Farmer Survey (Farm Input Promotions-Africa Bean Demos Evaluation)

INSTRUMENT FOR ENDLINE SURVEY, 2018 (Version: September 16, 2018)

SECTION 1: FARMER CONTACT INFORMATION

1.	District name	**DISTRICT**	
2.	District code	**district_id**	
3.	Ward name	**WARD**	
4.	Ward code	**ward_id**	
5.	Village name	**VILLAGE**	
6.	Village code	**village_id**	
7.	Household serial number	**HH**	
8.	Name of the household head (from village chairperson's list)	**headname**	
9.	Name of the respondent (if different from head) ***(Enumerator:*** A respondent must be the head of the HH or an adult HH member who is a decision maker and is involved in growing beans. Ensure that the respondent is 18 years of age or older.***)***	**respname**	
18.	Response status ***1=Available/Continue*** ***2=Refusal*** ***3=Non-contact***	**response**	
11.	Respondent's gender ***1=male 2=female***	**gender**	
12.	What is the best mobile phone number at which to reach the respondent? ***(Enter "-9" if none → go to married)***	**phonenumber**	
13.	Does this phone number belong to the respondent him/herself? ***1=Yes 2=No***	**ownnumber**	
14.	Is the respondent married? ***1=Yes 2=No→go to growbeans***	**married**	
15.	What is the respondent's spouse's name?	**spname**	
16.	What is the best mobile number at which to reach the respondent's spouse? ***(Enter "-9" if none)***	**spphonenum**	
10.	Did you or any member of your household grow beans in the following season? [Select all that apply] 1=Major season this year (March-July 2018) 2= Minor season this year (Dec 2017-March 2018) 5= None of the seasons	**growbeans**	

19.	ASSIGNMENT RECORD					Day	Month	Year
	a. Name of Enumerator		**ENCODE**		Date completed			2018
			START		Start time			
			END		End time			
						Day	Month	Year
	b. Name of Supervisor		**SPCODE**		Date checked			2018

SECTION 2: VBAA presence and activities

2.1 We'd like to learn if there was a village-based agricultural advisor supported by Farm Input Promotions-Africa (FIPS VBAA) in your village, the activities the FIPS VBAA carried out, and your interactions with that VBAA.

2.1.1b Have you ever met [NAME OF VBAA AT TIME OF 2017 BEAN MOTHER/MOTHER+BABY DEMOS]? ***1=Yes, 2=No → go to vbaacov***	**vbaacovbyname**	
2.1.1.c When did you first meet [NAME OF VBAA AT TIME OF 2017 BEAN MOTHER/MOTHER+BABY DEMOS]? (enter year and month [drop down list], ***-9 = I don't know)***	**vbaayearmet, vbaamonthmet**	
2.1.1 To the best of your knowledge, was there a FIPS supported village-based agricultural advisor (VBAA) that covered your village this year (the 2017/18 agricultural year)? ***1=Yes, 2=No -9=I don't know → go to* othervbaacov17**	**vbaacov**	
2.1.1a [if vbaacovbyname = yes] Was the village-based agricultural advisor named [NAME OF VBAA AT TIME OF 2017 BEAN MOTHER/MOTHER+BABY DEMOS]? ***1=Yes → go to* othervbaacov17** ***2=No*** ***-9=I don't know***	**vbaanameconfirm**	
2.1.2 What was the name of the VBAA? ***(-9 = I don't know)***	**vbaaname**	
2.1.1d Was there any other type of non-government agricultural advisor that covered your village this year (2017/18)? ***1=Yes, 2=No -9=I don't know → go to othervbaacov16***	**othervbaacov17**	
2.1.1e If Yes, what was the name of that advisor? ***(-9 = I don't know)***	**othervbaacov17name**	
2.1.1f Was there any other type of non-government agricultural advisor that covered your village the year before (2016/17)? ***1=Yes, 2=No -9=I don't know → go to vbaademo***	**othervbaacov16**	
2.1.1g If Yes, what was the name of that advisor? ***(-9 = I don't know)***	**othervbaacov16name**	
2.1.3 To the best of your knowledge, did your VBAA or any other organization operate a bean demonstration plot or bean "mother demo" this year (2017/18)? ***1=Yes, 2=No -9=I don't know → go to* vbaatpack**	**vbaademo**	
2.1.3b Who operated this mother demo? **1=VBAA/FIPS 2=Other organization 3=Both -9=I don't know**	**demoorg**	
2.1.4 What bean varieties were planted at the mother demo? Tick all that apply. ☐ Njano Uyole ☐ Uyole 96 ☐ Wanja ☐ Calima Uyole ☐ Uyole 03 ☐ Local variety ☐ Other (specify: _____) ☐ I don't know	**demovar**	
2.1.5 Was some of the bean seed planted at the mother demo treated with Apron Star? ***1=Yes, 2=No, -9=I don't know***	**demoapron**	
2.1.6 Was fertilizer applied to some of the bean plants at the mother demo? ***1=Yes, 2=No, -9=I don't know***	**demofert**	
2.1.7 To the best of your knowledge, did the organizer invite members of the community to attend the planting of the bean mother demo? ***1=Yes, 2=No -9=I don't know → go to demovisits***	**demoinvite**	
2.1.8 Other than yourself, did any members of your household attend the bean mother demo planting this year? ***1=Yes, 2=No***	**demohh**	
2.1.9 Did you yourself attend the bean mother demo planting this year? ***1=Yes, 2=No → go to* demovisits**	**demoattend**	

2.1.10 Did you help to plant the bean mother demo this year? ***1=Yes, 2=No***	**demoplant**	
2.1.11 Did you help apply Apron Star to any of the bean seed for the mother demo this year? ***1=Yes, 2=No***	**demoapron**	
2.1.12 At this year's bean mother demo planting, did the organizer do any of the following? Tick all that apply ☐ Speak about the characteristics of the improved bean varieties ☐ Provide written information about the characteristics of the improved bean varieties ☐ Demonstrate how to plant the improved bean varieties ☐ Ask the participants about their previous experiences with the improved bean varieties ☐ Speak about the benefits of using Apron Star on beans ☐ Provide written information about the benefits of using Apron Star on beans ☐ Speak about how to apply Apron Star to beans ☐ Provide written information about how to apply Apron Star to beans ☐ Demonstrate how to apply Apron Star to beans ☐ Ask the participants about their previous experiences with Apron Star on beans ☐ Ask the participants about their previous experiences using other seed treatments, insecticides, or fungicides on beans	**demoact**	
2.1.13 Not counting the bean mother demo planting day, how many other times did you visit the bean mother demo this year? ***(Number of times. Enter "0" if none.)***	**demovisits**	
2.1.14 How many of your friends/relatives/neighbors/fellow farmers that you talk to about bean farming attended the bean mother demo planting this year? ***(Number; Enter "-9" for "I don't know")***	**demofrnd**	
2.1.15 To the best of your knowledge, did your VBAA or any other organization distribute free bean seed to people in your village this year (2017/18)? ***1=Yes, 2=No*** → **tpackprevyr**	**vbaatpack**	
2.1.16 Did you or any member of your household receive some of the free bean seed? ***1=Yes, 2=No*** → ***go to*** **tpackfrnd**	**rectpack**	

Table 2.1.17 Please describe the free bean seed that your household received this year (2017/18). We'd like to know about the quantities, varieties, if the seed was treated with Apron Star or not, and from whom did you receive the free bean seed.

