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資料 1．ミニッツ及び合同評価報告書

MINUTES OF MEETING
BETWEEN
THE JAPANESE PROJECT EVALUATION TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
ON JAPANESE TECHNICAL COOPERATION
FOR THE POULTRY MANAGEMENT TECHNIQUES IMPROVEMENT PROJECT

The Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Project Evaluation Team, headed by Mr. Shinki Suzuki, Vice President of JICA, to Bangladesh from 2 June to 14 June 2002 for the purpose of conducting the joint evaluation for the Poultry Management Techniques Improvement Project (hereinafter referred to as "the Project")

The Joint Evaluation Team, which consists of members from JICA and members from the Government of Bangladesh, was jointly organized for the purposes of conducting the final evaluation and preparation of necessary recommendations to the respective governments.

After intensive study and analysis of the activities and achievements of the Project, the Joint Evaluation Team prepared the Final Evaluation Report (hereinafter referred to as "the Report"), which was presented to the Joint Coordinating Committee.

The Joint Coordinating Committee discussed the major issues pointed out in the Report, and agreed to recommend to the respective governments the matters attached hereto.

Dhaka, June 13, 2002

Shinki Suzuki
Team Leader
Japanese Project Evaluation Team
Japan International Cooperation Agency

Iqbal Mahmood
Deputy Secretary
Economic Relation Division
Ministry of Finance

Tatsuo Yamamoto
Team Leader
JICA Expert Team

S.M.A Mannan
Deputy Secretary
Ministry of Fisheries and Livestock

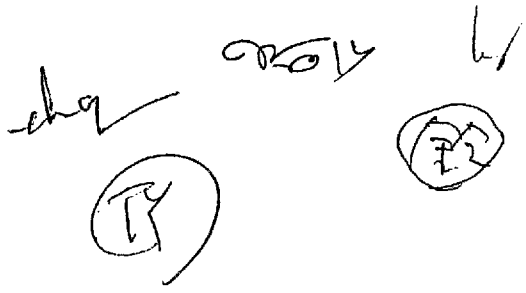
13.06.2002

Quazi M. Endadul Huque
Director General
Bangladesh Livestock Research Institute

1) The Evaluation Team presented the Final Evaluation Report to the Joint Coordinating Committee.

2) The Joint Coordinating Committee has accepted the Final Evaluation Report and taken note of the recommendations made for successful completion of the Project.

3) The Bangladesh side has requested further Japanese assistance on the issue, in order to extend output of the project for enhancing the poultry production at farmers' level, especially small-scale holders in Bangladesh. The Japanese side has agreed to convey this request to the Japanese Government.



THE FINAL EVALUATION REPORT

ON

THE POULTRY MANAGEMENT TECHNIQUES IMPROVEMENT

PROJECT

IN

BANGLADESH

Dhaka, June 13, 2002

Japan-Bangladesh Joint Evaluation Team

The Joint Evaluation Team (hereinafter referred to as "the Evaluation Team") was jointly organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and Bangladesh authorities concerned for conducting project evaluation and for preparing necessary recommendations on the Poultry Management Techniques Improvement Project (hereinafter referred to as "the Project").

This Final Evaluation Report (hearinafter referred to as "the Report") has been prepared by the Evaluation Team with the cooperation of the Project, Ministry of Fisheries and Livestock (hearinafter referred to as "MoFL"), Bangladesh Livestock Research Institute (hearinafter referred to as "BLRI"), Department of Livestock Services (hearinafter referred to as "DLS"), Planning Commission of Ministry of Planning (hearafter referred to as "PC"), Implementation Monitoring and Evaluation Division of Ministry of Planning (hearinafter referred to as "IMED"), Economic Relation Division of Ministry of Finance (hearinafter referred to as"ERD"), Japanese Embassy to Bangladesh, and JICA Bangladesh Office.

The Evaluation Team conducted joint evaluation in the form of interviews, field surveys, and discussions. As a result of these discussions, the Evaluation Team agreed to present the Report contents to the Joint Coordinating Committee (hearinafter referred to as "JCC").

Here, the leaders of the Team put their signature as agreed on Report contents.

Dhaka, June 13, 2002

Shinki Suzuki
Team Leader
Japanese Evaluation Team
Vice President,
Japan International Cooperation Agency

Md.Habibur Rahman
Team Leader
Bangladesh Evaluation Team
Joint Chief,
Ministry of Fisheries and Livestock

Table of Contents

1. Evaluation of the Project

1-1 Objectives of Evaluation

(1) To review the degree of achievement of Input, Output, Project Purpose, in comparison with the Record of Discussions (R/D), Project Design Matrix (PDM) and Plan of Operation (PO).

(2) To evaluate the Project in terms of the five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability).

(3) To make recommendations regarding the measures to be taken for improvement of the Project, as well as to draw the lessons for the improvement in planning and implementation of similar technical cooperation projects.

1-2 Methodology of Evaluation

The evaluation study was conducted by the Evaluation Team composed of the Japanese Project Evaluation Team (hereinafter refer to as Japanese Team) and Bangladesh Evaluation Team.

(1) Analysis was made according to the indicators in the PDM for evaluation (PDMe) attached in ANNEX 1

(2) The degree of achievement of the Project Plan was assessed, using the Achievement Grid attached in ANNEX 2.

(3) Analysis was made for the Five Evaluation criteria described below, based on the Evaluation Grid attached in ANNEX 3.

(a) Relevance

Relevance refers to the validity of the Project purpose and the overall goal in connection with the development policy of the recipient country as well as the needs of beneficiaries.

(b) Effectiveness

Effectiveness refers to the extent to which the expected benefits of the Project have been achieved as planned, and examines if the benefit was brought about as a result of the Project (not of external factors).

(c) Efficiency

Efficiency refers to the productivity of the implementation process, examining if the input of the Project was efficiently convert into the output.

(d) Impact

Impact refers to direct and indirect, positive and negative impacts caused by implementing the Project, including the extent to which the overall goal has been attained.

(e) Sustainability

Sustainability refers to the extent to which the Project can be further developed by the recipient country, and the benefits generated by the Project can be sustained under the recipient country's policies, technology, systems, and financial state.

(1) The Japanese Team

Name	Assignment	Occupation
Shinki SUZUKI	Team Leader	Vice President, Japan International Cooperation Agency (JICA)
Noriaki NIWA	Vice Team Leader/ Project Evaluation	Director, Livestock and Horticulture Division, Agricultural Development Cooperation Department, Japan International Cooperation Agency (JICA)
Kazuhisa SHIMAZAKI	Cooperation Evaluation	Section Chief, Technical Cooperation Division International Affairs Department, General Food Policy Bureau, Ministry of Agriculture, Forestry and Fisheries
Aya YAMAMOTO	Poultry Management Techniques	Director of Poultry Breeding 1st Div, Hyogo National Livestock Breeding Center
Makoto SHINKAWA	Planning Evaluation	Staff, Livestock and Horticulture Div., Agricultural Development Cooperation Dept., JICA
Satomi SUZUKI	Evaluation Analysis	Associate Expert, Livestock and Horticulture Div., Agricultural Development Cooperation Dept., JICA

(2) The Bangladesh Team

Name	Job Title	Occupation
Md.Habibur Rahman	Leader	Joint Chief, Ministry of Fisheries and Livestock (MoFL)
Md. Matiur Rahman, Khan	Member	Senior Assistant Secretary, Japan Desk-2, Economic Relations Division (ERD), Ministry of Finance
Nurul Alam	Member	Assistant Director of IMED, Ministry of Planning
Md. Enayet Hossain	Member	Senior Assistant Chief, Planning Commission, Ministry of Planning
Hossain Ahmed	Member	Poultry Extension Officer, Directorate of Livestock Service (DLS)

1-4 Schedule of the Evaluation

The Evaluation Team spent ten (10) days from June 4 to 13, 2002 at Dhaka, Cox's Bazar, and Dinajpur for carrying out the following activities:

(1) Reviewing Project activities through technical presentations by counterpart personnel of the Project;

(2) Interviewing to JICA experts, counterpart personnel; model farmers, related government officials.

(3) Consultation meetings with MoFL executive officials; and

(4) Analyzing observations and findings during the meetings and field study for the

Evaluation.

4/June	Tue	Formulation of the Joint Evaluation Team Confirmation of the evaluation methods Counterparts (C/P)'s presentation about progress on (1) Project Management, (2) Poultry Feeding Management, (3) Poultry Breeding Management
5/June	Wed	C/P's presentation about progress on (4) Poultry Disease Control, (5) Sub-site Activities, Overall Q&A※
6/June	Thu	Move to Cox'Bazar from Dhaka Field study at Cox'Bazar(Interviews to model farmers)
7/ June	Fri	Continuing field study at Cox'Bazar (Discussion with DLO officers, Interviews to model farmers)
8/ June	Sat	Group discussion among model farmers Move to Dhaka from Cox'Bazar
9/ June	Sun	Move to Dinajpur from Dhaka Field study at Dinajpur (Interviews to model farmers, Group Interviews to model farmers)
10/ June	Mon	Continuing field study at Dinajpur (Interview to staff members of CARE International)
11/June	Tue	Joint Evaluation Team Meeting Preparation of the draft evaluation report Discussion on the results of the evaluation
12/ June	Wed	Reporting to MoFL about joint evaluation, and having a discussion Discussion with DLS Joint Coordinating Committee's meeting (JCC) Presentation about the evaluation report
13/ June	Thurs	Exchange signature on the minutes

※ Counterparts (C/Ps) mean that BLRI staff members who involve in the Project.

※ One of the evaluation members conducted field study at Barisal and Bogra from 27 May to 3 June.

2. Outline of the Project

2-1 Background of the Project

Poverty alleviation and improvement of nutritional level are highlighted in the latest national plan of Bangladesh (5th Five Year Plan) as important objectives of the Plan. The government takes measures to develop poultry husbandry in the small-scale farmers to achieve the objectives of the National plan.

The eggs and chicken meat is easily purchased for the farmers to take an animal protein, so that poultry husbandry is expected to produce animal protein and to have a cash income on small investment for short period. Small-scale farmers manage the most of the chicken in Bangladesh. These chicken are native birds which produce small amount of eggs, because of the genetic character, inadequate feeding management and no-control of the diseases. Appropriate poultry management techniques are needed for small-scale farmers.

On this background, Bangladesh government requested for the Project type of technical cooperation to Japan. The Japanese implementation study team was dispatched in April 1997. The Project was commenced in November 1997 for five-year period that will terminate in October 2002. Joint evaluation team performed the mid-term evaluation in November 2000.

The purpose of the Project is to improve poultry management techniques for small-scale poultry holders by developing the appropriate technology on poultry feeding management, disease control and developing an appropriate breed suitable for small-scale farmers. Mid-term Evaluation Team formed PDM and PO and evaluated the activities during first half period. The Project activities have been conducted based on PDM and PO.

2-2 Summary of the Project

1. The Project purpose:

   To improve the poultry management techniques for small-scale poultry holders by developing appropriate technology on poultry feeding management, disease control, and developing the appropriate breed suitable for small-scale farmers .

2. The outputs of the Project:

   (1) Poultry feeding management is improved,

   (2) Poultry breeding management is improved,

   (3) Poultry disease control techniques are improved,

   (4) Poultry management techniques suitable for small-scale farmer level are developed.

3. Site of the Project

   Main site is located in BLRI at Savar, Dhaka, and the sub-sites are located in Cox'Bazar, Dinajupur, Bogra, and Barisal.

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[1] Small-scale farmers mean that their monthly income is below US100, and holding land is below 300 decimals(3a).

3. Results of the Evaluation with Five Criteria

Regarding the degree of achievement of the Project, the Project was evaluated in terms of the five criteria as follows. Details of each evaluation result can be referred to the Evaluation Grid attached in ANNEX 3.

