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## REVIEW

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THE TWO-YEAR FOLLOW-UP COOPERATION

ON THE STRENGTHENING OF LEGUMES

IN RELATION TO

CROPPING SYSTEM RESEARCH PROJECT

(ATA-218)

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DECEMBER, 1985

JAPAN INTERNATIONAL COOPERATION AGENCY





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ORGANIZATION STRUCTURE OF CRIFC IN THE AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPUENT (AARD)

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	•		CENTRAL RESEARCH INSTITUTE FOR HORTICULTURE Dr. Subiyonto										

## THE RECORD OF DISCUSSIONS

ON

1

EXTENSION OF THE PERIOD OF THE TECHNICAL COOPERATION
FOR THE STRENGTHENING OF LEGIMES IN RELATION TO CROPPING
SYSTEM RESEARCH PROJECT

The Japan International Cooperation Agency (hereinafter referred to as "JICA"), with regard to the recommendation made by the Indonesian and Japanese Joint Evaluation Team which conducted the evaluation survey from August 2 to 19, 1983, had a series of discussions, through the Resident Representative of JICA in Indonesia, Mr. Hiroshi Yamamura with the authorities concerned of the Government of Indonesia in view of the extension of the period of the technical cooperation for the Strengthening of Legumes in Relation to Cropping System Research Project (ATA - 218) based on the Record of the Discussions (hereinafter referred to as "R/D") which was signed in Jakarta on October 12, 1978 and will be terminated on October 22, 1983.

As a result of the discussions, JICA and the authorities concerned of the Government of Indonesia agreed to recommend to their respective Governments to amend Annex I, II, and III of the above-mentioned R/D as attached hereto and to carry out a follow-up cooperation and to extend the project on the basis of this amended R/D until October 22, 1985 in order to attain the anticipated objectives of the technical cooperation. In addition, the both sides also agreed the Central Research Institute of Agriculture referred to in the above-mentioned R/D should be interpreted into the Central Research Institute for Food Crops (hereinafter referred to as "CRIFC").

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Dr. Bernard Hendrik Siwi Director of Central Research Institute for Food Crops Agriculture. Jakarta, September 14, 1983

Colombo Plan
UNDER
JAPANESE GOVERNINENT
JAFARTA

Hiroshi (Yamamura

Resident Representative Japan International Cooperation Agency.

#### MASTER PLAN

- 1. With a view to developing package of technology on Food Crops production suitable for agro-climatic conditions in the Republic of Indonesia, the project will be carried out for strengthening research activities on legumes and other secondary crops as components in cropping system at CRIFC, Bogor.
- 2. The Project will consist of the following activities:
  - 1) Research work on the component technology of cropping system through interdisiplinary approach on the following themes:
    - a. Breeding technique on legunes and other secondary crops.
    - b. Cultivation practice on legumes and other secondary crops.
    - c. Plant physiology.
    - d. Plant protection.
  - 2) Exchange of information, samples, materials and research reports.
  - 3) Developments of research capabilities of the Indonesian researchers in the fields as mentioned in (1) above.
  - 4) Other activities to be agreed upon between the authorities concerned of the two Governments.
- 3. The activities mentioned in 2 above will also be conducted at appropriate experimental stations of CRIFC and farmers' field.

#### ANNEX II

### JAPANESE EXPERTS

Researchers covering the following fields:

- 1. Upland crops cultivation
- 2. Upland crops agronomy
- 3. Plant physiology
- 4. Plant pathology
- 5. Entomology.
- Note: (1) A team leader and a coordinator/liaison officer will be nominated from among the experts mentioned above.
  - (2) Short-term experts may be despatched when necessity arises, for the smooth implementation of the Project.

ANNEX III

## List of the Articles to be Provided by the Covernment of Japan

- 1. Equipment, spare parts and other materials for Laboratory work.
- 2. Equipment, spare parts and other materials for Field Work.
- 3. Other necessary equipment and materials to be mutually agreed upon.

Review of the Two-Year Follow-Up Cooperation on

The Strengthening of Legumes in Relation to Cropping System Research Project (ATA-218)

The Follow-Up Cooperation of the Strengthening of Legumes in Relation to Cropping System Research Project started on October 23, 1983, with the cooperation period of 2 years, on the basis of the Record of Discussions signed on September 14 of the same year.

Prior to the expiry of the cooperation period, the Japanese Consultation Survey Team headed by Mr. Takeo IGUCHI visited Indonesia and conducted a preliminary discussion on the new project which is expected to be formulated in near future, as well as evaluation of The Two-Year Follow-Up Cooperation in this Project.

