Evaluation Report
on the Effectiveness of the
HasNa Farmer Extension Program 2013-2014

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June 26, 2015

Executive Summary

The HasNa Farm Extension Program focuses on improving the farm extension system in the Diyarbakir region of Turkey by helping groups of farmers and agricultural experts learn modern farming methods and applying and promoting these methods in their communities. This evaluation report studied the effectiveness of HasNa training on two training cohorts. The April 2013 cohort had 12 participants and the July 2014 cohort had 10 participants. Participants included farmers, agricultural engineers, an agricultural university professor, a food products businessman, and a community development expert. Each training period was two weeks long and was conducted in the United States.

The two-weeks of U. S. training included communication and conflict resolution training, the study of vegetable and fruit production methods, and learning about the U. S. farm extension system. At the end of training, participants prepared action plans to apply the training to their jobs and communities when they returned to Turkey. The 22 participants in the two cohorts prepared 22 individual action plans and four group action plans.

In April 2015, data was collected by interviewing 19 of the 22 participants to determine the extent to which the participants carried out their individual and group action plans, and the extent to which they reached out to community members not in the HasNa program to encourage them to improve their agricultural methods. Participant action plans and community outreach efforts were rated successful if they resulted in a real change in how agricultural work was done. The number and percent of successful action plans and community outreach efforts were then computed.

Of the 19 participants interviewed, nine participants were successful in carrying out their individual action plans, thus HasNa training was 47% effective. None of the four group action plans were carried out, thus training was not effective in achieving participant collaboration.

The HasNa Farm Extension Program and Participants

HasNa's mission in Turkey is to bring people of different backgrounds together to collaborate on projects that will improve their communities and their relations with one another. To carry out this mission, HasNa brings small, diverse groups to the United States for two weeks of training in conflict resolution, professional development, and cross-cultural engagement. After a group completes training, it returns home to carry out various projects the participants planned during their time in the U. S.

The HasNa Farm Extension Program focuses on improving the farm extension system in the Diyarbakir region of Turkey by helping groups of farmers and agricultural experts learn modern farming methods then work together to apply and promote these methods in their communities.

There are two overarching goals of the Farm Extension Program.

- One goal is to improve agricultural production in the region through the use of better farming methods by individual farmers.

- The second goal is to improve the capability of the regional farm extension system to support farmer adoption of better farming methods through collaboration among agricultural engineers, agricultural researchers, and farmers.

The program evaluated for this report involved bringing two cohorts of farmers, agricultural engineers, and others involved in agriculture in the Diyarbakir region to the United States. The first cohort came to the U. S. in April 2013 and the second came in July 2014. The 2013 cohort consisted of 4 farmers, 7 agricultural engineers, and a university professor of agriculture, a total of 12 participants. The 2014 cohort consisted of 5 farmers, 3 agricultural engineers, an agricultural products businessman, and a community development expert, a total of 10 participants.

Both cohorts underwent the same two-week training program in the U. S. The training began in Washington DC with two days of communication and conflict resolution training aimed at helping participants be more willing to work with each other for common goals and to share their training experience with others in their communities when they returned. For the rest of the two weeks of training participants studied vegetable and fruit production methods and learned about the U. S. farm extension system from agricultural experts and extension agents affiliated with the University of Maryland's College of Agriculture and Natural Resources in College Park, MD.

Near the end of the two-week training, participants were asked to prepare action plans for how they would make use of their U. S. training experience when they returned to their jobs and communities. Two types of action plans were required. First, each participant presented an individual action plan for what project he or she wanted to carry out after

returning home. Second, the cohorts developed group action plans for how they would collaborate on agricultural projects after returning home. The 2013 cohort developed one group action plan that all agreed to participant in. The 2014 cohort broke out into three subgroups and each subgroup developed a group action plan. In sum, for both cohorts, the 22 participants left the U. S. with 22 individual action plans and four group action plans.

Evaluation Methods

The guiding purpose of this evaluation was to assess the effectiveness of the program with the two cohorts as framed by the following two questions:

1. To what extent were the participants effective in carrying out their individual action plans?

   This question focuses on whether their HasNa training experience caused individual participants to make a change in or try out a new method in their agricultural work.

2. To what extent were the participants effective in carrying out their group action plans?

   This question focuses on whether their HasNa training experience caused groups of participants to collaborate in carrying out a project to improve agriculture in the region.

3. To what extend did participants reach out and share knowledge gained in HasNa training with others to improve agriculture in the region?

   This question focuses on whether their HasNa training experience caused participants to encourage others in the region to improve farming methods or agricultural extension practices.

To answer these three questions, the evaluator traveled to Diyarbakir for one week in April 2015 to interview participants in person and find out what had happened after they returned home. It had been twenty-four months since the 2013 cohort's visit to the U. S. and nine months since the 2014 cohort's visit. Of the 22 participants in the two cohorts, 19 were available to be interviewed.

