

5-9 Rough Estimate of Project Cost

5-9-1 Assumed Conditions

In estimating the approximate construction cost of this project, the following conditions were assumed.

- * Estimating time: October 1984
- * Rate of foreign exchange: US\$1 = Yen 237 = Rs. 17.2
- * Inflation rate: Annual increase rate of 14% for construction cost increase in Nepal
- * Construction period: 12 months from commencement of construction work.

5-9-2 Construction Cost to be Borne by the Nepalese Side

* Cost of removing obstacles within the proposed site	Rs.	74,000
* Cost of access road pavement	Rs.	311,600
* Cost of city water feed pipe connection	Rs.	10,000
* Cost of incoming power line installation	Rs.	10,000
* Cost of telephone line connection	Rs.	15,000
* Cost of greenery work	Rs.	290,000
* Cost of boundary fence work	Rs.	2,194,000
* Furniture and furnishings	Rs.	462,000
	Total	Rs. 3,366,600

CHAPTER 6

PROJECT EXECUTION PLAN

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6-1 Executing Authority

The executing authority of this project on the side of Nepal is the Department of Agriculture, Ministry of Agriculture. The basic matters will be decided by the Joint Secretary of Ministry of Agriculture in charge of planning and enforced by the authority of the Minister.

Operation and maintenance of this Center upon its completion will fall within the jurisdiction of the Fruits Development Division Department of Agriculture.

Since this Center is to become the nucleus of mountain horticulture development in Nepal for which Japan's project-type technical cooperation is planned, all important matters with respect to its operation will be decided upon by the Joint Committee in which the Department of Agriculture, Ministry of Agriculture is represented.

6-2 Execution Plan

6-2-1 Execution System

The execution of this project is scheduled to be implemented in the form of grant aid of the Government of Japan. As soon as implementation of this project is determined by the exchange of notes between the two countries, the consultant (Japan) for design and supervision of work for this project will be, who will prepare the detailed design and specifications and, the construction contractor (Japan) will be later selected as a result of an open tender.

The construction work of this Center will be executed under a lump sum contract, and the contractor will be selected by a tender from among the Japanese enterprises who are exclusively engaged in construction and who have passed the evaluation of qualifications by the exe-

cuting authority. The successful tenderer will have the breakdown of this tender examined, and after it has been confirmed to be reasonable, will conclude a construction contract with the executing authority. After this construction contract is verified by the Government of Japan, the contractor will commence the construction work under the supervision of the consultant, and this commencement time is assumed to be about six months after the said exchange of notes with respect to Japan's grant aid for this project between the two governments.

Upon conclusion of the construction contract between the contractor and the Government of Nepal, the contractor will immediately order, fabricate, transport, install and conduct test operation on the equipment to be procured in Japan. Orchard preparation and construction of building facilities will be executed by procuring the necessary construction materials and equipment either in Japan or in Nepal.

6-2-2 Execution Program

The rainy season in Nepal lasts from June to September, during which period more than 80% of its annual precipitation is concentrated. Once it enters into the rainy season, efficiency of earthwork and other construction work becomes considerably lower. Especially as the soil of the site of this Center are clayey and become soft when water is contained, rain will obviously slow the progress of earthwork and foundation work. The period required for construction work is expected to be about 12 months judging from the scale, structure, contents of facilities for this Center and the local executing ability.

6-2-3 Execution Design and Supervision

Detailed Design

The detailed design will be drafted after conclusion of exchange of notes between the Governments of Japan and Nepal. The detailed work includes the preparation of drawings, specifications and tender documents.

Supervision Plan

The purpose of supervision is to convey the intent of design accurately to the executing contractor, to confirm whether the intent is being fulfilled or not, and to offer guidance and advisory suggestions to the executing contractor to make sure that the quality of work as per the contents of the construction contract are being properly executed. The supervision work consist of the following duties:

(1) Cooperation in consummating the construction contract

Selection of the contractor, counsel on the terms and conditions of the contract, explanation for estimating construction cost, screening of estimate sheet, preparation of contract documents, witnessing of construction contract consummation.

(2) Counsel to the executing contractor

Review and offering counsel on the execution plan.

(3) Review and approval of the working drawings, shop drawings and the like

Review and approval of the working drawings, shop drawings, samples of materials and equipment specifications

(4) Report on the progress of work

Reporting the progress of work to the Nepalese side.

(5) Witnessing of inspection

Witnessing the inspection of buildings, materials and equipment as well as final inspection upon completion.

(6) Witnessing of delivery

Witnessing the delivery of the object of contract and submission of documents on completed work.

(7) Cooperation in processing payment approval

Reviewing of documents on construction cost payable based on the contract and cooperation in processing such documents.

In executing the foregoing duties, the consultant will supervise and control the work on the spot. The Consultant will also perform its supervision and control duties within Japan which will consist of examination and inspection of materials and equipment procured in Japan and various communication and coordination works. The consultant will also report the progress of the project to the Government of Japan.

6-3. Scope of Work

The scope of work to be implemented by the grant aid of the Government of Japan and the scope of work to be implemented at the cost of the Nepalese side are shown below.

