Código del hogar (**copiar X7**): _____

Socioeconomic and Agronomic Survey of Climbing Bean Growers in Guatemalan Highlands

Version: 12/29/2014

Instructions: Ask for the responsible person for dry bean production (18 years and older) at home. If the person is not available (after two attempts) fill the ABSENT FORM and look for another replacement household (follow protocol). If the person is available, go ahead with the survey, first read the consent statement and if the person agrees, start the interview.

X0a. Interview date or date of the last visit (dd/mm/yy):	**X0b**. Name of the interviewer:	**X0c**. Name of the supervisor:	**X0d.** Language (s) used in the interview:

X1a. Please tell us, did you cultivate **climbing beans** at the farm during the planting **season in 2014?**

[1] Yes => *Go ahead with the survey after reading the consent Statement* [2] No => *Answer **X1b,** say thanks to the interviewer, stop the survey and look for another replacement farmer*

X1b. Why you **did not cultivate** climbing bean at farmland during 2014?

_____

CONSENT STATEMENT

My name is _____ ID number _____. I am collaborating with the Institute of Science and Agricultural Technology (ICTA), North Dakota State University and Michigan State University from U.S. to carry out a survey on **climbing bean production** in the Chimaltenango, Huehuetenango, Quetzaltenango, Quiché and San Marcos provinces to learn about bean production systems used by farmers in these regions. This information will be used to focus on breeding efforts to release new cultivars of climbing beans that can benefit to farmers. I would like to ask you some questions related to your planting systems, inputs use (as seed, fertilizer, and pesticides), harvest, seed storage, and bean sales carried out in during the **2014 planting season**.

The Legume Innovation Lab, supported by United States Agency for International development (USAID) and sponsored by Michigan State University (MSU) in the United States, is financing this survey. The interview will last approximately **one hour and 15 minutes**. Your participation in this study is **voluntary**. Your refusal to participate or to withdraw from the survey at any time does not imply any punishment or loss of benefits. You are free to not answer any of the questions that I am going to ask. However, your answers will help me to understand the production systems of climbing bean in this area and it will allow to make recommendations for breeding efforts in Guatemala that will guide the breeding program to generate new useful climbing bean cultivars for this area. All personal information will be kept **confidential**. Results of this study will be presented as summarized/aggregated data and any personal information will not be used in reports. If you want to receive a copy of the summarized results in the future, or if you have questions, concerns, or comments about this survey, you may call to XYZ, North Dakota State University, by phone to XYZ or to ABC, ICTA, phone ABC, or to the Institutional Review Board at NDSU, Toll-free PQR.

Do you have any questions for me about this survey? <*Interviewer:* *pause and answer any question from the interviewed person: then continue with the following statement*>

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If you do not have any questions or if I have answered your questions adequately, I would like to start the interview. By a**nswering my questions**, you are indicating your willingness to **participate freely** in the survey.

Socioeconomic and agronomic survey of climbing bean growers in Guatemalan Highland

X. General information of <u>respondent</u>

Interviewer, read to responder: I would like to start by asking some general questions about you and your family. Thereafter, I will ask about your climbing bean production in 2014, and available resources at home.

X2. Department: _____ [1] Chimaltenango [4] Quiché [2] Huehuetenango [5] San Marcos [3] Quetzaltenango	**X3**. County n**ame**:	**X4**. Community name:
X5. Community **code** (see list):	**X6**. Home **number** (0-9):	**X7**. Home **code** (*combine X5 y X6*): _____ (Write this code above each page)

X8a. First name of the responder: _____

X8b. Last name of the responder: _____

X8c. Cell phone number of the responder _____

[77] Prefer not to give your cell phone number
[88] Does not have cell phone

X9 Relationship of the responder with the main head of household:* _____

[1] Is the head of household [3] Son/daughter (18 years old or up)
[2] Spouse/domestic partner [99] Other (specify): _____

X10a. Gender of head of household: _____

[1] Man [2] Woman

X10b. Education level of the household head (years of full formal education) _____
(Just started with *1=First year of elementary, etc.*)

X10c. Does the head of household read and write? [1] Yes [2] No _____

X10d. What is the marital status of the head of household? _____

[1] Married by law/church [3] Single/live alone
[2] Cohabitate/live with other person [4] Divorced/widow/separated

If the responder is SON/DAUGHTER or OTHER and X10d=[3] ó [4] => A1
If the responder is HEAD OF HOUSEHOLD and X10d=[3] ó [4] => A4

X10e. If is married/cohabitate, what is education of spouse (years full formal education) _____