The nineteen participants were interviewed over the course of five days. In most cases, the evaluator met with participants in their offices or on their farms. Three interviews were conducted in the office of HasNa's in-country program coordinator. One interview was conducted by telephone and Skype because the participant was in another part of Turkey.

Each interview followed a protocol that consisted of the following general questions with follow-up probes as needed. Each interview lasted approximately an hour. Participant responses during the interview were written down by the evaluator.

1. Did you carry out your individual action plan proposed during the U. S. training? If you did not carry it out, why not? If you changed your plan, why did you change it? If you did carry out the original plan or a different plan, what did you do, and what were the results?

2. Did your group carry out its group action plan proposed during the U. S. training? If you did not carry it out, why not? If you changed your plan, why did you change it? If you did carry out the original plan or a different plan, what did you do, and what were the results?

3. Did you reach out and share your HasNa training with others outside of your participant group? If you did, whom did you contact and how often did you do this? What resulted from these contacts if anything?

To analyze the interview data, two rating scales were constructed—one to assess the extent to which an individual or group action plan was carried out and one to assess the extent of participant outreach to others in the region.

The Action Plan Rating Scale has four levels as described below. An action plan effort is judged effective only if it achieves a result and is given a rating of 4. All lower levels represent ineffective effort.

Level 1: No effort was made to carry out the action plan.
Level 2: An initial effort was made which was thwarted by an authority.
Level 3: An initial effort was made but was not continued.
Level 4: A complete effort was made to achieve a result (Effective).

The Outreach Rating Scale has four levels as described below. An outreach effort is judged effective only if it achieves a result and is given a rating of 4. All lower levels represent ineffective effort.

Level 1: No effort was made to share U. S. training with others.
Level 2: HasNa training was shared only with family and friends.
Level 3: HasNa training was shared with strangers, but no-change occurred.
Level 4: Sharing HasNa training caused another person to change (Effective).

For an action plan or outreach effort to be considered "effective" and be given a rating of 4, it had to result in some degree of change in the agricultural extension practice or in method of farming, and the change can be attributed to the HasNa training experience. Once the interview responses were rated using these two scales, frequency distributions and percentages were calculated for each response level. Due to the small sample size in this study, analyses were limited to describing frequencies and percentages. No tests of statistical significance were performed.

Evaluation Findings

Evaluation Question 1: To what extent were the participants effective in carrying out their individual action plans?

To assess the overall effectiveness of the program, interview rating data from the two cohorts were combined into a single frequency distribution as shown in Table 1. This table indicates that 9 participants (47%) successfully completed an action plan and received an action plan rating of 4 for effectiveness.

Table 1		
Individual Action Plans: Combined Cohorts		
Rating	**Frequency**	**Percent**
1	7	37
2	3	16
3	0	
4	9	47
Total	**19**	**100**

The nine effective participants did the following:

- Three farmers installed drip irrigation systems for the first time with the help of HasNa small grants.
- One farmer began experimenting with berry farming.
- One farmer tried mulching a crop.
- The university professor started a new program in which sponsors were found to fund a group of agricultural students to go on overnight trips to observe innovative farming and food processing methods in other regions in Turkey,
- Two agricultural engineers increased their visits to farms to advise farmers from 10% of the time to 70%.
- One agricultural engineer who was a manager used her new conflict resolution skills to turn around a dysfunctional department in a regional extension office.

The other 10 participants did not carry out their action plans for various reasons:

- Two farmers said their plan was too expensive to implement.
- One farmer was taken up by family problems.
- Two agricultural engineers left the region for personal reasons.
- Two agricultural engineers were thwarted by their manager.
- One agricultural engineer was thwarted by the father.
- The businessman was doing his planned activities prior to training and was only continuing them after training.
- The development expert offered no good reason.

To find out if the two cohorts differed in action plan effectiveness, the data in Table 1 were split out by cohort years as shown in Table 2. This table shows that for the nine plans rated effective, six were in 2013 and three were in 2014. The 2013 cohort was three times more effective in making changes through action plans as the 2014 group (6 versus 2).

Table 2				
Individual Action Plans: 2013 Cohort Vs. 2014 Cohort				
	2013		**2014**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	1	11	6	60
2	2	22	1	10
3	0		0	
4	6	67	3	30
Total	**9**	**100**	**10**	**100**

To find out whether farmers or non-farmers (i.e., agricultural engineers and others) were more responsible for producing change, the data in Table 1 were split out by farmer versus non-farmer as shown in Table 3. This table shows that five of the eight farmers (63%) were effective and four of the 11 non-farmers (36%) were effective. The effective non-farmers were three agricultural engineers and a university professor.