3-1 Relevance

The overall goal of the Project was set to enhance the poultry production at farmers'level in Bangladesh with perspective of poverty alleviation and improvement of nutritional status among Bangladesh people, which is relevant to the latest national plan of Bangladesh (5th Five Year Plan).

The Project is consistent with GOB policy of poverty alleviation, employment generation, production increase, improvement of nutritional status through livestock and poultry farming. Present government of Bangladesh has given special emphasis on the development of livestock sector.

The Project purpose meets needs of local farmers, the Bangladesh development policy, and latest JICA's country strategy paper for Bangladesh.

On this regard, the Project is relevant.

3-2 Effectiveness

3-2-1 Effectiveness in terms of the Project Purpose

The Evaluation Team assessed that activities were implemented according to the PO and expected outcome was almost realized through technical transfer to C/Ps.

Through verification and demonstration of the Project, the Evaluation team found that the significant impacts on model farmers. However, techniques developed by the Project is suitable for small-scale farmers;(1) who could frequently receive technical advice and necessary training, (2) who could have access to credit for chicks and feed until 22 weeks of chicks, or who could stand without any other profit for around 5 months from the layer farms, and (3) who are able to prepare initial capital investment. Therefore, to extend the Project style layer farms needs a system which meets the above criteria, or further study is needed in order to extend the techniques throughout Bangladesh.

3-2-2 Achievement of Outputs

Achievement of the Project plan was examined in accordance with the Achievement Grid (ANNEX 2) prepared by the Evaluation Team.

(1) Output 1: Poultry feeding management is improved.

Indicators: The higher fertility rate, hatching rate, brooding rate, laying rate, and lower mortality rate is realized in the parent stocks and chicken in the model shed than those record of initial project period.

During the Project period, day old chicks were produced seven times in the Project. Through this experience, C/Ps have acquired knowledge and skills for incubation in order to produce good and healthy day old chicks. The ways of measuring and recording data necessary for poultry breeding with individual bird management were established in BLRI. Through the project activity, following items were improved in BLRI; hatchability, growing viability of small chicks raising, the death rates of layers during growing stage, egg production rates, and mortality rates in adult stage and so on.

(2) Output 2:Poultry breeding management techniques are improved.

Indicators: The C/Ps set the appropriate annual operational plan for breeding.

During the Project period, the Project produced day old chicks three times for obtaining next generation. Through the three time practical experience, C/Ps have learnt efficient utilization of parent stocks and facilities created for the Project. C/Ps are able to make an annual operation plan for breeding programme. The Project has made the target of improvement for parent stock razing in BLRI. C/Ps mastered the following techniques necessary for poultry breeding; (a) the method of measuring and recording performance of individual birds, (b) the method of calculating and analyzing measurable data, (c) the method of evaluating individual birds' performance, (d) C/Ps learnt the selection method for excellent birds and have mastered the method of mating with selected birds, (e) C/Ps who cooperated with JICA experts made manuals on breeding for BLRI.

(3) Output 3: Poultry disease control techniques are improved.

Indicators: (a)The number of disease types diagnosed in BLRI is increased. (b) The higher brooding rate, laying rate and lower mortality rate are realized in the model shed of BLRI than those record of initial project period.

Major infectious diseases were revealed by serological survey and diagnostic services. The manual of hygienic management for small-scale farmers were made. Manuals for hygienic management were distributed to the small-scale farmers. Hygienic measure and daily

practice were established. Relevant staff became skilled in vaccination techniques. Though some prospective method for disease diagnosis has been under examined, it is not yet verified at the sub-sites. Vaccination program was revised on the basis of local situation in the sub-sites. Technical transfer has been made to concerned DLO officers.

(4) Output 4: Poultry management techniques suitable for small-scale farmer level are developed, verified and demonstrated.

Indicators: (a) Frequency of the training and the number of the participants are increased. (b) The manual of the poultry management techniques was made and distributed to the related organizations. (c) Excellent laying rates are demonstrated at sub-site level. (d) Major diseases, like ND, Gumboro diseases have not seriously damaged on the model farms.

Sub-sites and model farmers were selected. Model farmers were trained in the following training courses on (a) guidance course on poultry management technique improvement project, (b) lecture course on poultry management suitable for the small-scale farmers, (c) practice course on poultry management suitable for the small-scale farmers, (d) follow-up training course on poultry management suitable for the small-scale farmers, (e) training course on poultry farming for small-scale farmers. Besides, following manuals were completed: (a) a feeding and breeding manual, (b) a poultry disease control manual, and (c) a video manual for starting poultry farm.

3-2-3 Major Achievement of Project Activities

(1) Poultry feeding management

(a) Management of incubation

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evaluation Team found that C/Ps had acquired necessary techniques and skills for incubation to produce good and healthy day old chicks.

(b) Brooding management

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had acquired the techniques and skills for brooding.

(c) Growing management

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evaluation Team found that C/Ps had acquired the techniques and skills to grow chicks.

(d) Adult chicken management

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evaluation Team found that C/Ps had acquired techniques and skills on

feeding management.

(e) Management of parents' stock keeping

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had aquired the techniques and skills for pedigree hatching and individual bird management through the Project.

(2) Poultry breeding management

(a) Setting the annual operation plan for poultry breeding

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had generally acquired how to make the management plan of parent-stocks through the Project.

(b) Assessment of flock performance

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had generally acquired how to measure and record the performance of individual bird, to calculate, to analyze measurable data, and to evaluate individual bird performance through the Project.

(c) Selection of birds for the next generation

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had generally acquired how to make the selection plan, selection indices, to evaluate on performance of individual bird, and to select excellent birds for getting next generation through the Project.

(3) Poultry disease control

(a) Understanding of major infectious disease

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found the followings:

1) The current situation of major infectious diseases was revealed with serological survey and so on.
2) Reference data for consideration of disease control in the project sub-sites located north and south was obtained.
3) Based on the above two items, the outline of the manual of hygienic management for small-scale farmers in Bangladesh was prepared through the Project.

(b) Development of disease prevention and management

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that C/Ps had generally acquired the hygienic measures and disease control techniques.

(c) Improvement of disease control at farmers' level

According to the final progress report submitted by the Project and interviews to C/Ps and

JICA experts, the Evalution Team found that availability of hygienic management techniques and vaccination program at model farms in the sub-sites had been examined and some parts of vaccination program had been revised in accordance with local situation by the Project.

(4) Sub-site activities

Due to some unsuitable selection of model farmers particularly in Cox' Bazar sub-site, both the project team and model farmers have acquired lessons to be modified. The Project could implement activities effectively in the sub-sites.

(a) Selection of sub-sites and farmers

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that the sub-sites and farmers were selected by Sub-site Working Committee which collected the information from the District and Upazilla Livestock officials, local authorities, and other related organizations.

(b) Training for related personnel(C/Ps, DLS, TLS, and NGOs) and the model farmers

From the final progress report from the JICA experts and the interview to JICA experts and C/Ps, the Evalution Team found the followings:

1) Some training courses were conducted by PMTIP Guidance. In addition, lecture practice and follow-up training courses were conducted by the Project. Participants consider this training effective.
2) Poultry feeding, breeding, disease control manuals were prepared.

(c) Improvement of poultry management techniques suitable for small-scale farmers

From the final progress report from the JICA experts and the interview to JICA experts and C/Ps, the Evalution Team found that the suitable equipment designed were found suitable for small-scale farmers.

(d) Verification of developed poultry management suitable for small-scale farmers

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that the original equipment were designed and verified in model shed in BLRI and in sub-sites. The model farmers evaluated this equipment as effective.

(e) Demonstration of poultry management techniques for farmers in sub-sites

According to the final progress report submitted by the Project and interviews to C/Ps and JICA experts, the Evalution Team found that model farmers were well trained and they could manage their flock by themselves.

The Evaluation Team assessed the Project was generally implemented effectively for the development of the small-scale poultry in Bangladesh.

The details on the current progress of the activities so far in the Project were summarized in the ANNEXS10.

5-3 Efficiency

5-3-1 Achievement of Inputs

(1) Input from the Japanese Side

Dispatch of Experts

Seven (7) long-term experts and thirteen (13) short-term experts in total have been dispatched as planned. Furthermore, three (3) short-term experts are planed to dispatched to Bangladesh in 2002. The list of the experts is attached in ANNEX 4.

Provision of Equipment and Facilities

Major equipment and facilities were provided to carry out the activities effectively as shown in ANNEX 5.

Training for Bangladesh Personnel in Japan

Total fourteen (14) counterparts have visited Japan to participate in technical training, furthermore, three (3) counterparts are expected to receive training in Japan in 2002. The list of trained personnel is attached in ANNEX 6.

Supplementary Funds to Cover Local Cost

The Japanese side bore a part of the Project local cost to implement the Project more effectively. The supplementary fund made by the Japanese side is shown in ANNEX 7.

(2) Input from the Bangladesh Side

Provision of the Project Premises

Project premises were provided by Bangladesh side.

Assignment of Counterparts

Fourteen (14) Bangladesh counterparts have been assigned to the Project. The list of assigned counterparts is attached in ANNEX 8.

Provision of Equipment and Materials (Furniture and Fittings)

Equipment and Materials Furniture and fittings were provided.

Allocation of Budget

Expenses for electricity, fuel, water supply and other miscellaneous expenses were born by Bangladesh side.

Local Cost

The Project local cost was disbursed by the Government of Bangladesh attached in ANNEX9.

5-3-2 Major Factors which Affected Efficiency of the Project Activities

Most necessary inputs were provided as planned from Japanese side, although delay of some inputs affected project activities. When the Project period was started, infrastructures (such as modern poultry shed, hatcheries, and poultry disease diagnostic control laboratory) were not equipped properly for implementing the Project activities. It took a long time to start project activities effectively due to the delay in the creation of facilities. Although some infrastructures

have been delayed to be completed, most parts of the expected outputs seem to be achieved by the end of the Project. In addition to that, due to low capacity of electricity in laboratory, some equipment could not be used due to unstable electric supply. Moreover, outbreak of poultry diseases soon after the Project introduced parent stock from Japan affected the efficiency on the activities.

5-4 Impact

Some positive impacts were found in verification at sub-site level as follows;

(1) Financial Impacts

Many model farmers increased their income through the profit of the layer farms.

(2) Socio-cultual Impacts

Especially, female model farmers used profit from the farm for school fees for their children.

Most female model farmers got self-confident through managing their layer farms, since women have less opportunity to work outside. And now, they are developing their leadership.

Some neighboring farmers motivated by model farmers started layer farms surrounding model farmers. According to the interviews to field officers in sub-sites, the number is about 3 for Barisal, 10 for Bogra, 20 for Cox' Bazar, and 12 for Dinajpur. This is the result of demonstration effect.

As the feeding cost is expensive for small-scale farmers, model farmers in Dinajpur formed a cooperative in order to purchase feed at cheaper price and to sell eggs collectively to reduce the production cost. This is due to motivation by C/Ps in Dinajpur. A network among the model farmers was established through the cooperative, and it is expected to continue their activities even after completing the Project.

Almost all model farmers increased their intake of protein from eggs and meat.

5-5 Sustainability

5-5-1 Institutional Aspects

Some skilled temporary staff for the Project became permanent staff, and that contributes for increasing institutional sustainability. With employing the other trained temporary C/Ps as permanent staff, institutional sustainability will be increased.

If BLRI takes necessary measures for extending the Project outcome, MoFL coordinates the related organization, the institutional sustainability will be higher.

5-5-2 Financial Aspects

JICA support will end in October 2002. After that Project activities will continue up to June

2003 with Government of Bangladesh support only. However, considering the importance of increasing income among small-scale farmers, without allocation of budget after the completion of the Project, the financial sustainability for continuous project implementation will be lower.

5-5-3 Technical Aspects

C/Ps acquired necessary knowledge and skills for poultry management for small-scale farmers. Necessary facilities and equipment for research activities in BLRI was provided from JICA, and C/Ps are able to handle and maintain the facilities and equipment. Therefore, C/Ps keep making effort and following issues will be solved and technical sustainability will be higher.

