

6-3 Construction Plan

6-3-1 Construction Policy

A Japanese contractor will undertake the Project construction as a whole, and, if necessary, will employ Micronesian subcontractors.

6-3-2 Construction Situations and Conditions Requiring Special Attention

- (1) Pohnpei State has its own port. The boat providing regular service visits the island only four times a year. Irregular service is provided by boats that serve as both cargo and passenger carriers. These boats haul small amounts of cargo between Micronesian islands; they are not suitable for transporting large cargo items.

Therefore, it is of utmost importance that appropriate advanced planning be done for the ordering of equipment and materials that are to be shipped from Japan. As much as possible, items to be shipped should be disassembled.

- (2) On the island there are no seasons and the humidity is very high; therefore, particular attention must be paid to the procurement of cement and to the concrete work.
- (3) The operation and management of Project facilities after implementation will be carried out by the Micronesian people. In order to make certain that their work is performed smoothly and properly, it will be necessary to provide staff members with training throughout the Project construction period.

### 6-3-3 Detailed Designs and Construction Supervision

For Project implementation, the contracted consultant will undertake the following tasks:

#### (1) Detailed Design

Based on the results of the Basic Design Study, the consultant will conduct field surveys and prepare detailed designs and tender documents.

#### (2) Tendering

The consulting will make the tender announcement, do the prequalification evaluation, delivery of tender documents and tender evaluation, and will assist the Government of the FSM in contract negotiations with a Japanese contractor.

#### (3) Construction Supervision

(a) After the contract agreement is reached, the consultant will certify the various documents to be submitted by the contractor, and will inspect the equipment and materials procured by the contractor.

#### (b) On-site Construction Supervision

The consultant will attend and witness the contractor's various preconstruction procedures and local equipment and materials procurement, and will inspect construction work progress and the procured equipment and tools. Also, the consultant will direct and supervise the contractor in the performance of the test operation and completion tests, conduct construction progress management, and will undertake quality control, and cost control work. The consultant will make an effort to complete Project construction within the time specified in the Exchange of Notes.

#### 6-3-4 Equipment and Materials Procurement Plan

As a rule, construction equipment shall be procured in Pohnpei State. Only equipment that is not available in the state will be procured and shipped from Japan.

Construction materials shall be procured either in Micronesia or in Japan, as follows:

##### Construction Materials:

###### In Micronesia

Coarse aggregate

Sand

Concrete blocks

###### In Japan

Lumber

Cement

Reinforcing bar

Steel products

Electrical appliances and tools

Water supply and drainage fixtures

Sanitary equipment and tools

##### Construction Equipment:

The Government of Pohnpei State has several large-size bulldozers, dump trucks, graders, concrete mixers, trailers, tank trucks, and pickup trucks, but they are not properly maintained and have low rates of operation.

As a rule, equipment to be provided by Japanese grant aid is to be procured in Japan.

##### Equipment to be Provided by Japanese Grant Aid

- . 1 set -- Swine breeding management equipment
- . 1 set -- Feed processing equipment
- . 1 set -- Slaughtering equipment
- . Sets of artificial insemination, pathological dissection, and veterinary equipment and tools
- . Vehicles: One 2-ton truck, Six 1-ton pickup trucks

#### 6-3-5 Project Implementation Schedule

Following is the Project implementation schedule for carrying out the swine production improvement plan in Pohnpei of the Federated States of Micronesia, with grant aid cooperation from the Government of Japan.

- (1) The Exchange of Notes that specify the objectives, contents, and monetary amount of the grant aid cooperation will be signed by the Government of Japan and the Government of the Federated States of Micronesia.
- (2) In order to accomplish the construction work and the equipment and material procurement necessary for the Project, as stipulated in the Exchange of Notes, the Government of the Federated States of Micronesia will enter contract agreements with Japanese companies (a consultant and construction contractor). After signing the Exchange of Notes, thirteen months will be required for conducting field surveys, preparing detailed designs and tender documents, making tendering, procuring equipment and materials, inspecting the procured equipment and materials, and conducting Project construction work.

