

付属資料4 フォローアップ技術協力におけるカウンタートパートナー配置状況表

プロジェクト名	インドネシア農業研究計画		協力期間		備考			
	中央食用作物研究所 (CRIFC)		昭和53年10月23日～昭和58年10月22日 昭和58年10月23日～昭和60年10月22日					
協力機関	Jl. Merdeka 99, Bogor, Indonesia							
住所	同上							
郵便宛先	同上							
番号	カウンタート名	職	配属年月日	専門分野	学歴	指導専門家	研修受入分野または機関(期間)	備考
1.	Dr. B. H. Siwi	CRIFC所長	昭58.11.8	作物育種	フィリップシノボリス大学	泉山陽一 (リーダー)	稲察(昭和60.8.25～60.9.4)	
1.	Dr. Z. Harahap	育種	"	"	ルイジアナ大学	泉山陽一		
2.	Dr. Sumarno	育種	"	"	マイオア大学	"		
3.	Ir. Saikin Somaatmaja	育種	"	"	シシボンビ大学	"		
4.	Ir. Tateng Sutarnan	育種	"	"	ボゴール農大	"	豆類育種(昭56.6.5～56.12.4)	
5.	Lukman Hakim	育種	"	"	"	"		
1.	Ir. Soetjipto Partohardjono	栽培部長	"	作物栽培	ボゴール農大	泉山陽一 (畑作物栽培)		
2.	Ir. Djuber Paseribu Msc.	豆類栽培主任	"	"	フィリップシノボリス大学	"		
3.	Dr. Novianti Sunarlim	豆類栽培	"	"	アイオワ大学	"		
4.	Ir. Sri Hutami Msc.	"	"	"	ガジマダ大学	"		
5.	Drs. Ig. V. Sutarto Ds.	"	"	"	I R I P	"	豆類栽培(昭55.5.8～55.11.7)	
6.	Ir. Ruchiat Dananhuri	水稻栽培主任	"	"	ボゴール農大	"	水稻栽培(昭56.6.5～56.12.4)	
7.	Ir. Tmtias Basa	トウモロコシ栽培主任	"	"	ボゴール農大	"		
8.	Ir. Sutor Harjosutarno	トウモロコシ栽培	"	"	ボゴール農大	"	ソルガム育種(昭55.3.13～55.9.12)	IPBへ国内留学中
9.	J. Wargiono Hodi Bsc.	いも類栽培主任	"	"	ナショナル大学	"		
10.	Ir. Melina Megawati	いも類栽培	"	"	ボゴール農大	"	かんし栽培(昭58.3.30～58.9.20)	IPBへ国内留学中
11.	Inu. Candana Ismail	作付体系主任	"	"	農業アカデミ	"		

12. Ir. Trip Alihamsyah	作物体系	昭58.11.8	作物栽培	ガジャマダ大学	泉山 陽一	農業機械(昭58.3.30~59.3.20) 豆類栽培(昭59.5.30~59.8.31) 豆類栽培(豆類栽培(昭60.7.2~60.11.20))	米留留学中
13. Ir. Ukup Sudriatna	作物体系	昭59.11.8	"	ガジャマダ大学	"		
14. Ir. Firman Bangun	雑草防除主任	"	"	ボゴール農大	"		
15. Ir. Suprpto Hs.	豆類栽培	"	"	ガジャマダ大学	"		
16. Lalu Sukarino Esc	実験室主任	"	"	化学分析アカデミー	"		
1. Dr. M. Ismudjji	BORIF所長	昭58.10.23	植物生理	ボゴール農大	矢沢 文雄 (植物生理)		IPBでDr.取得 兼職 週1回
2. Dr. M. Fathah Mubadjar M.S.C.	植物生理部長	昭60.5.1	"	ガジャマダ大学 ライオンズ大学	"		兼職 週1~2回 京都大(Dr.)
3. Dra. Sisniya. J.I.R.	作物栄養主任	昭58.10.23	(作物栄養)	ガジャマダ大学	"	農業技術研究所(昭48.7~49.1)	兼職 週4~5回
4. Iskandar Z.M.Sc.	作物栄養	"	"	東京農工 (M.Sc.)	"		兼職 60%協力
5. Dra Ratna Fatmahan	"	"	"	ガジャマダ大学	"	農業研究センター(昭60.6~60.12)	兼職 20%協力
6. Drs.Mirtado	"	"	"	ガジャマダ大学	"	農業技術研究所(昭57.3~57.9)	兼職 50%協力
7. Drs.M.Djazuli M.S.	"	"	"	ガジャマダ大学	"	九州農業試験場(昭58.1~58.7)	
8. Ir. Irwan Nastion M.S.	"	"	"	ボゴール農大	"	北海道農業試験場(昭56.8~57.2)	
9. Drs.Mono Rehardjo	"	"	"	ジャカルタ、ナンジャ ル大学	"		
10. A. Choliludin	"	"	"	農業高校	"	北海道農業試験場(昭59.2~59.8)	兼職 20%協力
11. Nanaag Priatna	化学分析	"	(作物栄養) 化学分析(作物)	ボゴール化学分析高校	"	九州農業試験場(昭54.4~54.10)	兼職 30%協力
12. Ayub Warma Gozali	"	"	化学分析(土壌)	"	"	沖縄研究所(57.1~58.1)	兼職 30%協力
1. Dr. D.M. Tantera	病理昆虫部長	昭59.1.21	昆虫	ナショナル大学	本間 健平 (昆虫)	植物ウイルス研究所(昭49.1~49.3)	
2. Dr. Ir. I. N. Oka	品種抵抗性	"	"	コロンネル大学	"		
3. Dr. Ir. Moebamed Iman	品種抵抗性	"	"	フィリピン・ホムボス大学	"		
4. Ir. Suartini	品種抵抗性	"	"	ボゴール農大	"		
5. Ir. Arifin Kartohardjono	品種抵抗性	"	"	ボゴール農大	"		
6. Dr. Ir. J. Sugitno	生産	"	"	ボゴール農大	"		
7. Sugiarto PBA	生産	"	"	ボゴール農大	"		
8. Dr. Edi Sumarjo	生産	"	"	ボゴール農大	"		

