

活動はタイ国に留まらず、同様な地勢・生活環境下にあるラオスからの訓練生受入れ実績に見られるように、ミャンマー、カンボジア、ベトナム、中国等広く近隣諸国に及ぶものである。しかし、既存の諸施設が不備なため、その能力が十分発揮されていない状況にある。本計画施設の規模・活動内容はタイ国の技術的・経済的レベルにおいて現実的、かつ妥当なものであり、かかる実情からみて、本計画施設がチェンマイ大学により適切に維持・管理・運営されることは確実である。また日本からの技術協力が実施されるならば、高地農業の開発、訓練、普及の一層の充実が図られることになる。

タイ国政府はその重要性、緊急性に鑑み、本計画を最優先プロジェクトの一つとして位置付け、麻薬取締局の協力のもと、チェンマイ大学が計画に係わる事業費の確保と維持・管理・運営のための体制を整えつつあり、本計画に要する運営資金の予算措置は十分可能であると見込まれる。

このような背景のもとに進められる本計画は、国際的地域センターとしてタイ国のみならずミャンマー、ラオス、ベトナム、中国等近隣諸国の山岳民族の住民生活の向上、民生の安定化に大きく寄与するばかりでなく、日本とタイ国及び近隣諸国間の協力を通じてその友好関係に益するところが多いものと確信される。

# 資料編



## 資料編 1 協議議事録

### 1-1 基本設計調査

### 1-2 ドラフト・ファイナル・レポート説明



MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY ON THE PROJECT  
FOR  
THE IMPROVEMENT OF FACILITIES AND EQUIPMENT  
FOR  
THE HIGHLAND AGRICULTURAL DEVELOPMENT AND TRAINING CENTER  
IN  
THE KINGDOM OF THAILAND

In response to the request made by the Government of the Kingdom of Thailand, the Government of Japan decided to conduct a Basic Design Study on the Project for the Improvement of Facilities and Equipment for the Highland Agricultural Development and Training Center (hereinafter referred to as "the Project"), and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to the Kingdom of Thailand a study team, which is headed by Mr. Masashi Kono, Deputy Director, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, from January 27 to February 20.

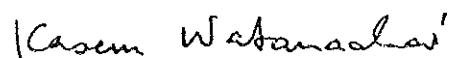
The team had a series of discussions with the officials concerned of the Government of the Kingdom of Thailand and conducted a field survey at the study area.

As a result of discussions and field survey, both sides have confirmed the main items described in the attached sheets. The team will proceed to further works and prepare the Basic Design Study Report.

Chiang Mai, February 5, 1992



Mr. Masashi Kono  
Leader  
Basic Design Study Team  
JICA



Prof. Kasem Watanachai M.D.  
President  
of  
Chiang Mai University

## ATTACHMENT

### 1. Title of the Project

The title of the Project is the Improvement of Facilities and Equipment for the Highland Agricultural Development and Training Center.

### 2. Objective

The objective of the Project is to contribute to the Highland Agricultural Development by improving the Highland Agricultural Development and Training Center.

### 3. Project Site

The Project site is located at Chang Khian, as shown in Annex I.

### 4. Coordinating and Executing agencies

Office of the Narcotics Control Board(ONCB), Office of the Prime Minister, will coordinate and give necessary assistances to the Project.

Chiang Mai University is responsible for the administration and execution of the Project.

### 5. Necessary items for the realization of the Project requested by the Government of the Kingdom of Thailand

After discussions, both sides have confirmed that the following items would be necessary for the realization of the Project.

#### (1) Construction of the facilities for the Chang Khain Highland Agricultural Development and Training Center

- 1) Training room
- 2) Library
- 3) Dining room
- 4) Exhibition room
- 5) Office and Administration room
- 6) Dormitory
- 7) Warehouse and Workshop

(2) Provision of equipment related to the Project

- 1) Equipment for training
- 2) Equipment for demonstration farm
- 3) Equipment for road maintenance
- 4) Equipment for transportation vehicles
- 5) Equipment for highland agricultural development

However, the final components of the Project may differ from the above items, if it is so judged after further studies in Japan.

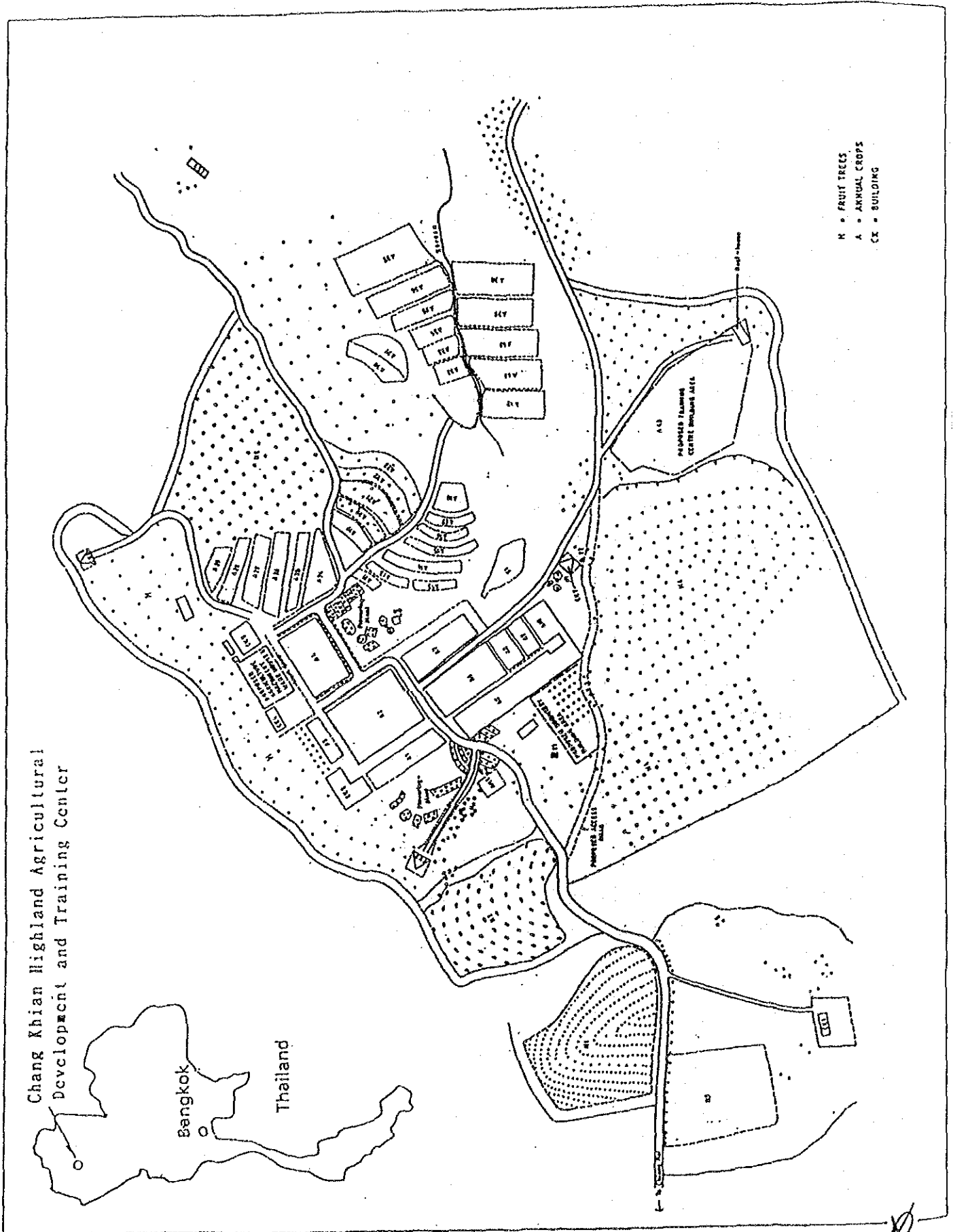
6. Japan's Grant Aid system

- (1) The Thai side understood the system of Japan's Grant Aid as explained by the team.
- (2) The Thai side will take necessary measures, as described in Annex II for the smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

7. Schedule of the Study

- (1) The consultants will proceed to further studies in Thailand until February 20.
- (2) Based on the Minutes of Discussions and the results of the study, JICA will prepare a draft report and dispatch a mission in order to explain its contents in May, 1992.
- (3) Upon approval of the said draft report by the Thai side, JICA will complete the final report and send it to the Government of the Kingdom of Thailand around July 1992.





K = FRUIT TREES  
A = ANNUAL CROPS  
CX = BUILDING

Chang Khian Highland Agricultural  
Development and Training Center

Bangkok

Thailand

MKB  
KW

Annex II

Necessary measures to be taken by the Government of the Kingdom of Thailand on condition that Japan's Grant Aid is extended:

1. To secure the site for the Project.
2. To clear, level and reclaim the site prior to commencement of the construction.
3. To undertake incidental outdoor works such as gardening, fencing, gates and exterior lighting within and around the site.
4. To improve the access road to the site prior to commencement of the construction.
5. To provide facilities for water supply, and other incidental facilities including general furniture.
6. To arrange exemption of customs duties and other taxes on the materials and products imported or procured locally in Thailand for the Project, and to take the necessary measures for customs clearance at the port of disembarkation.
7. To arrange exemption of Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the Kingdom of Thailand with respect to the supply of the products and services under the verified contracts.

8. To arrange entry and stay of Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contracts, and extend such facilities as may be necessary for their entry into the Kingdom of Thailand and stay therein for the performance of their works.
9. To use and maintain properly and effectively the facilities constructed and the equipment purchased under the Grant.
10. To arrange to bear all the expenses other than those to be covered by the Grant, necessary for the execution of the Project.

MINUTES OF DISCUSSIONS  
BASIC DESIGN STUDY ON THE PROJECT FOR  
THE IMPROVEMENT OF FACILITIES AND EQUIPMENT FOR  
THE HIGHLAND AGRICULTURAL DEVELOPMENT AND TRAINING CENTER  
IN THE KINGDOM OF THAILAND  
(CONSULTATION ON DRAFT REPORT)

From January 27 to February 20, 1992, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study team on the Project for the Improvement of Facilities and Equipment for the Highland Agricultural Development and Training Center (hereinafter referred to as "the Project") to the technical examination of the result in Japan, the team has prepared the draft report of the study.

In order to explain and to consult with the Thai side on the components of the draft report, JICA sent to the Kingdom of Thailand a study team, which is headed by Mr. Teruaki Kamada, Assistant Director Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, and is scheduled to stay in the country from June 7 to June 13, 1992.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Chiang Mai, June 11, 1992

J. Kamada

Mr. Teruaki Kamada

Leader

Draft Report Explanation Team

JICA

Kasem Watanachai

Prof. Kasem Watanachai M.D.

President

of

Chiang Mai University

## ATTACHMENT

### 1. Components of Draft Report

The Government of the Kingdom of Thailand has agreed and accepted in principle the components of the Draft Report proposed by the team.

### 2. Japan's Grant Aid System

(1) The Government of the Kingdom of Thailand has understood the system of Japanese Grant Aid explained by the team.

(2) The Government of the Kingdom of Thailand will take the necessary measures, described in Annex 1, for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

### 3. Further Schedule

The team will make the Final Report in accordance with the confirmed items, and send it to the Kingdom of Thailand by the end of July, 1992.

### 4. Staff Allocation

The Thai side has confirmed all the staff mentioned in the Draft Report shall be allocated three months before the completion of the construction work, on condition that the Grant assistance by the Government of Japan is extended to the Project.

7/11  
10/11

5. Operation and Maintenance Cost for the Centre

Also the Thai side has confirmed the yearly operation and maintenance cost estimated in the Draft Report shall be taken budgetary measures three months before the completion of the construction work, on condition that the Grant assistance by the Government of Japan is extended to the Project.

6. Technical Cooperation

1. Thai side requested the short term Agricultural Expert in the field of Post harvest, Meteorology and Plant Protection for supporting the training programme. The team stated to convey the above mentioned request to the agencies concerned, while the team explained the difficult execution of the request under the present situation.
  
