

## Classification - categorization - of subjects of research in NAHPI

Presently the research subjects is classified only by responsible Sections. Relations between or among subjects are not clearly defined.

Systematic classification of the subjects is necessary for the persons concerned to know the real objective of each research, and to evaluate the plan of the research at the level of individual, group, section and total NAHPI.

### Categories

Purpose:Target:

To Promote the livestock industry.

To enhance the productivity of livestock.(Animal Production)

To prevent the livestock from disease.(Animal Health)

TO survey the disease

TO clarify the cause of disease

To develop the countermeasure for disease.

Disease : 1 Infectious disease

Viral disease

Protozoal disease

Bacterial disease

Parasitic disease

Mycotic disease

2 Non-infectious disease

Metabolic disorder

Toxicosis

Counter measure: Diagnosis, Vaccine, Treatment, feed control

Livestock(Animal):cattle, buffalo, pig, sheep, goat, chicken,  
duck, dog, cat, fish, elephant, wild animal.

Implementation:

Period::fiscal year to begin and finish.

Present status: Planning/ongoing/completed/interrupted/discontinued

Personel: NAHPI: individual, group, section

Other institution:

Budget(Fund): Ordinary budget (DLD,JICA)

Special budget: USAID, ASCIR, others.

Collection of informations on each research subject

A form will be used to collect the informations necessary for classification of research subjects. The information include above mentioned categories and short description of objective, method, result, remaining problem. Attached are a model of filled form and indication prepared by Drs Tada and Nopporn.

## Publication

### 1. "Abstracts"

Abstracts of the papers of research performed by Veterinary Research Division, NAHPI, in a period of (1986-1989)

Approx. 200 pieces, 400 pages.

Preface includes a short description of the NAHPI Project.

Draft is ready and to be printed by March, 1991.

### 2. NAHPI Report 1991. No.1

Description on the NAHPI Project.

List of research subjects

Review:

Major research projects.

Diagnostic service.

Information service.

Reference service.

Training service.

Others.

Start the planning and preparation immediately.

Publish by October 1991.

### 3. Brochure of NAHPI: Printed in 1991 JICA fiscal year.

Editorial Board:

Secretary:

