

Associate Award under the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes

AID-EDH-A-00-07-00005

YEAR 1 PRELIMINARY REPORT APRIL-SEPTEMBER 2014



With the collaboration of













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1. Introduction

This is the first six-month report of the MASFRIJOL project, a multifaceted, four-year Associate Award to the Leader Award for the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes (Legume Innovation Lab) (Cooperative Agreement No. EDH-A-00-07-00005-00). With a focus on black beans, MASFRIJOL is designed to mobilize the expertise and experience of the Legume Innovation Lab and its network of partners to strengthen the efforts of the USAID Mission to Guatemala to achieve its Feed the Future strategic development goals there by improving the health and livelihood of families in rural communities. During this period, the project has successfully worked on its two major objectives:

- Increase bean productivity in highland cropping systems
- Enhance nutritional quality of diets

MASFRIJOL formally began operation in April 2014; however, in late 2013 and early 2014, MASFRIJOL had already held preliminary planning meetings to establish relationships with key institutions directly and actively involved in the project. These institutions are:

- 1. Foundation for Technological Innovation, Agricultural and Forest (FUNDIT)
- 2. Institute of Agricultural Science and Technology (ICTA), a national agricultural research institution under the Ministry of Agriculture, Livestock and Food (MAGA)
- 3. Ministry of Health and Social Welfare (MSPAS), mainly through its technical staff of Rural Health (TSR's), Nutritionists and Educators
- 4. Center for Communication and Development (CECODE), a Non-Governmental Organization (NGO) with experience in communications with community partners

Thanks to coordination with these institutions and key partners working under the Western Highlands Initiative Program (WHIP) of USAID Guatemala, MASFRIJOL has reach more than 200 communities in the 30 municipalities located in five departments (Quetzaltenango, Totonicapán, Quiché, Huehuetenango, and San Marcos). A summary of administrative and programmatic accomplishments during this period is offered below:

- 2. The project completed a high percentage of planned activities during this report period, as documented in the FTF Indicators' Table (attached separately).
- 3. The project coordination screened over 70 applications, interviewed selected candidates and hired a professional project team in the field. This team includes the project director with a PhD in plant breeding, a program evaluator who is a licensed nutritionist, and four agronomists as field educators to be cross-trained in nutrition and maternal and child health as well as in community communications and nutritional assessments.

- 4. The project established a functional office in the Western Highlands in Quetzaltenango and continuing development of field activities according to the established short-, medium-, and long-term plans.
- 5. The terms of coordination between MASFRIJOL and its partners working under WHIP were established and strengthened.
- 6. The MASFRIJOL program evaluator developed a database with bean production and productivity information, as well as, nutrition information. She will continue to enrich it as the project advances.

7. Results and Progress Report

Administrative Results

Establishing field offices and administrative processes

The MASFRIJOL Project began its activities in April 2014. In May 2014, field offices were opened at ICTA Quetzaltenango, located at km. 3.5 Road to the Olintepeque, Department of Quetzaltenango (See Figure 1). The place is known locally as "Labor Ovalle Experimental"



Figure 1. MASFRIJOL Offices located at ICTA Quetzaltenango

Station." Being situated within the boundaries of this ICTA experimental station provides several advantages to MASFRIJOL. For instance, ICTA provided MASFRIJOL with more than sufficient space to host our technical team and group (up to 45 persons) meetings of up to 45 people. Also, as an experimental station, this location is surrounded by agricultural fields used for experimentation.

MASFRIJOL is already using a section of the station to

display bean production technologies (different varieties and agronomic practices) for use in the development of

educational materials.

Personnel recruitment

The project hired Dr. Salvador Castellanos as MASFRIJOL's national director. Dr. Castellanos first day on the job was May 12. As part of his responsibilities, he has successfully hired the rest of the field team. Consequently, Nutritionist Carolina Molina was hired as the monitoring and evaluation specialist with a start date of May 19. Also, the selection process of extension professionals concluded in mid-August with the recruitment of four agricultural engineers (Sandra Pineda, Luis Santos, Miguel Guzman, and Mario Tello). Additional support personnel for office maintenance will be hired in November, but the key technical team is all on board.

Development of MASFRIJOL base documents

The development of the following documents was completed based on the content of our Cooperative Agreement.

