Appendix 1 Evaluation grid

Relevance, Impact, Sustainability of the Projects

Evaluation Criteria	Study Item (large)	Study Item (small)	Source of Information	Survey Method
Relavance	Does the project meet the needs of recipient country?	Is the project consistent with request from recipient country?	MOA, EA, JICA	Interviews, request form
		Is the project consistent with development plans and policies of MOA, centers, and local governments?	MOA, EA	Agricultural plans, plans of centers
		Is the project consistent with local needs?	EA, JAD, EXT	
	Are Japanese advisorts appropriate?	Does the chief leader have not only technical expertise but also managerial capabilities?	JICA,JAD, MOA,EA	Interviews
		Do advisors have not only technical expertise but also attitude to work together with counterparts?		
	Are the project purpose and activities appropriate given the project duration?			
Impact	What is the impact of the project on the agricultural sector?	What is the ratio of key farmers that adopted the technology which the project attempted to transfer?	JAD, EXT, F	Interviews, questionaire, documents of centers
		What is the ratio of intermediate farmers that adopted the technology?		
		What is the ratio of (ordinary) farmers that adopted the technology?		
	What is the impact of the project on the social sector?			
Sustainability	Does the project have sustainability from institutional aspects?	Is the support for extension likely to be continued?	MOA, EA	Interviews
		Is the operational and managerial capacity of the centers appropriate?	MOA, EA, JAD	
		Can the centers continue to operate machinery and equipment ?	EA, JAD	O&M documents
	Will the technology disseminate to other areas?	Is the technology and the method of extension likely to be disseminated to other areas?	EA, JAD, EXT	Interviews
		Will the trained researchers and extension officers continue to work with the centers?	EA, EXT, RE	
	Does the project have sustainability from financial aspects?	Will the centers be able to obtain financial support from MOA?	MOA,EA	Interviews, budget
		Can the budget for extension be secured?		
		Can the centers continue to buy materials and equipment necessary for extension services?	EA, JAD, EXT	
	Does the project have sustainability from policy aspects?	Will the support of MOA be continued?	MOA	Interviews
		Are the centers active in establishing close linkages with relevant institutions?	EA, JAD	
	Who is the target group of extension services?	Who is the target group?	JICA,MOA, EA,JAD, EXT	Documents of centers, interviews
		How was the target group chosen?		
		Is the technology appropriate for the target group?	JAD,EXT,F,NF	
		Are there any groups of people that may be disadvantaged due to the project?		
	Where is the target area?	How was the target area chosen?	JICA,MOA, EA,JAD, EXT	
		Is the technology appropriate for the target area? If not, how did the project try to accommodate?		
	Is the timing of project appropriate?	Is the timing of project appropriate from the points of policy implementation and infrastrucutre development?	JICA,MOA, EA,JAD	Interviews
		Is the timing when the advisors are dispatched appropriate?		

MOA : Ministry of Agriculture、JICA : JICA representative office、EA : Project executing agenciy、JAD : Japanese Advisors、RE : Researchers/instructors、EXT : Extension officers、F : Beneficiaries (key, intermediate, and ordinary farmers) 、NF : Non-beneficial farmers、OD : Other donors, W/S : Workshop、O&M : Operation and Maintenace

Sub-Question1: Strengthening of the capacity of research and extension centers

Study Item (large)	Study Item (small)	Source of Information	Survey Method
Are the project activities and the mandate of centers consistent?	How was the counterpart selected?	JICA,MOA	Interviews
	Has the mandate of centers been changed due to decentralization policies?	MOA,EA	Interviews, government documents
	If the mandate of centers does not meet project activities, how did the project approach this issue?	JICA,JAD	Interviews, Documents of Japanese advisors
How were the institutional capacity of the center strengthened?	How were the center's capabilities of research development and extension strengthened?	MOA, EA, JAD, RE, EXT	Questionnaire, Interviews, Organizational structure, annual report, Documents of JICA and Japanese advisors
	How was the decision-making system strengthened?		
	How was the system of sharing information and feedback from training programs developed?		
	How were the linkages between centers, MOA, and extension offices developed?		
	How was the system of planning, monitoring and evaluation strengthened?		
	How was the allocation of human resources improved?		
	How was the number of counterparts increased?		
	Have the equipment and facilities for research and technology development been provided?	EA, RE,EXT,JAD	Interviews, List of materials, Observation
	Have the equipment and facilities for extension services been provided?		
How were the technical capacity of the center strengthened?	Does the center have a system of understanding local needs?	EA, JAD, EXT, F, NF	Questionnaire, Interviews, Documents of JICA and Japanese Advisors, Observation
	Were researchers trained to develop technology based on local needs?	EA, JAD, RE	
	Were the new technology verified?		
	How were the demonstration farms developed to facilitate technology transfer?	EA, JAD, RE, EXT	
	How were the extension officers trained?		
How were the financial capacity of the center strengthened?	How did the center attemp to receive more budgetary support from MOA?	MOA, EA	Questionnaire, Interviews, Budget documents
	Is the center able to raise revenue from its own activities?	EA, JAD	
	Is a part of the costs of extension services borne by beneficiaries?		
	Do technology development receive sufficient financial support?	EA, JAD, RE	
	Do extension services receive sufficient financial support?	EA, JAD, EXT	
	Were the expenditures scrutinized and minimized?	EA, JAD	
	How did the center try to improve financial sustainability?	MOA, EA	

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Sub-Question2: Approaches/models for establishment and dissemination

Study Item (large)	Study Item (small)	Source of Information	Survey Method
What kinds of technologies were disseminated?	Did the center identify best technologies being practised by farmers?	EA, JAD, EXT	Interviews, W/S
	How did the center select a technology for dissemination?	JAD, EXT, RE	
	Is the selected technology appropriate for target farmers/areas?	EXT, JAD, F, NF	
	What is the property of the technology?		
Has the project been implemented appropriately?	Is the project appropriate given the capacity of counterparts?	JAD	Interviews
	Did the counterpart share the goal and activities of the project?	JAD,EA	
What kinds of approaches/models are appropriate for establishment?	What is the property of the technology which is appropriate for establishment?	MOA, EA, JAD, EXT, RE, OD	Interviews, W/S
	What kinds of approaches/models are used for establishment?		
	What kinds of farmers are appropriate as a target of establishment?		
What kinds of approaches/models are appropriate for dissemination?	What is the property of the technology which is appropriate for dissemination?		
	What kinds of approaches/models are used for dissemination?		
	What kinds of farmers are appropriate as a target for dissemination?		
What kinds of models were used?	What kinds of models were developed for establishment and dissemination?	EA、JAD	Interviews, Documents of centers and Japanese advisors, W/S
	How did the project compare these models?		
	What is the role of each model in the entire project?		
	How were the models combined?		
	What is the evaluation of each model?		
	Has the model incorporated a feedback system from farmers?		
Does the model have sustainability?	Is the model easy to operate and maintain?	EA、JAD、EXT	
	Is the model easy to be reproduced in other regions?		
	Is the model easy to be adopted by other extension officers?		
	Is the model sustainable from financial points of view?		
What kinds of roles did the key farmers play?	How were the key farmers selected?	EA、JAD、EXT、F	
	How were they trained?		
	What kinds of demonstraion farms were developed?		
	How did the technology transfer from key farmers to intermediate farmers?		