Feeding cost consists of 60-70% of the total production cost for the management. In a case of decreasing price of eggs and increasing the cost for feed, the profit will be smaller. As most feed for layer is imported, further study on local available feed ingredient for reasonable price for reduce the feed cost is needed.

Initial capital investment, particularly cost for shed for the Project style layer farms seems to be expensive for small-scale farmers. In order to facilitate to extend the techniques developed by the Project, further study is needed.

Necessary manuals are completed and C/Ps are able to manage training. Without sharing that experience among DLS, DLOs, and ULOs in other areas, it would be difficult to attain the overall goal.

6. Conclusion

The Evaluation Team has concluded that appropriate techniques on poultry feeding management, disease control, and developing the appropriate breed suitable for small-scale farmers have been developed, though it is needed to improved further so as to meet the real needs of small-scale farmers.

The Evaluation Team has observed its high relevancy, prospect of positive impacts, and efficiency of the Project. On the other hand, sustainability to achieve the overall goal is serious concern. It would be highly depend on the strategy of the Government of Bangladesh.

In conclusion, based on the discussions with concerned officials and counterparts as well as a field study, it is fair to say that the Project achieved its objectives on the whole set by the R/D and that the remaining problems are within the competence of the trained counterparts. Therefore, it is justified that the Project is to be completed as planned in the R/D.

7. Recommendations

The following issues and necessary measures are recommended by the Evaluation Team to sustain the Project outcome and to further develop the achievements of the Project.

1. The Government of Bangladesh should assign adequate number of manpower including C/Ps to continue the work even after completion of the Project in order to attain sustainability.
2. Allocation of necessary budget and proper maintenance of the equipment supplied under the Project are required for attaining the overall goal. In consideration of the significance and characteristics of the Project, for poverty reduction in Bangladesh, the Project activities need to be continued.
3. It is needed to improve the poultry management model continuously as comprehensive package applicable to small-scale farmers not only from technical point of view but also social and economical point of view in close collaboration and coordination between BLRI and DLS.
4. BLRI and DLS should cooperate each other to develop the techniques concerning poultry feeding, in order to reduce the poultry feed cost.

Besides, considering the next stage in which the major outputs of the Project are extended, the following measures are recommended, and the Government of Bangladesh is requested to commence these measures as soon as possible.

1) MoFL should prepare a future plan for utilizing the output of the Project effectively. Based upon the plan, DLS should play a main role of extending the Project outcome with cooperation of BLRI.
2) Government support for successive micro-credit system is needed, so that small-scale farmers can manage initial capital investment to start the poultry farming. And also Government support is needed to promote small-scale farmers to form farmer association/group for better poultry farm management.

8. Lessons Learned from the Project

(1) If the farming model is needed to be developed, cost benefit of the model should be analyzed for the target groups so as to make the comprehensive cost effectiveness.
(2) Projects which are oriented towards technical development should take such approach in the initial period of the Project which will help in the extension of the project outcome. Otherwise, project effectiveness on target groups would not be realized.

Project Design Matrix for evaluation (PDMe) of the Poultry Management Techniques Improvement Project in Bangladesh (1997.11.1-2002.10.31)

12 June 2002

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
To enhance the poultry production at the farmer's level, especially small-scale holders in Bangladesh.	To amount of the poultry products is increased in Bangladesh.	Analysis of the statistic data of the MoFL.	Preference of egg and meat are stable.
Project Purpose			
To improve the poultry management techniques for small-scale poultry holders by developing appropriate technology on poultry feeding management, disease control, and developing the appropriate breed suitable for small-scale farmers.	Developed poultry management techniques suitable for small-scale farmers are prepared for extension.	1. Interviews to model farmers 2. Local consultants' survey report 3.Project reports on feeding management of model farmers 4. Interviews to C/Ps and DLS	1. Price of poultry feed, egg products, and poultry meat products are stable. 2.BLRI and DLS cooperate in extending project outcome to national wide of Bangladesh with direction of MoFL. 3. Extension officers use manuals developed by the Project.
Outputs			
1.Poultry feeding management techniques are improved. 2.Poultry breeding management techniques are improved. 3.Poultry disease control techniques are improved. 4.Poultry management techniques suitable for small-scale farmer level are developed, verified and demonstrated.	1.Higher fertility rate, hatching rate, brooding rate, laying rate, and lower mortality rate is realized in the parent stocks and chickens in the model shed of BLRI than those record of initial project period. 2.The C/Ps set the appropriate annual operation plan for breeding. 3-1.The number of disease types diagnosed in BLRI is increased. 3-2.Higher brooding rate, laying rate and lower mortality rate are realized in the parent stocks and chickens in the model shed of BLRI than those record of initial project period.. 4-1.Frequency of the training and the number of the participants are increased. 4-2 The manual of the poultry management techniques suitable for small-scale farmer level is prepared and distributed to the related organizations. 4-3. Excellent laying rates are demonstrated at sub-site level. 4-4. Major diseases, like ND, Gumboro diseases have not seriously damaged n the model farms.	1.Project record of the feeding management of the parents stocks and chickens in the model shed. 2.The breeding plan prepared by the C/Ps. 3-1.Project record of the poultry diseases diagnosis in BLRI. 3-2.Project record of hygiene management. 4-1 Project record of the training. 4-2 Manual on poultry management, 4-3 Interviews to experts and superior to C/Ps.	1.No new deadly diseases from outside. 2.Climate stability. 3.Coherence in the poultry management policy.
Activities	Input by Japan	Input by Bangladesh	Pre-conditions
1.Poultry Feeding Management (1) Management of incubation., (2) Brooding management., (3) Growing management., (4) Adult Chicken management., (5) Management of parents stock keeping. 2.Poultry Breeding Management (1) Setting annual operation plan for breeding farm., (2) Assessment of flock performance., (3) Selected birds for the next generation. 3.Poultry Disease Control (1)Understanding of major infectious diseases., (2)Development of disease control and management measures., (3)Development of disease control measures for farmers. 4.Sub-site Activity (1)Selection of sub-site and farmers., (2)Training for related personals (C/Ps,DLS,ILS,and NGO) and the model farmers., (3)Development of poultry management techniques suitable for small-scale farmers., (4)Verification of developed poultry management suitable for small-scale farmer level in BLRI., (5)Demonstration of poultry management techniques for farmers in sub-sites.	1.Dispatch of Japanese experts. (Seven long-term experts and 13 shot-term experts have been dispatched. Three short-term experts are expected to dispatched in 2002.) 2.Provision of machinery and equipment. (equipment for disease diagnosis laboratory, equipment for brooding, hatchery, and growing. Auto mobiles, motor cycles, office equipment etc. Total cost for equipment from Japan is 29,259,900taka. Total cost for providing equipment which was purchased in Bangladesh is 9,144,845taka.) 3.Training of Bangladesh Personal in Japan. (14 counterparts received training in Japan. Furthermore, three counterparts are expected to receive training in Japan in 2002.) 4. Infrastructure (Total cost for constructing infrastructure including model shed is 10,554,875taka.) 5.Dispatch of the mission from Japan. 6. Supplementary fund to cover local cost (Japan have bored total 9,679,377taka as local expenditure for Bangladesh.)	1. Land, Buildings and the other Facilities (project office and site for model shed) 2.C/Ps and management staff.(3C/Ps for feeding management, 2C/Ps for breeding management, 3C/Ps for poultry diseases control, 5C/Ps for sub-site activities, and 1project director are allocated.) 3. Expenditure of local cost. (operational expenditure for feeding management, salary for C/Ps, and costs for sub-site activities)	

* Small-scale farmers mean that their monthly income is below US$100, and holding land is below 300decimal(3a).

Achievement Grid

Category	Indicators	Source of Information	Method	Evaluation
Input	(Japanese side)			
	J-1. Japanese experts	Quarterly reports, experts' reports, relevant parties' comments, etc.	To go over the number of Japanese experts, relevance of areas of training, and the timing for the allocation.	Seven long-term experts and 13 shot-term experts have been dispatched. Areas of training are Disease control, poultry management, rural development, nutritive analysis, and media technology etc. Furthermore, three short-term experts are planed to dispatched in 2002.
	J-2. Provision of machinery and facilities	Quarterly reports, relevant parties' comments, etc.	To see the amount of input, degree of the use, and the timing for the provision.	Model shed, equipment for disease diagnosis laboratory, equipment for brooding, hatchery, and growing. Auto mobiles, motor cycles, office equipment etc. Total cost for equipment from Japan is 29,259,900taka. Total cost for constructing infrastructure is 10,554,875taka. Total cost for providing equipment which was purchased in Bangladesh is 9,144,845taka.
	J-3. Counterpart's training in Japan	Quarterly reports, relevant parties' comments, etc.	To confirm the amount of input. To interview impacts of training after coming back from Bangladesh.	14 counterparts received training in Japan. National Livestock Breeding Center Okazaki Station have mainly accepted their training. Fields of training are feeding management, breeding management, disease control, rural development, and study visit. Furthermore, three counterparts are expected to received training in Japan in 2002.
	J-4. Local Cost Support	Documents, relevant parties' comments, etc.	To see the amount of local cost supported by Japanese side. To examine how they were used.	Japan have borne total 9,679,377taka as local expenditure for Bangladesh.
	(Bangladesh side)			
	B-1. Land, Buildings and the other Facilities	Quarterly reports, Documents	To look through whether necessary land, buildings and the other facilities for the project are provided from Bangladesh side.	Bangladesh borne construction of project office and site for model shed.
	B-2. Allocation of C/P staff	Quarterly reports, Documents, relevant parties' comments, etc.	To confirm the amount of input and the timing for the allocation.	3C/Ps for feeding management, 2C/Ps for breeding management, 3C/Ps for poultry diseases control, 5C/Ps for sub-site activities, and 1project director are allocated.
	B-3. Provision of Equipment and Materials	Documents, relevant parties' comments, etc.	To confirm the amount of input and the timing for the provision.	Furniture in project office was provided.
	B-4. Expenditure of Local Costs	Documents, relevant parties' comments, etc.	To check the amount of local cost.	Bangladesh has borne the operational expenditure for feeding management, salary for C/Ps, and costs for sub-site activities. With the operational expenditure borne by Bangladesh, this project has been implemented without hitch.
Activities	1. Activities for Output 1 : "Poultry Feeding Management"	Achievement Chart	To confirm the progress and the outcome of the activity.	Generally, the progress and the outcome of the activities were achieved. The activities were implemented as planned, and C/Ps acquired necessary skills and knowledge on feeding management.
	2. Activities for Output 2 : "Poultry Breeding Management"	Achievement Chart	To confirm the progress and the outcome of the activity.	Generally, the progress and the outcome of the activities were achieved. The activities were implemented as planned, and C/Ps were able to set up a plan for breeding.
	3. Activities for Output 3 : "Poultry Disease Control"	Achievement Chart	To confirm the progress and the outcome of the activity.	Generally, the progress and the outcome of the activities were achieved. The activities were implemented as planned. Main poultry diseases in Bangladesh were identified by their research.

