

ATTACHMENT - B

DIALOGUE WITH FARMERS

DIALOGUE WITH FARMERS
MGETA SCHEME

Record - 1

Date : 12th June 1997

Venue : Langali village

Time: 10 : 00 AM to 12 : 40 PM

Farmers : Key Farmers in Langali village (14 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA Do you have any questions / opinions on the cropping patterns that is present cropping pattern and tentatively proposed cropping patterns ?

Farmer Problem is weather but if irrigation water is available, the proposed cropping pattern is possible.

JICA There is a plan to improve the irrigation system in your area, therefore water will be available for proposed pattern.

JICA Is there any problems with existing irrigation system ?

Farmer Right now there is enough water in the systems, but in dry season (August to November and sometimes to February) water is not enough.

Farmer Some canals have been destroyed by the rains.

JICA Are you in a position to solve some of these problems ?

Farmer We can not preserve water in the wet season. We need a reservoir.

Farmer We have low capacity to maintain or repair the canals after the long rains.

Farmer From my experience, the project site has no water problems.

JICA In future, do you want to maintain same crops, came area or you can consider new crops or expand or reduce area for certain crops ?

Farmer Yes, we will try to cultivate other crops such as wheat, tomatoes, sunflower, etc.

Farmer First, we have to look into the market of the new crop (s) before accepting them.

[It was confirmed that major crops in Langali village are potatoes, beans, cabbage, and maize.]

Supply of Seeds

JICA Next, we would like to ask the present situation concerning supply of seeds in your fields. Presently, where do you obtain seeds for the following cropping season? And which kind of crops is required?

Farmers For Irish potatoes, we get seed potatoes locally in the market (name of place : Lolo), some farmers buy them from Morogoro town (sources being from Iringa, Mbeya, etc.)

Farmer For all crops farmers keep their own seeds from previous season. For Irish potatoes, it is difficult to store seed potatoes until the next growing season.

Farmer For cabbage, we buy from shops here in Langali village.

Farmer For maize and beans, we produce by ourselves.

Farmer Maize seeds are on poor quality, while for beans we are satisfied with the quality of their seeds.

JICA What is the problem for the shortage of seed potatoes?

Farmer It is poor storage skill, namely seed potatoes put up the shoots before sowing season.

Farmer Some of seed potatoes were bought in town which have diseases.

JICA You said that cabbage seeds can be of poor quality.

Farmer The sellers can cheat on the variety (such a different variety as Copenhagen instead of Romengo be sold).

JICA Is seed price not a problem?

Farmer Seed price is too high, e.g. a tin of cabbage (250 gram) is sold at TShs. 7,000.

JICA You have been growing vegetables for a long time, and you have been experiencing problems of seed availability. Why don't you form farmer's groups so that you can buy seeds in large quantities at a lower price?

Farmer We tried to form a society for the whole ward but misunderstanding happened and the society collapsed. But now we are trying to formulate one for Langali village only.

JICA What will the society / group do?

Farmer Still we have tried to formulate them.

JICA What types of groups are you formulating?

Farmer That is a Union of Farmers of Langali village. So far 30 farmers and some are joining still.

JICA What is the objectives of the union?

Farmer That is to solve farming problems of Langali farmers.

Fertilizer and Agro-chemicals

- JICA Are agro-chemicals available ?
Farmer Yes, they are available. We buy from town and the village.
JICA Which kind of diseases affect cabbages ?
Farmer Root knot is the most serious one.
JICA Do you apply any fertilizer ?
Farmer Yes, we apply it except beans.
JICA Do you have any problems regarding agro-chemicals or fertilizer ?
Farmer We have side effects of the agro-chemicals due to lack of protective gears.
Farmer The price is high. Sprayers are not available. And if available, those are expensive.
JICA What have you done for the cabbage diseases ?
Farmer We just uproot the affected plants. And we leave the area to rest for some time during which we can grow other crops, namely rotation cropping have been done.
Farmer Some farmers have no serious damage, then they have cultivated cabbage continuously.
JICA Are other villages also affected ?
Farmer No, they are not. That disease is found only here in Langali village.
JICA Why do you have that disease ?
Farmer Because this village started growing cabbage for long time.

Marketing

- JICA Presently, where or to whom do you sell your products ?
Farmers Middlemen come to our market place.
JICA Do you have any problem in marketing ?
Farmer The farmer need marketing knowledge, so that we can have a say on the price (how to know when to sell).
Farmer Our fellow farmers buy our produce and sometimes middlemen come as far as Dar es Salaam.
Farmer During the harvesting season of cabbage, some farmers organize their group for smooth selling to middlemen.
Farmer The farmer can not decide on the price of the farm products.
Farmer Problem there are no places to store because most of the products are perishable.
JICA Do you think the farmers can be assisted here.
Farmer Yes, we need provision of storage facilities so that the farmer can sell only when the price is good.
JICA Tchenzema are doing well because they are organized and they own a lorry.
Farmer Tchenzema has an organization of only 86 members who do not farm, but they are only doing business of buying farm products and taking them to the market.

- JICA Are they living in Tchenzema ?
Farmer Yes.
JICA Is it possible to check prices in the market (Dar es Salaam) ?
Farmer It is difficult because we do not have any way to check the price.
JICA For cabbage, which is your big market ?
Farmer It is Dar es Salaam, which is also receiving cabbage from other places, e.g. Mbeya, Iringa, Lushoto, Arusha, Songea.
JICA Then it is better to grow in seasons which the other places are not producing the same products.
Farmer Cabbage sold in March fetch highest price because the other places have no harvest during this period.
JICA Which are the peak seasons for the other areas ?
Farmer It is June onwards for Mbeya. It is not known for other areas.
JICA You said you start in March to July to grow cabbage. How do you harvest in March ?
Farmer The cabbage harvested in March is grown in October. The temperature during this period is too high, so only a few farmers try to cultivate it. Also the rain is too much for cabbage cropping, in case the short rain season comes.
JICA Which month is the peak season for cabbage in the present cropping pattern ?
Farmer September.
JICA How do you know that the price being given by traders is reasonable ?
Farmer Number of middlemen is various depending on the demand on the consuming place, that is Dar es Salaam. On selling season, if demand is high, middlemen compete with others in buying cabbage, resulting in farmers fetching a good price for their cabbages.
JICA What is the average price of cabbage ?
Farmer Price of one bag of cabbage is between TShs. 1,500 to 2,000 (July to November). One bag have around 70 pieces of cabbage.
JICA What about in March ?
Farmer Price of one bag of cabbage is around TShs. 7,000. the price of cabbage fluctuates a lot.

Others

- JICA Is there any problems concerning soil erosion ?
Farmer No.
JICA You said you have problem with soil fertility, especially those related to chemical fertilizers and you are getting problem with availability of fertilizer. why don't you use organic fertilizer ?
Farmer Few farmers keep animals.
Farmer Farmers need motivation of using manure because at least each household has one pig, so at least some farmer can get some manure, but not all they are using it in their farms.
JICA Do you have any plan to keep more animals ?
Farmer No. Feeding is a problem.

Farmer Agro-forestry is also having practiced.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MGETA SCHEME

Record - 2

Date : 13th June 1997

Venue : Langali village

Time: 10 : 00 AM to 0 : 40 PM

Farmers : Male Farmers in Langali village (10 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA Do you have any questions / opinions on there cropping patterns that is present cropping pattern and tentatively proposed cropping patterns ?

Farmer Right now there is enough water in the systems, but in dry season (August to November and sometimes to February) water is not enough.

Farmer Some canals have been destroyed by the rains.

JICA How do you think you can solve the water shortage ?

Farmer We think that conservation of the catchment area is important. And technique of water harvesting is also necessary.

Farmer We need water reservoir. We wish to use sprinkler irrigation.

[It was confirmed that major crops in Langali village are potatoes, beans, cabbage, and maize.]

Supply of Seeds

- JICA Next, we would like to ask the present situation concerning supply of seeds in your fields. Presently, where do you obtain seeds for the following cropping season ?
- Farmers Each farmer struggle on his own to get seeds from Morogoro town.
- JICA Do you buy any seed potatoes ?
- Farmer We choose those with shoots.
- Farmer The government can assist in bringing the seeds to the village.
- Farmer Farmers should be trained how to preserve seeds from previous crop. Actually, the training has started here in the village. We have some farmers who know how to do it.
- JICA You said the Government should bring the seed to the village. Why don't you organize yourself and buy seeds from town and bring them to the village ?
- Farmer We used to look for seeds on our own and the extension officers do not help us, so we should be left to continue like this. We have been doing it for 5 years now.
- Farmer Potatoes in the town market are not specific for seeds and we have been bringing diseases and on it might be a big problems latter.
- Farmer That is why we have struggled to get our seeds.
- JICA Where do you get your maize seeds ?
- Farmer We buy improved seeds from Morogoro town.
- JICA How often do you buy improved seeds of maize ?
- Farmer Some farmer buy them every year, while some of us every 3 to 6 years.
- JICA How about cabbage seeds ?
- Farmer We buy a tin showing a good cabbage plant, but after growing you get very poor crop, that is small cabbage.
- Farmer We buy them from Morogoro town, while some people sell locally.
- Farmer Varieties from Denmark is not suitable , while Romengo from the Netherlands is suitable variety here. Other varieties, Gloria (from Netherlands) and White Cabbage are also suitable for this climatic condition.
- JICA How do you know about good and bad seeds ?
- Farmer From the experience of other farmers.
- Farmer As another problem, Root knot nematode (Kirungu in local name) is serious here. To avoid the disease of cabbage and potatoes, it is necessary to collaborate with the extension officers to preserve their own seeds.
- JICA How about beans seeds ?
- Farmer We have kept our own seeds from the fields.
- Farmer Since seeds of vegetables are available in Morogoro town, seeds availability is not a problem for us.

Land Preparation

- JICA Do you have any problems related to land preparation ?
- Farmer We can not expand cultivated area. We can not solve this situation.

Fertilizer and Agro-chemicals

- JICA Do you have any problems concerning fertilizer ?
 Farmer The price of fertilizer is too expensive.
 Farmer Fertilizers are brought by middlemen and sold at very high prices. For instance, SA (Sulphate of Ammonium is estimated at TShs. 11,300 per 50 kg bag in Langali village instead of TShs. 9,800 per 50 kg bag in Morogoro town, while Urea is estimated at around TShs. 13,000 per 50 kg bag at local market.
 JICA Do you use manure ?
 Farmer Yes, all of us have applied pig manure.

Agro-chemicals

- JICA Do you have any problems with agro-chemicals ?
 Farmer Agro-chemicals are available in Morogoro town, but it is expensive.
 Farmer There is possibility of bringing the expired chemicals.
 Farmer There is problem of not getting the right agro-chemicals for the right crop.
 JICA Why don't you organize yourselves and open a shop here in the village and sell your own agro-chemicals ?
 Farmer We don't trust each other according to our past experience, but young generation has different intention which we need to trust each other and organize farmer's group.
 JICA Do you need the knowledge of how to start your society ?
 Farmer Not quite. The problem is to get the devoted members.
 JICA Which shops in Morogoro town do you go to buy your inputs (seeds, fertilizer, or agro-chemicals) ?
 Farmer Wami Magole, UKUTU, TANSEED for maize seeds, Morogoro Bookshop for vegetable seeds.
 JICA Do you get any health problems with the agro-chemicals ?
 Farmer We don't have any protection gears. We don't know whether there are any side effects.
 JICA For the cabbage diseases, mainly root knot, have you tried crop rotation ?
 Farmer Some farmers have tried and succeeded to wipe off the diseases, but some farmers have tried and failed.
 JICA Based on the cultivated area of cabbage, it appears that you have given us cabbage is not a major crop.
 Farmer Not quite. It has only happened that recently, due to the decrease we have already mentioned some farmers are shying away from the crop.

Marketing

- JICA Presently, where or who do you sell your products ?
 Farmers There are farmers cum businessmen here in the village who buy our products

- and sell them in Dar es Salaam.
- JICA Do you have any problem ?
- Farmer Cabbage prices fluctuate too much.
- Farmer Sometimes quality of the crop will be damaged after not getting any buyer.
- Farmer Sometimes middlemen offer very low prices.
- Farmer Most farmer have no market knowledge. No effort to look for other markets beside Dar es Salaam. We think that knowing about other market is expensive.
- JICA Again, why haven't you organized yourselves to look for better market ?
- Farmer The problem is the free market policy. The farmers don't favour this type of market, because they can not control the price of their products.
- JICA Cabbage sold in March very high prices. Do you sell cabbage this period ?
- Farmer Cabbage need cool weather which is not available here in October when cabbage will have to be grown.
- JICA How come that cabbage is sold at an average of TShs. 30 per kg and in Morogoro town is sold as high as TShs. 200 to 300 per kg.
- Farmer Transport is problem. A few farmers are organized and use the available transport to send cabbages to the market. Also middlemen in the village discourages the efforts of the farmers, by telling the authorities to give lower prices to farmers so that they do not show up in the market again.
- JICA How is the transportation here in the village ?
- Farmer There are no lorries in the village. Middlemen in the village hire lorries from Morogoro or Dar es Salaam.
- JICA Now, you want to start and organize to buy inputs. Will your organization be able to sell your products ?
- Farmer Yes, it is possible, but we need capital to start with the capital which is necessary for car hiring. We need 7 tons lorry. Hiring cost is estimated at around TShs. 450,000 for Dar es Salaam.

Extension Services

- JICA Is extension services satisfactorily ?
- Farmer No. I have not received any assistance from the extension officer.
- JICA Fro example, have you gone to the extension officer to look for any assistance ?
- Farmer Yes. For example, extension officer said he did not know the disease, regarding the cabbage disease.
- JICA Which type of assistance form the extension services do you need ?
- Farmer We need assistance concerning vegetables cultivation.
- Farmer The extension officer is so busy, that is why it is difficult to get some assistance form him. Also he has assisted farmers who have cultivated fish. Maybe we should get another one extension officer.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MGETA SCHEME

Record - 3

Date : 13th June 1997

Venue : Langali village

Time: 1 : 30 PM to 4 : 00 PM

Farmers : Female Farmers in Langali village (14 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA Do you have any questions / opinions on there cropping patterns that is present cropping pattern and tentatively proposed cropping patterns ?

Farmer We wish to grow Irish potatoes, tomatoes, peas, sweet pepper, beans, maize, onions, etc.

JICA We have seven crops, which ones are major crops ?

Farmer Maize, beans, cabbage, potatoes

Farmer Let me point out that cabbage is a very important crop here but now we have a problem of a disease, that is root knot, so many farmers are shying away from it.

JICA Cabbage is not as important crop as it used to be. Which crop has taken the place ?

Farmer Potatoes

JICA What about beans ?

Farmer Potatoes are more important because the yields are higher than beans.

JICA How many of you have irrigated plots ?