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Sub-Question3: Socioeconomic environments for extension

Study Item (large)	Study Item (small)	Source of Information	Survey Method
What kinds of human capital are necessary?	Are farmers capable of understanding and adopting technologies which the center is disseminating? If not, what kinds of measures were taken?		
	What are the constraining/reinforcing factors associated with human capitals for the adoption of the technologies?		
What kinds of social capital are necessary?	Do the technology require organizational activities by farmers? Do farmers have such capabilities?	JAD, EXT, F, NF	
	Are the technologies consistent with social traditions / power structures in target areas?		
	Are the technologies appropriate for local ethnicity, religions, and cultures?		
	Are the technologies appropriate for local land ownership systems?		
	What are the constraining/reinforcing factors associated with social capitals for the adoption of the technologies?		
What kinds of natural capital are necessary?	Is the water available in a sustainable manner?	EA	
	Is the soil appropriate in a sustainable manner?		
	What are the constraining/reinforcing factors associated with natural capitals for the adoption of the technologies?	F, NF, EXT	
What kinds of physical capital are necessary?	Are irrigation facilities and agricultural machinery and equipment available in a sustainable manner?	JAD, EXT, F, NF	Interviews, W/S, Questionnaire
	Is the communication between farmers and extension officers smooth?		
	Is there a transportation network for the products?		
	What are the constraining/reinforcing factors associated with physical capitals for the adoption of the technologies?		
What kinds of financial capital are necessary?	Do farmers have sufficient financial resources to adopt the technology?	F, NF	
	Is there a credit available within a community or from external sources?		
	Are there any kinds of institutional support for the adoption of the technology?	JAD, EXT	
	What are the constraining/reinforcing factors associated with financial capitals for the adoption of the technologies?	JAD, EXT, F, NF	
Are the markets of inputs as well as outpus available?	Is the supply of inputs such as seeds and fertilizers stable?	F,NF, EXT, JAD	
	Are the farm-gate prices appropriate?		
	Is the market of the output competitive?		
Did the surrounding environments experience significant changes such as natural disasters, changes in the prices of agricultural products, and the occurrence of epidemics?		F,NF, EXT,JAD	

MOA: Ministry of Agriculture、JICA: JICA representative office、EA: Project executing agenciy、JAD: Japanese Advisors、RE: Researchers/instructors、EXT: Extension officers、F: Beneficiaries (key, intermediate, and ordinary farmers)、NF: Non-beneficial farmers、OD: Other donors, W/S: Workshop、O&M: Operation and Maintenace

Appendix 2 Questionnaire survey

In this study, questionnaire survey was conducted in El Salvador and Tanzania. The outline of the questionnaire survey is summarized in the following table.

Respondents		Number of respondents	Notes
El Salvador	CENTA Researchers	8	
	CENTA Extension Officers	18	Cojutepeque 9, Zapotitán 6, CENTA Coordinator and others 3.
	Key Farmers	20	Cojutepeque 10, Zapotitán 10.
Tanzania	KATC Tutors	21	Includes KATC Principal and Vice Principal. Tutors since KATC Phase I 11, since KATC Phase II 10.
	Extension Officers	13	Mwega 2, Mombo 3, Lekitatu 2, Lower Moshi 5, Mkindo 1.
	Key Farmers	68	Mwega 18 (includes 10 intermediate farmers), Mombo 24, Lekitatu 21, Lower Moshi 3, Mkindo 2.

This section presents the questions and answers of the questionnaire survey. The answers include the number of respondents who answered yes to each question as well as their descriptive replies.

Questionnaire survey for extension officers and key farmers in Tanzania were originally prepared for those who participated in the outreach training in Phase 1. However, it was not possible to visit each of those irrigation schemes. Therefore, the survey was conducted in irrigation schemes which the study team visited. They are not necessarily the sites of outreach training in Phase 1. In Mwega and Mombo, in addition to key farmers, some intermediate farmers answered the questionnaire survey which was designed for key farmers. The results of the survey in Tanzania are given by irrigation scheme. They are Mombo (MO,), Lekitatu (LE), Key farmers in Mwega (MW-K), Intermediate farmers in Mwega (MW-I), and Lower Moshi and Mkindo (LM, MU). Likewise, KATC tutors since Phase 1 are categorized as Old Tutors and those new in Phase 2 are as New Tutors.

Questionnaire to CENTA's Researchers in El Salvador

Dear Sir or Madam,

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, i.e. the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador and the Kilimanjaro Agricultural Training Center Project in Tanzania. We, the consultants, will be visiting CENTA to conduct interviews with you in the middle of May 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions prior to our visit so that we could have more intensive and thorough discussions there. Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones that are listed or you have additional answers, please write them down in "others."

1 Name:
2 Office location:
3 Primary research area:
4 How many key farmers and other farmers are you in charge in the CENTA-JICA project?
  Key farmers:
  Other farmers:
5 How often do you visit each of them?
  Key farmers:
  Other farmers:

[About CENTA-JICA project]

6 Do you think that your technical capacity of being a researcher has been strengthened as a result of the CENTA-JICA project?
  Yes 8
  No 0
7 If yes, in what area has your capacity been strengthened in particular?
  Plague and disease control. 4
  Management of vegetable plantations (specifically: tomatoes)
  Vegetables (management). 5
  Irrigation. 4
  Greenhouses. 2
  Computing 2
  Vegetable nutrition
  Managing equipment for soil determination and experimental design plant and corresponding analysis.
  Preparation of aids for technical, agricultural presentations.
  Fertilization.
  Diagnosis (of the influence area)
  Prioritize problems
  Design and statistical analysis
  Production of vegetable seedlings
  Analysis and integration of research results.
  Agronomical management of crops. 2
  Soil disease control (disinfection)
8 Which components of the CENTA-JICA project were particularly helpful in strengthening your capacity?
  Identifying problems by Japanese experts 6
  On-farm practical training 8
  Collaboration with extension officers 7
  Communication with farmers 5
  Others (Please specify:)
  - Better performance in work activities
  - Logistics received for the work. Resource availability, Strategies applied in the development of the
  - Everything is relevant, but the most important is to have established relationship with farmers which makes me aware of the practical techniques used in the farms.

9 If not, what kinds of training do you think could have strengthened your capacity?
- Communication with farmers
- Improvement of existing varieties of the area

[Extension]

10 What do you think are the advantages and disadvantages of working in collaboration with extension officers?

Advantages:

Researchers are more acquainted with farmers' needs.	5
Researchers can use the communication skills of extension officers.	4
Researchers can use the coordination skills of extension officers.	5

Others (Please specify:)
- The extension workers have a better presence with the farmers, therefore they know the actual needs in the field.
- The researcher knows the reality of the farmers.
- The researcher communicates with the producer through the extension worker in order to truly integrate a team for generating and transferring technology (GyTT).
- Research is now based on the real needs of farmers, which are informed by extension officers.
- Extension officers are more aware of research techniques, which make them more capable.
- Work relations are improved
- The extension worker talks to the researcher about the problems at the farmer's property

Disadvantages:

It is difficult to determine the divisions of works	1
It is hard to coordinate.	4

Others (Please specify:)
- Given the methodology, it is difficult for the extension workers to have contact with the researchers.
- Some extension workers do not know the scientific research method
- Some extension officers are more interested in research activities than extension.