X10f. If is married/cohabitate, can spouse read and write? [1] Yes [2] No _____

If the responder is SPOUSE/DOMESTIC PARTNER => A3
If the responder is HEAD OF HOUSEHOLD => A4

Interviewer:

*1) The head of the household is the main decision maker related to **household expenses and/or farm production***

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*2) A household is defined as a unit comprised of members of an inmediate family **who normally live and eat and their meals together**.*

Section A. General information of responder and farmland

A1	**A2**	**A3**	**A4**	**A5**	**A6a**	**A6b**	**A7**	**A8a**	**A8b**	**A8c**
Education: Full years of formal education (*Staring with 1=First year of elementary, etc.)*	Do you read and write? [1] Yes [2] No	Gender (do not ask, just look at and write) [1] Man [2] Woman	How old are you? (***<18 years old? End up the survey!***)	How many years have you been **living** in this community? [77] Since I born	How many years of experience in **agriculture** do you have?	How many years of experience **growing beans**?	Are you <u>active member</u> of any farm organization, cooperative or an organized group? [1] Yes [2] No=> **A9**	If yes, What type of organization do you belong to? (*Write each organization in a column separated-up to three: if belongs to less than 3 organizations, write 88 in the empty columns*) [1] Producers cooperative [2] Crop specific cooperative [3] Entrepeneur group not related to agriculture [99] Another type (write in the correspondent space) [88] Do not belong to other organizations (*only for A8b y A8c*)		
								1º organization	2º organization	3º organization

A9	**A10a**	**A10b**	**A11a**	**A11b**	**A11c**	**A12a**	**A12b**
Any **other member** at home belongs to any productive organization, cooperative or other organized group? [1] Yes [2] No	For the **2014 planting season**, please answer… *[Write separately for owned land and not owned land (rented or lend from others]*					In **2014**: Which were the **two most important crops** for your home relative to **planted area**? (*See code of the crops below; 1º is the most important!*)	
	<u>How many parcels</u> (#) of farming land were under your responsibility?		How much was the **<u>total area</u>** (in **acres**) for all the plots planted by your family in <u>all your crops</u>?		**<u>How many acres</u>** are in a **<u>manzana</u>** of land? (*see conversion table*)		
	Owned	Not owned	Owned	Not owned		1º	2º

A13a	**A13b**	**A14**	**A15a**	**A15b**	**A16**	**A17**
In **2014**: Which were the **most important** crops for your family relative to the higher amount **produced for your own consumption**? *(See code of the crops below; 1º is the most important!)*		What **year** was the last time that you received **some training** related to **bean production**? AAAA [8888] Never/Do not remember => **A16**	**Who** was the trainer? [1] Extensionist or Government project [2] ICTA/University [3] NGO/development private project [99] Other (be specific)	What was the **main topic taught**? [1] New cultivars [2] Culture practices [3] Integrated pest management [4] Post harvest management [5] Nutrition [99] Other (be specific)	What **year** was the last time that you adopted some **new** input or management practice for the farm the first time? AAAA [8888] Do not know/Do not remember => **B1**	What was the **<u>new input or practice</u>** that you adopted recently in your farm? (*Input name/practice*)
1º	2º					

Crop code for questions A12a-A13b:		<u>TUBERS</u>	<u>HORT CROPS</u>	[35] Faba bean	<u>OTHER CROPS</u>	<u>OTHER CODES</u>

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BASIC GRAINS [1] Rice [2] Climbing bean [3] Bush bean	[4] Maize [5] Soybean [6] Wheat	[9] Other basic grains (specify in the space)	[21] Sweet potato (white or yellow) [22] Sweet potato (orange) [23] Potato [24] Cassava	[31] Pea [32] Squash [33] Fig leaf gourd [34] Broccoli	[36] Cucumbers [37] Sweet pepper [38] Cabbage [39] Tomato	[40] Other horts (specify in space)	[41] Coffee [42] Fruits	**[88]** *No more crops (only for answer 2º)* **[99]** Other crop (specify in space)

Section B. General information about plots/parcels where climbing beans were cultivated during 2014 (months indicated in A10a-A10b)

Interviewer, read to responder: *Now I would like to ask about plots/parcels in which you produced climbing beans during the 2014 planting season.*

B1. During the 2014 planting season, how many plots/parcels did you plant with beans? ☐

Interviewer: Define PLOT as a piece of land separated (not adjacent) where beans were planted

Interviewer: ask to the person for drawing all the plots where beans were planted in 2014 in **the last page** of this survey. ☐