This is to present the results of the evaluation.

- I. Outline of the cooperation activity
  The details of the Master Plan and the Annual Operational
  Work Plan were discussed at the 4th and 5th Joint Committee
  Meetings held in January, 1984 and in December, 1984
  respectively.
  - On the basis of these meetings' recommendations all efforts for implementation of the Project were made during the two-year period.
  - The implementation of the Project comprises (i) Cooperative Research Activities, (ii) Dispatch of Japanese Expert, (iii) Studying and Training of the Indonesian Counterpart Personnel in Japan, and (iv) Provision of Machinery and Equipment.
- II. Cooperative Research Activity
  Research Activities on the following subjects were carried
  out and useful research results were produced.

- 1. Breeding techniques on legumes and other secondary crops
  - 1) Plant breeding techniques for adaptable soybean varieties to the environmental conditions especially for acid soil and aluminium toxicity
- 2. Cultivation practices on legumes and other secondary crops
  - 1) Enhancement of soybean productivity based on the growth habit and yield component
  - 2) Techniques of liming for soybean production on acid soil
  - 3) Soil-plant-water relation practices
- 3. Plant Physiology
  - 1) Physiological disorders of soybeans
    - a) Diagnosis of soil and plant nutrition of soybeans
    - b) Imbalance problem of the basic elements in soy
      - c) Survey for physiological disorders of soybeans
      - d) Micronutrient of soybeans
  - 2) Chemical composition of soybean seed in relation to its viability
- 4. Plant Protection
  - 1) Bionomics and control of main diseases affecting production of grain legumes
    - a) Studies on fungal disease in soybean
    - b) Studies on viral diseases in soybean
  - 2) Studies on main diseases in other crops
  - Bionomics and control of main insect pests affecting production of grain legumes
    - a) Studies on pod borers in soybean
    - b) Studies on natural enemies to the main insect pests in soybean
    - c) Studies on white fly in soybean

## III. Dispatch of Japanese expert

Based on Annex II of the R/D on Follow-Up Cooperation of the Project, five Japanese long term experts were dispatche With regard to short term expert, eight researchers for the above mentioned research fields and one engineer for repairing of laboratory equipment were dispatched.

Name	Name Research Field	
(Long term expert)		
Y. Izumiyama	Upland Crop Culti-	Nov. 8, 183-Nov. 8, 185
	vation (Leader)	
F. Yazawa	Plant Physiology	Oct.21, '83-Oct.22, '85
K. Matsumoto	Plant Pathology	Mar.16, 184-Oct.22, 185
K. Honma	Entomology	Jan.20, 184-Oct.22, 185
S. Okuda	Upland Crop Agro-	Oct.17, '83-Oct.22, '85
	nomy (Coordinator)	
(Short term expert)		•
N. Iizuka	Plant Pathology	Aug.22,'84-Oct.21,'84
J. Ishizuka	Plant Physiology	Sep.10,'84-Nov.21,'84
H. Mikcshiba	Plant Breeding &	Oct. 3, 184-Dec. 25, 184
	Agronomy	Feb.25, '85-Apr.28, '85
.K. Yamagishi	Entomology	Feb.15, '85-Apr.30, '85
S. Akao	Plant Physiology	Aug.21, '85-Sep.18, '85
A. Tanaka	Agronomy	Sep. 3, 185-Sep. 23, 185
T. Inaba	Plant Pathology	Sep. 5, 85-0ct.10, 85
K. Nakazawa	Entomology	Sep. 5, 185-Oct.22, 185
M. Masaki	Repairing Equipment	Jun.11, '84-Jun.25, '84

IV. Study tour and training of the Indonesian counterpart personnel in Japan

During two years of the Follow-Up Cooperation period ten Indonesian researchers were received in Japan for training in their research field, and one person went to Japan for a study tour.

These trainings obtained good result for promotion of their research capability and the study tour achieved a great success for making close relations of cooperation between Indonesia and Japan.

Name	Major Field	Period
(Training) Mr. Muhammad Djazuli Mr. Djumanto Harjosudarmo	Plant Physiology Plant Pathology	Feb. 1, '84-Sep. 6, '84 Mar. 1, '84-Oct.11, '84

(Study tour)

Dr. B. H. Siwi

Study Tour

Aug.15, '85-Sep. 4, '85

# V. Provision of Machinery and Equipment

For the first year of cooperation, macinery and equipment in 142 items amounting to \$23,000,000 were provided for cooperative research activities and have been used effectively.

For the second year, procedures are being made for provision of machinery and equipment amounting to approximately ¥17,000,000.