- Farmer All
- JICA Do you have any problem with irrigation practices ?
- Farmer Broken canals and water shortage in the dry season are major problems.
- JICA What are your opinions on the problems ?
- Farmer The farmers work together to repair canals by men and women. Sometimes the repair is difficult because of material cost.
- JICA It is possible to get assistance from the Government ?
- Farmer Not so easy.
- JICA What type of assistance is necessary ?
- Farmer Such materials as cement, aqueducts (pipes) are necessary.
- JICA Do you get any soil erosion problem ?
- Farmer Yes, even when making a canal , you have to be very careful or else you may end up losing all your plots due to soil erosion.
- JICA This soil erosion occurs in the canal, what about when irrigating ?
- Farmer It depends on how you make the ridges and terraces. The irrigation canal should follow the terraces and not along the way slope.
- JICA Do you have any problems on the cropping pattern ?

[It was confirmed that major crops in Langali village are potatoes, beans, cabbage, and maize.]

Supply of Seeds

- JICA Next, we would like to ask the present situation concerning supply of seeds in your fields. Presently, where do you obtain seeds for the following cropping season ?
- Farmer Regarding cabbage, our fellow farmers of Tchenzema village bring seeds from Morogoro town, and we buy from them.
- Farmer The prices of cabbage seeds are high.
- Farmer Sometimes there is cheating in selling seeds. We need Gloria and they sell to us Copenhagen. Our favourable varieties are Gloria, Romengo, and White cabbage.
- Farmer Also those days cabbage has been affected by diseases.
- Farmer Gloria is resistant to wet condition. White cabbage is bigger, palatable, and easy to recognize its maturity.
- JICA How about potatoes ?
- Farmer Traders will get from Dar es Salaam or Morogoro town and sell them to us.
- Farmer Sometimes seed potatoes are not available and prices are high.
- Farmer Locally available seed potatoes are in low price, but low quality, e.g. Korogwe, Pinki, etc.
- JICA How about beans ?
- Farmer Locally found in the village (this means that farmers arrange seeds from the previous crop).
- JICA Where do you get maize seeds from ?
- Farmer Local seeds

JICA What about seeds of other small vegetables ?
Farmer Some farmers keep their own seeds.

Fertilizer and Agro-chemicals

JICA Do you have any problems concerning fertilizer ?
Farmer Fertilizer is available, but the price of fertilizer is expensive.
JICA What are your suggestions on the price of fertilizer and agro-chemicals ?
Farmer If we are assisted with a shop selling the fertilizer and agro-chemicals, we can buy these inputs at reduced price or at loan basis.
JICA What about shop at Malimbichi (Tchenzema village) ?
Farmer They sell them very expensively to farmers who are not members.
JICA What have you done to solve the high prices of inputs ?
Farmer We have started, e.g. we have saving and credit society building and they are members.
Farmer Not all farmers are members.

Marketing

JICA Presently, where or who do you sell your products ?
Farmers Middlemen from here in the village and some from Dar es Salaam.
JICA Are you satisfied with the system ?
Farmer No. Sometimes the prices are very low.
JICA How do you think you can solve this problems ?
Farmer We have to organize ourselves like Tchenzema people so that we can go to the market on our own instead of using middlemen.
Farmer That is why I was suggesting that we join the saving and credit society which is now being formed - membership fee of TShs. 3,000 and share of TShs. 10,000. The assistance is coming from a French expert who assisted the formation of Malimbichi Society in Tchenzema village.

Extension Services

JICA Is extension services adequate ?
Farmer The extension officer is one for many farmers. We need more extension officer.
Farmer Sometimes we can be called for seminar when we will get some training how to apply fertilizer.
JICA How often the extension officer visit you.
Farmer Once a month.

[Female farmers who attended in the discussion have set up their houses along the rural road. It means that they can get easy access on the extension

services compared with other farmers who are living at the inner part of village.]

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 1

Date : 5th June 1997

Venue : Mkindo village

Time: 9 : 30 AM to 0 : 30 PM

Farmers : Key Persons in Mkindo, Dihombo, and Hembeti villages (24 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

JICA Do you have any question concerning paddy which is a promising crop for the proposed cropping pattern ?

Farmer Will 40 ha of Mkindo Irrigation Scheme (Small Irrigation Development Unit : SIDU) be included in the proposed area of 660 ha ?

JICA Yes.

Farmer For the proposed second cropping season - other crops normally do not cope with the rainy season . How will this problem be tackled ? [Farmers misunderstand that second cropping season is applied in rainy season, but in dry season.]

JICA To answer this question, I firstly need to know if you have agreed with the proposed crops.

Farmer We agree with paddy as it is our staple crop and we are accustomed with it.

Farmer Before agreeing with the proposed cropping pattern, I need to understand how the plan will be executed in allocation of the available plot to each individual farmer ?

JICA Allocation / distribution of plot should be finalized by the farmers concerned.

Farmer Our experience have shown that beans and other legumes are not commonly

- grown, due to unsuitable soil conditions and rainfall pattern, so I propose for paddy to grown in the project area.
- Farmer I propose for maize rather than beans, as with my experience. Beans tended to have low yield due to unfavorable soil conditions.
- Farmer I propose for paddy as we have been accustomed to it compared to other crops.
- Farmer Experience have shown that other crops apart from paddy do foil to grow well in the leveled land with flooding conditions.
- Farmer Onions has shown it to grow well, but the problem is that we don't have any experience with it and I doubt it will create a lot of problem to avoid. Then I oppose Alt. 2 and agree with Alt. 1.
- JICA Which kind of crops do you prefer in case you decide to agree with Alt. 2 ?
- Farmer Green vegetables, especially cabbage and onion.
- Farmer Proposed for selection of demonstration plots for trial - to see how green vegetables can perform. At least, 2 or 3 ha can be given to each farmer for vegetables as a matter of trial (testing), rather than using the large plot for vegetables in the 2nd season.

Cropping Pattern

- JICA Do you have any question on there cropping patterns that is present cropping pattern and proposed cropping patterns of Alt-1 and Alt-2 ?
- Farmer I am worried that other crops proposed for the 2nd cropping season will be affected by the flooding water especially, in the low land area. How do you see it ?
- JICA For the coming project, there will be control of water supply, so flooding will not be a problem to the proposed crops.
- Farmer Most of the land is not leveled, some area is found in the valley, e.g. Phase - I. How will it be possible to grow crops in the valley with a water lodged condition ?
- JICA We expect that the land will be leveled to cope with the proposed crops.
- Farmer I better propose that the 1st season is used only for paddy and the 2nd season is cultivated for the other crops, to see which crop and at which season is highly paying.
- Farmer During the dry season, the soil has a tendency of cracking. How will this be controlled for the establishment of vegetables. And if leveling will be done, don't you think that top soil which is very fertile will be removed ?
- JICA In the execution of the project, irrigation will be done systematically according to the requirement of the crops, while it seems that soil will be returned back after construction of irrigation facilities. When you apply such rotational cropping as paddy - beans - paddy, it is expected that soil fertility will be improved. Furthermore, damage of weeds and pest will be also decreased.
- Farmer I am proposing that during the execution of project, the leveling to start from the current 40 ha of irrigated land.
- JICA 40 ha of irrigated land in Mkindo area is not a component on leveling of the project.

Farming Practices

- JICA In Mgongola area, paddy has been cultivated, using flooded water, Water control is not regulated properly. In our plan, the flood dike will be planned and hence paddy cultivation will be undertaken without any flood damage. It means that proper farming practices will be able to be applied. It is possible to adopt the farming practices which are recommended in the Special Programme of FAO. In the Special Programme of FAO, package technology is recommended, that is 1) use of recommended and acceptable high yielding varieties such as line 88 or TXD 85, 2) preparation of nursery and implementation of proper transplanting, 3) application of proper dosage of fertilizer, etc. Then do you have any questions / opinions concerning this farming practices ?
- Farmer I agree with that farming practices, because they need change. Above this, seeds viability with nursery is very much assured. It is also a modern one, which may definitely increase the crop yield.
- JICA You have agreed with the farming practices of Special Programme - FAO. By the way, what is your experience with broadcasting ?
- Farmer With broadcasting, seed viability is not ensured. It is like a trial and error (gambling). Sometimes broadcasting use a lot of seeds including inviable seeds which is a loss. It also creates a lot of space unwanted between rice plants, resulting in low germination of seeds.
- JICA Both methods of transplanting and broadcasting are practical for the paddy cultivation. Broadcasting is much easier under the proper water control and leveled field, although weeding is a heavy work in this case. What is your opinions ?
- Farmer It may be good, but in the long run the land may become unlevelled and create uneven distribution of water which is not good for broadcasting. In this case transplanting may be better than broadcasting.
- Farmer Broadcasting does not ensure the required space for paddy sowing with line - it ensure space between plants, weeding is easier, and destruction of some plants as it creates a good space for passage will be avoided during weeding and application of agro-chemicals. Application of herbicide is also easier.
- Farmer With transplanting, high yield is expected compared with broadcasting as it is more technically efficient.
- JICA what can we do for better implementation of Special Programme - FAO ?
- Farmer There is no need to discuss much the Special Programme - FAO as it has shown and proved to be better than broadcasting, with high yield and it is technically good (efficient).

Supply of Seeds

- JICA Next, we would like to ask the present situation concerning supply of seeds in

- your fields. Presently, from where do you obtain seeds for the following cropping season ?
- Farmer We select the already grown paddy which show to be better and start to dry it shortly for the next season.
- Farmer The improved seeds were obtained from Cholima research centre in 1993. Thereafter the variety has been cultivated and the selection was done based on plant height (the shorter ones are more preferable).
- Farmer Sometime the longer plants are removed from the plots to remain with better plants for seed source in the next season.
- Farmer Sometime we have a tendency to buy good seeds from our fellow farmers.
- JICA How many farmers obtain the seeds from their own farm ? Please rise your hands. 14 farmers replied.
- Farmer There are some problems. Namely, at the beginning Line 88 was good variety with high yielding, but with time it started to have low yield and quality which is not preferred.
- JICA What is your opinion ?
- Farmer It will be better if the project will assist in the availability of good seeds and especially qualified seeds will be produced in the nearest place.
- Farmer Since Line 88 has proved to decrease in yield with time, we propose that researcher should concentrate their efforts for investigation of good seeds.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
- Farmer 21 farmers have shown to use tractor.
- JICA Do you have any kind of problems / opinions in land preparation ?
- Farmer Unavailability of tractors may delay the time to start.
- Farmer Unstable price (highly varied depending with the drivers).
- Farmer Due to few number of operators, the land is not prepared properly. They hurry to run for other customers.
- Farmer Poor preparation due to hard soil.
- JICA How many tractors do you have in each village ?
- Farmer There are 7 tractors in Mkindo village and 4 tractors in Dihombo. However, 2 tractors out of 4 tractors in Dihombo are not used for farmers, but only for owners.
- JICA What are your opinions to solve this problem ?
- Farmer We would like to request sponsors or agencies to provide tractors which can be hired at fair price.
- JICA In the case the tractors will be available, will you be in a position to use them effectively ?
- Farmer Yes.
- JICA Which ways do you think can be used to obtain more tractors ? By loan ?
- Farmer By loan, and we can pay in installment after selling our crops, so that it becomes our own property in the future, and also the money obtained through

- hiring of tractors can be used to pay the loan.
- Farmer I suggest that tractors will be provided to use for land preparation under the water lodged condition.
- JICA You have said that you prefer to have your own tractor. But what can you do to manage it, as we know it needs to have some spare parts, workshop, operators, etc. ?
- Farmer We can open a bank account. and then obtain money to be used to maintenance the tractor.
- JICA Who will be responsible to keep the tractor and the money obtained ?
- Farmer A particular committee will be formed to monitor this.
- JICA It seems that you have a good morale and interest of getting tractors why have not you done it before, at least to get one tractor ?
- Farmer The present plots are so small to have enough income for buying a tractor. We have also tried to contribute some money before which really ended to the hands of few people.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
- Farmer No. Due to hard soil.
- JICA You can complain for the use of oxen due to hard soil. But have you ever tried it before ?
- Farmer Oxen usually is suitable for sandy soil with short grasses, but in our case it is not easier to apply oxenization.
- JICA It is expected that oxen will be used for puddling and leveling. What are your opinions ?
- Farmer Oxenization is time consuming, the area is in water-lodged condition and is difficult for oxen to perform well, sometimes oxen may be stuck in wet soil condition.
- Farmer We don't have any experience, and we are afraid of being attacked by Maasai people.
- Farmer Probably water buffaloes may be better.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
- Farmer Not used in Mgongola. Proportion of farmers : 24 farmers
- JICA What is your reasons that you have not applied fertilizer ?
- Farmer Fertilizer is sold at high prices.
- Farmer Fertilizer need to be used consistently. At present, poor yield is normally experienced due to unavailability.
- Farmer Water is not stagnant, so it will be washed away.

- Farmer The land is not leveled.
JICA What are your opinions ? In the case land is leveled, will you be ready to apply the fertilizer ?
Farmer Yes.
JICA Do you prefer to follow the package techniques of Special Programme - FAO to purchase fertilizer in groups ?
Farmer We prefer and should be strengthened, as it is very expensive to buy it individually.

Agro-chemicals

- JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
Farmer 24 farmers agreed to use agro-chemicals.
JICA Which kind of herbicide commonly used in Mgongola area ?
Farmer 2,4 - D
JICA What are the common insects in the area ?
Farmer Grass hopper and Stalk-eyed shoot fly
JICA Which kind of problems do you have ?
Farmer High price, lack of fertilizer and sprayer.
Farmer Expired agro-chemicals.
Farmer Sometimes agro-chemicals are mixed or diluted with other fluids which reduce its effectiveness.

Drying

- JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
Farmer It is normally left to dry in the field.
JICA Do you have any opinions / problems on drying ?
Farmer It is always broke into pieces. Breakage is high for paddy which was dried in the fields.
Farmer Some may be lost during harvesting.
JICA Regarding those problems, what are you doing for them ?
Farmer Early harvesting for drying at home.

Marketing

- JICA Do you have any problems / opinions ?
Farmer Price of paddy is cheap and flexible affected by marketed amount of milled rice.
Farmer It is difficult to sell rice due to lack of milling machine.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 2

Date : 6th June 1997

Venue : Mkindo village

Time: 9 : 00 AM to 1 : 00 PM

Farmers : Male Group of Mkindo village (23 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer Would you please try to explain to us how we can be benefited from rotational crops ?

JICA Rotational cropping improve soil structure and reduce diseases incidences, while with single cropping soil is exhausted easily and increase high disease incidence.

Farmer I personally do agree with rotational crop and most alternative crops are maize and beans.

Farmer We shall be pleasure with the rotational crop, as most of us we are living at Mgongola and we can be benefited in getting sufficient maize for our own consumption.

JICA But I know that you have not tried with vegetables, how do you see it ?

Farmer Anyway, it is also good to cultivate vegetables, but we better try with maize and beans.

JICA You have all agreed with rotational crop. Why did not you try it before ?

Farmer There is little space (plot) for rotational crop.

Farmer Rain pattern may not suit with some crops.

Farmer Most of us have been accustomed with inter-cropping.