B2. *Interviewer, answer*: Were plots drawn by the farmer? [1] Yes [2] No

B3. In general, did you have the following production problems or more during 2014 season that the last 2 years? [1] Yes [2] No [77] I do not know

B3.1 Insects ☐ **B3.2** Diseases ☐ **B3.3** Drought ☐ **B3.4** Excess of rainfall ☐

Interviewer: *The number of rows to be filled in the following tables should be equal to the number of tables indicated in **B1**. **Use the map to identify easily the plots**.*

Interviewer, read to the responder: *Now, for each of the plots where bean was planted, please tell me, starting by the bigger plot:*

1. Characteristics of the plots, labor, and abiotic constraints in the plot

B0	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**	**B11a**	**B11b**	**B12a**	**B12b**	**B12c**	**B13**	**B14**
Plot ID	Unique description of the plot (i.e. place, some reference point, etc.)	How long it takes to go there from home by foot? [888] Cannot be reached by foot	How is the [...] in this plot? Slope [1] Flat [2] Slightly inclined [3] Inclined [4] Highly Inclined	Soil type [1] Sandy [2] Silt [3] Clay [77] Unknown	Soil quality to grow beans [1] Good [2] Average [3] Bad	Land tenure [1] Owner =>**B11a** [2] Rented =>**B10** [3] Co-owned =>**B11a** [4] Borrowed =>**B11a** [5] Government =>**B11a** [99] Other (specify)	If this plot is rented, how much did you pay during the cropping cycle? (Quetzales) [77] I do not know	What is the size of this plot? Area	Unit [1] Manzanas [2] Tareas [3] Cuerdas **(use same size as in A11c)** [99] Other (specify)	Who makes decisions about which crops should be planted? [1] Myself [2] Spouse [3] Spouse and me [4] Son/daughter [99] Other (specify)	**Gender of this person** [1] Man [2] Woman	**Age of** this person (years)	What type of soil preparation did in this plot? [0] No till [1] Minimum till [2] Animal till [3] Mechanic till [99] Other (specify)	Approximately what percentage of your milpa fell down because of the climbing bean? [0] 0% (nothing) [1] 25% or less [2] 33% (un third) [3] 50% (half) [4] 67% (two third) [5] 75% or more [77] I do not know/I cannot answer

Código del hogar (**copiar X7**): _____

P1														
P2														
P3														
P4														
P5														
P6														

Código del hogar (**copiar X7**): _____

1. Characteristics of the plots, management and abiotic constrains in the plot (continuation)

B0	**B15**	**B16**	**B17**	**B18**	**B19**	**B20**	**B21**	**B22**	**B23**	**B24**	**B25**	**B26**	**B27**	**B28**	**B29**	**B30**
Plot ID (kept the same order as previous page)	Which crops were planted before in the previous season **(2013)**? *(separate crops by commas)* (see codes below)	**Besides beans,** what other crops were planted here during **2014**? *(separate crops con commas)* (*See codes below*)	Approximately, what proportion of the area was planted with beans? [1] 25% or less [2] 33% (one third) [3] 50% (half) [4] 67% (two thirds) [5] 75% or more [6] 100% (bean only)	For bean planted in this plot, tell me what was the… Distance between Rows (cm) [88] Does not work (forecast planted)	Distance between plants/hills (cm) [88] Does not work (forecast planted)	Number of Seeds per hill	Was this distance used for all cultivars in this plot? [1] Yes [2] No	Approximately, how much did you spend in the following inputs in the bean crop planted during 2014 season? (*Quetzales; write number '0' if did spend any* Soil preparation	Chemical fertilizers	Organic fertilizers	Herbicides	Chemical pesticides (insecticides and fungicides)	Seed	Hand labor hired	Who makes decisions about the destination of the harvested product of this plot? [1] Me [2] Spouse [3] Spouse and me [4] Son/daughter [99] Other (specify)	How many cultivars did you planted in this plot during **2014**?
P1																
P2																
P3																
P4																
P5																
P6																

Crop codes for questions B15 y B16:						
[0] Fallow land (*only for **B15***)	BASIC GRAINS [1] Rice [2] Climbing beans [3] Bush bean [4] Maize [5] Soybean [6] Wheat [9] Other basic grains (specify in space)	TUBERS [21] Sweet potato (White or yellow) [22] Sweet potato (orange) [23] Potato [24] Cassava	HORT CROPS [31] Pea [32] Squash [33] Fig leaf gourd [34] Broccoli [35] Faba bean [36] Cucumber [37] Sweet pepper [38] Cabbage [39] Tomato [40] Other horts (specify in space)	OTHER CROPS [41] Coffee [42] Fruits	OTHER CODES **[66]** Did not rent this plot [77] I do not know/I do not remember **[99]** Other crop (specify in space)	