9.	Ir. Wedaninbi Tengkan	生	殺	殺	昆	虫	大	本間	大豆害虫(昭56.6.5~56.12.4)	
10.	Ir. Agus Iqbal	生	殺	殺	"	"	大	"	"	
11.	Ir. Sri Suharni Siwi	分	殺	殺	"	"	大	"	"	
12.	Ir. Rubendi Msc.	複	殺	殺	"	"	大	"	"	
13.	Ir. Imau Parasadjja	複	殺	殺	"	"	大	"	"	
14.	Ir. Dandi Sukarna	殺	殺	殺	"	"	校	"	"	
15.	Ir. P. Panudju B. Sc.	殺	殺	殺	"	"	大	"	"	
16.	Ir. Sutrisno	殺	殺	殺	"	"	大	"	"	
17.	Ir. Djatnika Kilin	殺	殺	殺	"	"	大	"	"	
18.	Ir. Harnoto Msc	防	殺	殺	"	"	大	"	"	
19.	Ir. Budihardjo	防	殺	殺	"	"	大	"	"	
20.	Drs. M. Arifin	天	殺	殺	"	"	大	"	"	
21.	Ir. Rochman	防	殺	殺	"	"	大	"	"	
22.	Ir. Tota Djuwarso	防	殺	殺	"	"	大	"	"	
23.	Burhanudin	防	殺	殺	"	"	校	"	"	
1.	Dr. D.M. Tantera	病理	昆	昆	植物	理	ナ	和夫	ウイルス研究所(昭49.1~49.3)	東京農大で学位取得(昭59)
2.	Dr. Mukelar Amir	病理	昆	昆	(糸状菌類)	(	ガ	"	農業技術研究所(昭49.3~49.6)	ボゴール農大で学位取得(昭60)
3.	Dr. M. Sutjadi	病理	昆	昆	(	(	ガ	"	東京農大(昭54.6~54.9)	
4.	Ir. M. Roeban	病理	昆	昆	(ウイルス病)	(	ガ	"	農業技術研究所(昭58.3~59.3)	
5.	Ir. Nasir Seten	病理	昆	昆	(	(	ガ	"	農業技術研究所(昭49.3~49.9)	
6.	Ir. Djumanto	病理	昆	昆	(	(	ガ	"	ウイルス研究所(昭48.7~58.12)	
7.	Dr. M. Machmud. M. Sc.	病理	昆	昆	(	(	ガ	"	シンポジウム(昭52.1~52.12)	
8.	Dra. Nuning Hindum A.	病理	昆	昆	(	(	ガ	"	ウイルス研究所(昭57.5~57.11)	
9.	Ir. Hartini Ramlan H.	病理	昆	昆	(	(	ガ	"	ウイルス研究所(昭59.3.1~59.10.11)	

10.	Drs. M. Kosim Kardin	病理昆虫部長	昭59. 1. 21	植物 (糸状菌病)	パンドン工科大学	松本 和夫	農業技術研究所 (昭51. 3~51. 9)	ミネソタ大学留学中
11.	Drs. Masdin Bustaman	病理昆虫部長	"	"	アランダラスタ大学	"	熱帯農学研究所 (昭55. 5~55. 10)	米国メリーランド大 学留学中
12.	Ir. Muhammed Herman	病理昆虫部長	"	" (線 虫)	ガジヤマダ大学	"	農業技術研究所 (昭54. 5~54. 10)	米国留学中
13.	Ir. Haeni Purwanti	病理昆虫部長	"	" (糸状菌病)	サテイアクシヤナ大学	"	農業技術研究所 (昭60. 3~9)	
14.	Objim Sumantri	病理昆虫部長	"	"	高 校	"		
15.	Eddy Soetarwo	病理昆虫部長	"	" (データ解析)		"		
1.	Dr. B. H. Siwi	C. R. I. F. C 所長	昭58. 10. 18		カリフォルニア大学	奥田 飛行 (業務調整)		育 種
2.	Mr. Seejianto	総務部長	"		農業研究アカデミー		稲祭 (昭58. 6. 1~58. 6. 18)	昆 虫
3.	Dr. Sridodo	研究計画部長	"		アイオワ大学			生 理
4.	Drs. Mahjodclin Syam	研究広報部長	"		ガジヤマダ大学			生 物
5.	Mr. Abdvillah Ph	研究施設部長	"		アラウイジャ大学			栽培



付属資料5 新規プロジェクト要請内容

SEKRETARIAT NEGARA  
SEKRETARIAT KABINET RI

Jakarta, May 30, 1985.

