

## **CHAPTER 7: PROJECT EVALUATION**



## CHAPTER 7: PROJECT EVALUATION

The Important points in the appraisal of the Project are as follows:

- o Whether the objectives and content of the Project are pertinent or highly effective as a Grant Aid Project by the Government of Japan.
- o Whether the purpose of the Project is in relevance and coordination, in the light of present situation and future perspectives of social and economic views in particularly in livestock and animal health, with the intentions of national programs including National Economic and Social Development Plan and others in Thailand.
- o Whether the content, size and grade of the facilities and equipment selected to attain the objectives of the Project are feasible in view of the current circumstances in Thailand with respect to operation, management and maintenance.
- o Whether, in the process of implementation of the Project, preparation of the Project site, preparatory works for infrastructure such as earth-filling, grading and access roads, will be carried out by the Thai side on schedule.

As the Project mainly aims at the reinforcement of research activities in animal health, it is very difficult to quantitatively assess the benefit and effectiveness of the Project and therefore, the standard for the project appraisal has to be a qualitative one. The adequacy of the Project and the effectiveness of cooperation shall therefore be appraised under the above-mentioned premises.

- (1) As stated before, the Government of Thailand has had reasonable success in its endeavors to enrich and expand the regional animal health institutes aligning its animal health policy. However, this has resulted in DLD not having the potential to control the local organization and give technical assistance.

Here, by the establishment of NAHPI, DLD will be enriched and strengthened in its facilities and technology, by the performance of the NAHPI as a national central institute organizing its regional centers, Foot-and-Mouth Disease Vaccine Production Center, Veterinary Biologics Production Center, etc. having functions of research, inspection, information analyzing and extension. The Project, aiming at technical improvement of both basic and advanced research in animal health at the central organization level, is expected to develop further the technology in this field in Thailand by upgrading the technical standards in rural areas, lead to development of a firm foundation for the improvement of animal health in Thailand, and ultimately contribute to the development of the national animal health administration system. The establishment of the NAHPI will contribute to the development of the country largely by assisting the livestock industry, and further the technical and economic level of the whole agricultural industry by the development of measures for the prevention of animal diseases.

- (2) The Basic Design of the facilities and equipment for the Project take into consideration the current circumstances of animal health in Thailand, ease of use and maintenance economy in terms of energy and maintenance, and the minimum necessary requirements for the projected research activities of NAHPI.

As stated in Chapter 3, the Thai side is projecting an organization for research activities, and allocation of staff for the management of the NAHPI. In the course of the implementation of animal health activities, the NAHPI will implement solely the research activities as its main work, in principle, and the other sectors in the DLD will be in charge of the application and assay services. In this case, the necessary reformation of the animal health administration will be expected. In the light of this and in view of the possible obtainability of research staff through training in the new Institute, the establishment of the NAHPI will contribute to the national animal health administration system. It is necessary for the Government of Thailand to implement effectively the management

and maintenance of facilities and equipment according to the detailed schedule based on the recommendations of Basic Design Team as described in Chapter 5, "Operation and Maintenance". It is also necessary for the Government of Thailand to give sufficient financial support to meet costs such as maintenance costs for facilities and equipment.

- (4) Arrangements required by the Government of Japan to be taken by the Government in Thailand are shown in 6-3-2, works to be done by the Government of Thailand. The import of this arrangement has been confirmed by both parties in the attached Minutes of Discussions, Annex IV (28th September, 1984).
- (5) In this context, this Project will enable the Japanese Government to contribute effective aid because of its high potential for the improvement of animal health in Thailand.



## **CHAPTER 8: TECHNICAL COOPERATION**





## CHAPTER 8: TECHNICAL COOPERATION

Technical cooperation, particularly in the field of animal health, is very important to Thailand today. Many foreign countries and international organizations such as the FAO have been offering assistance in this area. The Government of Japan has been making a substantial contribution in this area by grant aid and technical cooperation projects. Such projects include the Foot-and-Mouth Disease Vaccine Production Center (Grant Aid, Pak Chong, 1976-1977), Animal Health Improvement Projects (Technical Cooperation, Thung Song and Pak Chong, 1977-1984).

This Project is of central importance to the above-mentioned projects, which are systematically interrelated. It is a wider ranging cooperation project to establish effective means of promoting animal health activities and animal disease control, reinforcing animal health research activities and surveillance systems in central and rural areas. The Government of Thailand launched the Project to foster systematic research in animal health for effective prevention and treatment of animal diseases. As a result of such research, the establishment of a central organization which conducts advanced research and expands its research results to rural area organization was being indispensable and effective.

It goes without saying that Thai researchers trained abroad illustrate the high level of technical knowledge available, but the numbers of such researchers are limited.

It is therefore of vital significance to extend the technical cooperation to implement the Project successfully by directing fundamental technical guidance and introducing high-level technology, and to raise the level of the research standards for the accumulation and propagation of specialized technical knowledge and skills.

The proposed technical cooperation for the Project will generally be focussed on the designated field of diagnosis, research, training,

extension, etc. in the field of animal health. It is recommended that the Government of Thailand concentrate on the field of animal diseases, since the Project emphasizes these in its basis research facilities.

## **CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS**



## CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

- (1) In the Fifth National Economic and Social Development Plan (1982-1986), agriculture is marked as one of the most important industries in Thailand. In line with its policies, the agricultural livestock industry is being developed and a definite plan for this purpose has been proposed.
- (2) The Project has the aim of enriching and strengthening the facilities and technology of the DLD as the central national administrative organization to govern animal disease control, diagnosis, research and training in the field of animal health in Thailand.

The Government has recognized the importance of the Project and is expected to gain the cooperation of the Government of Japan.

- (3) Through this basic design study, the JICA has investigated the background, objectives of the Project, and the status of preparation for research activities, operation and maintenance. JICA also confirmed the preparatory efforts for the execution of the Project made by Thai Government. JICA concluded that this Project possessed sufficient value for the Government of Japan to execute as its Grant Aid Project, and that its cooperation would contribute to the friendly relationship between Japan and Thailand. It is earnestly wished that the Government of Japan take strong action to promote the cooperation to this Project.
- (4) Finally, the Team presents the following suggestions to the part or parties concerned in Thailand so that, in the event of the implementation of the Project, the facilities and equipment may function as intended and that good results may be obtained from research activities.

- 1) While structural reformation and reorganization of the existing DLD is expected to be promoted by the party or parties concerned in Thailand, it is essential to put the organization in order by defining clearly the scope of cooperation, share of responsibilities, infrastructure system, etc., with other divisions of the DLD and with rural organizations so that the NAHPI may be operated effectively.
  
- 2) It is also necessary for the Government of Thailand to give sufficient secure financial support such as operation and maintenance costs for facilities and equipment. Out of the basic recognition that the essence of research is talented staff, it is expected that the Government of Thailand will constantly try to improve the quality of these staff.

## APPENDICES

### APPENDICES

- (1) Basic Design Study Team  
(Basic Design Study, Sept.-Oct., 1984)
  - 1) Member List
  - 2) Itinerary
  - 3) Minutes of Discussions
- (2) Basic Design Study Team  
(Confirmation, Dec., 1984)
  - 1) Member List
  - 2) Itinerary
  - 3) Minutes of Discussions
- (3) Others
  - 1) Breeding Distribution of Cattle and Buffalo in Thailand
  - 2) Production Amount of Fresh Milk
  - 3) Occurance Distribution of Anthrax and Haemorrhagic Septicaemia
  - 4) Name and Location of the Organizations under DLD





(1) Basic Design Study Team (Basic Design Study, Sept.-Oct., 1984)

1) Member List

THE JAPANESE BASIC DESIGN STUDY TEAM

FOR

THE ANIMAL HEALTH AND PRODUCTION INSTITUTE

MEMBER LIST

Team Leader	Hiroyuki Yuki	Chief, Extension Section Planning and Coordination Division National Institute of Animal Health
Project Coordinator	Hideo Ono	Chief, Livestock Develop- ment Division, Agricultural Development Cooperation Department, JICA
Architectural Planner	Kiyoshi Hata	Nikken Sekkei Ltd
Architect	Yutaka Segawa	Nikken Sekkei Ltd
Electrical Engineer	Kazuhiko Yamada	Nikken Sekkei Ltd
Mechanical Engineer	Tadahiko Hashimoto	Nikken Sekkei Ltd
Equipment Planner	Tsunemasa Motohashi	Nikken Sekkei Ltd