Project construction work will take nine months, starting in mid-June and ending in mid-March of the following:

#### 6-4 Project Cost Estimate

The total estimated Project cost will be fully financed by the Government of Japan.



## CHAPTER 7 OPERATION AND MAINTENANCE PLAN



## CHAPTER 7 OPERATION AND MAINTENANCE PLAN

### 7-1 Operation and Maintenance System

The Project will be managed by Mr. ADELINO E. LORENS, Chief of the Division of Agriculture, Department of Conservation and Resources Surveillance, which is the executing agency of the Pohnpei State Government.

The Main Breeding Center in Kolonia will be under state government control, and one director and two vice-directors will be assigned.

Five Sub-breeding Stations will be under the control of the municipal government. One director, one vice-director, and two laborers will be assigned by the respective municipal government concerned, and one vice-director will be assigned by the state government.

An inventory of the equipment will be drawn up for maintenance, and a manuscript of specifications, explanatory leaflet, and parts list will be kept in the Main Breeding Center. Copies thereof will be distributed to individual Sub-breeding Stations. The replacement parts, attachments to equipment etc., will be kept at the workshop in the Main Breeding Center, and will be administered at the management room in each Sub-breeding Station.

The replacement of parts, repairs etc., should be recorded from time to time. The expendable supplies will be controlled by the management section, and the director is responsible for the operation.

The conditions of facilities and equipment will be reported to the management section from time to time, and the necessary supplies and repairs will be studied. A budget and a maintenance program should be established to match the results. The operation and maintenance system on the spot is as follows:



7-2 Operation and Maintenance Plan

(1) Operation and maintenance plan for facilities

The Pohnpei State Government will take every possible measure to ensure the success of the Project. The persons shown in Fig. 7-1 are to be engaged in the Plan.

(2) Technology transfer plan

Technology transfer in the Main Breeding Center will be provided to extension workers and local farmers through some laboratory work and experimental feed mixing, and the technology transfer in the Sub-breeding Stations will be provided directly to local farmers according to the results of the transfer in the Main Breeding Center.

(3) Personnel organization plan

The personnel organization charts in the Center and Stations are shown in Fig. 7-1.

(4) Budget for the Project

As the fiscal year in Pohnpei State is from October 1 to September 30, a detailed operational budget cannot be calculated. However, it has been confirmed that the operational budget for the Project will be appropriated out of the state budget for the coming fiscal year.

(5) Equipment operation and maintenance system

The operation and maintenance of the equipment in the Main Breeding Center will be carried out by the Pohnpei State Government; the operation and maintenance in each Sub-breeding Station will be carried out by the respective municipality.

## CHAPTER 8 PROJECT EVALUATION



## CHAPTER 8 PROJECT EVALUATION

### 8-1 Benefits of the Project

This Project is considered to be the most important one among the National Government Agriculture Development Programs, because imported food accounted for about 40 percent of the total consumption requirements, and eighty-five tons of pork was imported in 1985. Pigs have been raised as the main source of animal protein for the islanders since olden times, and pork plays an important dietary role in Pohnpei. In the National Government Programs, it is planned to reduce the amount of imported pork, and to upgrade the productivity of pig raising in the state. On Pohnpei Island, many farmers have been engaged in raising pigs for a long time though on a small scale. Therefore, it would be quite possible for them to produce sufficient pork on the island if better techniques are introduced.

Although the existing breeding center is located in the Agriculture Station in Kolonia, it was constructed twenty-three years ago. So it is too old to function and pens, laboratory equipment, and other facilities are insufficient. For these reasons, the original purposes of the Agriculture Station could not be achieved even up to now. Since the service of the Main Breeding Center and the Sub-breeding Stations will be useful for the technical improvement of pig raising, technical extension to local farmers, and in training, the provision of these facilities should be done as soon as possible. The Pohnpei State Government is contemplating the Project as the most important national development program, and the Department of Conservation and Resources Surveillance has budgeted for the Project and has prepared the operation and maintenance system. The budget for the Project will be given a priority over all others by the Pohnpei State Government.

Through the implementation of this Project, increased productivity and technical improvements in pig farming will be realized.