Interviewer: *For the first plot* (**P1**)*, ask the responder the names of all bean cultivars planted, use IDs sequentially* (**V1, V2**…) *and write in each in the following section/page; thereafter do the same for the second plot* (**P2, V1; P2, V2**…) and successively up to write the names of all bean cultivars planted in all plots. *The number to fallout in the tables C1 should be equal to sum number of cultivars reported in B30, for all plots. It is possible that the same cultivar was planted in more than one plot.*

Código del hogar (**copiar X7**): _____

Section C. Information about bean production in 2014 planting season

Interviewer, read to responder: *Now, for each bean planted plot, tell me the names of the planted cultivars and please answer the following questions:*

1. Bean cultivars planted, main seed source and cropping systems used during 2014 planting season

B0	**C0**	**C1a**	**C1b**	**C2a**	**C2b**	**C3**	**C4a**	**C4b**	**C5**	**C6a**	**C6b**	**C7**	**C8**	**C9**
Plot ID (*Write* P1, P2… P6, keeping the same order of section ***B***)	Cultivar ID (*Write* V1, V2, *etc… Start with* V1 *in each plot —i.e., first ID cultivar in* P2 *is* V1*)*	Which cultivar did you planted in this plot during this season? *(write the name clearly)*	What **commercial type or market class is this cultivar**? [1] Bolonillo [2] small black [3] Piloy [4] Piligua [99] Other (specify)	What growth type is this? [1] Climbing [2] Bush=>**C3** [77] I do not know=>**C3**	**If climbing,** what is the support? [1] Maize [2] Wood stakes [99] Other (specify)	Is this an improved cultivar? [1] Yes [2] No [77] I do not know	Could you provide 5-**10 seeds** of this cultivar? ** [1] Yes [2] I do not have seed (I planted all) [3] No, I cannot	**Interviewer:** Was the bag correctly labeled, the seed kept and the bag sealed? [1] Yes [2] No	What year was the first time this cultivar was planted in your farm? (AAAA)	**Planted** date of this cultivar during 2014 season Month (1-12)	 Week (1-4)	The seed used was certified? [1] Yes [2] No [77] Unknown	What was the main source? *(The most important of this seed?* *(see codes below)*	What was the planting system used for this cultivar? [1] In milpa (direct) [2] In milpa (relay) [3] Intercropping [4] Monoculture, in rows [5] Monoculture, in trellises [6] Monoculture, broadcast seeded [99] Oher (specify)
P1	**V1**													

Source seed code for C8:			
[1] Seed kept from previous harvest	[2] Other farmer [3] seed bought in the market	[4] Bagged seed bought in the market/agrochemical store	[5] Donated from an NGO or any Project [6] or from government (ICTA, MAGA, SOSEP, FONTIERRAS)	[99] Other source (specify in space)

Código del hogar (**copiar X7**): _____

****NOTICE FOR INTERVIEWER: BEfORE** putting seed in the bag, labeled it. The label include **Farm Code (X7),** plot ID **(B0),** cultivar **ID (C0)** and cultivar name **(C1a).** Thereafter put the seed inside the bag and seal the bag. Confirm that the bag is labeled **(X7 B0 C0 C1a)** before asking samples of the following cultivar.