No. 3275 /Set.Kab/LN/P/5/1985.

Mr. M. Fujii  
First Secretary  
Embassy of Japan  
J A K A R T A

Dear Mr. Fujii,

Strengthening of Pioneering Research for  
Palawija Crop Production.

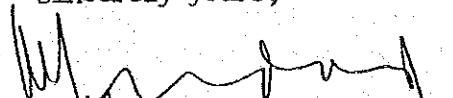
I would like to submit a technical assistance request for the project  
Strengthening of Pioneering Research for Palawija Crop Production.

For your perusal I am enclosing the Terms of Reference of the project.

We would highly appreciate your kind assistance in forwarding this request  
to your Government for their favourable consideration and approval.

Thank you for your continued cooperation.

Sincerely yours,

  
Moh. Widodo Gondowardojo, SH  
NIP. 180001398

Head  
Bureau for Technical Cooperation

CC :

1. Sdr. Sekjen Dep. Pertanian.
2. Sdr. Sekretaris Badan Litbang  
Pertanian, Dep. Pertanian.
3. Biro Pertanian dan Pengairan,  
BAPPENAS.
4. Dit. KST dan Jasekon, Deplu.
5. Biro Hublu, Setjen Departemen HANKAM.
6. JICA Representative - Jakarta. ✓



BADAN PENELITIAN DAN  
PENGEMBANGAN PERTANIAN

STRENGTHENING OF PIONEERING RESEARCH  
FOR PALAWIJA CROP PRODUCTION  
(1985 - 1990)

DEPARTMENT PERTANIAN

1 9 8 5

## PROJECT DIGEST

1. Project title : Strengthening of Pioneering Research for Palawija Crop Production (1985-1990)
2. Location : Bogor, West Java
3. Executing Agency : Central Research Institute for Food Crops (CRIFC)
4. Objectives :
  1. To establish appropriate technology for palawija crop production through pioneering research for the improvement of crop production system, crop nutrition technology and, disease and pest management, by means of:
    - a. Tissue culture and cytogenetics techniques.
    - b. biological technologies including microbiological techniques.
  2. To contribute the development of palawija crop production through the establishment of appropriate technology.
  3. To promote research capability through cooperative research activities.
5. Project description :
  - a. This project is expected to assist (CRIFC) with its strengthening of fundamental and pioneering research activities for palawija crop through:
    1. Dispatch of experts,
    2. Training and
    3. Equipment supply.

- b. To strengthen experiment activities at experiment field of BOIF, Bogor.
- c. To organize and distribute specified package recommendations on each subject as the basis for improvement of farming practices to all the concerned agencies in Indonesia.
- d. To conduct seminar on each subject with or without the request of external organizations.

6. Scope of Assistance Requested:

a. Expert Services	:	5 x 40 mm	=	US\$1,500,000
b. Fellowship	:	5 x 40 mm	=	US\$ 500,000
c. Equipment Supply	:	-	=	US\$1,250,000
				<hr/>
Total				US\$3,250,000

7. Implementation period : 1985 - 1990 (5 years)

8. Related to project aid : \_\_\_\_\_



## TERM OF REFERENCE (Draft)

### I. BACKGROUND AND SUPPORTING INFORMATION

#### A. Justification of Project

While great efforts have been made to increase production in food crop, especially in non-rice food crops which are known in Indonesia as "Palawija", aiming at national food sufficiency and saving of international payment, agricultural developing area has been expanded and its environmental condition has been diversified.

Accompanying such development, Indonesian agriculture is encountering various problems to be solved for continuing the promotion of food crop production.

In this situation, a package technology which can support strengthening of palawija crop production adapting various agro-environmental conditions are urgently desired to be established.

Main problems to be solved for promoting production in palawija crops are considered as follows:

##### 1) Seed quality improvement

Seed is a primary and basic matter for crop production. In humid-tropic climatic condition, there is much difficulty in producing good quality seed due to various influences such as plant disease and insect pest, further, it is also difficult to maintain viability of seed in such climatic condition.

Through investigation is necessary to solve these problems and to produce high quality seeds capaciting high yield production of palawija crops.

##### 2) To establish production system of palawija crop

Corresponding with the development and diversification of agriculture, appropriate crop production system to the agro-environmental condition should be established.

#### Note:

Palawija : non-rice food crops.

Research for improvement of crop variety, cropping system, and cultivation techniques through the use of tissue culture and cytogenetic technique in breeding methodology are the essential approaches for this purpose.

- 3) To develop crop nutrition improvement technology suitable for various soil conditions with the use of microbiological techniques.

Productivity of crop is decisively influenced by soil condition. While palawija crop are is varying in soil condition in accordance with extensive agricultural development. So that, it is desired to develop suitable crop nutrition technology for various soil conditions.