Achievement Grid

Category	Indicators	Source of Information	Method	Evaluation
	Activities for 4. Output 4 : "Sub-site Activity"	Achievement Chart	To confirm the progress and the outcome of the activity.	Generally, the progress and the outcome of the activities were achieved.
Output	1. Poultry feeding management techniques are improved.			
	1-1. Management of incubation	Project record of feeding management of parents' stocks and chickens in model shed	Higher hatching rates have been found in the parent stocks and chickens in the model shed of BLRI than those record of initial record.	According to the C/Ps' presentation, hatching rate was increased from 75% to 88%.
	1-2. Brooding management		Higher brooding rates have been found in the parent stocks and chickens in the model shed of BLRI than the rates before starting project..	According to the C/Ps' presentation, breeding and growing rate was increased from 95% to 96%.
	1-3 Growing management		Lower mortality rates have been found in the parent stocks and chickens in the model shed of BLRI than the rates before starting project..	According to the C/Ps' presentation, mortality rate was decreased from 5% to 4%.
	1-4 Adult chicken management		Higher fertility rates and higher egg production rates have been found in the parent stocks and chickens in the model shed of BLRI than the rates before starting project.	According to the C/Ps' presentation, fertility rate was increased from 55% to 92%.
	1-5 Management of parent stock keeping		Breed method for producing parent stock is verified. To confirm individual management and number of birds produced at parents' stock.	C/Ps managed parent stock rearing by themselves. A mission member commented that C/P acquired enough skills and knowledge to instruct model farmers, but it was necessary to instruct farmers with more attention by some C/Ps.
	2. Poultry breeding management techniques are improved.			
	2-1 Drawing up annual operation plan for breeding farm	C/P's breeding plan (breeding manual, parents stock management manual)	C/Ps are able to drawing up an annual operational plan for breeding.	Prepared operational plan should be successively implemented.
	2-2 Assessment of flock performance	Project record of feeding management of parents' stocks and chickens in model shed	To confirm whether flock performance is improved compared to the performance before starting this project or initial stage of the project.	Please refer to 1-1,1-2,1-3, and 1-4.
	2-3 Selected birds for next generation	Project record of feeding management of parents' stocks and chickens in model shed	C/Ps are able to select birds for next generation.	Satisfactory level obtained.

Achievement Grid

Category	Indicators	Source of Information	Method	Evaluation
	3. Poultry disease control techniques are improved.			
	3-1. Understanding major infectious diseases	BLRI's document for diagnosis infectious diseases	The number of infectious diseases diagnosed by BLRI are increasod.	According to the Project reports, major infectious diseases in Bangladesh were diagnosis by the Project.
	3-2 Developing disease control and management measures	Records on feeding management for parents' stock and chicks in model shed	Higher fertility rates and higher laying rates have been found in the parent stocks and chickens in the model shed of BLRI.	According to the C/Ps' presentation, hatching rate was increased from 75% to 88%.
	3-3 Developing disease control measure for farms	Records and document about sub-site activities, research report by the local consultant	Occurrence rates of infectious diseases among flocks in model farms have been decreased comparing the rates of before starting sub-site activities.	Disinfectant were placed in the pantry area of the shed among model farmers for hygienic purpose.
	4. Poultry management techniques suitable for small-scale farmers are developed, verified, and demonstrated.			
	4-1 Selection of sub-sites and farmers	Reports, comments of relevant parties	To check whether characters of sub-sites represent various types of climate, geography, and environment of Bangladesh. To make sure whether the character of model farmers is composed by various components of small and medium farm in Bangladesh in terms of level of households, level of education, ethnicity, religious status, and social status.	According to the comment by the Project and observation of field study, sub-sites cover various character, in terms of climate variety, geography, and economic situations among farmers. 600 farms were surveyed according to the criteria on the committee. Individual interviews were also done for the selection.
	4-2 Training for related personnel (C/Ps,DLS, TLS, and NGOs) and model farmers	Document for training	To examine whether no. of training for each parties and no. of the participants have been increased. To look through the areas of training.	According to the questionnaire survey to Japanese experts, training for concerned DLO and seminar for linkage between BLRI and DLS were took place. Manuals which prepared by the Project was distributed to them. According to C/Ps, training for NGOs was also took place.
	4-3 Development of poultry management techniques suitable for small-scale farmers	Manual for feeding management	To check examine necessary information is included in the manuals for small scale farms. To confirm whether the techniques introduced by PMTIP are suitable for small-scale	Training manuals includes necessary information.
	4-4 Verification of developed poultry management suitable for small-scale farmer level in BLRI	BLRI's document for diagnosis infectious diseases, Sub-site reports	To confirm whether typical infectious diseases, such as ND and IBD, have not occurred at model farms.	Typical infectious disease are sometimes happen, but the occurrence rate is small. (3birds over 250birds, 15 birds over 300birds)
	4-5 Demonstration of poultry management techniques for farmers in sub-sites.	Project reports, report written by local consultant	To confirm whether the techniques introduced by PMTIP are suitable for model farmers. To analyse laying rates and other important indicators. To analyse cost and benefit at model farms.	Further technical development is needed for reducing initial investment among small-scale farmers.

Achievement Grid

Category	Indicators	Source of Information	Method	Evaluation
Project Purpose	1. To improve the poultry management techniques for small-scale poultry holders by developing appropriate technology on poultry feeding management, disease control, and developing the appropriate training method.	Reports written by the local consultant, project's reports, comments from model farmers	To analyse whether model farmers can easily apply the techniques introduced by PMTIP. To confirm whether model farmers are willing to continue to apply the techniques after completing this project.	Most model farmers commented that they felt easy to apply techniques and skills and they are interested to continue their farm.
	2.	Comments from relevant parties including DLS	DLS is intended to adopt the techniques and knowledge introduced by PMTIP for the extension work of DLS.	According to the interviews to DLS, DLS was dependent on JICA for the extension of the Project outcome. However, DLS should apply the techniques for extension.
Important Assumptions	1. No new deadly diseases from outside	Project documents, reports, comments from relevant parties	To study whether this assumption is realised. If not, to analyse the main reasons.	According to the questionnaire survey to Japanese experts, positive Avian Influenza was found out. Except Avian Influenza, there were no new deadly diseases occurred like ND and IBD.
	2. Climate stability	Project documents, reports, comments from relevant parties	To study whether this assumption is realised. If not, to analyse the main reasons.	According to the questionnaire survey to Japanese experts, during the Project period, there was no big climate change which affected on the poultry management.
	3. Coherence in the poultry management policy	Project documents, reports, comments from relevant parties	To study whether this assumption is realised. If not, to analyse the main reasons.	According to the interviews to Planning Commission, and comments by Bangladesh Evaluation team, the project purpose is relevant with the latest national plan of Bangladesh.
Precondition	1 CIDA are going to provide research outcome on the development of low-cost hybrid feed,.	Project documents, reports, comments from relevant parties including CIDA.	To study whether this precondition has been realised. If not, to analyse the main reasons.	According to the Project, due to delay of the project activities of CIDA, research outcome of CIDA was not provided to the Project.
Others (process of implementation)	1. Means for implementing project	Comments from experts and C/Ps, experts' report	To find the procedure of implementation, communication measures taken among related parties, and any communication gap occurred among them.	According to the questionnaire survey to C/Ps, the team spirit of the Project is very good communication through regular meeting and discussion. Japanese expert commented that communication between C/Ps and Japanese experts became better than first period of the Project.
	2. Progress of monitoring	Comments from JICA office, experts and C/Ps	To find how they monitor the progress of this project periodically. How they share the responsibility of monitoring.	According to the questionnaire survey to C/Ps, The progress of the Project is monitored through physical and practical observation and participation through the assignment given to the counterparts scientist and staff members as per the set objectives/goals . In this regards weekly and monthly meetings (chaired by the DG/PD) are arranged in presence of JICA experts, C/Ps and BLRi staff members. In addition, the sub-site activities and programmes are monitored through regular/intensive visit to each of the four sub-sites of the Project. Scientific officers and stuff members of the Project staying there are monitored by Project
	3. Degree of ownership for BLRI to this project	Comments from experts, C/Ps, achievement chart	To examine the degree of involvement from executives of BLRI to this project. To find the portion which BLRI have been bared for this project. To know their attitude to this project. How their attitude has been changed,	Japanese experts commented that Director General of BLRI understand the Project very well.

Achievement Grid

Category	Indicators	Source of Information	Method	Evaluation
	4. Degree of attainment toward the suggestion at the mid-term evaluation	quarterly reports, expert's report, comments from C/Ps, experts	To confirm the progress of realisation pertaining suggestions at the mid-term evaluation (promoting advertisement about project outcome and promoting linkage to DLS)	Seminar for DLS was carried out and manuals created by the Project was distributed to DLS.

Evaluation Grid

Annex3

Criteria	Indicators	Source of Information	Method	Evaluation
Relevance	1. Relevance to latest national policy of Bangladesh	Planning committee, JICA office	To confirm whether improvement of nutrition, poverty reduction, poultry development for small farmers are still on high priority in the latest national policy of Bangladesh	Improvement of nutrition, poverty reduction, poultry development for small farmers are in high priority in the latest national policy of Bangladesh.
	2. Relevance to beneficiaries' needs	DLO, experts, C/Ps,etc	To check whether project outcome is still needed and useful for small farmers in Bangladesh.	According to interviews to Planing Commission, ERD, MoFL, DLS, the project outcome is useful for small-scale farmers in Bangladesh.
	3. Relevance to the aid policy of JICA	JICA HQ officers	To confirm whether the project purpose and overall goal are relevant to the aid policy of JICA.	Fields of agriculture development, agricultural community development, and increasing production is in high priority on JICA national development policy in Bangladesh.
Effectiveness	1. Achievement of the project purpose	Achievement Grid	To rate attainment of project purpose	According to the self-evaluation report submitted by the project as well as evaluation study by the Evaluation mission, the project purpose was generally attained.
	2. Comparison to economic situations and poultry management of other farmers out of project.	reports, DLO	To compare economic situations and poultry management between model farmers and other farmers out of project.	In general, economic situations in sub-sites have been improved effected by various NGO projects, government project, and other donors' projects.
	3. Important assumptions and other external factors which might affect the achievement of project purpose.	Reports, observation, experts, C/Ps, CIDA	To check the influence of external factors on project activities(no newly deadly diseases from outside, climate stability, consistency with national policy of Bangladesh)	There was no special external factors.
Efficiency	1. Achievement of input	Achievement Grid	To refer the Achievement Grid	

Evaluation Grid

Criteria	Indicators	Source of Information	Method	Evaluation
	2. Achievement of output	Achievement Grid	To refer the Achievement Grid	
	3 Comparison between output and input	quarterly reports, observation, C/Ps, experts	To measure how much of inputs have turned out outcome in terms of practical use of personnel/equipment/fund, relevance of scale of inputs, and timing of inputs.	According to the questionnaire survey, C/Ps were commented positively.
	4 Comparison to other similar projects	C/Ps	To confirm whether the quantity of input with the outcome can be justified by comparison with other similar projects.	Initial capital investment of PMTIP layer farm is costly comparing local layer farms by NGOs, but productivity is higher in PMTIP type.
	5 Combination of input	Experts and C/P	To examine whether content and level of input are appropriate from a view point of a project manager. To study which input could be replaced and the reasons in case of both budget decrease and budget increase.	
	6 Combination of activities	Experts and C/P	To examine whether content and level of activities are appropriate from a view point of a project manager. To study which activities could be replaced and the reasons in case of both budget decrease and budget increase.	According to the questionnaire survey to C/Ps, construction works should reduced in increased budget, because within available facilities activities should be carried out. While in case of decreased budget, increasing land, building, and other facilities should be increased, because infrastructures are necessary for research. Japanese experts commented that activities on feeding management, especially on providing equipment and allocation of personnel will be
	7 Any linkage to other type of co-operation which promoted or decreased its efficiency.	Experts and JICA staff	To check any co-operation including other donor projects, other scheme of JICA projects, promoted its efficiency, or decreased its efficiency.	This project cooperated research activities for JICA individual experts in WID, and research outcome was provided to the Project. Japanese experts provided technical advise for OISCA which is an NGO, and a C/P had a presentation in a seminar organised by CIDA.

