not owned) by male, female or jointly owned by household members.
- ◆ Move to next section and fill the number owned by household. The total owned is a cross-check column –the number will be auto-calculated in ODK, check that is equals the total number of animals owned by the household (for each species x breed).
- ◆ The term 'cross' in this table refers to animals which are a Local breed crossed with (x) an Exotic breed. The term 'exotic' refers to animals which are pure bred exotic breeds.

Livestock Species		Number owned by male	Number owned by female	Number owned jointly	Number owned by the household (total)
Cattle	Local	0	0	5	5
	Cross /exotic				
Goats	Local				
	Cross/ exotic	0	3	0	3
Sheep	Local				
	Cross/ exotic				
Other (e.g. Pig)	Local				
	Cross/ exotic				
Other poultry - ducks		0	4	0	4
Other poultry – guinea fowl					
Other poultry - turkey					
Donkeys/Horses					
Rabbits					
Other, specify []*					

L. Other Sources of income

- ◆ Income sources and estimated amount, should include income from ALL household members over the past 12 MONTHS (1 YEAR). Enter UNKNOWN (-99) in income amount column if farmer has income from source but cannot estimate the value.
- ◆ Sale of chicken & chicken products are **not** included here because they have been asked earlier in the survey
- ◆ Rank of source is done for all the types of income earned by the household (even if a figure was unknown) - *most important source = rank 1*. If two sources are equally important you can use the same rank (called ‘tied ranks’) and then skip the next rank. See example below
- ◆ Who earns an income stream may be different from who controls the income – e.g. a daughter earns money from a knitting business but she gives her earnings to her mother who then decides how to spend the money.
- ◆ Note that in the ODK program the rank of source will be asked on the form for that Income Source only – therefore when asking the farmer the rank of the source the enumerator will have to refer to all the sources the farmer answer yes. For example, if farmer indicates all the sources in the example below then when answering the question about ‘sale of livestock products’ the enumerator needs to say – “Out of the 5 income sources you indicated how important is sale of livestock products compared to the others, the most important, 2nd, 3rd, 4th or least important?”.
- ◆ It is NOT possible to guess the rank from the income as some incomes may be missing (-99 / -88).

Income Source	Did anyone in the household earn income from source in last 12 months? (0 = no, 1 = yes)	Total HH income in past 12 months from this source	Rank of Source ⁺	Who earns income from this source? (code a)	Who controls the income from this source? (code a)
Sale of livestock (not including chicken)	0				
Sale of livestock products (not including chicken)	1	20,000	2	5	5
Sale of livestock services (not including chicken)	0				
Sale of agricultural products (crops/ vegetable / fruit)	1	-99 (?)	3	5	5
Trading in livestock and livestock products (not own produce)	0				
Trading in agricultural products (excluding livestock!) (not own produce)	0				
Formal salaried employment (non-farming, e.g. civil servant, private sector employee, labourer, domestic work in other home)	1	50,000	1	3	3
Business – Trade or services (non-agricultural)	0				
Working on other farms (including herding)	1	5,000	5	3	1
Sale of products of natural resources (forest and sea/river products)	0				
Pensions	0				
Rent out land / sharecropping (cash value of share crop or rent)	0				
Remittances (Other will say – ‘son working away’)	1	10,000	3	Other	5
Other 1: (specify) []					
Other 2: (specify) []					
Other 3: (specify) []					
Other 4: (specify) []					
a). WHO CONTROLS THE MONEY : 1= household head, 2= spouse (if household head male), 3= other household male, 4=other household female, 5=joint (household head & spouse), Other (specify)					

L2 What is your APPROXIMATE RANGE OF TOTAL monthly household income? [4]

AVERAGE MONTHLY HOUSEHOLD INCOME		
1= < US\$60/month (< 12,000 Naira/month; <120,000 Tsh/month; <1,200 Birr/month)	3= between US\$120 and US\$240/month (24,000 – 48,000 Naira/month; 240,000 – 480,000 Tsh/month; 2,400 – 4,800 Birr/month)	5= above US\$480/month (> 96,000 Naira/month; > 960,000 Tsh/month; > 9,600 Birr/month)
2= between US\$60 and US\$120 (12,000 – 24,000 Naira/month; 120,000 – 240,000 Tsh/month; 1,200 – 2,400 Birr/month)	4= between US\$240 and US\$480/month (48,000 – 96,000 Naira/month; 480,000 – 960,000 Tsh/month; 4,800 – 9,600 Birr/month)	

L3 Overall, what proportion of your total income do you estimate comes from chickens (in the past 1 year)?

0-No income [] 1-Less than a quarter [] 2-Quarter [] 3-Half [] 4-Three quarters [] 5-More than three quarters []