<u>Japanese Side</u>	<u>Nepalese Side</u>
1. Construction Work	1. Construction Work
1) Laboratory & lecture block	1) Removal of obstacles from the proposed construction site
2) Dormitory block	2) Connection of feeder lines of electric power and telephone
3) Workshop block	3) Connection of service piping of city water
4) Covered walkway	4) Landscaping and playground
5) Farm management block	5) Orchard preparation
6) Water receiving tank, elevated water tank	6) Fence
7) Septic tank	7) Access road from public road to the site
8) Water supply and drainage within site	8) Furnitures and furnishings (other than those provided by Japan: such as linens, curtains, blankets, pillows, etc.)
9) Road within the site and parking lot	9) Provision of site for temporary facilities for construction work

- | | |
|---|---|
| 10) Office furnitures | 10) Construction work of buildings and facilities other than those shown on the basic design drawings |
| 11) Orchard irrigation system | 11) Storage fee |
| 12) Glass houses, and vinyl house | |
| 13) Grapevine trellis | |
| 14) Marine transport | |
| 15) Inland transport | |
| 16) Shipping charge, port charge | |
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| 2. Equipment | 2. Equipment |
| 1) Laboratory equipment | 1) Equipment other than those shown on the equipment list |
| 2) Meteorological observation equipment | |
| 3) Wireless radio set | |
| 4) Vehicles | |
| 5) Office equipment for training | |
| 6) Audio visual equipment for training | |
| 7) Farm machinery | |
|
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| 3. Design and Supervision | 3. Necessary Formalities and Procedures |
| 1) Detailed design | 1) Procedures for finalizing banking arrangements for works under the grant aid program and payment of expenses thereof |
| 2) Supervision of construction work | 2) Exemption of taxes add levies |
| | 3) Procedural formalities for admission of entry and approval of residence |
| | 4) Duty free customs clearance of materials and equipment used for the Project |

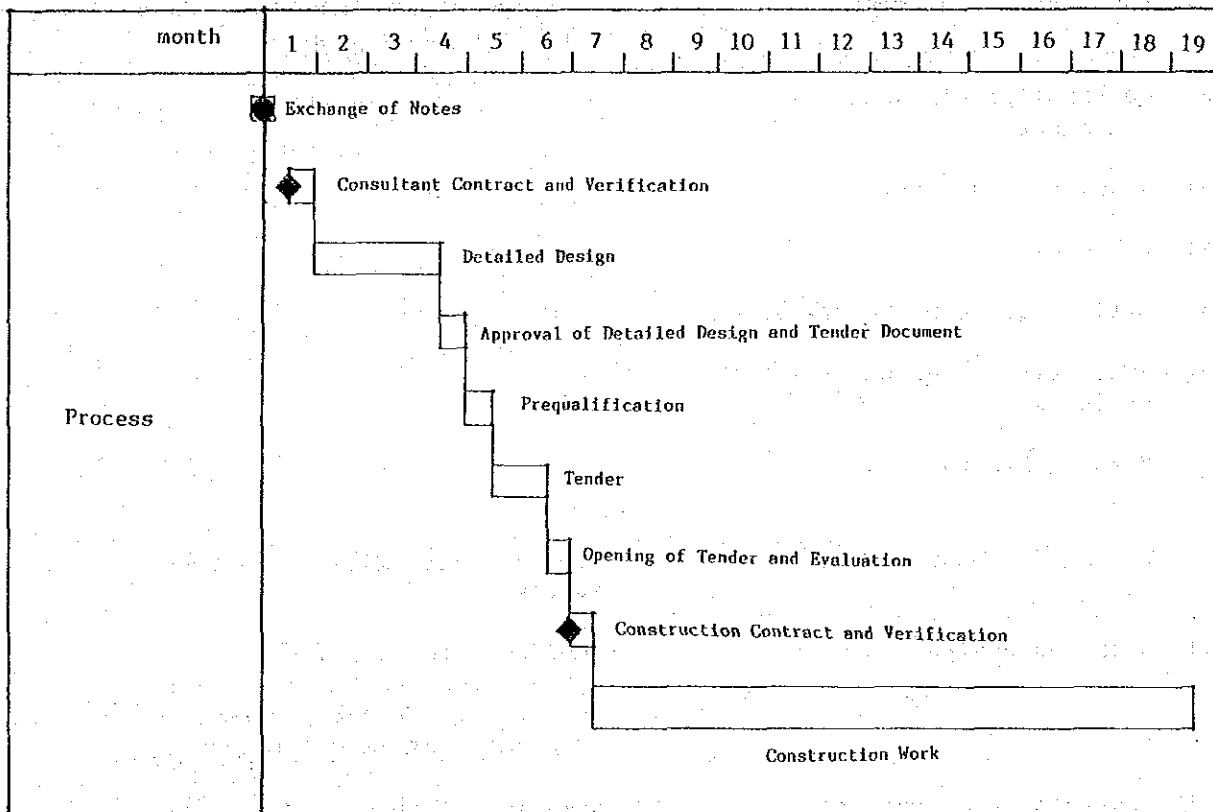
4. Operation

- 1) Appropriation of operating expenses and maintenance and repair expenses

6-4 Execution Schedule

The construction of this Center will be executed in accordance with the procedures required under the grant aid program of the Government of Japan. A schedule such as the following is conceivable.

Fig. 6-1 Overall Schedule



6-5 Operation, Maintenance and Control Plan

This Center, upon completion, is to be operated, maintained and managed by the Fruits Development Division, Dept. of Agriculture, Ministry of Agriculture of the HMG of Nepal. These activities are presumed to be roughly as follows.

6-5-1 Personnel Composition

The personnel composition is described in detail in Par. 4-4 on organizational structure and manning plan. Besides the Nepalese personnel described in that section, about five Japanese experts on a long term basis and about seven on a short term basis will probably be dispatched to render technical cooperation. The Japanese experts, will offer advice and counsel on operational matters.

6-5-2 Maintenance

If the facilities and equipment are to function for a long time, those must be properly handled and maintained. Particularly with respect to equipment, the establishment of a management and maintenance system, including technicians who are capable of offering proper instructions and judgement at time of trouble as well as the implementation of periodical checkups to cope with wear, breakage, obsolescence, etc. are necessary.

1) Buildings

Upkeep of the buildings mainly consists of cleaning and repairing the interior and exterior of buildings. Especially, the assignment of manpower to cope with troubles with fittings, which are the most used and therefore subject to wear and tear, must be considered.

2) Building Facilities

If the functions of various equipment and apparatus are to be fully utilized, their maintenance and upkeep are important. Training must be offered by an electrical engineer who are expected to be assigned to this Center to enable the trainees to acquire a grasp of the contents of the equipment and facilities of this Center and to master the techniques to handle and repair those.