Key variables: village_id HH vcode *Reference period: This Agricultural Year (2017/18)*

Variety name		Quantity (grams) of bean seed of variety ___ NOT treated with Apron Star *(Enter "0" if none)*	Quantity (grams) of bean seed of variety ___TREATED with Apron Star *(Enter "0" if none)*	From whom did you receive the free bean seed? 1=VBAA/FIPS 2=Other organization 3=Both
	vcode	**bdseednoap**	**bdseedap**	**bdseedrc**
Njano Uyole	1			
Uyole 96	2			
Wanja	3			
Calima Uyole	4			
Uyole 03	5			
Local variety	6			
Other (specify)_____	888			

2.1.18 Did your household receive the free bean seed at the demo plot planting or at another time? ***1=At the demo plot planting → go to* tpackuse*, 2=At another time***	**trectpack**	
2.1.19 When the free bean seed was distributed, did the person who gave you the free bean seed do any of the following? Tick all that apply. ☐ Speak about the characteristics of the improved bean varieties ☐ Provide written information about the characteristics of the improved bean varieties ☐ Demonstrate how to plant the improved bean varieties ☐ Ask you about your previous experiences with the improved bean varieties ☐ Speak about the benefits of using Apron Star on beans ☐ Provide written information about the benefits of using Apron Star on beans ☐ Speak about how to apply Apron Star to beans ☐ Provide written information about how to apply Apron Star to beans ☐ Demonstrate how to apply Apron Star to beans ☐ Ask you about your previous experiences with Apron Star on beans ☐ Ask you about your previous experiences using other seed treatments, insecticides, or fungicides on beans	**tpackact**	
2.1.19b What did you do with this free bean seed that you received this year? ☐ Planted in my fields ☐ Gave to another farmer for free ☐ Sold it to someone else ☐ Still have it; not used it so far ☐ Discarded it ☐ Other (specify)	**tpackuse**	
2.1.20 How many of your friends/relatives/neighbors/fellow farmers that you talk to about bean farming received some of the free bean seed that was distributed this year? ***(Number; Enter "-9" for "I don't know")***	**tpackfrnd**	
2.1.21. To the best of your knowledge, did your VBAA or any other organization distribute free bean seed to people in your village in previous years? ***1=Yes*, *2=No → go to Table 2.4***	**tpackprevyr**	
2.1.22. Did you or any member of your household receive some of the free bean seed in previous years? ***1=Yes*, *2=No → go to Table 2.4***	**rectpackprevyr**	
2.1.23. Was that free bean seed distributed by your VBAA or someone else or by both? 1=by VBAA 2=By someone else 3=both	**tpacksrcprevyr**	
2.1.24 What did you do with this free bean seed that you received in previous years? ☐ Planted in on my fields ☐ Gave to another farmer for free ☐ Sold it to someone else ☐ Still have it; not used it so far ☐ Discarded it ☐ Other (specify)	**tpackuseprevyr**	
2.1.25 How many of your friends/relatives/neighbors/fellow farmers that you talk to about bean farming received some of the free bean seed that was distributed in previous years? ***(Number; Enter "-9" for "I don't know")***	**tpackfrndprevyr**	

2.4 We would like to learn about your bean production and inputs during the Major season (March-July 2018)

Questions	Variable Name	Response
2.4.1 On how many plots did your household grow beans during the MAJOR Season (March-July 2018) *Note: If response is 0 plots, then skip to 2.5*	**mjrplots18**	

Table 2.4.2 For each of the plots mentioned in 2.4.1, please tell me the following about bean production:

Key variables: village_id HH PLOT *Reference period:* Major season (March-July 2018) in *2017/18 agricultural year*

Plot Number	What is the total area of this plot? (acres)		Were the beans on this plot intercropped with other crops? ***1=Yes*** ***2=No >MVARIETY***	What crops were intercropped with beans on this plot? **1=Cereal crops** **2=Vegetables** **3=Fruits** **4=Roots and tuber crops** **5=Other**	What was the main bean variety planted on this plot during the Major season (March-July 2018)? ***See codes below.***	What other bean varieties, if any, were planted on this plot during the Major season (March-July 2018)? Please list all varieties. ***See codes below. Enter "99" if no other varieties were planted.***	Was the main variety a local/traditional variety or an improved variety? ***1=local/traditional*** ***2=Improved*** ***-9= Don't know***	What color/market class was the main variety planted? 1=Black 2=Brown 3=Cream 4=Khaki 5=Mixed 6=Orange 7=Purple 8=Red 9=Red mottled 10=Sugar Type 11=White 12=Yellow	What size seed was the main variety planted? 1=Small 2=Medium 3=Large	[If INTCROP = 1] What was the total area planted to beans on this plot? (acres) *Programmer: The area should be equal to or less than P01A*		What was the total quantity of bean seed planted to this plot? (kilograms)		What was the main source of seed for this plot? 1=Saved from own harvest ***→go to P06*** 2=purchased as grain from others/market ***→answer P04 then skip to P07A*** 3=purchased as seed from others/market 4=Given by NGO/Govt program 5=FIPS/VBAA 6=Given by friend/neighbor/relative/ fellow farmer 888= Other (specify)	If purchase, what price per kg was paid for the bean seed on this plot? (Tsh/kg)	What type of bean seed was it? 0=Basic seed from a research station 1= Certified 2= Quality declared seed 3= Non-certified but came in a package with labeling 4= Came in no package and no label -9= Don't know	[If PO3!=5] Was any of this seed obtained from a FIPS VBAA? ***1=Yes*** ***2=No***	Was any of this seed treated with Apron Star? ***1=Yes*** ***2=No***
	Area									Area		Quantity						
PLOT	**P01A**		**INTCROP**	**INTCROP_TYPES**	**MVARIETY**	**OVARIETY**	**VARTYPE**	**COLOR**	**SIZE**	**P01C**		**P02A**		**P03**	**P04**	**P05**	**P06**	**Apron**

Bean variety codes						
1=Local	4=Calima Uyole	7=Njano Uyole	10=UYL 84	13=Uyole 90	16=Uyole 98	888=Other (specify:
2=Bilfa 4	5=Kabanima	8=Roba1	11=Uyole 03 (Mwaspenjele)	14=Uyole 94 (Kasukanywele)	17=Uyole 2003	_____)
3=Bilfa-Uyole	6=Kablanket	9=Urafiki	12=Uyole 04 (Maini)	15=Uyole 96 (Msafiri)	18=Wanja	

Table 2.4.2 (continued)

Plot Number	What was the total quantity of beans harvested from this plot? (kilograms)			[If P07A>0] What was the total quantity of beans sold from this plot? (kilograms) [Constraint: Quantity sold <= quantity harvested]			[If P08A>0] What price per kg was received for beans sold? (Tsh/kg)		If you had sold a 20kg bag of shelled beans from this plot to a private trader who came to your village, what price would it have fetched? (Tsh)	How would you rate the suitability of land on this plot for growing beans? 1=highly suitable 2=somewhat suitable 3=not suitable	Which of the following practices were used on this plot in this last Major season? And indicate if this season was the first time your household used this practice.									
	Quantity		Type 1=fresh beans 2=dry beans	Quantity			Price (Tsh/kg)				Cleared land before planting beans 1=Yes 2=No >P21B1	Was this the first time? 1=Yes 2=No	Ploughed deeply 1=Yes 2=No >P21C1	Was this the first time? 1=Yes 2=No	Harrowing 1=Yes 2=No >P21D1	Was this the first time? 1=Yes 2=No	Planted beans on raised beds or ridges 1=Yes 2=No >P21E1	Was this the first time? 1=Yes 2=No	Planted beans with a spacing of 50 cm between rows and 10 cm between plants within a row 1=Yes 2=No >P22	Was this the first time? 1=Yes 2=No
PLOT	**P07A**		**P07C**	**P08A**			**P09A**		**P09B**	**P20**	**P21A1**	**P21A2**	**P21B1**	**P21B2**	**P21C1**	**P21C2**	**P21D1**	**P21D2**	**P21E1**	**P21E2**

Plot Number	What did you grow on this plot' in the minor season (Dec 2017-Feb 2018)? 1=cereal crops 2=vegetables 3=fruits 4=roots and tuber crops 5=other 99=nothing (was fallow)	What did you grow on this plot' in last year's major season March-July 2017? 1=cereal crops 2=vegetables 3=fruits 4=roots and tuber crops 5=other 99=nothing (was fallow)
PLOT	**P22**	**P23**

Table 2.4.3 **For each of the plots mentioned in 2.4.1, please tell me the following about inputs to bean production:**

Key variables: village_id HH PLOT *<u>Reference period</u>:* Major season (March-July 2018) in *2017/18 agricultural year*

Plot Number	Was Apron Star applied to the bean seeds on this plot? 1=yes 2=no		Was inorganic fertilizer applied to this plot? 1=yes 2=no		Was herbicide applied to this plot? 1=yes 2=no		Was insecticide applied to this plot? 1=yes 2=no		Was fungicide applied to this plot? 1=yes 2=no		Was animal manure applied to this plot? 1=yes 2=no		What was the estimated total cost of non-labor inputs on this plot ? (Tsh)	What quantity of family labor was used on this plot?		What was the estimated cost of hired labor on this plot? (Tsh)
														Quantity	Units 1=man days 2=hours	
PLOT	**P10A**		**P11A**		**P12A**		**P13A**		**P14A**		**P15A**		**P16**	**P17A**	**P17B**	**P18**