Código del hogar (**copiar X7**): _____

2. Biotic stress, control, and use of inputs for bean production during 2014 planting season.

B0	**C0**	**C10**	**C11**	**C12a**	**C12b**	**C13**	**C14a**	**C14b**	**C15**	**C16a**	**C16b**	**C17**	**C18**	**C19**
Plot ID	Cultivar ID	From the total seed planted, approximately how much germinated? [0] 0% (any) [1] 25% or less [2] 33% [3] 50% [4] 67% [5] 75% or more [6] 100% (all)	Which of the following insects attacked mainly to this bean cultivar? SHOW PHOTOS OF INSECTS (Write codes separated by *commas*) [0] Any insect **=>C13**	If any **insect** attacked this cultivar… ¿Did you a**pply** any insecticide to this cultivar? [1] Yes, chemical insecticide [2] Yes, natural insecticide [3] Yes, both, chemical and natural insecticide [4] I did not applied any**=>C13** [77] I do not know **=>C13**	How many applications you did during the production cycle? [77] I do not remember	Which diseases affected mainly to this bean cultivar? SHOW PICTURES OF THE DISEASES *(Write codes separated by commas)* [0] any disease **=>C15**	If any disease affected to this cultivar… ¿Did you applied any fungicide to this cultivar? [1] Yes, chemical insecticide [2] Yes, natural insecticide [3] Yes, both, chemical and natural insecticide [4] I did not applied any**=>C15** [77] I do not know **=>C15**	How many application you did during the production cycle? [77] I do not remember	Did you apply any chemical fertilizer to this cultivar? [1] Yes [2] No **=>C17** [77] I do not know **=>C17**	**Name of the two main chemical fertilizer applied** (see codes below)		Did you apply any organic fertilizer to this cultivar? [1] Yes [2] No [77] I do not know	After planting, how many weeding passes did you do to this cultivar? (write number '0' *if not weeded* \)	Did you apply any herbicide to control weeds in this bean field? [1] Yes [2] No [77] I do not know
(type in the same order as previous page*)*										Main	Secondary			
P1	**V1**													

Chemical fertilizers codes for questions C16a y C16b:	[2] 12-30-10	[4] 18-46-0	[6] 20-20-10	[8] 40-40-0	[10] Foliar	[88] I did not apply other fertilizer (only for **C16B**)
[1] 10-10-40	[3] 15-15-15	[5] 20-20-0	[7] 20-20-20	[9] Urea	[11] Ammonium sulfate	[99] Other (specify in correspondent space)

Código del hogar (**copiar X7**): _____

3. Characteristics of the bean cultivars and seed yield during 2014 planting season

B0	C0	C20a	C20b	C21a	C21b	C22a	C22b	C22c	C22d	C23a	C23b	C24a	C24b	C25a	C25b	C25c	C25d	C25e
Plot ID	Cultivar ID	Which ones are the two traits that you most like of this cultivar?		Which ones are the two traits that you dislike of this cultivar?		Was this cultivar planted for green bean or dry grain? [1] Dry bean =>**C22d** [2] Green bean	If it was for green bean, What was its use? [1] Household consumption [2] Sale=> **C22d** [3] Both household consumption and sales [99] Other (sp.) =>**C22d**	Approximately how many pounds were left for household consumption? pounds	Approximately, what proportion of this cultivar was harvested as dry bean? [0] 0% [1] 25% or less [2] 33% [3] 50% [4] 67% [5] 75% or more [6] 100%	**Date** when you ended up harvesting as dry bean		**Total amount harvested** of dry bean of this cultivar		From total of harvested seed How much was […] (*use the same weight units as C24b*)				
(copy in the same order as previous page)		[1] Good seed yield [2] Disease resistance [3] Insect resistance [4] Drought resistance [5] Early maturity [6] Fast cooking [7] Good taste [8] High value [9] Do not lodge the maize [99] Others (specify)		[0] None [1] Low seed yield [2] Disease susceptibility [3] Insect susceptibility [4] Drought susceptible [5] Late maturity [6] Slow cooking [7] Bad taste [8] Low price [9] It lodges the maize [99] Others (specify)								*Units:* [1] 100weigh [2] Cargos [3] Pounds [4] Kilos [99] Other (**specify unit and weight**)		Saved to be used as seed later?	Saved for household consumption and/or already ate?	Lost due to pest storage?	Sold?	¿Used for other purposes (specify)? (i.e. to pay bills)
		First	Second	First	Second					Months (1-12)	Weeks (1-4)	Amount	Unit	(*write the number '0' if not saved/lost/did not use*)				
P1	**V1**																	

C26a. Please name your favorite one among the cultivars listed in the previous table _____

C26b. Plot and cultivar ID (***copy B0 & C0***): _____

Código del hogar (**copiar X7**): _____

Section D. Sales, drying, and bean storage during 2014 planting

DX. *Interviewer,* *check out question* **C22b** (previous page): is any of the questions equal to [2] *or* [3]? [1] Yes [2] No _____

DY. *Interviewer,* *check out question* ***C25d*** *(*previous page**)**:* is any of the questions higher than cero? [1] Yes [2] No _____

Interviewer*: If your answer to* **DX = [1]** *or* **DY = [1]** *(at least one answer is YES), continue with* **D1a**. *If your answer to* **DX = [2]** *and* **DY = [2] (***both are NO), go to* **D10a**.