2. Thai side requested the acceptance of Thai lecturers assigned in the Center to be trained in Japan.

Annex 1 : Necessary measures to be taken by the Government of the Kingdom of Thailand on condition that Japan's Grant Aid is extended :

1. To secure the site for the Project.
2. To undertake incidental outdoor works such as gardening, fencing, gates and exterior lighting within and around the site.
3. To improve the access road to the site prior to commencement of the construction.
4. To provide facilities for water supply, and other incidental facilities including general furniture.
5. To arrange exemption of customs duties and other taxes on the materials and products imported or procured locally in Thailand for the Project, and to take the necessary measures for customs clearance at the port of disembarkation.
6. To arrange exemption of Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the Kingdom of Thailand with respect to the supply of the products and services under the verified contracts.

7. To arrange entry and stay of Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contracts, and extend such facilities as may be necessary for their entry into the Kingdom of Thailand and stay therein for the performance of their works.
8. To use and maintain properly and effectively the facilities constructed and the equipment purchased under the Grant.
9. To arrange to bear all the expenses other than those to be covered by the Grant, necessary for the execution of the Project.

ZK  
Ker





## 資料編 2 調査団員名簿

### 2-1 基本設計調査

### 2-2 ドラフト・ファイナル・レポート説明



2-1 タイ王国高地農業開発訓練センター拡充計画基本設計調査

調査団員名簿

河野 雅之	団 長 ( 総 括 )	外務省 経済協力局無償資金協力課 課長補佐
酒井 保幸	高地農業技術普及計画	農林水産省 経済局国際部国際協力課 海外技術協力官
乾 英二	計 画 管 理	国際協力事業団 無償資金協力調査部 基本設計調査第一課
高力 寛三	栽培技術普及計画 (業務主任技術者)	(株) 三祐コンサルタント
曾川 正敏	施 設 設 計	(株) アイデック
田村 栄	機 材 計 画	(株) 三祐コンサルタント

2-2 タイ王国高地農業開発訓練センター拡充計画基本設計調査

ドラフト・ファイナル・レポート説明

調査団員名簿

鎌田 照章	団 長 ( 総 括 )	外務省 経済協力局無償資金協力課 課長補佐
高力 寛三	栽培技術普及計画 (業務主任技術者)	(株) 三祐コンサルタンツ
田村 栄	機 材 計 画	(株) 三祐コンサルタンツ

## 資料編 3 調査日程

### 3-1 基本設計調査

### 3-2 ドラフト・ファイナル・レポート説明



3-1 基本設計調査日程表

NO	日付	曜	行程 (宿泊地)	行 動
1	1/27	月	東京→バンコック (バンコック泊)	JL717 13:00→17:35
2	1/28	火	(バンコック泊)	JICA事務所と打合せ タイ国総理府経済技術庁(DTEC)表敬訪問
3	1/29	水	(バンコック泊)	国連麻薬取締計画(UNDCP)表敬訪問 アメリカ国際開発庁(USAID)表敬訪問 タイ国内務省公共福祉局山岳民族福祉部と打合せ
4	1/30	木	バンコック→チェンマイ (チェンマイ泊)	TG104 12:00→13:05 チェンマイ大学表敬訪問 (インセプション・調査方針説明並びに日程打合せ)
5	1/31	金	(チェンマイ泊)	チェンマイ大学と協議 チェンマイ大学農学部施設視察 山岳民族福祉部フィールド事務所訪問 タイ/オーストラリア・プロジェクト地域のバン・フ エイ・タード村視察
6	2/01	土	(チェンマイ泊)	チャンキャン・サイト調査 ドイ・ノタノン・ロイヤル・プロジェクト訪問
7	2/02	日	(チェンマイ泊)	資料整理及び団内打合せ
8	2/03	月	(チェンマイ泊)	チェンマイ大学学長表敬訪問 チェンマイ大学と協議
9	2/04	火	(チェンマイ泊)	チェンマイ大学と協議 協議議事録草稿提出
10	2/05	水	チェンマイ→バンコック (官団員バンコック泊) (コンサル団員チェンマイ泊)	協議議事録署名 TG119 12:50→14:00 ONCB宛て報告 チェンマイ大学と施設規模及び機材協議
11	2/06	木	(官団員バンコック泊) (コンサル団員チェンマイ泊)	日本大使館、JICA事務所宛て報告 チャンキャン・サイト詳細調査 ロイヤル・プロジェクト事務所及び北方農業開発セ ンター事務所表敬訪問
12	2/07	金	バンコック→東京 (コンサル団員チェンマイ泊)	官団員帰国TG640 11:00→19:00 チェンマイ大学と協議
13	2/08	土	(チェンマイ泊)	資料整理並びに団内打合せ
14	2/09	日	(チェンマイ泊)	資料整理並びに団内打合せ



NO	日付	曜	行程 (宿泊地)	行 動
15	2/10	月	(チェンマイ泊)	チェンマイ大学と訓練計画、施設並びに機材につき協議 質問回答書受領
16	2/11	火	(チェンマイ泊)	ノンホイ訓練センター視察 チェンマイ大学と質問書回答につき協議
17	2/12	水	(チェンマイ泊)	理学部化学科小林義男専門家表敬訪問 領事館表敬訪問 学長事務所・営繕部訪問 建設資材及び機材業者聴取 在チェンマイONCB及びUNDCPプロジェクト協力 事務所表敬訪問
18	2/13	木	(チェンマイ泊)	チェンマイ大学と協議
19	2/14	金	チェンマイ→バンコック (バンコック泊)	チェンマイ大学と最終打合せ TG105 14:00→15:00
20	2/15	土	(バンコック泊)	団内打合せ
21	2/16	日	(バンコック泊)	資料整理及び団内打合せ
22	2/17	月	(バンコック泊)	大使館及びJICA事務所宛て報告 農業、建設及び機材事情調査
23	2/18	火	(バンコック泊)	資料整理及び団内打合せ
24	2/19	水	(バンコック泊)	農業、建設資材及び輸送事情調査 ONCBと打合せ
25	2/20	木	バンコック→東京	コンサル団員帰国 TG640 11:00→19:00

3-2 ドラフト・ファイナル・レポート説明日程表

NO	日付	曜	行程 (宿泊地)	行 動
1	6/07	日	東京→バンコック (バンコック泊)	TG641 11:00→15:30
2	6/08	月	(バンコック泊)	JICA、EOJ、DTEC及びONCB表敬訪問、ファイナル・ドラフト・レポート説明
3	6/09	火	バンコック→チェンマイ (チェンマイ泊)	TG114 09:50→10:55 チェンマイ大学表敬訪問並びにファイナル・ドラフト・レポート説明/協議
4	6/10	水	(チェンマイ泊)	チェンマイ大学と協議、協議議事録草稿提出、チャンキャン・サイト調査
5	6/11	木	(チェンマイ泊)	協議議事録署名、在タイ日本国大使館チェンマイ駐在官事務所表敬訪問
6	6/12	金	チェンマイ→バンコック (バンコック泊)	TG111 07:45→08:50 JICA及びONCB宛報告
7	6/13	土	バンコック→東京	TG640 11:00→18:50



## 資料編 4 主な面会者リスト

4-1 基本設計調査

4-2 ドラフト・ファイナル・レポート説明



## 1. Office of Narcotics Control Board (ONCB)

(麻薬取締局)

Police General Chavalit Yodmani	Secretary General, Narcotics Control Board
Mr. Sorasit Saengprasert	Director, Narcotics Crop Control Division
Ms. Siree Bonnag	Director, Technical and Planning Division
Mrs. Runathai Singlalvany	Chief, Foreign Affairs Sub-Division
Ms. Yupana Chitkaroon	Foreign Relations Officer
Mr. Yong Youth Boonsirivibul	Foreign Relations Officer
Ms. Chutima Hanpachern	Policy and Plan Analyst, Narcotics Crop Control Division
Mrs. Arparporn Vimooktalop	Policy and Plan Analyst, Narcotics Crop Control Division

## 2. Department of Technical and Economic Cooperation (DTEC)

(タイ国総理府経済技術協力局)

Mr. Apinan Patiyanon	Director, External Cooperation Division 3
Mrs. Tipsuda Nopmongcol	Chief, Japan-Sub-Division
Mr. Banchong Amornchewin	Program Officer, Japan Sub-Division
Mr. Tomikazu Inagaki (稲垣 高一)	JICA Expert, Technical Cooperation Coordination(技術協力調整)

## 3. United Nations International Drug Control Programme(UNDCP)

(駐タイ・国連国際麻薬取締計画)

Mr. Willian F. Beachner	Director, Regional Centre
Mr. Odd A. Halhjem	Field Adviser
Ms. Narumi Yamada	Deputy Field Adviser

## 4. U.S. Agency for International Development (USAID/Thailand)

(駐タイ・アメリカ国際開発庁)

Mr. Mintra (Min) Silawatshananai	Chief Engineer
Mr. Kamol Chantanumate	
Mr. Thongkorn Hiranraks	

5. Department of Public Welfare (DPW)

(内務省公共福祉局)

Mr. Elawat Chandraprasert	Director, Hill Tribe Welfare Division
Mrs. Pannipa Woodtikarn	Chief, Hill Tribe Development Section
Mr. Supaehai Satheerasilpin	Hill Tribe Researcher
Mrs. Suntaree Puaves	Public Welfare Officer

6. Chiang Mai University (CMU)

(チェンマイ大学)

Dr. Kasem Wattanachai	President
Dr. Luechai Chulasai	Vice President, Foreign Relations and Special Affairs
Dr. Chote Theetranont	Vice President
Mr. Nakorn Na Lampang	Dean, Faculty of Agriculture
Dr. Pongsak Anghasith	Project Coordinator, Training and Audio Visual Laboratory Incharge
Dr. Methi Ekasing	Research Incharge, Land-Use Planning Laboratory
Dr. Bantoone Warrit	Assistant Manager of the Coffee Project, Plant Physiology Laboratory, Faculty of Agriculture
Dr. Vichian Hengsawat	Post-Harvest Laboratory
Dr. Boonloom Cheewaisarakul	Analytical Laboratory
Dr. Prasartporn Samiyamarn	Bio-Technology Laboratory
Dr. Rumpaipun Aprichartpongchai	Secretary
Mr. Angsana Charukitphiphat	Foreign Relations Officer, Foreign Affairs Section
Mrs. Areerat Sukkasem	Foreign Relations Officer, Foreign Affairs Section
Mr. Dittagorn Pantapa	Acting Chief of the Training Stations
Dr. Boonlom Chivaisarakul	Department of Animal Husbandry Faculty of Agriculture
Mr. Puja Methakounvudhi	Architect, Design & Construction, Welfare Section, Office of President
Dr. Yoshio Kobayashi (小林 義男)	JICA Expert in Polymer Technology, Department of Chemistry, Faculty of Science

7. Royal Project Office & Northern Agricultural Development Center (NADC)

(ロイヤル・プロジェクト事務所及び北部農業開発センター)

Mr. Suthat Pleumpanya Office Manager

8. ONCB & UNDCP Projects Coordination Office

(在チェンマイONCB及びUNDCPプロジェクト協力事務所)

Dr. Gary Suwannrat Senior Adviser

9. 在タイ日本国大使館

高橋 恒一 参事官

---

黒木 弘盛 一等書記官

---

長門 利明 一等書記官

---

野口 宏一

10. 国際協力事業団タイ事務所

阿部 信司 タイ事務所長

---

伊東 隆文 Assistant Resident Representative

---

Mr. Athorn Charoenlai Manager



#### 4-2 ドラフト・ファイナル・レポート説明

##### 1. Office of Narcotics Control Board (ONCB)

(麻薬取締局)

Police General Chavalit Yodmani	Secretary General, Narcotics Control Board
Mr. Sorasit Saengrasert	Director, Narcotics Crop Control Division
Mr. Siree Bonnag	Director, Technical and Planning Division
Mr. Saman Dolnok	Narcotics Crop Control Division
Ms. Chutima Hanpachern	Policy and Plan Analyst, Narcotics Crop Control Division
Ms. Runathai Singlalvany	Chief, Foreign Affairs Sub-Division

##### 2. Department of Technical and Economic Cooperation (DTEC)

(タイ国総理府経済技術協力局)