Table 2

TRAINING IN JAPAN	1st Year Dec. 1986~	2nd Year Dec. 1987~	3rd Year Dec. 1988~	4th Year Dec. 1989~	5th Year Dec. 1990~
<u>1986 Japanese Fiscal Year</u>					
Dr. Rumpa Intraraksa (Biochemistry-1) Mar. 22 - Jun. 21, 1987	XXX				
Dr. Supole Methiyapun (Pathology/ EM-1) Mar. 26 - Sep. 25, 1987	XXXXXX				
<u>1987 Japanese Fiscal Year</u>					
Dr. Ladda Mulika (Bacteriology-1) May. 22 - Nov. 21, 1987	XXXXXX				
Ms. Prapit Klainin (Biochemistry-2) Aug. 29, 1987 - Feb. 26, 1988	XXXXXX				
Dr. Nopporn Sarataphan (Parasitology-1) Jan. 10 - Jul. 9, 1988		XXXXXX			
Dr. Ladda Trongwongsa (Pathology/ EM-2) Mar. 27 - Sep. 24, 1988		XXXXXX			
Dr. Cherngchai Chuntarusmi (FMD-1) Mar. 27 - Sep. 24, 1988		XXXXXX			
Dr. Wasana Pinyochon (Virology-1) Mar. 27 - Oct. 14, 1988		XXXXXXX			
<u>1988 Japanese Fiscal Year</u>					
Dr. Indhira Kramomlong (Bacteriology-2) May. 29 - Dec. 3, 1988			XXXXXX		
Dr. Jatuporn Smitanon (Epidemiology-1) Aug. 8, 1988 - Mar. 9, 1989			XXXXXXX		
Dr. Arinee Chatchavanchontcera (FMD-2) Aug. 8, 1988 - Mar. 9, 1989			XXXXXXX		
Dr. Sukanyanee Thonasuth (Parasitology-2) Feb. 13, 1989 - Feb. 10, 1990				XXXXXXXXXXXX	
<u>1989 Japanese Fiscal Year</u>					
Dr. Arunee Chaisingha (Virology-2) Aug. 28, 1989 - Mar. 4, 1990				XXXXXXX	
Miss. Monaya Ekgatat (Immuno-serology-1) Aug. 28, 1989 - Aug. 23, 1990				XXXXXXXXXXXX	
Dr. Anoung Bintvihok (Biochemistry-3) Aug. 28, 1989 - Apr. 4, 1990				XXXXXXX	
Dr. Pornpen Pathanasophon (Bacteriology-3) Aug. 28, 1989 - Apr. 4, 1990				XXXXXXX	
Dr. Somboon Sutherat (Pathology-3) Jan. 8, 1990 - May. 7, 1990					XXXX
Observation Tour					
Director General Dec. 3 - Dec. 12, 1989					X
Deputy Director Dec. 3 - Dec. 12, 1989					X
<u>1990 Japanese Fiscal Year</u>					
Mr. Virai Uthaiwaravit (Machinery Maintenance-1) Sep. 10, 1990 - Mar. 06, 1991				XXXXXX	
Dr. Piyanoot Prasitiratana (Parasitology-3) Sep. 24, 1990 - Apr. 24, 1991				XXXXXXX	
Mrs. Thanarat Janukit (FMD-3) Oct. 28, 1990 - Jun. 05, 1991				XXXXXXX	
Dr. Sujira Parcharyyanon (Virology-3) Oct. 28, 1990 - Jun. 05, 1991				XXXXXXX	
Dr. Chit Sirivan (Epidemiology-2) Oct. 28, 1990 - Jun. 05, 1991				XXXXXXX	
Dr. Pacharee Thongkamkoon (Bacteriology-4) Oct. 28, 1990 - Jun. 05, 1991				XXXXXXX	
Mrs. Malee Teeranusonti (Biochemistry-4) Oct. 28, 1990 - Jun. 05, 1991				XXXXXXX	

Table 3-1

EXPERTS	1st Year Dec. 1986~	2nd Year Dec. 1987~	3rd Year Dec. 1988~	4th Year Dec. 1989~	5th Year Dec. 1990~
Team leader					
Dr. Tamotsu ITO Dec. 25, 1986 - Dec. 31, 1987	XXXXXXXXXXXX				
Dr. Chuzou USHIMI Feb. 13, 1988 - Jul. 12, 1989		XXXXXXXXXXXXXXXXXXXX			
Dr. Tetsuo KUMAGAI Jun. 19, 1988 - Jun. 18, 1990			XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
Coordinator					
Mr. Hiroshi MATOBA Jan. 4, 1987 - May. 13, 1987	XXXXXX				
Mr. Yoshihiro SHIMIZU Oct. 6, 1987 - Oct. 5, 1990		XXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Long-term experts					
(Virology)					
Dr. Koichi TAKEHARA Jan. 20, 1987 - Jan. 19, 1989	XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Dr. Tomiaki MORIMOTO Jun. 19, 1989 - Jun. 18, 1991			XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
(Parasitology)					
Dr. Hiroaki NISHIKAWA Jan. 20, 1987 - Jan. 19, 1990	XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Dr. Yusuke TADA May. 24, 1990 - Dec. 08, 1991				XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
(Pathology)					
Dr. Masashi MORIWAKI Jan. 20, 1987 - Jan. 19, 1989	XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Dr. Shigemi SHOYA Nov. 14, 1989 - Nov. 13, 1991				XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
(Biochemistry)					
Dr. Mitsuaki HAYASHI Apr. 25, 1989 - Apr. 24, 1991			XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
(FMD)					
Dr. Takaaki SUGIMURA Mar. 30, 1987 - Mar. 29, 1988	XXXXXXXXXXXXXX				
Dr. Junsaku SIRAI Aug. 1, 1988 - Jul. 31, 1989		XXXXXXXXXXXXXX			
Dr. Shigeo YAMAGUCHI Oct. 3, 1989 - Oct. 2, 1990				XXXXXXXXXXXXXX	
Dr. Kenichi SAKAMOTO Nov. 20, 1990 - Nov. 19, 1991					XXXXXXXXXXXXXX
(FMD)					
Dr. Toshihito SUZUKI Jun. 4, 1987 - Jun. 3, 1988	XXXXXXXXXXXXXX				
Dr. Akio FUKUSHIHO Oct. 1, 1988 - Dec. 25, 1989		XXXXXXXXXXXXXXXXXXXX			
Dr. Toru INOUE Feb. 20, 1990 - Feb. 19, 1991				XXXXXXXXXXXXXX	