Evaluation Grid

Criteria	Indicators	Source of Information	Method	Evaluation
Impact	1. Any changes surrounding project activities	Experts , C/P	To study impacts on model farmers from the project activities. To study positive impacts and negative impacts if technology introduced by the project were extended to national wide of Bangladesh. To categorise the data into technological impacts; environmental impacts, economical impacts, cultural impacts, social impacts, and institutional impacts.	According to the questionnaire survey to Japanese experts, positive impacts will be improving education level due to increased income, improving nutrition status, promoting to be a enterprise, promoting local industry with combination of fish cultivation. While negative impacts will be small from chicken dropping and increasing flies, the number of local native chicken might be decreased due to decreasing scavenging farming.
	2. Possibility to attain overall goal of the project(possibility to extend technology introduced by project to other areas of Bangladesh)	Experts, C/P, other data	To examine whether overall goal of the project could be attained. To find external factor to obstacle to attain the project goal as well.	Japanese experts commented that continuous allocation of C/Ps after completing the Project is need.
Sustainabil	1. Institutional sustainability			
	1-1. Possibilities of BLRI	Experts, C/Ps, PC	To foresee the capability and possibilities of BLRI	Japanese experts commented that necessary facilities and equipment were provided to BLRI. Capability on technical development has been increased. They expects that C/Ps will continue technical development suitable for small scale farmers as well as basic research.
	1-2. BLRI's strategy for technical development	Experts, C/Ps	To check whether BLRI has a clear strategy for continuing technical development.	According to the C/Ps' presentation, they have clear strategy for the future activities.
	1-3. Co-operation between BLRI and DLS	Experts, C/Ps, DLS	To confirm the system of co-operation between BLRI and DLS	Both DLS and BLRI noticed the importance of their cooperation.
	2. Financial sustainability			
	2-1. Financial situation of BLRI	C/Ps	To examine how BLRI is going to continue activities after completing project, and how BLRI will get financial support after this project.	C/Ps commented that budget is ensured by June 2003. With the recommendation in the evaluation report, C/Ps like to obtain budget for the next fiscal year.
	3. Technical sustainability			

Evaluation Grid

Criteria	Indicators	Source of Information	Method	Evaluation
	3-1. Establishment of skill and knowledge in BLRI	Expert and C/Ps	To confirm whether C/Ps can continue the development of study without support of Japanese expert. To check whether C/Ps can manage to maintain equipment and facility which was provided by JICA. To check how C/Ps are going to get consumable including reagent which has been provided by JICA after completing project. To find how BLRI are going to study feeding management after completing project.	C/Ps commented that they can continue their activities without support of Japanese experts. C/Ps commented that they can maintain equipment and facilities provided by JICA. C/Ps try to find way to obtain consumable after completing the Project.
	3-2. Possibility of technical extension	Experts and C/Ps, DLLs	To find how BLUR consider technical extension developed by the project team. Find out their strategy.	According to the C/Ps' presentation, C/Ps plans to increase the number of sub-sites for the extension.
	3-3. Stability of workforce of C/Ps	Experts and C/P	To see C/Ps would continue working for BLRI after completing the project.	Up to June 2002, C/Ps are ensure to hire by the Project.
	3-4. Sustainability of knowledge and skills for farmers	Experts and C/P	To check whether model farmers are going to apply the acquired skills and knowledge after completing project. To check whether there is any local institution to share the knowledge and skills among farmers.	Almost all farmers commented that they continue to manage PMTIP style layer farm. Field staff of BLRI will continuously provide technical support by June 2002. DLO and ULO officers can support them.
	4. Obstacle against sustainability	Experts, C/P	To find out any obstacle for C/P's activity after completing the project.	Japanese experts commented that keep allocating skilled C/Ps and budget is essential.

3 Input by Japanese side

(1) Dispatch of Experts

Long-Term	Name	Duration	Counter-parts
Leader	Tatsuo Iwama	97.12.2-99.12.1	Dr.Md.SalahUddin
	Tatsuo Yamamoto	00.2.16-02.2.15	
Coordinator	Kiyoji Mori	97.11.26-00.2.25	Mr.Md.Jahid Hossain
	Hisanori Hashimoto	00.2.03-02.10.31	Dr.N.R.Sarker
Disease Control	Masao Yoshimura	97.11.26-99.11.25	Dr. Gias uddin
	Ikuo Koike	99.12.8-02.10.31	Dr.Jahan Giar Alam
Poultry Management	Atsushi Irimura	98.6.23-00.11.22	Dr.Nazul Islam, Mr.Dulal Chandra Poul Mr.Mafuzal Rhaman Mr.Bimol Chandra Roy, Mr.Saidul Islam, Ms.Wahida Pervin, Ms. Monira Khatun, Ms.Razia Khatun, Dr.Mushud Rahman, Mr.Md Abdul Rashid, Mr.Shamim Ahrmed
Short-Term			
Rural Development	Takeo Oshima	99.4.23-7.22	
Poultry Management	Hidetaka Sugamuma	99.4.30-6.29	
Disease Control	Tetsuo Kurotaki	99.9.26-11.25	
Poultry Management	Tomio Suekuni	99.11.27-00.2.26	
Rural Development	Takeo Oshima	00.8.28-11.27	
Poultry Management	Yukihiro Yamamoto	00.10.05-12.25	
Poultry Management	Isamu Okamoto	00.11.29-01.2.26	

Nutritive Analysis	Motomu Suginaka	01.3.31-5.28
Poultry Management	Isamu Okamoto	01.6.29-12.20
Poultry Management	Shouzou Hanzawa	01.9.3-11.2
Poultry Management	Susumu Odaira	01.10.21-12.20
Nutritive Analysis	Takuo Konno	02.2.01-3.29
Media Technology	Tomoyuki Kozuke	02.2.01-3.29

List of Provided Equipment

No. Of Hardware	Arrival time	Trade Name of Hardware	Type	Manufacturer	Number	Price Tag	Room for Installation	About current operation	Since when and its cause in the case of nonoperation
9808	Apr-99	Brooder Maruto type	Maruto type	Toyohasi-siryou	2 sets	473,000	brooding house	in operation	
〃	〃	Hot water tank	〃	〃	〃	90,600	〃	in operation	
〃	〃	Water supply gutter	〃	〃	〃	84,000	〃	in operation	
9809	〃	Battery main unit	〃	〃	16 sets	800,000	〃	in operation	
〃	〃	Water supply gutter	〃	〃	〃	331,200	〃	in operation	
9810	May-99	Equipment for Breeding			1 unit	1,094,000	groring house	in operation	
9811	〃	Equipment for cocks			1 unit	1,291,000	Adult shed	in operation	
9812	〃	Equipment for hens			1 unit	1,005,000	Adult shed	in operation	
9813	〃	Consumble and Spare			1 unit	101,060	Poultry shed	in operation	
9833	〃	Egg tray for 30 eggs		Daisyosangy	200 pcs	20,000	Adult shed	in operation	
9834	〃	Egg tray container		〃	30 pcs	50,400	〃	in operation	
9835	〃	Container for chicken		〃	204pcs	544,680	Poultry shed	in operation	
9906	Feb-01	Feed mixer	A4		1 set	770,000	brooding house	in operation	
								in operation	
<購送機材								in operation	
9807	Feb-99	Sprayer	CA4510	Kandakougyo	1 set	277,000	Hatchary	in operation	
9902	May-99	Day-old-chick			1000pcs	541,432	Poultry shed	in operation	
<携行機材								in operation	
9903	May-99	Debeaker	ECT	touzaisangyo	1pcs	101,000	groring house	in operation	
9926	Jan-00	Electric balance	EK4000		1 set	63,000	Adult shed	in operation	
9932	〃	Weight scale	D-100		1 set	52,000	〃	in operation	
9933	〃	Degital weight scale	KL-10		1 set	73,200	〃	in operation	
9934	〃	Egg discriminator			1 set	7,000	Hatchary	in operation	
00-4	Jul-00	Auto Debeaker	FN-90	Fujihirakougyo	2 sets	168,000	sub-site	in operation	
00-5	〃	Foggers(Fogmaster)	TRI		1 set	114,000	Hatchary	in operation	
00-6	〃	Egg Quality Meter	FN-596	Fujihirakougyo	1 set	82,000	Office	in operation	
	Oct-02	Egg Shell Strength Meter	FN597	〃	1 set	319,000	〃	in operation	
	〃	Egg Shell thickness Gauge	FN595	〃	1 set	35,500	〃	in operation	
	〃	Egg Quality Gauge	FN596	〃	1 set	219,000	〃	in operation	
	〃	Egg Weight Meter	FN599	〃	1 set	38,500	〃	in operation	
	〃	Egg Form Measure	FN598	〃	1 set	133,000	〃	in operation	
	Nov-02	Debeaker	SuperV	Orionn	1 set	155,000	groring house	in operation	

List of Hardware Provided by JICA During the Project

No. of Hardware	Arrival Time	Trade Name of Hardware	Type	Manufacturer	Price Tag (Yen)	Management Section	Room for Installation	About Current Operation	Since when and its cause in the case of nonoperation
98-14	May-99	Ultra-low temperature freezer	BHF-132LR	ESPEC	1,093,000	Poultry Disease Diagnostic Laboratory (PDDL)	Serological inspection room (Sero.Ins)	Occasional	Operation is normal. But, electric power supply has been in instability, and operation of the generator has been rarely made at the time when power cut has taken place almost daily, and stable freezing has been rarely realized. UPS device has not functioned fitly, the device being no longer employed currently. The freezer itself shall operate occasionally to keep its own condition.
98-20	May-99	Autoclave	ss-35	Tomy	366,000	PDDL	Wash & sterilization room (W & S)	in operation	
98-22	May-99	Dry oven	PHH-101	ESPEC	1,024,000	PDDL	W & S	in operation	
98-25	May-99	Bench-top centrifuge	LC-100	Tomy	197,000	PDDL	Sero.Ins	in operation	
98-31	May-99	Refrigerator high-speed centrifuge	GRX-220)	Tomy	1,500,000	PDDL	Sero.Ins	no operation, has never operated in the past,	It hardly elucidates the definite occasion of nonoperation. The first report of nonoperation was made at the time of particular wiring for the machine March 2001. Due to displaying the maker-call on the machine, it has been so difficult to define the trouble part. Considering a few suspect parts, we don't yet fix the problem as of February 2002.
99-01	Feb-01	Medical cabinet for refrigerator	BMC710GD	ESPEC	589,000	PDDL	Sero.Ins	in operation	
99-02	Feb-01	Medical cabinet for freezer	BMC710	ESPEC	589,000	PDDL	Sero.Ins	in operation	
99-03	Feb-01	Cooled incubator	MIR253	Sanyo	437,000	PDDL	Bacteria inspection room(Bac. Ins)	in operation	
99-04	Feb-01	CO2incubator	MCO175	Sanyo	774,000	PDDL	Virological inspection room(Vir.Ins)	in operation	
99-05	Feb-01	Egg incubator	P-03	Showa Furan Lab.	402,000	PDDL	Lab. corridor	in operation	
99-06	Feb-01	Drying shelf	74-145-01	luchiseieido	76,000	PDDL	W & S	in operation	