Also, every equipment and apparatus has a respective serviceable life, and when it expires, the need for replacement or repair would inevitably arise. Budgetary measures must therefore be considered in this regard.

3) Equipment

For effective utilization of equipment, it is of foremost importance that the users gain the complete mastery of handling and operation of each equipment.

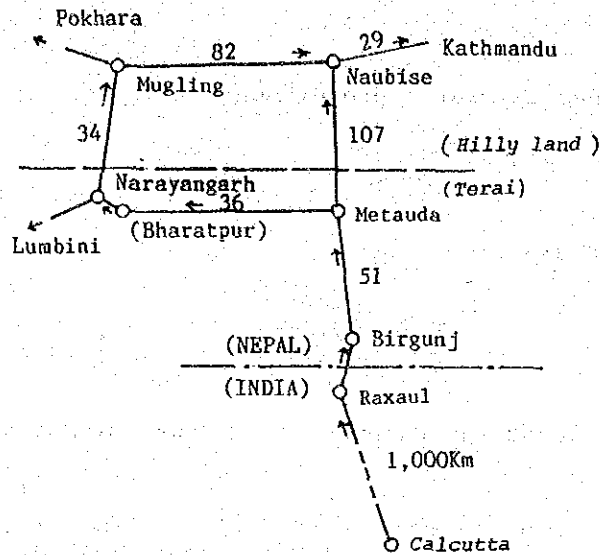
Regarding any equipment which is not easy to operate or handle, it is necessary to appoint the person in charge of that equipment in advance and dispatch an instructor from Japan at the time of its delivery to make the Nepalese side versed in the operation and handling of such equipment.

It is also desirable to try to enforce daily checkups instead of coping with machine trouble after it has happened.

6-6 Procurement

As Nepal relies on import for almost all of its construction materials and equipment and because of being an inland country without any sea, the procurement and transport of materials and equipment are most crucial to carry out construction work without a hitch. Materials and equipment are landed at the Port of Calcutta in India and transported by an inland route to Nepal.

Fig. 6-2 Transportation Route from Calcutta to Kathmandu



Materials and equipment landed at Calcutta in India are transported inland for about 1,000 km to Raxaul and must be cleared through customs between Raxaul and Birgunj.

The distance between Birgunj and Kathmandu is about 190 km if crossed by the mountain road from Metauda which was constructed by the Indian Army's Engineering Corps. This road however winds narrowly at an altitude of about 2,000 m and is said to be especially dangerous during the monsoon season and, therefore, unsuitable as a route for the transport of materials and equipment.

It is safer and more reliable to take the route which goes west from Metauda via Bharatpur, Narayangarh, Mugling and Naubise to reach Kathmandu.

The construction materials which are procurable in Nepal are aggregate, brick, tile, asbestos cement slate, wood, terrazzo tile, wooden furniture, etc. Cement, PVC pipe and some other are also produced locally, but positive use of those is not recommended as those pose problems in both quality and production scale.

The procurement plan for construction materials is shown below:

(1) Materials planned for local procurement

Aggregate (sand, gravel)
Brick
Roof tile
Asbestos cement slate
Terrazzo tile
Cement
Steel bar
Office furniture

(2) Materials planned for procurement from Japan or any other third country

Light weight shaped steel	Materials for water supply, drainage and sanitation
Metal fittings	Materials for electrical work
Glass	Equipment
Paint	
Materials for interior finish	

Regarding labor procurement plan: - Even judging by the level of local construction technology, it is evident that very few skilled workers are locally available to satisfy the requirements for executing building works of this project. There are some work for which it is considered appropriate to dispatch skilled technical workers from Japan to supervise the work to secure the quality of work and execution efficiency. However, it was decided instead that some supervisors would be dispatched from Japan to supervise local technical workers so as to allow the local workers to complete the work by themselves from the view point of effecting technological transfer from Japan. It is necessary to execute an appropriate manning and procurement program to match the progress of work according to the executing plan and work schedule so as to avoid idle time and reversing of working steps.

CHAPTER 7

PROJECT EVALUATION

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7-1 Socio-Economic Evaluation

Nepal is a typical agricultural country wherein agriculture plays an important role as the basic industry that supports its national economy. Its economic development plan is being advanced with emphasis on its agricultural development policy which stresses expansion of agricultural production and industrialization by using agricultural products as raw materials.

The production of agricultural products such as oil seeds, jute, tobacco, and potato which constitute the largest export items is increasing satisfactorily, but these products are susceptible to changes of international commodity prices. Nepal is therefore faced with the need to stabilize its national economy by some other new measure apart from its policy of expanding the production of prevailing crops.

Also urgent from the social and economic viewpoints is for Nepal to correct the income disparity between the mountainous and hilly regions and other regions, and also to diversify its agricultural production based on the nation's climatic and geographic conditions, and this was how its horticulture development program came into being.

The objectives of this program are as follows:

- (1) Selection of suitable varieties and the development of methods to cultivate and manage those.
- (2) Research and development of technology for controlling disease and insect damages.
- (3) Research and development of soil management system for farmland and improvement of fertility.

- (4) Extension of the aforementioned technologies at the suitable places to expand fruit production.
- (5) By expanding fruit production, stimulate domestic demand and promote the farmers' economic activities.
- (6) By promoting exports of fruits, contribute to foreign currency earnings.

Should the foregoing objectives be achieved through this project, they are expected to produce the following effects.

- (1) By the diversification of varieties and expansion of production, the per capita fruit consumption will increase. This will eventually result in improved nutritive level of the Nepalese people because of increased intake of fruits. (Current per capita annual consumption is about 20 kg).
- (2) The current fruit market which only serves local consumption may be expanded as to promote the economic activities of the growers, by which they will have the means to earn cash, provided however, the distribution mechanism within the country is improved.
- (3) Promotion of economic activities of the growers through fruit tree growing will create employment opportunities for the farm households in the mountainous and hilly regions who lack any other means to earn cash income, and thus contribute to correcting the disparity between the inhabitants of these regions and other regions. (The number of persons employed per 1 ha of orchard is 400 persons.)
- (4) Increase in pomiculture products will reduce the previous types of import expenditures and instead enables earning of foreign currency by exports of surplus products.