11 Do you think the technologies developed in the CENTA-JICA project meet the needs and conditions of farmers?

Yes	8
No	0

12 If yes, how did you learn the needs / conditions of farmers?

From extension officers	6
Through field visit	7
From Japanese experts	5
From household surveys	8
You had known them since before the project.	2

Others (Please specify:)
- All of these are important to know the needs and conditions of farmers.
- Through general diagnosis with a gender approach

13 If not, in what aspects don't the technologies meet farmers' conditions/needs?

Production techniques are too difficult.	1
Inputs and equipment are too expensive.	1
They require more labor.	1
Markets for vegetables (tomatoes) are limited.	2

Others (Please specify:)

[About key farmers]

14 What kinds of support have you, as a researcher, provided for key farmers?

Prepared a demonstration farm	7
Provided initial investments (inputs)	1
Offered technical guidance on vegetable production	8
Offered market information	4

Others (Please specify:)

- To gear research based on the actual needs of the producers in the short term.
- Sharing with them how the farming diary should be filled and the detailed diagnosis.
- Speaking about other agriculture fields.
- Adaptation of new agriculture techniques
- All of the above are important, but the biggest support has been that farmers are now aware of new ideas through the exchange of information with researchers.
- New technologies and solutions are provided to the farmers through research tries.
- To do research to solve problems.

15 What kinds of difficulties, if any, did you experience in transferring the technology to key farmers?

They would not understand the techniques.	0
They did not want to try the new techniques.	1
Their financial capacity is limited.	7

Others (Please specify:)

- Their culture limits them somewhat in terms of adopting technologies.

[Technology transfer to other researchers]

16 Have you, as a researcher, ever tried to transfer the technology and knowledge you learned from the CENTA-JICA project to other researchers in the nation?

Yes	8
No	0

17 What kinds of problems you might expect in transferring the technology and knowledge to other researchers?

Difficulty in adjusting to local needs	1
Difficulty in explaining the needs of the new technology	0
Unable to access expertise of Japanese experts	0
CENTA's financial constraints	7

Others (Please specify:)

- Sometimes it is difficult to follow up on the technologies transferred for not being within the influence area of the project.

[Sustainability]

18 Will you, as a researcher, be able to perform the same level of research activities even when JICA's cooperation is over?

Yes	3
No	5

19 If not, what might be the constraints? (You may circle more than one.)

Unable to learn practical skills at farm level	0
Unable to identify local needs	0
Unable to access expertise of Japanese experts	1
CENTA's financial constraints	6

Others (Please specify:)

- It is difficult to maintain the same scheme of the project, it is always good to have a Japanese expert.
- Depends on the new government

Thank you.

Questionnaire to CENTA's Extension Officers in El Salvador

Dear Sir or Madam,

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, i.e. the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador and the Kilimanjaro Agricultural Training Center Project in Tanzania. We, the consultants, will be visiting CENTA to conduct interviews with you in the middle of May 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions prior to our visit so that we could have more intensive and thorough discussions there. Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones that are listed or you have additional answers, please write them down in "others."

[About you]

1 Name:

2 Office location:

3 How many key farmers and other farmers are you in charge in the CENTA-JICA project?
- Key farmers:
- Other farmers:

4 How often do you visit each of them?
- Key farmers:
- Other farmers:

5 Apart from the CENTA-JICA project, how many farmers in total are you in charge?

6 Apart from the CENTA-JICA project, how often do you visit each of them?

[About CENTA-JICA project]

7 Do you think that your capacity of being an extension officer has been strengthened as a result of the CENTA-JICA project?

Yes	17
No	0

8 If yes, in what area has your capacity been strengthened? (You may circle more than one.)

Production techniques	18
Field experiences	17
Planning	15
Accounting	10
Communication skills with farmers/researchers	3
Understanding farmers' needs	7

Others (Please specify:)
- The way in which the technical assistance or work methodology has been provided
- There was practically no communication with the researcher
- Associations to begin group activities: training, acquisition of inputs
- Elaboration of visual aids
- Use of equipment (computers, cameras, plotters, scanners)
- Evaluation of activities
- Logistics
- Work discipline

9 Which components of the CENTA-JICA project were particularly helpful in strengthening your capacity?

On-farm practical training	18
Working with farmers	12
Collaboration with researchers	4
Direct instructions from Japanese experts	17

Others (Please specify:)
- Improve the technological capacity in presenting the works
- Training 2
- Learning the use of computers 2
- To be organized in giving follow up and acquiring data at demonstration plots
- The submittal of results to the authorities of CENTA, researchers and Japanese experts.

10 If not, what kinds of training do you think could have strengthened your capacity?
- Training on marketing
- Expansion of knowledge on planning, implementing and evaluating the training.
- Marketing area
- Other alternative crops (cabbage, onion)

[Extension]

11 What do you think are the advantages and disadvantages of working in collaboration with researchers?

Advantages:

Extension officers can convey farmers' needs to researchers	16
Researchers have better farming techniques	2

Others (Please specify:)
- The researchers have more technical and logistics support to develop their work
- Response to a problem is quicker and the solution is immediate.
- The collaboration between the researcher and the extension worker gives the farmer more alternatives
- It facilitates the farm plan work of the farmers.
- Problems are looked into with more knowledge
- This is how it should be done but it does not actually happen

Disadvantages:

It is difficult to determine the divisions of works.	2
Extension officers have enough techniques to instruct farmers.	0
It is hard to coordinate.	9

Others (Please specify:)
- The research and extension program coordinators have not been able to integrate both components.
- The researcher does not tell the extension worker about the research protocol they make in the communities.
- No coordination was made with the researchers
- The researcher does not like to visit the field of the producer
- They don not know the problems of the producers
- Few researchers assigned to this branch, i.e., in Cojutepeque we are 8 extension workers and only 1
- There is little coordination with some researchers

12 Do you think the technology developed in the CENTA-JICA project meets the needs and conditions of

Yes	18
No	0

13 If yes, how did you learn the needs / conditions of farmers?

From key farmers	9
Through field visit	14
From Japanese experts	3
From household surveys	16
You had known them since prior to the project.	6

Others (Please specify:)
- Participative diagnosis 3
- Through meetings with the producers
- Diagnosis of the communities
- Before, the producer grew only corn and beans
- By making a general diagnosis and one with a gender approach

[About key farmers]

14 What kinds of support have you, as an extension officer, provided for key farmers?

Prepared a demonstration farm	13
Provided initial investments (inputs)	4
Offered technical guidance on vegetable production	15
Offered market information	7

Others (Please specify:)
- Raising awareness among the producers for them to accept the process.
- Logistics support during training
- Discussing the problems with the crops and motivating them to change crops from corn and beans to
- Crop planning
- Crop information records
- I have coordinated training for the farmers.
- Facilitating the work of my staff

15 What kinds of difficulties, if any, did you experience in transferring the technology to key farmers?

Their knowledge is insufficient.	3
Their financial capacity is limited.	14
They would not listen to you.	0

Others (Please specify:)

- The technological transfer process that has been developed is too little or too short.
- In the beginning there was no confidence in the type of technology to be implemented.
- The change was only possible after positive production results
- The biggest problem is ownership of land apt for vegetables.
- *The financial support is limited or non existing in the marketing area of their products*

[About other (non-key) farmers]

16 What kinds of support have you provided for other (non-key) farmers?

Prepared a demonstration farm	10
Provided initial investments	1
Offered technical guidance on vegetable production	15
Offered market information	7

Others (Please specify:)

- Raising awareness among the producers so that they can be trained on the technologies
- To visit the production sites to give a solution to the problems
- Training with demonstrations
- Visits to their farms
- Coordinating training
- Supporting my extension workers
- The same of the key farmers

17 Approximately what is the percentage of other (non-key) farmers in your area that have adopted the technologies developed by the CENTA-JICA project?