2) Itinerary

1984

- Sept. 19 Wed. Arrive in Bangkok  
Confirmation of schedule
- 20 Thu. Meeting with the Embassy of Japan and JICA  
Courtecy visit to DLD  
Site survey
- 21 Fri. Meeting with Foreign Agriculture Relations  
Courtecy visit to DTEC  
Meeting with DLD (1)
- 22 Sat. Site survey (Existing facilities)
- 23 Sun. Meeting within Team for putting order the subjects at  
the previous meetings, move to Khon Kaen
- 24 Mon. Visiting of Northeast Regional Veterinary Diagnostic  
Laboratory Center (DLC) and Northeast Agricultural  
Development Center Khon Kane, returned to Bangkok
- 25 Tue. A day trip to Packchum for visiting main laboratories  
(Veterinary Biologics Production Center and Foot-and-  
Mouth Disease Vaccine Production Center)
- 26 Wed. Meeting and inspection of facilities of each section in  
DLD
- 27 Thu. Preparation of materials for meeting (Preliminary Plan)  
Meeting with DLD (2), including on Minutes draft
- 28 Fri. Preparation of sketch, equipment list  
Signing and exchange of the Minutes of Discussion
- 29 Sat. Discussion on content of Attachment for Minutes  
Visit to Central Forest Research Laboratory and Training  
Center  
Meeting within Team (Basic Design sketch and equipment  
plan)
- 30 Sun. Visit to Sincanari University Biologic Research Labora-  
tory at Bangsaen  
Meeting within Team (Putting in order the Basic Design  
and materials obtained)

- Oct. 1 Mon. Confirmation on the supplementary items for Minutes  
(Expansion of land for projecting site and staff  
allocation for NAHPI)
- 2 Tue. Team Leader Yuki and Team member Ono return to Japan  
Preparation of materials for meeting  
Meeting with DLD (3) on planning on each unit
- 3 Wed. Survey on infrastructure (Kasesart University's and  
Department of Agriculture's facilities)  
Visit to the National Experimental Animal Center, Salary  
Basic Design work
- 4 Thu. Meeting with DLD (4) - confirmation on the import  
discussed on Oct. 2 (Tue.)  
Meeting with MWWA on water supply condition  
Basic Design work
- 5 Fri. Meeting with DLD (5) - continued discussion of previous  
meeting  
Basic Design work  
Meeting with MEA and TOT on electric supply and  
telephone situation  
Team member Yamada, and Hashimoto return to Japan
- 6 Sat. Basic Design work  
Site survey (Electricity, water supply and land  
expansion)
- 7 Sun. Meeting within Team and Basic Design work  
Preparation of summarized materials discussed with DLD
- 8 Mon. Meeting with DLD (final) and confirmation of the  
discussed items and content of them (Planned facilities  
and arrangement to be taken by the Government of  
Thailand)  
Reporting to Embassy of Japan and JICA
- 9 Tue. Team member Hata, Motohashi and Segawa return to Japan

3) Minutes of Discussions

MINUTES OF DISCUSSIONS  
THE ESTABLISHMENT OF THE NATIONAL ANIMAL HEALTH AND  
PRODUCTION INSTITUTE IN THE KINGDOM OF THAILAND

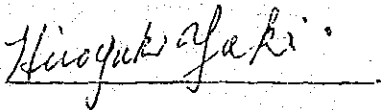
In response to the request made by the Government of the Kingdom of Thailand for the establishment of National Animal Health and Production Institute (hereinafter referred to as "the Project"), the Government of Japan has sent, through Japan International Cooperation Agency (hereinafter referred to as "JICA"), a team headed by Dr. Hiroyuki YUKI, Chief of Extension Section, Planning and Coordination Division, National Institute of Animal Health, Ministry of Agriculture, Forestry and Fisheries, to conduct a basic design study from 19 September to 9 October 1984.

The Team has carried out a field survey, held a series of discussions and exchanged views with the Thai authorities concerned.

As a result of the study and discussions, both parties have agreed to recommend to their respective Governments to examine the results of the survey attached herewith towards the realization of the Project.

28<sup>th</sup> September 1984

Bangkok, Thailand

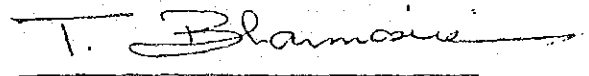


Dr. Hiroyuki YUKI

Team Leader

Basic Design Study Team

JICA



Dr. Tim BHANNASIRI

Director General

Department of Livestock Development

Ministry of Agriculture and

Cooperatives

ATTACHMENT

1. The objectives of the Project is to establish the National Animal Health and Production Institute to implement the research work and related service activities in the fields of animal health and production.
2. The purpose of the construction is to provide necessary buildings, facilities and equipment for the National Animal Health and Production Institute.
3. The proposed site of the Project is located at Bangkhen, Bangkok (existing Bangkhen Pig Breeding Centre of Department of Livestock Development, located in the campus of Kasetsart University). The location of Project site is shown in Annex I.
4. The research and service activities to be performed in the Institute will be as follows.
  - a. Applied researches for improvement, establishment or development of technologies in animal disease surveys, diagnosis, quality tests of feed and animal products, assay and production of biological product for veterinary use.
  - b. Service activities of disease surveys and diagnosis.
  - c. Collection, analysis and distribution of data as a national information centre.
  - d. Training of people concerned in the fields of animal health and production.
  - e. Collaboration on technical matters with various organizations and Divisions of the Department of Livestock Development.

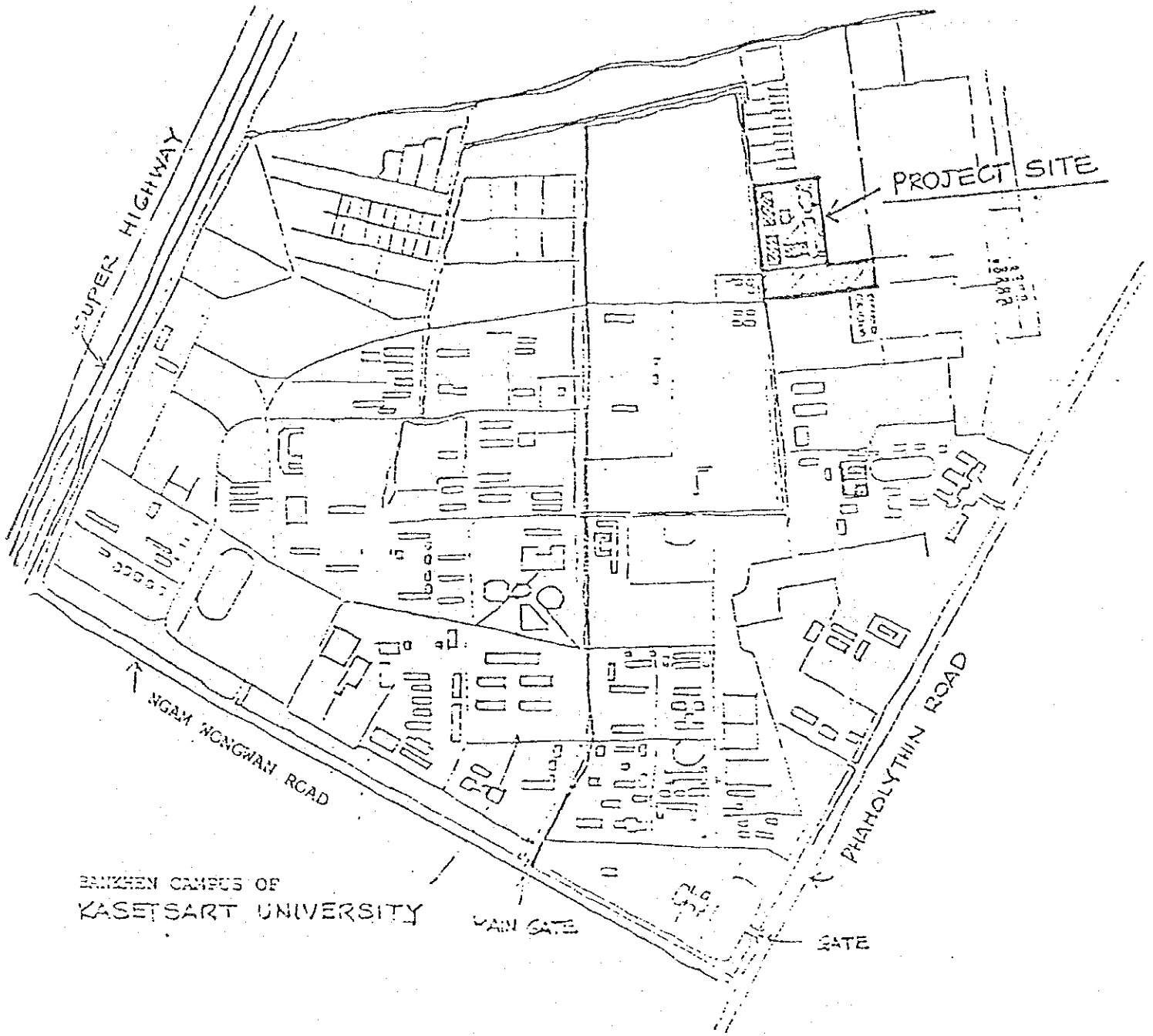
*Hiroyuki Yuki*

*Tom*

The institutional framework of the above-mentioned activities are shown in Annex II.