- (5) By attempting to increase the sale of fruits by inducing the food processing technology which uses fruits as raw material, the potential for diversification and modernization of agriculture can be enhanced.
- (6) The orchard with large leaf area will prevent soil erosion due to rainfall, and the accumulation of fallen leaves will enhance fertility of the soil.

As above, research and development of pomiculture would have tremendous subsequent effects, and immeasurable great potential benefits.

The Horticultural Development Center is planned to be built as the nucleus of the horticulture development program, and the development of pomiculture technology and training in pomiculture technology at this Center are expected to contribute greatly to upgrading the technological level of pomiculture and the level of extension services and to strengthen the organization. The fact that this Center, by utilizing its powerful organization, is being planned to function as the disseminator of pomiculture technology among the growers in the producing areas and as the organ for publicizing information on horticulture technology in general and related information may be evaluated as an effective project which, through horticultural development, would contribute to improving agricultural production. Also, the extension workers who have been trained at this Center and who will transmit their knowledge and skill to the growers in the fruit tree producing areas would be of invaluable help to the growers to gain a deeper understanding of the new technologies in pomiculture and to arouse their enthusiasm for production.

As above, the grant aid and technical cooperation of the Government of Japan for the establishment and operation of the Horticultural Development Center which render various services to the growers in the producing areas would, in a direct way, contribute to the introduction and diffusion of technology and, in an indirect way, to the improvement of agricultural productivity.

7-2 Technical Evaluation

Research and development on fruit trees in Nepal are mostly centered on cultivation management and growing of seedlings, such works are currently performed at only three research stations. It is in view of this situation that this Center is being planned as the first full-scale and systematic research facility in Nepal to be equipped with various basic laboratory facilities and an experimental orchard. As for the personnel who will be engaged in research and development at this Center, the staff and JT of the Fruits Development Division of the Department of Agriculture and those of the research stations that fall under its jurisdiction are planned to be assigned, but since they are inexperienced in the administration and operation of facilities in advanced specialized fields, the technical cooperation of the Government of Japan would probably be necessary to orient them in the initial stage of research and development.

The establishment of this Center means that the organization for research and development of fruit trees which had been immature will be firmly established and that it will assume tremendous significance as the center of research and development of technology in this field and also as the center for training of researchers.

Also, the research results accomplished at this Center will be widely disseminated among the growers by the extension workers trained at this Center and also by the travelling experts and researchers through the sub-center(s) at Sindhuli and the demonstration orchards at Kakani and Nepalgunj. The arrangements for these activities are also a part of this project by which all activities from research and development to extension can be carried out under an integrated system. Under such a system, the research results would promptly be extended among the producing areas and thus contribute to improved production.

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS

CHAPTER 8 CONCLUSION AND RECOMMENDATIONS

As stated heretofore, the needs for this project to establish the Horticultural Development Center are judged to be high, based on the survey results with respect to the prevalent state of agriculture in the mountainous and hilly regions of Nepal, the current status of pomiculture technology development and training of technicians, and confirmation of the contents of the request made by the Government of Nepal in regard to its horticulture development program.

The construction site is within the compound of the Kirtipur Horticulture Research Station located in the outskirts of Kathmandu, and it is a site suitable for the construction of the Horticultural Development Center in terms of its location, surrounding environment, and state of its basic infrastructure facilities.

As stated in the preceding paragraph, this project is highly useful to Nepal, and will give large benefits to the Nepal's national economy. The significance of the grant aid by the Government of Japan, would therefore be profound.

For the prompt realization of this construction project and the effective operation of the Center after its completion to accomplish its intended objectives, the following considerations are deemed necessary.

1) Cooperation with Other Institutions of the Ministry of Agriculture

The Ministry of Agriculture has other institutions with similar functions as this Center, namely, the Kirtipur Horticulture Research Station, the Dhankuta National Citrus Development Research Station, the Food Research Laboratory Farm and the Agricultural Extension and Service Division. The administrative organization of Nepal tends to be strongly inclined toward vertical division of work and to lack lateral communication and coordination, with the result that even

though they expect advisory suggestions and communication with respect to this Center, they show little intention of creating a positive cooperative relationship. In view of the contents of the developmental activities of this Center, many developmental achievements can be anticipated if the cooperation of specialists in diverse fields were to be obtained.

It is hoped that a positive interchange of visiting researchers and lecturers and exchange of teaching materials and developmental data among these institutions will contribute to technological improvement of not only this Center but of all the other institutions.

2) Securing of Operating Expenses

Annual expenses required for operation and maintenance of this Center will amount to Rs 1,184 thousand. Even if revenues from seedlings, etc. were to be taken into account to reduce the burden on the government, there is a certain limit to it. As most of these expenses are to be borne by the government, the Government of Nepal must secure enough operating expenses.

3) Establishment of Organization

For this project, a project-type technical cooperation is expected to be forthcoming from Japan. During the period of technical cooperation, technological transfer from Japan to Nepal will be effected by the dispatching of Japanese experts and receiving of Nepalese trainees. In order to effectively utilize the technological knowhow and realize the technological transfer and smoothly carry on this project even after the technical cooperation has terminated, it is important to establish a firm system by developing high quality manpower resources.

APPENDIX I.

APPENDIX I.