List of Hardware Provided by JICA During the Project

No. of Hardware	Arrival Time	Trade Name of Hardware	Type	Manufacturer	Price Tag (Yen)	Management Section	Room for Installation	About Current Operation	Since when and its cause in the case of nonoperation
99-08	Feb-01	Water bath	CTR-330	Asahi Techno.	171,000	PDDL	Vir.Ins	in operation	
99-09	Feb-01	pH meter	Model-15	Asahi Techno.	200,000	PDDL	Sero.Ins	in operation	
99-10	Feb-01	SLR camera	OM4-Ti	Olympus	171,000	PDDL	Histopatholigical inspection room(His.Ins)	in operation	
99-11	Feb-01	Fluorescence microscope	BX50-34-FLA-1	Olympus	1,847,000	PDDL	Sero.Ins	in operation	
99-12	Feb-01	Electronic balance	BW420D	Shimazu	200,000	PDDL	Pathological inspection room(Pat.Ins)	in operation	
99-13	Feb-01	Electronic balance	AW220	Shimazu	281,000	PDDL	Sero.Ins	in operation	
99-14	Feb-01	Ultra pure water maker	CPW-101	Advantec Toyo	458,000	PDDL	Vir.Ins	in operation	
99-15	Feb-01	Magnetic stirrer	SR-500	Advantec Toyo	47,000	PDDL	Sero.Ins	in operation	
99-20	Feb-01	Biological microscope	BX50-34	Olympus	1,197,000	PDDL	Bac.Ins	in operation	
99-21	Feb-01	Stereoscopic microscope	SMZ-U-3	Nikon	490,000	PDDL	Pat.Ins	in operation	
99-22	Feb-01	Work table	W-187S	Toyoshima	95,000	PDDL	Pat.Ins, His.Ins	in operation	
99-23	Feb-01	Filter holder for filtration sterilization	KGS-47-TF	Advantec Toyo	30,000	PDDL	Vir.Ins	in operation	
99-24	Feb-01	Filter holder	KP-47S	Advantec Toyo	12,000	PDDL	Sero.Ins	in operation	
99-25	Feb-01	Homogenizer	CM-200	Iuchiseieido	247,000	PDDL	Vir.Ins	in operation	
99-26	Feb-01	Camera lens F 1.8	Zuiko	Olympus	23,000	PDDL	His.Ins	in operation	
99-27	Feb-01	Camera lens F 2.0	Zuiko-Macro	Olympus	95,000	PDDL	His.Ins	in operation	
99-28	Feb-01	Microscope photographic attachment unit	PM-30-1	Olympus	779,000	PDDL	sharing by each section	in operation	
99-32	Feb-01	Dissecting tray	TO-15	Sankouirika	52,000	PDDL	Pat.Ins	in operation	
99-33	Feb-01	Mixer Vortex	WM-260	Scientific Industries	43,000	PDDL	Pat.Ins,His.Ins,Sero.Ins, Bac. Ins,Vir.Ins,	in operation	

List of Hardware Provided by JICA During the Project

No. of Hardware	Arrival Time	Trade Name of Hardware	Type	Manufacturer	Price Tag (Yen)	Management Section	Room for Installation	About Current Operation	Since when and its cause in the case of nonoperation
99-34	Feb-01	Freeze dry machine	FZ-6PV	Labconco	1,691,000	PDDL	Sero.Ins	Occasional	Operation is normal. But, electric power supply has been in instability, and operation of the generator has been rarely made at the time when power cut has taken place almost daily. Continuous operation is required overnight or more to make the product available for actual use. UPS device has not functioned fitly, the device being no longer employed currently. The machine itself shall operate occasionally to keep its own condition.
99-35	Feb-01	Auto vacuum chamber	79480-00STD	Labconco	2,993,000	PDDL	Sero.Ins	in operation	ditto
99-36	Feb-01	Recorder	LAE2050	Yokogawa	475,000	PDDL	Sero.Ins	in operation	ditto
99-37	Feb-01	Vacuum pump oil filter	ALS-157	Asahi life Science	361,000	PDDL	Sero.Ins	in operation	ditto
99-38	Feb-01	Vacuum pump	ALS-150	Asahi life Science	485,000	PDDL	Sero.Ins	in operation	ditto
99-39	Feb-01	Automatic voltage regulator	30A	Advantec Toyo	285,000	PDDL	W & S	in operation	
99-40	May-01	Distillation Apparatus	GHS-200	Advantec Toyo	596,000	PDDL	W & S	in operation	
2001-01	Jul-01	Shaker	VSJ-10B	Sakura Seiki	327,360	PDDL	His.Ins	in operation	
2001-02	Jul-01	Automatic embedding apparatus rotary	RX-11	Sakura Seiki	1,125,300	PDDL	His.Ins	in operation	
2001-03	Jul-01	Paraffin block casting apparatus	TEC-IV	Sakura Seiki	1,876,000	PDDL	His.Ins	in operation	
2001-04	Jul-01	Incubator for paraffin	IF-102	Sakura Seiki	269,700	PDDL	His.Ins	in operation	
2001-05	Jul-01	Sliding microtome	IVS-410	Sakura Seiki	808,170	PDDL	His.Ins	in operation	
2001-06	Jul-01	Paraffin spreading apparatus	PS-125WH	Sakura Seiki	167,400	PDDL	His.Ins	in operation	
2001-07	Jul-01	Electric balance	EK2000G	A & D	65,100	PDDL	His.Ins	in operation	

List of Hardware Provided by JICA During the Project

No. of Hardware	Arrival Time	Trade Name of Hardware	Type	Manufacturer	Price Tag (Yen)	Management Section	Room for Installation	About Current Operation	Since when and its cause in the case of nonoperation
2001-08	Jul-01	Electric balance	EK2000G	A & D	65,100	PDDL	Pat.Ins	in operation	
2001-11	Jul-01	Thermo-hygrograph	NWR-9903	Nihon Keiryouki	60,450	PDDL	sharing by each section	in operation	
2001-14	Jul-01	Biological microscope	BX-50-33	Olympus	971,850	PDDL	His.Ins	in operation	
2001-15	Jul-01	Inverted microscope	IX70-22PH	Olympus	1,732,800	PDDL	Vir.Ins	in operation	
2001-16	Jul-01	Vacuum cleaner 2 sets	VCY-11R	Toshiba		PDDL	Sero.Ins, His.Ins	in operation	
Carried Hard-ware									
9911	Oct-99	Voltage regulator	600VA	Matsunaga	30,000	PDDL	Office	in operation	
00-1	Jul-00	Electric air cleaner: 3 sets	IC-700	TEAC	177,000	PDDL	Pat.Ins,His.Ins,Sero.Ins	in operation	
00-3	Jul-00	Electric air cleaner: 2 sets	IC-270	TEAC	66,000	PDDL	Vir.Ins, Bac.Ins,	in operation	
00-7	Mar-01	Portable mill	SCM-40A	Shibata	24,500	PDDL	Pat.Ins	in operation	
00-8	Mar-01	Digital balance	HL-200	Shibata	16,500	PDDL	Pat.Ins	in operation	
	Nov-01	Microplate reader	Model 550	Biorad	753,000	PDDL	Vir.Ins	in operation	
Local Procurement					<Taka>				
98010	Mar-99	Air conditioner: 6 sets	1. 8 BUT	National	558,950	PDDL	Pat.Ins,His.Ins,Sero.Ins, W & S, Office(2)	in operation	
99008	Mar-00	Voltage stabilizer	3KW	Japan brand	25,900	PDDL	W & S, Sero.Ins	in operation	
	Jan-02	Washing machine	SAW-803W	Singer	18,000	PDDL	Washing room	in operation	

No. of Hardware	Arrival Time	Trade name of Hardware	Type	Manufacturer	Price Tag (Yen)	Management Section	Room for Installation	About Current Oeration	Since when and its cause in the case of nonoperation
9801	1998/6/24	Personal Comuputer	5200X/3200CDS/ 17S	COMPAQ	215,000	JICA	Coordinator room	good	
9835	1999/5/10	Personal Comuputer	GP6 266C		226,000	BLRI	Comuputer room	good	
9916	2000/2/18	Over Head Projector	HP-A380		91,000	BLRI	Conference room	good	
9916	2000/2/18	Over Head Projector	HP-A380		91,000	BLRI	Conference room	good	
9916	2000/2/18	Screen	HW-4		29,000	BLRI	Conference room	good	
9917	2000/2/18	Screen	HW-4		29,000	BLRI	Conference room	good	
9918	2000/2/18	Slide Projector	Ominigraphic253		52,500	BLRI	Conference room	good	
9918	2000/2/18	Slide Projector	Ominigraphic253		52,500	BLRI	Conference room	good	
9919	2000/2/19	Wireless Amplifire	WA-620C		42,500	BLRI	Conference room	good	
9919	2000/2/20	Wireless Amplifire	WA-620C		42,500	BLRI	Conference room	good	
9935	2000/2/27	Digital Steel Camera	MVC-FD88K		103,000	JICA	Coordinator room	good	
9935	2000/2/27	Software	MS-Office2000 Pro		63,000	JICA	Coordinator room	good	
	2001/9/9	Software	Quick Stastica		155,000	JICA	Coordinator room	good	
	2001/9/9	Personal Comuputer	2800 MultiDrive		395,000	BLRI	C/P	good	
	2001/9/9	Software	XP-Standard(E)		67,500	JICA	Coordinator room	good	
	2001/11/27	Digital Steel Camera	MVC-FD92		86,000	JICA	Coordinator room	good	
	2001/11/27	Digital Steel Camera	MVC-FD93		86,000	BLRI	Lab	good	
	2001/11/27	Digital Steel Camera	MVC-FD94		86,000	BLRI	C/P	good	
	2001/11/27	Digital Steel Camera	MVC-FD95		86,000	BLRI	C/P	good	
		Local Purchase			TAKA				
97003	1998/2/9	Photo Copy Macine	Canon 1215	Canon	104,400	BLRI	Library	good	
97009	1998/3/5	Personal Comuputer		Packerd Bell	87,000	BLRI	Comuputer room	good	
970014	1998/3/8	Fax Machine	Canon T-21	Canon	25,000	BLRI	PD room	good	
97018	1998/3/31	4WD.Jeep.	Land Cruiser Pradp	Toyota	1,360,000	BLRI	BLRI	good	

99007	2000/3/6	Over Head Projector & Screen		3M	48,000	BLRI	Conference room	good	
99011		Hi-Lux Pick-Up		Toyota	1,135,000	BLRI	Sub-site	good	
99012	2000/3/9	Auto Mobil	C50	Honda	77,000	BLRI	Sub-site	good	
99013	2000/3/9	Auto Mobil	C50	Honda	77,000	BLRI	Sub-site	good	
99014	2000/3/9	Auto Mobil	C50	Honda	77,000	BLRI	Sub-site	good	
99015	2000/3/9	Auto Mobil	C50	Honda	77,000	BLRI	Sub-site	good	
99016	2000/3/9	Photo Copy Macine	NP-3020	Canon	150,000	JICA	Coordinator room	good	
99017	2000/3/9	Personal Comuputer	G-6	Gatway	57,000	BLRI	Comuputer room	good	
99020	2000/3/9	Television	29RN1	Sharp	37,350	BLRI	Conference room	good	
99021	2000/3/9	Television	29RN1	Sharp	37,350	BLRI	Conference room	good	
99022	2000/3/9	Video Camera	VI-E71E	Sharp	34,460	JICA	Conference room	good	
99023	2000/3/9	Video Player	MA-33	Sharp	16,000	BLRI	Conference room	good	
99024	2000/3/9	Video Player	MA-55	Sharp	16,000	BLRI	Conference room	good	
00-1	2001/2/19	Personal Comuputer	PTTT800	COMPAQ	60,000	BLRI	Comuputer room	good	
00-3	2001/2/19	Personal Comuputer	100S	COMPAQ	85,000	BLRI	C/P	good	
00-4	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	
00-5	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	
00-6	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	
00-7	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	
00-8	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	
00-9	2002/2/9	Motor Cycle	YB50	Yamaha	74,300	BLRI	Sub-site	good	

Acceptance of Bangladesh Counterpart for Training in Japan

(2) Counter-Part Training in Japan.