Mr. Apinan Patiyanon	Director of the External Cooperation, Division III
Ms. Tipsuda Nopmongcol	Chief of Japan Sub-Division
Mr. Banchong Amornchewin	Program Officer, Japan Sub-Division
Ms. Kanokwan Pringruksa	Program Officer, Japan Sub-Division
Ms. Sutisa Shoonharaungdej	Program Officer, Japan Sub-Division
Mr. Tomikazu Inagaki	JICA Expert, Technical Cooperation Coordination

##### 3. Chiang Mai University (CMU)

(チェンマイ大学)

Dr. Kasem Watanachai	President
Dr. Luechai Chulasai	Vice President, Foreign Relations and Special Affairs
Mr. Nakorn Na Lampang	Dean, Faculty of Agriculture
Dr. Pongsak Anghasith	Project Coordinator
Dr. Methi Ekasing	Research Incharge, Land-Use Planning Laboratory

Dr. Bantoone Warrit	Assistant Manager of the Coffee Project, Plant Physiology Laboratory, Faculty of Agriculture
Dr. Boonloom Cheewaisarakul	Analytical Laboratory
Ms. Areerat Sukkasem	Foreign Relations Officer, Foreign Affairs Section
Mr. Dittagorn Pantapa	Acting Chief of the Training Stations
Dr. Boonlom Chivaisarakul	Department of Animal Husbandry, Faculty of Agriculture

4. Embassy of Japan

(在タイ日本国大使館)

Mr. Koichi Noguchi

(野口 宏一)

5. Japanese Consular Post at Chiang Mai

(在タイ日本国大使館チェンマイ駐在官事務所)

Mr. Isamu Yamada

Consul

(山田 勇)

(一等書記官兼領事)

6. Japan International Cooperation Agency (JICA), Thailand Office

(国際協力事業団タイ事務所)

Mr. Yoshio Tanikawa

Deputy Resident Representative

(谷川 与志雄)

(タイ事務所次長)

Mr. Takabumi Ito

Assistant Resident Representative

(伊東 隆文)



## 資料編 5 収集補足データ



- |   |   |
|---|---|
| 1. タイ国経済概況(1990~1991年版)   | バンコック日本人商工会議所   |
| 2. 第七次国家社会経済開発計画(1992~1996)期間<br>における農業開発ガイドライン(仮訳)                       | 農業共同組合省・事務次官室<br>海外農業関係部  |
| 3. タイ国労働法及び関係内務省令   | バンコック日本人商工会議所   |
| 4. 労働者保護法開解説及び労働者保護法  | バンコック日本人商工会議所   |
| 5. AGRICULTURAL STATISTICS OF<br>THAILAND CROP YEAR 1989/90               | CENTER FOR AGRICULTURAL<br>STATISTICS, OFFICE OF<br>AGRICULTURAL ECONOMICS,<br>MINISTRY OF AGRICULTURE<br>& CO-OPERATIVES |
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| 7. Thai-German Highland Development<br>Programme                          | TG-HDP  |
| 8. Thai-Australia Highland Agricultural and<br>Social Development Project | TA-HASD   |
| 9. The Royal Project  | Royal Project Office  |
| 10. Highland Agricultural Development                                     | Chiang Mai University   |
| 11. From Opium Poppy ..... To Coffee                                      | Chiang Mai University   |
| 12. Thailand Narcotics Annual Report 1990                                 | ONCB  |
| 13. Technology of Arabica Coffee  | Chiang Mai University   |
| 14. International Seminar on Coffee Technology                            | Chiang Mai University   |
| 15. Faculty of Agriculture  | Chiang Mai University   |
| 16. Annual Report 1990  | Highland Coffee Research and<br>Development Center  |
| 17. Training for Lao 1990   | Highland Coffee Research and<br>Development Center  |
| 18. Insecticide and Pesticide Training                                    | Highland Coffee Research and<br>Development Center  |

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|--|---|
| 19. Report on the Results at Chang Khian Highland Agricultural Research and Training Center  | Highland Coffee Research and Development Center |
| 20. UN/THAI PROGRAMME FOR DRUG ABUSE CONTROL IN THAILAND   | United Nations Fund for Drug Abuse Control      |
| 21. Annual Report  | Department of Public Welfare                    |
| 22. Office of the Narcotics Control Board  | ONCB  |
| 23. Thailand's Efforts in Drug Control   | ONCB  |
| 24. Price List for Construction Materials  | Chiang Mai University                           |
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| 27. Profile of Chiang Mai University 1992, Chiang Mai, Thailand  | CMU   |
| 28. Highland Coffee Research and Development Centre  | HCRDC   |

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6-1-1 気象条件(チェンマイ、1989~1991)

1989

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *		PET
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.	mm/day
Jan)	31.2	14.0	21.4	88.4	45.5	67.0	0.0	4.5	76.7	8.8	11.0	7.2	11.4	2.7
Feb	33.0	13.9	22.1	81.0	31.1	56.1	0.0	5.3	75.2	9.6	11.4	8.2	12.8	3.3
Mar	34.5	19.6	25.9	73.3	38.4	55.9	3.5	6.2	97.1	7.2	11.9	7.9	14.5	4.3
Apr	38.0	20.9	28.2	66.4	31.8	49.1	25.9	7.6	102.5	8.9	12.4	9.3	15.7	5.2
May	35.2	23.4	28.4	79.0	55.5	67.3	226.4	7.1	109.0	6.9	12.9	8.3	16.2	4.9
Jun	32.9	23.3	27.4	84.6	64.9	74.7	155.5	5.1	88.9	4.4	13.1	7.0	16.2	4.1
Jul	32.8	23.4	27.4	88.1	67.8	77.9	233.5	4.7	82.7	3.7	13.0	6.6	16.2	3.9
Aug	32.4	23.2	27.1	88.5	69.6	79.0	212.5	4.9	80.2	4.2	12.7	6.8	15.9	3.9
Sep	32.1	22.9	26.8	89.7	70.8	80.2	154.5	4.4	66.6	3.7	12.1	6.2	14.9	3.5
Oct	31.5	22.0	26.1	91.8	67.5	79.6	146.5	4.5	66.5	5.1	11.6	6.3	13.4	3.3
Nov	30.6	18.4	23.6	89.6	52.7	71.2	9.0	4.2	61.4	7.2	11.1	6.6	11.7	2.9
Dec	28.6	12.6	19.4	90.6	47.2	69.0	0.0	3.7	48.1	8.7	10.6	6.8	10.9	2.2
Total							1167.4							
Mean	33.1	20.4	25.9	83.7	54.1	68.9	106.1	5.3	82.5	6.3	12.1	7.3	14.4	3.8

1990

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *		PET
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.	mm/day
Jan	31.0	14.0	21.3	89.8	41.5	65.7	4.1	3.9	52.5	8.7	11.0	7.1	11.4	2.6
Feb	32.3	15.6	22.8	81.6	39.1	60.3	28.7	4.7	65.6	8.1	11.4	7.6	12.8	3.3
Mar	34.7	18.7	25.5	74.6	34.4	54.5	46.0	6.5	92.3	8.4	11.9	8.5	14.5	4.3
Apr	36.8	21.8	28.2	69.6	35.3	51.1	35.1	7.2	109.1	7.3	12.4	8.5	15.7	5.1
May	33.3	22.7	27.2	86.3	61.1	73.5	268.1	5.8	90.6	5.3	12.9	7.5	16.2	4.2
Jun	32.8	23.6	27.5	84.1	65.8	75.1	63.0	5.1	87.7	3.9	13.1	6.7	16.2	4.0
Jul	31.7	23.4	26.9	85.4	67.8	76.6	93.7	3.7	98.0	1.8	13.0	5.7	16.2	3.6
Aug	33.1	23.3	27.5	87.7	64.8	75.9	213.5	4.3	76.1	5.1	12.7	7.3	15.9	4.2
Sep	32.4	22.6	26.8	88.1	68.3	77.5	133.0	3.9	71.1	4.7	12.1	6.8	14.9	3.8
Oct	32.3	21.8	26.3	89.0	64.0	76.5	132.8	4.6	73.1	5.9	11.6	6.7	13.4	3.5
Nov	31.4	19.2	24.4	89.5	53.8	71.7	135.1	4.3	72.8	7.1	11.1	6.6	11.7	3.0
Dec	29.4	15.0	21.2	90.6	47.5	69.2	0.0	3.8	65.9	8.4	10.9	6.7	10.9	2.5
Total							1152.9							
Mean	32.6	20.1	25.5	84.7	53.6	69.0	96.1	4.8	79.6	6.3	12.0	7.1	14.2	3.7

1991

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *	
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.
Jan	31.4	13.5	21.1	90.0	40.1	65.3	6.1	4.1	60.0	8.9	11.0	7.2	11.3
Feb	33.2	15.2	22.9	84.1	33.9	59.6	0.0	5.0	68.6	9.2	11.4	8.1	12.8
Mar	36.3	19.9	26.9	73.5	32.4	53.2	3.0	6.3	87.2	8.2	11.9	8.4	14.5
Apr	37.1	22.8	29.0	71.7	39.8	56.3	78.0	6.8	101.8	8.0	12.4	8.8	15.7
May	36.6	23.9	29.4	73.0	44.0	58.6	89.7	6.4	107.3	8.5	12.9	9.2	16.2
Jun	32.8	23.7	27.6	85.6	71.2	78.7	117.8	4.6	105.6	3.1	13.1	6.1	16.2
Jul	32.4	23.5	27.3	87.5	65.4	76.4	123.8	4.3	90.1	2.9	13.0	6.0	16.2
Aug	31.7	23.1	26.8	91.3	74.7	82.9	336.1	3.3	79.9	2.9	12.7	6.2	15.9
Sep	32.4	23.4	27.2	91.6	70.1	80.9	179.4	4.3	70.0	4.3	12.1	6.6	14.9
Oct	32.0	22.1	26.3	92.7	67.1	79.8	55.5	3.8	69.0	5.8	11.6	6.7	13.4
Nov	30.2	18.0	23.2	92.4	51.5	71.9	34.1	4.0	62.9	7.3	11.1	6.6	11.7
Dec	29.0	15.2	21.1	90.8	47.9	69.4	26.9	3.7	69.1	6.7	10.9	6.0	10.9
Total							1050.5						
Mean	32.9	20.4	25.7	85.4	53.2	69.4		4.7	81.0	6.3	12.0	7.2	14.1

6-1-2 気象条件(チャンキャン、1989~1991)

1989

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *		PET
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.	mm/day
Jan	22.1	10.3	15.3	82.6	43.7	63.2	0.0	4.3	129.9	7.5	11.0	6.6	11.4	2.4
Feb	23.4	10.4	16.0	70.0	41.3	55.7	0.0	5.0	113.7	8.8	11.4	7.9	12.8	2.8
Mar	26.6	13.9	19.3	84.7	50.7	67.7	14.1	4.5	107.1	6.7	11.9	7.7	14.5	3.5
Apr	29.4	16.8	22.2	81.9	49.6	65.8	14.1	7.3	110.5	9.0	12.4	8.9	15.7	4.2
May	27.1	18.7	22.3	95.6	58.9	77.3	358.4	4.1	95.4	5.3	12.9	7.5	16.2	3.7
Jun	25.1	18.8	21.5	97.8	69.0	83.4	326.1	2.9	89.8	2.9	13.1	6.1	16.2	3.2
Jul	25.5	19.0	21.8	97.6	66.9	82.3	378.3	3.0	105.9	2.7	13.0	6.1	16.1	3.1
Aug	25.0	18.7	21.4	98.8	69.2	84.0	330.3	2.5	68.8	2.9	12.7	6.1	15.9	3.1
Sep	25.0	18.7	21.4	99.7	69.8	84.7	230.3	2.6	61.0	2.9	12.1	5.8	15.0	2.8
Oct	23.5	18.2	20.5	96.9	63.8	80.4	330.2	3.3	70.7	3.3	11.6	5.5	13.4	2.6
Nov	22.7	15.3	18.4	84.8	43.1	64.0	2.7	2.1	50.4	4.8	11.1	5.6	11.8	2.4
Dec	20.8	10.7	15.1	84.6	74.8	79.7	0.0	2.5	51.7	6.8	10.9	6.1	11.0	1.8
Total							1884.5							
Mean	24.7	15.8	19.6	89.6	58.4	74.0		3.7	87.9	5.3	12.0	6.7	14.2	3.0