- Performance Monitoring Plan (PMP)
- MASFRIJOL Communication Strategy (MCS)
- MASFRIJOL Workplan 2014 (MWP)

The Legume Innovation Lab team at Michigan State University (MSU) and the MASFRIJOL team in the field worked together to develop these documents. MASFRIJOL submitted drafts to the agricultural officer and the MASFRIJOL agreement officer representative (AOR) at USAID Guatemala. The Environmental Monitoring and Mitigation Plan (EMMP) is still under development. The project has gathered the necessary data and is working with DEVTECH to incorporate the EMMP guidelines into the monitoring and evaluation (M&E) process.

Subcontracts with project partners

MSU and FUNDIT was signed a subcontract designating FUNDIT as the financial administrator of MASFRIJOL's project resources. Separate subcontracts with FUNDIT were also signed to manage the financial resources assigned to ICTA, MSPAS, and CECODE. These subcontracts cover Year 1 project activities from June through December 2014. Workplans from January through October 2015 for Year 2 project activities are under development.

Memoranda of Understanding (MOU) with WHIP partners

During the first six months of activities, the project has established close coordination of activities with the following WHIP Partners:

- Save the Children (Projects PAISANO and Cadenas de Valor Rural Project)
- AGEXPORT (Cadenas de Valor Rural Project)
- ADAM (Cadenas de Valor Rural Project / Save The Children)
- ANACAFE (Cadenas de Valor Rural Project) (MOU under review)
- Catholic Relief Services (CRS)

The project is expected to sign memoranda of understanding with these partners in the short term. Such documents bring formality to our partnership and represent an institutional commitment to our field activities. Additionally, mutually beneficial relationships defined in these documents will help MASFRIJOL remain on good professional terms with these partners despite potential personnel changes.

Acquisition of vehicles

Reliable mobility for field technicians lies at the center of importance for MASFRIJOL strategy. To make this mobility possible, five vehicles were scheduled for procurement at the project's inception, but MASFRIJOL has purchased only one pickup truck. The purchased

vehicle stays at the field office and is used by the national director, monitoring and evaluation specialist and the agricultural field extension professionals. Procedures to acquire four additional vehicles are in progress with a tentative delivery date of November 15th. Due to the need to mobilize our field team, MASFRIJOL has rented three pickup trucks and borrowed another vehicle from another recently completed USAID project. The four vehicles are assigned to the four extension workers. One extension worker covers communities in Quetzaltenango and Totonicapán, and the other three are assigned to Quiché, San Marcos, and Huehuetenango.

Programmatic Results

Community needs assessments

The objective for conducting the needs assessment was to establish a dialogue with the community on what they know and want to know regarding bean production, nutrition and an increased intake of protein, and their preferences on learning methods and schedules. This information was translated into specific community plans for the field technicians to execute.



Figure 2. MASFRIJOL agronomist Sandra Pineda and MSU's Drs. Hoerr and Wille validating the bean consumption form with mothers in the community Chipuac, municipality of Totonicapán, department of Totonicapán.

MASFRIJOL partner CECODE coordinated and led these diagnostics. The development of such studies takes into account the sociocultural aspects of communication and the transmission and reception of information and feedback. CECODE conducts the diagnostics in the local, indigenous languages to facilitate and encourage participation of both men and women.

The first six such assessments have provided important inputs for validating the method in use such as the Household bean consumption form (See

Figure 2). As a result, the MASFRIJOL technical staff and CECODE's team of experts in communication for development now have an instrument (form/report card) to obtain information from the needs assessment of the targeted communities. This tool was validated in the communities of Petatán and Cabic in the department of Huehuetenango. This validation took place with the participation of MASFRIJOL technical staff, CECODE, and Ministry of Health rural health technicians.

Dissemination of bean seed of improved varieties

One of the readily available technologies to MASFRIJOL is bean seed of improved varieties. MASFRIJOL completed the production, conditioning, and bagging of 1,200 quintals of seeds (approx. 55.0 TM) by late May 2014 of three varieties ICTA Hunapu, ICTA Altense, and ICTA Super Chiva (See Figure 3). With this seed available, the MASFRIJOL coordinated

efforts with WHIP partners to reach 8,213 beneficiary households in the target geographic area. This volume of seed was packed in five-pound (2.3-kg) bags, sufficient to plant one *cuerda* of land or about 432.0 square meters. The amount recommended per *cuerda* is three pounds, but the project expects that farmers will plant more than one *cuerda* or will share the seed among family members.