Less than 25%	4
25~50%	7
50~75%	6
More than 75%	0

18 If the technologies have been widely disseminated, what do you think are the primary reasons?

The technologies are easy to implement.	10
The technologies meet the local needs/conditions.	11
The technologies do not require a lot of costs.	3
Markets offer good prices.	0
The markets of outputs are stable.	1
Support of extension officers has been available.	13
Key farmers have played an important role.	14

Others (Please specify:)

- The main thing is that they were encouraged through seeds/trays and thus they practiced, and once they saw positive results they adopted the technology
- Unconditional support of the project in the construction of infrastructure (green houses, irrigation systems, reservoirs and others)
- The new technologies are easy but expensive.
- The high level of interest by the producers in developing the techniques.
- There has been support from the project

19 If the dissemination to other (non-key) farmers is limited, what do you think are the constraints?

Financial constraints for the initial investments	15
The technologies are too difficult.	0
The technologies require more labor.	5
Markets for vegetables (tomatoes) are limited.	2
Lack of support from extension officers	1
Farmers do not want to take a risk.	3

Others (Please specify:)

- There have been no problems since the project has facilitated matters.
- Technologies are being transferred to other producers within our work area.
- Lack of organization by the farmers
- Lack of natural resources (water)
- Cultural aspects (corn and beans planting)

- Lack of complete support, similar to that received by the key producer, such as giving larger amounts and more variety of seeds and vegetables or inputs.
- Lack of economic resources
- High production costs and low sales prices
- Resources are concentrated in the key producers' property.
- More time and presence of the extension worker to be able to disseminate and adapt the technology.
- More time is needed to demonstrate to and train farmers (others) on the techniques.
- Coverage capacity of extension workers is limited
- Direct or personalized support
- Market prices are too low

[Technology transfer to other extension officers]

20 Have you, as an extension officer, ever tried to transfer the technology and knowledge you learned from the CENTA-JICA project to other extension officers in the nation?

Yes	17
No	0

21 What kinds of problems you might expect in transferring the technology and knowledge?

Difficulty in adjusting to local needs	7
Difficulty in explaining the needs of the new technology	0
Unable to access expertise of Japanese experts	4
CENTA's financial constraints	17
Others (Please specify:)	

- Our farmers do not have the resources needed to implement some technologies
- Full time work is not done because of institutional reasons, in addition to other priorities (time is dedicated to other needs of the institution: packages)
- The risk is great because if an external factor fails (rain, plagues, low prices) this producer will not grow vegetables again.
- Limited time to transmit practical knowledge
- The little coverage by the institution.
- The financial part of the institution

[Sustainability]

22 Do you think you, as an extension officer, will be able to provide the same extension services for farmers even when JICA's cooperation is over?

Yes	4
No	14

23. If not, what might be the constraints? (You may circle more than one.)

Unable to learn practical skills at farm level	0
Unable to identify local needs	0
Unable to access expertise of Japanese experts	8
CENTA's financial constraints	12
Others (Please specify:)	

- There may be changes in the agricultural policies of CENTA
- Not being able to generate new technologies
- Lack of economic resources
- The answer is an absolute no. The producers that were successful will continue.
- I could be changed to a different department within the institution.
- Guidance from the Japanese experts contributes to focusing on the priority activities for the research and technological transfer.
- Technical personnel restrictions.
- The current government isn't interested in supporting agriculture or small scale farmers
- There has to be empowerment for the farmers but it isn't possible in a short time.
- Lack of insentives

Thank you.

Questionnaire to Key Farmers in El Salvador

Dear Sir or Madam,

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, *i.e. the Project for the Strengthening of Agricultural Technology Development and Transfer* in El Salvador and the Kilimanjaro Agricultural Training Center Project in Tanzania. We, the consultants, will be visiting El Salvador to conduct interviews with some of you in the middle of May 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions and return to CENTA through extension officers prior to our visit so that we could have more intensive and thorough discussions there. Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones that are listed or you have additional answers, please write them down in "others."

[About you]

1 Name:

2 Location:

[About the support you have received from the CENTA-JICA project]

3 As a result of the CENTA-JICA project, do you think that your knowledge and skills for producing vegetables has been strengthened?

Yes	20
No	0

4 If yes, what kinds of support were helpful in particular?

Prepare demonstration plots	18
Knowledge on agricultural planning and management	12
Field training	19
Lectures	12
Joint support of researchers and extension officers	13

Others (Please specify:

- Support only by the extension worker
- Support of the project with inputs, reservoirs and green houses
- Training with demonstrations (strengthened techniques)
- Production infrastructure (green house, reservoir, irrigation system)
- Extension worker, yes. Researcher, no.
- Participating the day of vegetables in CENTA

5 If not, what kinds of support did you want to have?

No One Answered.

6 Do you think that a close collaboration between extension officers and researchers have resulted in offering better services to farmers than a case without researchers?

Yes	13
No	5

[Dissemination to other (non-key) farmers]

7 What kinds of support have you, as a key farmer, provided for other farmers to help disseminate the technologies you learned from the CENTA-JICA project?

Prepare demonstration plots/farms at your farm	16
Hold a seminar	8
Visit their farms and provide technical guidance	18

Others (Please specify:)

- Inviting producers to my plot to do agricultural practices
- Help farmers and the youth from school.
- Inviting producers to my plot with crops.
- Lending my plot and participating in training with demonstrations.
- I have facilitated my farm for other farmers to practice and produce their vegetable seedlings
- Welcome producers to my plot and explain to them the various techniques employed depending on the crop.
- Providing land for planting
- Training on artisanal drip irrigation

- Whenever tours are organized to plots I would explain the work that had been made and the Giving demonstrations
- Allowing other farmers to visit my plot
- Transferring the techniques learned through the project
- Provide advice for better results

8 Approximately what is the percentage of other (non-key) farmers in your area that have adopted the technologies developed by the CENTA-JICA project?

Less than 25%	6
25~50%	9
50~75%	5
More than 75%	0

9 If the technologies have been widely disseminated to other (non-key) farmers, what do you think are the primary reasons?

The technologies are easy to implement.	14
The technologies meet the local needs/conditions.	12
The technologies do not require a lot of costs.	6
Markets offer good prices.	0
The markets of outputs are stable.	0
Support of extension officers has been available.	15
Key farmers have played an important role.	14

Others (Please specify:)

- Interest of the producers in developing techniques
- Improve income
- Training: theory and practice
- I think that the time is short for the technologies to have been disseminated to other radiated farmers

10 If the dissemination to other (non-key) farmers is limited, what do you think are the constraints?

Financial constraints for the initial investments	16
The technologies are too difficult.	0
The technologies require more labor.	1
Markets for vegetables (tomatoes) are limited.	2
Lack of support from extension officers	1
Farmers do not want to take a risk.	4

Others (Please specify:)

- Small plots for some
- High price of inputs and agriculture materials
- Land ownership (rented)
- They needed the same support that we - the key farmers - received.
- Lack of time to disseminate the technologies

[Sustainability]

11 Do you think that you will continue to use the technologies you learned from the CENTA-JICA project even when JICA's cooperation is over?