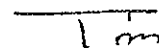
5. Both parties confirmed that the Department of Livestock Development, Ministry of Agriculture and Cooperatives is the executing agency for the Project.
6. The Government of the Kingdom of Thailand have understood Japan's grant aid system explained by the Japanese Study Team which includes the use of a Japanese consultant firm and a Japanese general contractor for implementation of the Project.
7. The Japanese Basic Design Study Team will convey to the Government of Japan the desire of Thai side that the Government of Japan takes necessary measures to cooperate in implementing "the Project" and provides the building and other items listed in Annex III within the scope of Japanese economic cooperation programme in grant form.

*Hiroyuki Yuki*



LOCATION OF PROJECT SITE

*Hiroyuki Yuki*



## ANNEX II

The institutional framework for the National Animal Health and Production Institute are as follows :-

### 1. Research Laboratories

#### 1. Bacteriology Division

- 1) Aerobic bacteria laboratory
- 2) Anerobic bacteria and enterobacteria laboratory
- 3) Mycoplasma and Mycobacterium laboratory
- 4) Fungi laboratory

#### 2. Virology Division

- 1) Bovine disease laboratory
- 2) Swine disease laboratory
- 3) Poultry disease laboratory
- 4) Special studies laboratory

#### 3. Parasitology Division

- 1) Ecto-parasitology laboratory
- 2) Endo-parasitology laboratory
- 3) Protozoa laboratory
- 4) Epidemiology laboratory

#### 4. Pathology Division

- 1) General pathology laboratory
- 2) Clinical pathology laboratory
- 3) Immuno-pathology laboratory

#### 5. Biochemistry Division

- 1) Toxicology laboratory
- 2) Clinical biochemistry laboratory
- 3) Immuno-chemistry laboratory

*Hiroyuki Yuku*

*T. m.*



- 4) Feed safety laboratory
6. Experimental Animal Division
  - 1) Large Animals
  - 2) Small Animals
  - 3) Isolation
  - 4) Normal Animals

## II. ADMINISTRATION DEPARTMENT

1. General Affairs Division
2. Planning and Co-ordination Division
3. Training Division
4. Information Centre

*Hiroyuki Yuki*

ANNEX III

Items required by the Government of the Kingdom of Thailand  
whose cost will be borne by the Government of Japan :-

1. Buildings with necessary facilities for

- (1) Research Laboratories
- (2) Experimental Animal Houses
- (3) Administration and Training
- (4) Others

2. Equipment for

- (1) Research Laboratories
- (2) Training and information Centre
- (3) Others

*Jiroyuki Yuki*

ANNEX IV

Following arrangements are to be taken by the Government of Kingdom of Thailand.

1. To secure land necessary for the construction of the facilities and to clear, fill and level the site as needed before the start of the construction.
2. To provide facilities for distribution of electricity, telephone, water supply and drainage and other facilities outside the building.
3. To construct and prepare the access road to the Project Site.
4. To ensure prompt unloading, tax exemption and custom clearance at ports of disembarkation in Thailand and prompt internal transportation therein of the products and related 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 Thailand with respect to the supply of the products and related equipment and services under the verified contracts.
6. To accord without delay to Japanese nationals whose services may be required in connection with the supply of the products and related equipment and services under the verified contracts such facilities as may be necessary for their entry into Thailand 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.
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

*Hiroguchi Yuki*

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 available for the construction and incidental activities relative to the Project.

*Hiroyuki Fujis*

      
T. m.

Supplementary Note

For the Minutes of Discussions on the Establishment of National  
Animal Health and Production Institute in Thailand

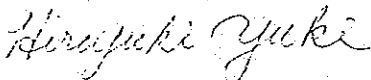
In pursuance of the Preliminary Study Team headed by Dr. Yujiro Fujisaki in July, 1984, the Basic Design Study Team headed by Dr. Hiroyuki Yuki has been sent, through Japan International Cooperation Agency to conduct a basic design study for the establishment of National Animal Health and Production Institute from 19 September to 9 October, 1984.

The Team has carried out a field survey, held a series of discussions and exchanged views with the Thai authorities concerned.

Supplementing to the Minutes of Discussions signed on 28 September, 1984, both parties have agreed to convey the results of the discussions attached herewith for smooth and effective implementation of the Project.

28<sup>th</sup> September, 1984

Bangkok, Thailand



Dr. Hiroyuki Yuki

Team Leader

Basic Design Study Team

JICA



Dr. Tim Bhannasiri

Director General

Department of Livestock

Development

1. The proposed site of the Project is located at Bangkhen, Bangkok. The area of land to be secured for the Project is approximately 34,150 square metres (22 rai) consisting of 23,000 square metres (15 rai) of the existing Bangkhen Pig Breeding Centre of Department of Livestock Development and 11,150 square metres (7 rai) of the rice field, belonged to Department of Agriculture. This land, located adjacently south side to the land of Pig Breeding Centre, is to be transferred from Department of Agriculture to Department of Livestock Development for the establishment of National Animal Health and Production Institute. Prior to official procedure necessary for tranferrence of land, including land survey, it is endorsed by the approved letter of Director General, Department of Agriculture addressed to Director General, Department of Livestock Development. The letter translated into English is shown in Annex I together with land map.
2. Before starting construction work, Thai side will take necessary measures to relocate the existing facilities of Pig Breeding Centre to Tab Kuang Breeding station, Saraburi Province.
3. To set up proper institutional framework of the institute, further discussions between both sides shall be needed through scruitnizing the present activities of Divisions concerned including Regional Diagnostic Laboratory Centres, Veterinary Biologics Centre and other related institutions under the Department of Livestock Development. Their mutual understandings have been confirmed on the organization and function chart attached in Annex II.
4. Thai side has worked out the personnel assignment scheme as one of fundamental component necessary for basic design study. The personnel assignment chart is attached in Annex III.

5. The Institute will serve as a national centre for animal health and production improvement in Thailand, therefore the administration of the institute will be directly under supervision of the Director General of Department of Livestock Development. The level of director of the institute would be as same as Deputy Director General of the DLD.

6. The research and service activities to be performed in the Institute are summarized as follows :

- 1) Animal disease investigation activities covering the central region of Thailand (Region 1,2 and 7).
- 2) Central reference activities integrating three Regional Veterinary Diagnostic Laboratory Centres, Khon Kaen, Tung Song and Lampung, covering,
  - a. collection analysis and distribution of data on animal disease
  - b. supply of diagnostic reagent unavailble in The Veterinary Biologics Centre, Pak Chong and DLCs.
- 3) Applied and practical research activities to improve, develop and establish technologies in the following fields
  - a. surveillance of animal disease
  - b. investigation of animal diseases and their causative agents
  - c. development of biologics for veterinary use and establishment of assay procedure excluding routine work of production and assay.
  - d. quality tests of feed and animal products with particular reference to safety test such as feed additives pesticide and antibiotics residues.
- 4) Information service activities of animal disease as
  - a. Collection and analysis of technical data
  - b. Extension of technologies

c. Co-ordination with other relevant organizations

d. Library activities

5) Training of veterinary and scientific personnels

Thai side will plan detailed training programmes for designing of the Institute as soon as possible. Training programmes are to be conducted in the form of group training course and individual course in laboratories. Training participants will be from regional, provincial and district veterinary officers, regional diagnostic laboratory centers and other related organizations under the Department of Livestock Development.