- 4) Plant disease and pest management

Disease and pest is the problem which always appears when agriculture develops to new area. Moreover, they may become a problem challenging development of modern agriculture. Influence of disease and pest on agricultural production is generally severer, especially tropical climatic condition.

In this sense, it is essential to establish appreciate technology that can help increase production of palawija crop in the way of disease and pest management.

#### B. Name of the Project

The name of the project is Joint Pioneering Research for Palawija Crop Production.

#### C. Institutional Framework

The project is to be executed by Central Research Institute for Food Crops (CRIFC), under supervising of the Agency for Agricultural Research and Development, Department of Agricultural.

The research activities are implemented at Bogor Research Institute for Food Crops (BORIF) that has been developed and designed to conduct pioneering research for food crops commodities in connection with other research institutes for food crops coordinated by CRIFC.

#### D. Government Follow Up

By the end of this project the Indonesian research staff should gain appropriate technology and basic material necessary for continue improvement of national palawija crop production. Equipment and skill in research methodology for 1) seed quality improvement, 2) tissue culture and cytogenetics, 3) crop nutrition improvement for various soil condition with the use of microbiological techniques, 4) biological plant disease and pest management, will enable Indonesia researcher continue to work with advance technologies. This is important to support the development project to increase palawija crop production to meet the national ever increasing demand both for domestic consumption and export.

## II. OBJECTIVES OF THE PROJECT

### A. Immediate Objectives

To establish appropriate technology for palawija crop production through pioneering research for the improvement of crop production system, crop nutrition technology and disease and pest management by means of:

- a. tissue culture and cytogenetics techniques for breeding methodology.
- b. biological N-fixation technologies and other microbiological method for crop nutrition improvement.

### B. Long-range Objectives

1. To contribute the development of palawija crop production through the establishment of appropriate technology.
2. To promote research capability through cooperative research activities.

## III. PLAN OF OPERATIONS

To achieve the objectives mentioned above, following research activities are to be attempted:

1) Seed quality improvement

a. Production techniques for high quality seed

Involving cultural techniques, crop nutrition techniques and disease and pest management in seed production, and seed processing techniques.

b. Techniques for maintaining high quality and high viability of seed involving investigations on germination of seed, seed storage and control of stored grain insect pest.

2) Production system of palawija crops

a. Improvement of crop variety adaptable to environmental condition through the use of tissue culture and cytogenetic for breeding technique.

b. Introduction and trial cultivation of new crop as component of cropping system.

c. Utilization techniques of yield increasing agent including micro-organism agent.

3) Plant nutrition improvement technology for palawija crops

a. Diagnostic techniques for nutritional problems of crops.

b. Improvement of problem soils and establishment of fertilization techniques.

c. Establishment of economical fertilization system through biological N-fixation technologies and other microbiological agent for soil plant nutrient availabilities.

4) Plant disease and pest management

(plant disease)

a. Diagnosis and identification of causal agent of disease in palawija crops.

b. Bionomies of causal agent affected crop yield.

c. Disease management through genetic resistance and other method.

(insect pest)

- a. Ecology and bionomics of main pest
- b. Analysis of injury caused by insect pest
- c. Transmission of plant virus by insect
- d. Suitable pest management

#### IV. EXTERNAL AND GOVERNMENT INPUTS

##### 1. External Inputs

In the implementation of this Joint Project the Japanese Government will dispatch experts, provide training for Indonesia researcher and the related research equipments.

1) Team Leader

2) Researchers covering the following fields:

- a. Seed Technology
- b. Upland Crop Agronomy
- c. Plant Physiology/Microbiology
- d. Plant Pathology
- e. Entomology

3) Coordinator

The total Japanese budget contribution for 5 years period is US\$3,250,000 as shown in this following table:

The Japanese budget contribution for 5 years period is estimated as \$3,250,000.--, with the following breakdown.

	Budget (thousand US\$)				
	1st year	2nd year	3rd year	4th year	5th year
A. Equipment and Consumable	250	250	250	250	250
B. Training of Counter-part	100	100	100	100	100
C. Salaries and Running Expenses for Research	300	300	300	300	300
Total	650	650	650	650	650

## 2. Government Inputs

The Indonesia Government will provide research staff with the necessary facilities from Bogor Research Institute for Food Crops to join in the implementation of the project.

The estimated Indonesian budget contribution (local cost) for 5 years period will covered Rp. 325,000,000.-. This is compose of: 1) Indonesia counterpart staff, 2) Office and research space, 3) Travel allowance for Indonesia staff, 4) Clearances of commodities, 5) Clearance of visas, permit, etc. and 6) Operational cost of research.

The discription of the budget is presented in the following table:

The estimated Indonesian budget contribution (local cost) for 5 year period Rp. 325,000,000.-.