The benefits derived from the Project will affect many sectors, and further, the following benefits will be brought to Pohnpei State.

- (1) Upgrading of the productivity of pig production through the introduction of appropriate breed improvement.
- (2) Production of young pigs and pig feed for meeting the demands of local farmers.
- (3) Establishing of a system for the extension of modern breeding technology to the farmers.
- (4) Increase in quantity and improvement of the quality of pork produced to supply the protein needed for the people's diet.
- (5) Lowering of the production cost of pork through reduction in feed costs.
- (6) Reduction of imports of pork and pork products.

As mentioned above, the Project for the improvement of pig breeding will steadily contribute to the supply of pork through the upgrading of productivity, and also to improvement of the quality of pork, and to the achievement of National aims.

8-2 Justification of the Project

Through its implementation, the Project will bring direct benefits to Pohnpei Island and secondary benefits to the FSM as mentioned earlier. The Project will form a basis for pig farming propagation activities including the domestic production of feed, and for improvement of the pig farming industry. The Project area will be the model for the swine production development program that will aid to bring stable and upgraded productivity not only to Pohnpei Island but also to all other islands in the FSM. Based on the above evaluation, it will be most meaningful to proceed with the Project and to carry out the work with grant aid from the Japanese Government.



## CHAPTER 9 CONCLUSION AND RECOMMENDATIONS





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### 9-1 Conclusion

The Project will bring about not only stable and higher productivity in pig farming, and improvement of the marketing system in the Project area, but will also develop the farmers' understanding and concern for pig farming methods, thereby possibly extending pig farming throughout the FSM. Consequently, the Project will contribute to increasing and stabilizing the productivity of pig farming, thereby contributing to the economic development of the Nation. In conclusion, the Project will have numerous beneficial effects on the Nation. And it appears that technical cooperation from the Japanese Government will bring immediate results for the success of the Project.

### 9-2 Recommendations

To realize the above stated benefits as quickly as possible and to fully achieve the Project objectives, the Study Team submits the following recommendations:

#### (1) Management, Staff Training, and Staff Arrangement:

Staff training should be provided to coincide with the personnel plan and to consolidate the management system for the effective operation and management of the Main Breeding Center and Sub-breeding Stations.

#### (2) Guidance and Extension:

Positive action should be taken to carry out extension activities and to provide technical training and guidance based on the results of the testing and research at the Main Breeding Center. This should be done in order to improve future swine breeding.

(3) Facility and Equipment Operation and Maintenance System:

An operation and maintenance system should be established for the effective and functional use of the Project's facilities and its associated equipment, and the budget for accomplishing operation and maintenance work should be obtained.

(4) Preservation of Purebred Boars and Sows:

Purebred boar and sow preservation, and the systems for their production and supply should be strengthened.

(5) Improvement of the Pork Distribution System:

To improve swine production, attempts should be made to change and modernize the local customs that obstruct such improvement. The pork distribution system should also be improved.

(6) Standardization of Pork Quality:

To improve pork distribution conditions, pork quality should be standardized. The standards should include pig slaughtering age, weight, etc.

(7) Forage Crops for Feed:

Plans should be drawn up for growing forage crops, and efforts should be made to develop domestic feed production at the Main Breeding Center.

(8) Pig Slaughtering:

Pig slaughtering should commence only after confirming water supply service hours. All slaughtering work should be completed prior to noontime.

(9) Existing Feed Storage:

The existing feed storage should be repaired (if necessary), cleaned and inspected in order to store feed for the use of the Main Breeding Center and Sub-breeding Stations.

(10) Management Room:

About 75 m<sup>2</sup> of space in the Agriculture Station should be obtained for setting up the Main Breeding Center's management room instead of building a separate building.