2.5 We would like to learn about your bean production and inputs during this last Minor season (Dec 2017 – Feb 2018)

Questions	Variable Name	Response
2.5.1 On how many plots did you grow beans during the last Minor season (Dec 2017 to Feb 2018)? *Note: If response is 0 plots, then skip to 2.8*	**mnrplots18**	

Table 2.5.2 For each of the plots mentioned in 2.5.1, please tell me the following about bean production: Key variables: village_id HH PLOT
Reference period: Minor season (Dec. 2017-Feb. 2018) in *2017/18 agricultural year*

[Same as Table 2.4.2 with Major Season dates replaced with Minor Season dates]

Table 2.5.3 For each of the plots mentioned in 2.5.1, please tell me the following about inputs to bean production:

Key variables: village_id HH PLOT *Reference period:* Minor season (Dec. 2017-Feb. 2018) in *2017/18 agricultural year*

[Same as Table 2.4.3 with Major Season dates replaced with Minor Season dates]

2.8 We would like to know about your seed purchasing habits and other aspects of bean farming

Questions	Variable Name	Response
2.8.1 Do you **regularly purchase** or have you **ever purchased** bean **seed** (not grain) for planting? **1= Yes, regularly purchase** **2= Yes, purchase occasionally** **3= No, never purchase 'seed' → grainpur**	**seedpur**	
2.8.2 What is the highest price per kg you have ever paid for bean seed? (Tsh/kg)	**hseedpr**	
2.8.3 In what agricultural year and season did you pay this high price? a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**yrhseedpr** **sehseedpr**	
2.8.4 When was the last time (year and season) you purchased bean seed? a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2012 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**lstseedpur** **selstseedpur**	
2.8.5 What was the price per kg you paid for acquiring this seed last time? (Tsh/kg)	**lstseedpr**	
2.8.6 What was the name of this bean seed variety you acquired last time you paid this price?	**nmlstseed**	

2.8.1a Do you **regularly purchase** or have you **ever purchased** bean **grain** for planting? **1= Yes, regularly purchase** **2= Yes, purchase occasionally** **3= No, never purchase 'grain' for planting → pctbeansld**	**grainpur**	
2.8.2a What is the highest price per kg you have ever paid for bean grain acquired for planting purpose? (Tsh/kg)	**hgrainpr**	
2.8.3a In what agricultural year and season did you pay this high price? a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**yrhgrainpr** **sehgrainpr**	
2.8.4a When was the last time (year and season) you purchased bean grain for planting purpose? a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2012 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**lstgrainpur** **selstgrainpur**	
2.8.5a What was the price per kg you paid for acquiring this grain for planting purpose last time you purchased it? (Tsh/kg)	**lstgrainpr**	
2.8.6a What was the name of this bean variety you acquired last time you paid this price?	**Nmlstgrain**	
2.8.7 In a normal year, what **percent (%)** of your bean **harvest** do you **sell?**	**pctbeansld**	
2.8.8 In a normal year, what **percent (%)** of your **HH income** comes from **bean sales?**	**pctbeaninc**	
2.8.9 With how many total friends/relatives/neighbors/fellow farmers did you talk about bean farming in this 2017/18 agricultural year?	**beanagfrnd**	
2.8.10. Have you heard about hybrid seeds? 1=Yes 2=No (if No, skip to **rotation**)	**hybridknow**	
2.8.11 Have you ever used hybrid seeds of any crop? 1=Yes 2=No (If No, skip to **rotation**)	**hybriduse**	
2.8.12 Name of the crop(s) for which you have used hybrid seeds (select all that are mentioned) [1] maize [2] rice [3] sorghum [4] soybean [5] potato [6] vegetables [888] Other (specify)_____)	**hybridcrop**	
2.8.13 Do you practice cereal-legume rotation on your farm? *(Enumerator: explain that rotation means on a given plot growing a cereal crop and a legume crop in alternate seasons (or in rotation). A legume crop includes beans, groundnuts, cowpea, soybeans, etc.* 1=Yes 2=No	**rotation**	
2.8.14 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Tumia mbegu: a. Zilizotangazwa ubora b. Zilizothibitishwa c. Kutoka kwa Mshauli wa kilimo kijijini" ***Check all that apply: 1=Yes, I received it on my phone*, 2=Yes, received it on another family member's phone, 3=*Yes, know of someone else who received it, 4=No -9=don't remember/don't know***	**msg_1**	
2.8.15 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Chagua ardhi yenye rutuba ya kutosha inayofaa kwa uzalishaji wa maharage. Anza mapema matayarisho kwa kusafisha, kukwatua na kusawazisha ardhi"	**msg_2**	

Check all that apply: 1=Yes, I received it on my phone*, 2=Yes, received it on another family member's phone, 3=*Yes, know of someone else who received it, 4=No -9=don't remember/don't know		
2.8.15 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Panda kwenye matuta au makinga maji kupunguza madhara ya maji kutuama" ***Check all that apply: 1=Yes, I received it on my phone*, 2=Yes, received it on another family member's phone, 3=*Yes, know of someone else who received it, 4=No -9=don't remember/don't know***	**msg_3**	
2.8.15 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Zingatia kanuni bora ya kupanda kwa kuacha sm 50 kati ya mstari na mstari pamoja na sm 10 kati ya shimo na shimo" ***Check all that apply: 1=Yes, I received it on my phone*, 2=Yes, received it on another family member's phone, 3=*Yes, know of someone else who received it, 4=No -9=don't remember/don't know***	**msg_4**	
2.8.15 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Weka mbolea. Hii itaimalisha nguvu ya mmea na kupelekea mmea kustaimili na kupona zidi ya magonjwa na shida za wadudu" ***Check all that apply: 1=Yes, I received it on my phone*, 2=Yes, received it on another family member's phone, 3=*Yes, know of someone else who received it, 4=No -9=don't remember/don't know***	**msg_5**	

SECTION 3: New Agricultural Technologies

3.1 We'd like to learn more about your knowledge of Apron Star seed treatment

Questions	Variable Name	Response
3.1.01 Did you or anyone in your household or someone you know receive a text message on the mobile phone that said something like "Tumia kemikali yenye viuatirifu vyenye nguvu ya kupambana na wadudu pamoja na fangasi kama vile APRON STAR au nunua mbegu zilizo changanywa na APRON STAR." **Check all that apply: 1=Yes, I received it on my phone, 2=Yes, received it on another family member's phone, 3=Yes, know of someone else who received it, 4=No -9=don't remember/don't know**	**apmsg**	
3.1.1 Have you received any information about Apron Star in the past agricultural year 2017-18? ***1=Yes, 2=No →go to 3.1.4* (apuse)**	**apknow**	
3.1.2 In which season(s) this past year did you receive information about Apron Star? Select all that apply 1=Minor season 2=Major season	**seap**	
3.1.3 How did you learn about Apron Star seed treatments this past year? Please check all that apply: ☐ FIPS VBAA ☐ Government Extension Officer ☐ Farmer Cooperative/Group ☐ ARI-Uyole or other research center ☐ Neighbor/Friend/Relative ☐ Private Company/Input Dealer ☐ Other NGO ☐ Radio/TV ☐ Mobile Phone ☐ Newspaper ☐ From a survey enumerator ☐ Other (Specify _____)	**aplearn**	
3.1.4 Have you or any member of your household ever used Apron Star? ***1=Yes →go to 3.1.6* (yrapstart), *2=No***	**apuse**	
3.1.5 If No, why? Please check all that apply: ***→go to 3.1.15 (aptraining)*** ☐ Unwilling to try new technology; ☐ Lack training/information; ☐ Too expensive; ☐ Apron Star not available in village; ☐ Not satisfied with output; ☐ Not suitable for crop; ☐ Difficult to apply to seeds; ☐ Other(Specify)	**noaprsn**	
3.1.6 In what agricultural year did your household **first** start using Apron Star?	**yrapstart**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**seapstart**	
3.1.7 What was the motivation behind your household's decision to use Apron Star? Please check all that apply. ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from disease ☐ To reduce loss from fungus ☐ VBAA recommended Apron Star ☐ Other farmers in my village were using Apron Star ☐ Friends/family members were using Apron Star ☐ Less weeding ☐ Lower cost of inputs ☐ Improved land quality ☐ Reduce risk and uncertainty of bean production ☐ Other (Specify)	**apmotiv**	