Table 3-2

EXPERTS	1st Year Dec.1986~	2nd Year Dec.1987~	3rd Year Dec.1988~	4th Year Dec.1989~	5th Year Dec.1990~
Short-term					
1986 Japanese Fiscal Year					
Dr.Hiroshi Watase (Bacteriology) Jan.20 - Apr.17,1987	XXX				
Dr.Shigeyoshi Nagasawa (Biochemistry) Jan.20 - Mar.31,1987	XXX				
1987 Japanese Fiscal Year					
Dr.Koichi Namba (FMD) Apr.16 - Jul.15,1987	XX				
Dr.Chuzou Ushimi (Virology) Oct.18 - Oct.31,1987		X			
Dr.Kazunori Hashimoto (Bacteriology) Nov.27,1987 - Feb.15,1988		XXX			
Dr.Tomoo Yoshino (Pathology) Nov.27,1987 - Feb.26,1988		XXX			
Dr.Yoshiko Motoi (Biochemistry) Jan.10 - Mar.9,1988		XXX			
Dr.Noriyuki Taira (Parasitology) Mar.24 - Jun.21,1988		XXX			
Dr.Tsunemasa Motohashi (Experimental Animal) Mar.29 - Apr.28,1988		X			
1988 Japanese Fiscal Year					
Dr.Koichi Namba (FMD) May.20 - Aug.19,1988		XXX			
Dr.Tetsuo Morozumi (Bacteriology) Nov.10,1988 - Feb.9,1989			XXX		
Dr.Yoshio Mizuno (Virology) Jan.25 - Apr.11,1989			XXX		
Dr.Michio Nakagawa (Pathology) Mar.20 - Jun.19,1989			XXX		
1989 Japanese Fiscal Year					
Dr.Yasuyuki Nakajima (Pathology) Aug.3 - Oct.29,1989				XXX	
Dr.Tadashi Tokui (FMD) Aug.21 - Nov.21,1989				XXX	
Mr.Teruo Hiruta (Machinery Maintenance) Sep.22,1989 - Mar.21,1990				XXXXXXXX	
Dr.Koichi Namba (FMD) Oct.13 - Nov.8,1989				X	
Dr.Tatsuo Oya (Bacteriology) Nov.8,1989 - Feb.5,1990				XXX	
Dr.Koichi Nakamura (Parasitology) Nov.27,1989 - Feb.26,1990				XXX	
1990 Japanese Fiscal Year					
Dr.Koichi Namba (FMD) Nov.6, - Dec.24,1990					XX
Dr.Isao Nonomura (Bacteriology) Nov.6, - Dec.24,1990					XX
Dr.Takashi Ogawa (Epidemiology) Nov.20,1990 - Feb.19,1991					XXX

## 付属資料 - 5 合同委員会議事録

### 1. Opening Address.

The fourth Joint Committee Meeting was opened by Dr.M.R.Amnuayporn, Deputy Director General, Department of Livestock Development (DLD). In the opening address he made an apology on behalf of Mr.Tweesackdi, Director General (DG), for coming to the meeting late due to another unavoidable meeting, and expecting the DG to join in later part of the meeting. He also expressed his sincere thanks to members of Joint Committee participating in the meeting for their kind cooperation to the project.