## APPENDICES



## APPENDICES

1. Members of the Study Team
2. Schedule of the Study Team
3. List of Interviewed Personnel
4. Minutes of Discussions
5. List of Collected Data
6. Operation and Maintenance Cost Estimate





APPENDIX 1 MEMBERS OF THE STUDY TEAM

<u>Name</u>	<u>Task</u>	<u>Affiliation</u>
Katsuo Ohashi	Team Leader	Vice-director, Miyazaki Livestock Breeding Farm; Ministry of Agriculture, Forestry and Fisheries
Osamu Kosegawa	Project Coordinator	Basic Design Study Division Grant Aid Planning & Survey Department, Japan International Cooperation Agency
Minoru Yahata	Stockbreeding Development Engineer	Pacific Consultant International
Tsutomu Fukuda	Breed Improvement Specialist	Pacific Consultant International
Ichiro Imai	Feed Program Specialist	Pacific Consultant International
Kenichiro Fukushima	Construction Program Engineer	Pacific Consultant International
Tadahiro Suzuki	Facility Design Engineer	Pacific Consultant International
Shoji Hasegawa	Cost Estimation Engineer	Pacific Consultant International

APPENDIX 2 SCHEDULE OF THE STUDY TEAM

<u>DATE (1987)</u>	<u>ACTIVITIES</u>
Oct. 28, Wednesday	The study team departed Narita for Guam.
Oct. 29, Thursday	The Team visited the Japanese Consulate in Agana. Departed Guam and arrived at Pohnpei Island.
Oct. 30, Friday	Had a discussion with the officials of the Governments of the Federated States of Micronesia and Pohnpei State.
Oct. 31, Saturday	Visited the PATS Swine Breeding Facility and swine breeding farms and conducted surveys.
Nov. 1, Sunday	Held a discussion among the Study Team concerning field surveys.
Nov. 2, Monday	Inspected swine breeding farms. Held a meeting at the Agriculture Station.
Nov. 3, Tuesday	Independence Day. Held a Team discussion.
Nov. 4, Wednesday	Made field surveys at the proposed Sub-breeding Station sites. Held a meeting at the Department of Conservation and Resources Surveillance.
Nov. 5, Thursday	Made swine breeding farm and market surveys. Mr. Suzuki and Mr. Fukushima joined the Team.
Nov. 6, Friday	Held a study plan meeting. Made construction material surveys. Team Leader Mr. Ohashi and Project Coordinator, Mr. Kosegawa, departed Pohnpei for Japan.

<u>DATE (1987)</u>	<u>ACTIVITIES</u>
Nov. 7, Saturday	Investigated the existing swine breeding center. Made proposed Sub-breeding Station site surveys.
Nov. 8, Sunday	Held a Team discussion concerning field surveys, and classified collected data.
Nov. 9, Monday	Investigated the Madolenihmw Sub-breeding Station site and the Pohnpei Coconut Production Co.
Nov. 10, Tuesday	Investigated the existing swine breeding center and U Sub-breeding Station site.
Nov. 11, Wednesday	Held a meeting at the Department of Conservation and Resources Surveillance. Collected weather data. Surveyed the Agriculture Stations' existing facilities.
Nov. 12, Thursday	Inspected existing buildings in the vicinity of the Project sites. Surveyed the U Sub-breeding Station site.
Nov. 13, Friday	Surveyed Kitti, Sokehs, and Nett Sub-breeding Station sites.
Nov. 14, Saturday	Held a Team discussion and clarified collected data.
Nov. 15, Sunday	Held a Team discussion and clarified collected data.
Nov. 16, Monday	Held a meeting with the Department of Conservation and Resources Surveillance officials. Surveyed the Agriculture Station's facilities.
Nov. 17, Tuesday	Inspected Ohwa Farm and the local swine breeding farms.

<u>DATE (1987)</u>	<u>ACTIVITIES</u>
Nov. 18, Wednesday	Held a Team discussion and discussed the Project's Basic Design Plan. Departed Pohnpei and arrived at Guam.
Nov. 19, Thursday	Visited the Japanese Consulate in Agana and reported the results of the field study to Mr. Yokoyama, Consul of Japanese Consulate. Classified collected data.
Nov. 20, Friday	Departed Guam and arrived at Narita.