Cropping Pattern

- JICA Do you have any question on these cropping patterns of Alt-1 and Alt-2 ?
- Farmer Our main doubt is scarcity of rainfall in some occasion, but as we can be assured with irrigation, I think there will be no problem with the pattern.
- Farmer We also have small land for cultivation i.e. using rotational system, but as long as we can be provided with more land, there will be no problem with new pattern.
- JICA In brief, you have agreed with rotational crops and the main crops you have proposed are paddy and beans ? Agreed ?
- Farmer Yes.
- Farmer I have suggested for vegetables, but unfortunately my colleagues opposed, I am still insisting for vegetables for the future benefit of our new generation.
- JICA How do you see this suggestion ?
- Farmer We have proposed rice, beans as with my experience they provided us with high income apart from food. Furthermore, the businessmen do come here to buy them. But with vegetables, I am worried of getting customers to buy them.
- JICA To summarize, I think you have all agreed with rotational pattern, and the alternative crops are beans, vegetables like onion, cabbage and tomatoes, is it ?
- Farmer Yes.

Farming Practices

- Farmer I suggest to use the Special Programme - FAO, as with my experienced, transplanting and use of fertilizer by which high yield is given.
- Farmer In my case, I have not practiced, but I think is around 20 - 25 bags per acre.
- Farmer I agree with Special Programme - FAO, as I used 5 tins of seeds for the broadcasting at Mgongola and I harvested 15 bags for 2 acres, while those who practiced Special Programme - FAO got 20 bags per acre.
- Farmer Special Programme - FAO ensures high yield with good quality, which ensure our income, after all we can be assured with fertilizer and the modern techniques.
- Farmer In the case of the farming practices based on Special Programme - FAO, I think it is too difficult especially for big acreage. I have no idea how this can be solved.
- JICA Can you tell me the disadvantages of broadcasting ?
- Farmer With broadcasting, the costs are too big compared with the net income.
- Farmer Also with broadcasting the liability can be poor and cause more spacing unnecessarily.
- Farmer Broadcasting has little yield.
- Farmer I am the chairman of irrigation scheme, so with my experience the two

techniques do differ. Broadcasting differs with transplanting in a sense that broadcasting is like a game of chance, while with transplanting you can be sure of getting more yield.

- JICA How many bags did you get from transplanting and broadcasting ?
- Farmer We got around 30 bags per acre with transplanting, while 7 to 10 bags per acre with broadcasting.
- Farmer I therefore beg my fellow farmers to agree with FAO Special Programme.
- JICA You all agree with transplanting, I want to ask how many farmers in Mgongola use transplanting ?
- Farmer No one, because there is no control for irrigation.
- JICA Transplanting is very tedious and time consuming. And I know most of you have more than 5 acres at Mgongola. After the beginning of project will you agree to reduce the number of acreage ?
- Farmer Yes, this is possible and we can volunteer some to our fellows who have no land, this is because we can be assured of getting high yield, and is better to concentrate with small part with high yield.
- Farmer I think broadcasting can also be the good alternative as there will be enough water for irrigation.
- JICA For example, for a person with 3 to 5 acres, it will be difficult to transplant suppose you are assured with tractors will you be able to get enough labour for transplanting.
- Farmer this is obviously possible provided you have enough money to pay them.
- JICA You have proposed some alternative crops like maize, beans, onions, cabbage, and spinach. Do you have any experience of cultivating these crops in the paddy field ?
- Farmer This have not practiced in the paddy field due to insufficient water. That is, after paddy harvest usually soil becomes to hardy (dry). It must also be noted that we did not practice rotational crops before. Hence, it was not easier to practice it in paddy field.
- Farmer We also did not have any experience with these crops before, but were now getting experience from outsiders.
- JICA During implementation of the project, soil conditions will be improved, water supply will be ensured for paddy cropping and there will be no damage from flooding. Also we expect that you will prepare bunds in the paddy field so that water will be controlled well. How do you think about this ?
- Farmer In case of ensured water supply after harvesting of paddy, then definitely no doubt other crops especially vegetables can be introduced.

Supply of Seeds

- JICA Next, we would like to ask the present situation concerning supply of seeds in your fields. Presently, where do you obtain seeds for the following cropping season ?
- Farmer For last season, I bought from our village extension officer (VEO), lent for the coming season. I have prepared already.

- Farmer I think in my opinion we better be provided with the new variety of good seed, as the ones were using now (Line 88) have been deteriorated in quality.
- JICA How do you know that the seed have been deteriorated ?
- Farmer Its yield becomes poor or low year after year.
- Farmer For our fellows who have started with phase 1 and 2, the area is too small for them to sell the seeds for us, to suffice the expected new big area at Mgongola. I propose for the project to provide us with enough seeds which we can buy them at reasonable price.
- JICA The project can not start today or tomorrow, we thus need your opinion for the coming season.
- Farmer We still request for the project to provide us with good seeds which we can buy them.
- JICA You have insisted on buying seeds from the project, but why didn't you try to buy them from Mrogoro stockists ?
- Farmer We are afraid of getting poor quality seeds and normally VEO brings us with seed of poor quality, we thus think of getting seeds from project as they can be of good quality.
- JICA You have said that Line 88 seeds have been deteriorated, why can't you go to the Cholima research centre ?
- Farmer Line 88 have not deteriorated as such, but the problem is mainly attributed to our poor soil conditions and uncontrolled water.
- JICA Is there any problem with availability of seeds now ?
- Farmer Yes. There no enough seeds as those who produce seeds they do it for themselves, and sell the remained few, at the sometime they keep for food.
- JICA Why are you complaining for unavailability of seeds while we knew that most of cultivate paddy, and why can't you keep enough seeds for the next season ?
- Farmer The insufficient seeds were kept is Line 88, most of us are cultivating the local variety (SUPA), compared with few number of farmers, about 92 farmers who cultivate Line 88, for both consumption and seeds.
- JICA How many of you use Line 88 in Mgongola ?
- Farmer We only use SUPA, but after beginning of the project we are sure that we can use Line 88, provided it can adequately be provided. It must also be noted that in Mgongola we use broadcasting which demands a lot of seeds.
- Farmer We did not also prefer to use Line 88 at Mgongola as we have no experience with it, whether it requires more water or can sustain drought condition, but with SUPA, no doubt we have realized that is resist drought condition.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
- Farmer Tractor 21
hand hoe 3
[Hand tractor is not used in Mgongola area]
[Problems : insufficient number of tractors, which attributed to high prices for

- hiring, thus why some of us tend to opt for hand hoe.]
- JICA Do you use harrowing after plowing ? If yes, is it carried before sowing or after sowing and how many times ?
- Farmer We normally prefer to harrow twice, but we normally do it once, i.e. before sowing.
- JICA The hiring price for plowing and harrowing differ ?
- Farmer They fairly vary.
- Farmer The available tractors are privately owned and they tend to rise the price as demand for tractors increase.
- Farmer Thus we suggest for the project to provide us with tractors which can hire them for the reasonable price. This will also low competition for tractors and an force the private owners to reduce and an force the private owners to reduce their price accordingly as more tractors will be available.
- JICA Is the whole area at Mgongola cultivated with tractor or hand hoe, or probably some farmer with many acres can decide to use both ?
- Farmer Majority use tractor and nobody can decide to use tractor, he can either borrow the other portion to any body else.
- Farmer For those who are capable (i.e. with enough money) it is easier to cultivate the whole area by tractor ?
- JICA How have you tried to solve the problem of insufficient tractors ?
- Farmer We have tried to request the responsible leaders (distinct level) in our normal meetings, but in real sense this has been us.
- Farmer As there few individuals who own tractors and no elsewhere we can hire them, thus we keep on relying from these few individuals ?
- Farmer In the past time, during the leadership of Mziwakeya, tractors were available and we have been successful.
- JICA In hiring of tractor, do you go to request it individually or in group ?
- Farmer We go there individually.
- JICA Why can not you organize yourself to find the tractor hiring ? Where each one of you can list the number of acre he needs to cultivate ?
- Farmer We have tried it before, but those who were assigned to hire the tractors proved to be untrustful and have eaten our money.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
- Farmer This is practically impossible due to our hard soil.
- JICA We are sure that in Phase 1 and 2, we have used tractors / hand hoe in plowing, but what kind of implement we are using for leveling and puddling ?
- Farmer We normally use hand tractors, but this is more common to those with high income.
- JICA But how can you use hand tractor in the new expected area ?
- Farmer In the new area we do not expect to use the hand tractor, mainly due the big

area we have, we thus request for the project to provide us with big tractor in loan term, where each one of us can go to hire it for normal preparation.

JICA I am sure using of tractor under water lodged conditions is not a good way, as it requires high maintenance and with my experience I am sure if tractor is brought here, it can not stay long time. With my opinion, I can not advice this. Why can not you use oxenization which is a simple means ?

Farmer With our experience, oxenization does not fit in our soil conditions which is hardy in dry season and can be flooded in the rain season to extent of making the animal to stuck.

JICA But, we are talking for the future where there will be leveling and controlled water, thus I think it can be possible for animals to perform this.

Farmer the main problem with us, we do not have animals, we are not livestock keepers and not used to oxenization. thus it can be good, if the project can provide us with animal and train us how to use them. Probably it can be good to cite us with more examples carried else where before.

Fertilizer

JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?

Farmer No one used it before, the main reason being the lack of levelling which attributed to lack of stagnant water, in this we feel that there is no need to apply the fertilizer which can later be washed away.

Farmer It is very expensive.

Farmer Unreliable rainfall which reach to insufficient water at the place, which lead to burning of plants by fertilizer.

JICA there is no need to worry with unreliable rainfall, unlevelled land as these will be solve by the project in the near future. The only problem is how to do with the question of high prices ?

Farmer We propose to be given fertilizer in loan which we can pay it after harvesting we can be free to buy it at any prices.

JICA Why can not you establish a sort of corporation where you can get it easily.

Farmer We have tried it before where each one of us contributed certain account of money and deposited in the bank for us to get loan easily, but this has been unpromisive, thus we request the project to assist us.

Agro-chemicals

JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?

Farmer We commonly use them.

JICA How many you use them at Mgongola ?

Farmer 3 farmers use herbicide and 18 farmers use insecticide.

JICA why do not you use them ?

Farmer Sometimes it is difficult to use them in weeding, but for the case of insects attack this is possible, depending on incidence.

- Farmer Agro-chemicals are not available at the right time. Sometimes they can be available, but the money may not be available. We thus request the project to provide us with enough supply of agro-chemicals which can be available throughout the growing season.
- Farmer Lack of stores / shops where we can find them at the nearest place and is meaningless to go up to Morogoro just for a single bag which less expensive than the bus fare itself.

Drying

- JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
- Farmer We leave it to dry at the field.
- JICA Do you have any problems or opinions ?
- Farmer We normally depend on sun drying.
- Farmer Problem lies on harvesting, which actually results to big loss due breakage in the milling which definitely lead to low price in the market.
- JICA You have realized that late harvesting lead to breakage of rice, why can not you harvest it earlier ?
- Farmer Lack of sufficient place both for threshing and drying due to wet condition in the field.
- Farmer It is also very expensive to carry the wet paddy.
- JICA But we expect that in the implementation of the project, water will be properly controlled. Do not you think that it makes it possible to dry it ?
- Farmer For this case we think it will be possible.

Marketing

- Farmer We normally sell the paddy due to lack of milling machine.
- Farmer Lack of customer / markets which force us to sell it at low prices.
- JICA You are complaining for low price, at what price do you prefer to sell your paddy ?
- Farmer At least 15,000 to meet our needs. For instance in the last season the lowest price was 12,000 which later raised up to 18,000.
- Farmer the other problem is that most of customers prefer SUPA especially in July. this force us to sell the new Line 88 at any available price due to its less demand to the business.

Others

- JICA We asked many questions. If you have any questions, please ask me.
- Farmer In most case the established project collapsed and leave the objectives unfulfilled, the good examples is the current irrigation scheme, this really

- brings a lot of doubt to us. We thus request for the project to make sure that its objectives are fulfilled.
- Farmer We have commonly experienced flooding during rainy season, how will project assist this ?
- JICA this will no longer be a problem as there will be control of water supply in the field.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

SCRIPT FOR DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 3

Date : 6th June 1997

Venue : Mkindo village

Time: 2 : 10 PM to 5 : 00 PM

Farmers : Female Group of Mkindo village (17 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer We agree with the paddy as the main crop.

Farmer I propose for fish keeping in the area proposed for other crops.

Farmer I agree with Alt. -2, but the alternative crops should be vegetables, as it can help us as a source of income.

Farmer I agree with Alt-1, because paddy is a big source of our income and food.

Farmer I agree with Alt. -2, but for the 2nd cropping season the area should be divided into two equal parts (1/2), i.e. one for paddy and the other for vegetables, this will help us to reduce the problem of vegetables scarcity especially during the dry season.

[Majority have agreed to cultivate paddy in the 1st season and rotational crops in the 2nd season]

JICA How many accept the Alt. 1 : 3 farmers accepted.

JICA How many accept the Alt. 2 :14 farmers accepted.

JICA You have agreed with Alt. 2. Can you tell me the alternative crops you can prefer ?

Farmer Vegetables - tomatoes, Amaranthus (Local spinach), beans, onions, cabbage

- Farmer I proposed to cultivate paddy from January to June and then beans from June to August.
- Farmer Currently we do not cultivate any crops after paddy harvesting, due to drought conditions of our soil.
- JICA It is proposed that because paddy is your main crop then is better if it can cover at least 2/3 of a plot, in the second season and the rest left for other crops.
- JICA you have raised the question of aquaculture, do you have any experience with it ?
- Farmer We do not have experience, but in the past some have tried and it is practically possible to harvest the fish at the end of June.

Farming Practices

- Farmer I agree with transplanting because broadcasting has little / low yield. With broadcasting, viability of seed is not ensured.
- Farmer With transplanting, it is definitely you can get high yield of at least 30 bags, but it is more tedious and time consuming with respect to preparation of nursery, preparation of field which requires harrowing and puddling, and transplanting in a straight line. So, in case of practicing it, we request for more help from you to facilitate all these activities.
- Farmer Currently we have poor quality seeds which gives low yield. Also, the soil is so clay and sometimes paddy fail to germinate.
- JICA Provided you are assured with leveling and water supply, how do you compare the two techniques ?
- Farmer In the case of ensured fertilizer, water supply, I hope that you can get a reasonable yield with broadcasting using Line 88. I have tried to use broadcasting at Mgongola and I got 50 bags for 2 acres without fertilizer application.
- Farmer I have also tried at Mgongola and I obtained 5 bags per 1/4 acre without fertilizer.

Supply of Seeds

- JICA Next, we would like to ask the present situation concerning supply of seeds in your fields. Presently, from where do you obtain seeds for the following cropping season ?
- Farmer We obtain them through selection and sometimes we can buy from others.
- Farmer Unreliable source of seed supply, we therefore request to be provided with good seed while we can either buy or take it for loan.
- JICA What is the price of seeds for one tin ?
- Farmer 800 to 1,000 for plastic of 20 liters during harvesting and 2,000 to 3,000 during sowing season.
- JICA Why you did not ask for good seeds from your VEO ?
- JICA We have asked and we were provided with Line 88 which we are using it now.