### 2. Address by Dr.Ogata,

the leader of the Technical Guidance Team. On behalf of the Technical Guidance Team of JICA, Dr.Ogata, showed great respect to relevant authorities and officers who have made many contributions to the implementation of the project. He highly commended on the remarkable progress for last four years at both NAHPI and FMD Center with large efforts provided by Thai and Japanese staff.

### 3. Review of Four-Year progress of the project.

Dr.Kumagai, Team Leader of Japanese Experts, summarized the project activities from 1986 to 1990 as follows :

#### Out line

- In the initial stage in NAHPI, a large effort was devoted to establishment of the institute and research activities were mainly focused on the survey and the diagnosis of animal disease in order to promote the project implementation for the next step.
- In the middle stage, the stress was shifted on important disease pointed out by former DG of DLD emphasizing collaboration among the section concerned.

- With regard to FMD Center site, since former Animal Health Improvement (AHI) project succeeded in development of technics and know-how for mass production of FMD Vaccine, the importance is attached to the research on diagnostic method and improvement of vaccine quality in an attempt to expand the results from former AHI project.

#### The Provision of Equipment and Materials

- Under JICA technical cooperation program, the equipment and materials worth about 272 million yen were provided from 1986 to 1989 in the Japanese fiscal year. In the 1990 fiscal year, about 90 million yen worth of equipment and materials will be provided for the project.

#### The Acceptance of Counterpart Study.

- In the past period (1986-1990 Japanese fiscal year), 24 research personnel were accepted for study in Japan. In addition to these, Director General and Deputy Director were invited for observation tour in December 1989.

#### The Assignment of Experts.

- Since the project started in 1986 until 1990, 40 experts were assigned to the project; long-term and short-term were 18 and 22 experts respectively.

Dr. Kumagai made following suggestion to implement the remaining parts of the project more effectively and to achieve our joint purpose

1) In order to succeed in the collaboration program mentioned before, the establishment of systematic research structure is indispensable among the sections concerned with close cooperation.

2) It requires classification (categorization) of research subjects to know the real objectives of each research and to evaluate the plan of research at the level of individual, group, section and whole NARPI, consequently the research activity can be carried out more efficiently.

3) Information and training activities are expected to play an important role in NAHPI. It is essential to promote these activities to publish the research outcome and to execute the training program. On the publications of such an abstract, NAHPI report and brochure of NAHPI, financial support will be expected from JICA.

In the progress report, he emphasized that diverse approach should be made towards the problem of important and difficult disease namely, Swine Fever, Paratuberculosis, Survey of health conditions of imported cattle, Copper deficiency in cattle and buffalo, and Foot and Mouth Disease.

He added that, such subjects as Swine Fever, Survey of health conditions of imported cattle and copper deficiency in cattle were in progress with interesting results under collaboration program and further cooperation and concentration are necessary to expand results.

The detailed papers were presented at the meeting.

Dr. Vises accounted for the research activities at each section for the last four years (1986-1990) and for the fifth year plan in accordance with the chart of Five - Year Schedule which was submitted at the meeting. In the progress report in NAHPI, he referred to the extension services with the remark. NAHPI will start the training service for technical personnel in the next year. We, however, have done the individual training for researchers from Sri Lanka and Lao as well as staff of the Veterinary Diagnostic Laboratory and Research Center in Tungsong. NAHPI also will accept Vietnamese researcher and participants from Agricultural College belonging to the Ministry of Education of Thailand.

Progress research in NAHPI was concluded by pointing out the instance of success on diagnostic methods for aerobic bacterial disease by prepared antigen; Toxoplasmosis by \_\_\_\_\_



test and Paratuberculosis by compliment fixzation test and ELISA technics as well as development of fluorescence antibody for diagnosis.

Fifth-year research plan in NAHPI was focussed on important diseases as Major Subject (Collaboration) agreed mutually.

1. Swine fever

Development of control measures

Vaccination program (VI)

Improvement of diagnostic method (VI,PT)

Analysis of epidemics (EP,VI,PT)

Characterization of lesion (PT)

2. Paratuberculosis

Improvement and development of diagnostic methods.