APPENDIX 3 LIST OF INTERVIEWED PERSONNEL

1. Kikuo L. Apis            Director, Department of conservation  
and Resources Surveillance  
Pohnpei State Government
2. Rain Weilbacher       Director, Department of Public Works  
Pohnpei State Government
3. Simon J. Kihleng       Acting Assistant to the Governor,  
Office of Federal and Foreign Relations  
Pohnpei State Government
4. Dan Perin               Economic Advisor, Department of  
Conservation and Resources Surveillance  
Pohnpei State Government
5. Adeliho Lorence       Chief, Division of Agriculture,  
Department of Conservation and  
Resources Surveillance  
Pohnpei State Government
6. Sadosy Une             Station Manager, Division of Agriculture,  
Department of Conservation and  
Resources Surveillance  
Pohnpei State Government
7. Kesner Hadley          Agriculture Extension Supervisor,  
Department of Conservation and  
Resources Surveillance  
Pohnpei State Government
8. Moses Lawrence         Director, Department of Land,  
Pohnpei State Government

9. Henry Biza                    Acting Legislative Counsel  
                                 Pohndpei State Government
  
10. Swingly Poll                Administrative Officer  
                                 Pohndpei Transportation Authority
  
11. Resio S. Moses              Governor of Pohndpei  
                                 Pohndpei State Government
  
12. Masao Nakayama            Chief of International Affairs,  
                                 Department of External Affairs  
                                 Federated States of Micronesia
  
13. Tadao Sigrah                Deputy Chief for Asian Affairs,  
                                 Department of External Affairs  
                                 Federated States of Micronesia

JAPANESE CONSULATE IN AGANA:

Katsuo Tosa                    Consul General

Tetsuyuki Yokoyama          Consular

APPENDIX 4 MINUTES OF DISCUSSIONS

MINUTES OF DISCUSSIONS  
ON  
THE PROJECT FOR IMPROVEMENT  
OF  
SWINE PRODUCTION  
IN  
FOHNPEI STATE  
FEDERATED STATES OF MICRONESIA

In response to the request made by the Government of the Federated States of Micronesia for assistance in improving swine production (hereinafter referred to as "the project"), the Government of Japan has sent through the Japan International Cooperation Agency (JICA), a Study Team headed by Mr. Katsuhiko Ohashi, Vice Director, Miyazaki Livestock Breeding Farm, Ministry of Agriculture, Forestry and Fisheries, to conduct the Basic Design Study on the Project from October 28th to November 20, 1987.

The team held a series of discussions and exchanged views with the relevant authorities of the Government of the Federated States of Micronesia. As a result of the study and discussions, both parties have agreed to recommend to their respective Governments to examine the result of the survey attached herewith, toward the realization of the Project.

November 6, 1987

*Katsuhiko Ohashi*

KATSUHIKO OHASHI  
TEAM LEADER  
JICA STUDY TEAM

*Tadao P. Sigrah*  
TADAO P. SIGRAH  
DEPUTY CHIEF OF ASIAN AFFAIRS  
DEPARTMENT OF EXTERNAL AFFAIRS



I. MAJOR POINTS OF UNDERSTANDING BY BOTH SIDES

1. The objectives of the Project are as follows:
  - a) To upgrade productivity of pig production through introduction of appropriate breeds from foreign countries;
  - b) To produce young pigs and pig feed for meeting demands of local farmers;
  - c) To establish a system for extension of modern breeding technology (artificial insemination, disease control, feed development, etc.) to local farmers;
  - d) To increase and improve quality of pork meat production to meet local protein demand;
  - e) To lower production cost of pork through reduction of feed costs and efficient management practices; *and*
  - f) To reduce importation of pork, and pork products.
2. To achieve these objectives, the following facilities and equipment have been requested by the Government of the Federated States of Micronesia:
  - a) A main breeding center at Pohnlangas Forestry Station, Madolenihmw to house 30 sows and 10 boars. Facility should be built for tropical conditions, and should be equipped with farrowing and weaner pens, AI collection dummy units, feed store/office, and a laboratory for routine disease diagnosis. The center will set aside land for growing and utilization of forage crops for feeding the pigs;
  - b) Six (6) sub-breeding units to house 10 sows and 2 boars. One in each of the following municipalities; namely, Sokehs, Nett, U and Kolonia, whereas Kitti will have 2 sub-breeding units. The facilities should include farrowing, weaner and grower pens with an adjoining small feed/store building;
  - c) A fully equipped mini-slaughter house to handle slaughtering of about 10 pigs and 10 goats per day. The facility should be built to satisfy United States Department of Agriculture (USDA) standards to ensure that the animals are slaughtered in human and hygienic conditions, and all waste from the facility disposed of properly. The facility should include the processing of blood, offal and bone for use in preparation of animal feed. In addition, equipment should be added to process "junk" fish and fish offal for the production of fish meal.