Figure 3. Brochures illustrating varieties disseminated during the April-September 2014 planting season.

Through partners' support (Table 1), each bag of seed was accompanied by a form requiring information from each family regarding the characteristics of their land holding(s), experience with seed (from different sources), and other key baseline information for the project. MASFRIJOL is gathering these forms to identify all the beneficiaries and to plan follow-up visits with additional information on productivity-

enhancing technologies and nutrition education. To date, the project has collected more than 3,800 forms and is building a digital database with this information.

It is noteworthy that the bean varieties distributed by MASFRIJOL have a range of adaptation in terms of altitude in meters above sea level (MAMSL). This is based on recommendations offered by the ICTA, which developed and owns these varieties. To corroborate this information with partners, MASFRIJOL has been developing an information database using GIS (Geographic Information System) to record altitude and other characteristics of specific communities under WHIP. This information was used to develop maps and to identify areas (communities) that are consistent with the recommendations for each variety.

MASFRIJOL identified that some seed was delivered to areas outside the range of the recommended altitudes. To learn from this experience, recommendations to partners will be drafted from this feedback once the collection of information and interpretation of the data is completed. For the moment, the collection of forms will continue as well as field monitoring on farmer harvesting results and overall adoption of the disseminated varieties. The seed distribution forms will provide final figures on percentage of women and men-led households among other key information for the project.

Development and validation monitoring and evaluation tools

MASFRIJOL's workplan envisions the development and validation of monitoring and evaluation forms that will serve as tools to gather information in a systematic fashion. As a

result, during these six months of operation, the team has developed forms or slips designed to gather information on bean productivity, consumption, diets, and feeding practices of children in beneficiary families. The seed distribution forms will provide final figures on percentage of male and female-led households among other key information for the project. It is very important that the forms are user-friendly, particularly since a high percentage of the beneficiaries in remote communities will be illiterate.

Table 1. MASFRIJOL Year 1 Seed dissemination report with the support of WHIP partners

Table 1. MASERIJOL Year 1 Seed dissemination report with the support of WHIP part						tiicis	
	r Partner Name	Department	Varieties (delivered in 5.0lb bags)				
Partner #			ICTA Hunapu	ICTA Altense	ICTA Super Chiva	TOTAL	Date of Delivery
1	Save The Children	Quiché	1400	200	200	1800	02/06/2014
2	AGEXPORT (ADIBA)	Quiché	154	153	153	460	10/06/2014
3	AGEXPORT (ASIES)	Quiché	346	347	347	1040	10/06/2014
4	MSPAS/ MAGA	Huehuetenango	300	300	300	900	19/06/2014
5	MSPAS	San Marcos, Quiche, Quetzaltenango, Totonicapán	560	355	345	1260	24/06/ 2014
6	MSPAS	San Marcos	20			20	25/06/2014
7	MSPAS	Quiché	75	75	75	225	02/07/2014
8	ONG ADAM	Quetzaltenango (San Juan Ostuncalco y Concepción Chiquirichapa)	500	200	200	900	04/07/2014
9	MSPAS	Quiché	152	0	0	152	14/08/2014
10	ANACAFE	San Marcos (San Miguel Ixtlahuacán)	132	132	132	396	26/08/2014
11	Proyecto CRS	San Marcos	1020	20	20	1060	25/09/2014
	TOTAL		4659	1782	1772	8213	

Once developed and validated, short-term training sessions will be organized with the network of collaborators to explain how to fill out the information form and report it quickly. These forms are an important piece in the systematic establishment of feedback loops for the technologies and practices disseminated by the project. Examples of these forms are included in the Appendix to this report. The forms developed to date, along with their validation status, include:

- Seed Delivery Form (validated)
- Community Needs Assessment Form (validated)
- Bean Harvesting Form (not yet validated)
- PICS Bags Delivery and Use (not yet validated)

- Bean Family Consumption Form (validated)
- Diet Diversity Form (not yet validated)

Strengthening Partnerships with WHIP Implementing Partners

The current period has been an excellent opportunity to meet the WHIP partners, some of whom have been working in FTF areas for decades and with WHIP for the last 18 months. Thanks to the expertise of these implementing partners, MASFRIJOL was able to reach circa 8,213 families with a bag of improved varieties of beans during the 2014 planting season. The final number of beneficiaries will be corroborated through the Seed Delivery Form. It is important to note that the number of farmers reached this first year represents 33 percent of the project target of 25,000 families during the life of the project. WHIP partners have demonstrated their satisfaction with



Figure 4. Ana Fuentes, from MSPAS Quetzaltenango, discussing with women farmers about their impressions on quality seed received from MASFRIJOL. San Juan Ostuncalco, Quetzaltenango.