I-1 Basic Design Study

I-1-1 Members of Basic Design Study Team

I-1-2 Itinerary

I-1-3 Minutes of Discussions

I-2 Confirmation of Basic Design Study

I-2-1 Members of the Team

I-2-2 Itinerary

I-2-3 Minutes of Discussions

I-3 List of the Nepal Officials Concerned

I-1 Basic Design Study (September 13 – October 1, 1984)

I-1-1 Members of Basic Design Study Team

Assignment	Name	Position
Leader	Mr. Shichiro TSUCHIYA	Head of Fourth Laboratory of Fruit Breeding, Div. of Fruit Breeding, Fruit Tree Research Station, Ministry of Agriculture, Forestry and Fisheries
Pomology	Mr. Toru KONDO	Pomologist
Coordination	Mr. Yoshihide TERANISHI	Basic Design Div., Grant Aid Dept., Japan International Cooperation Agency (JICA)
Architectural Planning	Mr. Yasuaki KAWABE	Matsuda Consultants International Co., Ltd.
Architectural Design	Mr. Jun NINOMIYA	Matsuda Consultants International Co., Ltd.
Agricultural Equipment	Mr. Kiyoshi SUZUKI	Matsuda Consultants International Co., Ltd.

I-1-2 Itinerary

Date	Study Schedule	Details of Study Items
1. Sep. 13 (Thu)	Lv. Tokyo (NRT) 13:00 Ar. Bangkok 17:10	Mr. S. TSUCHIYA Mr. T. KONDO Mr. Y. TERANISHI Mr. Y. KAWABE Mr. J. NINOMIYA Mr. K. SUZUKI
2. Sep. 14 (Fri)	Lv. Bangkok 16:00 Ar. Kathmandu 17:40	Courtesy call at the Embassy of Japan Study schedule confirmation
3. Sep. 15 (Sat)	Kathmandu, Kirtipur	Project site inspection Visit to the existing facil- ities
4. Sep. 16 (Sun)	Kathmandu	Schedule confirmation at JICA Courtesy call at National Planning Committee and Dept. of Agriculture Submission of Inception Report
5. Sep. 17 (Mon)	Kathmandu and Kirtipur	Discussion with staff of Dept. of Agriculture
6. Sep. 18 (Tue)	Kathmandu	Courtesy call at Ministry of Agriculture, Secretary Mr. P. N. Rana Discussion with staff of Dept. of Agriculture

Date	Study Schedule	Details of Study Items
7. Sep. 19 (Wed)	Kathmandu	Visit to Agricultural Engineering Div. Soil Science and Agricultural Chemistry Div., Khumaltar Meeting with Japanese Experts of JADP
8. Sep. 20 (Thu)	Kathmandu	Visit to Dept. of Meteorology and Dept. of Housing Discussion with staff of Dept. of Agriculture
9. Sep. 21 (Fri)	Kathmandu	Visit to National Electric Crop. and Agricultural Complex, Khumaltar, Ministry of Water Resource and Sewage Discussion with staff of Dept. of Agriculture
10. Sep. 22 (Sat)	Kirtipur	Inspection of test pits in the Project site
11. Sep. 23 (Sun)	Kathmandu	Visit to Water Resource and Sewage Corp., Telephone Corp. and Remote Sensuous
12. Sep. 24 (Mon)	Kathmandu	Discussion with staff of Dept. Agriculture

Date	Study Schedule	Details of Study Items
13. Sep. 25 (Tue)	Kathmandu	Visit to Building Dept. of Kathmandu City and City Plan- ning Bureau Arrangement for details of the Minutes of Discussions at Ministry of Agriculture Progress reporting to the Embassy of Japan Signing the Minutes of Dis- cussions
14. Sep. 26 (Wed)	Kathmandu Lv. Kathmandu 13:25	National Holiday Mr. S. TSUCHIYA Mr. Y. TERANISHI
15. Sep. 27 (Thu)	Kathmandu (Mr. S. TSUCHIYA & Mr. Y. TERANISHI Lv. Bangkok 10:30)	Inspection of existing Horticulture Research Station Visit to Ministry of Educa- tion, National Rastra Bank, Brick factory, Marble factory and Godawari Botanical Gardens
16. Sep. 28 (Fri)	Kathmandu	Meeting with staff of Dept. of Agriculture Visit to Small Industry Project, Panchayat Training Center, and construction material stores
17. Sep. 29 (Sat)	Kakani and Kathmandu	Visit to Kakani Horticulture Farm Market research in Kathmandu

Date	Study Schedule	Details of Study Items
18. Sep. 30 (Sun)	Lv. Kathmandu 11:00 Ar. Bangkok 15:20	Reporting to JICA, Mr. Hoshi Mr. Y. KAWABE Mr. J. NINOMIYA Mr. K. SUZUKI
19. Oct. 1 (Mon)	Lv. Bangkok 12:55 Ar. Tokyo (NRT) 20:45	

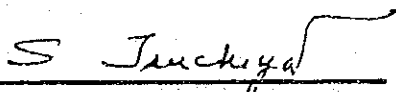
MINUTES OF DISCUSSION
ON
THE HORTICULTURAL DEVELOPMENT PROJECT
IN
THE KINGDOM OF NEPAL

In response to the request made by His Majesty's Government of Nepal for a Project on Horticultural Development (hereinafter referred to as "the Project"), the Government of Japan has sent, through the Japan International Cooperation Agency (hereinafter referred to as "JICA") which is an official agency implementing the technical cooperation of the Government of Japan, a team headed by Mr. Shichiro Tsuchiya, the Chief of Fourth Laboratory of Fruit Breeding, Division of Fruit Breeding, Fruit Tree Research Station, Ministry of Agriculture, Forestry and Fisheries, to conduct the survey for 19 days from 13th September to 1st October 1984.

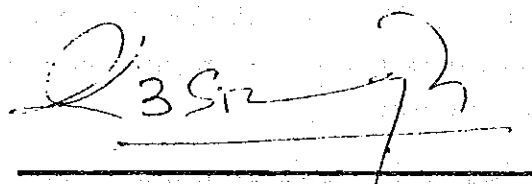
The team has carried out a field survey, held a series of discussions and exchanged views with the authorities concerned of His Majesty's Government of Nepal.

Both parties have agreed to recommend to their respective Governments and the authorities concerned to examine the result of the survey attached herewith toward the realization of the Project.