Name of C/P	Duration	Section	Training Course and Organization	Status at Training Course	Status at present
Dulal Chandra Poul	98.3.30-6.1	Feeding Management	National Livestock Breeding Center Okazaki	Senior Scientific Officer	Senior Scientific Officer
Md.Ashraf Biswas	98.3.30-6.1	Breeding Management	National Livestock Breeding Center Okazaki	Scientific Officer	BLRI Bagabali Branch
Bijon Kumar Sil	98.3.30-7.5	Disease Control	Kitazato University	Senior Scientific Officer	Senior Scientific Officer
Emdadul Haque	98.6.2-6.16	Study Visit	National Livestock Breeding Center Okazaki	Director General	Director General
Syed Golam Kibria	98.6.2-6.16	Study Visit	National Livestock Breeding Center Okazaki	Joint Secretary	
Md.GiasUddin	99.3.23-6.27	Disease Control	Kitazato University	Senior Scientific Officer	Senior Scientific Officer
Nazrul Islam	00.1.17-3.24	Feeding Management	National Livestock Breeding Center Okazaki	Senior Scientific Officer	Senior Scientific Officer
Jahangir Alam	00.3.26-4.09	Disease Control	National Livestock Breeding Center Okazaki	Director General	Ministry of Fisheries and Livestock
Jahangir Alam	01.1.23-3.19	Disease Control	Kitazato University	Scientific Officer	Scientific Officer
Md.Jahid Hossain	01.1.23-3.19	Feeding Management	National Livestock Breeding Center Okazaki	Senior Scientific Officer	Senior Scientific Officer
Sarwar Akram Aziz	01.1.23-3.19	Rural Development	National Livestock Breeding Center Okazaki	Scientific Officer	Lecturer of Veterinary School of Sylhet
Bimol Chandra Roy	02.1.23-3.20	Feeding Management	National Livestock Breeding Center Okazaki	Scientific Officer	Scientific Officer
Waheda Pervin	02.1.23-3.20	Rural Development	National Livestock Breeding Center Okazaki	Scientific Officer	Scientific Officer
Saidul Islam	02.1.23-3.20	Breeding Management	National Livestock Breeding Center Okazaki	Scientific Officer	Scientific Officer

Input by Japanese Side (Local Cost, Equipment Suppry)
Poultry Improvement Technique Management Budget 1997 (First of April) to 2001(End of December)

Year	Budget Item	Taka	Total Taka
1997	Local Expenditure	462,500	
1998	Local Expenditure	1,048,265	
1999	Local Expenditure	1,634,907	
1999	Another Expenditure	770,000	
2000	Local Expenditure	3,928,337	
2001	Local Expenditure	1,835,368	
			9,679,377
1997 to 99	Construction/infrastructure	10,554,875	
			10,554,875
1997	Purchase in Bangladesh	2,028,600	
1998	Purchase in Bangladesh	4,649,245	
1999	Purchase in Bangladesh	2,039,000	
2000	Purchase in Bangladesh	0	
2001	Purchase in Bangladesh	428,000	
			9,144,845
1997 to 2001	Attached Equipment		
1998	Equipment from Japan	4,859,100	
1999	Equipment from Japan	12,800,800	
2000	Equipment from Japan	11,600,000	
2001	Equipment from Japan		
			29,259,900
		General Total Taka	58,638,997

Allocation of Counterpart Personel													
		Assaigned Period											
Subject and Title	Name	1997		1998		1999		2000		2001		2002	
		6	7 0 1	6	7 0 1	6	7 0 1	6	7 0 1	6	7 0 1	6	7 0 1
Project Director	Dr.Md.SalahUddin,												
S.S.O, Feeding,Breeding Management	Dr.Nazrul Islam,												
S.S.O,Feeding,Breeding Management	Mr.Md.Mafuzal Rhamen,												
S.S.O,Feeding,Breeding Management	Mr.Md.Jahid Hossain												
S.O,Feeding,Breeding Management	Ms.Kamrun Nahar Monira												
S.O,Feeding,Breeding Management	Ms.Razia Khatun												
S.O,Feeding,Breeding Management	Mr.Saidul Islam												
S.O,Feeding,Breeding Management	Mr.Md.Asraf Biswas												
S.O,Feeding,Breeding Management	Ms.Shana Jahan												
S.O,Feeding,Breeding Management	Dr.Emanual Hoque												
S.O,Disease Control	Dr.Bijion Kumar Sli												
S.O,Disease Control	Dr.GiasUddin												
S.O,Disease Control	Dr.Jahangir Alam												

S.O,Disease Control	Dr.Md.Masurd Rhaman				→	→	
S.S.O Rural Development ,Sub-Site Activity	Mr.Dulal Chandra Poul	→	→	→	→		
S.S.O Rural Development ,Sub-Site Activity	Dr.N.R.Sarker					→	
S.O Rural Development ,Sub-Site Activity	Mr.Bimol Chandraroy			→	→	→	
S.O Rural Development ,Sub-Site Activity	Mr.Abdul Rashid				→	→	
S.O Rural Development ,Sub-Site Activity	Mr.Md.Shamim Ahrmed					→	
S.O Rural Development ,Sub-Site Activity	Ms.Wahida Pervin				→	→	
S.O Rural Development ,Sub-Site Activity	Mr.Sarwar Akram Azis			→	→		
S.O Rural Development ,Sub-Site Activity	Mr.Md.Eai San			→	→		
S.O Rural Development ,Sub-Site Activity	Mr.Shajmmel Ahrmed					→	

Allocation of Budget by Bangladesh Annex9

Total expenditure incurred up to June'2001
Poultry Management Technique Improvement Project

Items	Work done	Expenditure incurred up to June'2001 Year (1-5)	
		GOB	Total
1. Manpower	57	48.52	48.52
2. Physical construction	3165 sq.m	339.57	436.79
3. Equipment/furniture	105 item	49.07	309.12
4 Other investment cost	-		
i. Training (Local & foreign)	-	37.97	383.51
ii. Poultry feed, Research & others	-	83.25	83.25
iii. Miscellenous	-	19.57	19.57
9. CDST & VAT	-	76.15	76.15
Grand Total		**654.10**	**654.10**

(lakh. Taka)
100,000

1.Itemized achievement on activities (plan) :

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
I Poultry breeding 1. Setting the annual operation plan for poultry farm..	1－1.Make the management plan of parent-stocks. 1－2.Make the plan for use of each facilities.	C/P can make the management plan of parent-stocks. C/P can make the plan for use of each facilities.	During the period of the project, PMTIP had produced day old chick three times for getting next generation. C/P have acquired all kind of techniques related to poultry breeding. Through three times practical experience, C/P have learned how to utilize efficiently parent stocks introduced from Japan and facilities constructed for this project. C/P have been able to make annual operation plan for breeding farm.	3	It takes long time to commence project activity concerning technical transfer of poultry breeding management and poultry feeding management, because PMTIP needed to construct model infrastructures such as poultry shed.	PMTIP had produced three kinds of cross-breed (①RIR ♂mate with WLH ♀, ②RIR ♂mate with BPR♀、③WR♂ mate with BPR ♀) on July last year and examine the performance of these cross-breed. PMTIP is going to develop the technique as to the way of producing cross-breed and of evaluating cross-breed performance.

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
2.Assessment of flock performance	2-1.Making target of improvement of each flock	C/P develop the method of making the target of improvement.	PMTIP have made the target of improvement for parent stock raising in BLRI.	3	PMTIP had trouble with technical transfer of poultry breeding because of the following accident and difficulties. · Outbreak of poultry disease soon after PMTIP introduced parent stock from Japan. · Difficulties with identification of individual birds and accurate sexing at the time of producing next generation from selected parent stock.	PMTIP is going to maintain and develop poultry breeding management technique by using parent stock introduced newly from Japan with pedigree hatching and individual birds management.
	2-2.Decision on the ability which are measured	C/P formulate the performance for improvement.	C/P have mastered the following technique necessary for poultry breeding. · The method of measuring and recording performance of individual birds. · The method of calculating and analyzing measurable data. · The method of evaluating individual birds performance.			
	2-3.Measuring and recording the performance of individual birds	C/P master the method on measuring and recording performance of individual birds.				
	2-4.Calculating and analysis of collection data	C/P develop the method for calculating and analyzing measurable data.				

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
	2-5.Evaluation of abilities	C/P master the evaluation method for performance of individual birds	,C/P have learned the selection method for excellent birds and have mastered the method of mating with selected birds.			
3.Selection birds for next generation	3-1.Making the selection plan 3-2.Making the selective index 3-3.Evaluation on the performance of individual birds 3-4.Selection of excellent birds for next generation	C/P can make the selection plan and selective index. C/P can evaluate on performance of individual birds. C/P can select excellent birds for getting next generation.	C/Ps who are cooperate with JICA expert have made manual about breeding used in BLRI.	3		

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
	3-5.Making the plan of mating 3-6.Mating with selected birds 3-7.Making schedule of semen collection. 3-8.Carrying out artificial insemination. 3-9.Getting hatching eggs for next generation.	C/P acquire the method of mating with selected birds. . C/P master artificial insemination technique for achieving high fertility rate including the method of making AI schedule. C/P master the method of collecting hatching eggs and storing them in the container for pedigree hatching.				

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
II Poultry feeding management 1.Management of incubation.	1-1.Preparation and inspection of hatching house. 1-2.Selection of hatching eggs. 1-3.Storage of hatching eggs. 1-4.Hatching. 1-5.Cleaning, washing and disinfection of hatching house, incubator, and hatchery.	C/P acquire technique and skill for incubation. ・C/P master how to disinfect hatching eggs and select good hatching eggs. ・C/P master how to store hatching eggs for getting good hatchability. ・C/P master how to operate incubator and candle hatching eggs.	During project terms, PMTIP have produced day old chick seven times. Through this experience, C/P have acquired technique and skill for incubation in order to produce good and health day old chick. PMTIP have been able to realize over 50% hatchability even though the period of hatching eggs storage become to two weeks. C/p have been able to carry out pedigree hatching at all stage of hatching.	4	It takes long time to construct hachery and introduce parent stock from Japan, the project activities in the field of parent stock feeding management had been delayed It takes long time to realize high hatchability because of the following condition. ・It is high temperature and high humid in Bangladesh. ・PMTIP should store hatching eggs for two weeks to produce enough day old chicks.	PMTIP will produce different kind of cross-breeds by mating with pure species, and JICA expert will transfer the technique concerning feather sexing

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
2.Brooding management	2-1.Preparation and inspection of brooding house. 2.2Accommodation. 2-3.Daily management. 2-4.Recording of data. 2-5.Transfer to grower house. 2-6.Cleaning, washing and disinfection of brooding house..	C/P master the technique and skill necessary for feeding management in brooding stage. · C/P master the way of giving water and feed to small chicks. · C/P master the technique concerning control of temperature and humidity in the house and master how to cut small chick's beak..	Growing viability of small chicks raising in BLRI is over 95% because C/P have mastered temperature humidity and ventilation control technique in order to keep good environment for small chickens.. C/P have been able to carry out perfectly individual birds management. Because the wing band have not been taken off from chickens leg and wing by improvement of wing band structure and progress of C/Ps skill.	4	PMTIP had trouble with raising 2000 chickens because of space limitation in the house and house structure.	

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
3.Growing management.	3-1.Preparation and inspection of growing house. 3-2-.Accommodation. 3-3.Daily management.	C/P acquire the technique and skill necessary for management in growing stage. · C/P master how to give water with nipple system and discover abnormal birds in early stage. · C/P master how to adjust environment in growing house. · C/P master birds transfer method for individual birds management..	· The death rate of chickens during growing stage constantly is below 5% and PMTIP have become able to transfer 200 pullet into adult house. It is because C/P have mastered how to bring up good and health chickens · Chickens lay first egg at about 21 weeks	4		PMTIP is going to remodel the cage in growing house in order to make it easy to collect data and vaccinate to chicken

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
	3-4.Recording of data. 3-5.Transfer to Adult chicken house. 3-6.Cleaning, washing and disinfection of growing house.	· C/P master the way of measuring and recording data concerning birds performance in growing stage. · C/P master the method of preventing poultry disease.				
4. Adult chicken management	4-1.Preparation and inspection of adult chicken house. 4-2-.Accommodation.	C/P master technique and skill necessary for feeding management in adult stage.	Under Bangladesh climate, it is high temperature and high humidity, PMTIP have realized that developed egg production rate is about 70% from 169 days old to 280 days old and is over 80%	4		

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
	4-3.Daily management. 4-4.Recording of data. 4-5.Production of progeny chicks. 4-6.Culling of chickens 4-7. Cleaning, washing and disinfection of adult house.	· C/P master the way of transfer birds · C/P master how to find out abnormal birds in early stage and adjust environment in adult house. · C/P master the method of collecting and recording egg production data · C/P master the management of selected birds and method of collecting hatching eggs for pedigree hatching. · C/P master the way of prevention of poultry disease in adult stage	at the age of 220 days. Mortality rate in adult stage is below 5 %. PMTIP has established the way of measuring and recording data necessary for poultry breeding with individual birds management.			