- JICA Do you use new seeds in each growing season ?
 Farmer No, we normally use the same Line 88 after making selection from the previous cropping season.
 JICA Have not you experienced the decline of yield year by year ?
 Farmer Automatically there is a decrease in yield.
 Farmer No decrease in yield in case you have done good selection of seeds from the previous season and store them under good conditions with applied pesticides.
 JICA Have not you realize any problems concerning with delay in flowering or growing of paddy, comparing from the time you were provided with the Line 88 up to this moment ?
 Farmer Flowering and the rate of growing depends on the moisture content and usually those with moisture content tend to flower earlier with good yield.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
 Farmer Tractor 19
 Hand hoe 3
 JICA Why do not you use hand tractor ?
 Farmer Due to hard soil conditions especially during land preparation which takes place in the dry season.
 Farmer Lack of enough tractors which brings a lot of competition.
 Farmer High prices of hiring tractors
 Farmer At Mgongola the land is not leveled which brings a lot of problems in controlling work and make land preparation more difficult. How can this be solved ?
 JICA Of course in the implementation of the project, the land will be leveled and good control of water will be ensured.
 JICA What are your suggestion ?
 Farmer It will be better if we can be provided with a tractor which can be hired at the reasonable price or used for loan contract. So that we can pay at the end of each cropping season.
 Farmer Alternatively, we can be loaned a tractor which we can pay it in installment so that in the future we can own it.
 JICA For our case to bring a lot of tractors in more possible compared with provision of them for loan. But why have not you tried to organize yourself to hire them in groups, by listing the number of acreage each farmers needs to cultivate.
 Farmer We have not tried, but thus can also be a good alternative which we think can reduce competition, and low hiring price.
 JICA How many of you prefer to hire a tractor in groups ? - - 9
 JICA How many oppose this procedure ? - -
 JICA What means do you apply in carrying your crops from field to home ?
 Farmer Tractors and sometimes lorries and pick-ups can get into the field for this

purpose thus this has no problem.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
- Farmer With the soil condition which is really hard, this can be impossible.
- JICA With the coming project, you will be ensured with water supply to soften the land, don't you think that this will make it possible.
- Farmer Where can we get the animals after all apart from this we have not experienced it before.
- JICA Yes, I agree that oxenization is difficult even if you put some water to soften the soil. But how do you do with puddling ?
- Farmer We normally use hand hoe, after allowing some work . The soil will become to be soften.
- JICA After beginning of the project, maker will be supplied and we do not expect to use broadcasting, what matter do you expect to use in land preparation, i.e. plowing, harrowing, and puddling ?
- Farmer we think we can use the big tractors and later use hand tractor for puddling.
- JICA Why do not you think for the use of draught animals ?
- Farmer With Mgongola soil we think it is difficult as it becomes to hard, especially after being watered.
- JICA After the beginning of project, the soil will be under good condition for draught animals. Do you think the use of draught animals will satisfy your needs.
- Farmer If you think this is the good way, we can try it, but we need to be demonstrated and trained how to use them as we had never been exposed to them before.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
- Farmer We have never used fertilizer.
- JICA Why ?
- Farmer Because of unlevelled land, the fertilizer can be washed away to the neighbours farm which is a loss to me.
- Farmer Unaffordable price of fertilizer is also problem, though it is highly available.
- Farmer Also the whole process of using fertilizer is not paying.
- JICA Now can you solve this problem ?
- Farmer We propose to be provided fertilizer in loan, which we can pay after selling of crops.
- Farmer Even after leveling of the land, we can not promise that all of us can use fertilizer due to its high price. And apart from this we still get good yield without fertilizer application.

JICA Can you able to adopt FAO Special Programme for buying fertilizer in groups ?
Farmer We can not promise because none of us is aware of its benefit.

Agro-chemicals

JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
Farmer 9 farmers use them. But this depend much on the ability of each individual to buy them.

JICA Are the agro-chemicals highly available ?
Farmer Yes, the only problem is our poor economic situation, that is the price is high for us. For this reason we sometimes leave the nature to take its place.

Farmer We suggest to be provided with agro-chemical in loan which we can pay it after harvesting.

Drying

JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?

Farmer we do not. We normally cut it and leave it for 3 days in the field for it to dry and for easier threshing, unless it is wet by rains. However this is not specifically done for drying but for getting enough paddy to thresh.

JICA Do you agree with the current drying procedure ?

Farmer Because we do not have any alternative we think is proper though there is a lot of disadvantages, like breakage during milling.

Farmer Early harvesting is not common unless for immediate demand.

Farmer After sealing your bags in the field, do you dry it at home ?

Farmer No

JICA But you are aware that late harvesting causes breakage and low market price.

JICA How do you avoid this ?

Farmer We normally try to harvest it in time. And we usually try to avoid it from being rained as it increase high percentage of breakage.

Farmer No drying is done after brought it from the field, unless the buyers decide to do it.

Farmer As we normally harvest it in time we think there is no need of drying it again.

Marketing

Farmer We normally sell the paddy.

Farmer Lack of customer / markets which force us to sell it at low prices.

JICA What are your suggestion / opinion to solve these problem ?

Farmer We will be thankful if you help us to find a reliable market.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

SCRIPT FOR DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 4

Date : 7th June 1997

Venue : Mkindo village

Time: 10 : 10 AM to 0 : 40 PM

Farmers : Participated Farmers of Mkindo village for Special Programme - FAO
(6 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer It is possible to practice rotational crops especially, vegetables like cabbage, onions, as can also be, used to rise our income.

Farmer Suppose I have 4 acre, can I cultivate say half an acre for paddy and half an acre for other crops ?

JICA We have explained that main crop in the project area is paddy. It means that it should cover a bigger portion of your plots, say roughly 2/3 should be cultivated paddy, while 1/3 of area others of interest. Because paddy is most suitable crop in that area.

JICA Alternatively you can select those crops which also prefer water condition.

JICA The most important thing is not only how you can distribute your plots, but also how you can decide the type of plant to cultivate.

Farmer I agree with Alt. 1. Because my block has adequate moisture throughout, thus I will find it difficult to reclaim (drain) the block for cultivation after other crops.

Farmer I prefer to cultivate pigeon , beans, cabbage, amaranthus, etc. as well as

- paddy.
- JICA You should understand that after implementation of the project, there will be a good condition of water supply and the land will be levelled, therefore the question of how you can drain your plots will be no longer there. So what are your opinion ?
- Farmer For that matter I agree with rotational crops.
- JICA Why do you prefer cabbage, onions, etc. in your area ?
- Farmer I prefer to cultivate those crops as source of income and they prefer wet condition.
- JICA Have you ever cultivated them before ?
- Farmer I have tried to cultivate cabbage and onions and I got good yield.
- Farmer Apart from the fact that paddy is our main crop and you have explained well the benefits of rotational crops like minimization of disease incidences then I do agree with Alt. 2.

Farming Practices

- Farmer This is not problem to us as we have a lot of experience with it, compared to what we were practicing before joining Special Programme - FAO.
- [Other farmers supported the above suggestion.]
- JICA How do you compare the outcome of Special Programme - FAO with the previous one, especially unit yield ?
- Farmer Obviously, with Special Programme - FAO you can have high yield of around 26 to 28 bags per acre, but with the local technique the yield is low around 10 to 15 bags per acre, especially under good moisture condition.
- JICA Are 10 to 15 bags per acre found through transplanting or broadcasting ?
- Farmer Broadcasting.

Supply of Seeds

- Farmer We select from the harvested paddy and dry it well in the sun.
- JICA What problems do you face with your seeds ?
- Farmer For maize we have experienced some problems especially, deterioration in quality (viability and yield), but not for paddy seeds.
- JICA Which kind of paddy seeds are using now ?
- Farmer We have used Line 88. and we are comfortable with it, no problems concerned with Line 88.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?

- Farmer Tractor 4
Hand hoe 0
- JICA Which kind of problems do you face with land preparation now ?
- Farmer Our problems are high prices for hiring tractors and few number of tractors.
- Farmer Tractors are owned individually (privately) and the owner are profit (business) oriented.
- Farmer Because of our hard soil condition, they are very reluctant to cultivate during the dry season, resulting in the delay of land preparation.
- Farmer the owners have a tendency to shift to the other places outside the village where the soil is soft and they can cultivate more acres per day.
- Farmer Most of the owners and operators tend to ask other money outside the hiring costs.
- Farmer We request for assistance of more tractors under a loan conditions.
- JICA Have you ever tried to form groups to contribute for buying a tractor ?
- Farmer Yes, we have opened our account in the Bank, and we are trying to contribute each year so that we can in the future convince any donors.
- JICA How many members are involved in the account ?
- Farmer Two groups - Nguru Kazi and Mwahza Mgumu.
- JICA Your plan of buying the tractor is really encouraging, but in our plan of the project, the question of supplying you with a tractor is not under consideration.
- JICA What is the current price of a tractor ?
- Farmer We do not know, but it was TShs. 9,000,000 for the past three years.
- JICA Why can not you go to other place to find the tractors for hiring ?
- Farmer This has been practice, and normally based on friendship.
- JICA What are the problems in relation to hand tractors in Mkindo irrigation scheme ?
- Farmer Number of hand tractors is very few, and sometimes we can not get access to them in the proper time.
- Farmer Not efficient (low capacity)
- Farmer Due to lack of experience on how to use them, you can find that we use hand hoe to cultivate almost 65 % of the plots.
- JICA Hand tractors are sold at RALDO's office at about TShs. 1,700,000. Why do not you form group which will try to buy them ?
- Farmer Anyway, we were not aware.
- JICA You have complained for the low capacity of hand tractor. How many acres can is cultivate per day ?
- Farmer Almost 4 acres for day and night when it was new.
- Farmer The hand tractor is not in good condition. 4 acres can be done in 24 hours, last season the tractor did not work.
- Farmer Hand tractor can only be used in the water, they are suitable (useful) although probably we were not having experienced operator , also it might be that tractor was not new when it was brought here for the first time.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
- Farmer I have never used them before.
- Farmer I am afraid they will be stolen by Maasai.
- Farmer Let me tell my experience. I was involved in an oxenization project with SUA (Sokoine University of Agriculture); the Maasai stole the four cattle, the project again provided other animals, but the cows failed to work because the soil was very hard they can not plough even one acre. As a result, the project will be failed.
- Farmer Clay soils (which is hard) is difficult to work with using oxen.
- JICA Do not you think oxenization in Mgongola is possible ?
- Farmer It is possible in some area, but in other areas which have ant-hill, it is impossible.
- JICA I recommend to use the animals in puddling and leveling.
- Farmer That can be possible.
- JICA Currently, how do you carry out ploughing and puddling in Mkindo Irrigation Scheme ?
- Farmer By hand hoe.
- JICA Why do not you use a large tractor ?
- Farmer Big tractor increase problems, it leaves large clods, therefore we have to do leveling again, and puddling become more tedious.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
- Farmer We do not use fertilizer in Mgongola area.
- JICA Why ?
- Farmer Fertilizer will be carried by running water.
- Farmer SUPA which is applied fertilizer grows to tall and then prove to lodging.
- Farmer When we use fertilizer especially for SUPA, the plants tend to be taller with smaller panicles which definitely results to low yield.
- JICA How do you find the Special Programme - FAO for buying fertilizer in groups ?
- Farmer I suggest that we make a contribution which van be deposited in the bank, so that money can easily be available to buy fertilizer at the right time and stored in the store for everyone to have access.
- JICA If the fields will be levelled, will you use fertilizer ?
- Farmer Yes, it is.

Agro-chemicals

- JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
- Farmer We normally use agro-chemicals for army worm, 2,4-D.

Farmer Agro-chemicals are expensive and some are not effective.
Farmer Sometimes we can buy it in advance, but it may be a loss in case of absence of disease.

Drying

JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
Farmer We normally harvest in the field at the right time, that is when moisture content.
JICA How can you judge proper time for harvesting ?
Farmer We harvest when the color will change to brownish.

Marketing

Farmer We sell paddy due to lack of milling machine and it is very expensive to transport paddy to other places for milling.
Farmer Unreliable market is also our problem. We are now trying to form groups to sell our paddy in other places.
JICA When do you sell your paddy ? Immediately after harvesting or you normally store it for sometimes ?
Farmer We normally sell immediately either in the field or home to get some money to cater other expenses, like land preparation, harvesting, etc. But sometimes we store it in order to fetch higher prices during the peak demand of paddy.
JICA Have not you experienced any problem with storage, and what do you do to avoid problems in storage ?
Farmer We have never experience, as we normally dry it properly and store. Even after storing, we dry paddy sometimes by means of spreading and re-bagging them.
JICA Do you think that selling your paddy in group is more profitable at harvesting ? [Selling price is not high on harvesting time.]
Farmer When we harvest in March to April, selling price is normally high because of high demand for paddy at that period.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

SCRIPT FOR DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 5

Date : 7th June 1997

Venue : Mkindo village

Time: 1 : 35 PM to 4 : 30 PM

Farmers : Farmers of Hembeti village (14 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer Very few farmers from Hembeti have plots in Mgongola area. I prefer to use Alt. 1.

Farmer Crop rotation will be very helpful in the sense that soil will remain fertile for quite long time and reduce disease incidences.

Farmer The most preferable crops are maize, beans, and vegetables like cabbage.

Farmer I have tried to visit at Moshi project (Lower Moshi Irrigation Project), and farmers in the project normally use fertilizer to maintain soil fertility and they have been very successful. I therefore request for us to copy from them, as will increase our income.

Farmer I agree with Alt. 1, because of getting more income, vegetables can be cultivated in our other places but not in Mgongola.

Farmer I agree with Alt. 2, because crops like vegetables normally grow fast and we can harvest them at the short period.

Farmer Vegetables like tomatoes, onions, cauliflower, etc. will help us to increase our income and at the same time be used for our own consumption.

Farmer Rotational cropping will also help in nitrogen fixation especially beans which

- will maintain soil fertility and high yield.
- Farmer It will also reduce disease incidences. The good example is our fellow farmers in Mgeta who are now benefiting from vegetables.
- JICA As majority agreed with Alt. 2, we suggest that the big part should be covered by paddy, and the remaining part for other crops.
- Farmer As we informed you earlier, majority of Hembeti residents have no plots in Mgongola area, how will this be solved ?
- JICA That is not our question to assist you on how to distribute plots among you, we therefore do expect that you will do it by yourselves.