	Budget (in thousand Rp.)				
	1st year	2nd year	3rd year	4th year	5th year
A. Indonesian Counter staff	8,000	8,000	8,000	9,000	8,000
B. Office and research space	5,500	5,500	5,500	5,500	5,500
C. Travel allowance for Indonesian staff	10,000	10,000	10,000	10,000	10,000
D. Clearance of commodities	10,000	10,000	10,000	10,000	10,000
E. Clearance of visas, permit, etc.	2,000	2,000	2,000	2,000	2,000
F. Operational cost of research	25,000	25,000	25,000	25,000	25,000
Total	65,000	65,000	65,000	65,000	65,000

付属資料 6. 新規プロジェクト研究計画 (インドネシア提案)

STRENGTHENING OF PIONEERING RESEARCH FOR PALAWIJA  
CROP PRODUCTION

PLAN OF OPERATIONS

The following research activities will be conducted to achieve the objectives of the above cooperation project.

1. Seed quality improvement

a. Production techniques for high quality seeds.

- Research on cultural practices
- Research on crop physiology and nutrition
- Research on pests and diseases
- Research on seed processing
- Seed certification study

b. Techniques for maintaining high quality seeds during storage.

- Research on seed viability
- Research on pests and diseases
- Research on physiological and biochemical changes of stored seeds.

2. Production systems of palawija crops

a. Improvement of crop adaptability and productivity.

- Research on tissue culture
- Cytogenetic studies for breeding techniques
- Germplasm collection and utilization of legumes
- Breeding and selection on acid soils
- Studies on potential productivity of palawija crops

- b. Research on cropping systems
    - Introduction of new crops in the cropping systems
    - Crop interactions in cropping systems
    - Component technologies in the cropping systems
  - c. Utilization techniques of yield-increasing agents, including micro-organisms
    - Utilization of Rhizobium inoculant for legume production
    - Research on growth regulators
3. Plant nutrition improvement technology
- a. Diagnostic techniques of nutritional problems
    - Research on nutrient interactions
    - Research on micro-nutrients
  - b. Improvement of problem soils and fertilization techniques
    - Amelioration and fertilization of acid soils
    - Amelioration and fertilization of saline soils
    - Amelioration and fertilization of calcareous soils
    - Amelioration and fertilization of peat soils
  - c. Establishment of economical fertilization through biological N-fixation technologies
    - Collection, isolation, identification and selection of effective Rhizobium strains
    - Research on the production of Rhizobium inoculants



- Effect of cultural practices on Rhizobium development and crop productivity
- Research on Micorrhizal symbiosis with palawija crops

#### 4. Plant disease and pest management

##### Plant diseases

- a. Diagnosis and identification of causal agents of diseases in palawija crops
  - Studies on serological techniques
- b. Bionomics of causal agents affecting crop yield
  - Study on the biology and ecology of important diseases on corn and legumes
  - Disease and insect vectors interrelationships
- c. Disease management through genetic resistance and other methods
  - The use of genetic resistance for disease control
  - Integrated disease control
  - Tissue culture techniques to obtain disease free plants

##### Insect pests

- a. Ecology and bionomics of major pests
  - Population dynamics of major pests
  - Ecology and bionomics of major pests

b. Analysis of injury caused by insect pests

- Analysis of injury level of major stored-product insects
- Economic injury level of podsucking insects
- Analysis of injury caused by soybean pod borers

c. Transmission of plant viruses by insects and mites.

- Study on natural enemies of insects
- Chemical control of insects
- Side and residual effects of pesticide application
- Study on insect resistance

付属資料7. 新規プロジェクトに関する团长レター

Dr. Bernard Hendrik Siwi  
Chairman, Joint Committee  
of the Strengthening of Legumes  
in Relation to Cropping System  
Research Project (ATA-218)

Dear Sir,

It is my pleasure to submit herewith the Summary Report on the Consultation Survey for the Technical Cooperation on Strengthening of Pioneering Research for Palawija Crop Production, which is the fruit of the surveys and through the discussions with the Indonesian authorities concerned.

The Team will report and convey all the information obtained from the surveys and have continuous discussions about the possibility of formulating the technical cooperation on the said Project with the Japanese authorities concerned.

All the members of the Team wish to extend their heart-felt thanks for you and your staff members for the kind cooperation extended to them to make the survey a successful one.

Sincerely yours,

*Takeo Iguchi*

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Mr. Takeo IGUCHI  
Leader  
Consultation Survey Team  
for Strengthening of Pioneering  
Research for Palawija Crop  
Production

SUMMARY REPORT  
ON  
CONSULTATION SURVEY  
FOR  
THE TECHNICAL COOPERATION  
ON  
STRENGTHENING OF PIONEERING RESEARCH  
FOR PALAWIJA CROP PRODUCTION

1985, SEPTEMBER,  
JAKARTA, INDONESIA  
CONSULTATION SURVEY TEAM

## I. INTRODUCTION

Before the extended cooperation period of the Strengthening of Legumes in Relation to Cropping System Research Project will terminate on October 22, 1985, the Government of Japan received the application from the Government of the Republic of Indonesia for the technical cooperation on "Strengthening of Pioneering Research for Palawija Crop Production" (hereinafter referred to as "the Project").

In response to the above-mentioned application, the Consultation Survey Team (hereinafter referred to as "the Team"), headed by Mr. Takeo IGUCHI, has been despatched from 5th to 16th September 1985, by the Government of Japan.