MASFRIJOL seed and praised the complementarity of this activity in their ongoing programs. The challenge for MASFRIJOL and participating WHIP implementing partners is to identify new beneficiaries in remote areas to meet our goal.

The partnership dynamics established this season have also laid the groundwork for the fieldwork of a team of agriculture engineers working as MASFRIJOL extension specialists. Their responsibility throughout the next project periods is to introduce other technologies and productivity-enhancing practices to impact bean productivity and higher bean consumption at the home.

Development of curriculum packages for mobile units

As planned in the MASFRIJOL technical application, CECODE has worked closely with ICTA and MASFRIJOL team to collect video and photography in the field to produce training curricula for the project audiences. As of September 2014, the team has developed draft video materials on productivity enhancing practices for beans which are still under revision. Also, the team has identified other important topics for developing videos. ICTA and MASFRIJOL technicians will develop the topic content prior to submission to CECODE. CECODE will the first draft video and do one revision when needed.

8. Promoting "Communication for Development"



Figure 5. MASFRIJOL national coordinator Dr. Salvador Castellanos and MASFRIJOL agronomist Luis Santos discussing farmer experiences with disseminated seed of improved varieties with community members in Tzuná, municipality of Concepción Huista, Huehuetenango.

MASFRIJOL has accounted for the importance of implementing each of the programmed activities with a communications strategy that permeates the differences in language culture and to collect useful feedback. To this effect, CECODE is leading the application of communication for development practices and has provided a system to standardize how we

generate knowledge and bring it back to our rural community partners. MASFRIJOL wants to promote exchanges that inform, critique, and improve our fieldwork and the health and lives of rural farm families.

CECODE activities are not limited to theoretical training but include providing support and field implementation. CECODE is directly responsible for developing specific tools and communication products, such as videos, sketches, stories, pamphlets, and banners that include the icons and messages that connect and communicate effectively with the target population.

During the past six months, CECODE has delivered the message on communication for development through several examples and techniques. MASFRIJOL team members and collaborating partners are starting to apply these in the field (See **Figure 4**).

9. Activities in Progress

The current MASFRIJOL workplan extends from June through December 2014. Many activities have been fully implemented and will be completed in the next several weeks. The most significant actions that will be completed as part of the current workplan are as follows:

- The identification of new geographic areas under WHIP for MASFRIJOL intervention
- The planning of Community Seed Depot locations and plan to complete them
- The development of audiovisual materials to be used by mobile units
- The Monitoring and evaluation of ongoing actions
- The planning of 2015 activities
- The completion of reports

10. Lessons Learned and Recommendations for FY15

The value of partnerships in project implementation

Over the last six months, MASFRIJOL has mobilized project resources and partners in an expeditious and effective way to inventory groups of beneficiaries, carry out training activities, and reach thousands of families during the bean planting season. Because the project had just began and did not have access to vehicles or direct contacts in the communities, MASFRIJOL understands that without the strong commitment of USAID and WHIP's implementing partners these results could not have been achieved. Continuing to build stronger, mutually beneficial relationships with AGEXPORT, ANACAFE, Save the Children, CRS, and MSPAS and MAGA professionals will remain a priority for the MASFRIJOL team in the coming months.

Dealing with a dry rainy season

The 2014 rainy season was marked by an extended dry spell that affected farmers throughout the country. In the western highlands, where soil generally tends to have a high residual humidity, the damage to a number of crops was less significant than in other areas, such as the dry corridor in the east. Nonetheless, many farmers reported dry conditions that either forced them to plant in dry soil or not to plant at all during the *primera* planting season. As a result, MASFRIJOL technicians are gathering data that indicates how some communities with poor soil fertility and water holding capacity will not fully experience the benefits of the disseminated, improved seed. Others, in contrast, were more fortunate and have been able to confirm the superiority of the MASFRIJOL's improved bean seed—from its germination rate through the different phenological stages. As the project team collects data on how different farmers faired, conclusions will be drawn on where to continue dissemination and where to recommend against it.