1990

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *		PET
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.	mm/day
Jan	23.8	12.8	17.5	70.9	29.9	50.4	0.0	3.7	81.8	7.8	11.0	6.7	11.4	
Feb	25.1	14.2	18.9	63.4	29.4	46.4	0.0	4.1	94.3	7.7	11.4	7.3	12.8	
Mar	26.5	16.1	20.6	64.6	28.5	46.6	49.9	5.8	104.3	7.7	11.9	8.2	14.5	
Apr	28.8	18.5	22.9	67.2	31.2	49.2	37.4	6.3	115.1	7.4	12.4	8.5	15.7	
May	25.6	18.9	21.8	81.3	47.8	64.5	339.6	3.6	81.2	3.9	12.9	6.8	16.2	
Jun	25.0	19.9	22.0	96.5	80.2	88.4	299.7	4.1	100.8	3.3	13.1	6.4	16.2	
Jul	24.5	19.5	21.6	97.2	81.2	89.2	401.7	3.6	95.3	1.8	13.0	5.6	16.2	
Aug	25.8	19.4	22.1	97.7	81.1	89.4	496.9	3.8	80.8	3.6	12.7	6.5	15.9	
Sep	25.0	19.0	21.6	97.6	82.9	90.2	226.5	2.9	53.7	3.2	12.1	6.0	14.9	
Oct	24.2	18.4	20.8	99.4	83.6	91.5	216.5	2.6	51.5	4.8	11.6	6.2	13.4	
Nov	23.8	15.6	19.1	98.7	70.4	84.6	220.0	2.9	49.3	5.3	11.1	5.7	11.7	
Dec	21.3	12.6	16.3	99.2	78.6	88.9	0.0	2.4	59.6	5.5	10.9	5.3	10.9	
Total							2288.4							
Mean	25.3	17.5	20.8	86.1	60.4	73.3		3.8	60.6	5.2	12.0	6.6	14.1	

1991

MONTH	Air temperature, °C			Air Humidity, %			Rain	E-pan	Wind	Sunshine(hrs)		Solar rad. *		PET
	max	min	mean	8.00	15.00	mean	mm	mm/day	km/day	act.	poss.	act.	poss.	mm/day
Jan	24.3	12.7	17.7	93.3	57.1	75.2	30.7	4.1	82.7	7.9	11.0	6.7	11.3	2.2
Feb	25.7	14.6	19.4	93.6	60.6	77.1	0.0	4.7	92.0	8.8	11.4	7.8	12.8	2.8
Mar	29.2	18.5	23.1	90.6	56.7	73.6	0.0	6.0	92.4	8.3	11.9	8.4	14.5	3.8
Apr	28.9	19.4	23.5	96.1	65.4	80.8	109.4	5.0	96.7	7.3	12.4	8.3	15.7	4.0
May	28.1	19.8	23.4	97.8	68.2	83.0	159.7	4.7	80.0	6.9	12.9	8.3	16.2	3.9
Jun	25.7	19.8	22.4	98.7	83.1	90.9	377.2	4.0	104.2	2.7	13.1	6.0	16.2	3.1
Jul	25.2	19.5	21.9	100.0	81.9	90.9	236.9	3.4	89.3	2.2	13.0	5.8	16.2	2.9
Aug	24.4	19.2	21.4	100.0	85.1	92.5	792.7	2.8	80.6	2.0	12.7	5.6	15.9	2.8
Sep	25.1	18.9	21.6	100.0	79.1	89.6	414.6	2.6	53.9	2.8	12.1	5.8	14.9	2.8
Oct	24.2	17.9	20.6	97.8	77.0	87.4	213.4	2.2	56.5	4.0	11.6	5.8	13.4	2.5
Nov	22.5	14.5	18.0	97.0	67.1	82.1	88.5	2.6	64.1	5.6	11.1	5.9	11.7	2.1
Dec	20.7	11.7	15.5	95.3	59.0	77.1	4.7	2.6	56.2	4.5	10.9	5.1	10.9	1.8
Total							2427.8							
Mean	25.4	17.2	20.7	96.7	70.0	83.4		3.7	79.1	5.3	12.0	6.6	14.1	2.9

## 6-2-1 高地農業及び社会開発計画

### I. HASD (Highland Agricultural and Social Development) ZONES

- |                          |                  |
|--------------------------|------------------|
| 1. Hua Mae Kum Zone      | Chiang Rai Prov. |
| 2. Huay Nam Yen Zone     | Chiang Rai Prov. |
| 3. Huay Lu Zone          | Chiang Rai Prov. |
| 4. Tung Chang Zone       | Nan Prov.        |
| 5. Nam Luk Zone          | Nan Prov.        |
| 6. Mae Mee Zone          | Lampang Prov.    |
| 7. Mae Gar Zone          | Lampang Prov.    |
| 8. Huay Dua Zone         | Chiang Mai       |
| 9. Pong Pad Zone         | Chiang Mai       |
| 10. Tung Loy Zone        | Chiang Mai       |
| 11. Huay Pueng Zone      | Mae Hong Son     |
| 12. Mai Rid Pa Gae Zone  | Mae Hong Son     |
| 13. Huay Mung Zone       | Mae Hong Son     |
| 14. Thung Hua Chang Zone | Lamphum          |

• Integrated Pocket Area Development Project

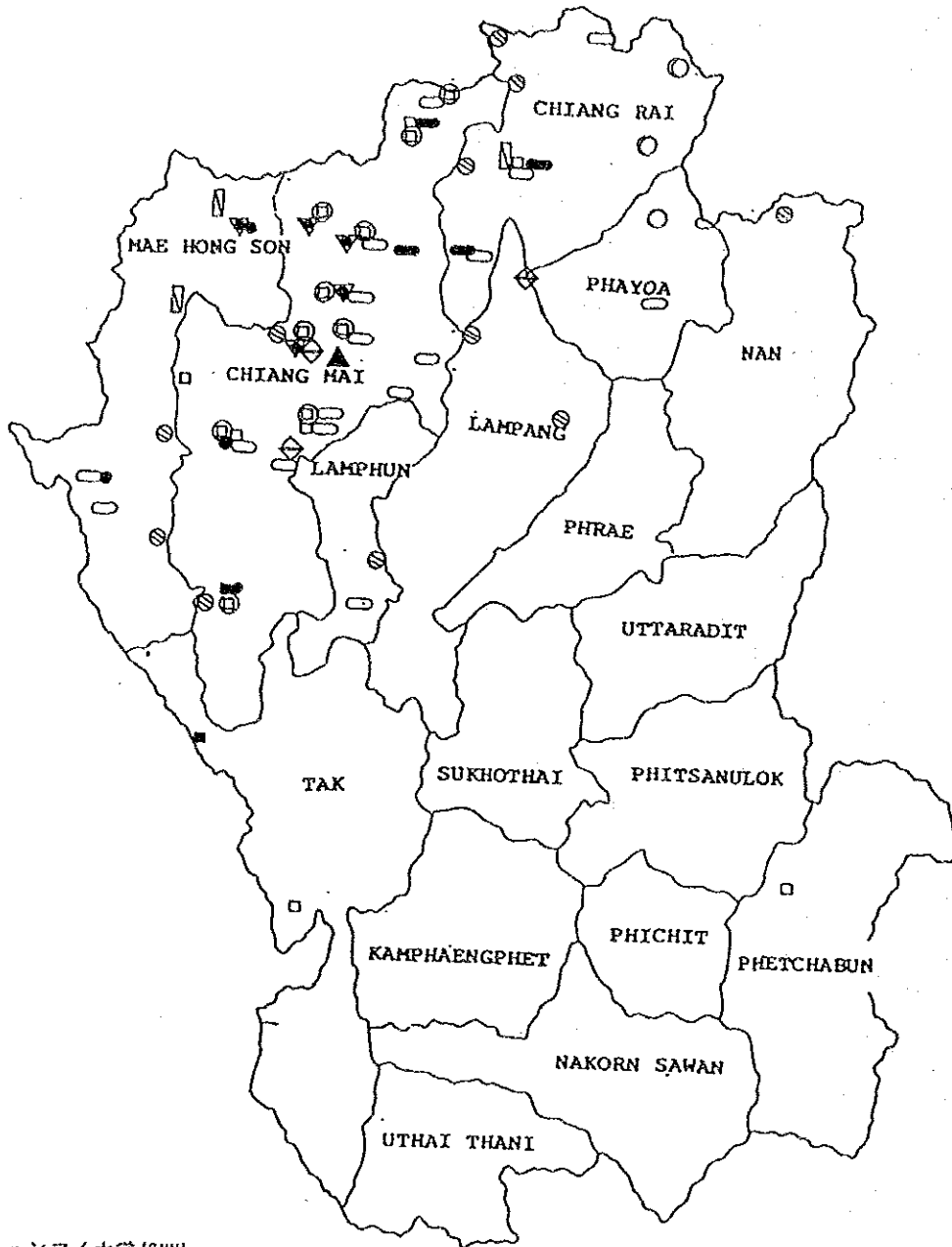
6-2-2 主要な諸外国の実施済援助計画

Project	Project Site	Duration	Budget
1. Royal Project	Chiang Mai, Mae Hong Son, Lumphun, Chiang Rai, Payao Nan	1973~83	\$ 3.6 M
2. The Establishment of highland community & Environmental Development and Narcotic Control Plan for Tak Province	Tak	2 years	B 12.17 M
3. Doi Muser Opium Cultivation Control Project	Tak	1987~90	B 1,010,280
4. The Highland Agricultural Marketing and Project Project (HAMP)	Chiang Mai, Lampang	1980~84	\$ 9.5 M
5. Mae Chaem Watershed Development Project	Chiang Mai	1981~87	\$ 22.07
6. The Thai-Australian Highland Agronomy Project (TA-HAP)	Chiang Mai	1972~80	\$ 148,000
7. Thai Payap Development Project	Nan		B 1.95 M
8. The Upper Mae-La-Noi Highland Agricultural Development Project	Mae Hong Son	1980~84	\$ 2.5 M
9. The establishment of the Tribal Research Center (1965)	Chiang Mai	1969	assistance included vehicles, foreign experts materials and equipemnt
10. Provision of Community Rice storage village water supply Rice Bank Support to the HASD Project	Chiang Mai	1973~83	B 54,800 \$ 0.74 M

6-2-3 主要な諸外国の実施中援助計画

Project	Project Site	Duration	Budget
1. The Thai-Australian Highland Agricultural and Social Development Project (TA-HASD)	Phase I Chiang Mai, Mae Hong Son, Chiang Rai, Lampang, Nan	1980~88	B 349 M
	Phase II 5 province+Lumphunn	1989~93	B 367 M
2. Thai-Norwegian Highland Development Project (TN-HDP)	Chiang Mai, Chiang Rai, Lumpang, Payao	1990~93	B 169 M
3. Thai-German Highland Development Programme (TG-HDP)	Chiang Mai Mae Hong Son	1982~91~	B 132 M
4. Pae-Por Highland Development Project (PP-HDP)	Tak, Chiang Mai	1987~92	B 82 M
5. Doi Yao Pha Mon Highland Development Project	Chiang Mai Payao	1988~92	\$ 3 M
6. Sam Mun Highland Development Project	Chiang Mai Mae Hong Son		\$ 2.5 M
7. Opium Dependence Treatment and Drug Abuse Centro in Hilltribe Communities	The Project is now being worked out in details		\$ 5 M

6-2-4 北部タイ高地開発プロジェクト



- ▲ チェンマイ大学 (CMU)
- 農務省、農業局 (DOA)
- ⊙ 内務省、公共福祉局 (DPW)
- ⊙ ドイヤオバモン高地開発計画 (OPM-HOP)
- ◆ 撻合山間地開発計画 (IPAD)
- バエアル高地開発計画 (PP-HOP)
- ⊙ タイーオーストラリア高地開発計画 (TA-HOP)
- ⊎ タイードイツ高地開発計画 (TC-HOP)
- ◇ タイーノルウエー高地開発計画 (TN-HOP)
- ロイヤル・プロジェクト (RP)
- ▽ サムムン高地開発計画 (SM-HOP)
- ウインバ高地開発計画 (WP-HOP)