- (4) d) A meat preparation area and a butcher shop should adjoin the mini-slaughter house. The meat preparation area, should have appropriate equipment for jointing of carcasses, and processing of meat to produce sausages, bacon and ham. The butcher shop should have refrigerator, deep freeze, refrigerated meat counter, scale and other related equipment;
- (5) e) A feed mill or mixing plant should only be constructed if it is found that feed can be economically produced on the island, whether by importing all the ingredients, or by incorporating some of the local ingredients available on the island. If it is found that locally produced feed cannot be produced at a price lower or similar to imported feed then adequate warehouse and feed-storage facilities should be constructed at the Agricultural Station to store imported feed;
- (6) f) Associated Equipment should include:
- A refrigerated vehicle;
  - Truck (2) for feed transportation;
  - Truck (1) for transportation of pigs; and
  - Pick-up (3) for pig extension service.

3. The Team will convey to the Government of Japan the requests of the Government of the Federated States of Micronesia that the former takes necessary measures to cooperate by providing the facilities and equipment necessary for the Project within the scope of Japanese economic cooperation program in grant form.
4. The optimum layout, scale and capacity, and order of priority of the facilities will be formulated in Japan after analyzing collected data and information, and it will be proposed in the Draft Final Report.
5. The Government of the Federated States of Micronesia will undertake the necessary measures (as described in II), on condition that the grant aid by the Government of Japan is extended to the Project.
6. Both sides have confirmed that the Japanese Study Team explained Japan's Grant Aid Program, and that it was fully understood by the side of the Federated States of Micronesia.

II. Required arrangements to be undertaken by the Government of the Federated States of Micronesia.

1. To secure land necessary for the construction of the facilities and to clear, fill and level the sites as needed before the start of construction.

2. To provide facilities for distribution of electricity, telephone, water supply and drainage and other incidental facilities outside the building.
3. To construct and prepare the access road to the Project site.
4. To ensure prompt unloading, tax exemption and customs clearance at ports of disembarkation in Pohnpei and prompt internal transportation therein of construction materials and equipment purchased under the grant.
5. To exempt Japanese nationals engaged in the Project from custom duties, internal taxes and other fiscal levies which may be imposed in the Federated States of Micronesia with respect to the supply of the products and services under the verified contracts.
6. To accord without delay to Japanese nationals whose services may be required in connection with the Project under the verified contracts such facilities as may be necessary for their entry into the Federated States of Micronesia and their stay therein for the performance of their work.
7. To maintain and use properly and effectively the facilities constructed and equipment purchased under the grant aid.
8. To bear all the expenses, other than those to be borne by the grant, necessary for the construction of the facilities.
9. To undertake incidental civil works such as planting and fencing, if needed.
10. To provide the space necessary for such construction as temporary offices, working areas, stock yards and others.
11. To ensure that temporary electric power and water supply are made available for the construction and incidental activities relative to the project.

APPENDIX 5 LIST OF COLLECTED DATA

<u>No.</u>	<u>Title</u>	<u>Authority</u>
1.	First National Development Plan 1985 - 1989	Office of Planning & Statistics
2.	First State Development Plan 1987 - 1991	Office of Budget, Planning & Statistics
3.	Pohnpei State Statistics Yearbook - 1986	Office of Budget, Planning & Statistics
4.	Economic & Social Statistics of Pohnpei State	Department of Conservation & Resource Surveillance
5.	Kaselehlia Pohnpei	Department of Conservation & Resources Surveillance
6.	Micronesian Customs and Beliefs	Rainy Day Press
7.	A Guide to Pohnpei	Rainy Day Press
8.	1982 Trust Territory of the Pacific Island	Department of State Publication United State of America
9.	Soil Survey of Island of Ponape, Federated States of Micronesia	United States Department of Agriculture Soil Conservation Service
10.	Tropical Swine Production	A Publication of the Foundation to Promote Economic, Agricultural and Community Endeavors

