

Group/order	Item	Quantity required	Remark
9.	Hack saw	2 sets	
10.	Files	3 sets	
11.	Cole chisels	3 sets	
12.	C-clamp (6", 12")	1	
13.	Pipe cutter	1	
14.	Pipe bender	1	
15.	Pipe wrenches	1 set	
16.	Double flaring tool set	1	
17.	Outside micrometer set (0-1, 1-2, 2-3, 3-4)	1	
18.	Inside micrometer set ($1\frac{1}{2}$ - 8")	1	
19.	Depth micrometer set (0-3")	1	
20.	Vernier caliper (6-12")	1	
21.	Dial test indicator set	1	
22.	Telescoping gages set ($\frac{1}{2}$ - 6")	1	
23.	Steel rules (6", 12")	12	
24.	Combination square set (12")	1	
25.	Steel square (12")	3 sets	
26.	Calipers and dividers (3-6")	3 sets	
27.	Screw-thread gage	6 sets	
28.	Screw-pitch gage and center gage	6 sets	
29.	Universal surface gage	1	
30.	Vise	2 sets	
31.	Blacksmith set	1	

Group/order	Item	Quantity required	Remark
E. <u>Machine tools:</u>			
1.	Heavy equipment for maintenance	1 set	
2.	Car maintenance equipment	3 sets	
3.	Maintenance tool set for minor repair work	5 sets	
4.	Crane (overhead)	1 set	
5.	Compressor (60-ton capacity)	1	
6.	Electrical pulley (5-ton capacity, motor driven)	1	
7.	Hydraulic floor crane (5-ton capacity)	1 set	
8.	Hydraulic jack (5-ton capacity)	1	
9.	Hydraulic jack (10-15 ton capacity)	1	
10.	Table (1 x 4 m)	10	
11.	Chain pulley (5-ton capacity)	2	
12.	Jeep	1	
13.	Nozzle tester	1	
14.	Nozzle analyzer	1	
15.	Paint sprayer	1 set	
16.	Tachometer (for diesel engine)	1	
17.	Air compressor (portable)	1	
18.	Puller (for bearing roller)	1	
19.	Torque wrench (heavy-duty)	1	
20.	armature testing and reconditioning tools	1 set	
21.	Lubricant injector and gear-motor filler	1 set	
22.	L-wrench (heavy-duty)	1	
23.	Distributor service tool set	1	
24.	Compression gage (0-250 PSI, gasoline engine)	1 set	
25.	Compression gage (0-606 PSI, diesel engine)	1 set	
26.	Battery charger	1	

5. Summary of budgetary requirement

Order	Item	Estimated cost (Baht)
1	Construction	18,770,000
2	Equipment	23,000,000
Total		41,770,000

6. Utilization plan

Order	Activity	Frequency
1	Intensive technical investigation on manufacture, operation, performance and care of important farm machinery and equipment.	All year round
2	Service in testing and evaluation of imported and locally manufactured farm machinery and equipment	All year round
3	Consultation service in selection, procurement, manufacture, operation, performance and care of farm machinery and equipment.	All year round
4	Service in providing facilities and personnel for training of students, agricultural extension workers and farmers in manufacture, operation, performance and care of important farm machinery and equipment.	All year round
5	Service in providing heavy machinery and equipment and pertinent well-trained technicians needed in field experiments, performing proper maintenance and minor repair for such machinery and equipment, and fabricating simple farm implement and appliance.	All year round
6	Compilation of technical data and information on various types of farm machinery and equipment.	All year round
7	Seminar, workshop and/or conference on manufacture, operation, performance, testing, evaluation and care of various types of farm machinery and equipment.	Twice a year for 1 - 2 weeks each

11. 追加資料

この資料は調査団の求めにより調査団帰国後送られてきたものである。

KASETSART UNIVERSITY DEVELOPMENT STRENGTHENING: RESEARCH AND

EXTENSION SERVICE FACILITIES IN AGRICULTURE

ADDITIONAL INFORMATION

AUGUST 1978

CENTRAL LABORATORY AND GREENHOUSE COMPLEX
ADDITIONAL INFORMATION
FOR
POSTHARVEST RESEARCH UNIT
AND
SEED TECHNOLOGY UNIT

AUGUST 1978

POSTHARVEST RESEARCH UNIT

Proposal for Agricultural Research in Thailand to
Improve Postharvest Technology of
Agricultural Commodities

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I. Title

Postharvest Technology of Agricultural Commodities.

II. Objective

It is desirable to study possible factors effecting
postharvest quantity and quality losses of agricultural commodities.

The improvement of the technique will be beneficial to everybody concerned.

The goal is to:

- minimize postharvest losses in all steps from harvest to
retailers and finally consumers.
- maintain the consuming quality of commodities.
- promote the agricultural business.
- give education to the public.

III. Importance of Work

Many of the agricultural commodities are perishable. Some
of them are highly perishable, while others have moderate or good shipping
and keeping quality. In well developed countries losses of perishable
commodities are estimated at 20 %. The losses will be certainly higher in
developing nations. These are due to that production of perishable
commodities is not well linked with marketing. In addition, harvesting,
postharvest treatment, packaging, storage, transport and handling technolo-
gies are practically non-existent.