### 6-3 山岳民族人口一覽

Department of Public Welfare

Hilltribe Population Data

From The National Statistical Office : 1988

-----		
Total number of Hilltribe families	-	75,808
Provinces	-	20
Districts	-	88
Sub-districts	-	11
Villages	-	3,474
Population	-	554,172

Northern region		Central region	
1. Chiangmai	- 139,965	16. Kanchanaburi	- 19,690
2. Chiangrai	- 98,105	17. Supanburi	- 1,396
3. Maehongson	- 82,967	18. Ratchaburi	- 5,953
4. Tak	- 68,745	19. Petchaburi	- 3,088
5. Nan	- 55,147	20. Prachaubkirikan	- 758
6. Lamphun	- 21,259		
7. Payao	- 10,913		
8. Lampang	- 9,573		
9. Petchabun	- 8,446		
10. Kamphangphet	- 8,622		
11. Phrae	- 8,397		
12. Pitsanulok	- 5,086		
13. Sukotai	- 2,734		
14. Utaithani	- 2,827		
15. Oaei	- 501		



6-4 タイ北部5県に於ける農地利用状況

Unit : ha

Province	Total	Housing Area	Paddy Land	Under Field Crops	Orchard Tree Crops	Vegetable Flower	Livestock Farm Area	Idle Land	Other Land
Tak	153,807	4,672	47,968	64,792	10,448	2,311	19,481	3,744	391
Nan	174,589	7,858	49,204	83,757	17,200	2,988	195	12,822	565
Chiang Mai	260,404	12,411	146,102	38,131	28,542	8,052	11,628	10,455	5,083
Chiang Rai	413,797	14,142	268,112	84,605	18,041	8,959	1,448	14,843	3,647
Mae Hong Son	36,446	1,844	19,415	6,991	3,699	1,359	641	1,622	875

Source : Agricultural Statistics of Thailand Crop Year 1989/90.

6-5 タイ北部5県に於ける主要産物生産状況

Unit : t

Province	Sedond Rice	Major Rice	Maize	Mungbean	Soybean	Groundnuts	Garlic
Tak	5,226	79,634	128,460	3,045	20,236	2,405	2,144
Nan	3,827	83,638	67,677	11,877	4,951	9,222	954
Chiang Mai	30,935	320,087	6,617	-	55,268	14,663	38,873
Chiang Rai	20,876	544,324	92,900	307	10,718	8,885	8,568
Mae Hong Son	-	38,907	1,423	-	5,566	1,699	6,422

3 years average : 1988 - 1990

Source : Agricultural Statistics of Thailand Crop Year 1989/90.

6-6 タイ北部5県に於ける主要家畜所有状況

Unit : head

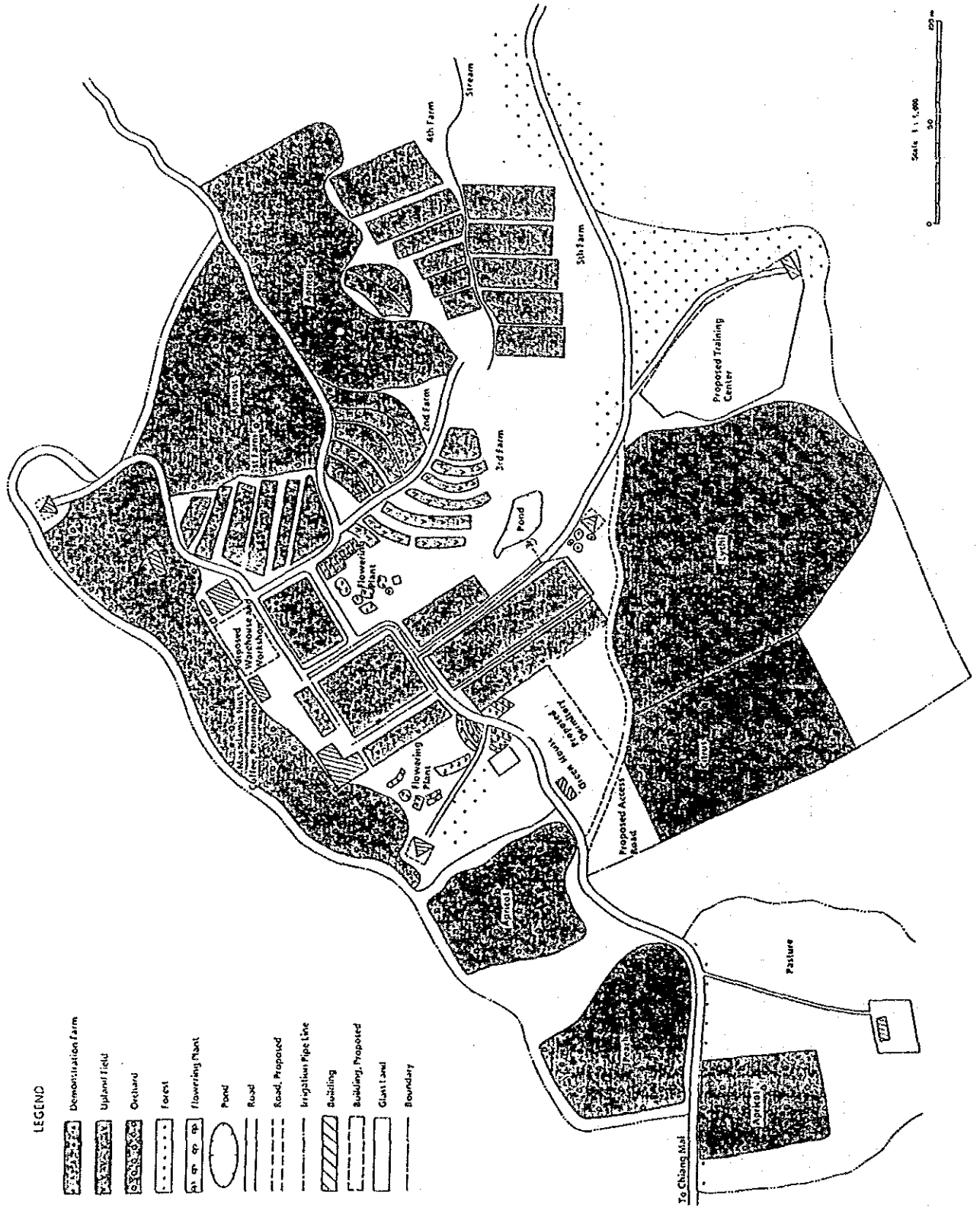
Province	Buffaloes	Cattle	Swine	Duck	Chicken
Tak	34,242	116,461	35,558	10,435	575,047
Nan	64,184	49,574	56,846	38,671	1,462,985
Chiang Mai	109,555	119,982	168,010	170,883	3,076,657
Chiang Rai	105,924	74,978	107,629	154,806	4,766,497
Mae Hong Son	32,705	18,048	25,278	10,987	196,269

3 years average : 1987 - 1989

Source : Agricultural Statistics of Thailand Crop Year 1989/90.

6-7 チャンキアン高地農業土地利用計画

CHANG KHIAN HIGHLAND AGRICULTURAL DEVELOPMENT AND TRAINING CENTER, LAND USE MAP



6-8 高地農業開発・訓練センター作物暦

Crop	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
<b>Vegetable</b>												
Lettuce					①	②③④		⑤		⑥		
Leek			⑥						①	②③④		⑤
Sugar Pea						①②③		⑤	⑥			
Sweet Corn					①②③	④	⑤	⑥				
Zucchini		⑥							①	②③④		⑤
Japanese Pumpkin	⑥								①		⑤	
Radish									①②③	④	⑤	⑥
Baby Carrot				①②③	④	⑤	⑥					
Carrot	⑥								①②③	④	⑤	
Asparagus(7~8years)				⑤	①②③	④			⑤			
Tomato	⑥					①	②③④	⑤		①②③④	⑤	⑥
Seed Pepper						①	②③④	⑤		①	②③④	⑤
Cucumber					①	②	③④	⑤	⑥	①②③④	⑤	⑥
Potato					①	②③④		⑤		⑥		
<b>Flower</b>												
Straw Flower	①④	⑤	⑥						①	②	③④	⑤
Statice	①④	⑤	⑥						①	②	③④	⑤
Carnation		④	⑤	⑥					①	②	③④	⑤
<b>Upland Crops</b>												
Upland Rice				①	②③	④		⑤			⑥	
Wheat	⑥								①	②③	④	⑤
Corn				①	②③	④		⑤				
<b>Fruits</b>												
Persimmon	Pr			Th	W.F.			H				Pr
Lichee	F	M		SP	H	Pr.W.						
Apricot	C.C.			H		W			F	Pr		Pr
Peach		Th	F			W						

- ① Land Preparation
  - ② Seeding/Seedling
  - ③ Fertilizing
  - ④ Transplanting
  - ⑤ Maintenance  
Top-dressing  
Plant Protecting, Weeding etc.
  - ⑥ Harvesting
- Pr : Pruning
  - Th : Thinning
  - W : Weeding
  - F : Fertilizing
  - SP : Spraying
  - C.C : Chemical Control
  - H : Harvest

6-9-1 高地農業開発・訓練センター訓練計画5ヶ年総括(1994年～1998年)

Item	Training Time					Total					Agri. Extension Officer					Farmer					Neighbor Countries				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
1. Production Course																									
(1) Vegetable C.	4	4	4	5	5	80	92	100	125	125	60	69	75	94	94	8	9	10	13	13	12	14	15	18	18
(2) Fruits C.	4	4	4	4	4	48	56	60	80	80	36	42	45	60	60	5	6	6	8	8	7	8	9	12	12
(3) Upland Rice C.	3	3	3	3	3	60	69	75	75	75	45	52	56	56	56	6	7	8	8	8	9	10	11	11	11
(4) Field Crop C.	3	3	3	3	3	60	69	75	75	75	45	52	56	56	56	6	7	8	8	8	9	10	11	11	11
(5) Flower C.	4	4	4	4	4	80	92	100	100	145	60	69	75	75	109	8	9	10	10	15	12	14	15	15	21
Sub Total	18	18	18	19	21	328	378	410	455	500	246	284	307	341	375	33	38	42	47	52	49	56	61	67	73
2. Discipline Course																									
(1) HL Farming System C.	3	3	3	3	3	60	69	75	75	75	51	59	64	64	64	-	-	-	-	-	9	10	11	11	11
(2) Plant Protection C.	2	2	2	2	2	40	46	50	50	50	34	39	42	42	42	-	-	-	-	-	6	7	8	8	8
(3) Soil Conservation C.	1	1	1	1	1	20	23	25	25	25	17	20	21	21	21	-	-	-	-	-	3	3	4	4	4
(4) Environmental C.	1	1	1	1	1	20	23	25	25	25	17	20	21	21	21	-	-	-	-	-	3	3	4	4	4
(5) Meteorological C.	4	4	4	4	4	64	72	80	80	80	54	61	68	68	68	-	-	-	-	-	10	11	12	12	12
Sub total	11	11	11	11	11	204	233	255	255	255	173	199	216	216	216	-	-	-	-	-	31	34	39	39	39
3. Other Course																									
(1) SW on HL C.	1	1	1	1	1	32	36	40	40	40	27	31	34	34	34	-	-	-	-	-	5	5	6	6	6
(2) HL Agri. Deve. C.	1	1	1	1	1	32	36	40	40	40	27	31	34	34	34	-	-	-	-	-	5	5	6	6	6
(3) Narcotics Crop Control and Prevention Training C.	1	1	1	1	1	32	36	40	40	40	27	31	34	34	34	-	-	-	-	-	5	5	6	6	6
(4) HL Community Deve. C.	1	1	1	1	1	32	36	40	40	40	27	31	34	34	34	-	-	-	-	-	5	5	6	6	6
(5) Forestry Community Deve. C.	1	1	1	1	1	32	36	40	40	40	27	31	34	34	34	-	-	-	-	-	5	5	6	6	6
Sub total	5	5	5	5	5	160	180	200	200	200	135	155	170	170	170	-	-	-	-	-	25	25	30	30	30
4. Mobile Training	13	15	16	16	16	650	750	800	800	800	-	-	-	-	-	650	750	800	800	800	-	-	-	-	-
Total	47	49	50	51	53	1,342	1,541	1,665	1,710	1,755	554	638	693	727	761	683	788	842	847	852	105	115	130	136	142