25th September 1984

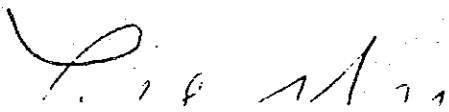


SHICHIRO TSUCHIYA
Leader, Japanese Basic Design
Survey Team.

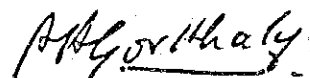


RAMESHWAR BHADUR SINGH
Joint Secretary (A.I.)
Planning Division,
Ministry of Agriculture,
HMG, Nepal.

Witness



Witness



Attachment

1. The objective of the Project under the grant aid is to establish the Horticultural Development Center in Kirtipur (hereinafter referred to as "the Project Center") in order to improve the techniques for selection of suitable varieties and for plant cultivation of fruit trees of Temperate Zone in Nepal's hilly areas and to train horticultural technicians and key farmers for the extension of the techniques.
2. The Project Center will carry out research, training and propagation activities which are described in details in ANNEX I.
3. The Project Center will be used for the purpose of the Main Center of the proposed Technical Cooperation for NEPAL Horticultural Development Project during the cooperation period.
4. The proposed organization chart of the Project Center is attached in ANNEX II.
5. Department of Agriculture will be the executing organization for the Project responsible for the implementation of the preparatory works and construction works of the Project Center.
6. The proposed sites of the Project Center will be located at the Horticulture Research Station, Kirtipur, Kathmandu District. The site plan for the Project Center is attached in ANNEX III.
7. The Japanese survey team will convey to the Government of Japan the desire of His Majesty's Government of Nepal that the former takes necessary measures to cooperate in implementing the Project and bears the cost of the facilities and equipment requested by the latter shown in ANNEX IV within the scope of Japanese economic cooperation program in grant form.
8. His Majesty's Government of Nepal will take necessary measures listed in ANNEX V under the condition that the grant aid assistance by the Government of Japan is extended to the Project.
9. Both parties confirmed that the survey team explained Japan's Grant Aid Program and Nepalese side has understood it.

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ANNEX I

Main activities of the Project Center will be as follows :

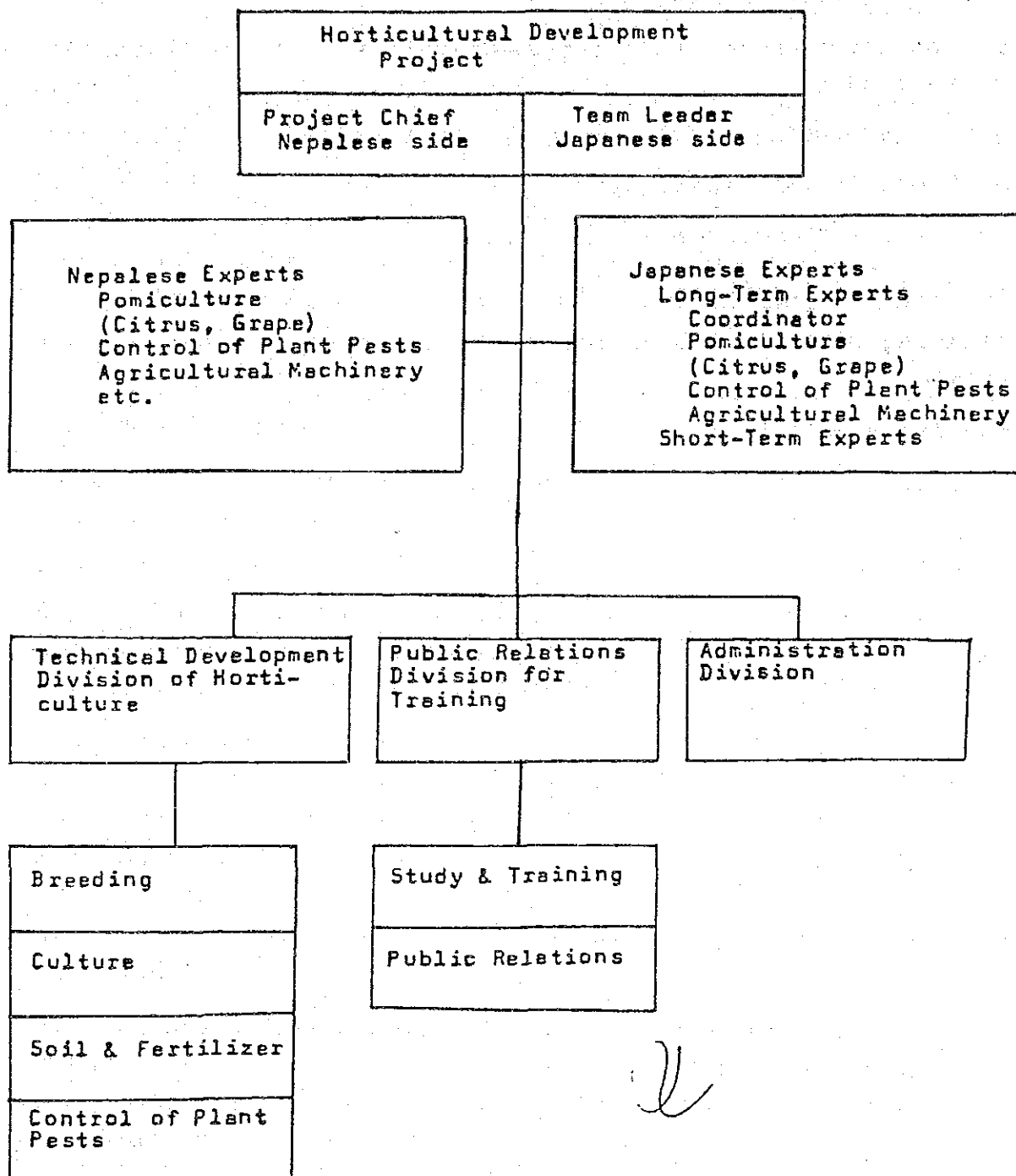
1. Technical Development Research
 - a. Introduction of fruit trees and selection of suitable varieties.
 - b. Proliferation techniques of fruit trees.
 - c. Pomicultural techniques.
 - d. Control techniques of plant pests.
 - e. Soil and fertilizer.
2. Training of pomicultural technician (long term, short term).
3. Publicity activities.