Yes	20
No	0

12 If not, what might be the constraints?

Lack of technical expertise of extension officers	0
Unable to access expertise of Japanese experts	0
Lack of financial support	0
Limited markets for vegetables (tomatoes)	0
Unable to replace the equipment that is depreciated	0

Others (Please specify:)

Thank you.

Questionnaire to KATC Tutors in Tanzania

Dear Sir or Madam:

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, i.e. the Kilimanjaro Agricultural Training Center Project in Tanzania and the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador. We, the consultants, will be visiting KATC to conduct interviews with you at the beginning of June 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions prior to our visit so that we could have more intensive and thorough discussions there. Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones that are listed or you have additional answers, please write them down in "others."

[About you]

1 Name:

2 Working at KATC since (year/month):

3 Courses you teach:

If you teach multiple courses, please circle one which you teach the most. And please answer the following questions in terms of the training course you circled.

[Your tutoring skills]

	Old	New
4 What kinds of technical advice have you received from Japanese experts?		
Techniques for irrigated rice farming;	3	5
How to establish a demonstration plot;	1	2
How to identify training needs;	9	3
How to develop a training program to meet local needs;	10	5
How to collect and provide information useful for irrigated rice farming;	4	7
Training skills in general; and	4	3

Others (Please specify:)

- Participatory techniques (2 people)
- Computer use (database) (3 people)
- How to prepare demonstration plots
- To assemble & fabricate simple tools
- Participatory training in map drawing, daily activities and seasonal calendar
- Agricultural tools maintenance
- Hand tractor operator courses

5 Among these, which do you think are particularly important to be a competent tutor? Please identify.

- Techniques for irrigated rice farming (4 people)
- How to establish a demonstration plot (2 people)
- How to identify training needs (13 people)
- How to develop a training program to meet local needs (9 people)
- How to collect and provide information useful for irrigated rice farming (4 people)
- Training skills in general (5 people)
- All of the above
- Technical exchange programs should be encouraged
- Computer use (database)
- The use of computer on data collection and provision of information.
- Participatory training
- Teaching methodology
- Evaluation on data collected

6 Other than the points listed in Question 4, what kinds of advice would you like to have from Japanese experts, if any?

- How to progress with agriculture projects
- Facilitation Skills & Planning Facilitation
- Monitoring & Evaluation Knowledge & Skills
- How to use questions for training and farming
- How to improve the trainings as technology keeps on changing.
- Computer uses (4 people)
- How to develop a training program to meet local/ environmental needs
- Linear Programming
- Evaluation of training success
- Teaching Methodology (2 people)
- How to collect and preserve/keep data using computer
- How to prepare leaflets for advertisement purposes
- Education in new technology
- Long training courses for tutors
- More tutors to be trained at once
- Topping up allowance to increase morale of the tutor
- Data analysis using computer (2 people)
- How to use the ox farming (oxenization) (2 pepple)
- Data interpretation
- Fabrication of simple tools
- Laboratory tests to be carried out to identify rice diseases
- How to develop teaching aids

[Development of training courses and teaching materials]

7 How did you, as a tutor, develop the training courses (including contents and teaching materials) you teach?

With Japanese experts	9	10
With your colleagues	11	8
By yourself	2	3
Others (Please specify:		
- With the target group		

8 Which components and what kinds of training courses do you think are particularly effective as a means of training for extension officers and key farmers, respectively?

For extension officers:		
Lectures	2	2
Discussion among participants	9	7
Field visits	8	7
Practice in fields	11	9
Interaction with farmers in nearby villages	3	2
Outreach training	9	7
Farmers-extension officers joint training	7	6
Others (Please specify:)		
For key farmers:		
Lectures	3	0
Discussion among participants	9	9
Field visits	9	10
Practice in fields	11	9
Interaction with farmers in nearby villages	6	6
Outreach training	8	5
Farmers-extension officers joint training	9	7
Others (Please specify:)		

- Field visits for farmers from one scheme to the other, one country to the other (e.g. Tanzania to Kenya).

9 Have you consulted researchers in developing and implementing training courses?

Yes	2	2
No	8	8

[Course/teaching materials improvement]

10 Do you think that you, as a tutor, are aware of the needs of the participants (extension officers and farmers) of the training courses? Please circle one.

About extension officers' needs:		
Yes	11	8
No	0	2
About key farmers' needs:		
Yes	11	9
No	0	1

11 If yes, how did you learn their needs?

About extension officers' needs:		
Field visits	8	4
Discussions in training courses	11	7
Suggestion/advice from Japanese experts	4	3
Others (Please specify:)		

- Discussions among participants, farmers and extension officers and tutors/experts.
- Before training the extension officers, we are given chance to suggest the course of interest/competence to teach.
- Research should be done in joint with extension officers
- In field training
- Special training at KATC
- No program/courses for extension officers' skills

About key farmers' needs:		
Field visits	10	5
Discussions in training courses	10	8
Suggestion/advice from Japanese experts	5	3
Others (Please specify:)		

- Discussions among participants, farmers and extension officers and tutors/experts.
- Evaluation on farmers' field activities
- Baseline survey
- Intensive research joint with the farmers to be done on the farmers' local environment
- Participatory training
- In field training
- Needs for calendar /working schedule training courses

12 If no, why?

It is hard to learn their needs.	0	1
The needs vary greatly and it is difficult to generalize.	0	2
It is not necessary to be aware of the needs of the participants.	0	0
Others (Please specify:)		

13 Do you, as a tutor, adjust the contents and teaching materials of your training courses based on the feedback/comments from the participants?

Yes	11	10
No	0	0

14 Do you share the comments/feedback from the participants with your fellow tutors with the aiming of improving the training courses?

Yes	11	10
No	0	0

[Sustainability]

15 Do you think that you will be able to perform the same way as a tutor even when JICA's cooperation is over?

Yes	6	7
No	2	2

- Yes, because training is expensive, if possible the JICA should continue.
- Yes, as tutor. But No as an institution due to budget constraint
- No. When will be well trained we won't need JICA's help.
- Yes. Somehow I will be able to perform the job but JICA's help is needed to enhance training courses development.

16 If no, what do you think might be the problems?

Unable to develop/modify courses	0	0
Unable to learn local needs	0	2
Unable to maintain/upgrade your skills	0	2
Unable to offer training courses due to KATC's financial constraints	3	1
Others (Please specify:)		

Thank you.

Questionnaire to Village Agricultural Extension Officers in Tanzania

Dear Sir or Madam,

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, i.e. the Kilimanjaro Agricultural Training Center Project in Tanzania and the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador. We, the consultants, will be visiting Tanzania to conduct interviews with some of you at the beginning of June 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions prior to our visit and return to KATC so that we could have more intensive and thorough discussions there.

Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones

[About you]

1 Name:
2 District:
3 How many farmers (families) are you in charge of?
4 How often do you visit each of them?

[About training courses at KATC]

5 Please list all the training courses you have attended at KATC.
6 Do you think that your capacity of being an extension officer has been strengthened as a result of KATC training courses?

Yes	11
No	0

7 If yes, in what area has your capacity been strengthened?

Field experiences	6
Understanding farmers' needs	6
Techniques for irrigated rice farming	9
Agricultural marketing	4
Processing	0
Communication skills with farmers/researchers	5
Organizing farmers	5
Planning	3
Accounting	0
Others (Please specify:)	

- Confidence on my work when dealing with the farmers in the field.
- Control of diseases and pests, and harvesting

8 Which components of the training course were particularly helpful in strengthening your capacity as an extension officer?

Field visit	6
Practice in fields	11
Lectures	3
Teaching materials	2
Discussion among participants	5
Joint training with key farmers	6
Others (Please specify:)	

9 If not, in which area, would you like to strengthen further? (You may circle more than one.)

Field experiences	1
Understanding farmers' needs	1
Techniques for irrigated rice farming	1
Agricultural marketing	0
Processing	1
Communication skills with farmers/researchers	0
Organizing farmers	0
Planning	1
Accounting	1
Others (Please specify:)	

[Outreach training]

10 Has KATC offered outreach training in your district?

Yes	11
No	0

11 If yes, do you think it was helpful in disseminating the technology?

Yes	11
No	0

12 If yes, what are the advantages of outreach training over residential training at KATC?

Many farmers can actually see the techniques for irrigated rice farming.	10
Local needs/conditions are reflected.	6
Farmers can learn from the experiences of their nearby farmers.	9
Time saving for farmers.	2
Others (Please specify:)	

- KATCs tutors get chance to know the farmers local environmental.
- *The technology dissemination is faster*

13 If no, why it was not helpful? (You may circle more than one.)

The technologies suggested do not meet the needs/conditions of local farmers.	0
Farmers are not interested in irrigated rice farming in your area.	0
The recommended inputs are too expensive.	0
Training facilities are absent.	0
Others (Please specify:)	

[About key farmers]

14 Approximately what is the percentage of key farmers in your area that have adopted the techniques for irrigated rice farming learned at KATC?

Less than 25%	0
25~50%	0
50~75%	1
More than 75%	10

15 What kinds of role have you played as an extension officer?

Visited their farms repeatedly to instruct the techniques	10
Developed a demonstration farm together	10
Nothing particular	0
Others (Please specify:)	

- *Preparation of plan of action, monitoring and evaluation of the farmers*' fields work (problem and solution of the farmers).
- Report writing

  Identification of diseases/insects in the fields

16 If the techniques have been widely disseminated to key farmers, what do you think are the primary reasons?

The techniques are easy to implement.	6
The techniques meet the local needs/conditions.	6
The techniques do not require a lot of costs.	6
Markets offer good prices.	0
The markets of outputs are stable.	0
Support of extension officers has been available.	6
Others (Please specify:)	0

- Extension officers are not enough and have no transport

17 If the dissemination to key farmers is limited, why?

The irrigation scheme in your village is not good enough.	1
The technologies require expensive inputs.	2
The technologies require more labor.	1
Irrigated rice farming is less profitable than other crops.	0
The technologies are too difficult.	0
It is too risky.	0
You, as an extension officer, are unable to visit them.	0
Others (Please specify:)	

[About extension to (non-key) farmers]

18. Are you, as an extension officer, well aware of farmers' needs?

Yes	11
No	0

19 If yes, how do you learn them?

Field visit	9
Interview with farmers	5
Participatory planning workshops	3
At KATC 's joint training with key farmers	5
Others (Please specify:)	

- On their cooperative meetings
- *During the cooperatives meetings and the in field training*

20 If not, why?

It is hard to learn farmers' needs.	0
The needs vary greatly and it is difficult to generalize.	0
It is not necessary to be aware of farmers' needs.	0
Others (Please specify:)	

21 Have you, as an extension officer, been trying to transfer the technology you learned at KATC to farmers?

Yes	11
No	0

22 If yes, how?

Develop a demonstration farm	8
Visit farmers by yourself.	8
Visit farmers with key farmers	9
Organize a workshop on irrigated rice farming	0
Others (Please specify:)	

- Have monitoring and evaluation meetings.
- Preparation of meetings on rice cultivation
- To show other farmers the demonstration plot
- Establishment of the farmer groups trainings on the village
- Field day

23 If not, why?

The technology learned at KATC does not meet the needs of farmers.	0
Farmers are not interested in irrigated rice farming.	0
Irrigation facilities are absent.	0
The recommended inputs are too expensive.	0
You were not able to master the techniques at KATC.	0
You are not to visit farmers.	0
Others (Please specify:)	

24 Approximately what is the percentage of other (non-key) farmers in your area that have adopted the techniques for irrigated rice farming which you learned at KATC?

Less than 25%	0
25~50%	2
50~75%	3
More than 75%	6

25 If the techniques have been widely disseminated to other (non-key) farmers, what do you think are the primary reasons?

The techniques are easy to implement.	5
The techniques meet the local needs/conditions.	5
The techniques do not require a lot of costs.	4
Markets offer good prices.	0
The markets of outputs are stable.	0
Support of extension officers has been available.	6
Key farmers have played an important role.	6
Others (Please specify:)	

- The farmers are read to learn new techniques.

26 If the dissemination to other (non-key) farmers is limited, why?

The irrigation scheme in your village is not good enough.	1
The technologies require expensive inputs.	0
The technologies require more labor.	1
Irrigated rice farming is less profitable than other crops.	0
The technologies are too difficult.	0
It is too risky.	0
You, as an extension officer, are unable to visit them.	0
Others (Please specify:)	

[Sustainability]

27 Will you, as an extension officer, transfer the technology learned at KATC to farmers even when JICA's

Yes	9
No	1

28 If not, what do you think might be the constraints?

Lack of technical expertise	0
Lack of financial support	1
Lack of transport means	0
Unable to upgrade your skills	0
Others (Please specify:)	0

Thank you.

Questionnaire to Key Farmers in Tanzania

Dear Sir or Madam,

This is a questionnaire prepared for JICA's Synthesis Study on Evaluation in the Field of Agriculture/Rural Development (Agricultural Extension). The overall goal of the study is to draw lessons for future JICA projects that involve agricultural extension by reviewing the experiences of JICA's two technical cooperation projects, i.e. the Kilimanjaro Agricultural Training Center Project in Tanzania and the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador. We, the consultants, will be visiting Tanzania to conduct interviews with some of you at the beginning of June 2004. We have prepared this questionnaire primarily to inform you in advance of the points we would like to discuss with you. However, we would very much appreciate it if you could answer the following questions prior to our visit and return to KATC through extension officers so that we could have more intensive and thorough discussions there. Thank you in anticipation.

For the following questions, please circle all that apply. If your answers to the questions are different from the ones that are listed or you have additional answers, please write them down in "others."