Table 3				
Individual Action Plans: Farmers Vs. Non-Farmers				
	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	3	37	4	36
2	0		3	28
3	0		0	
4	5	63	4	36
Total	**8**	**100**	**11**	**100**

Comparisons of farmers versus non-farmers within each cohort are shown in Tables 4 and 5. For the 2013 cohort, Table 4 shows that all three farmers (100%) were effective and three of the six non-farmers (50%) were effective.

Table 4				
Individual Action Plans: 2013 Cohort, Farmers Vs. Non-Farmers				
	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	0		1	17
2	0		2	33
3	0		0	
4	3	100	3	50
Total	**3***	**100**	**6**	**100**

*This cohort included four farmers, but one was not available to be interviewed.

For the 2014 cohort, Table 5 shows that two of five farmers (40%) were effective and one of five non-farmers (20%) was effective. The three farmers were the only participants in either cohort to receive small grants of $5,000 to carry out their action plans.

Table 5				
Individual Action Plans: 2014 Cohort, Farmers Vs. Non-Farmers				
	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	3	60	3	60
2	0		1	20
3	0		0	
4	2	40	1	20
Total	**5**	**100**	**5**	**100**

To summarize, HasNa training was 47% effective in individual action plan as evidenced by the nine of 19 participants who implemented a change in their agricultural work as a result of the training. The 2013 cohort was more effective than the 2014 cohort, and farmers were more effective than non-farmers.

Evaluation Question 2: To what extent were the participants effective in carrying out their group action plans?

The 2013 cohort developed one plan for the entire cohort. The plan was to form a working group that would meet monthly for two purposes: (1) Assist each other with their individual action plans and (2) collaborate to increase farm extension services in the region by identifying promising practices, pilot testing them, and disseminating those that proved successful. Interviews found that the nine participants in this cohort met four times and then stopped. Reasons given were that everyone was busy or had other priorities.

The 2014 cohort divided into three groups to develop group action plans. One group proposed a multiyear project to identify vegetable growing practices suitable for the

region, pilot testing them, and implementing successful ones in the region. A second group planned to share their expertise individually, one showing local farmers a drip irrigation system, one teaching mulching, one teaching packaging and marketing techniques, and one helping farmers apply for grants to improve their farms. The third group proposed a multi-year vegetable-growing project using a participant's farm and showing all the necessary steps of soil analysis, seeding, using fertilizers, irrigation, controlling pests and weeds, harvesting, and marketing.

As with the 2013 cohort, interviews with the 2014 cohort found that their group action plans were not carried out. After two meetings, the first group stopped meeting when no one called for further meetings. The second group did not meet. The third group did not implement their plan when the participant whose farm was to be used for the demonstration project left the region.

All four group action plans were given a rating of 1 for lack of effort.

Evaluation Question 3: To what extend did participants reach out and share knowledge gained in HasNa training with others to improve agriculture in the region?

To assess the overall effectiveness of participant outreach, interview rating data from the two cohorts were combined into a single frequency distribution as shown in Table 6. This table indicates that of the total of 19 participants, 6 (32%) received an effectiveness outreach rating of 4, meaning they influenced someone to implement a change in agriculturally-related work. Note that all but one participant made some effort to share their HasNa training, however, this sharing was with family and friends for the most part.

Table 6		
Outreach: Combined Cohorts		
Rating	**Frequency**	**Percent**
1	0	
2	9	47
3	4	21
4	6	32
Total	**19**	**100**

The six effective participants did the following:

- Two farmers that had installed drip irrigation systems with HasNa small grants demonstrated their system to other farmers and reported that some 40 of those farmers have installed drip irrigation systems since then.
- A farmer showed a neighbor how a covered method to grow cucumbers and the neighbor implemented the method on his farm.

- A farmer persuaded a friend to try mulching and the friend did successfully.
- A farmer who had installed drip irrigation before HasNa training demonstrated it to local farmers and one farmer installed one.
- The university professor who started a new program of sponsored trips for students to observe agricultural and food processing methods made such trips a requirement for the faculty in his department.

To find out if the two cohorts differed in outreach, the data in Table 6 were split out by cohort year as shown in Table 7. This table shows that for the six participants with an outreach rating of 4, four were in 2013 and two were in 2014.

Table 7

Outreach: 2013 Cohort Vs. 2014 Cohort

	2013		**2014**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	0		0	
2	2	22	7	70
3	3	33	1	10
4	4	45	2	20
Total	**9**	**100**	**10**	**100**

To find out whether farmers or non-farmers (i.e., agricultural engineers and others) were more responsible for producing change, the data in Table 6 were split out by farmer versus non-farmer as shown in Table 8. This table shows that five of the six effective participants were farmers and one was a non-farmer. The effective non-farmer was the university professor.