The purposes of the Team are to carry out an overall review of performances during the last two years of cooperation on the Strengthening of Legumes in Relation to Cropping System Research Project, to collect more detailed information about the new Project, and then to make an agreement on a framework of the possible technical cooperation on the Project with Indonesian authorities concerned.

## II. BACKGROUND

Aiming at national food sufficiency and saving international payment, the Government of the Republic of Indonesia has laid great emphasis on development of food crops production, especially on one of "Palawija Crops" production.

In Indonesia, the agricultural area has continued to extend. Consequently many kinds of problems concerning cultivation of palawija crops under diversified conditions have been actualized. At present, it is strongly requested to introduce some appropriate cultivation techniques of palawija crops to Indonesian farmers.

On the other hand, the Team got a strong impression that one of the most serious factors, which have obstructed high yielding of palawija crops in Indonesia is a problem of seed quality. In order to solve this problem the Team considers that an integrated approach is quite important.

In these sense , pioneering research for palawija crop production has much significance now in Indonesia

### III. PLAN OF THE PROJECT

Based upon the results of the surveys and discussions, the Team considers that possible plan of the Project would be in the manner as specified as follows:

#### 1. Name of the Project

Strengthening of Pioneering Research for Palawija Crop Production

#### 2. Purposes of the Project

The purposes of the Project are as follows:

- (1) To develop appropriate technology for palawija crop production through pioneering research for the seed quality improvement of crop production system and crop nutrition technology
- (2) To contribute to the development of palawija crop production through the establishment of appropriate technology
- (3) To promote Indonesian researchers' capability through cooperative research activities

#### 3. Organization

##### (1) Executive organization

Central Research Institute for Food Crops (CRIFC)

##### (2) Implementation organization

Bogor Research Institute for Food Crops (BORIF)

4. Term of the Project

Five (5) years about from April 1986

5. Research activities of the Project

To achieve the purposes mentioned above, following research activities are to be attempted:

(1) Seed quality improvement

1. Production techniques for high quality seed
2. Techniques for maintaining high quality and high viability of seed
3. Disease and pest management

(2) Improvement of palawija crop production techniques

1. Improvement of crop adaptability and productivity
2. Plant nutrition improvement technology

(3) Improvement of palawija crop production by biological techniques

1. Utilization techniques of microorganism agent including biological N-fixation technology
2. Use of Tissue Culture

6. Subject crops

Soybean, peanut, corn and sweet potato

7. Measures to be taken by Japanese side

(1) Fields of Experts to be assigned:

1. Team Leader
2. Upland Crops Agronomy
3. Plant Physiology
4. Plant Pathology
5. Entomology
6. Coordinator

Note: The total number of the long-term experts is fixed at six (6). Short-term experts in the fields of Seed Storage, Tissue Culture, etc. may be despatched when necessity arises.

(2) Acceptance of Indonesian Counterpart Personnel to Japan for training

(3) Provision of equipment

Machinery, equipment and other materials necessary for the implementation of the Project will be provided under the technical cooperation scheme

8. Measures to be taken by Indonesian side

(1) Provision for experimental fields, building and facilities etc. necessary for the implementation of the Project

(2) Assignment of necessary number of counterpart experts and other administrative staff

(3) Budgetary allocation necessary for the implementation

9. Establishment of a Joint Committee

(1) Chairman : Director of Central Research Institute for Food Crops (CRIFC)

(2) Indonesian side:

1. Director of Bogor Research Institute for Food Crops (BORIF)
2. Head of Divisions of BORIF related to the Project
3. Other personnel appointed by the Chairman

(3) Japanese side:

1. Team Leader
2. Experts designated by Team Leader
3. Coordinator
4. Representatives of Japan International Cooperation Agency

Officials of the Embassy of Japan can attend the Joint Committee as observers.

IV. SCHEDULE BY THE TIME OF THE START OF THE PROJECT

Implementation Survey Team may be despatched about in January of 1986 (Conclusion of the Record of Discussions).



付属資料 8. 日・「イ」合同委員会出席者名簿

DAFTAR HADIR  
JOINT COMMITTEE MEETING  
Tanggal : 12 September 1985

1. HISAO SHIOZAKI	JICA Consultation Team
2. SOHEI YASUDA	- " -
3. MICHIKO UMEZAKI	- " -
4. TAKEO IGUCHI	- " -
5. K. HONMA	JICA ( BORIF )
6. K. MATSUMOTO	JICA ( BORIF )
7. S. OKUDA	JICA EXPERT
8. F. YAZAWA	JICA EXPERT
9. Y. IZUMIYAMA	JICA EXPERT
10. Y. SASAKI	JICA
11. EMILIA	BIRO KLN
12. INDRAMINI SUSILO	AARD
13. SUMARTINI	BUREAU OF PLANNING
14. M. ISMUNADJI	BORIF
15. D.M. TANEERA	BORIF
16. I.N. OKA	BORIF
17. Z. HARAHAP	BORIF
18. SOETJIPTO	BORIF
19. PARANSIH ISBAGIO	AARD
20. A. PRAWIROSAMUDRO	CRIFC
21. HILMI RIDWAN	AARD
22. DANDI SOEKARNA	BORIF
23. SADIKIN SOMAATMADJA	BORIF
24. SRIDODO	CRIFC

Pimpinan Rapat

Dr. B.H. Siwi



付属資料 9. 無償資金協力要請内容

SEKRETARIAT NEGARA  
SEKRETARIAT KABINET RI

Jakarta, ~~February~~ 9, 1985

No. 5664/Setkab/LN/P/9/1985

Mr. K. Hirayama  
First Secretary  
Embassy of Japan

J A K A R T A

Dear Mr. Hirayama,

ATA-378 : Strengthening of Pioneering  
Research for Palawija Crop  
Production.