Glossary of technical terms in English

Terms	Explanation
Household	A household is a group of individuals, usually related, that conduct activities (farming and non-farming) together and pool their resources from their activities. They usually cook and eat together.
Species	A classification of different animal types. For this project important poultry species are Chicken (<i>Gallus domesticus</i>), Duck (<i>Anas platyrhynchos</i>), turkey, guinea fowl
Parcel (land)	One contiguous plot of land. One parcel can contain more than one plot.
Animal breeding	A branch of animal science that uses genotype and/or phenotype to improve the traits of interest in the animals.
Bran	Known as miller's bran, is the hard outer layers of cereal grain. Often produced as a by-product of milling in the production of refined grains.
Chicken breed	A population of chickens with <u>definable and identifiable external characteristics</u> that enable it to be separated by visual appraisal from other populations within the same species, or a group for which geographical and/or cultural separation from phenotypically similar groups has led to acceptance of its separate identity (FAO, 2001).
Age of sexual maturity	It is the age when male and female animals can reproduce (i.e. females start laying eggs; males start mating / producing sperm)
Household head	For this study, in households with a man as the senior most member in the household, this is assumed to be the husband, but in a household where a woman is the senior most, this is assumed to be the woman (e.g. if a woman is widowed, divorced or separated). A member of a household is a person resident in the house/compound at least three months in a year.
Spouse	For this study, this is assumed to be the wife of the male household head (in the project countries if the household head is female this implies there is no equivalent adult male)
Tenure system	Mode of ownership of land e.g. communal, private ownership with title deed, government owned etc.
Local / indigenous breed	Breeds which have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country (s) (FAO, 2001). This also includes breeds which originated within the country.
Cross breed	Offspring produced by mating parents of two different breeds; in this survey it mostly refers to a mating of a local / indigenous parent with an exotic parent.
Exotic breed	Breeds which are maintained in a different area from the one they were developed and including breeds that are not locally adapted. Exotic breeds comprise both recently Introduced breeds (whose importation was within the last 5 generations) and Continually Imported Breeds (whose local gene pool is regularly replenished from one or more sources outside the country) (FAO, 2001).
Cock	Adult male chicken
Hen	Adult female chicken
Grower	Young (2 – 6 months) chickens (both male and female)
Chick	Chicken less than 2 months of age (both male and female)
Marketing channel	For this study, it is the way products and services initially move from the producer to the consumer, e.g. the way eggs are transferred from a farmer to a trader
Transport mode	Means of moving goods
Productivity	Quantity and quality of production of a single chicken during a specified period of time (day, month, laying cycle, year, lifetime...)
Eggs per clutch	Mean number of eggs that are laid by a hen in a single laying cycle before becoming broody
Clutch length	Average number of days per clutch - Mean number of days a layer needs to complete one laying cycle

Terms	Explanation
Hatches per year	Number of times the hen ceases laying of eggs and sits for natural incubation
Eggs per brood	Mean number of eggs set for a hen per one natural incubation to hatch them
Chicks per brood surviving to separation from hens	Number of chicks staying alive till weaning age (about 2 months of age) to start scavenging on their own
Broody hen	A hen that through hormonal changes has undergone marked changes in behaviour and physiology, including stopping laying eggs and development of the maternal instincts. A hen that wants to sit on eggs to hatch them and to brood chicks.
Brood	A group/family of chicks hatched at the same time
Trait	A distinguishing quality or characteristic of the chicken e.g., body weight, comb shape, feather colour, eye colour
Selection	a process in the breeding of chickens by which the farmer chooses to keep in the flock only those individuals having certain desirable characteristics to serve as parents of the next generation
Culling	The elimination of chicken from a flock based on certain criteria (e.g. performance, disease, etc.)
Supplementary feed	Feed given to chicken, any feed not obtained from scavenging
Plot	For Nigeria, a plot of land is 450 square meters
Head edema	Brain/head swelling of chicken
Newcastle Disease	An acute infectious viral fever affecting birds, characterized by nasal discharge and bloody diarrhoea
Infectious Bursal Disease (Gumboro)	This is a viral disease affecting young chicken. Infected birds are depressed, have ruffled feathers, droopy appearance and may be seen pecking at the vent.
Coccidiosis	A parasitic protozoal infestation, usually occurring in damp and unclean housing conditions. It is characterized by droopiness, loss of appetite, ruffled, unthrifty feathers, huddling or blood or mucus in the feces and diarrhea.
Management system	The husbandry of chicken including the practices of feeding, housing, breeding, marketing and health
Chicken inventory	A complete listing of all numbers of chicken in a flock by age, sex and breed
Foundation stock	The chicken that a farmer started rearing e.g. usually obtained by purchase, gift, inheritance etc.
Flock	A group of chicken feeding, resting or travelling together
Cock fighting	A recreational activity involving fighting between two cock chickens
Preference	Liking or choice
Chicken entries	Chicken of any age and breed that are newly introduced into a household by any means (purchase, hatching, gift, etc.)
Chicken exits	Chicken of any age and breed leaving a household by any means (slaughter, death, sale, gift, etc.)
Infectious Bronchitis	This is a viral disease affecting chickens of all ages. It is characterized by depression, coughing, nasal discharge, soft shelled eggs
Pullorum (Salmonella)	Disease caused by one of the two poultry-adapted strains of Salmonella bacteria, Salmonella Pullorum, usually causing mortality in birds up to 3 weeks of age. It is characterized by depression, ruffled feathers, closed eyes, loud chirping & white diarrhoea.
In-kind payment	Payment made through transfer of 'valuables' instead of cash (e.g. food etc.)
Mortality	Refers to death as a result of disease, predation, accident or other factors
Rearing	Raising of chickens
Remittances	The sending of money, checks, etc., to a recipient at a distance
Retailers	The person who sells goods / commodities directly to consumers
Traders	A person who engages in trade of chickens and/or chicken products; dealer, merchant e.g. Dhodhi (Gawala) in Nigeria. They represent a stage of product movement between the producer and the consumer (or end-user).