Interviewer, read to responder: *Now, please answer related to green bean and/or dry grain sales during 2014 planting season:*

1. Green or dry bean sales during the 2014 planting season

	D0	**D1a**	**D1b**	**D2a**	**D2b**	**D3a**	**D3b**	**D4a**	**D4b**	**D5**	**D6a**	**D6b**
Type of product sold	ID	**Total amount** sold		**Month** when you sold the largest amount? [1-12]	Why did you sell in this month? [1] Harvest time [2] High value [3] I cannot store [4] I needed cash [99] Other (specify)	**Place** where you sold the highest amount [1] Farm/home [2] Local market (in my community) [3] other close marker (in other community) [4] Other far market (in other community) [5] Broker/intermediary [99] Other (specify)	Why did you sell in this place? [1] Easy access [2] High price [3] I cannot transport to other place [4] Good relationship with the buyer [99] Other (specify)	What was the price when you sold the largest amount? (Quetzales)	Did you negociate/settle this price before harvest time? [1] Yes [2] No	How much you paid for transportation when you sold the higher amount? (Quetzales) *(Write number '0' if any)*	About the person responsible for selling the higher amount…	
		Amount	Units [1] Quintales [2] Cargas [3] Pounds [4] Kilogram [99] Other (**specify units & weigh**)								What is your relationship with the head of household? [1] Is the head of household [2] Spouse [3] Son/daughter (>18 years) [4] Both head and spouse sold [99] Other (specify)	Gender [1] Man [2] Woman [3] Both (only if **D6a=[4]**)
Green bean	**1**											
Dry Grain	**2**											

2. Drying and storage of dry bean during the 2014 planting season

D10a	**D10b**	**D11a**	**D11b**	**D12a**	**D12b**	**D13**	**D14**	**D15**	**D16**
How did you dry up the harvested plants? [1] They dried in the field, uncovered [2] They dried in the field, covered with plastic [3] Dried in a cord hanging up [4] Dried under shade (e.g., at home) [88] Not in another way (**only for D10b**) [99] Another way (specify)		What are the two main ways that you dried the grain once threshed? [0] Did not dry it [1] Exposed to the sun, uncover [2] Exposed to the sun, covered by transparent plastic [3] Drier under shade [88] Do not dry in another way (**only for D11b**) [99] Another way (specify)		What are the two main ways that you store the grain once threshed? [0] Did not save any [1] In plastic bags [2] in polyethylene sacs [3] In fertilizer sacs [4] In troja	[5] In metal silos [6] In small plastic recipients [7] In barrels (metal/plastic) [88] Do not storage in other way (only for **D12b**) [99] Other (specify)	For the main storage method, how much will the beans last without damage by pest? (weeks)	Did you apply any product to control storage pests? [1] Yes [2] No =>**D16**	What is the main pest during storage? [1] Weevils [2] Rodents (mice) [99] Other (specify)	Did you apply any natural pesticide (e.g. ash, pepper, lime, dry leaves) **to control storage pest**? [1] Yes [2] No
First	Second	First	Second	First	Second				

Código del hogar (**copiar X7**): _____

Section E. Preferences of the bean characteristics and demand for bean seed

***Interviewer, read to the responder**: Now I would like to ask about the most desirable traits in beans for you and your family*

E1	**E2**	**E3**
What are the three main traits/characterisitcs that you and your family are looking for in a bean cultivar (traits of the plant or the crop that you appreciate/like) *(Interviewer: Write the codes of the traits included at the right side)*		
Main trait	2nd trait	3rd trait

Trait for E1-E3:	
[1] Good grain color [2] Good grain size [3] Resistant to insects [4] Resistant to diseases [5] Good flavor of green beans [6] Early maturity [7] High grain yield	[8] Good market class/commercial acceptability [9] Fast cooking [10] Good flavor/taste [11] Good resistant to storage insects [12] Do not lodge the maize plants [88] There is no more desirable traits (**only for E2-E3**) [99] Other (specify in the correspondent gap)

E4	**E5**	**E6**	**E7**	**E8**	**E9**	**E10**
If a cultivar has good traits mentioned above (in E1-E3), how much would you would be willing to pay for a pound of seed of this cultivar? Quetzales/pound	Initially, how much seed would you like to buy? Amount	Unit [1] Pounds [2] Kg [3] Arrobas (25 pounds) [99] Other (specify)	During the last 3 years, have you stop planting any cultivar that you used to plant? [1] Yes [2] No => **Go to F1**	If Yes, how many cultivars did you stop planting in the last 3 years	From all of these cultivars, please tell me the NAME of the last cultivar that you stop planting lately	What was the main reason to stop planting this cultivar? *(See codes below)*