3.1.7b On what crops have your household used Apron Star? Check all that apply. [1] maize [2] rice [3] sorghum [4] soybean [5] potato [6] vegetables [7] beans [888] Other (specify)_____)	**apcrops**	
3.1.8 Did your household stop using Apron Star after using it? **3=Yes, temporarily (stopped for some season(s) then started using it again)** ***4=Yes*, permanently** ***2=No →go to 3.1.10 (yrlstapuse)***	**apstop**	
3.1.9 Why did your household stop using Apron Star? Please check all that apply: ☐ Lack training/information ☐ Too expensive ☐ Apron Star not available in village ☐ Not satisfied with output ☐ Not suitable for crop ☐ Did not prevent pests/fungus/disease as advertised ☐ Difficult to apply to seeds ☐ Other (specify)	**apstoprrsn**	
3.1.10 In which agricultural year did you/your household **last** use Apron Star?	**yrlstapuse**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**selstapuse**	
3.1.11 From whom did you obtain Apron Star? Check all that apply. ☐ FIPS VBAA; ☐ Government Extension Officer; ☐ Farmer Cooperative/Group; ☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Other (specify)	**apsource**	
3.1.12 What was the total bean area to which you/your household applied Apron Star that year? (acres)	**aparea**	
3.1.13 Do you share your experiences using Apron Star with other farmers? ***1=Yes*, *2=No***	**apshfrm**	
3.1.14 Do you share your experiences using Apron Star with your VBAA? ***1=Yes*, *2=No***	**apshvbaa**	
3.1.15 Have you or anyone else in your household received training in how to use Apron Star on beans? ***1=Yes*, *2=No →go to 3.1.17* (apchange)**	**aptraining**	
3.1.16 If yes, from whom? Please check all that apply: ☐ FIPS VBAA ☐ Government Extension Officer ☐ Farmer Cooperative/Group ☐ ARI-Uyole or other research center ☐ Neighbor/Friend/Relative ☐ Private Company/Input Dealer ☐ Other NGO ☐ Radio/TV ☐ Mobile Phone ☐ Newspaper ☐ Other (specify)	**aptrsource**	
3.1.17 Does your household plan to increase, decrease or not change the bean area under Apron Star in the next season? 1-increase, 2-decrease, 3-not change	**apchange**	
3.1.18 In your opinion, what are the main benefits of using Apron Star? ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from disease ☐ To reduce loss from fungus ☐ VBAA recommended Apron Star	**apben**	

☐ Other farmers in my village were using Apron Star ☐ Other friends/family members were using Apron Star ☐ Less weeding ☐ Lower cost of inputs ☐ Improved land quality ☐ Reduce risk and uncertainty of bean production ☐ I don't know ☐ Other (specify)		
3.1.19 In your opinion, what are the main inconveniences of using Apron Star? ☐ Lack of service provider in the village ☐ Cost of technology ☐ Treating/coating the seeds ☐ Lack of information/knowledge about Apron Star ☐ Labor intensive ☐ Health concerns ☐ I don't know ☐ Other (specify)	**apincon**	
3.1.28 Have you ever used another type of bean seed treatment? ***1=Yes, 2=No →go to 3.1.30 (othfung)***	**oseedtrt**	
3.1.29 If yes, what was the name of the most frequently used alternative seed treatment? 1=Apron Star/Syngenta 2=Seed Plus 3= Carbofuran /Marshal 4=Other (specify) -9=Don't recall	**nmoseedtrt**	
3.1.30 Have you ever used fungicide on beans? ***1=Yes, 2=No***	**othfung**	
3.1.31 Have you ever used herbicide on beans? ***1=Yes, 2=No***	**othherb**	
3.1.32 Have you ever used insecticide on beans? ***1=Yes, 2=No***	**othinsect**	
3.2.33 How many farmers that you regularly interact with or discuss about bean farming have ever used Apron Star? *Number (-9 = don't know)*	**apuseother**	
3.2.34 Has any other farmer shared his/her experience of using Apron Star with you? ***1=Yes, 2=No***	**apshfarmother**	

3.2 We'd like to learn more about your knowledge of an improved bean seed called Uyole 96

Questions	Variable Name	Response
3.2.01 Did you or anyone in your household receive a text message on the mobile phone that said something like "Panda aina ya mbegu zinazovumilia magonjwa kama Njano Uyole na Uyole 96." **Check all that apply: 1=Yes, I received it on my phone, 2=Yes, received it on another family member's phone, 3=Yes, know of someone else who received it, 4=No -9=don't remember/don't know**	**varmsg**	
3.2.1 Have you received any information about Uyole 96 in the past agricultural year 2017-18? ***1=Yes, 2=No →go to 3.2.4* (uyuse)**	**uyknow**	
3.2.2 In which season(s) this past year did you receive information about Uyole 96? Select all that apply 1=Minor season 2=Major season	**seuyknow**	
3.2.3 How did you learn about Uyole 96 this past year? Please check all that apply: ☐ FIPS VBAA; ☐ Government Extension Officer; ☐ Farmer Cooperative/Group; ☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Radio/TV ☐ Mobile Phone; ☐ Newspaper; ☐ From a survey enumerator ☐ Other (specify)	**uylearn**	
3.2.4 Have you or any member of your household ever used Uyole 96? ***1=Yes →go to 3.2.6a (yruystart), 2=No***	**uyuse**	

3.2.5 If No, why? Please check all that apply: ***→go to 3.2.19 (uytraining)*** ☐ Lack training/information; ☐ Too expensive; ☐ Seeds not available in village; ☐ Not satisfied with output; ☐ Not suitable for farm; ☐ Did not function as advertised; ☐ Not marketable/cannot sell ☐ Don't like color/culinary/consumption characteristics ☐ Land constraint ☐ Other (specify)	**rsnnouyuse**	
3.2.6 In what agricultural year did your household **first** start using Uyole 96?	**yruystart**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**seuystart**	
3.2.7 What was the motivation behind your household's decision to use Uyole 96? Please check all that apply: ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from bean rust ☐ To reduce losses from Angular Leaf Spot (ALS) ☐ VBAA recommended Uyole 96 ☐ Someone else recommended Uyole 96 ☐ Other farmers in my village were using it ☐ Less weeding ☐ Fast time to maturity ☐ I like the color, size and shape of Uyole 96 beans ☐ I like the taste of Uyole 96 beans ☐ Uyole 96 beans are good for consumption ☐ Uyole 96 beans are good to sell ☐ It was given as free seed ☐ Other (specify)	**uymotiv**	
3.2.8 Did your household stop using Uyole 96 after adopting it? ***1=Yes***, ***2=No →go to 3.2.10 (yrlstuyuse)***	**uystop**	
3.2.9 Why did your household stop using Uyole 96? Please check all that apply: ☐ Lack training/information; ☐ Too expensive; ☐ Uyole 96 not available in village; ☐ Not satisfied with yield; ☐ Not suitable for farm; ☐ Took too long to mature; ☐ Required too many seeds per hectare; ☐ Did not prevent disease as advertised; ☐ Difficult to apply to seeds; ☐ Don't like the color, size and shape of Uyole 96 beans ☐ Don't like the taste of Uyole 96 beans ☐ Uyole 96 beans are not good for consumption ☐ Uyole 96 beans are not good to sell ☐ Other (specify)	**rsnuystop**	
3.2.10 In which agricultural year did your household last use Uyole 96?	**yrlstuyuse**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**selstuyuse**	
3.2.11 How much seed did your household get the last time it obtained/purchased Uyole 96 seed? (kilograms)	**lstuyquan**	
3.2.12 When your household last obtained/purchased Uyole 96 seed, how much did you pay for it (per kg)? Write 0 if it was given as free seed.	**lstuypr**	
3.2.13 [if lstuypr>0] Was this a subsidized price or the commercial price? ***1=Subsidized***, ***2=Commercial***	**uysub**	
3.2.14 From whom did your household obtain/purchase Uyole 96? Please check all that apply: ☐ FIPS VBAA;	**uysource**	