7. Thai side has proposed that Japan's technical cooperation will be extended for implementing the activities of the Institute at the initial stage. A draft proposal of technical cooperation from Department of Livestock Development is attached in Annex IV for consideration of Japanese side in advance.



Date 26 September 1984

From : Department of Agriculture.

Subject: Donation of Land for Department of Livestock Development

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To : Dr.Piya ( Deputy Director-General )

In connection with our meeting on 25 September 1984, on the subject that the Department of Livestock Development requested to use piece of land which belongs to our department for construction of the National Animal Health and Production Institute. I would like to inform you that, I have reported this matter to my Director-General and he has agreed to give you  $6\frac{3}{4}$  rai plus 86.87 square-wa ( as shown in the sketch ). The reason why we can give you only this number of land, is because we have fixed our plan to utilize other parts of the land for our department.

I herewith attached the sketch of the land for your consideration. I hope that this number of land will be enough for construction of the National Animal Health and Production Institute, which your department will receive aid from the Government of Japan.

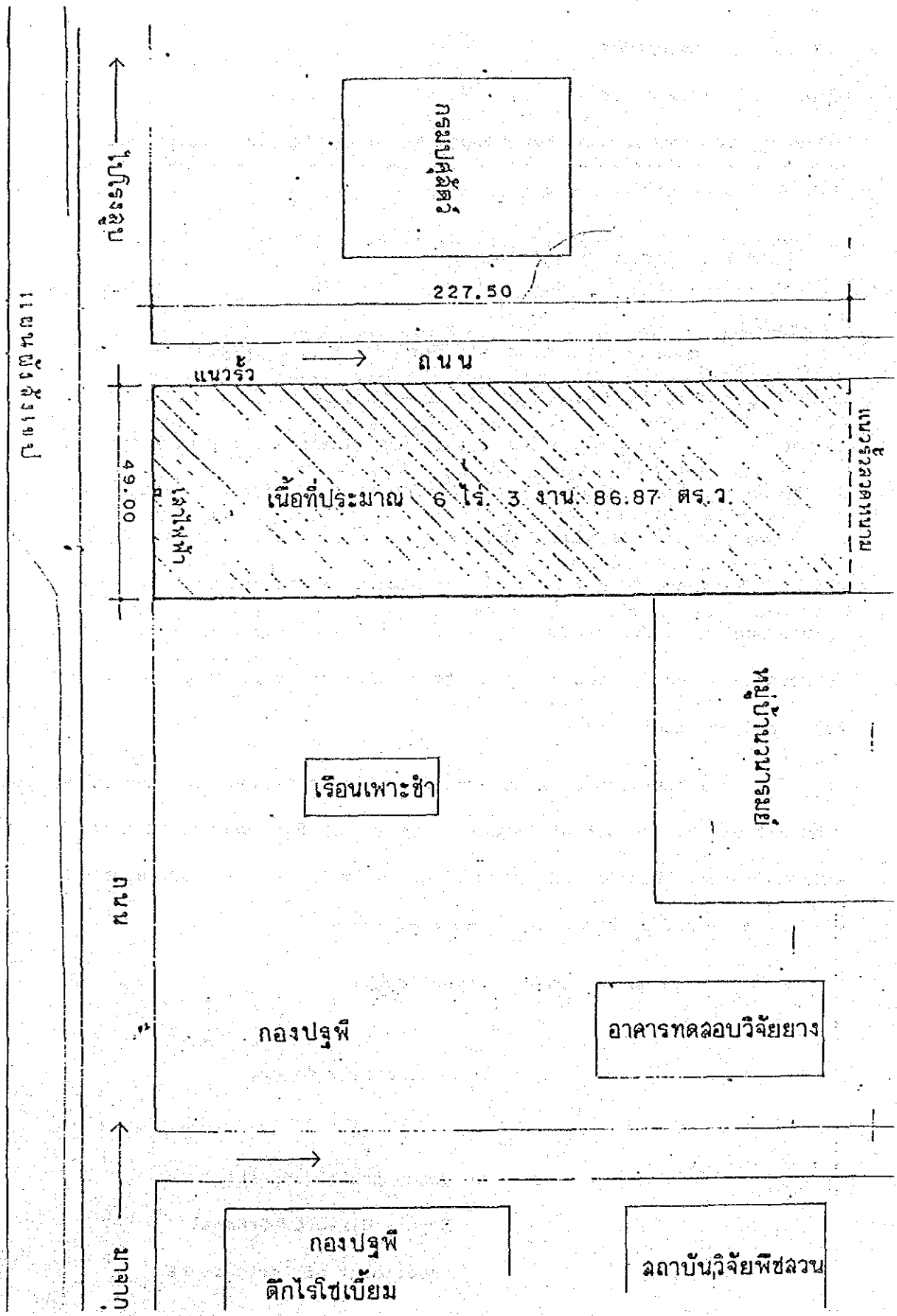
This is for your consideration.

Sincerely Yours,

( Thanongchit Wongsiri )

Deputy Director-General

Department of Agriculture.





บันทึกข้อความ

ส่วนราชการ กรมทรัพยากรธรรมชาติและสิ่งแวดล้อม โทร. 5794855

ที่ - วันที่ 26 กันยายน 2527

เรื่อง ทิศในกรมทรัพยากรธรรมชาติและสิ่งแวดล้อมในกรุงเทพมหานคร

เรื่อง แผนที่รังวัด (แผนที่ ๖)

ตามที่แผนที่รังวัด ได้ไปพบตามรังวัด (ฉบับที่

25 ก.ย. 27) เรื่อง ทิศในกรุงเทพมหานครรังวัดรังวัด

กรมทรัพยากรธรรมชาติและสิ่งแวดล้อม และ

ว่า กรมทรัพยากรธรรมชาติและสิ่งแวดล้อม 6 ปี 3 หน้า 86-87

ตาม (ฉบับที่ ๖) (แผนที่ ๖) ในกรุงเทพมหานคร

ได้ fix ทิศในรังวัด

ตามที่แผนที่รังวัด ได้ไปพบตามรังวัด (ฉบับที่

กรมทรัพยากรธรรมชาติและสิ่งแวดล้อม กรุงเทพมหานคร

รังวัดรังวัด (ฉบับที่ ๖) (แผนที่ ๖)

ฉบับที่ ๖

๒๖

26 ก.ย. 27

ร.พ. กระทรวงประมง

ANNEX II

Organization and Function Chart for the National  
Animal Health and Production Institute (NAHPI)

Existing Laboratories	(Existing No. of Staff)	NAHPI	(Proposed No. of Staff)
1. Division of Veterinary Research			
1) Bacteriology laboratory	(14)	1. BACTERIOLOGY	33
2) Virology laboratory	(12)	2. VIROLOGY	30
3) Parasitology	(11)	3. PARASITOLOGY	28
4) Pathology	( 6)	4. PATHOLOGY	22
5) Toxicology	(13)	5. BIOCHEMISTRY	48
6) Epidemiology	( 9)		
7) Immunology	( 8)		
-Regional Veterinary Diagnostic Centers			
Khon Kaen, Tung Song, Lumpung			
2. Division of Veterinary Biologics			
-Veterinary Biologics Center, Pak Chong			
3. Division of animal Nutrition (11)			
Laboratories (7)			
4. Division of Disease Control			
Laboratories (4)			
-Animal Products Residue			
5. Division of Veterinary Service			
Poultry disease laboratory			
6. Division of Feed Quality Control			
Laboratories (4)			
-Chemical (8)			
-Physical			
-Microbiological			
-Biochemistry			

## ANNEX IV

## Personnel Assignment Chart for the National Animal Health and Production Institute

I.	RESEARCH LABORATORIES	<u>Vet.</u>	<u>Scientist</u>	<u>Para.Vet</u>	<u>Worker</u>	<u>Other</u>	<u>Total</u>
1.	BACTERIOLOGY	10	10	6	7	-	<u>33</u>
	1) Aerobic bacteria						
	2) Anaerobic bacteria and Enterobacteria						
	3) Mycoplasma and Mycobacteria						
	4) Fungi						
2.	VIROLOGY	10	9	5	6	-	<u>30</u>
	1) Bovine disease						
	2) Swine disease						
	3) Poultry disease						
	4) Special studies						
3.	PARASITOLOGY	8	9	5	6	-	<u>28</u>
	1) Ecto-parasitology						
	2) Endo-parasitology						
	3) Protozoa						
	4) Epidemiology						
4.	PATHOLOGY	7	7	4	4	-	<u>22</u>
	1) General pathology						
	2) Clinical pathology						
	3) Immuno-pathology						
5.	BIOCHEMISTRY	15	15	8	10	-	<u>48</u>
	1) Toxicology						
	2) Clinical biochemistry						
	3) Immuno-chemistry						
	4) Feed Quality and Safety						

6. ANIMAL EXPERIMENT

"Number of personnel is included at Virology labo."