S. J.



ANNEX II

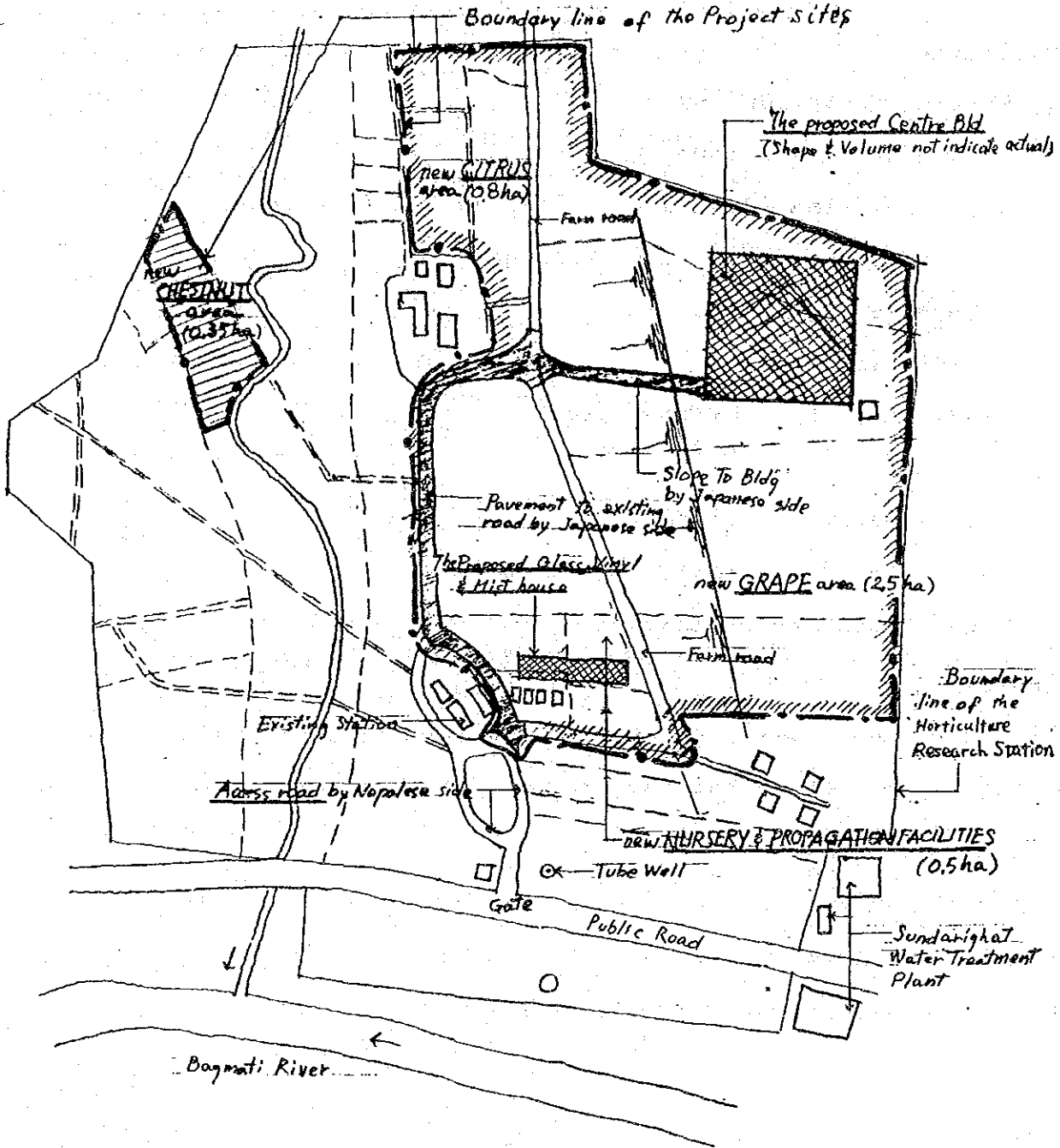
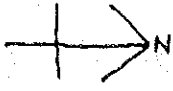
Organization Chart of the Project Center



S. J.

ANNEX III Site Allocation Plan

FOR THE PROPOSED PROJECT CENTER
IN KIRTIPUR, KATHMANDU DISTRICT



24 SEPT '84.

S.J.

Site map shown is based on the map given by the HMG To Japan. Supposed scale will be 1:3,000 (only for references).

ANNEX IV

The following items are requested by His Majesty's of Nepal as grant aid assistance.

1. Facilities

a. Project Center Building

- Research staff room
- Laboratories (Breeding & Pomiculture, Pathology, Biochemistry, Soil & Fertilizer)
- Lecture rooms
- Auditorium
- Administration office, etc.

b. Dormitory

c. Farm management building

d. Facilities for utility

e. Other necessary facilities

2. Equipment

Necessary equipment and materials for the research and training activities for the Project Center.

3. Experimental Farm

Experimental farm of the Project Center consists of grape, chestnut, citrus and nursery blocks.

Grape, citrus and nursery blocks will be irrigated.

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ANNEX V

The following arrangements are requested to be taken by His Majesty's Government of Nepal.

1. To secure necessary lands for the Project Center, and to clear, fill and level the sites as needed before the start of the works.
2. To provide facilities for distribution of electricity, and other incidental facilities outside of the sites if necessary.
3. To construct access road to the sites when necessary.
4. Provision of respective data and information to a Japanese consultant and a contractor necessary for the detailed engineering services and construction.
5. To ensure prompt unloading, tax exemption, customs clearance and internal transportation therein of the products purchased under Grant in the Kingdom of Nepal.
6. To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the Kingdom of Nepal with respect to the supply of products, materials, equipment and services under the verified contracts of the Project.
7. To provide and accord necessary permissions, licences and other authorization required for execution of the Project.
8. To maintain and use properly and effectively the facilities constructed under the Grant, and to arrange the budget for maintenance and operation.
9. To bear all the expenses, other than those to be borne by the Grant, necessary for the Project Center.