☐ Government Extension Officer; ☐ Farmer Cooperative/Group; ☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative/Fellow farmer ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Other (Specify_____)		
3.2.15 When you last obtained/purchased Uyole 96 bean seed, what type of seed was it? 0=Basic seed from a research station, 1= Certified, 2=Quality declared seed, 3= Non-certified but came in a package with labeling, 4= Came in no package and no label, -9= Don't know/Don't remember	**uytype**	
3.2.16 What was the total bean area to which your household planted Uyole 96 during the last year you used it? (**acres**)	**uyarea**	
3.2.17 Do you share your household's experiences using Uyole 96 with other farmers? ***1=Yes***, ***2=No***	**uyshfarm**	
3.2.18 Do you share your household's experiences using Uyole 96 with your VBAA? ***1=Yes***, ***2=No***	**uyshvbaa**	
3.2.19 Have you or anyone else in your household received training in how to use Uyole 96 beans? ***1=Yes***, ***2=No*** ***→go to 3.2.21*** (uychange)	**uytraining**	
3.2.20 If yes, from whom? Please check all that apply: ☐ FIPS VBAA ☐ Village cooperative ☐ Neighbor/Friend/Relative Farmer ☐ Agrodealer ☐ Farmer association ☐ Other (specify)	**uytrsource**	
3.2.21 [If uyuse=1] Does your household plan to increase, decrease or not change the bean area under Uyole 96 in the next season? 1-increase, 2-decrease, 3-not change	**uychange**	
3.2.22 In your opinion, what are the main benefits of using Uyole 96? Please check all that apply: ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from bean rust ☐ To reduce loss from Angular Leaf Spot (ALS) ☐ VBAA recommended Uyole 96 ☐ Someone else recommended Uyole 96 ☐ Other farmers in my village were using it ☐ Less weeding ☐ Fast time to maturity ☐ Uyole 96 beans are good for consumption ☐ Uyole 96 beans are good to sell ☐ Other (Specify_____)	**uyben**	
3.2.23 In your opinion, what are the main inconveniences of using Uyole 96? Please check all that apply: ☐ Lack training/information; ☐ Too expensive; ☐ Uyole 96 not available in village; ☐ Unsatisfactory yield; ☐ Not suitable for farm; ☐ Takes too long to mature; ☐ Requires too many seeds per hectare; ☐ Does not prevent disease as advertised; ☐ Uyole 96 beans are not good for consumption ☐ Uyole 96 beans are not good to sell ☐ Other (Specify_____)	**uyincon**	
3.2.32 [If uyuse=1] How do you generally obtain Uyole 96 bean seed? Please check all that apply: ☐ Save seed from previous season ☐ Purchase from agrodealer (non-VBAA) ☐ Purchase from VBAA ☐ Receive for free from VBAA ☐ Receive from extension officer	**uyhabit**	

☐ Purchase from ARI-Uyole ☐ Purchase from the vendors in the market ☐ Purchase/borrow from other farmers in this village ☐ Given by friends/family/neighbors/fellow farmers ☐ Other (Specify)_____)		
3.2.33 How many farmers you regularly interact with or discuss about bean farming have ever used Uyole 96? *Number (-9 = don't know)*	**uyuseother**	
3.2.34 Has any other farmer shared his/her experience of using Uyole 96 with you? ***1=Yes, 2=No***	**uyshfarmother**	

3.3 We'd like to learn more about your knowledge of an improved bean seed called Njano Uyole (Jarrad—this section is same as the previous one, except for the variety focus and the last four questions; please follow the same revisions as in the previous section (replacing Uyole 96 with Njano Uyole)

Questions	Variable Name	Response
3.3.1 Have you received any information about Njano Uyole in the past agricultural year 2017-18? ***1=Yes, 2=No →go to 3.3.4 (njuse)***	**njknow**	
3.3.2 In which season(s) this past year did you receive information about Njano Uyole? Select all that apply 1=Minor season 2=Major season	**senjknow**	
3.3.3 How did you learn about Njano Uyole? Please check all that apply: ☐ FIPS VBAA; ☐ Government Extension Officer; ☐ Farmer Cooperative/Group; ☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Radio/TV ☐ Mobile Phone; ☐ Newspaper; ☐ Other (specify)	**njlearn**	
3.3.4 Have you or any member of your household ever used Njano Uyole? ***1=Yes →go to 3.3.6 (yrnjstart), 2=No***	**njuse**	
3.3.5 If No, why? Please check all that apply: ***→go to 3.3.19 (njtraining)*** ☐ Lack training/information; ☐ Too expensive; ☐ Seeds not available in village; ☐ Not satisfied with output; ☐ Not suitable for farm; ☐ Did not function as advertised; ☐ Other (specify)	**rsnnonjuse**	
3.3.6 In what agricultural year did your household **first** start using Njano Uyole?	**yrnjstart**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**senjstart**	
3.3.7 What was the motivation behind your household's decision to use Njano Uyole? Please check all that apply: ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from bean rust ☐ To reduce loss from Angular Leaf Spot (ALS) ☐ To reduce loss from root rot ☐ To reduce loss from halo blight ☐ To reduce loss from common bacterial blight (CBB) ☐ VBAA recommended Njano Uyole	**njmotiv**	

☐ Someone else recommended Njano Uyole ☐ Other farmers in my village were using it ☐ Less weeding ☐ Fast time to maturity ☐ I like the color, size and shape of Njano Uyole beans ☐ I like the taste of Njano Uyole beans ☐ Njano Uyole beans are good for consumption ☐ Njano Uyole beans are good to sell ☐ It was given as free seed ☐ Other (Specify_____)		
3.3.8 Did your household stop using Njano Uyole after adopting it? ***1=Yes, 2=No →go to 3.3.10 (yrlstnjuse)***	**njstop**	
3.3.9 Why did your household stop using Njano Uyole? Please check all that apply: ☐ Lack training/information; ☐ Too expensive; ☐ Njano Uyole not available in village; ☐ Unsatisfactory yield; ☐ Not suitable for farm; ☐ Takes too long to mature; ☐ Requires too many seeds per hectare; ☐ Does not prevent disease as advertised; ☐ Don't like the color, size and shape of Njano Uyole beans ☐ Don't like the taste of Njano Uyole beans ☐ Njano Uyole beans are not good for consumption ☐ Njano Uyole beans are not good to sell ☐ Other (Specify_____)	**rsnnjstop**	
3.3.10 In which agricultural year did your household last use Njano Uyole?	**yrlstnjuse**	
a. ***Enter agricultural year as YYYY, e.g., Dec 2010 to July 2011 should be noted as 2011, Dec 2015 to July 2016 should be 2016, etc.*** b. Select the season 1=Minor season 2=Major season	**selstnjuse**	
3.3.11 How much seed did your household get the last time it obtained/purchased Njano Uyole seed? (kilograms)	**lstnjquan**	
3.3.12 When your household last obtained/purchased Njano Uyole seed, how much did your household pay for it (per kg)? (write zero if it was given as free seed)	**lstnjpr**	
3.3.13 [if lstnjpr>0] Was this a subsidized price or the commercial price? ***1=Subsidized, 2=Commercial***	**njsub**	
3.3.14 From whom did your household obtain/purchase Njano Uyole? Please check all that app ☐ FIPS VBAA; ☐ Government Extension Officer; ☐ Farmer Cooperative/Group; ☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Other (Specify_____)	**njsource**	
3.3.15 When you last obtained/purchased Njano Uyole bean seed, what type of seed was it? 0=Basic seed from a research station, 1= Certified, 2=Quality declared seed, 3= Non-certified but came in a package with labeling, 4= Came in no package and no label, -9= Don't know/Don't remember	**njtype**	
3.3.16 What was the total bean area to which your household planted Njano Uyole during the last year you used it? (**acres**)	**njarea**	
3.3.17 Do you share your household's experiences using Njano Uyole with other farmers? ***1=Yes, 2=No***	**njshfarm**	
3.3.18 Do you share your household's experiences using Njano Uyole with your VBAA? ***1=Yes, 2=No***	**njshvbaa**	
3.3.19 Have you or anyone else in your household received training in how to use Njano Uyole beans? ***1=Yes, 2=No →go to 3.3.21 (njchange)***	**njtraining**	
3.3.20 If yes, from whom? Please check all that apply: ☐ FIPS VBAA; ☐ Government Extension Officer; ☐ Farmer Cooperative/Group;	**njtrsource**	