Addressing community misperceptions about MASFRIJOL's improved bean seed

A new draft law in Guatemala regarding property rights and the registration of plant varieties recently stirred rural communities to organize rallies against it. The problem with this law lies with the potential negative implications it would have on farmers' access to seed. As community leaders fought against the enactment of the law, a number of misperceptions about whether MASFRIJOL bean seed was transgenic reached some target communities.

MASFRIJOL has taken a very careful and respectful approach in different communities to explain the differences between transgenic seed and the bean seed disseminated. It is important to spend time with farmers who genuinely worry about the type of seed that comes to their hands because they are leaders in their villages and can spread the correct information in lay terms. The benefit of this investment is that it helps farmers from being confused and manipulated. This problem was not present across all beneficiaries, but it is an important lesson for the rest of the project's execution, possibly for other USAID projects.

11. Appendix

Draft forms developed





Boleta No. 001

BOLETA DE ENTREGA BOLSAS "PICS"

Estimado colaborador: El Proyecto MASFRIJOL es una iniciativa apoyada por USAID, la cual tiene dos objetivos: incrementar la productividad de frijo ly fomentar mayor consumo del mismo a nivel del hogar. La información que requerimos en este formato nos

ayudaran a planificar mejor nuestras ad	tividades. Por lo tanto, le agrade	ecemos sus esfuerzos en completar este formulario.
1- Código d el Productor.		
2. Cantidad de bolsas tipo "PICS" recibi	de 50 kg:25kg:	3- Fecha de Recepción:////
NOTA: Si requiere mas espacio para alg	jun as respuestas, as cribir en el	reverso de la boleta si es necesario
4 Departamento:	5- Municipio:	6- Comunidad:
7- Nombre completo (del responsable		Ŋ:
3- Número de identificación personal (
Información sobre el presente ciclo de	siembra que recién cosechó:	
9- Fecha de siembra:		10- Fecha de cosecha:
11- Que variedad(es) de frijol sembró:		Otres:
12- Área sembrad a de frijol (cu erdas):		Otres:
13- ¿De qué forma y en que lugar guar	da el frijo I que utiliza para con:	sumo en el hogar?
34- ∡De qué forma y en que lugar guar	da el frijo I que utiliza para sem	ille?
15- ¿De que forma y en que lugar guard	Jael frijolque u tiliza como ser	milla para el siguiente ciclo de cultivo?
15- ¿Qué cantidad de trijol vende (libra	s):	
17-2Q ue can tidad de frijol guardo para	consumo? Variedad MASFR	NUOL (libras): Otra Variedad (libras):
13-2Que cantidad de trijol guardo para	semilla? Variedad MASFRUO	OL (libras): Otra Variedad (libras):
19- ¿Utilizo la bolsa? Si 🔲 No 🗌	20- Para: Co	on sumo 🗌 Semilla 🔲
21- Prefiere almacenar el trijol para con	rsumo: Como lo hacia antes	Con bolse plestice tip o "PICS"
22- Prefiere almacenar el frijol para ser	milla: Como lo hacia antes	Con bolsa plastica tipo "PICS"
23- Nombre y firma de responsable de	esta boleta:	
24- O rganización a que pertenece:		
25- Teléfo no y Direccción de responsab	ile de llenar esta boleta: Tel	; Dirección:
26-Nombre y firma de la persona que	ofrece la información:	
NOTA: Si requiere mas espacio para alg	jun as respuestas, ascribir en el	reverso de la boleta si es necesario

CON LA COLA BORACION DE:















BOLETA DE DIVERSIDAD DE LA DIETA FAMILIAR Y DATOS ANTROPOMETRICOS

Fedha de evaluación:///	Departamento:	Munidpio:
		e de Familia:
Codigo de Agricultor://_/		

II. DIVERSIDAD DE LA DIETA FAMILIAR

Instrucciones: El objetivo de esta sección es evaluar la diversida del los alimentos que consume la familia. Se debe preguntar a la familia sobre los tipos de alimentos que comieron los miembros de la familia en el día anterior (24 horas atrás) guiandose de la siguiente pregunta: Qué Comieron el día de ayer (agregar las difere tes grupos de a limentos). Si la familia comió alguno de los alimentos del grupo tiene 1 punto y si no comieror ningunos de los alimentos dentro de éste grupo tiene O puntos.