Survey

Collection of field information (EP)

Johnin test (EP)

Serological test (IM)

Isolation of the agent (BA)

Listopathological examination (PT)

3. Survey of health condition of imported cattle.

Collection and analysis of information of health condition.(EP)

Etiological investigation

Blood protozoa (PR,PT,EP)

Arbovirus (VI,IM)

Others.

4. Copper deficiency in cattle.

Survey of Cu level in serum of cattle and their feed (BC,EP)

5. Foot and Mouth Disease

Analysis of FMD virus antigens using monoclonal antibody

Studies on immunogenicity of FMD Virus antigens using monoclonal antibody.

Diagnostic services will be continued for the farmers. Section concerned with the services are as follows;

Virology  
Bacteriology  
Parasitology  
Pathology  
Biochemistry  
Epidemiology  
Immuno-serology

Dr. Vises summarized the duty of NAHPI as diagnostic service for the farmers, research work and training. And NAHPI is much expected to play an important role in training by other government agencies and private sectors.

Dr. Amnuayporn commented on progress report of NAHPI. With regard to information services, NAHPI library was provided with mainly the literature of animal health and journal however, films and slides are also required as reference data for research work at least.

Dr. Somchai, Director of Northeast Research and Diagnostic Center made additional comment on NAHPI progress report. According to the report, it is very successful research work. The success of the work today will be utilized in the future to cope with the problem of the nation.

On the status of NAHPI in the future, NAHPI is expected to cover much wider activities than that of Veterinary Research Division (V.R.D.). However, V.R.D. includes central laboratory and original V.R.D. Thus NAHPI is inside here in his understanding.

While the outcome of research work must be disseminated to the field and can be utilized locally to solve the particular problem, disease control planning for particular disease have never had full participation from NAHPI and information services system was not utilized particularly for data analysis or diagnostic service.

According to the national plan, the government intends to increase the income among average farmers by means of promotion of livestock production in the area where the crop production is not suitable. The national plan is so ambitious that we expect to utilize NAHPI as headquarters for animal disease control and production.

Dr. Somchai concluded his remarks with suggestions on the NAHPI in the future. In order to achieve higher philosophy of the project, right leadership, plan (transfer of the personnel) and legal background of the organization are necessary and NAHPI should back up such organization as Central Division, Vaccine Production Center and veterinary Research Division providing the information which we need to cope with the particular problem.

In reply to the comment above, Dr. Vises said that the matter pointed out by Dr. Somchai has been discussed already as a plan of the NAHPI in the future; we plan to improve the information service and training in consideration of disease control program of DLD.

Dr. Amnuayporn also stated his views in agreement with Dr. Somchai's suggestion. Research work carrying out at NAHPI should be useful to the technical officer in the field and kindly to the farmers, because we have to assist the farmers to increase their income and to improve their life.

#### Progress Report of activity from FMD Center.

Project activities at FMD Center were reported by Dr. Ab, Director of FMD Vaccine Production Center. Most of the activities under NAHPI project are continued from Animal Health Improvement (AHI) Project by which the facilities and the method of Vaccine Production were established as the method of diagnosis.

The process for research activities was directed into two ways as mentioned in the five-year schedule. When the new project started, we divided the process or method into six main topics;

1. Monoclonal antibody techniques.
2. ELISA as a tool for diagnosis and vaccine potency.
3. Study of antigenic variation.
4. Estimation of 140S
5. Improvement of vaccine quality
6. Preservation of concentrated antigen.

#### Monoclonal antibody technique.

We succeed in obtaining one hundred of hybridomas with ELISA positive to type O, and nine hybridomas of the neutralizing activity positive. Finally, six hybridomas were obtained after cloning.

For type ASI, ten of the 50 hybridomas were neutralization positive.

In the remaining period of the project, we are interested to prepare monoclonal antibody with recent isolation of type O and ASI as well as AII. If the trial succeed as expected, monoclonal antibody will be used for characterization of the field viruses, which mean to clarify the antigenic relationship between field viruses and our vaccine strain in term of immunity of protection.