☐ ARI-Uyole or other research center; ☐ Neighbor/Friend/Relative ; ☐ Private Company/Input Dealer; ☐ Other NGO; ☐ Other (Specify_____)		
3.3.21 [If njuse=1] Does your household plan to increase, decrease or not change the bean area under Njano Uyole in the next season? 1-increase, 2-decrease, 3-not change	**njchange**	
3.3.22 In your opinion, what are the main benefits of using Njano Uyole? Please check all that apply: ☐ To increase crop yield ☐ To reduce loss from pests ☐ To reduce loss from bean rust ☐ To reduce loss from Angular Leaf Spot (ALS) ☐ To reduce loss from root rot ☐ To reduce loss from halo blight ☐ To reduce loss from common bacterial blight (CBB) ☐ VBAA recommended Njano Uyole ☐ Someone else recommended Njano Uyole ☐ Other farmers in my village were using it ☐ Less weeding ☐ Fast time to maturity ☐ Njano Uyole beans are good for consumption ☐ Njano Uyole beans are good to sell ☐ Other (Specify_____)	**njben**	
3.3.23 In your opinion, what are the main inconveniences of using Njano Uyole? Please check all that apply: ☐ Lack training/information; ☐ Too expensive; ☐ Njano Uyole not available in village; ☐ Not satisfied with yield; ☐ Not suitable for farm; ☐ Took too long to mature; ☐ Required too many seeds per hectare; ☐ Did not prevent disease as advertised; ☐ Difficult to apply to seeds; ☐ Njano Uyole beans are not good for consumption ☐ Njano Uyole beans are not good to sell ☐ Other (Specify_____)	**njincon**	
3.3.32 [If njuse=1] How does your household generally obtain Njano Uyole bean seed? Please check all that apply: ☐ Save seed from previous season ☐ Purchase from agrodealer (non-VBAA) ☐ Purchase from VBAA ☐ Receive for free from VBAA ☐ Receive from extension officer ☐ Purchase from ARI-Uyole ☐ Purchase from the vendors in the market ☐ Purchase/borrow from other farmers in this village ☐ Given by friends/family/neighbors/fellow farmers ☐ Other (Specify_____)	**njhabit**	
How many farmers you regularly interact with or discuss about bean farming have ever used Njano Uyole? Number (-9 = don't know)	**njuseother**	
Has any other farmer shared his/her experience of using Njano Uyole with you? **1=Yes, 2=No**	**njshfarmother**	
3.3.33. I would like to ask you about other improved bean varieties you are aware of. Other than Uyole 96, Njano Uyole, and varieties you planted in the past year mentioned before, please tell me the names of all the improved bean varieties you know or are aware of (Enumerator—write the names as mentioned) **Enter "none" if don't know any others**	**varaware**	

3.3.34 Enumerator: count the number of improved varieties mentioned and put the number in this field	**varcount**	
3.3.35 Have you ever grown any of these varieties on your farm in the past? 1= Yes >next section 2= No	**varuse**	
3.3.36 Main reasons for not growing these bean varieties on your farm? (please check all that are mentioned) ☐ Too expensive; ☐ Seed of that variety not available/have not seen them; ☐ Unsatisfactory yield; ☐ Not suitable for farm; ☐ Takes too long to mature; ☐ Requires too many seeds per hectare; ☐ Does not prevent disease as advertised; ☐ Didn't like the color, size and shape of that variety ☐ Didn't like the taste of that variety ☐ That variety was not good for consumption ☐ That variety was not good to sell/cannot market ☐ No information ☐ Other (Specify_____)	**varavoid**	

SECTION 4: SOCIO-ECONOMIC CHARACTERISTICS & FARMING/EXTENSION EXPERIENCE

4.1 We'd now like to know more about you and your background.

4.1.1 What is your **age**?	**age**	

4.1.3 What is your **relationship to the head** of your household? ***See codes below***	**relhead**	
if the response to 4.1.3 is codes 2 to 7 (i.e., not head), then ask: 4.1.3a What is the gender of the Head of the Household?	**genderhhh**	
4.1.3b What is the age of the Head of the Household?	**agehhh**	
4.1.3c What is the highest level of formal education the Head of the HH has completed? ***See codes below***	**educhh**	

4.1.4 Excluding yourself, how many male and female members age 15 to 59 are in your household?	**hhmale**	Male	
	hhfem	Female	

4.1.5 Excluding yourself, how many male and female members age 60 and above are in your household?	**hhmale60**	Male	
	hhfem60	Female	

4.1.6 How many child members age 14 and below are in your household?	**children**	

4.1.7 What is the highest level of formal education that you have completed? ***See codes below***	**educ**	
4.1.8 What is the highest level of formal education completed by any member of your household? ***See codes below***	**educhh**	

4.1.9 Are you a member of a farmer cooperative, farmer association, and/or other farmer group? ***1=Yes 2=No***	**memcoop**	
4.1.9a Other than you, is anyone else in your household a member of a farmer cooperative, farmer association, and/or other farmer group? ***1=Yes 2=No***	**memcoophh**	

4.1.10 Are you or your spouse a member of a women's group? ***1=Yes 2=No***	**womgroup**	

4.1.11 Do you have a bank account? ***1=Yes 2=No***	**bankacct**	

4.1.12 Are you a member of a rotating savings and credit association, village community bank (viccoba), or any community-based savings and loan group? ***1=Yes 2=No***	**creditassoc**	

Relationship to the HH head codes (relhead)
1=head
2=spouse
3=child (own/step)
4=parent/parent-in-law
5=brother/sister
6=other relative
7=unrelated

Education codes (educ)			
00=none	07=standard 7	14=form 6	21=univ year 3
01=standard 1	08=standard 8	15=college year 1	22=univ year 4
02=standard 2	09=form 1	16=college year 2	23=univ year 5
03=standard 3	10=form 2	17=college year 3	24=postgrad
04=standard 4	11=form 3	18=college year 4	25=other, specify
05=standard 5	12=form 4	19=univ year 1	_____
06=standard 6	13=form 5	20=univ year 2	

4.1.15 Are you or your spouse related to the village extension officer? ***1=Yes 2=No***	**relvilext**	

4.1.16 Are you or your spouse related to the village chairperson or the village executive officer? ***1=Yes 2=No***	**relvilcon**	

4.1.17 Are you or your spouse related to the VBAA serving your village? ***1=Yes 2=No***	**relvbaa**	

4.1.18 Do you currently serve on the village council? ***1=Yes→go to Q4.1.20 (yearvil) 2=No***	**vilconcur**	

4.1.19 Have you ever served on the village council? ***1=Yes 2=No***	**vilcon**	

4.1.20 In what year did you first settle in your village? ***(If the respondent was born in the village, enter -9)***	**yearvil**	

4.1.21 Were either of your parents born in the village where you currently live? ***1=Yes 2=No***	**parvil**	

4.2 We'd now like to know about your other sources of income

4.2.2 Do you or any member of your household currently have a job that pays a **regular salary**? ***1=Yes 2=No***	**saljob**	

4.2.4 Do you or any member of your household currently have any **wage employment**? Do NOT include work on others' farms. ***1=Yes 2=No***	**wage**	

4.2.6 Do you or any member of your household currently have any **wage employment** on **someone else's farm**? ***1=Yes 2=No***	**Ganyu**	

4.2.8 Do you or any member of your household currently earn income from any **formal or informal business activities**? ***1=Yes 2=No***	**Bizact**	

4.2.10 Do you or any member of your household currently receive a **pension**? ***1=Yes 2=No***	**pension**	

4.2.12 Do you or any member of your household currently receive **remittances**? ***1=Yes 2=No***	**remit**	

4.3 We'd now like to know about the land your household owns.

4.3.1 How much **land** does your household currently **own**? (acres)	**landarea**	Area	

4.3.2 [if landarea>0] For how much of this land do you have a **formal land title**? (acres) (Constraint: landtitlearea <= landarea)	**landtitlearea**	Area	

4.3.5 [if landarea>0] How much of your **total land area owned** was **cultivated** with any crop during the 2017/2018 agricultural year? (acres) (Constraint: areacult <=landarea)	**areacult**	Area	

4.3.6 Did your household rent-in any land during the 2017/2018 agricultural year? **1=yes 2=no**	**rentyesno**	

4.3.9 What is the annual rental rate for an acre of land in your village? (Enter -9 if the farmer doesn't know)	**rentrate**	