	<u>Vet.</u>	<u>Scientist</u>	<u>Para-Vet</u>	<u>Worker</u>	<u>Adm. staff</u>	<u>Total</u>
II. ADMINISTRATION						
Director of the Institute						
1. General Affairs	3	11	-	20	8	42
1) General affairs						
2) Personnel						
3) Accountant						
4) Maintenance and Procurement						
2. Planning and Co-ordination	2	3	1	3	3	12
1) Planning						
2) Coordination						
3. Training and Extension	-	2	1	1	2	6
1) Trainig						
2) Extension						
4. Information Center	1	4	-	4	5	14
1) Statistics						
2) Infomation						
3) Publication						
4) Library						
<u>GRAND TOTAL</u>	<u>56</u>	<u>70</u>	<u>30</u>	<u>61</u>	<u>18</u>	<u>235</u>

(2) Basic Design Study Team (Confirmation, Dec. 1984)

1) Member List

THE JAPANESE BASIC DESIGN STUDY TEAM

FOR

THE ANIMAL HEALTH AND PRODUCTION INSTITUTE

MEMBER LIST

Team Leader	Dr. Hiroshi Yonemura	Chief, Extension Section Planning and Coordination Division National Institute of Animal Health
Project Coordinator	Yoshifusa Shikama	Basic Design Division Grant Aid Dept., JICA
Chief Architect	Kiyoshi Hata	Nikken Sekkei Ltd
Equipment Planner	Tsunemasa Motohashi	Nikken Sekkei Ltd
Architect	Yutaka Segawa	Nikken Sekkei Ltd

2) Itinerary

1984

- Dec. 18 Tue. Arrive in Bangkok
- 19 Wed. Meeting with Embassy of Japan and JICA  
Courtesy visit to DTEC  
Courtesy visit to DLD, submitted the Draft Final Report
- 20 Thu. Meeting with DLD (1)  
Explanation of Draft Final Report to, and consultation  
with, DLD  
Site survey
- 21 Fri. Meeting with DLD (2)  
Discussion and consultation with DLD
- 22 Sat. Work within Team
- 23 Sun. Work within Team  
Visit to Grant Aid facilities
- 24 Mon. Discussion with DLD on the draft of Minutes of  
Discussions  
Signing of the Minutes of Discussions  
Report to the Embassy of Japan and JICA
- 25 Tue. Return to Japan



3) Minutes of Discussions

MINUTES OF DISCUSSIONS  
ON  
THE DRAFT FINAL REPORT OF THE BASIC DESIGN STUDY  
ON  
THE ESTABLISHMENT OF THE NATIONAL ANIMAL HEALTH  
AND PRODUCTION INSTITUTE  
IN  
THE KINGDOM OF THAILAND

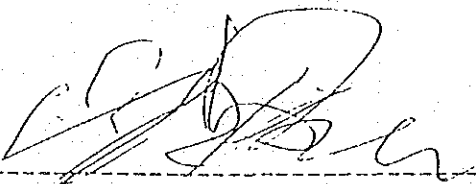
The Government of Japan has sent, through Japan International Cooperation Agency (JICA), a Mission to the Kingdom of Thailand from December 18th to 25th, 1984, for the purpose of presenting and explaining the Draft Final Report of the Basic Design Study (The Report) on the Project.

The team held meetings with the authorities concerned of Thai side headed by Dr. Pinit Suphavilai, Deputy Director-General, Department of Livestock Development, Ministry of Agriculture and Cooperatives, to explain and to discuss on the Report.

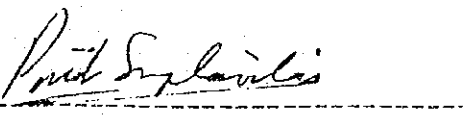
The main items which were discussed and understood by both parties at the meetings are as follows:

1. The Thai side principally agreed upon the Report and appropriate alterations in design the discussions which will be incorporated in the Final Report.
2. The Final Report (10 copies in English) on the Project will be submitted to the Government of Thailand by the end of February, 1985.
3. Both sides confirmed that the Thai side understood the system of Grant Aid Programme to be extended by the Government of Japan especially the arrangements to be taken by the Government of Thailand as agreed in the Minutes for the Project dated September 28th, 1984.

Bangkok, December 24th, 1984



Mr. Hiroshi Yonemura  
Leader,  
Japanese Study Team



Dr. Pinit Suphavilai  
Deputy Director-General  
Department of Livestock Development  
Ministry of Agriculture and Cooperatives

Schedule for removing the existing  
facilities and earth filling of the project site

- 
- |            |   |  |
|------------|---|--|
| Jan. 2, 85 | - | Start removing the existing facilities   |
| Jan. 3, 85 | - | Tendering and contract for earth filling |
| Feb. 4, 85 | - | Start earth filling                      |
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SUPPLEMENT TO THE DRAFT FINAL REPORT OF BASIC DESIGN STUDY FOR THE  
CONSTRUCTION OF NATIONAL ANIMAL HEALTH AND PRODUCTION INSTITUTE

1. Site preparation works shall be undertaken by Thai side

It was confirmed that the removal of the existing facilities of Pig breeding station will be commenced on January 2nd 1985 and completed by the start of the construction by Japanese side. The earth filling of the site also will be started immediately according to the attached schedule furnished from Thai side. The foot path, proposed in the draft final report to be constructed along the boundary at south side of the site in lieu of the existing foot path running along south side of the site will not be constructed. Thai side shall arrange immediately necessary procedure to follow the project schedule.

2. Personnel Assignment

It was confirmed that Thai side provide the personnel assignment according to the proposed allocation plan described in the Final draft report of this project (page 3-13 and 5-3) by the time of the completion of the construction for this project and Thai side shall take necessary arrangement for budgeting.

3. Revision and Addition to Draft Report of the Basic Design Study

The Draft Report will be revised and added according to the discussion of the meetings as listed in the attached sheets.

(3) Thai Government Officials Concerned

1. Department of Technical and Economic Cooperation (DTEC)

Mr. Kasem Unahasuvan	Deputy Director-General
Mr. Sutin Susila	Member Colombo Plan Sub-Division
Mr. Surayuth Kungsadan	Member Colombo Plan Sub-Division

2. Ministry of Agriculture and Cooperatives

Mr. Chote Suvipakit	Director, Foreign Agriculture Relations
	Division, Office of Permanent Secretary

3. Department of Livestock Development

Dr. Tim Bhannasiri	Director General
Mr. Vitoun Khumnirdpetch	Deputy Director General (Livestock)
Dr. Pinit Suphavitai	Deputy Director General (Administration)
Dr. Piya Aranyakananda	Deputy Director General (Technology)

1) Division of Planning

Dr. Siriwat Sarobol	Director
Dr. Vises Presert	Chief, International Cooperation Office
Miss Kannika Ruenparch	Staff
Dr. Samran Tapwichien	Staff
Miss Chiraporn Sapakit	Staff
Dr. Anong Bintawihok	Staff (Toxicology Section)