The monoclonal techniques will be also applied for one of the methods to estimate amount of 140s antigen.

#### Detection of VIA antibody.

It was concluded that ELISA is more sensitive than AGDT established in the former project for detecting anti VIA in cattle sera.

#### Estimation of 140S

The method of ultracentrifugation was introduced to estimate the amount of complete virus particle in harvest and was established with preparation of standard curve of 140S. At present the method is being utilized to estimate the amount of 140S from every batch of virus prepared for vaccine production and the results will be applied for next step.

on the concentration and purification of the antigen, because the potency of the vaccine depends on the antigen. The results of the trial enable us to prepare at least 3 kinds of new vaccines depending on the potency required.

Consequently, it is possible to prepare bivalent and trivalent vaccine in the future instead of monovalent vaccine producing now.

#### Sensitivity of FLL-YFT cells.

FLL-YFT cells introduced from Japan were tested for its sensitivity to FMD viruses. It was found that the sensitivity was very high comparing to BHK-21 cell and CPE appeared earlier completely within oneday.

Usually, FMD viruses are contained very small amount in the field materials and also in the residences of the virus after inactivation for antigen preparation resulting risky or dangerously for vaccine production (antigen preparation). Therefore, FLL-YFT cell is considered the best sensitive cell line for isolation of small amount of FMD virus from the field materials and the residues of the virus.

Finally, Dr. Ab mentioned that we are especially interested in vaccine production and monoclonal antibody techniques in the next year plan.

#### IV. The scope of the NAHPI

#### V. Authorization of the NAHPI.

Dr. Vises suggested that the fourth and fifth item of the agenda could be combined together in the discussion because both are clearly related to each other.

He added that we held the discussion about the matter last week but we had better find out the most suitable scope of NAHPI.

In the agreement of the grant aid program, the scope of the NAHPI is very wide intending the national institute which should be the center of the research work in animal health and production, especially for three Veterinary Research and Diagnostic Center (South, North East and North). Now we are carrying out the services in animal health, with results as I

reported before under Record of Discussion (R/D) of the project. And the services of animal production will be included in the future.

However, after negotiations (with authorities concerned) about the authorization of NAHPI, we recognized that the modification of the scope of NAHPI is necessary for emphasizing deeply specialized research on each subject. If we could set up the scope of deeply specialized research work and put them into the frame of NAHPI, the status of NAHPI will be promoted and followed up to project target in the future.

According to the new plan explained by Dr. Vises, the following items will be modified comparing with existing frame of NAHPI.

1. Establishment of Technology Transfer and Information Center Section in order to strengthen those existing activities and services.
2. Incooperation of South Veterinary Research and Diagnostic Center.
3. Incooperation of Assay Laboratory.
4. Incooperation of Animal Production project.
5. Tightening research cooperation with North and North-East veterinary Research and Diagnostic Center.
6. Establishment of Exotic Disease Section.

The new scope of NAHPI is much wider than beginning of the technical cooperation but much closer to the first agreement (NAHPI Establishment by grant aid program). The remaining problem is how to get the agreement with authorities concerned to become the national institute.

The detail paper including the chart of proposed organization of NAHPI was submitted at the meeting.

Dr. M.R. Amnuayporn informed the attendance about the DG's arrival

He also gave a supplementary explanation of the topic since Dr. Tim, former DG of DLD considered that the research work on animal health and production was not progressive to cope with the problem of livestock in our country, DLD asked Japanese

Government Technical Cooperation for the animal health. Before starting the project, there was no staff for NAHPI but building and facilities were granted by Japanese Government. Consequently DLD decided to allocate VRD staff to NAHPI project. However, it is time that VRD returned to original work such as basic research and survey and diagnostic work on the other hand NAHPI concentrated on specific research adapting the high technology. On the authorization of NAHPI we have the commitment with Japanese Government but we can not comply with the commitment so far because there are no permanent staffs of NAHPI officially. We are now trying to arrange the allotment of work mentioned between NAHPI and VRD presonels and let Civil Services Commissions (CSC) know the differences in them clearly.