6-9-2 1994年訓練計畫

Training Course	Jan. 10/20	Feb. 10/20	Mar. 10/20	Apr. 10/20	May 10/20	Jun. 10/20	Jul. 10/20	Aug. 10/20	Sept. 10/20	Oct. 10/20	Nov. 10/20	Dec. 10/20	Total Person	Total Day
1. Production Course (10 days)														
1.1 Vegetable Course									20	20	20	20	80	40
1.2 Fruits Course					12		12		12		12		48	40
1.3 Upland Rice Course						20		20					60	30
1.4 Field Crop Course						20		20		20		20	60	30
1.5 Flower Course									20		20	20	80	40
2. Discipline Course														
2.1 Highland Farming System Course			20			20				20			60	120
2.2 Plant Protection Course			20					20					40	140
2.3 Soil Conservation Course									20				20	30
2.4 Environmental Course											20		20	30
2.5 Meteorological Course (5 days)							16			16			64	20
3. Other Course (3 days)														
3.1 Seminar/Workshop on Highland Course	32												32	3
3.2 Highland Agricultural Development Course	32												32	3
3.3 Narcotics Crop Control and Prevention Training Course	32												32	3
3.4 Highland Community Development Course												32	32	3
3.5 Forestry Community Development Course												32	32	3
Sub-Total (1. + 2. + 3.)	132/24	20/30	40/60	36/35	32/40	60/50	68/45	40/40	72/60	96/45	72/60	124/36	692	535
4. Mobile Training (50 farmers/time-3 days x 13 times/year)	150/9	150/9									200/12	150/9	650	39
Total (1. + 2. + 3. + 4.)	282/33	170/39	40/60	36/35	32/40	60/50	68/45	40/40	72/60	96/45	272/72	274/45	1,342	574

Notes: Figures in Sub-Total and Total show the total number of trainees/days.

6-9-3 1995年訓練計畫

Training Course	Jan. 10/20	Feb. 10/20	Mar. 10/20	Apr. 10/20	May 10/20	Jun. 10/20	Jul. 10/20	Aug. 10/20	Sept. 10/20	Oct. 10/20	Nov. 10/20	Dec. 10/20	Total Person	Total Day
1. Production Course (10 days)														
1.1 Vegetable Course									23	23	23	23	92	40
1.2 Fruits Course					14		14		14				56	40
1.3 Upland Rice Course						23		23					69	30
1.4 Field Crop Course						23		23					69	30
1.5 Flower Course									23	23			92	40
2. Discipline Course														
2.1 Highland Farming System Course			23			23				23			69	120
2.2 Plant Protection Course			23					23					46	140
2.3 Soil Conservation Course									23				23	30
2.4 Environmental Course											23		23	30
2.5 Meteorological Course (5 days)				18							18		72	20
3. Other Course (3 days)														
3.1 Seminar/Workshop on Highland Course	36												36	3
3.2 Highland Agricultural Development Course	36												36	3
3.3 Narcotics Crop Control and Prevention Training Course	36												36	3
3.4 Highland Community Development Course													36	3
3.5 Forestry Community Development Course													36	3
Sub-Total (1. + 2. + 3.)	149/24	23/30	46/60	41/35	37/40	69/50	78/45	46/40	83/60	110/55	83/60	141/36	791	535
4. Mobile Training (50 farmers/time-3 days x 15 times/year)	200/12	150/9											750	45
Total (1. + 2. + 3. + 4.)	349/36	173/39	46/60	41/35	37/40	69/50	78/45	46/40	83/60	110/55	283/72	341/48	1,541	580

Notes: Figures in Sub-Total and Total show the total number of trainees/days.

6-9-4 1996年訓練計畫

Training Course	Jan. 10/20	Feb. 10/20	Mar. 10/20	Apr. 10/20	May 10/20	Jun. 10/20	Jul. 10/20	Aug. 10/20	Sept. 10/20	Oct. 10/20	Nov. 10/20	Dec. 10/20	Total Person	Total Day
1. Production Course (10 days)														
1.1 Vegetable Course									25	25	25	25	100	40
1.2 Fruits Course					15		15		15	15			60	40
1.3 Upland Rice Course						25		25					75	30
1.4 Field Crop Course						25		25				25	75	30
1.5 Flower Course									25			25	100	40
2. Discipline Course														
2.1 Highland Farming System Course			25			25				25			75	120
2.2 Plant Protection Course			25				25						50	140
2.3 Soil Conservation Course								25			25		25	30
2.4 Environmental Course													25	30
2.5 Meteorological Course (5 days)					20								80	20
3. Other Course (3 days)														
3.1 Seminar/Workshop on Highland Course	40												40	3
3.2 Highland Agricultural Development Course	40												40	3
3.3 Narcotics Crop Control and Prevention Training Course	40												40	3
3.4 Highland Community Development Course												40	40	3
3.5 Forestry Community Development Course												40	40	3
Sub-Total (1. + 2. + 3.)	165/24	25/30	50/60	45/35	40/40	75/50	85/45	50/40	90/60	120/55	90/60	155/36	865	535
4. Mobile Training (50 farmers/time-3 days x 16 times/year)	200/12	200/12									200/12	200/12	800	48
Total (1. + 2. + 3. + 4.)	365/36	225/42	50/60	45/35	40/40	75/50	85/45	50/40	90/60	120/55	290/72	355/48	1,665	583

Notes : Figures in Sub-Total and Total show the total number of trainees/days.



6-9-5 1997年訓練計畫

Training Course	Jan. 10/20	Feb. 10/20	Mar. 10/20	Apr. 10/20	May 10/20	Jun. 10/20	Jul. 10/20	Aug. 10/20	Sept. 10/20	Oct. 10/20	Nov. 10/20	Dec. 10/20	Total Person	Total Day
1. Production Course (10 days)														
1.1 Vegetable Course					25	25			25	25	25	25	125	50
1.2 Fruits Course					25		25		15		15		80	40
1.3 Upland Rice Course						25		25					75	30
1.4 Field Crop Course						25		25					75	30
1.5 Flower Course									25		25		100	40
2. Discipline Course														
2.1 Highland Farming System Course			25			25				25			75	120
2.2 Plant Protection Course			25				25						50	140
2.3 Soil Conservation Course									25				25	30
2.4 Environmental Course													25	30
2.5 Meteorological Course (5 days)						20					20		80	20
3. Other Course (3 days)														
3.1 Seminar/Workshop on Highland Course	40												40	3
3.2 Highland Agricultural Development Course	40												40	3
3.3 Narcotics Crop Control and Prevention Training Course	40												40	3
3.4 Highland Community Development Course												40	40	3
3.5 Forestry Community Development Course												40	40	3
Sub-Total (1. + 2. + 3.)	165/24	25/30	50/60	45/35	50/40	100/60	95/55	50/40	90/60	120/55	90/60	155/36	910	545
4. Mobile Training (50 farmers/time-3 days x 16 times/year)	200/12	200/12									200/12	200/12	800	48
Total (1. + 2. + 3. + 4.)	365/36	225/42	50/60	45/35	50/40	100/60	95/55	50/40	90/60	120/55	290/72	355/48	1,710	593

Notes : Figures in Sub-Total and Total show the total number of trainees/days.

Training Course	Jan. 10/20	Feb. 10/20	Mar. 10/20	Apr. 10/20	May 10/20	Jun. 10/20	Jul. 10/20	Aug. 10/20	Sept. 10/20	Oct. 10/20	Nov. 10/20	Dec. 10/20	Total Person	Total Day
1. Production Course (10 days)														
1.1 Vegetable Course					25	25	25		25	25	25	25	125	50
1.2 Fruits Course					25	25	25	15			15		80	40
1.3 Upland Rice Course					25	25		25	25				75	30
1.4 Field Crop Course					25	25		25	25				75	30
1.5 Flower Course		20		25					25				145	60
2. Discipline Course														
2.1 Highland Farming System Course			25	25	25	25			25				75	120
2.2 Plant Protection Course			25	25		25							50	140
2.3 Soil Conservation Course								25			25		25	30
2.4 Environmental Course							20			20			25	30
2.5 Meteorological Course (5 days)		20											80	20
3. Other Course (3 days)														
3.1 Seminar/Workshop on Highland Course	40												40	3
3.2 Highland Agricultural Development Course	40												40	3
3.3 Narcotics Crop Control and Prevention Training Course	40												40	3
3.4 Highland Community Development Course												40	40	3
3.5 Forestry Community Development Course												40	40	3
Sub-Total (1. + 2. + 3.)	165/24	45/40	50/60	70/45	50/40	100/60	95/55	50/40	90/60	120/55	90/60	155/36	955	565
4. Mobile Training (50 farmers/time-3 days x 16 times/year)	200/12	200/12											800	48
Total (1. + 2. + 3. + 4.)	365/36	245/52	50/60	70/45	50/40	100/60	95/55	50/40	95/60	120/55	290/72	355/48	1,755	613

Notes: Figures in Sub-Total and Total show the total number of trainees/days.

## 6-10 所要機材一覽

Item No.	Name of Equipment	Quantity	Standard
1.	Equipment for Training Activity	1 lot	
1.1	Audio-Visual Equipment (Outdoor Video Production Equipment)	1 lot	
1.1.1	Portable Video Camera	1 unit	with Cable, Viewfinder, Microphone & Carrying Case
1.1.2	Tripod	1 unit	with Dolly, Chest Pad & Carrying Case
1.1.3	Portable Video Cassette Recorder	1 unit	with Cable, Carrying Case, Carrying Handle, 40pcs Video Tapes
1.1.4	Color video Monitor	1 unit	9"
1.1.5	Battery Charger	1 unit	with AC Adaptor
1.1.6	Battery Pack	10 pieces	Rechargeable, Ni-Cd
1.1.7	Portable Battery Light	1 unit	24V, 200W, with 20pcs Lamps
1.1.8	Microphone  (Video Program Production Equipment)	1 unit	
1.1.9	Color Video Monitor	1 unit	21"
1.1.10	Video Monitor	2 units	9", Monochrome
1.1.11	Special Effect Generator	1 unit	
1.1.12	Headphone	1 unit	
1.1.13	Video Monitor	2 units	12", Monochrome
1.1.14	Video Cassette Editing/ Recorder	1 unit	
1.1.15	Power Amplifier	1 unit	
1.1.16	Headphone	1 unit	
1.1.17	Audio Mixer	1 unit	with Video Editor

Item No.	Name of Equipment	Quantity	Standard
1.1.18	Cassette Tape recorder	1 unit	
1.1.19	Compact Disc Player	1 unit	
1.1.20	Compact Monitor Speaker	2 units	
1.1.21	Portable Lighting Kit	1 unit	with 10pieces Lamps
1.1.22	Main Power Unit	1 unit	
1.1.23	Console  (Video Editing Equipment)	1 unit	
1.1.24	Video Cassette Editing/ Recorder	1 unit	
1.1.25	Video Cassette Recorder	1 unit	with 100pcs tapes
1.1.26	Automatic Editing Control Unit	1 unit	
1.1.27	Color Video Monitor	1 unit	14"
1.1.28	Console	1 unit	
1.1.29	Main Power Unit  (Video Duplication Equipment)	1 unit	
1.1.30	Video Cassette Player	1 unit	U-Matic
1.1.31	Video Cassette Player	1 unit	S-VHS/VHS
1.1.32	VTR Dubbing Controller	1 unit	
1.1.33	Color Video Monitor	2 units	14"
1.1.34	Video/Audio Distributor	1 unit	
1.1.35	VHS Recorder/Player	2 units	
1.1.36	Main Power Unit	1 unit	
1.1.37	Rack  (Video Display Equipment)	1 unit	