Farming Practices

- Farmer On my side, I do request my fellow farmers to accept Special Programme - FAO techniques because it is technically efficient and it is more likely to get high yield than what we are getting now.
- JICA How many bags do you get in Mgongola by using transplanting and in the other places by means of using broadcasting ?
- Farmer I normally get 22 to 24 bags per acre by transplanting and about 10 bags per acre by broadcasting.
- Farmer I get 18 bags per acre by means of transplanting, but this was due to army worm attack, and I got 7 to 8 bags per acre by means of broadcasting.
- JICA How many acres do you have in Mgongola area ?
- Farmer We have plots of 3, 2, 3, 10, 2, one and half, respectively.
- JICA Do you agree to practice Special Programme - FAO in the plots you own in Mgongola ?
- Farmer Yes.
- JICA But transplanting is very laborious and too labour demanding. How will you afford this ?
- Farmer This will depend on our financial position. If you are financially poor, then you can arrange family manpower, and 5 peoples can transplant 5 acres per day.
- JICA Is the manpower or labors available here ?
- Farmer Yes, provided you have enough money to pay them.
- JICA How much do you pay the labour to transplant one acre ?
- Farmer It is TShs. 24,000, but this is variable depending on the season and is negotiable.

Supply of Seeds

- Farmer We normally get from our own farms where we select, dry them properly and store them. Sometimes from our VEO.
- Farmer Yield vary with type of seeds, e.g. Line 88 and SUPA.
- JICA You have said that Line 88 is good. Why don't you use it frequently ?
- Farmer They don't prepare Line 88 because it is not drought resistant and as most of

- them have no irrigation plots now, they hence prepare SUPA which has drought resistance.
- Farmer We request to be provided with seed.
- Farmer I request the project to establish the permanent places in the nearest area where we can be supplied with seeds and other items where we can buy.
- Farmer Not all farmers can be in a position to buy seeds, we therefore propose for the project to provide us seeds in loan terms.
- JICA What effort have you carried to solve the problems ?
- Farmer We have tried to produce seeds for our own, but the area used for seed multiplication was not big enough to produce for all farmers.
- Farmer Some farmers were supplied with good seeds which they could multiply them and sell to others, but they do usually produce them for different purposes like business and consumption. Then it was not easier for them to supply the produced seeds to all farmers.
- JICA What do you really want, a new variety or same variety ?
- Farmer Variety but of high quality.
- JICA Have you ever requested your VEO to find seeds of high quality from the research centre like Cholima, KATRIN, etc. ?
- Farmer We have not and we think they are not producing them now.
- JICA Then where do you think you can obtain seeds of high quality ?
- Farmer We propose to be brought with seeds of high quality which we can buy it and get it easily.
- JICA To bring you with new variety of seeds is quite difficult, but what the project can assist is to request more multiplication of seeds with high quality from responsible research centre like Cholima, Ilonga, KATRIN, etc. Furthermore, it is possible to assist you, regarding the training on seed selection and seed production.
- Farmer We happily accept it, and we are ready to be trained.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
- Farmer Tractor 7
Hand hoe 2
Hand tractor 0
- JICA Which kind of problems do you face with tractors now ?
- Farmer Tractors are not available - very few and is difficult to get them.
- Farmer High price, Tractors which are available are not in a good order.
- Farmer Operators do not cultivate properly.
- Farmer Tractors are not available at the right time.
- Farmer Due to high prices for hiring a tractor we are forced to cultivate only once and drivers tend to rush to other farmers.
- Farmers To be provided with tractors, which we can hire them more easily and at reasonable prices, this will assist us to cultivate in time and reduce competition.

- JICA Why do not you organize yourself, so that you can buy it in loan ?
Farmer We are still very poor to buy a tractor.
JICA tractors are highly available in Morogoro. Have you ever tried to hire them in groups ?
Farmer we have been using that idea, we normally sent our representatives to look for the tractors, but they turned to be untrust worthy and spent the contributed money for their personal ends.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
Farmer Oxen need some proper management and we have never been used before. So oxenization will be difficult for us, and oxen may be ended in death.
Farmer Hard soil condition is difficult to apply oxenization.
Farmer We are aware with the success brought by oxenization in many places of the country, but frankly speaking, the environmental condition in our places are not suitable for oxenization. Thus, most of us are not ready to accept it.
JICA You are complaining that oxenization is difficult to be adopted here, but you must be aware for successful paddy cultivation with transplanting, you need leveling and puddling. How will you do all these activities ?
Farmer We have been using hand hoe for these activities for quite long time and we think we shall continue to do so, provided we have no other alternative.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
Farmer We do not use fertilizer in Mgongola area.
JICA Why ?
Farmer The land is very fertile and if you apply fertilizer the plants tend to grow to the extent that they become lodged.
Farmer Fertilizer is not available. Price of fertilizer is high. Land is not leveled and in applying fertilizer, it can be washed away.
JICA Let us discuss the question of unavailability and high prices. How can these problems be solved ?
Farmer We can be provided with shop where we can buy our agricultural items to be required. We can contribute to establish that shop and own it.
JICA Why do not you adopt Special Programme - FAO ?
Farmer We have formed some groups like *Jembe ni Mali*. But we have been unsuccessful as the groups are still too young to sustain themselves.

Agro-chemicals

- JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
Farmer We normally apply agro-chemicals in case of disease incidence.
Farmer No problem because we normally get agro-chemicals through VEO, in case of problem we can formulate groups or group committee to solve it.
JICA How many use agro-chemicals at Mgongola ?
Farmer 10 farmers out of 11.

Drying

- JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
Farmer We leave it dry in the field.
JICA In case that paddy will be left to dry in the field for quite long time, breakage during milling will be increased. Don't you fear about this ?
Farmer We normally harvest in time and there is no problem.

Marketing

- Farmer We sell paddy.
JICA Why paddy, not milled rice ?
Farmer We do not have any milling machine.
Farmer Price is not stable. You can imagine for the last two weeks, one bag of paddy was sold for TShs. 25,000 and now TShs. 12,000.
JICA Why can't you organize in groups so that you can send your fellow to check for the existing price in the market ?
Farmer We can do it, but no one can trust them.
Farmer I suggest for the establishment of group society (cooperative) where we can sent our crops after harvesting and sell them in group.
JICA For the formation of a society, what steps you think can be taken ?
Farmer We can call for the village meeting and introduce the issue with three villages (Mkindo, Hembeti, and Dihombo villages).
JICA Do you think all of you can join ?
Farmer We can use our farmers groups in each village so that we can join together. Further, we can expand the cooperation with other villages.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

SCRIPT FOR DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 6

Date : 9th June 1997

Venue : Dihombo village

Time: 10 : 00 AM to 00 : 45 PM

Farmers : Male Farmers of Dihombo village (18 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer We are worried that most of us in Dihombo have plot which will be out of the area intended to be covered by the project. We, therefore, request you and our village leader to make sure that we can also be included in the area intended.

JICA How many of you have plots in Mgongola area ?

Farmer All of us

JICA Suppose I show you the map now, will you be able to understand it ?

Farmer Yes.

[The map was then shown to the farmers and thereafter farmers were asked by JICA.]

JICA How many among you have plots out of this map ?

Farmer Most of us.

JICA The map for the project area have been presented to your VEO (Village Extension Officer), and we expect that the distribution of plots will be under

- authority of your village leaders .
- Farmer You are the expert and we expect a lot from you, so is better if you assist us on how this problems can be solved, otherwise it will be meaningless to discuss the issue which we can not benefit from it.
- JICA Suppose you are distributed with plots which cropping pattern will you use ?
- Farmer Of course.
- JICA But you should answer as someone with experience in paddy cultivation and as someone with plots in the area, what are your opinion then ?
- Farmer Our soil has shown to be favorable to some crops except beans in the 2nd season, I therefore agree with Alt. 1.
- JICA At the beginning of the project, drainage system, leveling and all other important activities will be done to an able cultivation of other crops. So, what you think will be the possible crops ?
- Farmer Onions and cabbage.
- Farmer I think crops like onions, cabbage and tomatoes can withstand much wet condition.
- Farmer I think the Alt. 2 is good as during June to December there is no rainfall, and there is acute demand for vegetables therefore we can cultivate them.
- Farmer I accept the Alt. 1, despite the fact that we still have shortage of vegetables.
- JICA With Alt. 2, it does not mean that you should cultivate the two crops in your plots, the large part of the plots should be covered by paddy as it is still your staple crop.
- Farmer It is true that we have shortage of vegetable and we can real benefit by cultivating them, but it should be noted that some vegetables take long time up to their harvest to the extent that they can interfere the paddy season, I therefore suggested to cultivate only vegetables, which take shorter period.
- Farmer I propose the Alt. 1.
- JICA You have suggested various vegetables. Which one do you prefer most ?
- Farmer Tomatoes
- Farmer I propose for maize as alternative crop.
- Farmer For tomatoes there is some period especially July where they real fail to produce due to wilting. I suggest for some other crops like pigeon peas.
- JICA Have you ever tried to cultivate cabbage or maize ?
- Farmer Yes.
- JICA How many bags can you get from maize ?
- Farmer I do not remember well, but can be up to 5 bags per acre.
- JICA How about tomatoes ?
- Farmer You can harvest 25 tenga (1 tenga = 2 tins) per acre after 3 days which is approximately 120 bags per season : 360 plastic bags
- JICA Onions ?
- Farmer I cultivated 1/4 of an acre and I got 40 bags per acre.
- JICA Which kind of onions do you cultivate last ?
- Farmer Red Bombay
- JICA Cabbage ?
- Farmer Cabbage can do well here, but in most cases tend to be affected by pest.
- JICA How many of you cultivate beans here every year ? none of them

JICA Onion : 1, cabbage : 3, tomatoes : 10, maize : 15

Farming Practices

Farmer Transplanting is the good technique because with my experience, I tried it and I got high yield of 25 bags per acre.

Farmer Because there will be good drainage system the Special Programme - FAO will be good and we have seen the fruits of Special Programme - FAO from our friends.

JICA In implementation of the project, there will be leveling of land and water control thus the question of fertilizer application should not be worried much.

Farmer With my experience there is big difference between transplanting and broadcasting with broadcasting you can manage big area and smaller for transplanting. So would you please elaborate is on the difference of the two, with respect to income ?

JICA Transplanting has been practiced in several places, e.g. a certain farmers tried it and obtain 38 bags per acre and with broadcasting he was getting 19 bags per acre, deducting all other expenses with transplanting still you get high income than broadcasting converting it into monetary terms, say 1 bag = TShs. 10,000.

Then,

$38 \times 10,000 = 380,000$ by transplanting

$19 \times 10,000 = 190,000$ by broadcasting

Farmer In the case we all agree the Special Programme - FAO .

JICA How many of you will use transplanting ?

Farmer We normally do transplanting in Phases 1 and 2.

JICA How about Mgongola ?

Farmer I have tried in about 1/4 acre and try to monitor the difference between the broadcasting and transplanting, and I realized that with transplanting. You can get more yield.

JICA In Mgongola area the plots are not leveled with no controlled water supply, don't you think that you are getting less yield due to other factors apart for broadcasting ?

Farmer Yes, there might be some other factors and broadcasting is not bad as such.

JICA With transplanting you may require expenses like plowing, puddling, and harrowing different from broadcasting. Do you think that transplanting, say in 3 acres will be practical ?

Farmer Yes, I can do.

Farmer We can use both transplanting and broadcasting.

Farmer In case you have enough money, you can hire some laborer.

Farmer With my experience, most of us can not have more than 5 acres in the irrigation scheme, If therefore better to use transplanting.

Farmer We are not experienced with transplanting, so it is better if this question can be forwarded to Mkindo farmers as they are experienced with it.

Supply of Seeds

- Farmer We obtain them from the previous season.
- JICA Which kind of seeds do you prefer for irrigation ?
- Farmer Line 88
- JICA How many of you prefer Line 88 ? 17 farmers
How many of you prefer SUPA ? 3 farmers
How many of you prefer TXD 85 ? none
- Farmer It is not easily available and most of farmers do use them for food, we therefore request to be supplied with seeds.
- JICA Why don't you exchange with SUPA ?
- Farmer It is not possible, they only need money.
- JICA Do you want to be supplied with Line 88 now or after the beginning of project ?
- Farmer Not now, because the plots we have are not leveled and no good drainage system.
- JICA You have said that Mkindo farmers do not agree to exchange Line 88 with SUPA. Are you guessing or have you tried ?
- Farmer We have tried, they were so reluctant to exchange, they were only selling a plastic of seed for TShs. 3,000.
- JICA Why don't you make a plan to produce seeds for yourself ?
- Farmer It is not easier due to insufficient water for irrigation, probably it can be possible in the future after the beginning of the project.
- Farmer We know that Mgongola area covers a big area of about 880 acres, and it will be easier for us to produce enough seeds. I therefore think that it will be better if we can be supplied with adequate seeds of the same variety.
- JICA This is good suggestion, the only thing is that you should organize yourself and agree on the seed variety which you prefer.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
- Farmer All of us use tractors. Neither use hand tractors nor hand hoe.
- Farmer the big tractors available here are owned individually (personal property) thus they normally make sure that they have prepared their plots first, and then for others.
- JICA Suppose you are supplied with enough tractors, will you be ready to buy them ?
- Farmer Yes, in loan terms.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
Do you want to use oxen for land preparation ?
- Farmer No, we have problems with our soil which is very hard for oxenization. Further, we afraid to be attacked by Maasai.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
- Farmer We do not use fertilizer in Mgongola area.
- JICA Why ?
- Farmer Because of unlevelled land, if you fertilizer it can easily be washed away.
- JICA After the beginning of the project, your farmers will be leveled, will you be ready to use fertilizer ?
- Farmer Yes
- Farmer Not available, and very expensive when available.
- JICA what are your suggestion for the availability of fertilizer ?
- Farmer We propose to get an agent who can supply us frequently and at the right time with this. I am sure that the agent will be convinced to sell it at a bit low price.
- JICA Why don't you organize yourselves to find an agent who can supply you at the nearest center ?
- Farmer We have not tried or even discussed it before, but we think we can do it in the future.
- JICA You have not used fertilizer in Mgongola area, but what about other areas is in the Phase 1 and 2.
- Farmer We are using in Phase, 1 and 2
- JICA Why do not you use to same means in Mgongola area and other parts ?
- Farmer The use of fertilizer need to be consistent each year otherwise you will end up with poor / low yield in case of absence.

Agro-chemicals

- JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
- Farmer We apply 2,4-D and other herbicide.
- Farmer It is not so easily available.
- JICA How do you perform for weeding ?
- Farmer It is not easily available. We do normally uproots.
- Farmer Anyway, wild rice has similar effect to herbicide with paddy, therefore in applying herbicide you can kill both wild rice and paddy, we therefore advice you to plough and harrow before transplanting your paddy seedlings.

Drying

- JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
- Farmer We normally harvest, thresh and pack them in bags.
- Farmer We do not have problems because the business men normally come here to buy them.
- JICA How do you know that price is low.
- Farmer Comparing it with costs of production and normally SUPA is prepared them other modern variety.
- JICA How decide of the price.
- Farmer The buyers because we air need of money. Therefore, we tend to agree with what they say.
- JICA What are your suggestion to solve this problem ?
- Farmer Probably, formulation of cooperative society could be good alternative, but we really afraid of fake loan.