Since the research on specific and important diseases requires experienced personel and much time to get solution and countermeasure for important disease. We want to propose the reorganization shown on the chart. We will request CSC to assign the experienced personel who have done the research on important and specific disease to concentrate on the tasks as NAHPI staff. It save us time to get solution and countermeansure of problems.

On the occation of DG's arrival, Dr.M.R.Amnuayporn summerised the progress of the meeting so far with the remark on the discussion with representative of Department of Technical and Economic Cooperation (DTEC) and the Budget Bereau as following: -

-Mrs.Tipsuda, representative of DTEC, was worried that the remaining time was very limited while there were many things to be done. She asked how to deal with the problem.

-Dr.M.R.Amnuayporn replied to her that we are going to request the extension of the project for a few more years. He also informed that arrangment of extension were expected after the mission team confered with JICA headquaters.

-Mrs.Supatra, representative of Budget Bereau, asked whether NAHPI had put this request for an extension in the Five-Seven Year-r plan.

-Dr.M.R.Amnuayporn answered that it had been put in already.

Mr. Tweesackdi, DG of DLD, apologized to participants for coming late to the meeting.

The comments from DG. on the project are summarized as follows:

1. It is pleased that research program of NAHPI will be concentrated on important disease such as Swine Fever, Paratuberculosis, Survey of animal health condition of imported cattle for preventing exotic disease, Copper deficiency in cattle and buffalo and Foot and Mouth Disease, which will comply with DLD policies because they cause a great loss to our farmers and have been our problems, and to we have eradicate them.
2. Since the remaining time is very limited in order to complete the research and to take the countermeasure for important disease, the extension of the project should be considered, to continue the research program.
3. The result from research at the institute should be transferred and extended to the field officers scattered around the Kingdom of Thailand through the training program and the conduct of seminars or meetings. Subsequently the field officers and extension workers should disseminate techniques and knowledge to the farmers.

DG. repeatedly emphasized the importance of extension of the project for 2 or 3 more years. He appreciated and expected the assistance and aid from Japanese Government through DTEC as well as the counter fund and services from Thai Government to carry out the project completely.

Dr. Vises informed the chairman that some items are to be discussed on the continuation of the project. It is required to define the most suitable scope of NAHPI and future status after termination of the project. Those are very important factors when we consider the detail of research and training plan,



and establishment of assay lab and production sector as well as request for budget and supporting plan. With regard to deeply specialized research program, the detail of the plan should be analyzed and then clarified to implement smoothly.

In response to the Dr. Vises comment, Dr. Ogata presented a view on behalf of the team. The team understood the background, present situation and problems on the scope of NAHPI as well as the authorization of NAHPI. We are also very concerned about legal position of NAHPI, because support from the government is essential to implement the project and expand the results of the project especially on the aspect of the allotment of personnel and budget. NAHPI should be legally based otherwise it is sometimes difficult to maintain the project. Therefore, we have requested to obtain legal position since the project started, however, we have not received any clear answer unfortunately, although we have made a number of plan and proposal. When we consider what Dr. Somchai mentioned, I completely agree with him and support his idea as it is much to the point on the problems. Since the time left is only one year before termination of the project, I would like to ask the matter again. If we could get certain and substantial progress about the legal position of the institute, it will be great help for discussion of our project in the future. With regard to the detail of the scope of NAHPI and future status, it is big and complicated that we need much more time to discuss and to clear. And on the new organization chart of the institute for approval, as the matter is completely concerned itself with DLD (internal matter), we are not in the position to judge or to decide it. We, however, hope that present activities of NAHPI should be maintained steadily and smoothly. Thus remaining question is what kind of institute will be set up legally. Dr. Ogata concluded his remarks with asking kindly and carefully with in the future on this matter.

The DG. recognized that it is difficult for Japanese Team to give the commitment for extension and reorganization of NAHPI.

## VI. Report and Proposal by the Mission Team.

Dr. Ogata, leader of the team, firstly explained the objectives of the team. The main objectives of the team are 1) to review the activities of the project in the past four year and elucidate technical and other problems, 2) to provide necessary advice and guidance to relevant officials and experts of the project, and 3) to participate in the Joint Committee Meeting of the project.