2) Division of Personnel

Dr. Ubol Srisomboon	Director
Dr. Jamlong Poompakdee	Staff

3) Division of Financial

Mrs. Lamai Chatniyom	Staff
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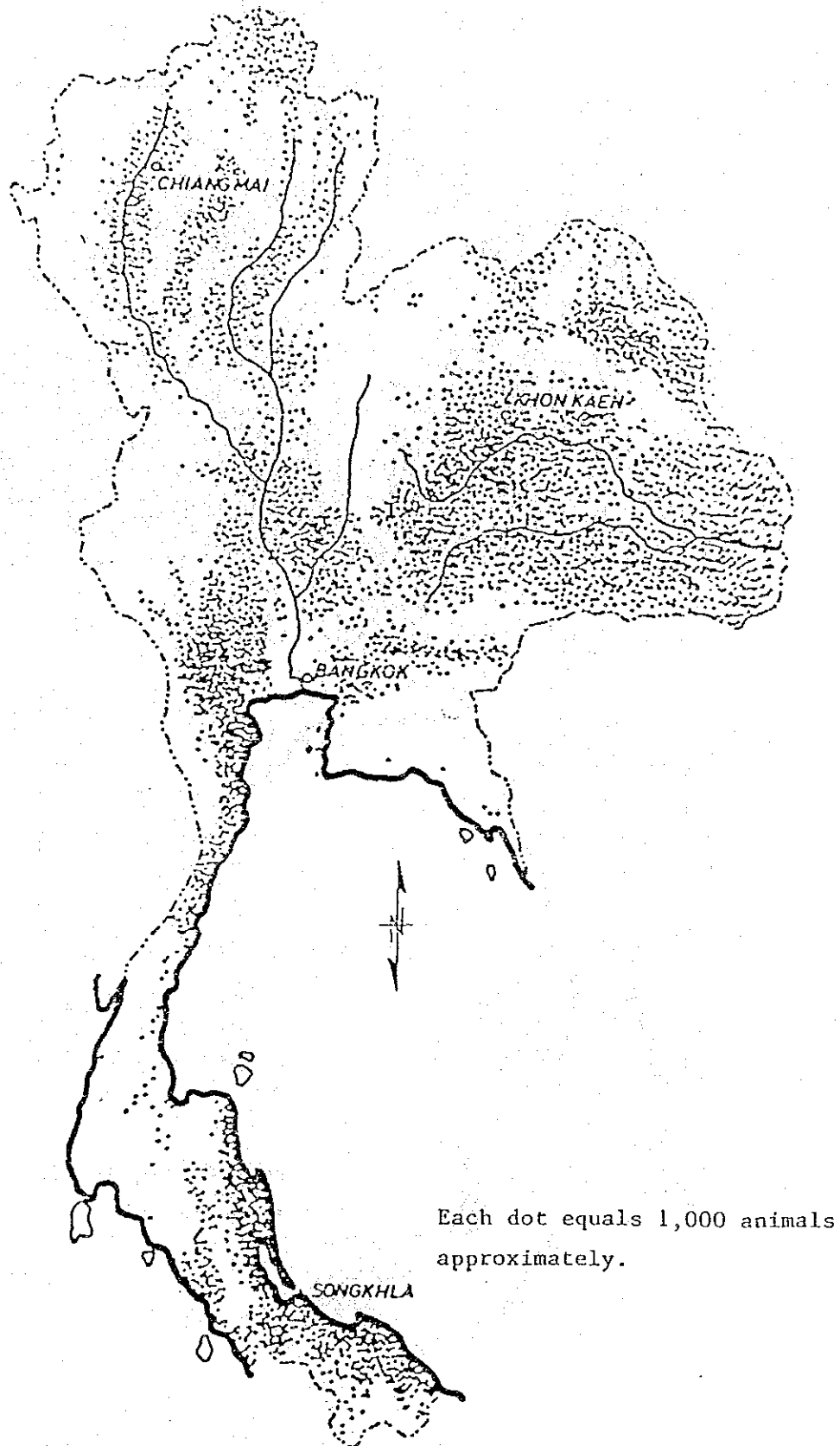
- 4) Division of General Affairs  
 Dr. Reanchai Bintvinhok
- 5) Division of Disease Control, DLD  
 Dr. Soyon Muangchroen Director  
 Dr. Utis Mustigo Chief, Eradication Disease Section
- 6) Division of Veterinary Service  
 Dr. Chaweewan Leawijak Staff
- 7) Division of Veterinary Biologics Production  
 Dr. Smarn Pipthkul Director  
 Dr. Watana Srisongmuang Staff
- 8) Division of Veterinary Research, DLD  
 Dr. Sutham Bunya-upapat Director  
 Dr. (Ms) Urasri Tantaswasdi Chief, Virology Section  
 Dr. Vichitr Sukhapisna Chief, Parasitology Section  
 Dr. Prapahd Neramitmansook Rep. Bacteriology Section  
 Dr. (Ms) Wallapa Santivatr Rep. Bacteriology Section  
 Dr. (Ms) Anong Binthaviahok Toxicology and Biochemistry Section  
 Dr. Chaowana Mekgamol Epidemiology Section  
 Dr. Somboon sutherat Chief, Pathology Section
- 9) Division of Animal Nutrition, DLD  
 Dr. Panudej Sutad Na  
 Ayunhaya Director  
 Miss Nisa Sobhon Staff
- 10) Division of Feed Registration and Quality Control  
 Dr. (Ms) Yuantar Pruksaraj Director  
 Mrs. Cherdchai Thiratinrat Scientist  
 Mr. Dumri Haisupa Engineer, Design Section Office of  
 Department Secretariat, DLD



(4) Others

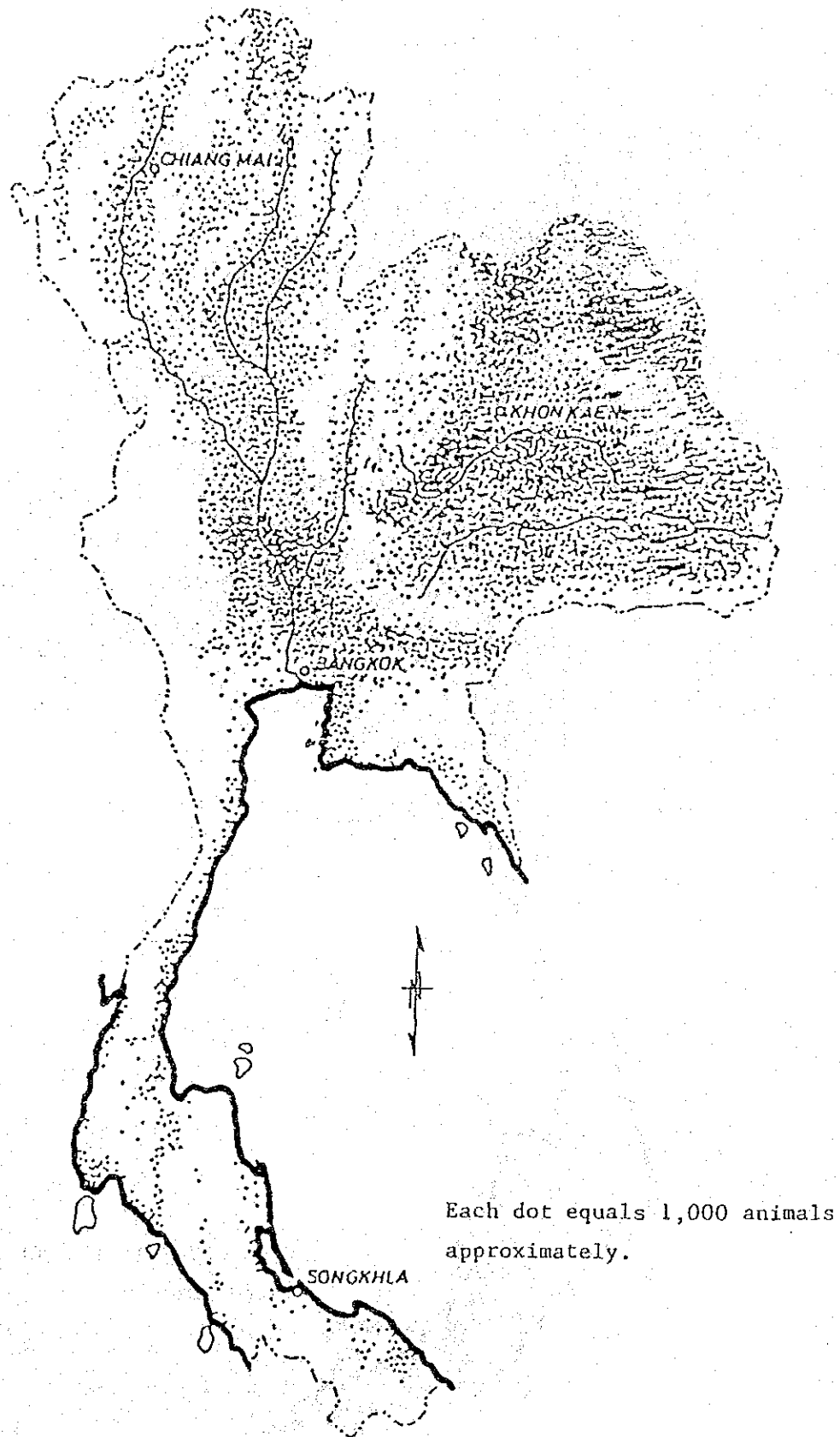
1) Breeding Distribution of Cattle and Buffalo in Thailand

(Cattle, 1970)



Source: The five faces of Thailand, an economic geography. W. Donner, 1978.