<u>No.</u>	<u>Title</u>	<u>Authority</u>
11.	Report of the Scientific Survey on Ponape Island in Micronesia	University of Osaka Prefecture
12.	Local Climatological Data	NOAA
13.	Gross Domestic Product of the Federated States of Micronesia	FSM National Government

APPENDIX 6 OPERATION AND MAINTENANCE COST ESTIMATE

(1) Personnel Expenditures:

Hourly Wage: US\$0.60  
Work hours: 8 hrs/day  
Work days: 300 days/year

(a) Main Breeding Center:

4 persons x 300 days/year x \$0.60 x 8 hrs/day = \$5,760/year  
Miscellaneous and allowance: 5,760 x 0.25 = \$1,240  
Subtotal: \$6,000/year

(b) Sub-breeding Stations:

For one Station:  
2 persons x 300 days/year x \$0.60 x 8 hrs/day = \$2,280/year  
Miscellaneous and allowance: 2,280 x 0.25 = \$520  
Subtotal: \$2,400/year

For 5 Stations: \$2,400 x 5 = \$12,000/year

(2) Repair and Maintenance Costs:

Maintenance costs for tools and equipment were assumed to be 2.5% of their initial purchase prices. Vehicle repair costs were assumed to be 17.5% of their initial purchase prices.

(a) Equipment and Tools:

¥27,439,005 x 0.025 x 1\$/¥142 = \$4,830

(b) Vehicles:

¥7,716,600 x 0.175 x 1\$/¥142 = \$9,510  
Subtotal: = \$14,340

(3) Cost of Electricity:

Operating hour was assumed to be 12 hours a day; 4,380 hrs/year

(a) Main Breeding Center:

(1) Two pumps:	3.0 kw/hr
Pigpens (boars and sows):	0.33 kw/hr
Farrowing and growing pigpen:	1.75 kw/hr
Subtotal:	5.08 kw/hr

$5.08 \text{ kw/hr} \times 4,830 \text{ hrs/year} \times \$0.03/\text{kw} = \$668/\text{year}$

(ii) Artificial Insemination Room:

$3 \text{ kw/hr} \times 4,830 \text{ hrs/year} \times 1/7 \times \$0.03/\text{kw}$	$= \$56/\text{year}$
$1.25 \text{ kw/hr} \times 4,830 \text{ hrs/year} \times \$0.03/\text{kw}$	$= \$164/\text{year}$
Subtotal	$= \$220/\text{year}$

(iii) Feed Processing House:

$0.64 \text{ kw/hr} \times 4,680 \text{ hrs/year} \times \$0.03/\text{kw} = \$84/\text{year}$

Total of (i) + (ii) + (iii):  $\$972/\text{year}$ , say  $\$1,000/\text{year}$

(b) Sub-breeding stations:

(1) Three pumps:	4.5 kw/hr
Pigpens (boars and sows):	0.9 kw/hr (0.3 kw/hr x 3)
Subtotal	5.4 kw/hr

$5.4 \text{ kw/hr} \times 4,830 \text{ hrs/day} \times \$0.03/\text{kw} = \$710$ , say  $\$700/\text{year}$

(4) Fuel Costs:

(a) Main Breeding Center:

2-ton truck:  $87\text{HP} \times 0.035 \text{ liter/HP hr} = 3 \text{ liter/hr}$

5 hour operation per day, 200 days a year: 1,000 hrs/year

$3 \text{ liters/hr} \times 1,000 \text{ hrs/year} \times \$0.39/\text{liter} = \$1,170/\text{year}$

1-ton pickup truck:  $40\text{HP} \times 0.035 \text{ liter/HP hr} = 1.4 \text{ liter/hr}$

5 hour operation per day, 200 days a year: 1,000 hrs/year

$1.4 \text{ liters/hr} \times 1,000 \text{ hrs/year} \times \$0.39/\text{liter} = \$546/\text{year}$