Codes for E10:				
[1] The color was not good enough/desirable [2] The grain was too small	[3] Susceptible to insects [4] Susceptible to diseases [5] Pods were no good enough/desirable	[6] Late maturity [7] Low grain yield [8] Do not have good price	[9] Takes longer time to cook [10] The flavor/taste was not good [11] Susceptible to storage insects	[12] There was not available seed [13] The grain was opaque (not bright) [14] Lodge the maize plants [99] Other (specify)

Section F. Importance of bean production

F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**
Did you use bank loan/credit for the bean production in the last 12 months? [1] Yes [2] No	Did you received cash money from any relative? [1] Yes [2] No	In a typical year, what percentage of your incomes come from green bean commercialization? [0] Do no sell Green bean [1] Less than 25% [2] Between 25% and 50% [3] Between 50% and 75% [4] More that 75%	In a typical year, what percentage of your incomes come from dry bean commercialization? [0] Do not sell bean [1] Less than 25% [2] Between 25% and 50% [3] Between 50% and 75% [4] More than 75%	In a typical year, what percentage of your household bean consumption comes from your own production? [1] Less than 25% [2] Between 25% and 50% [3] Between %0% and 75% [4] More than 75%	Typically, how long will last your bean reserves for household consumption after harvesting? [1] Less that one month [2] From one to three months [3] From three to six months [4] From six to nine months [5] Up to the next planting season [77] Do not know/cannot answer	In a typical year, when the bean reserve in the household is over, how frequently do you buy bean for your consumption? [0] Never [1] Every day [2] Few times a week [3] Once a week [4] 2-3 times a month [5] Once a moth [77] Do not know/cannot answer	How far from your home is the closest place to buy beans? *(km)*

Código del hogar (**copiar X7**): _____

Section G. Socioeconomic characteristics of the family

G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14a	G14b	G15	G16	G17	G18
How many people live at home?			How many people at home are in the following age groups? (*Write the number of persons in each age group. The sum in each group should be equal to the total in G3)*							All the children at home between 7-13 years old attend school? [1] Yes [2] No [3] Does not have children between 7 to 13	What is the floor material at home? *(See codes at your right side)*	At home, do you have [...]? [1] Yes [2] No						
Men	Women	Total	<5	5-6	7-13	14-25	26-49	50-65	> 65			Water well	Shower (inside)	Shower (outside)	Bathroom	Latrine	Faucet water	Electricity

Code of materials (G12)

[1] Wood
[2] Clay bricks
[3] Concrete slab
[4] Concrete bricks
[5] Soil or sand
[6] Ceramics
[99] Other (specify)

G19	G20	G21	G22	G23	G24	G25	G26	G27	G28	G29
In the last 12 months, did any family member get incomes from one of the following sources? (***Instructions**: Red each point and write the answer)* [1] Yes [2] No									From the source of incomes in G19-G27, which ones are the two main sources? (write the number of the question*: G19-G27*)	
Sale of basic crops	Sale of hort crops	Sale of dairy products	Sale of beef cattle crops	Salary from farm hand labor	Other farm activity	Renting the land or equipment to others	Salary from other nonfarm activities (e.g.., hand labor, government, teacher, bank employee, domestic employee)	Income from an agricultural business	The higher source of incomes	Second source of incomes

G30	G31	G32	G33	G34	G35	G36	G37	G38	G39	G40	G41	G42	G43	G44	G45	G46	G47	G48	G49	G50	G51	G52	G53
How many animals have at home actually? *(if any, write the number'0')*							How many of the following items do you have at home (owner)? *(For each item, write one number. If not write '0')*																
Cows	Bulls	Ox	Pigs	Horses	Donkeys /mules	Calves	Bicycles	Motorcycles	Cars and trucks	Tractors	Cart of animal traction	Ploughs of animal traction	Backpack pump	Metallic silos	Water pump	Refrigerator	Gas or electric heater	Grainin g stone	Electric iron	TV	Radios	Cell phones	Computers

Section H. Bean consumption and dietary diversity

***Interviewer**: If possible, talk to the person who usually cook at home and ask the following questions. If the person is not available, ask the following questions.*

H1a. The person who answer the following questions is actually the person who cooks for the family? [1] Yes [2] No=>**Go to H2** |_____|

H1b. What is the gender of the person that usually cooks for the family? [1] Male [2] Female |_____|