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I-2 Confirmation of Basic Design Study

I-2-1 Members of the Team

Assignment	Name	Position
Leader	Mr. Shichiro TSUCHIYA	Head of Fourth Laboratory of Fruit Breeding, Div. of Fruit Breeding, Fruit Tree Research Station, Ministry of Agriculture, Forestry and Fisheries
Coordination	Mr. Tadahito MORISAWA	Overseas Technical Cooperation Officer, Technical Cooperation Div., Economic Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Architectural Planning	Mr. Yasuaki KAWABE	Matsuda Consultants International Co., Ltd.
Agricultural Equipment	Mr. Kiyoshi SUZUKI	Matsuda Consultants International Co., Ltd.

I-2-2 Itinerary

Date	Study Schedule	Details of Study Items
1. Dec. 11 (Tue)	Lv. Tokyo (NRT) Ar. Bangkok	
2. Dec. 12 (Wed)	Lv. Bangkok Ar. Kathmandu	Courtesy call at the Embassy of Japan
3. Dec. 13 (Thu)	Kathmandu	Explanation of Draft Final Report at Ministry of Agricul- ture
4. Dec. 14 (Fri)	Kathmandu	Courtesy call at National Planning Committee Courtesy call to Foreign Aid Division, Ministry of Finance
5. Dec. 15 (Sat)	Holiday	
6. Dec. 16 (Sun)		Visit to Horticulture Research Station, Kirtipur Discussion with staff of Dept. of Agriculture at Ministry of Agriculture
7. Dec. 17 (Mon)		Discussion with staff of Dept. of Agriculture at Ministry of Agriculture Minutes Draft of Discussion

Date	Study Schedule	Details of Study Items
8. Dec 18 (Tue)	Holiday	Progress reporting to the Embassy of Japan
9. Dec. 19 (Wed)	Lv. Kathmandu Ar. Bangkok	Progress reporting to the Embassy of Japan Signing the Minutes of Dis- cussions at Ministry of Agriculture
10. Dec. 20 (Thu)	Lv. Bangkok Ar. Tokyo (NRT)	

I-2-3 Minutes of Discussions

MINUTES OF DISCUSSIONS

ON

THE DRAFT FINAL REPORT OF THE BASIC DESIGN STUDY

ON

THE HORTICULTURE DEVELOPMENT PROJECT IN THE KINGDOM OF NEPAL

The Government of Japan has sent, through Japan International Cooperation Agency, a Basic Design Study Team to the Kingdom of Nepal from December 11th to December 20th, 1984 for the purpose of presenting and explaining the Draft Final Report of the Basic Design Study (The Report) on the Project.

The team held a series of meetings with the counterpart's party headed by Mr. ROHIT B. THAPA, Project Coordinator, Ministry of Agriculture, His Majesty's Government of Nepal, to explain and discuss on the Report.

The main items which were discussed and understood by both parties at the meetings are as follows:

1. The Nepalese side, in principle, approved the Report and appropriate alterations in design which both sides agreed during the discussions will be incorporated in the Final Report to the extent possible.
2. The Nepalese side expressed that an independent residential quarter which has two bed-rooms, a kitchen, a dining room and a toilet should be constructed for the superintendent of the trainees' dormitory under the Grant Aid Programme of the Government of Japan for effective management of the dormitory.
The Japanese side agreed to convey this proposal to the Government of Japan.
3. Both sides agreed that area of proposed grape orchard block (2) would be decreased by about 0.3 ha for conserving a part of Peach orchard.

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4. As regards irrigation water supply for the Project, the Japanese side requested the Nepalese side to provide a pump test data of the existing well.
Based on the test data, necessary measures would be taken by the Japanese side to provide enough irrigation water for the Project.
5. The Final Report (10 copies in English) on the Project will be submitted to His Majesty's Government of Nepal around the middle of February, 1985.
6. Both sides confirmed that the Nepalese side understood the system of Grant Aid Programme to be extended by the Government of Japan, especially the arrangements to be taken by His Majesty's Government of Nepal (as agreed in the Minutes for the Project dated on September 25th, 1984).

19th December, 1984

S. Tsuchiya

SHICHIRO TSUCHIYA
Leader,
Japanese Study Team

Ro hit B Thapa

RCHIT B. THAPA
Project Coordinator,
Ministry of Agriculture
His Majesty's Government of Nepal

I-3 List of the Nepal Officials Concerned

1. National Planning Commission

Mr. B. B. Khadka Joint Member of NPC
Mr. T. R. Joshi Chief, Agricultural Division

2. Ministry of Agriculture

Mr. P. N. Rana Acting Secretary
Mr. R. B. Singh Joint Secretary (Planning)
Mr. R. B. Thapa Project Coordinator
Mr. K. B. Rajbhandary Senior Agricultural Advisor
Mr. S. M. Singh Senior Agricultural Advisor
Mr. P. P. Gorkhali Director General
Dept. of Agriculture
Mr. H. P. Gurung Deputy Director General
in charge of Horticulture and
Fisheries Development
Dept. of Agriculture
Mr. P. P. Shrestha Chief Pomologist
Fruit Development Div.
Dept. of Agriculture
Mr. K. B. Shrestha Assistant Pomologist
Fruit Development Div.
Dept. of Agriculture
Mr. Jai N. Rana Horticulturist
Horticulture Research Station,
Kirtipur
Mr. Jha R. N. Acting Chief Agricultural Engineer
Agricultural Engineering Div.,
Khumaltar
Mr. Yog Narayan Sharma Agricultural Overseer
Agricultural Engineering Div.,
Khumaltar

3. Ministry of Finance

Mr. H.S. Shrestha

Additional Secretary

Foreign Aid Division

Mr. K. Parazuli

Section Officer

Foreign Aid Division

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