Subtotal = \$1,716/year, say \$1,700/year

(b) Sub-breeding Stations:

Diesel generator: 45 KVA,

$58\text{PS} \times 0.035 \text{ liter/PS hr} = 2.0 \text{ liter/hr}$

0.5 hr operation per day, 365 days a year; 182.5 hrs/year

2 places:  $182.5 \times 2 = 365 \text{ hrs/year}$

$2.0 \text{ liters/hr} \times 365 \text{ hrs/year} = \$300/\text{year}$



APPENDIX 7 MEMBERS OF DRAFT FINAL REPORT EXPLANATION TEAM

1. The draft final report explanation team consists the following four (4) persons.

<u>Name</u>	<u>Task</u>	<u>Affiliation</u>
Matsuo Ohashi	Team Leader	Vice Director, Miyazaki Livestock Breeding Farm, Ministry of Agriculture, Forestry and Fisheries
Hiroyuki Takeda	Coordinator	First Training Division, Training Affairs Department Japan International Cooperation Agency
Minoru Yahata	Stockbreeding Development Engineer	Pacific Consultant International
Kenichiro Fukushima	Construction Program Engineer	Pacific Consultant International

2. Schedule of the Team

<u>Date (1988)</u>	<u>Activities</u>
Jan. 23, Saturday	The team departed Narita for Guam
Jan. 24, Sunday	Departed Guam for Pohnpei
Jan. 25, Monday	Visited and discussed with the Deputy Secretary of the Department of External Affairs, the Federated States of Micronesia.
Jan. 26, Tuesday	Investigation of the proposed Sub-breeding Station sites.
Jan. 27, Wednesday	Meeting with the Department of Conservation and Resources Surveillance officials.
Jan. 28, Thursday	Meeting with the Department of Conservation and Resources Surveillance officials.
Jan. 29, Friday	Meeting with the Deputy Secretary of the Department of External Affairs and the Department of Conservation and Resources Surveillance officials.
Jan. 30, Saturday	Meeting with the Department of Conservation and Resources Surveillance officials.
Jan. 31, Sunday	Departed Pohnpei for Guam.
Feb. 1, Monday	Visited the Japanese Consulate in Agana and reported the results to Mr. Yokoyama, Consul of the Japanese Consulate. Departed Guam for Narita.

### 3. LIST OF INTERVIEWED PERSONNEL

1. Mr. Asterio R. Takesy Deputy Secretary, Department of External Affairs,  
Federated States of Micronesia
2. Mr. Johnny P. Dadid Vice Governor of Pohnpei  
Pohnpei State Government
3. Mr. Kikuo L. Apis Director, Department of Conservation and  
Resources Surveillance  
Pohnpei State Government
4. Mr. Dan Perin Economic Advisor, Department of  
Conservation and Resources Surveillance  
Pohnpei State Government
5. Mr. Haresh Patel Livestock Development Advisor,  
Division of Agriculture, Department of  
Conservation and Resources Surveillance  
Pohnpei State Government
6. Mr. Adelihno Lorence Chief, Division of Agriculture, Department  
of Conservation and Resources Surveillance  
Pohnpei State Government
7. Mr. Sadosty Une Station Manager, Division of Agriculture,  
Department of Conservation and Resources  
Surveillance  
Pohnpei State Government
8. Mr. Simon J. Kihleng Acting Assistant to the Governor,  
Office of Federal and Foreign Relations  
Pohnpei State Government
9. Mr. James P. Hagerstrom Lawyer, Pohnpei State Legislature
10. Mr. Yasuo Phillip Senator, Pohnpei State Legislature
11. Mr. Mitsuo Daniel Senator, Pohnpei State Legislature
12. Mr. Herman Semes Senator, Pohnpei State Legislature
13. Mr. Henry Biza Acting Legislative Counsel  
Pohnpei State Legislature
14. Mr. Nelson Delep Senator, Pohnpei State Legislature

#### JAPANESE CONSULATE IN AGANA:

Tetsuyuki Yokoyama

Consular





JKCA