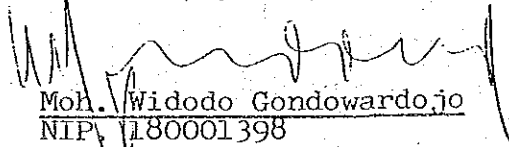
I would like to submit a Grant Aid proposal of the project  
ATA-378 : Strengthening of Pioneering Research for Palawija  
Crop Production.

I am enclosing the project proposal for your perusal.

We would highly appreciate your kind assistance in forwarding  
this request to your Government for their favourable consider-  
ation and approval.

Thank you for your continued cooperation.

Sincerely yours,



Moh. Widodo Gondowardojo

NIP. 180001398

Head,

Bureau for Technical Cooperation

CC :

1. Sdr. Sekjen. Dep. Pertanian.
2. Sdr. Sekretaris Balitbang Pertanian,  
Departemen Pertanian-
3. Dit. KST dan JASEKON, Deplu.
4. Biro Hublu, Setjen. Dep. Hankam.
5. Biro KELN, Bappenas.
6. JICA Representative - Jakarta.

R.

DRAFT

Proposal for Japanese Grant Aid

1. Title : Facility development for research in seed technology and micro-biology
2. Location : Bogor Research Institute for Food Crops (BORIF), Jalan Cimanggu No. 3, Bogor Indonesia
3. Executing Agency : Central Research Institute for Food Crops (CRIFC), Agency for Agricultural Research and Development
4. Objectives of the Grant aid :
  - A. Immediate Objectives
    1. Construction of laboratory buildings for research in seed technology and micro - biology.
    2. Install a long term seed/germplasm cool storage units.
    3. Provide laboratory instruments, equipments and machines related with above mentioned buildings.

B. Long-Range Objective

This project is expected to establish a nucleus of a Biotechnology Research Center and in the long run enable to produce significant research findings, in term of methodologies, component and packet technologies for agricultural development toward self-sufficiency and to meet food demand of the fast increasing population.

5. Description of the project : 1. To construct laboratory buildings for research in seed technology and micro biology  
2. To install a modern long term seed/germplasm cool storage units with equipments.
6. Time of Implementation : 2 (two) years
7. Scope of Grant Aid Requested: a. Construction : US\$ 1,453,000  
b. Equipments : US\$ 350,000
8. Donor Agency : Government of Japan

Estimated project expenditure form JICA  
(in US \$)

Expenditure	Y e a r		Total
	1st	2nd	
Laboratories, meeting room, staff rooms, seed/germplasm cool storage units, etc	617,000	500,000	1,117,000
Seed processing room	72,000	-	72,000
Green house	-	192,000	192,000
Garage and storages	72,000	-	72,000
Lab. equipment, instruments and machines	-	350,000	350,000
<b>T o t a l</b>	<b>761,000</b>	<b>1,042,000</b>	<b>1,803,000</b>

For detail information of buildings, equipments and budget from Japan is listed in table 1 (attached).

9. G.O.I. inputs

The Indonesian side will participate in providing counterparts, assistance, office for the Japanese consultant and technician, an architect for detail planning of buildings, handling cost of equipments, instruments, machines and materials imported from Japan.

The Indonesian side is also responsible for expenses for land preparation, road construction, underground construction, electricity/water/gas supply outside the buildings and telephone.

Estimated project expenditure from G.O.I.  
(in thousand Rp.)

No.	Expenditure	Y e a r		Total
		1st	2nd	
1.	Land preparation	10.000	-	10.000
2.	Underground construction	35.000	-	35.000
3.	Road construction	-	30.000	30.000
4.	Electricity/water/gas supply	-	50.000	50.000
5.	Telephone	-	5.000	5.000
6.	Clearing of commodities	15.000	15.000	15.000
7.	Architect fare	10.000	-	10.000
8.	Indonesian counterpart	2.500	2.500	5.000
9.	Travel allowance	1.000	1.000	2.000
10.	Clearance of visas, permit, etc.	1.500	1.500	3.000
T o t a l		75.000	105.000	180.000