Activity plan		Goal	Achievement and present situation	Level	Reasons for delay	Future plan
Item	Activities					
5.Management of parent stock keeping.	5-1.Practice of pedigree hatching 5-2.Identification of individual birds by using wing band. 5-3.Collection of individual bird's data.	· C/P master the method of pedigree hatching. · C/P master the method of individual bird's management by using wing band and cage number. · C/P master the way of measuring and recording individual birds data concerning performance such as Egg production rate, egg weight, body weight and so on.	· C/P have mastered the technique and skill necessary for pedigree hatching and individual birds management with improvement of wing band and basket equipped with incubator. · PMTIP have established the way of measuring and recording data necessary for poultry breeding under individual birds management.	4	It takes long time to perfectly carry out pedigree hatching and individual birds management because of delay of improvement basket equipped with incubator and wing band.	

Activity Plan		Goal	Achievement and Present Situation	Achievement Grade	Cause for Retard	Future Plan
Item	Activities					
1.Understanding of Major Infectious Diseases (1) Survey of suspected major diseases with serological method	Understanding of major infectious diseases responsible for heavy economic loss through serological survey	Understanding of major infectious diseases responsible for heavy economic loss and submit reference data available for consideration of disease control and hygienic management, particularly for small-scale farms	Revealing current distribution of major infectious diseases with serological survey and so on in the Project sub-sites located north and south , reference data obtained available for consideration of disease control and management measures have contributed to making the manual of hygienic management for small-scale farms.	3	Blood sampling and investigation in the field had not been on the rail by the midterm of the Project. Conducting those activities in the latter half of the Project, it has taken time to gain the result.	To implement serological survey about a few sensitive diseases on blood samples of scavenger chickens in the four sub-sites of the Project.
(2) Understanding of Major Diseases Through Diagnostic Service	Potentiation of diagnostic laboratory work and effectuation of diagnostic work with the facilities	Digesting of diagnostic result and analysis of diseases	Diagnostic service has revealed the situation of major infectious diseases occurring at poultry farms in Savar area to gain data available to disease control and hygienic management As a result, it has contributed to making the manual of hygienic management for small-scale farms..	3	It has somewhat retarded in potentiation of diagnostic laboratory work. Unstableness of local electricity is the prime cause.	To take countermeasure against frequent power cut.
2. Development of Disease Prevention and Management (1)Establishing of hygienic management for the parents stocks(introduced from Japan) in BLRI	*Establishing of hygienic working procedure and daily practice together with efficient cleaning and disinfection of the hennery. *Establishing of effectual vaccination program for parents stocks.	The parents stocks (introduced from Japan) are reared under hygienic management	*Hygienic working procedure has been usually practiced and introduction of the mechanical sprayer has accelerated efficient work of cleaning and disinfection of the hennery. *The relevant staff have been expert in vaccination technique to improve the livability of the chicks remarkably, and the adult parents stocks have scarcely suffered fatal infectious diseases.	4		

(2) Development of hygienic management technique available at small-scale farms in the sub-sites and son	Development of various techniques and their verification on availability for making the manual of hygienic management for small-scale farms.	Development of hygienic management techniques available for small-scale farms in the sub-sites and so on will lead to making the manual of hygienic management	*Overall management in hygienic administration of layer rearing and the value of wild bird-proof device have been proved available at the experimental henroosts and model farms in the sub-sites. *Practice of hygienic management has verified that it is able to rear chickens without daily administration of antibiotics mixed in feed except sickness, anticipating the proper management style. *Verifying minimum vaccination program based on hygienic management, the manual of hygienic management in both versions of English and Bengali has been distributed to the small-scale farmers.	3	It has taken tough work to find an applicable vaccination program against Gumboro disease in Bangladesh. Though some prospective method has been examined lately, it is not yet verified at the sub-sites.	To verify availability of the vaccination method in the sub-sites.
(3)Development of ND HI antibody test suitable for local situation	Development of the filter paper bleeding method available for local situation and trial making of HA antigen	The filter paper bleeding method available for local situation shall develop for assessment on vaccine efficacy and immune status and ND HI test technique will pervade nationwide.	The filter paper bleeding method available for local situation has developed. Not only presentation of the result at a seminar, but also that method has been frequently applied for assessment on ND vaccine efficacy for the sub-sites.	3	The technique for making ND HA antigen has been available, but the potency of HA antigen is not stable due to electricity problem, leaving live ND vaccine of DLS to substitute.	Ensuring stable electricity, making of stable HA antigen shall set about.
3. Development of Disease Control Measures at Farmers (1)Demonstration and verification of hygienic management at model farms in the sub-sites	Demonstration and verification of hygienic management technique at model farms in the sub-sites	Practical hygienic management technique will be available at the small-scale farms through carrying out it.	Availability of hygienic management technique and vaccination program at model farms in the sub-sites have been examined and some parts of vaccination program have been revised in accordance with local situation for ensuring efficacy to obtain a bright perspective.	4		

(2)Pervasion of ND HI antibody test	ND HI antibody test is applied for the chicken flocks at the model farms of the sub-sites and the technology transfer is made to local officers of DLS	It will contribute to disease control through assessment on vaccine efficacy and immune status .	*Not only the important reference data submitted by the test in the main sub-site, Cox's Bazar, but also test result about samples collected by C/P and so on in other three sub-sites have been contributing greatly to consideration of revised vaccination program suitable for local situation. *The technology transfer has been made to local officers of DLS and so on.	4		
(3) Inspection of Aflatoxin contamination in poultry feed at the sub-sites and so on	The facilitative method is applied to inspect Aflatoxin in the feed distributed for farmers	It will contribute to improvement of feed quality administration through inspection of Aflatoxin.	The staff have been expert in the facilitative technique suitable for local situation and inspecting Aflatoxin in the feed distributed to farms to reveal actual condition.	4		
(4) Hygienic management guidance to farms through diagnostic service	Hygienic management guidance to farms through diagnostic service	As the result of hygienic management guidance to the farms, it will improve at the farms.	Understanding major infectious diseases at poultry farms in Savar area together with guidance of disease control and hygienic management has contributed to making the manual of hygienic management.	4		

Itemized Evaluation of PMTIP activities (Sub-site activity)

Item	Activities	Goal	Achievement and Present Situation	Implementation	Reason of delay	Aftermath
1 Sub-site selection 1-1 Selection of upazila 1-1-2 Selection of village	1) Collection of information from the local officers of DLO, Government, NGOs, and related organization. 2) Door to door collection of information in the perspective upazilas. 3) Sub-site Working Committee for the sub-site selection took final decision. 4) Door to door collection of information through local leaders. 5) Understandings the farmers abilities.	1) Farmers can be classified using the collected data and the data analysis. 2) Farmers could be categorized and determined by their ability.	The following upazilas were selected. 1) Cox'sBazar, Sader Upazila. 2) Barisal, Babugonj Upazila. 3) Bogra, Shibugonj Upazila. 4) Dinajpur, Ranigonj Upazila. The following villages were selected. 1) Cox'sBazar, Patasaudagarpara. 2) Barisal,Kudra Kathi. 3) Bogra, Sankerpur. 4) Dinajpur,Ranigong	4 4		More upazila and villages will be selected for the extension.
1-2 Model farmers selection	1) Farmers data collection through interviewing the individual farmers as per pre-structured questionnaires. 2) Data analysis at BUET for categorizing farmers' ability as per necessary. 3) Door to door personal interview of the nominated farmers. 4) Final decision by DLO, TLO, local leaders, BLRI, and JICA experts.	Understanding the farmer's ability and selected farmers might be leader for poultry production in the locality.	Twelve model farmers were selected in each sub-site.	4		More farmers will be selected for the extension.
2 Training 2-1Poultry management training for related personals.	1) Training courses for scientific and field officers of DLS and NGOs. 2) Training courses for the small-scale farmers in and around the main-site and sub-site.	1) Development of leadership for poultry management technique will act in the country. 2) Making the farmers self-confidence or independent on poultry management.	1) Leaders of poultry management techniques training course was conducted for the related personals. 2) Training on poultry management techniques for the newly recruited personals was conducted. 3) training course (lecture and practice) on poultry management techniques for the model farmers were conducted in all sub-sites.	4 4 4		Newly recruited officers will be instructed poultry management technique for the extension.
2-2 Training course for the model	1) Guidance course for Poultry Management Techniques	Poultry management techniques suitable	The following training courses were conducted.			Newly selected farmers will be

farmers.	Improvement Project. 2) Lecture course for poultry management suitable for small-scale farmers. 3) Practice course for poultry management suitable for small-scale farmers. 4) Follow-up training course. 5) Training course on poultry farming for small-scale farmers.	for small-scale farmers have been transferred to the model farmers.	1) Guidance course on Poultry Management Technique Improvement Project. 2) Lecture course on poultry management suitable for the small-scale farmers. 3) Practice course on poultry management suitable for the small-scale farmers. 4) Follow-up training course on poultry management suitable for the small-scale farmers. 5) Training course on poultry farming for small-scale farmers.	4 4 4 4 4		instructed poultry management technique for the extension.
2-3 Compilation of training manual. 2-3-1Training manual of feeding and breeding management. 2-3-2 Training manual of disease control. 2-3-3 Training video of poultry management.	1) Compilation of feeding and breeding manual, and poultry disease control manual were conducted. 2) Compilation of video manual has been conducted.	1) Completion of the manual. 2) Completion of the video manual.	1) Feeding and breeding manual were completed. 2) Poultry disease control manual was completed. 3) Compilation of video manual is on-going.	4 4 4		Delivery will be conducted for the extension.
3 Development of PMTIP designed equipment suitable for small-scale farmer.	1) Introduction of Japanese brooder with hot water system. 2) PMTIP original designed drinker and feeders were developed. 3) PMTIP original designed feed mixer was developed. 4) PMTIP original designed bamboo battery developed.	The original designed equipment were completed and verified in model shed in BLRI and in Sub-sites.	The original equipment were designed and verified in model shed in BLRI and in Sub-sites.	4 4 4 4		
4 Chicks Introduction	1) Day-old chicks were introduced to the four model farmers in each sub-site were selected for the brooding. 2) Bamboo-made battery brooder with hot water system was used for brooding.	All the model farmers commenced their poultry management.	Soon after finishing the brooding stage, the two weeks old chicks were distributed to the other farmers.	4		
5 Technical	Technical Transfer for brooding	The model farmers	Door to door transfer of technique			New cycle of

Transfer (Training) 5-1 Technical Transfer for brooding stage.	stage was conducted through the dispatched Scientific officers and the JICA experts.	can manage their flock by themselves.	for brooding stage was conducted.	4		poultry management will be conducted in each sub-site.
5-2 Technical Transfer (Training) for growing stage.	Technical Transfer for growing stage was conducted through the dispatched Scientific officers and the JICA experts.	The model farmers can manage their flock by themselves.	Door to door transfer of technique for growing stage was conducted.	4		New cycle of poultry management will be conducted in each sub-site.
5-3 Technical Transfer (Training) for laying stage.	Technical Transfer for laying stage was conducted through the dispatched Scientific officers and the JICA experts.	The model farmers can manage their flock by themselves.	Door to door transfer of technique for laying stage was conducted.	3		New cycle of poultry management will be conducted in each sub-site.
6 Survey for extension	Survey of economic circumstance around the sub-sites and NGOs availability for extension.	Analysis was completed for poultry management suitable for small-scale farmers.	Local consultant surveyed economic circumstance around the sub-sites and NGOs availability for extension.	3		