Preguntas y categorias	Puntuación
A. Pan, fide os, arroz, trigo, maiz o tortillas?	Α.
B. Pa pas, camote, yuca, malanga o cualquier otro alimento proveniente	
de raiz o tubérculo?	В.
C. Verduas u hojas verdes?	.C.
D. Frutas?	. D.
E. Carne de va ca, carne de cerdo, carne de cordero, carne de cabra, carne de conejo,	
carne de pollo, carne de pato, hígado, riñon, corazón u otras carnes de órganos?	. E.
F. Huevas?	.E.
G. Pesca dos frescos o secos, mariscos frescos o secos?	G.
H. Frijoles, a rvejas, lentejas o fruto secos?	H.
I. Queso, yagurt, leche u atras productos lácteos?	.l.
J. Utilizó aceite, mante quilla, margarina o manteca de cerdo?	L
K. Azúcar o miel?	K.
L. Otras condimentas, café y té ?	L
Sacado en la meltodo logia FANTA III, "Puntaje de Oliversidad dietética en el hogar (HDSS) para Suma torila:	

la medición del acceso a los alimentos en el hogar. Guía de indicado res", Septiembre 2005. Modificado plor el Proyecto MASFRUOL 2014.

II. DIVERSIDAD DE LA DIETA DE NIÑOS < 2 AÑOS

Instrucciones: El objetivo es evaluar la diversidad de los alimentos que consumen los niños < de 2 años. Se debe preguntar a las madres sobre los tipos de alimentos que sus hijos comieron a en el día anterior (24 horas atrás) guiandose de la siguiente pregunta: Qué Comieron sus hijos < 2 a ños el día de ayer? agrega ndo los diferentes grupos de alimentos). Si los niños comieron alguno de los alimentos del grupo tiene 1 punto y si no consumieron ningunos de los alimentos dentro de éste grupo tiene 0 puntos. Con la colaboración de:



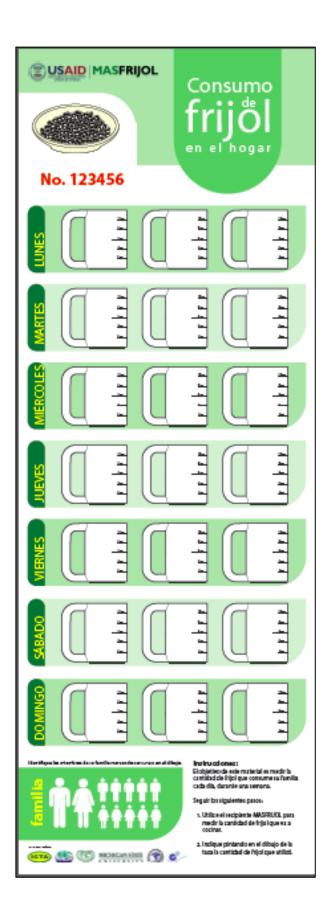


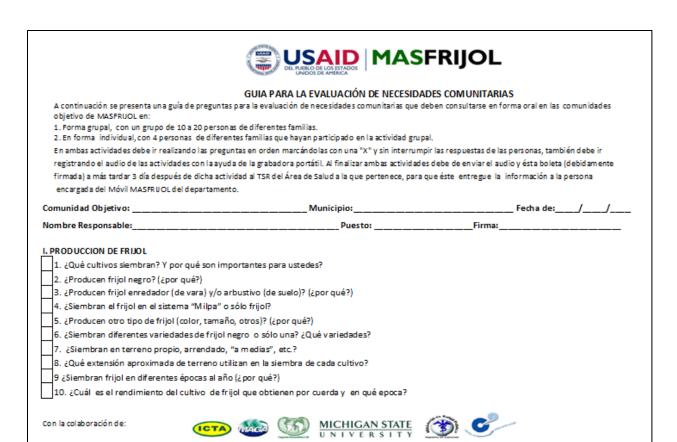












(first page of five)