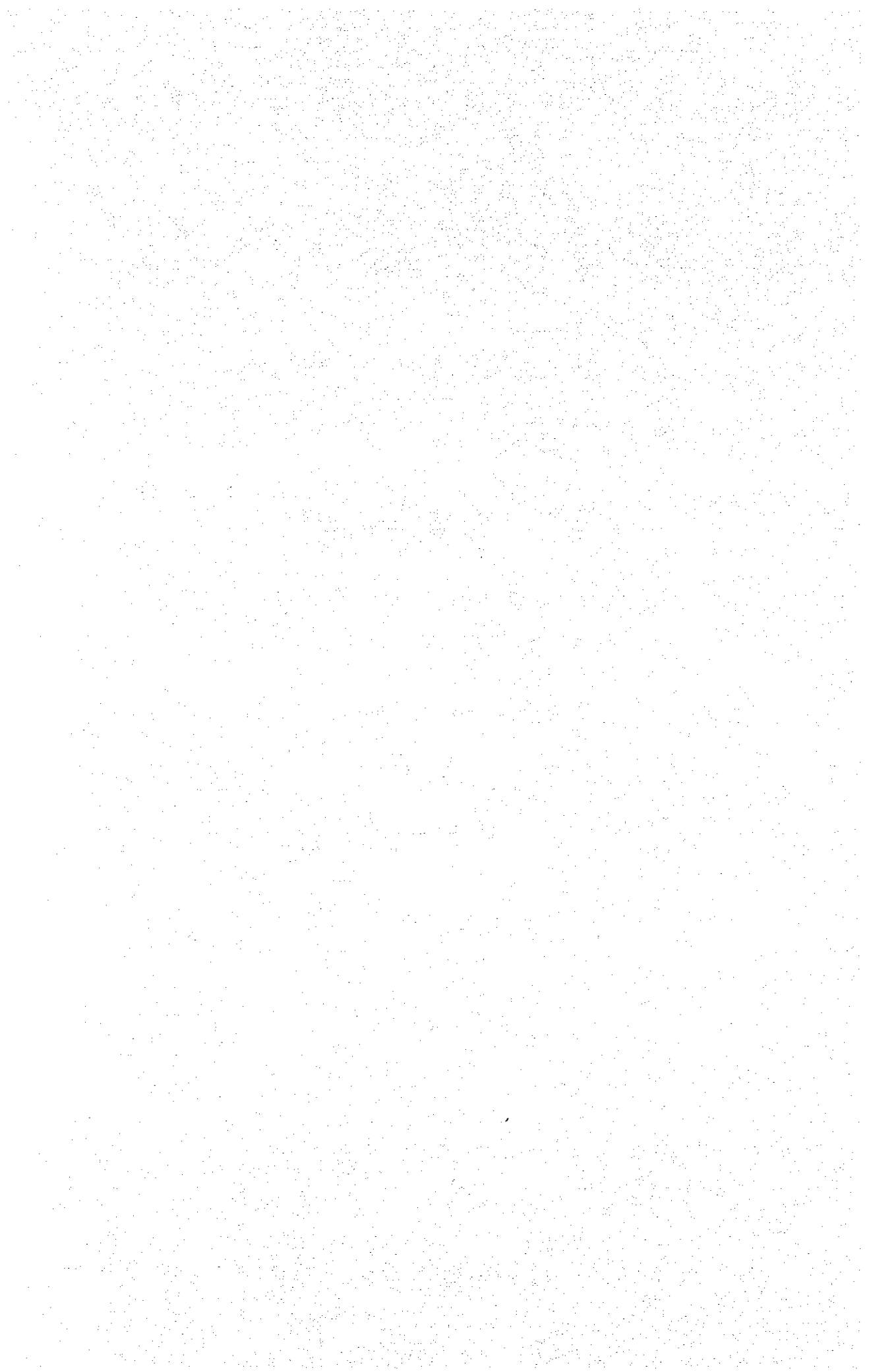
Table 1. Detail information of buildings, equipments and project budget from Japan for development of research facility

Item	Unit	Area(m <sup>2</sup> )	US\$
<u>Main Building</u>		<u>1,500</u>	<u>1,117,000</u>
1.Laboratories	4	600	480,000
2.Laboratories for special use	6	240	192,000
3.Seed storage room (with cooling apparatus)	1	65	78,000
4.Seed drying room	1	50	40,000
5.Office rooms for researchers	5	150	90,000
6.Meeting room	1	50	30,000
7.Maching room for cool storage	1	35	21,000
8.Electric supply room	1	35	21,000
9.Gas (for chemical analyses ) supply room	1	20	12,000
10.Rest room	1	30	18,000
11.Miscellaneous		225	135,000
<u>Seed Processing Room</u>	1	<u>120</u>	<u>72,000</u>
<u>Green Houses</u>	2	<u>240</u>	<u>192,000</u>
<u>Garage and Storage Room</u>	1	<u>120</u>	<u>72,000</u>
<u>Equipments</u>			<u>350,000</u>
1.Generators	2		20,000
2.Electric stabilizers	2		20,000
3.Water Supply Pumps	2		10,000
4.Microscopes	8		15,000
5.Electron microscope	1		120,000
6.Ventilating dryers	2		10,000
7.Clean benches	5		20,000
8.Draft chamber	3		15,000
9.Gas-chromatograph	1		20,000
10.Seed germination testers	2		10,000
11.incubaters	4		20,000
12.Atomic absorption spectrophotometer	1		25,000
13.Laboratory balances	10		30,000
14.Others			15,000
<b>Total</b>			<b>1,803,000</b>









JICA