Marketing

- Farmer We sell paddy. We do not have any milling machine.
- Farmer Price is not stable. You can imagine for the last two weeks, one bag of paddy was sold for TShs. 25,000 and now TShs. 12,000.
- JICA Why can't you organize in groups so that you can send your fellow to check for the existing price in the market ?
- Farmer We can do it, but no one can trust them.
- Farmer I suggest for the establishment of group society (cooperative) where we can sent our crops after harvesting and sell them in group.
- JICA For the formation of a society, what steps you think can be taken ?
- Farmer We can call for the village meeting and introduce the issue with three villages (Mkindo, Hembeti, and Dihombo villages).
- JICA Do you think all of you can join ?
- Farmer We can use our farmers groups in each village so that we can join together. Further, we can expand the cooperation with other villages.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

SCRIPT FOR DIALOGUE WITH FARMERS
MGONGOLA SCHEME

Record - 7

Date : 9th June 1997

Venue : Dihombo village

Time: 2 : 10 PM to 4 : 50 PM

Farmers : Female Farmers of Dihombo village (24 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops

Farmer I agreed for paddy to be the main crop.

Farmer I agree with Alt. 1, because we have shortage of green vegetables, so inclusion of green vegetables in the small portion will help to solve the problem.

JICA What are your alternative crops to paddy ?

Farmer Cabbage, beans, onions, maize, tomatoes, local spinach (Amaranthus), spinach, cow peas, Green beans, carrot, egg plant, okra, etc.

JICA There are too many. Try to select the most suitable 3 over you can prefer.

JICA How many of you have cultivated the following crops ?

Cowpea	15
Okra	15
Amaranthus	5
Onions	1
Beans	none
Cabbage	1
Tomatoes	18
Spinach	none
Green beans	none
Maize	all
Carrot	none
Egg plant	none

Farmer With the experience form our friends who are practicing it (transplanting), they are complaining that it is difficult to manage an acre with this practice of puddling, harrowing, and transplanting. How can we manage this problem

having in mind that we are poor, and we can not even hire the laborers for assistance.

Farming Practices

- Farmer We agree the Special Programme - FAO provided the project will fulfill all activities like leveling, water control and proper drainage system.
- Farmer With my experience, broadcasting gives the yield of about 10 to 12 bags per acre. So how many bags can someone get by Special Programme - FAO techniques.
- JICA With Special Programme - FAO implemented with your friends in Phase 1 and 2, it were possible to get up to 25 bags per acre. But, I think you will be cheating yourself to say, that Special Programme - FAO techniques are good and broadcasting is bad, because you are now not applying fertilizer and controlled water for irrigation in your current plots.
- Farmer We have been satisfied with Special Programme - FAO from our friends in Phase 1 and 2, thus we will be happy if the project can be implemented for us to start practicing of Special Programme - FAO.

Supply of Seeds

- Farmer We obtain from our own stock and only seed we are using is SUPA.
- JICA Why not using other seeds like LINE 88 ?
- Farmer Because other variety needs irrigation.
- JICA Does it mean that you don't like any other variety ?
- Farmer We like to be provided with other variety of good (high) quality. We are now using SUPA because it withstand better the drought condition. We have also been convinced with the good taste of SUPA.
- Farmer We also prefer the SUPA because we have experience with it, but if we can be trained modern techniques we can then use other varieties.
- Farmer Shortage of seeds is our problem. We differ in income and responsibility we normally produce paddy for food and as a source of income. Thus will small plots we tend to harvest paddy which is not enough to satisfy the two demands (needs). At the end we tend to eat or sell what could be preserved for seeds.
- Farmer Because you are going to introduce the project, we will be happy to use new techniques in order to get high yield for consumption and preservation of seeds as well as for sale. We therefore request for the project to be implemented soon and if possible supply us with new seed variety.

Land Preparation

- JICA Regarding paddy cultivation in the Mgongola area, do you plow and harrow by tractor, hand tractor, hand hoe, or any other means ?
- Farmer All of us use tractors. Neither use hand tractors nor hand hoe.
- JICA How many of you use by tractor for cultivation ?
- Farmer 21 of farmers. None use hand tractor and hand hoe.
- Farmer There is unsystematical manner of cultivation carried by each individuals. This limits the uniform flow of water on the plots because some ridges may inhibit a flood flow of water forwards the low land plots.
- JICA Why don't you organize yourself so that the operators can cultivate in one

- direction ?
- Farmer We used it before where we tended to contributed the required money to the village chairman and the hired tractor were used to cultivate all plots in one direction and later demarcated to each one.
- JICA Why then you are not using that system now ?
- Farmer Because a very few number of tractors is available, which create big competition and drivers tend to hurry for other farmers.
- JICA What are your suggestion to avoid this ?
- Farmer we request the project to supply us with adequate number of tractors.
- JICA When were that system used ?
- Farmer Around 1950's
- JICA Why don't you use the old organized system you were using it at that era ?
- Farmer Because the area we are cultivating now is too big compared with what were cultivated in 1950's - 1960's, it is now 5 to 10 times to the previous one. Apart from other farmers came from different places like Dar es Salaam, thus it is difficult for them to wait for one tractor.
- JICA Why can't you organize and use your available VEO to supervise the operator so that they can cultivate in one direction.
- Farmer We were not aware and we can try to do so.
- Farmer Sometimes this can accelerate soil erosion in the field. We therefore tend to shift direction almost every year.

Oxenization

- JICA Oxenization programme have been carried out in some villages under Special Programme of FAO in Mvomero Ward.
- Do you want to use oxen for land preparation ?
- Farmer We do not use it.
- JICA Why
- Farmer Because of water conditions in the field, oxen do fail to operate and sometimes their hooves can get out.
- Farmer Under hard condition of soil, it is quite difficult for them to operate.

Fertilizer

- JICA Have you applied fertilizer for paddy cultivation in Mgongola area ?
- Farmer We do not use fertilizer in Mgongola area.
- JICA Why ?
- Farmer Because of our poor financial condition and unlevelled fields.
- JICA After the implementation of the project, the fields will be leveled. Will you be ready to use fertilizer ?
- Farmer Yes.
- JICA for high yield you should apply fertilizer. What is your suggestion to solve the question on high prices ?
- Farmer We request to be provided with the fertilizer which is sold at fair prices and affordable to us.
- JICA The price of fertilizer is fairly constant every where, therefore it will be difficult for the project to get the fertilizer which is sold at fair price. We therefore can not promise this.
- JICA Suppose the project brought you with fertilizer at you nearest place will you buy it at the same price ?

Farmer Yes.
JICA Why haven't you done it before ?
Farmer After all we are not familiar with the use of fertilizer, as we are accustomed with the local techniques. I therefore request to be trained on how to apply it first.

Agro-chemicals

JICA Have you applied agro-chemicals for paddy cultivation in Mgongola area ?
Farmer We use them.

Drying

JICA We would like to ask you where you have carried out drying work for paddy after harvesting in Mgongola area ?
Farmer We normally harvest, thresh and pack them in bags.

Marketing

Farmer We sell paddy.
Farmer The system used by traders is not good, because we normally do not weigh the bags they always request for an excess amount for the same bag. Yet they are the one who arrange the price which is actually low, that is in their favors.
JICA How do you know that price is low ?
farmer Low price in comparison with the cost of production.
JICA Why can't you negotiate with them for price.
Farmer They normally come individually and to each farmer which is really difficult for the farmers to consult others, because he/she will be in peak demand of money. Also if the farmers is so reluctant the traders tend to go to other farmers.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MKULA SCHEME

Record - I

Date : 24th June 1997
Venue : Mkula village
Time: 8 : 50 AM to 0 : 25 PM
Farmers : Key Persons in Mkula village (14 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA Do you have any comments or opinions on the cropping pattern ?
Farmer All what we have said is good and we accept the crops and the cropping pattern , but if we can add some crops - may be sweet potatoes and cassava.
Farmer I propose vegetables.
Farmer The mentioned crops are good, but we should not forget main cash crop that is sugarcane.
Farmer the mentioned crops are enough, but now consideration should be on getting improved seeds.
JICA That is coming later in our dialogue.
Farmer Another crop could be banana.
JICA In our plan sugarcane should be changed to another crop since its marketing is a problem and the processing capacity of the existing factory is not enough. What is your opinion ?
Farmer I think it is difficult to take out sugarcane completely from our area, because we depend on it for cash.
Farmer The problem you have pointed out on sugarcane is quite true, but the problem of marketing is for all crops. How is the government going to assist us in

- marketing ?
- Farmer I suggest that sugarcane should be left as it is nature will take its place.
- Farmer We should leave the sugarcane issue as it is. There are suggestion that the sugarcane is going to be privatized may be there will be some changes for our betterment.
- Farmer The farm land in Mkula village is big and the project is going to cover only part. I suggest that the sugarcane can be grown in the other area.
- Farmer I remember in the past sugarcane was grown in large area of Mkula village, but because of lack of marketing the farmers changed the crop to paddy. Hence the farmers will change on their own from sugarcane to other crops if the situation of sugarcane marketing worsen or does not improve.
- JICA At present after harvesting paddy you don't grow any crop until December.
- Farmer After harvesting paddy, maize is grown. That starting time depends on when you harvest paddy but the season is from June to December.
- Farmer That season is not a reliable because the crop depends on residual and capillary moisture.
- Farmer Maize to be planted in December is only grown in the areas which are not flooded.
- JICA When do you plant sweet potatoes ?
- Farmer It is planted during the period from May / July and harvested in September onwards, depending on when planting took place and variety grown.
- JICA Do you have any other comments and opinions ?
- Farmer We would like to grow vegetables, the problem is the area to grow and seeds are expensive.
- JICA You said that you have no area to grow vegetables what do you mean ?
- Farmer Most of the time our area is too wet for vegetables.
- JICA The project is going to provide drainage hence you can have water in your own area when you need it.
- JICA You have mentioned several crops, i.e. paddy, maize, sugarcane, beans, vegetables, sweet potatoes, cassava. What are the major crops ?
- Farmer Maize, paddy and sweet potatoes.
- JICA When do you grow beans ?
- Farmer We have never grown beans in large quantities.
- Farmer Beans do not perform well at our places. They can flower but do not fill the seeds, or the pods will be rotten.
- JICA Why is beans not performing well ?
- Farmer May be some research has to be done, but in our case we have failed.
- JICA Should you leave out beans ?
- Farmer No. Because we need it for food.
- Farmer If beans are not doing well then this can be replaced by cowpea or green peas.

Irrigation Management

- JICA Now, you have a project here of irrigation but we are worried that you won't maintain this new project as you have failed to maintain the current existing one.

- What is your opinion on this regard ?
- Farmer This problem is that all farmers participated in construction of the project in the past, but only 60 farmers benefited from it and the rest complained. So it is important to make sure that in the coming project every farmers gets a plot in the irrigation area. Also there area 200 household from neighbouring area and these farmers can also be included.
- JICA Is the redistribution of land possible ?
- Farmer Yes, it is possible. What is needed is only education to the farmers.
- Farmer This should not disturb you because it is our internal issue.
- JICA You have the old irrigation system but this has not been maintained well. Do you think you will be able to maintain the coming irrigation system with many and long canals ? Also we expected you could maintain and make use of small canals available.
- Farmer The farmers are discouraged because the canals are low and farms are elevated.
- Farmer The existing canal has some fault (seepage) and the water in the canal is very little have failed. The new project will be functioning well and for maintenance we can contribute say bags of paddy to create an account for assisting with the maintenance. Also our labour will be available.
- JICA The project is going to construct the main canal only and it is your work to excavate the field canals. Now since you have failed to do is with the present canals, I am afraid the practice will be just the same even after the new project.
- Farmer the problem with the present system is loss of water in the main canal, but we believe the new system will be different.

Farming Practices

- JICA Do you have any problem ?
- Farmer We cultivate using hand hoe but if we get tractors we will be happy.
- JICA I think most of farmers have used tractors especially before paddy sown.
- Farmer It is true that most farmers use tractors for ploughing but the tractors are not ours. The owners bring them when they want something. Accordingly, sometimes we get late in land preparation. Since the project is now going to be implemented, the project can bring us a tractor which we can pay slowly by contributing bags of paddy every season.
- Farmer Land tillage by hand hoe is not good hence weeds are great problem. Tractor ploughing can solve this problem.
- JICA The project can not supply tractor. You can unite and try to apply loans from institutions like CRDB.
- JICA Have you heard of the Special Programme - FAO ?
- Farmer We are not aware of it.

Supply of Seeds

- JICA Do you have any problem with seeds of the main crops ?

- Farmer I am not satisfied with all varieties but in my case Line 88 is promising variety, that is high yielding and disease resistant.
- Farmer The seeds which we are using now are available but not of good quality.
- JICA What do you suggest ?
- Farmer The improved varieties, e.g. Line 88 has some complications you have to apply fertilizers which are sometimes not available.
- Farmer Availability of this improved seed is a problem.
- Farmer Regarding maize, we grow local varieties.
- Farmer We have grown Taxpeno, TMV-1, etc.
- Farmer As for cowpeas, the quality is not good and yield is low.
- Farmer If we get improved varieties, we will be grateful.
- JICA How do you get the seeds of cowpeas ?
- Farmer We get seeds from the cowpeas which are grown locally.
- Farmer The extension officer is the one who can bring good seeds. if he can not , we will continue to grow the local varieties.
- Farmer Regarding sweet potatoes, we use local varieties.

Oxenization

- JICA Since you have problems with tractors, don't you think that oxenization can assist this issue ?
- Farmer It is possible to use oxen but we do not have cattle here.
- Farmer There is tsetse fly which makes rearing cattle be difficult.
- Farmer The weeds have are many hence difficult to use oxen.
- Farmer The soil is hard hence difficult for the oxenization.

Fertilizer

- JICA Have you applied fertilizer ?
- Farmer Generally we do not apply any fertilizers to any crops.
- JICA Do you have any reason ?
- Farmer Our soil has enough fertility.
- Farmer In some places, if we apply fertilizer in paddy, it becomes tall and hence lodging will be happened.
- Farmer For some farmers who have tried to use fertilizer, they get more yields.
- JICA Presently, you don't apply fertilizers. Will you be willing to apply it in the future ?
- Farmer If you apply fertilizer local varieties of maize or paddy, they will become too tall. If improved varieties will be introduced, we can use fertilizer.
- JICA You have been using flooding water for paddy cultivation. Don't you think you have to make levee (or border) to keep water and can apply fertilizers under this condition ?
- Farmer The farmers are used to the present condition.
- Farmer I have tried to make bands but water loss through seepage was great.

Agro-chemicals

- JICA Do you use any agro-chemicals ?
Farmer We have used herbicide for paddy and sugarcane, that is 2,4-D.
Farmer Pesticides are not available also expensive if available.
JICA How many of you use 2,4-D in paddy ?
Farmer All.
JICA How do you think you can solve the problem of availability of agro-chemicals ?
Farmer We can use our extension officer to buy agro-chemicals for us from somewhere price is slightly low.
Farmer The people who sell the agro-chemicals here sell them very expensively. If we get an institution which can sell the agro-chemicals at cheaper prices we will be grateful.
JICA Where do you get 2,4-D ?
Farmer From shops in Mwanga or Mkamba.