	MO	LE	MW -K	MW -I	LM, MU
[About you]					
1 Name:					
2 Village:					
3 District:					
4 How many acres did you plant rice and other crops last year, respectively?					
Rice					
Other crops (maize, cassava, bananas, vegetables, etc.)					
5 Approximately how much of your income comes from irrigated rice farming?					
Less than 25%	0	0	0	0	0
25~50%	3	3	0	1	0
50~75%	15	14	4	4	4
More than 75%	3	3	2	3	1
[About training courses at KATC]					
6. Please list all the training courses you have attended at KATC.					
7. Were the training courses at KATC helpful?					
Yes	22	21	6	8	5
No	0	0	0	0	0
8 If yes, which components of the training courses were helpful in particular?					
Lectures	8	5	4	5	4
Teaching materials	13	9	5	7	5
Discussion among participants	15	13	6	7	5
Field visit	14	14	5	7	4
Practice in fields	16	16	5	7	4
Joint training with extension officers	12	14	2	3	2
Interaction with farmers from other villages	8	8	3	4	2
Others (Please specify:)					

LE: Study tour
Need a class to be taught by different technicians
I discovered to me farming is an employment.
It was very short course and we need a power tiller techniques training.
The entire courses were of importance indifferently.
Farmer to farmer discussions help to know the other farmers from different villages experiences.

LM: Visits to other regions and neighbouring countries we learned together at Visits

9	If not, why?					
	The training course is too short.	3	2	1	1	1
	Inputs such as seeds and fertilizer are too expensive.	6	3	3	3	3
	Inputs are not available in and around your village.	3	1	2	2	2
	You need to have modern irrigation schemes to adopt the techniques.	2	1	1	1	1
	The techniques are too difficult.	0	0	0	0	0
	There is a water shortage.	5	3	2	2	2
	Others (Please specify:)					
	MW Water shortage last season of the rice cultivation was the most problem. (2					
	LM: Water shortage					
[Outreach training]						
10	Have you attended outreach training offered by KATC near (in) your village?					
	Yes	18	17	5	7	4
	No	3	3	1	1	1
(If you have answered yes, please also answer the following questions in this section.)						
11	Was it more helpful than the residential training at KATC?					
	Yes	12	12	3	5	2
	No	5	4	1	1	1
12	What did you like about the outreach training?					
	You do not have to leave the village.	7	6	3	4	2
	The techniques shown meet the local needs/conditions.	11	9	3	3	3
	Many local farmers can attend and discuss.	15	15	4	5	3
	Others (Please specify:)					
	MW In field training is good because it is able to disseminate techniques to many farmers at a go.					
	The technology is widely spread to the farmers. (2 people)					
	LE: To remind us what we have been taught					
	We have increased our income and we are using improved shorter time seeds					
13	If the outreach training was not helpful, why?					
	Training facilities are absent.	2	2	0	0	0
	Local needs/conditions are not reflected.	0	0	0	0	0
	The training does not meet the specific needs in your area.	1	1	0	0	0
	The recommended inputs are too expensive.	4	3	1	1	1
	Timing was not good.	0	0	0	0	0
	Others (Please specify:)					
	MW Financial problems to most farmers. Farmers need credit. (3 people)					
	Most of the farmers have financial problems. (3 people)					
[About extension officers]						
14	Do extension officers visit you?					
	Yes	21	20	6	8	5
	No	1	1	0	0	0
15	If yes, how often?					
	Once a month	17	15	5	7	4
	Once 2~3 months	3	4	0	0	0
	Once six months	0	0	0	0	0
	Less frequently	0	0	0	0	0
16	Do they provide useful support for you?					
	Yes	20	20	5	7	4
	No	2	1	1	1	1

17 If yes, what kinds of support are helpful in particular?					
Techniques for irrigated rice farming	20	20	5	7	4
Use of agricultural equipment/tools	9	9	2	2	2
Market information	0	1	0	0	0
Information on other farms	7	7	3	4	2
Others (Please specify:)					
MO: Uses of chemicals (herbicides and pesticides) on rice farming.	5				
LE: Agric business / record keeping					
Uses of fertilizers and pesticides, use of improved seeds and use of agric					
Whenever I need advice or report he /she helps me immediately					
We work hand in hand with ext officer, we get information from the districts					
and during in field training.					
18 If not, why?					
The necessary inputs are not affordable and/or available.	4	3	1	1	1
The techniques they show are not applicable under the conditions of your fields.	2	2	0	0	0
They do not have sufficient knowledge on irrigated rice farming	0	0	0	0	0
Others (Please specify:)					
Mw(Fertilizers are expensive in turn farmers cannot afford to buy.					
[About the technology learned at KATC]					
19 Have you adopted the techniques for irrigated rice farming learned at KATC?					
Yes	22	21	6	8	5
No	0	0	0	0	0
20 If not, why?					
The irrigation scheme in your village is not good enough.	0	0	0	0	0
The technologies require expensive inputs.	1	1	0	0	0
The technologies require more labor.	2	2	0	0	0
Irrigated rice farming is less profitable than other crops.	0	0	0	0	0
The technologies are too difficult.	0	0	0	0	0
It is too risky.	0	0	0	0	0
Lack of support from extension officers.	0	0	0	0	0
Others (Please specify:)					
LK: Whenever I need him/her he/she visits me					
[About the role of key farmers]					
21 Have you, as a key farmer, been trying to transfer the technologies for irrigated rice farming to nearby farmers?					
Yes	22	21	6	8	5
No	0	0	0	0	0
22 If yes, how?					
Prepare a demonstration plot/farm.	14	15	4	5	3
Explain the techniques to other farmers who visit you.	14	16	3	5	2
Visit other farmers to teach the technologies.	17	17	5	6	4
Hold a workshop in your village.	2	2	0	0	0
Others (Please specify:)					
MW Its important t to establish the demonstration plots with all the needed					
agricultural equipment.					
LE: To have training classes in different location within the village					
To prepare leave lefts and give to the other farmers					
Discovery of the two seasons and calendar preparation for rice cultivation					
On the farmers group training and in field day					
MK: More training on spacing and in field trainin					
23 If not, why?					
The techniques are too difficult to be transferred.	1	1	0	0	0
Technology transfer to other farmers is not your responsibility.	0	0	0	0	0
Do not want to disseminate the profitable farming practice.	0	0	0	0	0
You are too busy.	0	0	0	0	0
Others (Please specify:)					
24 Have you, as a key farmer, been working together with extension officers in transferring the technology?					
Yes	21	20	6	8	5
No	1	1	0	0	0

25 If yes, why?

Your knowledge/techniques and those of extension officers are complementary.	6	6	2	3	2
You can also learn from extension officers.	15	15	5	6	4
Extension officers provide monetary benefits to you.	3	1	2	2	2
It is your mandate as a key farmer.	18	20	3	5	2
Others (Please specify:)					

LE: Work hand in hand with extension officer
I try to disseminate information to other farmers. When I fail, I call extension officer to assist me.
It is easier for the farmer to follow the experience of the other farmer than extension officers.
We need levelling techniques.

26 If not, why?

They are unable to visit your village.	0	0	0	0	0
They do not know the technology well.	0	0	0	0	0
They are reluctant to work with you.	0	0	0	0	0
It is easier to work without extension officers.	2	2	0	0	0
Others (Please specify:)					

27 Approximately what is the percentage of other (non-key) farmers in your area that have adopted the techniques for irrigated rice farming which you learned at KATC?

Less than 25%	0	0	0	0	0
25~50%	2	4	0	1	0
50~75%	7	6	2	2	2
More than 75%	12	10	3	4	3

28 If the techniques have been widely disseminated to other (non-key) farmers, what do you think are the primary reasons?