Item No.	Name of Equipment	Quantity	Standard
1.1.38	Video Cassette Player	1 unit	
1.1.39	Color Video Monitor	1 unit	14"
1.1.40	Video Projector	1 unit	Movable
1.1.41	VP Remote Control Unit	1 unit	
1.1.42	Audio Mixer	2 units	
1.1.43	Power Amplifier	2 units	
1.1.44	Microphone	2 units	Floor Type
1.1.45	Microphone	2 units	Desk Top Type
1.1.46	Speaker	2 pairs	
1.1.47	Screen	2 units	100"
1.1.48	Main Power Unit	1 unit	
1.1.49	Console	1 unit	for Video Player, Monitor & Remote Control Unit, Movable
1.1.50	Console (Mobile Training Equipment)	2 units	for Audio Mixer & Power Amplifier, Movable
1.1.51	Video Cassette Player	1 unit	with Carrying Case
1.1.52	Display	1 unit	27", with Carrying Case
1.1.53	Engine Generator	1 unit	Gasoline
1.1.54	Automatic Voltage Regulator	1 unit	
1.2	Training Support Equipment	1 lot	
1.2.1	Typewriter Set	1 lot	
1.2.1.1	Manual Typewriter	2 units	Thai
1.2.1.2	Table	2 units	
1.2.1.3	Chair	2 units	
1.2.1.4	Electric Typewriter	2 units	Thai/English
1.2.1.5	Table	2 units	

Item No.	Name of Equipment	Quantity	Standard
1.2.1.6	Chair	2 units	
1.2.2	Personal Computer Set	1 lot	
1.2.2.1	Computer	1 unit	16bits
1.2.2.2	Keyboard	1 unit	ANSI 101keys, 12
1.2.2.3	Display	1 unit	14"
1.2.2.4	Printer	1 unit	65pcs, 10cpi
1.2.2.5	Computer Soft	1 lot	
(A)	Data Base	1 piece	
(B)	Lotus	1 piece	
(C)	MS DOS	1 piece	
1.2.2.6	Uninterrupted Power Supply (UPS)	1 unit	220V ± 15%, 1KVA
1.2.2.7	Floppy Diskette	200 pieces	3.5" DS/DD
1.2.2.8	Diskette Cabinet	1 lot	
(A)	Desk Top Type	4 units	
(B)	Common Storage	1 unit	1
1.2.2.9	Table	1 unit	
1.2.2.10	Chair	1 unit	
1.2.2.11	Data File Cabinet	1 unit	
1.2.3	Plain Paper Copy Machine	1 unit	B5~A3, 21copies/min- A4, with 12bottles toner, cleaner, cleaning & cloth
1.2.4.1	Stencil cutter	1 unit	Max. cutting area 350mm×250mm, with desk
1.2.4.2	Auto Printer	1 unit	40~130copies/min, with desk, 2year black/red/blue/yellow ink
1.2.4.3	Cutter	1 unit	Manual, Cutting Capacity 390mmL, with Stand
1.2.4.4	Book Binder	1 unit	75mmT×430mmL

Item No.	Name of Equipment	Quantity	Standard
1.2.4.5	Paper Drill	1 unit	50mm
1.2.5	Electric Calculator	2 units	10digits, Solar
1.2.6	Wireless Radio Set	1 lot	50km~100km, VHF & FM, 140MHz~150MHz
1.2.6.1	Base Station	2 units	20W
1.2.6.2	For Automobile	3 units	10W, with antenna
1.2.6.3	For Hand Carry	6 units	5W
21..7	Fax	1 unit	Original 148mm~280mm Recording 210mm(A4)×50m, with paper
1.2.8	Steel Shelves	4 units	5shelves(Inc. Top Board), 955mmW×634mmD×2,400mmH 18"×24"×52"
1.2.9	File Cabinet	5 units	4stages,
1.2.10	Slide Door Locker	5 units	
1.2.11	Camera set	1 lot	
1.2.11.1	Camera	3 units	35mm, Single-Lens Reflex
1.2.11.2	Lens	3 lots	Standard, Wide Angle, Tele- Zoom & Close-Up
1.2.11.3	Motor Drive	3 units	
1.2.11.4	Case	3 units	
1.2.11.5	Tripod	3 units	with Case
1.2.12	Slide Projector Set	1 lot	
1.2.12.1	Slide Projector	3 units	35mm, with Zoom Lens
1.2.12.2	Slidecorder	3 units	
1.2.13	Overheard Projector	3 units	
1.2.14	Opaque Projector	1 unit	
1.2.15	16 mm Movie Projector	1 unit	
1.2.16	Screen Set	1 lot	

Item No.	Name of Equipment	Quantity	Standard
1.2.16.1	Floor Stand Type	3 units	1,800mm×1,800mm
1.2.16.2	Wall Type	1 unit	3,000mm×2,300mm
1.2.17	Handy Speaker	5 units	Battery driven, 12~18W, with spare batteries
1.2.18	Furniture	1 lot	
2.	Equipment for Demonstration Farm	1 lot	
2.1	Farm Machinery & Implement	1 lot	
2.1.1	Hand Tractor Set	1 lot	
2.1.1.1	Hand Tractor	2 units	Diesel, Max. 7.0Hp/2,400rpm
2.1.1.2	Rotary	2 units	
2.1.1.3	Disc Plow	2 units	
2.1.1.4	Ridger	2 units	
2.1.1.5	Cage Wheel	2 units	
2.1.1.6	Trailer	2 pairs	500kg
2.1.2	4 Wheel Tractor Set	1 lot	
2.1.2.1	4 Wheel tractor	1 unit	Diesel Max. 70Hp/2,400rpm
2.1.2.2	Rotary	1 unit	
2.1.2.3	Disc Plow	1 unit	
2.1.2.4	Disc Harrow	1 unit	
2.1.2.5	Ridger	1 unit	
2.1.2.6	Front Blade	1 unit	
2.1.2.7	Cage Wheel	1 pair	
2.1.2.8	Trailer	1 unit	1~2ton
2.1.3	Sprayer Set	1 lot	
2.1.3.1	Power Sprayer	2 units	Knapsack Type, Gasoline, Chemical Tank 22liter



Item No.	Name of Equipment	Quantity	Standard
2.1.3.2	Hand sprayer	5 units	Knapsack Type, 14liter Stainless Steel made Chemical Tank
2.1.3.3	Preparation Tank	6 units	Plastic made
2.1.4	Bush Cutter	5 units	Gasoline, 2Hp, 40cc
2.1.5	Sprinkler Head	50 units	Mobile, with Stand & Hose
2.1.6	Corn Sheller	3 units	Manual
2.1.7	Rice thresher	1 unit	Axial Flow, Diesel Engine driven
2.1.8	Winnower	2 units	Manual
2.2	Workshop Tools	1 lot	
2.2.1	For Engine	1 lot	
2.2.1.1	Compression Gauge	1 lot	
(A)	For Gasoline Engine	1 unit	Max Graduation 25kg/cm <sup>2</sup> , Gauge Dia. 60mm
(B)	For Diesel Engine	1 unit	70kg/cm <sup>2</sup>
2.2.1.2	Nozzle Tester	1 unit	with Valve, 0~500kg/cm <sup>2</sup>
2.2.1.3	Valve Lifter & compressor	1 unit	Opening Range 50~225
2.2.1.4	Thermometer	10 pieces	~200°C
2.2.1.5	Piston Ring Tool	1 pieces	83~135mm
2.2.2	For Chassis	1 lot	
2.2.2.1	Tire Pressure Gauge	1 piece	Bar Type, Capacity, 10kg/cm <sup>2</sup>
2.2.2.2	Garage Jack	1 unit	3ton
2.2.3	For Electric	1 lot	
2.2.3.1	Battery and Coolant Tester	1 piece	
2.2.3.2	Digital Multitester	1 unit	
2.2.3.3	Digital Clamp Meter	1 unit	

Item No.	Name of Equipment	Quantity	Standard
2.2.3.4	Battery Charger	1 unit	6~12V 30A, 18~24V 15A, 1.1KVA
2.2.3.5	Battery Tester	1 piece	12V/18~120 AH
2.2.4	For Gauge and Measurement	1 lot	
2.2.4.1	Hand Tachometer	1 unit	Non-Contact, 6~30,000rpm, 5Digits
2.2.4.2	Dial Indicator	1 unit	
2.2.4.3	Radius Gauge	1 unit	
2.2.5	For General Facility		
2.2.5.1	Steam Cleaner	1 unit	Water Consumption : 390lit/hr, Steam Pressure : 7kg/cm <sup>2</sup>
2.2.5.2	Air Compressor	1 unit	9.9kg/cm <sup>2</sup> , 57liter
2.2.5.3	Parts Cleaner	1 unit	Tank Capacity : 70ℓ
2.2.6	For Processing	1 lot	
2.2.6.1	Electric Drill	1 unit	10mm $\phi$ , with Straight Twist Shank Drill Set
2.2.6.2	Bench Drill Press	1 unit	13mm $\phi$ , with Drill Chuck & Handle & Straight Shank Twist Drill Set
2.2.6.3	Bench Electric Grinder	1 unit	Wheel Size : 205×19×15.88mm
2.2.6.4	Spray Gun	1 unit	Suction, 1.3mm $\phi$ , 1,000cc
2.2.6.5	Gas Welding & Cutting Set	1 lot	
(A)	Oxygen Container	2 pieces	40liter
(B)	Acetylene Container	2 pieces	40liter
(C)	Oxygen Pressure Regulator	1 piece	
(D)	Acetylene Pressure Regulator	1 piece	
(E)	Gas Welding Torch	1 piece	1.0~3.0mm, with 7pieces Tips

Item No.	Name of Equipment	Quantity	Standard
(F)	Manual Gas Cutting Torch	1 piece	3~30mm, with 3pieces Tips
(G)	Oxygen Hose	1 piece	6mm $\phi$ x 10m
(H)	Acetylene Hose	1 piece	9mm $\phi$ x 10m
(I)	Goggle	1 piece	
(J)	Leather Glove	2 pairs	
(K)	Spark Gas Lighter	2 pieces	
(L)	Hose Band	6 pieces	
(M)	Welding Rod	1 set	Each 25kg of 2.0mm 2.0mm $\phi$ x 1,000mmL, 2.6mm $\phi$ x 1,000mmL, 3.2mm $\phi$ x 1,000mmL & 6.0mm $\phi$ x 700mmL
(N)	Carrying Cart	1 unit	
2.2.6.6	Engine Welder Set	1 lot	
(A)	Engine Welder		50~180A, 9ps/3,600rpm
(B)	Welding Shield	1 piece	Hand Holding Type
(C)	Secondary Cord	2 pieces	22mm $\phi$ x 10m
(D)	Safety Holder	1 piece	150~250A
(E)	Earth Clip	1 piece	150~300A
(F)	Double-End Chipping Hammer	1 piece	
(G)	Leather Glove	1 pair	
2.2.6.7	Plating & Blacksmith Tool Set	1 lot	
(A)	Rivet Forge	1 piece	360mm $\phi$ x 80mmD
(B)	Iron Anvil	1 piece	Cast Steel, 30kg
(C)	Tong Firing	1 piece	Flat Nose, 450mm
(D)	Double-Face Sledge Hammer	1 set	1.8kg & 3.5kg
(E)	Cast Iron Swage Block	1 piece	300mm x 300mm x 98mm

Item No.	Name of Equipment	Quantity	Standard
2.2.7	Common Tools (For Measuring)	1 lot	
2.2.7.1	Vernier Caliper	1 piece	Digital
2.2.7.2	Measuring Tape	1 piece	Steel Made, 0~20m
2.2.7.3	Straight Rule	1 piece	0~300mm
2.2.7.4	Thickness Gauge	1 piece	25leaves
2.2.7.5	Pitch Gauge	1 piece	21leaves
2.2.7.6	Surface Gauge	1 piece	
2.2.7.7	Square (For Assembling/Dis- assembling)	1 piece	Flat Type, 150mm×100mm
2.2.7.8	Adjustable wrench Set	1 set	3pieces/set
2.2.7.9	Open End Wrench Set	1 set	6pieces/set
2.2.7.10	Adjustable Pipe Wrench	1 piece	10~54mm
2.2.7.11	Hexagon Wrench Set	1 set	2~12mm, 9pieces/set
2.2.7.12	Double Offset Box Wrench Set	1 set	6pieces/set
2.2.7.13	1/2" Square Socket Wrench Set	1 set	22pieces/set
2.2.7.14	3/4" Square Socket Wrench	1 set	11pieces/set
2.2.7.15	Puller Set		
2.2.7.16	Screw Driver Set	1 set	
2.2.7.17	Copper Hammer Set	1 set	
2.2.7.18	Ball Peel Hammer Set	1 set	
2.2.7.19	Combination Plier	1 piece	200mm
2.2.7.20	Side Cutting Plier	1 piece	200mm
2.2.7.21	Water Pump Plier	1 piece	Spring Type, Opening 40mm×250mmL