Drying

- JICA How do you dry your paddy ?
Farmer Paddy is dried in the field.
JICA Do you dry after cutting or before ?
Farmer After cutting the paddy is left to dry in the field (after 4 to 7 days).

Marketing

- JICA Do you have any problems with marketing of your crops ?
Farmer We depend on middlemen. Formerly we used to sell to Co-op society but since these were collapsed we have to depend on businessmen who offer low prices.
JICA How do you know that the businessmen are buying at low prices ?
Farmer We have considered the production cost.
JICA What is the break-even price of paddy ?
Farmer Between 12,000 and 15,000 TShs. per bag.
JICA You have grown various paddy varieties. Can you sell at different prices for different varieties ?
Farmer No. The businessmen take sample and mill to see the breakage proportion. If it is too much, they will not buy. And the price is only one kind.
JICA Do you expect to grow Line 88 and to change in price ?
Farmer The price will be the same.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MKULA SCHEME

Record - 2

Date : 25th June 1997

Venue : Mkula village

Time: 09 : 00 AM to 00 : 25 PM

Farmers : Male Farmers in Mkula village (9 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA We have seen that there is a short-coming with the present cropping pattern. Don't you grow any crop after harvesting paddy ?

Farmer We grow maize after harvesting paddy.

JICA what percentage of farmers grow this maize ?

Farmer It's about 15 %.

JICA When do you plant some sweet potatoes we saw in the fields ?

Farmer That growing will be started from May when the soil has started draining out. Some farmers plant in June and harvest in August and September.

JICA You start to grow maize in December and harvest between March and May. What do you plant after that ?

Farmer It is maize which is called "Chalula Maize (dry season maize)". That will be harvested in September / October.

JICA What is the proportion of maize which will be planted after harvesting paddy ?

Farmer It is only quarter of the paddy area. In the area with clay soil, maize does not flourish well (capillary water is impeded).

JICA What is the proportion of paddy area which is planted with sweet potatoes ?

Farmer The area planted with sweet potatoes is less than quarter (but not intercropped)

- with maize).
- JICA Do you have any other crop which is grown in the area planted with paddy ?
- Farmer There is no other crop grown area not planted with maize or sweet potatoes is left fallow.
- Farmer The area planted with maize is always in higher elevation than that of sweet potatoes.
- JICA What opinion do you have on the sugarcane crop ? The crop has been left out in the proposed cropping pattern. This is because last year the marketing problem was discovered.
- Farmer We leave it out because it has marketing problems.
- Farmer There are some transport problems and it is occupying area which can be planted with other crops.
- Farmer We continue with it because the factory has the capacity to process our sugarcane.
- Farmer The crop is very important cashwise, but it is true that it has marketing problem. Maybe we suggest another cash crop to replace it. Also the area planted with sugarcane is not that planted with paddy.
- JICA Please suggest any other cash crop which can replace sugarcane.
- Farmer Maize is also a good cash crop.
- Farmer We can try to plant sesame.
- JICA What about paddy ?
- Farmer The area planted with sugarcane is good for maize because soil is sandy.
- Farmer Because of flooding water paddy can be grown.
- Farmer If moisture can be maintained, paddy can be flourished.
- Farmer For farmers who have planted and sold sugarcane, it is difficult to tell you to leave it out.
- JICA Only a portion of the area cultivated is going to be developed. Who are going to be the beneficiaries ?
- Farmer Everybody would like to have a plot in the project area. Maybe redistribution of the land in this area should be done. A person having more than one plot in the project area has to forfeit it for another farmers and the former farmer is given another area outside the project area.
(This idea was supported by all farmers)
- JICA What is common here, that is farmers have scattered farmers in the upland and in the lowland or farmers have farms in one area only ?
- Farmer Our majority have scattered farms.
- JICA Under this situation of scattered farms do you think the exchange of plots is possible ?
- Farmer It is possible because the land belongs to the village government, hence it is just a matter of giving order.
- JICA If a farmer has four acres in the project area, he losses three acres which will be obtained in the flooded area. Don't you think that this farmer will complain ?
- Farmer There is no problem this is going to affect all farmers in the same way.
- Farmer Here in the village we are very much interrelated, then I will not feel bad if a relatives of mine is given portion of my land.

Farming Practices

- JICA Do you have encountered any problems with your farming practices ?
- Farmer Availability of tractors is a problem. When it is time for ploughing there can be only one tractor and every farmer wants to use it hence one can be late in ploughing.
- Farmer Major problem is the availability of tractors if they are available we have the money.
- JICA Why don't you contact the financial institutions for loans ?
- Farmer it is difficult to get loans from these institutions. What is my suggestion is on the project at hand can give us a loan of tractor which we can pay slowly we will be grateful.
- JICA Which month do you need tractors ?
- Farmer We need tractors in November or December which land preparation will be started for paddy cultivation. Again, in May for maize cultivation.
- JICA If you organize in a group and go to the tractor owners and hire a tractor to come and cultivate your farms. Don't you think you'll succeed ?
- Farmer We have tried but the tractor did not come here and we were all late in ploughing.
- JICA If tractor availability is a problem, why don't you use other alternatives, e.g. oxenization ?
- Farmer Oxenization in this area is difficult because the soil is hard.
- Farmer Donkeys came here and they died because of tsetse fly.
- Farmer Our land has red ants (Safari ants) which bite the animals. Again weed here is great problem.
- JICA Have you tried to use oxen ?
- Farmer Yes, two oxen were brought here and they tried to cultivate the farm land, but they failed and the animals were withdrawn.

Fertilizer

- JICA Do you use fertilizer in your farming ?
- Farmer Few farmers use them. If we use the fertilizer for paddy, it will become too tall and be fallen.
- Farmer The soil is fertile. We don't need to apply it.
- Farmer Fertilizer will be applied for top-dressing at the ripening stage.
- JICA Is it possible to buy fertilizer here ?
- Farmer No, it is possible to buy at Mkamba and Ifakara.
- Farmer Retailer is available, but it is bit expensive.

Agro-chemicals

- JICA Do you use agro-chemicals ?

- Farmer Yes, we use weed killer, that is 2,4-D, Fenester-60, Farmanine-74.
Farmer All the farmers have used agro-chemicals in paddy cultivation.
JICA Where do you buy them from ?
Farmer It is Mwaya, Mkamba, Ifakara, etc.

Marketing

- JICA Do you have any problems with marketing of your crops ?
Farmer We depend on middlemen. Formerly we used to sell to Co-op society but since these were collapsed we have to depend on businessmen who offer low prices.
JICA How do you know that the businessmen are buying at low prices ?
Farmer We have considered the production cost.
JICA What is the break-even price of paddy ?
Farmer Between 12,000 and 15,000 TShs. per bag.
JICA You have grown various paddy varieties. Can you sell at different prices for different varieties ?
Farmer No. The businessmen take sample and mill to see the breakage proportion. If it is too much, they will not buy. And the price is only one kind.
JICA Do you expect to grow Line 88 and to change in price ?
Farmer The price will be the same.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MKULA SCHEME

Record - 3

Date : 25th June 1997

Venue : Mkula village

Time: 02 : 00 PM to 03 : 45 PM

Farmers : Farmers in Mkula village (10 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA After harvesting paddy, what do you grow ?

Farmer It is maize which will be planted in June / July and harvested in October / November.

JICA Do you have any comments regarding the proposed cropping pattern and type of crops ?

Farmer Beans should be remained in the project because there is one farmer who grow it and the crops grow very well.

Farmer I prefer to grow vegetables, that is tomatoes, onions, amaranthus, etc.

JICA In the proposed cropping pattern, sugarcane has not been included. What is your opinion ?

Farmer Personally, I am not satisfied with the marketing of sugarcane. Also it is a risky crop because fire can destroy it any time.

Farmer We are getting much problem with sugarcane because of no market.

Farmer Even if the Kilombero Sugar Company buy the sugarcane, payment can take time more than one year.

JICA Regarding some of you who have sugarcane in your farm, what are your plans ?

- Farmer Just waiting. If the factory can come and harvest, otherwise we are at the edge of despairing.
- JICA We would like all farmers to benefit from the project but the project will cover only 320 ha. This means that all the farmers will not have farm lands in the project area. What is your comments on this issue ?
- Farmer Our feeling is that no farmers would like to give out an extra land in the project area for an exchange with land outside the project area.
- Farmer Some farmers will not accept this especially if the soil of the exchanged pot is bad.
- JICA Let us ask who is the owner of land in the village. Why can't the village government force the exercise ?
- Farmer It will be difficult though the village government is the owner of the land.

Farming Practices

- JICA Are there any problems with present farming practices ?
- Farmer I'm not satisfied with present condition. Namely tractors are not available.
- Farmer Sometimes money to hire tractor is a problem.
- JICA Which month do you want tractor for land preparation, i.e. ploughing ?
- Farmer It is October and November.
- JICA Now, you are broadcasting paddy seeds and the project will propose to transplant the seedlings. What is your opinion on this issue ?
- Farmer Transplanting is good and some farmers are doing it.
- JICA Do you know the practices being done by the contact farmers group working with the extension officer ?
- Farmer Yes, it is very laborious.
- JICA So what practice will you follow in the project ?
- Farmer We need enough water to carry out transplanting.

Supply of Seeds

- JICA Where do you get seeds from ?
- Farmer We grow our own seeds.
- JICA Are you satisfied with these seeds ?
- Farmer Yes, it is.

Oxenization

- JICA You have said tractor availability is a problem. So, what about using other cultivation means, e.g. oxenization ?
- Farmer Where can we get animals ?
- Farmer Animals can not cultivate our land because of notorious weeds.

- Farmer Soil is hard.
Farmer There is tsetse fly in our area.
Farmer We have no money to buy the animals.

Marketing

- JICA Do you have any problems with marketing of your crops ?
Farmer Sometimes buyers are there, while sometimes they are not available.
Farmer Buyers are many, but they offer low prices, e.g. now we are selling one tine of 16 kg at TShs. 1,000 and in September when there is no maize here we buy one tin in TShs. 4,000.
JICA Is it possible to mill paddy and sell rice to the businessmen and get more money ?
Farmer If you sell rice, you'll lose because the size of that tin the businessmen use is deformed and can take more rice than normal condition.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MKULA SCHEME

Record - 4

Date : 26th June 1997

Venue : Mkula village

Time: 08 : 30 AM to 00 : 05 PM

Farmers : Farmers in Mkula village (15 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Cropping Pattern

JICA Do you have any comments concerning proposed cropping pattern ?

Farmer We prefer to cultivate beans, but it is difficult to plant it because of some disease or insects. Also we like to cultivate cowpea and sweet potatoes.

Farmer Please tell us we know that sugarcane is an important crop here, but you have not included it in the proposed cropping pattern. Do you want to exclude it ?

Farmer About beans, I have long experience to cultivate beans, but I got only one tin from one acre. So I suggest that we leave beans.

Farmer You have mentioned only to cultivate maize. Can't we try to cultivate sorghum ?

Farmer We obtain some money from sugarcane but there is market problem. I suggest we replace it with the other crops, that is paddy, vegetables, etc.

Farmer I still suggest that sugarcane should remain if we can get transport and loading means or loans to assist us. So sugarcane will be very useful.

Farmer Morogoro region is a hot area that is why maize and beans are not grown well. The two crops are food, so we should leave out sugarcane and grow food crops.

JICA Why do you think beans are not grown well at your area ?

- Farmer When we grow beans they germinate very vigorously the shoot become very long and the flowers fall down.
- Farmer When experts come here, they will analyze our soils and find that beans are suitable for our area.
- Farmer We continue with beans, we change the farming systems, e.g. intercropping it with other crops.
- JICA If the practice is improves, are you ready to grow beans ?
- Farmer Yes, we are.

Farming Practices

- JICA Do you have any problems or opinions ?
- Farmer We use handhoe or sometimes use tractor. The tractors sometimes not available and sometimes we have no money for tractor hiring.
- Farmer Sometimes the tractor owner cheat, that is they cultivate less one acre and claim money for one acre.
- Farmer Some farmers have money for tractor hiring but you can not find any tractors.
- Farmer Most of farmers have no money during the cultivation period in November.
- JICA If tractor availability is a problem, why don't you try to introduce oxenization ?
- Farmer We like it but they have not been brought in our place.
- Farmer Once some oxen were brought to the school but later they were withdrawn because of tsetse fly.
- Farmer And soil is very hard for oxen ploughing.

Supply of Seeds

- JICA Where do you get seeds from ?
- Farmer We grow our own seeds.
- JICA Are you satisfied with these seeds ?
- Farmer Mixing with different varieties is very common. We have no technology to preserve pure seeds.
- Farmer Mixing of seeds is brought by the flooding water.
- Farmer If we transplant paddy instead of broadcasting, we will solve the problem.
- JICA What is the problems brought about by the mixing ?
- Farmer Traders don't like to buy the mixed paddy.
- Farmer In the field, different varieties have maturing at different times.

Oxenization

- JICA You have said tractor availability is a problem. So, what about using other cultivation means, e.g. oxenization ?
- Farmer Where can we get animals ?
- Farmer Animals can not cultivate our land because of notorious weeds.

Farmer Soil is hard.
Farmer There is tsetse fly in our area.
Farmer We have no money to buy the animals.

Ending

JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MWEGA SCHEME

Record - 1

Date : 17th June 1997

Venue : Malolo village

Time: 10 : 00 AM to 0 : 30 PM

Farmers : Key Persons in Malolo, Nyinga, and Mgogozi-Mwega areas (20 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops and Cropping Pattern

JICA Do you agree that major crops at Malolo are beans, maize, onions, and paddy ?
And do you have any comments on the cropping pattern ?

Farmer In Nyinga and Mgogozi-Mwega area, we don't grow onions in the same seasons with Malolo village because of flooding condition.

JICA Drainage condition will be improved, hence floods will be controlled.

Farmer The mentioned crops are favourable by the weather. And my proposed crops should be tested whether they agree with weather.

JICA We are not proposing new crops. It is you who can suggest new crops.

Farmer In Nyinga area, we can do intercropping maize and onions or maize and tomatoes. We start with growing maize, after 3 days you grow tomatoes.

Farmer Also, I suggest cabbage you know we have some problems of vegetables.

Farmer I agree with the previous speaker.

JICA You say you have some problems concerning vegetables. What type of problems do you have now ?

Farmer Shortage and if we grow vegetables, some farmers steal them due to shortage.

Farmer Those four crops are quite enough for us, but also we can grow groundnuts.

JICA Why are all farmers not growing vegetable ?