4.4 Please tell us about the types and numbers of livestock, assets, and implements that your household currently owns.

Table 4.4 Assets *Key variables: vbaa_id asset* *Reference period: Now*

Type of asset	Asset code	How many … does your household currently own? ***(Enter "0" if none)***
	asset	**assetnum**
Mobile phones	1	
Smart phones	2	
Landline phones	3	
Radios	4	
Televisions	5	
Computers	6	
Solar panels and equipment	7	
Generators	8	
Bicycles	9	
Motorcycles	10	
Pick-ups/vans/cars/jeeps	11	
Trucks/lorries	12	
Trailers	13	
Tractors	14	
Animal drawn carts	15	
Houses	16	
Shops	17	
Cattle excluding oxen	18	
Oxen	19	
Sheep	20	
Goats	21	
Pigs	22	
Donkeys	23	
Chickens	24	

4.5 We'd now like to know the distance in kilometers from your homestead to some key locations and services.

4.5.1 What is the distance from your homestead to the nearest mineral fertilizer seller (other than yourself)? ***Km*** ***If "0"→go to 4.6.4 (kmvbaa)***	**kmfert**	
4.5.2 How much does it cost to transport one 50 kg bag of fertilizer from the nearest seller to your homestead? ***TZS***	**transfert**	
4.5.3 With what main type of transport from seller to homestead? ***1=car, 2=bus/daladala, 3=bicycle, 4=motorcycle, 5=ox cart, 6=donkey, 7=tractor, 8=I carry it myself/human 888=other (specify)***	**transtypef**	
4.5.4 What is the distance from your homestead to your FIPS VBAA? ***Km***	**kmvbaa**	
4.5.5 What is the distance from your homestead to the nearest seller of commercial bean seed (other than yourself)? ***Km***	**kmseedbn**	
4.5.6 What is the distance from your homestead to the nearest seller of Apron Star or other seed treatment for maize or beans (other than yourself)? ***Km***	**kmseedtrt**	
4.5.8 How much does it cost to transport one 100 kg bag of maize grain from your homestead to the nearest town? ***TZS***	**transmz**	
4.5.9 With what main type of transport from your homestead to the nearest town? ***1=car, 2=bus/daladala, 3=bicycle, 4=motorcycle, 5=ox cart, 6=donkey, 7=tractor, 8=other (specify: _____)***	**transtypem**	
4.5.15. What is the distance from your homestead to the homestead of the farmer with whom you most often interact with or discuss about bean farming? *Km*	**kmothfarmer**	

4.6 Progress Out of Poverty Module

4.6.1 How many household members are 18-years old or younger?	**ppi1**	
4.6.2 [if pp1>0] Are all household members ages 6 to 18 currently in school? **1= Yes, 2=No, 3=No members aged 6-18**	**ppi2**	
4.6.3 What is the main building material used for the walls of the main building of your home? **1=Baked bricks, 2=Poles and mud, grass, sun-dried bricks, or other** **3=Stones, cement bricks, or timber**	**ppi3**	
4.6.4 What is the main building material used for the roof of the main building of your home? **1=Grass/leaves, mud/leaves, other, 2=Iron sheets, tiles, concrete, or asbestos**	**ppi4**	
4.6.5 What is the main fuel your household uses for cooking? **1=Firewood, coal, solar, gas(biogas), wood residuals, animal residuals, 2= Charcoal, paraffin, gas(industrial), electric, other**	**ppi5**	
~~4.6.6 Does your household have any televisions? **1= Yes, 2=No**~~	~~**ppi6**~~	
4.6.7 Does your household have any cassette/tape recorders or hi-fi systems? **1= Yes, 2=No**	**ppi7**	
4.6.8 Does your household have any lanterns? **1= Yes, 2=No**	**ppi8**	
4.6.9 Does your household have any tables? **1= Yes, 2=No**	**ppi9**	
~~4.6.10 If your household has cultivated any crops in the last 12 months, does your household currently own any bulls, cows, steers, heifers, male calves, female calves, or oxen?~~ ~~1= No crops and no cattle, 2=Cattle but no crops 3 = Crops but no cattle, 4=Crops and cattle~~	~~**ppi10**~~	

********** **SECTION 5: Agricultural Output and Input Prices** **********

5.1 We would like to ask you about crop prices in recent months.

Table 5.1 Crop prices *Key variables: village_id HH CPR Reference period: Various (see questions)*

		If you had sold a 20-kg bag of …. (dried and shelled) to a private trader that came to your village during the following periods, how much would it have fetched? *(Tsh)*					
Crop						March-April 2018	June 2018-present
CPR						**CPR05**	**CPR06**
Beans	1						
Groundnuts	2						
Maize	3						

5.2 We would like to ask about input prices this past year.

Table 5.2 Input prices *Key variables: village_id HH IPR Reference period: Agricultural year 2017/18*

Input		What was the price of … at the nearest retailer during the **2017/18 agricultural year**? *(Tsh)*	
IPR		**IPR01**	
10-kg packet of hybrid maize seed	1		
50-kg bag of compound DAP fertiliser	2		
2-kg packet of commercial groundnut seed	3		
2-kg packet of commercial certified bean seed	4		

5.3 We would like to ask about hired labor and agricultural wages in recent years.

5.3.1 How many hours are typically worked when agricultural labor is hired for the day?	**hours**	

5.3.2 What was the agricultural wage rate in your area during the 2017/18 agricultural year?	**Quantity (Tsh)**	**wage1718a**	
	Units 1=per hour, 2=per day	**wage1718b**	

********** **SECTION 6: Social Network** **********

6.1b [if vbaacovbyname=1]: You indicated previously that you've met [NAME OF VBAA IN 2017]. What is your relationship to [NAME OF VBAA IN 2017]? **1=blood relative 2=related by marriage 3=neighbor but not relative 4=not related**	**vbaarelation**	
6.1c Have you ever gone to [NAME] for **advice about farming**? **1=yes 2=no**	**vbaafarmadvice**	
6.2d Have you ever **discussed bean farming** with [NAME]? **1=yes 2=no**	**vbaadiscbeans**	
6.2e In a typical week, how many times do you interact with [NAME] face-to-face? **(number)**	**vbaanum**	
6.2f In a typical week, how many times do you interact with [NAME] on mobile phone? **(number; write 0 if do not interact by phone)**	**vbaaph**	

6.2a Have you ever met the village chairperson? **1=yes 2=no >skip to soctable**	**leadmet**	
6.2b What is your relationship to the village chairperson? **1=blood relative 2=related by marriage 3=neighbor but not relative 4=not related**	**leadrelation**	
6.2c Have you ever gone to the village chairperson for advice about farming? **1=yes 2=no**	**leadfarmadvice**	
6.2d Have you ever discussed bean farming with the village chairperson? **1=yes 2=no**	**leaddiscbeans**	
6.2e In a typical week, how many times do you interact with the village chairperson face-to-face? **(number)**	**leadnum**	
6.2f In a typical week, how many times do you interact with the village chairperson on mobile phone? **(number; write 0 if do not interact by phone)**	**leadph**	

We would like to ask about your interactions with other farmers from a sample of ~25 households in your village.

PID	Have you ever met [PERSON1] or [PERSON2]? **Tick all that apply 1= Has met [PERSON1] 2= Has met [PERSON2] 99=Neither >skip to next hh**	[If have met PERSON1] What is your relationship to [Person1]? **1=blood relative 2=related by marriage 3=friend/neighbor but not relative 4=not related**	[If have met PERSON2] What is your relationship to [Person2]? **1=blood relative 2=related by marriage 3=friend/neighbor but not relative 4=not related**	Have you ever gone to [PERSON1] or [PERSON2] for advice about farming? **Tick all that apply 1= Advice from [PERSON1] 2= Advice from [PERSON2] 99=Neither**	Have you ever discussed bean farming with [PERSON1] or [PERSON2]? **Tick all that apply 1= Bean farming discussion with [PERSON1] 2= Bean farming discussion with [PERSON2] 99=Neither**
	sochavemet	**socrelation1**	**socrelation2**	**socfarmadvice**	**socdiscbeans**