Table 8

Outreach: Farmers Vs. Non-Farmers

	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	0			
2	3	37	6	55
3	0		4	36
4	5	63	1	9
Total	**8**	**100**	**11**	**100**

Comparisons of farmers versus non-farmers within each cohort are shown in Tables 9 and 10. For the 2013 cohort, Table 9 shows that all three farmers were effective and one of six non-farmers was effective.

Table 9				
Outreach: 2013 Cohort, Farmers Vs Non-Farmers				
	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	0		0	
2	0		2	33
3	0		3	50
4	3	100	1	17
Total	**3**	**100**	**6**	**100**

Table 10 shows that the two effective participants in the 2014 cohort were farmers.

Table 10				
Outreach: 2014 Cohort, Farmers Vs Non-Farmers				
	Farmers		**Non-Farmers**	
Rating	**Frequency**	**Percent**	**Frequency**	**Percent**
1	0		0	
2	3	60	4	80
3	0		1	20
4	2	40	0	
Total	**5**	**100**	**5**	**100**

To summarize, HasNa training was 32% effective in outreach as evidenced by the six of 19 participants who implemented a change in their agricultural work as a result of the training. The 2013 cohort was more effective than the 2014 cohort. Farmers were more effective than non-farmers.

Conclusions and Recommendations

In this evaluation, in order to determine that HasNa training caused a participant's Level 4 effectiveness rating, the participant had to describe a result that was achieved and state that the intent to achieve that result came from HasNa training, and they had to acknowledge that they had not been trying to achieve that result prior to the training. Using this causation-assigning requirement to rate the post-training efforts of the 19 participants in Diyarbakir yielded the following answers to the three questions guiding this evaluation.

Evaluation Question 1: To what extent were the participants effective in carrying out their individual action plans?

The 19 participant action plans were 19 opportunities for HasNa training to cause participants make a change in their agricultural work. Nine participants made a change

that can be directly attributed to their HasNa training, thus HasNa training was 47% effective (9 of 19) in producing changes in farming and in agricultural extension practice in the region.

Farmers were 63% effective (5 of 8) and non-farmers were 36% effective (4 of 11). The 2013 cohort was 67% effective (6 of 9) and the 2014 cohort was 30% effective (3 of 10).

Among the 10 participants that did not carry out their action plans, four were prevented from doing so by a boss or family member, two found their plan too expensive, one was already doing what he had planned to do, one offered no good reason, and two left the region for other priorities.

It is recommended that HasNa strengthen its participant selection process to ensure that participants are willing to follow through on the HasNa expectation that they will apply their U. S. training when they return. Also, because the cost of implementing new agricultural methods was a deterrent to some participants, HasNa should consider how it can provide more financial support for in-country application of training.

Evaluation Question 2: To what extent were the participants effective in carrying out their group action plans?

The four group action plans were four opportunities for HasNa training to cause participants to collaborate to improve agriculture in the region. None of the four groups carried out their plan, thus training was not effective at all in producing collaboration.

Two of the four groups met a few times and then did not continue. The other two groups did not meet at all. Reasons for not carrying out their plans were that participants were too busy, or that no one took the initiative to call a meeting, or that a key participant needed for the plan left the region.

The complete lack of effort in carrying out the group action plans suggests that HasNa needs to think more carefully about its expectations for group action plans. A recommendation is that it should consider including activities during training that develop leadership and collaboration skills for working effectively in groups to accomplish a goal.

Evaluation Question 3: To what extend did participants reach out and share knowledge gained in HasNa training with others to improve agriculture in the region?

The 19 participants were 19 opportunities for HasNa training to cause participants to reach out to others in the region and encourage them to improve farming methods or improve the agricultural extension system. Six of the 19 shared their U. S. training with non-participants that induced those individuals to implement a change in their agriculturally-related work, thus training was 32% effective (6 of 19) in producing change in the region in addition to changes made by the participants through their action plans.
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Farmers were 63% effective (5 of 8) and non-farmers were 9% effective (1 of 11). The 2013 cohort was 45% effective (4 of 9) and the 2014 cohort was 20% effective (2 of 10). It should be noted that participants were not asked during HasNa training to reach out to others to promote agricultural improvement in their region.

All of the 13 participants that did not receive an effective outreach rating of 4 did share their HasNa training with others. Nine shared with family, friends, and colleagues for an outreach rating of 2. The other four who received a rating of 3 were agricultural engineers who sponsored an internet-based conference about their HasNa training for 50 agricultural professionals and farmers.

If HasNa wants to magnify the impact of it program beyond the individual changes made by its participants, a recommendation is to include in its expectations and its program activities the notion that it views participants as change agents when they return home. HasNa could impress on participants that, after training, they are not expected to implement change just in their jobs or on their farms, they are expected to reach out into the community and encourage others to implement changes that improve agriculture in the region.