The techniques are easy to implement.	10	10	4	6	3
The techniques meet the local needs/conditions.	17	17	5	7	4
The techniques do not require a lot of costs.	6	5	2	3	2
Markets offer good prices.	1	1	0	0	0
The markets of outputs are stable.	0	0	0	0	0
Support of extension officers has been available.	15	15	5	5	4
Key farmers have played an important role.	10	9	2	3	2
Others (Please specify:)					

LE: Although the rice cultivation is expensive but the final cost (after selling) is greater than initial costs.

29 If the dissemination to other (non-key) farmers is limited, why?

The irrigation scheme in your village is not good enough.	2	1	1	1	1
The technologies require expensive inputs.	3	3	0	0	0
The technologies require more labor.	1	1	0	0	0
Irrigated rice farming is less profitable than other crops.	0	0	0	0	0
The technologies are too difficult.	0	0	0	0	0
It is too risky.	0	0	0	0	0
Lack of support from extension officers.	0	0	0	0	0
Others (Please specify:)					

MW The technology is very expensive, as it needs highly expensive equipment like power tillers. It also needs fertilizer, which is expensive too.

Thank you.

Appendix 3 Field schedule

El Salvador

Month/Day			Schedule
May	8	Sat	15:45 Tokyo → 13:40 Houston (CO006) 16:15 Houston → 18:15 San Salvador (CO828)
	9	Sun	Internal Meeting
	10	Mon	■ Meeting with JICA El Salvador office ■ Courtesy calls at Embassy of Japan ■ Interview and discussion with Mr. Yunoki, Japanese Expert to CENTA
	11	Tue	■ Courtesy calls and interviews with Jose Emilio Saudi H., Vice Minister of Agriculture and Livestock ■ Courtesy calls and interviews with Jose Armando Rivas Melara, General Budget Director, Ministry of Finance ■ Interviews and discussion with William Patterson, USAID
	12	Wed	■ Courtesy calls and interviews with Hernan Ever Amaya Meza, Executive Director of CENTA ■ Interview and discussion with managers of CENTA ■ Interview and discussion with coordinators of the CENTA-JICA project
	13	Thu	■ Interview and discussion with researchers of CENTA (C/P of the CENTA-JICA project) ■ Interview and discussion with extension officers at CENTA Zapotian Office
	14	Fri	■ Field visit <Zapotitan> Inverview and discussion with key farmers, radiated farmers and other farmers
	15	Sat	■ Field visit <Zapotitan> Inverview and discussion with key farmers, radiated farmers and other farmers
	16	Sun	Internal Meeting / Report Writing
	17	Mon	■ Field visit <Zapotitan> Inverview and discussion with key farmers, radiated farmers and other farmers
	18	Tue	■ Field visit <Cojutepeque> Inverview and discussion with key farmers, radiated farmers and other farmers ■ Interview and discussion with extension officers at CENTA San Martin Office
	19	Wed	■ Interview and discussion with extension officers at CENTA Cojutepeque Office ■ Field visit <Cojutepeque> Inverview and discussion with key farmers, radiated farmers and other farmers
	20	Thu	■ Field visit <Cojutepeque> Inverview and discussion with key farmers, radiated farmers and other farmers
	21	Fri	■ Field visit <Cojutepeque> Inverview and discussion with key farmers, radiated farmers and other farmers ■ Field visit <San Martin> Interview and discussion with farmers
	22	Sat	Internal Meeting / Report Writing
	23	Sun	Report Writing
	24	Mon	Report Writing / Internal Meeting
	25	Tue	■ Debriefing and Discussion with CENTA and Mr. Yunoki, JICA Expert ■ Debriefing and Discussion with Ministiry of Agriculture and Livestock, section in charge of the CENTA-JICA project
	26	Wed	■ Field Visit <FIDA PRODAPII in San Vicente> ■ Interview and discussion with FAO
	27	Thu	■ Debriefing and discussion with JICA El Salvador offide ■ Interview and discussion with Embassy of Japan ■ Debriefing and discussion with USAID (Tentative)
	28	Fri	08:00 Leave San Salvador → Houston 12:01 (CO829) 15:40 Houston → (Tanzania)

13

Tanzania

Month/Day			Schedule
May	29	Sat	(El Salvador) → 22:15 Dar es Salaam (KL571)
	30	Sun	Internal Meeting
	31	Mon	■ Meeting with JICA Tanzania office ■ Courtesy call at Embassy of Japan
June	1	Tue	■ Interview and discussion with Dr. Nozaka, Japanese Expert to MAFS ■ Courtesy call and interviews with Mr. Kapande, Director of Training Division, MAFS ■ Interview and discussion on finance with Mr. Okuyama, JICA ■ Interview and discussion with Mr. Guy Evers, Consultant for World Bank
	2	Wed	■ Move from Dar es Salaam to Moshi by car
	3	Thu	■ Courtesy call and interviews with Mr. R. J. Shayo, Principal, KATC ■ Courtesy call and interviews with Mr. A.G. Pyuza, Vice Principal, KATC ■ Interview and discussion with Japanese Experts at KATC
	4	Fri	■ Interview and discussion with Japanese Experts at KATC ■ Interview and discussion with KATC Tutors
	5	Sat	■ Field visit <Lower Moshi Irrigation Scheme> Inverview and discussion with KADP, Extension Officers, Farmers
	6	Sun	■ Move from Moshi to Arusha
	7	Mon	■ Interview and discussion with Mr. D.M. Ragangila, DALDO, Arumeru District ■ Interview and discussion with Mr. K. S. Mihambo, District Irrigation Officer ■ Field visit <Lekitatu Irrigation Scheme > Inverview and discussion with Key Farmers
	8	Tue	■ Move to Korogwe ■ Field visit <Mombo Irrigation Scheme> Inverview and discussion with Extension Officers and Key/Intermediate Farmers
	9	Wed	■ Field visit <Kwemazandu Irrigation Scheme> Inverview and discussion with Extension Officers and Key Farmers ■ Field visit <Mahenge Irrigation Scheme> Inverview and discussion with Extension Officers and Key Farmers ■ Move to Morogoro
	10	Thu	■ Interview and discussion with Dr. Abu Haygaimo, DALDO, Morogoro District ■ Interview and discussion with Mr. A. G. Ruhangisa, Morogoro Zonal Irrigation Officer ■ Field visit <Mkindo Irrigation Scheme> Inverview and discussion with Extension officers and Key Farmers
	11	Fri	■ Move to Malolo ■ Field visit <Mwega Irrigation Scheme> Inverview and discussion with Extension Officers and Key/Intermediate Farmers
	12	Sat	■ Return to DSM
	13	Sun	Internal Meeting / Report Writing
	14	Mon	Report Writing
	15	Tue	Report Writing / Internal Meeting
	16	Wed	■ Interview and discussion with Development Cooperation Ireland ■ Interview and discussion with DANIDA ■ Debriefing and discussion with JICA Tanzania Office
	17	Thu	■ Debriefing and discussion with Ministry of Agriculture and Livestock, Training Division ■ Interview and discussion with World Bank (Tentative) ■ Interview and discussion with FAO (Tentative) ■ Debriefing and discussion with Embassy of Japan 23:25 Leave Dal es Salaam (KL571) → (Japan)


JICA