H1c. What is the relationship of the cook with the head of household? |_____|

Código del hogar (**copiar X7**): _____

[1] Is the householdhead/responsible [2] Spouse/cohabitate [3] Son/daughter (18 years old or higher) [4] Father/mother [99] Other (specify): _____

H2. Up to yesterday, was there any festival, fest, or celebration that you were involved? [1] Yes [2] No |_____|

H3	**H4**	**H5**	**H6**	**H7**	**H8**	**H9**	**H10**	**H11**	**H12**	**H13**	**H14**	**H15**
Now please tell me if you or any family member ate something of the following **yesterday**…					**[1] Yes**	**[2] No**						
Food made or cereals (e.g. maize, wheat, rice, sorghum, millet)?	Cassava, sweet potato, potato, other food made of roots?	Any vegetables or horts?	Any fruit?	Meat of beef, pork, sheep, goat, chicken, other animals, kidney, heart, liver or other?	Fresh or dry fish or other sea food?	Eggs?	Meal made with beans?	Meal made with lentils, peas, cowpea, peanut, nuts, pigeonpeas?	Cheese, yogurt, milk, or other dairy product?	Meal made with oil, fat, or butter?	Sugar or honey?	Other food like condiments, coffee, tea?

H16a	**H16b**	**H16c**	**H16d**	**H16e**	**H16f**	**H16g**	**H16h**	**H16j**	**H16k**	**H16m**	**H16n**	**H17**	**H18**	**H19**	**H20**	**H21**	**H22**	**H23**
During 12 months of **2014**, which months did you and your family eat more beans and which month less or any? [0] We did not at beans this month [1] We ate small amount of beans this month [2] We ate more than usual this month												Do the children less than 14 years old like to eat beans? [1] Yes, all the time [2] Yes, most of the time [3] they do not like it [4] There are no children <14 (***confirm with questions G4-G6***) => **H 24**	Why do they like/dislike to eat beans? [1] Flavor/taste [2] Nutrition [3] They are used to [4] Make their stomach full [5] Prefer other food [6] Nothing else to eat [99] Other (specify)	In the last 7 days, how many days did the children eat beans? (answer should be between 0 and 7)	The days that the children eat beans, they eat in the… [1] Yes [2] No			How do the children like beans prepared? [1] Parados [2] Volteados [3] Fried [99] Other (specify)
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				Breakfast	Lunch	Dinner	

H24	**H25**	**H26**	**H27**	**H28**	**H29a**	**H29b**	**H29c**	**H30**	**H31**
In the last 7 days, how did you prepare the beans for consumption? [1] Parados [2] Volteados [3] Fried [99] Other (specify)	In the last 7 days, have you bought canned beans to eat at home? [1] Yes [2] No	In the last 7 days, how many times did you cook beans to eat at home? [77] Do not know/cannot answer	On average, how many cups (show cup) of beans did you cook each time in your house during the last 7 days? (# cups)	Typically, do you soak beans (in water) before cooking**?** [1] Yes [2] No	Typically, how long do you cook the beans? Time [77] I do not know/I cannot answer =>**H30**	Units [1] Minutes [2] Hours [77] I do not know/I cannot answer	What source of energy do you use to cook the beans? [1] Wood [2] Propane/gas [3] Electricity [99] Other source (specify)	Which one is your favorite cultivar? Name	When cooking, what is the most important characteristic in a bean cultivar? [1] Good flavor/taste [2] Good density/color of broth [3] bean growth during cooking [4] Do not change its color at cooking [5] Fast cooking [99] Other (specify)

H32. In a scale 0 to 10, where 0= Without any nutritional value and 10=highly nutritional, how do you grade the nutritional value of the following 7 meals…?

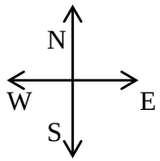
Interviewer: *Read each meal and ask to the responder the preferred grade. Write [88] if the responder do not know or cannot answer/give a grade to any of the meals*

Código del hogar (**copiar X7**): _____

H32a. Maize	**H32b.** Rice	**H32c.** Bean	**H32d.** Potato	**H32e.** Chayote	**H32f.** Coca Cola	**H32g. Meat** (any meat)

THANKS A LOT FOR YOUR TIME TO PARTICIPATE IN THIS SURVEY!

Interviewer: copy the home code (X7) and rip off this page *after the responder should be drown the plot where he/she planted beans in 2014.* ***Use this map in the sections B and C.***

Request to the farmer how the beans were planted in each plot/parcel within the farm (scheme with the crop lay out).

Código del hogar (**copiar X7**): _____