6.5. From the names of the people I just read, who do you interact the most on a regular basis? **(select from a drop down menu of PID with names)**	**socmost**	
6.6 In a typical week, how many times do you interact with [SOCMOST] face-to-face? **(number)**	**socmostnum**	
6.7 In a typical week, how many times do you interact with [SOCMOST] on mobile phone? **(number; write 0 if do not interact by phone)**	**socmostph**	
6.8 Do you consider [SOCMOST] to be your closest friend? **1=yes<skip to section 7 2=no**	**socmostbest**	
6.9a What is the name of your closest friend?	**socbestname**	
6.9b What is your relationship to [SOCBESTNAME]? **1=blood relative 2=related by marriage 3=neighbor but not relative 4=not related**	**socbestrelation**	
6.9c Have you ever gone to [SOCBESTNAME] for advice about farming? **1=yes 2=no**	**socbestfarmadvice**	
6.9d Have you ever discussed bean farming with [SOCBESTNAME]? **1=yes 2=no**	**socbestdiscbeans**	
6.9e In a typical week, how many times do you interact with [SOCBESTNAME] face-to-face? **(number)**	**socbestnum**	

6.9f In a typical week, how many times do you interact with [SOCBESTNAME] on mobile phone? **(number; write 0 if do not interact by phone)**	**socbestph**	

********** **SECTION 7: Personality Scale** **********

We would like to ask you how well each of the following adjectives describes you. Please rate how well each adjective describes you on a scale of A lot, Some, A little, and Not at all

Adjective	Please indicate how well each of the following describes you: **4=A lot, 3=Some, 2=A little, 1=Not at all**
Outgoing	
Helpful	
Moody	
Organized	
Self-Confident	
Friendly	
Warm	
Worrying	
Responsible	
Forceful	
Lively	
Caring	
Nervous	
Creative	
Assertive	
Hardworking	
Imaginative	
Softhearted	
Calm	
Outspoken	
Intelligent	
Curious	
Active	
Careless	
Broad-minded	
Sympathetic	
Talkative	
Sophisticated	
Adventurous	
Dominant	
Thorough	

Enumerator: Please rate the respondent's social interaction during the personality interview on a scale of: A lot, Some, A little, and Not at all		
Talkativeness	**talkative**	
Shyness	**shyness**	
Distractedness	**distracted**	
Level of smiling and/or making jokes	**smilejoke**	

********** **SECTION 8: Risk and Time Preferences** **********

8.1 When it comes to **adopting new technology, inputs or farming practices**, which of the following **best describes your behavior**? (Read each one and let farmer select one option) **1=I am one of the FIRST ones to adopt NEW technologies** **2=I usually wait until A FEW farmers I know have used those inputs/technologies/practices, and then based on their experiences I make the decision** **3=I usually wait until MOST farmers in this village are already using those inputs/technologies/practices, and I am 100% sure that those technologies work** **4=I RARELY change my farming practices as I am not comfortable doing new things**	**techadopt**	
8.2 How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please choose a value from zero to 10, with zero being you are "not at all willing to take risks", 5 being neutral, and 10 being you are "very willing to take risks". (Enumerator: record the response, which must be 0-10)	**riskselfrep**	
8.3 Suppose you have won a prize of 100,000 Tsh that you can claim immediately. However, you also have the option of waiting **one YEAR** to claim the prize. If you do wait, you will receive more than 100,000 Tsh. What is the **smallest amount of money in addition to the 100,000 Tsh** you would have to receive **one YEAR** from now to convince you to wait rather than claim the prize now?	**yearwait**	
8.4 Now suppose you have won a prize of 100,000 Tsh that you can claim immediately or wait **one MONTH** to claim. If you do wait, you will receive more than 100,000 Tsh. What is the **smallest amount of money in addition to the 100,000 Tsh** you would have to receive **one MONTH** from now to convince you to wait rather than claim the prize now?	**monthwait**	

8.5 We will now begin an experiment that involves real money. You will be asked a number of repeated choices. You will only have the chance of being paid for one of the choices you make in this exercise. However, you do not know yet which choice it will be, so you must think about each question very carefully.

You will only find out at the end of the interview for which of these questions you are going to have the chance of being paid. So, it is in your interest to treat each of the choices as if they were the only choice made and as if **this** is the question for which you are going to have the chance of being paid. Is this clear?

The questions deal with whether **you prefer to have a smaller amount of money for sure** OR **a larger amount of money where there is some risk** that you end up not getting anything.

You can never lose any money irrespective of what you choose. For example, consider the following two options:
Option A: You get 2,500 Tsh for sure.
Option B: Flip a coin. If it lands on heads you get 5,000 Tsh. If it lands on tails you get nothing.

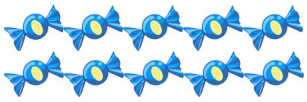
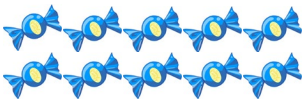
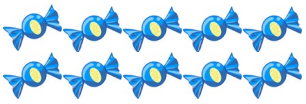
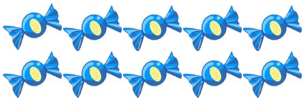
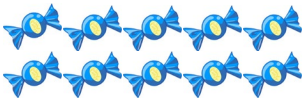
If you choose Option A, you know what you get for sure. If you choose Option B, where we flip a coin, you might get 5,000 Tsh, but there is also some chance you will get nothing.

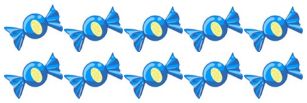
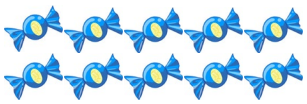
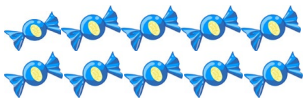
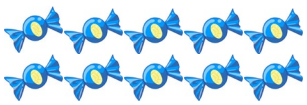
We will show you 8 questions like these but with different Tsh amounts. These differences are important. **Remember, the best you can do is to think carefully about each question as if it were the only choice you made.**

After you have made your choices, we will roll a die to decide which of the choices will be the choice that counts for you. If you decided to take the money for sure, that is the amount of money you will get. If you decided to flip the coin, we will then flip the coin. If it comes up heads, you will win 5,000 Tsh. If it comes up tails, you will not win anything.

Is this clear? Are there any questions before we begin? We will first do a practice round with candy before doing the experiment with real money.

Enumerator: If the respondent picks Lottery B (coin flip) in one of the choice tasks, show him/her the remaining choices (each of which have a smaller "for sure" payout from Lottery A) and explain that his/her switch to Lottery B implies that Lottery B is his/her preferred option for the remaining choices. If he/she does not agree, allow the respondent to reconsider his/her switching point.

#	Which alternative do you prefer? **A=Lottery A B=Lottery B**	**Lottery A**	**Lottery B** **Flip a coin:**	
1p		You get 10 candy for sure. 	**If the coin comes up heads**, you get 10 candy. 	**If the coin comes up tails**, you get nothing.
2p		You get 7 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.
3p		You get 6 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.
4p		You get 5 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.

#	Which alternative do you prefer? **A=Lottery A B=Lottery B**	**Lottery A**	**Lottery B (Coin Flip)**	
5p		You get 4 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.
6p		You get 3 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.
7p		You get 2 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.
8p		You get 1 candy for sure.	**If it comes up heads**, you get 10 candy 	**If it comes up tails**, you get nothing.

Enumerator: If the respondent picks Lottery B (coin flip) in one of the choice tasks, show him/her the remaining choices (each of which have a smaller "for sure" payout from Lottery A) and explain that his/her switch to Lottery B implies that Lottery B is his/her preferred option for the remaining choices. If he/she does not agree, allow the respondent to reconsider his/her switching point.

#	Which alternative do you prefer? **A=Lottery A B=Lottery B**	**Lottery A**	**Lottery B (Coin Flip)**	
1		You get 5,000 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
2		You get 3,500 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
3		You get 3,000 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
4		You get 2,500 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.

#	Which alternative do you prefer? **A=Lottery A** **B=Lottery B**	**Lottery A**	**Lottery B (Coin Flip)**	
5		You get 2,000 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
6		You get 1,500 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
7		You get 1,000 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.
8		You get 500 Tsh for sure.	**If it comes up heads**, you get 5,000 Tsh	**If it comes up tails**, you get nothing.

17.	GPS coordinates of the homestead	South **S_DD**	Decimal degrees	☐☐ . ☐☐☐☐
		East **E_DD**	Decimal degrees	0☐☐ . ☐☐☐☐

ENUMERATOR: END THE INTERVIEW AND THANK THE RESPONDENT FOR PARTICIPATING IN THE SURVEY