Item No.	Name of Equipment	Quantity	Standard
2.2.7.22	Cutting Nipper	1 piece	150mm
2.2.7.23	Radio Pench	1 piece	150mm
2.2.7.24	1/2" Square Stud Remover  (For Processing)	1 piece	19mm $\phi$
2.2.7.25	Engineer's File Set	1 set	5pieces of Flat, Half-Round, Round, Square & Triangular, 250mm Medium
2.2.7.26	Needle File Set	1 set	5pieces of Flat, Half-Round, Round, Square & Triangular, 150mm Medium
2.2.7.27	Oil Stone	1 piece	
2.2.7.28	Torch Lamp	1 piece	
2.2.7.29	Screw Plate Set	1 set	Metric Size
(A)	Medium Taps	28 pieces	
(B)	Dies	26 pieces	
(C)	Tap Wrench	2 pieces	
(D)	Tap Holder	1 piece	
(E)	Die Handle	2 pieces	
2.2.7.30	Adjustable Hacksaw Frame	1 piece	250~300mm, with spare blades
2.2.7.31	Soldering Iron	1 piece	
2.2.7.32	Tinner Scissors	1 piece	Cutting Thickness : 1.2mm, Straight Cutting Direction
2.2.7.33	Punch Set	1 set	
2.2.7.34	Chisel Set	1 set	
2.2.7.35	Scraper Set (For General Use)	1 set	
2.2.7.36	Grease Gun	1 piece	300cc
2.2.7.37	Vise	1 piece	Jaw Width : 152.5mm, Opening : 200mm

Item No.	Name of Equipment	Quantity	Standard
2.2.7.38	Screw Extractor Set	1 set	5pieces in Vinyl Case
2.2.7.39	Test Hammer	1 piece	230g
2.2.7.40	Cutting Nipper	1 piece	150mm
2.2.7.41	Radio Pench	1 piece	150mm
2.2.7.42	Rigid Rack	2 pieces	3ton, 350mm~675mmH
2.2.7.43	Portable Gantry Crane	1 unit	5ton
2.2.7.44	Cleaning Pan	10pieces	450mm x 600mm x 150mm
2.2.7.45	Parts Carrier	10 pieces	590mm x 358mm x 200mm, Plastic
2.2.7.46	Tool Tray	5 pieces	415mm x 250mm x 90mm, with handle
2.2.7.47	Tool Stand	1 unit	660mm x 415mm x 830mm
2.2.7.48	Tool Cabinet	1 unit	740mm x 400mm x 1,220mm
2.2.7.49	Work Bench	1 unit	1,800W x 750mmD x 750mmH
2.2.7.50	Stool	4 units	550mmW x 550mmD x 395mm~535mmH, with Caster Wheels
2.2.8	Carpenter's Tool Kit	1 lot	
2.2.8.1	Nail Hammer Set	1 set	500g, 800g & 1,000g
2.2.8.2	Hand Saw	1 piece	500mm
2.2.8.3	Nail Extractor	1 piece	260mm
2.2.8.4	Straight Rule	1 piece	1,000mm
2.2.8.5	Tape Rule	1 piece	30m
2.2.8.6	Portable Circular Saw	1 unit	210mm $\phi$
2.2.8.7	Power Plane	1 unit	82mmW
2.2.8.8	Screw Driver Set	1 set	5.5mm x 75mm, 7mm x 125mm
2.2.8.9	Try Square	1 piece	200mm
2.2.8.10	Carpenter's Drill Set	1 set	Drill Point : 2.0, 2.5, 2.8, 3.0 & 3.5mm
2.2.8.11	Wood Chisel Set	1 set	6, 9, 12, 15 & 18mm

Item No.	Name of Equipment	Quantity	Standard
2.2.8.12	Wood Marking Gauge	1 piece	6, 8 & 9mm $\phi$
2.2.8.13	Ratchet Bit Brace and Bits Set	1 set	
2.2.8.14	Tool Box	1 unit	
3.	Equipment for Road Maintenance	1 lot	
3.1	Bulldozer	1 unit	70Hp
3.2	Dump Truck	1 unit	2ton, 4WD, Diesel
3.3	Hydraulic Excavator	1 unit	15Hp, Crawler Type
4.	Equipment for Transportation Vehicle	1 lot	
4.1	Station Wagon	3 units	4WD, Diesel, Long Body
4.2	Pickup Truck	1 unit	Double-Cab, 1ton, 4WD
4.3	Microbus	1 unit	12Seaters, Diesel, 4WD
4.4	Motor Cycle	5 units	Off-Road Type, 125cc, 4-Stroke
5.	Equipment for Highland Agricultural Development	1 lot	
5.1	Equipment for Land and Soil Conservation Training		
5.1.1	Electronic Balance	2 units	0~6kg, 100g/0.01g
5.1.2	Mechanical Balance Set	1 lot	
5.1.2.1	Model A	6 units	5kg
5.1.2.2	Model B	6 units	12kg
5.1.3	Spring Scale	6 units	10kg
5.1.4	Platform Scale	6 units	50kg
5.1.5	Rule	14 units	1,000mm
5.1.6	Sketchboard	14 units	

Item No.	Name of Equipment	Quantity	Standard
5.1.7	Drying Oven	1 unit	150liter, 40°C~200°C
5.1.8	Meteorological Instrument	1 lot	
5.1.8.1	Evaporation Pan	2 units	1.15m <sup>2</sup> , with Hook Gauge Evaporimeter
5.1.8.2	Sunshine Autograph	2 units	
5.1.8.3	Rain Gauge	2 units	with 200cm <sup>2</sup> orifice
5.1.8.4	Precipitation Recorder	2 units	
5.1.8.5	Thermohygrograph	2 units	
5.1.8.6	Anemometer	2 units	Digital
5.1.8.7	Assman Aspiration Psychrometer	2 units	Battery driven
5.1.9	Automatic Weather Station	1 set	with Computer & Printer
5.1.10	Clinometer	14 units	Digital
5.1.11	Compass	14 units	
5.1.12	Altimeter	14 units	Digital
5.1.13	Runoff Plots Set	1 set	with Water Flow Meter & Sediment Sampler
5.1.14	Global Positioning System	2 units	Digital, 2-3m Precision
5.1.15	Soil Moisture Meter	2 units	Digital, with 20pieces blockss
5.1.16	pH Meter	2 units	Analog-Digital
5.1.17	Soil Sampler	2 units	
5.1.18	Soil Analysis Sieve Set	2 sets	Brass-Made, 12pieces/set
5.2	Equipment for Plant Protection Training	1 lot	
5.2.1	Microscope Set	1 lot	
5.2.1.1	Stereomicroscope	14 units	Max. 400X, with Illuminator



Item No.	Name of Equipment	Quantity	Standard
5.2.1.2	Compound Microscope	13 units	Max. 1000X, with Illuminator
5.2.1.3	Compound Microscope with Camera & Display	1 unit	Max. 1000X, with Illuminator
5.2.2	Glassware	1 lot	
5.2.2.1	Mortar and Pestle	26 pieces	90mm $\phi$
5.2.2.2	Frosted Slide Glass	1,400 pieces	0.7~0.9mm T,
5.5.5.3	Micro Cover Glass	1,400 pieces	50x40mm
5.2.2.4	Micro Slide Glass	1,400 pieces	
5.2.2.5	Petri Dish	400 pieces	90mm $\phi$ x 15mmH
5.2.2.6	Tweezers	26 pieces	Chrom-Plating Stainless Steel
5.2.3	Loupe	26 pieces	10X
5.2.4	Alcohol Lamp	26 pieces	
5.2.5	Plate Reader Set	1 lot	
5.2.5.1	Micro Plate Reader	1 unit	
5.2.5.2	Plate Mixer	1 unit	
5.2.5.3	Plate Washer	1 unit	
5.2.5.4	ELISA Plate	1,000 pcs	
5.2.6	Incubator	1 unit	150 liter
5.2.7	Autoclave	1 unit	40 liter
5.2.8	Oven	1 unit	150 liter
5.2.9	Water Bath	1 unit	42 liter
5.2.10	Dark Box	1 unit	
5.2.11	Grain Moisture Meter	1 unit	Digital

6-11 主要機材駆動用所要電力一覧

機 材 名	使 用 形 態 (KW)			備 考
	常 時	訓練時のみ	不特定時	
1. 訓練用機材				
1.1 視聴覚機材				
(1) 屋外ビデオ撮影機材	—	—	0.025	バッテリー駆動、比較的電力消費の低い時間に充電作業可
(2) 屋内ビデオ撮影機材	—	—	3.254	
(3) ビデオ編集機材	—	—	0.7	
(4) ビデオ複製機材	—	—	0.8	
(5) ビデオ投影機材	—	2.0	—	
(6) 巡回訓練用機材	—	—	—	
小 計	—	最大2.0	最大3.254	
1.2 訓練補助機材				
(1) 電動タイプ	0.3	—	—	最大0.15KW×2台
(2) コンピューター	0.235	—	—	
(3) コピー機	1.5	—	—	
(4) 印刷機材	—	—	1.755	
(5) スライド・プロジェクター	—	0.59	—	最大0.295KW×2台
(6) オーバーヘッド・プロジェクター	—	0.8	—	最大0.4KW×2台
(7) 反射プロジェクター	—	0.25	—	
(8) 映写プロジェクター	—	0.5	—	最大0.25KW×2台
小 計	最大2.038	最大0.59	最大1.755	
合計(1.1+1.2)	最大2.038	最大2.0	最大5.009	
2. 展示圃場用機材				
2.1 農業機械	—	—	—	人力、エンジン駆動
2.2 修理工具				
(1) 充電器	—	—	1.1	
(2) スチーム・クリーナー	—	—	0.4	
(3) コンプレッサー	—	—	0.75	
(4) パーツ・クリーナー	—	—	0.035	

機 材 名	使 用 形 態 (KW)			備 考	
	常 時	訓練時のみ	不特定時		
(5) 電動ドリル	--	--	0.25	3φ	
(6) 卓上ドリル	--	--	0.2		
(7) 卓上グラインダー	--	--	0.53		
(8) 電動グラインダー	--	--	0.325		
(9) リベット・フォージ	--	--	0.095		
(10)半田鎔	--	--	0.1		
(11)電動鋸	--	--	1.14		
(12)電動鉋	--	--	0.46		
小 計	--	--	最大2.38		
合計(2.1+2.2)	--	--	最大2.38		
3. 道路保守管理用機材	--	--	--		エンジン駆動
4. 輸送用機材	--	--	--		エンジン駆動
5. 高地農業開発用機材					
5.1 土地利用土壌保全用機材					
(1) 乾燥器	--	1.35	--		
(2) 自動気象観測装置	0.253	--	--		
小 計	最大0.253	最大1.35			
5.2 病虫害防除用機材					
(1) 実体顕微鏡	--	0.25	--		
(2) 万能顕微鏡	--	0.53	--		
(3) プレート・リーダー	--	--	0.445	プレート・リーダー360W、 プレート・ミキサー35W、 プレート洗浄器50W	
(4) 培養器	0.764	--	--		
(5) 滅菌器	--	2.3	--		
(6) 乾燥器	--	1.54	--		
(7) 恒温水槽	--	2.23	--		
(8) 暗箱	--	0.012	--		
小 計	最大0.764	最大2.83	最大0.445		
合計(5.1+5.2)	最大1.017	最大4.18	最大0.445		
総計(1.+2.+3.+4.+5.)	最大3.055	最大4.18	最大7.834		