- Farmer Some waste their time drinking local brew.
- Farmer Some can grow vegetables because they have enough water some have water shortage.
- Farmer Farmers have lack of knowledge of growing vegetables, e.g. cabbage.
- JICA If vegetable is shortage, how can you grow vegetables and most of you to alleviate the problems of vegetables ?
- Farmer Farmers are not motivated to grow vegetables.
- Farmer Why can't my neighbours come to ask a space to grow vegetables, is her or his area is not suitable due to water shortage.
- Farmer In some area, there is water shortage such that vegetable cultivation is impossible.
- Farmer Water management is poor because of bad canals and so much loses.
- JICA The canals are going to be improved, so shall be no more loses.
- Farmer In Nyinga area, water shortage is experienced due to erosion in the river. There is no enough water in the canal.
- JICA Do you agree to expand the cultivation area of onion ?
- Farmer Yes, because we can get more income from the expanded onion cultivation, if flood are controlled.
- JICA When the flood condition will be improved in Nyinga and Mgogosi-Mwega area, is it possible to follow the same cropping season with Malolo for onion cultivation ?
- Farmer Yes, as this is the only hindrance.
- JICA Harvesting season of onion is mainly August and September. Is this the best selling time for onion ?
- Farmer No.
- JICA Which month is the best time for selling onion ?
- Farmer February and March
- JICA Is it possible to cultivate onions in July so that you harvest it in February.
- Farmer That season is not best because of pest and diseases, resulting in the increase of application of agro-chemicals which are very expensive.
- JICA Do the Malolo want to expand area for onions ?
- Farmer Yes, but problem is capital for input labour.
- Farmer Another problem is water availability, e.g. at peak period which each farmer is given only 30 minutes of irrigation time for each farm.
- JICA Is it possible to get labours if the area will be expanded ?
- Farmer There is plenty of labour potential because during the onion season in the surrounding area there is no agricultural activity (no rain).
- JICA the project can improve the drainage canal condition, but the farmers should arrange for their capitals for expansion of the onion cultivation. Is this possible ?
- Farmer If water will be available, we can expand the area.
- JICA What is the proportion of paddy grown in your area in related to other crops ?
- Farmer It seems quarter of the area. Limiting factor is water.
- JICA In the lowlying area you have a rotation of paddy and onion. Is it practical all over the area ?
- Farmer No, because some area is too wet, then it is difficult to cultivate onion after

harvesting paddy in some area.

- JICA Which cropping pattern do you prefer, paddy and onion or paddy and beans ?
 Farmer We like both pattern.

Supply of Seeds

- JICA How do you get seeds for next season ?
 Farmer From the previous season.
 JICA Are you satisfied ?
 Farmer Availability of qualified seeds is problem.
 Farmer Seeds are our problem in quality of seeds.
 JICA What do you suggest to get qualified seeds ?
 Farmer We want to get improved seeds.
 JICA Which one ?
 Farmer SUPA because the SUPA is grown with other varieties here.
 JICA When you talk of quality of seeds, what do you mean ?
 Farmer It means to get clean seeds of only one variety. Actually, varieties of paddy are mixed due to the floods which bring seeds of other varieties from upstream farm.
 JICA Who likes SUPA ?
 Farmer We prefer pure SUPA.
 Farmer We like SUPA because it has been readily available in the market.
 Farmer We would like to cultivate some improved variety.
 JICA What about onion seeds ?
 Farmer We get seeds which are produced in Arusha.
 Farmer We grow own seeds in our fields.
 Farmer Seeds from Arusha are in good quality and best ones. The seeds which are grown locally is not in good because it is mixed with other local varieties.
 Farmer Most of farmers get seeds which are produced in Arusha.
 JICA How do you get seeds which are produced in Arusha ?
 Farmer Businessmen sell them in the village. The seeds are not in good quality, because it is also mixed with other seeds. Even in seeds which are produced in Arusha, they are grown by the farmers.
 JICA Who do you think you can get best seeds ?
 Farmer We can solve this problem by means of growing our own seeds properly, if we get adequate knowledge how to do it.
 JICA In Lumuma village, farmers have produced their own seeds. How can you communicate with them in order to get the knowledge how to produce the qualified seeds ?
 Farmer If water is available, we will organize our group to produce seeds and contact Lumuma's farmers and start to grow seeds.

Extension Services

- JICA Do you have any problems concerning extension services ?
- Farmer Yes, that is why we are say we don't know how to grow proper seeds.
- Farmer I do agree with my colleague because we don't see him.
- Farmer We don't know that extension officer.
- JICA How many of you have not received any assistance from extension services ?
- Farmer All of us.
- JICA Do you think you need some extension services ?
- Farmer Surely, we need some assistance concerning agro-chemicals, that is we wont to know the right chemicals for certain diseases.
- Farmer We want to know the technique to improve the yield of maize.
- Farmer We should be educated concerning how to produce our own seeds.
- Farmer We need some instruction concerning proper way to apply fertilizer.
- JICA On which crops do you want to know how to use agro-chemicals ?
- Farmer All the crops. Sometimes we buy agro-chemicals, but some chemicals specially for cotton is sold as chemicals for onions.
- JICA What about how to produce seeds ?
- Farmer For all the crops. We need training as we think that is better method rather than ours which we applied now.
- Farmer We need to be trained for improved farming practices.

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.

DIALOGUE WITH FARMERS
MWEGA SCHEME

Record - 2

Date : 18th June 1997

Venue : Malolo village

Time: 9 : 15 AM to 0 : 30 PM

Farmers : Male Farmers in Malolo village (17 persons)

Background of the project and features of agricultural development plan which was formulated in the Interim Report were explained by JICA study team and then the following discussions concerning cropping pattern, farming practices, supporting system, marketing, etc. were undertaken:

JICA Before our discussion will be proceeded, we have to say that we want to design your project, not our project. Namely, such a project should be owned by your beneficiaries.

We are trying to formulate agricultural development plan for Mgongola area. To formulate the plan, we need to know your difficulties, problems, conception, willingness, etc. If we know them, it will help us to think about the better plan. During our discussion, your name are not so important for us, rather your opinions are more important for us. Accordingly, we will not record who said what, rather only opinions to make a project more beneficial to the beneficiaries.

Proposed Crops and Cropping Pattern

JICA What is your impression on increment of area for growing onion as one of the cash crop ?

Farmer I do agree with the expansion and if the project is going to increase amount of water, we still have area we can cultivate under irrigation toward Ruaha river.

Farmer We would like to increase the area under paddy and onion long time ago, but the limiting factor was inadequate water for irrigation in most area. So now, with the assurance of irrigation water from the project, we would like to expand the area under paddy and onion.

JICA The project is going to ensure that water will be provided for the present irrigation area. It means that there is no new area which is going to be supplied with water.

JICA Which one do you prefer for expansion of the cultivated area, paddy or onion ?

Farmer We would like to cultivate both crops.

JICA You are talking of water shortage. Which shortage ? From the river source itself or losses in your present irrigation system ?

Farmer There is enough water in the river, the problem is losses of irrigation water from the earth canals through seepage as our soil here is mostly sand soil.

- Farmer There are losses from both river and canals. The weir built to divert water is malfunctioning properly due to shifting hence it can't divert the required amount of water, hence there is always a shortage. And also there are some losses in the canals.
- JICA Onions are grown in mid of March and harvested in August and September. Is this the main season ?
- Farmer Yes, that is main season in our area.
- JICA Yesterday we were told there is water shortage for onions at peak season. Which is this peak season ?
- Farmer In March and April, there is water shortage when we grow paddy in upstream.
- Farmer Also in August and September, this season is drought season and there is serious water shortage. This is the time the bulb of onions is being formed and also river discharge is low. There is high water losses in the canal due to the sandy nature of the soil.
- JICA How is the condition of the water in the river ?
- Farmer The water is available in the river, but the problem is the abstraction of water by the intake.
- JICA Any other opinions ?
- Farmer We can expand area of onions when water is available.
- Farmer Since a large area will be cultivated, it will be easy to use tractors.
- Farmer We are afraid that tractor will destroy our canals.
- Farmer We have capability to use tractors, but we were not used to using them.
- Farmer ?????
- JICA We think you have a problem on not liking to work in a group or society here. That's why you cannot organize yourselves to solve your problems.
- Farmer Yes, you are very correct.
- JICA You are harvesting onions in August and September. Is it possible doe you to harvest onions in October and November ?
- Farmer If onions will be planted late, we suffer to protect them against pests and diseases.
- Farmer Weather is different. In Nyinga the cool weather extend beyond July.
- Farmer It is possible but we have to apply a lot of agro-chemicals.
- JICA Which period of growing season you need agro-chemicals in that case ?
- Farmer Throughout.

Supply of Seeds

- JICA How do you get seeds for next season ?
- Farmer As for paddy, we produce our own seeds in paddy field.
- JICA As for paddy, is there any problem with paddy seeds ?
- Farmer Yes, the viability and vigour of seeds are low. Therefore the performance of the seeds is quite low. Yield also is in low level. And the shape of paddy seeds have been thin.
- Farmer We have never seen any other varieties, except SUPA.
- Farmer There was new variety, that is IR 14 which was brought by irrigation

- technician, but the farmers did not like them.
- Farmer We prefer SUPA. We can be assisted to get pure seeds of this variety. Before SUPA indicates high yield, while now a days production of SUPA is low.
- JICA What do you mean low yields of paddy ?
- Farmer Formerly when SUPA was introduced here, we got the high yield of 20 bags per acre, but now we can get only 10 to 12 bags per acre.
- JICA How about onion seeds ?
- Farmer We are not sure of the seed we grow. The seeds we are using are not performed well. We prefer good seeds from Arusha, e.g. Red Bombay.
- JICA What do you mean by good seeds ?
- Farmer That means size of bulb is smaller than good seeds to be brought from Arusha.
- Farmer Yield is also low.
- Farmer Each farmer produces his own seeds.
- Farmer Also there is cheating in buying seeds from businessmen. They sell us seeds of other sources under the pretext of seeds from Arusha.
- Farmer The problem is that farmers sell all onions instead of keeping some for seeds. I suggest that farmers grow their own seeds after getting original seeds from Arusha.
- JICA How many grow their own seeds ?
- Farmer one
- JICA How many buy seeds every year ?
- Farmer Majority.
- JICA What is the price of onion seeds ?
- Farmer One tin is TShs. 60,000 here in Malolo.
- JICA How can you differentiate good seeds from bad seeds ?
- Farmer At harvesting time, bad seeds have low yield and smaller bulbs.
- JICA How can you solve this problem ?
- Farmer The problem for us is that we unite and send one farmer to buy good seeds and each farmer continue growing the good seeds.
- JICA If it is so, why don't you unite yourselves ?
- Farmer We don't trust each other, because we had bad experience at the past time.
- Farmer Some farmers have applied good seeds, resulting in good yield of 60 bags per acre, while farmers who have applied bad seeds, resulting in low yield of 20 to 30 bags per acre.
- JICA What about beans and maize seeds ?
- Farmer We can keep seeds from the previous crop or can buy good seeds from the mission.
- JICA In Morogoro town, is onion seeds not available ?
- Farmer Yes, it is available, but that is imported seeds then the price is expensive. In Arusha, farmer sell seeds which have already been multiplied and the price is bit cheaper.

Oxenization

- JICA How do you feel to use oxen for land preparation ?
Farmer We hired oxen from Nyanzwa village last time and ploughing by oxen was completed successfully. However, oxen is fell sick and they were taken back.
- JICA If land preparation is successfully carried out by oxen, why don't you practice at your place ?
Farmer We should be trained.
- JICA Why don't you request to train you to Nyanzwa villagers ?
Farmer It is difficult for an individual farmer to go to Nyanzwa village for training. We need to be trained in a group and assist by a project.
- JICA You have to try to train yourselves. Nyanzwa is not so far and you can easily go there. This project is not ours but yours. You have to struggle to solve such problems.
- Farmer Your suggestion is good and you have reminded us on the subject we can struggle to achieve on our own.

Fertilizer

- JICA Do you use fertilizer ?
Farmer Yes.
- JICA Do you use fertilizer in onion ?
Farmer Urea and CAN
- JICA What about in paddy ?
Farmer Few farmers use fertilizer.
- JICA What about in beans and maize ?
Farmer We use fertilizer in beans, but not in maize.
- Farmer Few farmers use fertilizer in maize, but majority do not use.
- JICA Do you experience any problems in use of fertilizer ?
Farmer Yes, we do not know how much to apply fertilizers. We also do not know which one to start with ?
- JICA Who does not have problems of fertilizer use in onion ?
Farmer 8 farmers have no problems.
- JICA How many farmers have any problems ?
Farmer 6 farmers have some problems.
- Farmer The remaining 3 do not use fertilizer.
- JICA Is availability of fertilizer a problem ?
Farmer No. Fertilizer is plenty in Iringa, and we have easy transport to and from Iringa.

Agro-chemicals

- JICA Do you use agro-chemicals in onion ?
Farmer Yes.
- JICA Which types are common in onion cultivation ?
Farmer It is Malathion, Sumithion, Thiodan, etc.

- JICA What about application of agro-chemicals in maize ?
Farmer In maize crop, we only use in storage.
JICA What about agro-chemicals in paddy ?
Farmer Yes, we use in weed control, mainly 2,4-D.
JICA What about beans ?
Farmer Yes, we use same agro-chemicals as those for onion.
JICA Do you experience any problems ?
Farmer Availability is not good.
Farmer Other businessmen mix agro-chemicals with kerosene or water.
Farmer Knowledge on how to apply agro-chemicals is also problem.
JICA Is it easy to distinguish the agro-chemicals mixed with kerosene or water by naked eye ?
Farmer No. You know it only after finding out that the agro-chemicals are not effective.
JICA Is this problem for all chemicals ?
Farmer No. It is not easy for Sumithion to mix with water or kerosene, because it will change colour to milky.
Farmer Another problem is that chemicals are sold in one liter and that is expensive.
Farmer We need to buy smaller amount each time we need to apply. It is expensive to buy the whole litter.
JICA Why don't you unite and buy one liter or more of good quality chemicals ?
Farmer Every farmer need a certain chemicals at different time.
Farmer We understand the situation we are facing. We are now starting to unite to grow onion seed - a group of 5 farmers from neighbours area.

Drying

- JICA How do you dry paddy ?
Farmer Paddy is left to dry on standing in the field, then cut and harvested.
JICA Do you have any problems with this drying ?
Farmer No.
Farmer In the normal way, the farmers harvest their paddy after it is dried in the field and after harvesting it is no more dry.

Marketing

- JICA How about marketing situation with you ?
Farmer The businessmen buy their crops at low prices. Sometimes if the farmers have financial problems, they will buy crops while still in the field and will offer low prices.

Extension Services

- JICA Do you have any problems concerning extension services ?
- Farmer So long as we have the extension officer, we are supposed to utilize him.
- Farmer For one and half years we do not have agricultural extension officer because the one we have is a livestock extension officer.
- Farmer The one available is not very efficient because he serves a large area (the whole ward).

Ending

- JICA Thank you very much for your time and useful suggestions. On behalf of JICA study team, we would like to close this dialogue. Finally, when you leave your seat, please give our colleagues your name, family member, holding size of your farm land in the participants list.