(Buffaloes, 1970)



Source: The five faces of Thailand, an economic geography. W. Donner, 1978.



2) Production Amount of Fresh Milk in 1982

แหล่งผลิต	ปริมาณน้ำนมดิบ					
	มกราคม January	กุมภาพันธ์ February	มีนาคม March	เมษายน April	พฤษภาคม May	มิถุนายน June
อ.ส.ค. เขตมวกเหล็ก	911.9	849.2	970.5	1,074.9	1,218.6	1,281.7
อ.ส.ค. เขตประจวบคีรีขันธ์	85.8	84.0	118.3	139.7	149.9	149.3
อ.ส.ค. เขตเชียงใหม่	72.7	64.6	71.5	72.9	82.5	83.2
สหกรณ์โคนมหนองโพจำกัด	784.2	709.2	771.3	786.0	821.6	785.9
สหกรณ์โคนมอยุธยา	69.4	60.0	65.3	65.3	62.7	63.5
สหกรณ์โคนมนครปฐม	16.6	14.2	16.3	17.7	19.4	17.4
มหาวิทยาลัยเกษตรศาสตร์	4.3	3.7	5.4	5.7	5.3	5.1
รวมทั้งหมด	1,944.9	1,784.9	2,018.6	2,162.2	2,360.0	2,388.1
เฉลี่ย ตัน/วัน	62.7	63.7	65.1	72.1	76.1	79.5

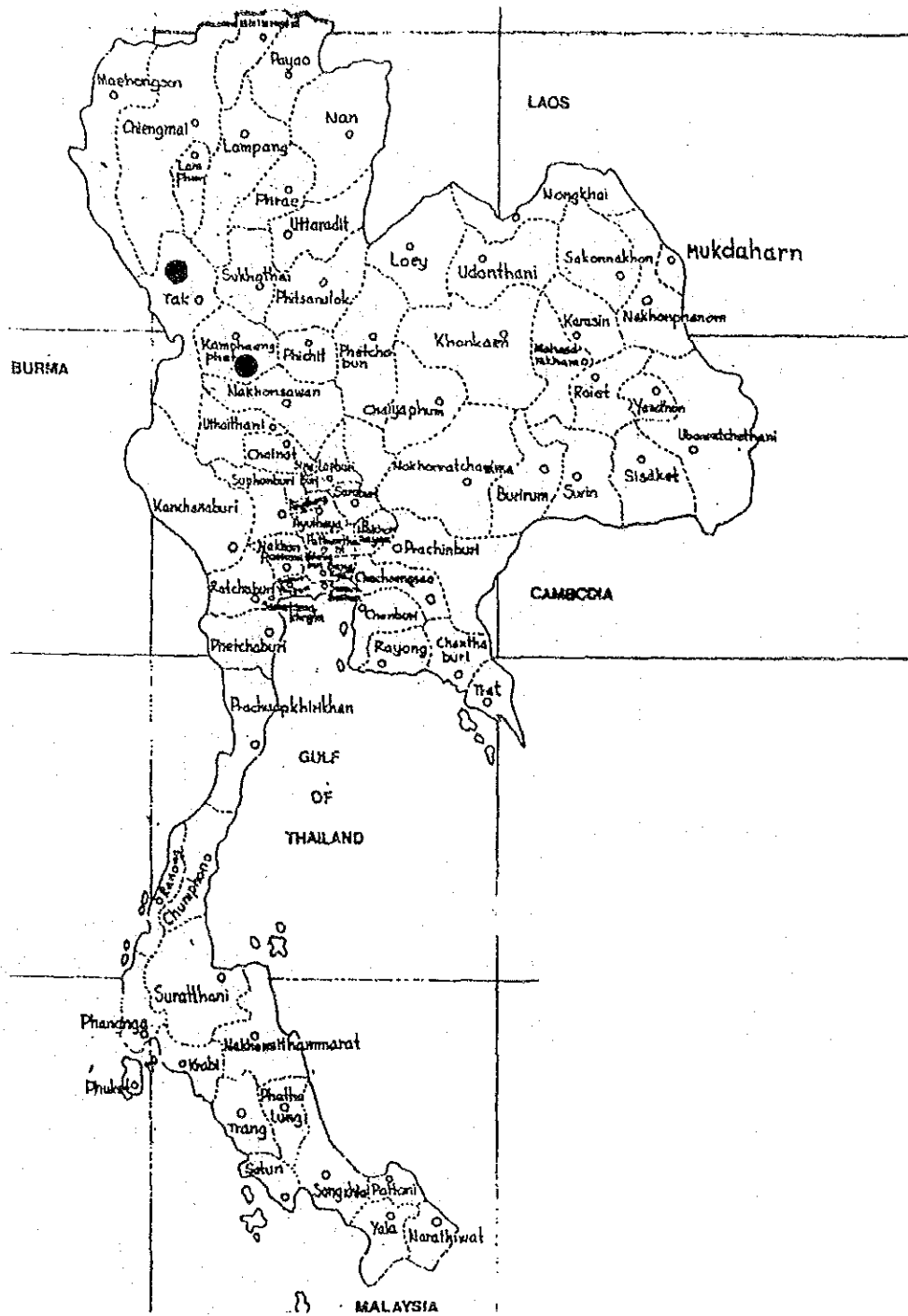
Quantity of Fresh Milk						รวม Total	Area
กรกฎาคม July	สิงหาคม August	กันยายน September	ตุลาคม October	พฤศจิกายน November	ธันวาคม December		
1,332.3	1,302.5	1,206.0	1,276.0	1,224.8	1,255.1	13,903.5	D.F.P.O. (Muaglek)
161.8	171.0	170.0	197.6	205.8	225.9	1,859.1	D.F.P.O. (Prachuap Khiri Khan)
79.6	74.2	68.5	83.3	90.6	91.1	934.7	D.F.P.O. (Chiang Mai)
781.5	765.0	738.4	800.2	799.6	831.2	9,374.1	Nong-Po Cooperative
59.9	49.2	42.9	50.9	57.3	66.0	712.4	Ayuthaya Cooperative
15.7	17.1	17.0	14.3	11.2	13.7	190.6	Nakhon Pathom Cooperative
5.7	4.7	3.8	3.6	2.9	3.7	53.9	Kasetsart University
2,436.5	2,383.7	2,246.6	2,425.9	2,392.2	2,486.7	27,028.3	Total
78.6	76.9	74.9	78.3	79.7	80.2	74.1	Average Ton/Day

Unit : tons

D.F.P.O = Dairy Farming Promotion Organization of Thailand .