He added that the summary report of the team has been circulated among the participants of the meeting. And main content of the remarks were already covered by the report and comment of Dr. Kumagai, Dr. Ab, Dr. Vises as mentioned before.

He, however, remarked that research cooperation programme about remaining one year was not covered in previous topics.

Dr. Ogata tentatively referred to the implementation plan of the 5th fiscal year by JICA. The 1991 fiscal year budget of JICA has not been decided yet, however the direction of 5th year plan would be considered as follows;

### 1) Japanese Experts (long-term and short-term)

The number of experts expected would be almost the same as the 4th fiscal year.

### 2) Acceptance of Thai counterpart.

The number of counterparts in 5th year would be decreased (a little) comparing with 4th year.

### 3) Provision of Equipment and Materials

The equipment and materials worth about 40 million yen would be expected to be provided for the project for 5th fiscal year.

He also mentioned the research program which was revised focusing on important disease as major subject in the Five-Year schedule. The major subject is being promoted intensively by intersectional cooperation. We place high value on this new approach and have to concentrate our efforts to accomplish the program.

With regard to the proposal of project extension, he promised to convey the proposal to JICA headquaters. However,

Dr.Ogata insisted that NAHPI should clearly show basic idea and plan of the future, and then we would discuss the detail of extension, otherwise we can not consider, how long, what direction and what kind of cooperation is needed and what can be done.  
done.

#### VII. Singing of Minutes.

The Minutes of the Joint Committee Meeting was singed by Dr.Kumagai, team leader of JICA Experts, Mr.Tweesakdi, DG of DLD and Dr.Ogata, leader of the mission team.

#### VIII. Closing address.

Mr.Tweesakdi closed the meeting giving closing address as attached paper.

CLOSING ADDRESS

BY

MR. TWEESACKDI SESAWEECH

DIRECTOR GENERAL

DEPARTMENT OF LIVESTOCK DEVELOPMENT

December 25<sup>th</sup>, 1990

Dr. Kumagai,  
Dr. Muneo Ogata,  
Mr. Y. Yamashita, representative of JICA, Bangkok.  
Members of Technical Guidance Team,  
Distinguish Participants,  
Colleagues,  
Ladies and Gentlemen,

I am very pleased to learn that this meeting has been conducted with a very fruitful discussion. NAHPI project is beneficial for our farmers in gaining their income from raising livestock. Numbers of animal die of disease. NAHPI plays a big role in solving the problems of animal diseases. Since the establishment of NAHPI, fifty research works on the disease have been accomplished, forty research works are on the way and thirty more are on the future plan. I am so pleased to know that for the period of over a year before Technical Cooperation of NAHPI project terminated, our staffs with the assistance of Japanese experts mutually concentrate in the conduction of five field operations namely: Swine Fever, Paratuberculosis, Survey of animal health condition of imported cattle for preventing exotic disease, Copper deficiency in cattle and buffalo, and Foot and Mouth Disease. As we all know that they cause a great loss to our farmers and have been our problems to eradicate them. Unfortunately, the remaining period of the project is so

short. Apart from the operation on those mentioned diseases, we need to concentrate on Technology Transfer and Extension Service. Since it will be useless if the knowledges received from the research work are not conveyed to our technical field officers and reach the farmers. I shall be grateful if our distinguished Technical Guidance Team will be so kind as to convey our problems and our tasks back to your country and let it be known. I am looking forward to extending the project of Technical Cooperation for few years more so that we can operate more successfully. I hope that the results of this meeting will gave the way for more closely relationship and more cooperation between our countries. I am looking forward to having an opportunity to welcome all of you in Thailand again. I wish you all of the Technical Guidance Team has a pleasant, save and sound journey back home . Just before you leave us, on behalf of the Thai Counterparts I have a little thing for you as a remembrance of our friendships.

On behalf of the Department of Livestock Development may I declare the Joint Committee Meeting officially closed.

Thank you.

JICA