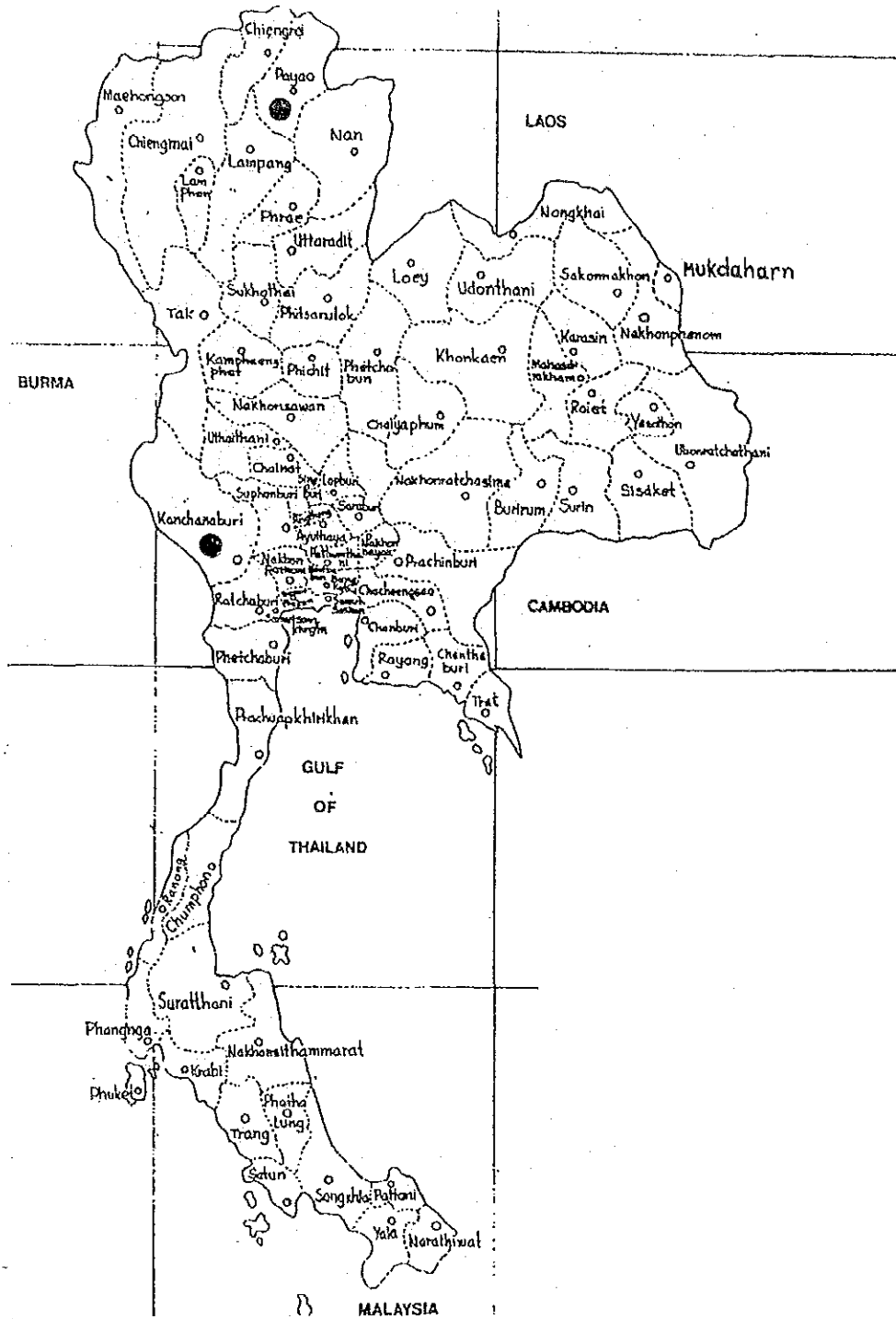
3) Occurrence Distribution of Anthrax and Hemorrhagic Septicaemia

(Anthrax, 1983)



EPIDEMIC DISEASE REPORTS OF ANTHRAX IN THE CALENDAR YEAR, 1983

(Anthrax, 1984)

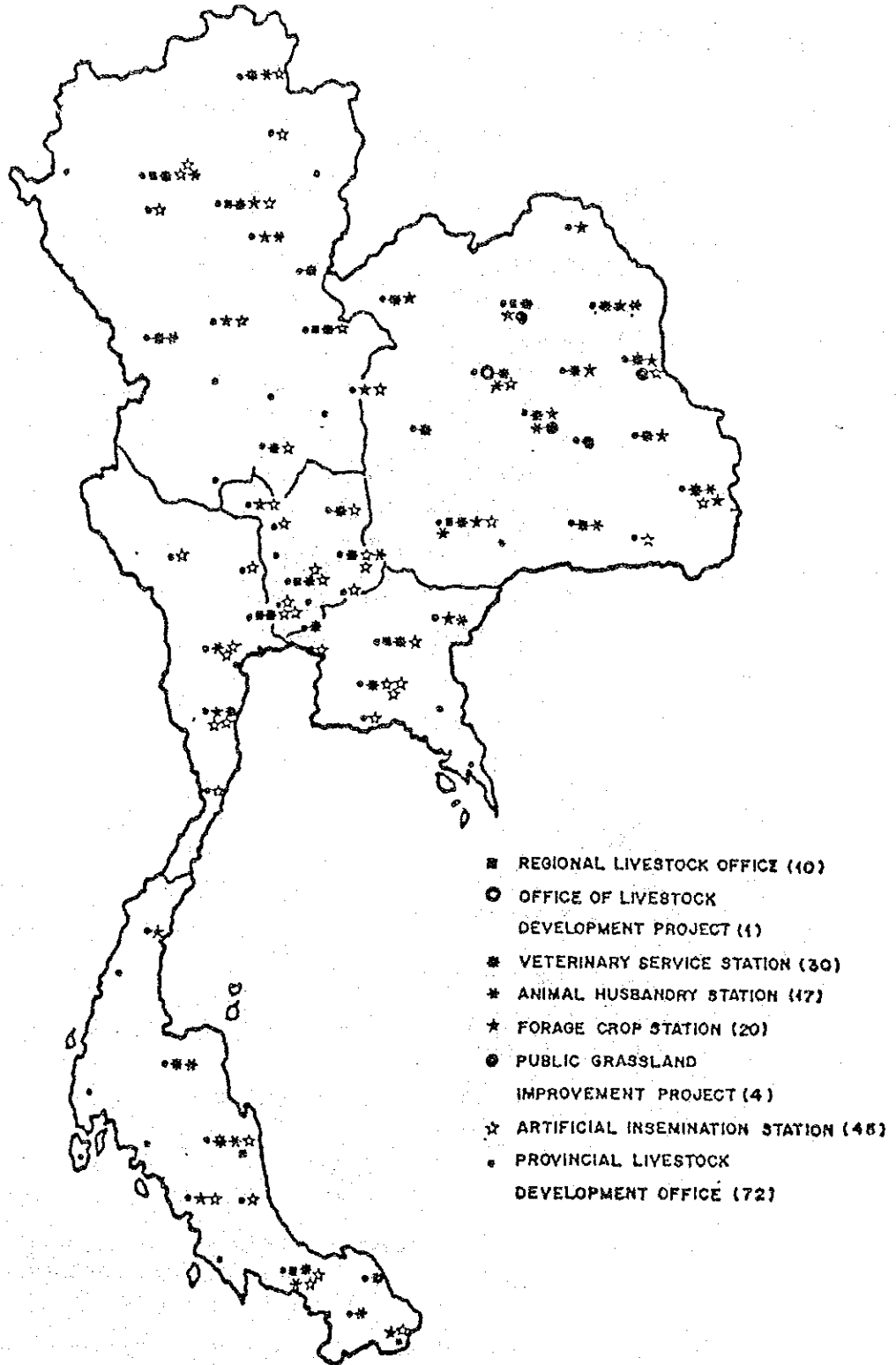


EPIDEMIC DISEASE REPORTS OF ANTHRAX IN THE CALENDAR YEAR, 1984





4) Name and Location of the Organizations under DLD



(Source: DLD)

# WATER ANALYSIS REPORT

Item	Sample Name	Deep Well *			
Sampling Date		19-9-84			
Appearance					
Turbidity					
Color					
P H		7.03			
Electric Conductivity ( $\mu\text{m/cm}$ )		665			
Total Solid (p.p.m. as NaCl)		<del>665</del> $\times 0.65$			
Total Hardness (p.p.m. as $\text{CaCO}_3$ )		120.0			
Calcium Hardness (p.p.m. as $\text{CaCO}_3$ )					
Total Iron (p.p.m. as Fe)		0.31			
M-Alkalinity (p.p.m. as $\text{CaCO}_3$ )		290.0			
P-Alkalinity (p.p.m. as $\text{CaCO}_3$ )					
Chloride Ion (p.p.m. as Cl)		8.5			
Sulfate Ion (p.p.m. as $\text{SO}_4^{2-}$ )		5.4			
Silica (p.p.m. as $\text{SiO}_2$ )		40.4			
Phosphate Ion (p.p.m. as $\text{PO}_4^{3-}$ )					
Chemical Oxygen Demand					
Manganese ( $\text{Mn}^{+2}$ )		0.21			
Remark	* Bangkhen				

JICA