Conservation of commodities with postharvest technology will
increase available food supply. This portion helps feeding our hungry
world.

Agricultural Project will be attractive and more incentive when all the commodities produced can be utilized and traded at a reasonable price. Fresh commodities will be highly priced when they are the right varieties which have been well taken care of, are harvested at the optimal stage of maturity, good handling practices, etc.

IV. Plan of Work

- a. It is clearly advantageous to do research on selecting varietal commodities of good shipping and keeping quality.
- b. Study the preharvest factors affecting postharvest shipping and keeping quality.
- c. Study the optimal stage of harvest of commodities for table and industrial purposes
- d. Improvement of practices of harvesting and postharvest handling of commodities will be studied and emphasized to reduce quantitative and qualitative losses.
- e. Research of each crop will be developed to solve problems in all fields pertinent to harvest and postharvest handling which includes treatment, packaging, transportation, storage, postharvest entomology and pathology, postharvest physiology, etc.
- f. During the first year project commodities of primary importance will be studied and researched. Continuing works of the above will be conducted in addition to the selected less economic crops in the following years.
- g. Education of how to produce quality products, proper harvest and handling practice of commodities will be given to the public.

V. Scope of Research Projects

Postharvest technology research will be divided into many projects:-

1. Data Collection on Postharvest losses of Economic Commodities at Different time and Condition.
2. Plant Pathology in Relation to Postharvest Problem of Agricultural Commodities.
3. Insects and Pests Damaging Commodities After Harvest.
4. Ripening of Fruits.
5. Biochemical Studies of Fruits in Relation to Their Ripening Processes.
6. Physiological Studies of Fruits and Vegetables as Basis in Harvest, Storage, Handling, and Transportation.
7. Precooling Effects on the Storage Life of Fresh Commodities.
8. Controlled Atmosphere Storage Study.
9. Cold Storage Study.
10. Curing Study on Tuber, Root, and Bulbs.
11. Postharvest Treatment Study.
12. Packaging and Container Research.
13. Grade Standard and Quality Study.
14. Feasible Study on the Implementation of the Research Outcome

It is an integrated project that scientists of various fields will participate respectively according to their expertise.

Outline of some of these projects are being given.

Project title: Studies on Postharvest Diseases and Pests of some Important Fruits and Vegetables.

Fruit crops and vegetables are produced in Thailand all year round. Most of them are consumed in the country, only some including longan, durian, mangoes, grapes and vegetables are exported. A large portion of them are lost through deterioration after harvest caused by diseases and pests. Many fruit crops and vegetables, such as mangoes, grapes, rambutan and cabbage are of great potential export commodities. However, exportation of these agricultural products is facing various problems such as pesticide residue, deterioration during transport, packaging and quarantining system. Research programs mean to solve these problems, as being proposed.

Objectives:

The research activities will be directed toward the following goals:

1. to find out a simple and reliable method for detecting diseases and pests of fruits and vegetables.
2. to improve the control measure, especially chemical control of diseases and pests of fruits and vegetables.
3. to standardize residue levels of the toxic substances in fruits and vegetables.
4. to certify disease and pest free fruits and vegetables for exporting purposes (this is to be coordinated with Dept. of Agriculture).

Subproject title: Postharvest Diseases and Storage Techniques of
Mangoes and Rambutan Fruits

Objective:

1. to study on detect method for postharvest disease of mangoes and rambutan
2. to determine environmental condition influencing on disease development and quality of fruits.
3. to minimize pre and postharvest losses by diseases

Subproject title: Study on control of papaya fruit rot by hot water treatment and its combination with chemical treatment.

Objective: To find out common fruit rot fungi on papaya fruits.
To threat infect fruit with hot water and/or chemicals.
To find out proper treatment and proper packing procedures for long shipment.

Subproject title: Studies on rotting fungi on banana fruits and their control measures by Physical and chemical means

Objective: To survey common rotting fungi on different varieties of bananas.
To use physical treatment such as hot water treatment for control storage diseases.
To use chemical treatments and combination treatment with hot water treatment.

Subproject title: Studies on fungi associaled on sweet tamarind pods and their control.

Objective: To survey different fungi on different varieties of sweet tamarind pod.

To find out duration of infection and infected sites.

To find out control measures either physical or chemical means.

Subproject title: Insect and pest damaging agricultural commodities and residues of pesticides after harvest in particular reference to perishable commodities.

Objective:

1. To minimize the losses of commodities quantitatively and qualitatively by pests
2. To provide the information for plant quarantine involving the limitation of damages appear on the export products
3. To standardize the residues level of the toxic chemical applied at pre-harvest depositing on the post harvest product which cause the problem to the public and an international business.

SEED TECHNOLOGY UNIT

Some of Additional Research Projects
Seed Technology Unit

Project Title: Mycotoxins (Aflatoxins) analysis of the grains of rice,
corn and sorghum.

Objectives:

1. To detect mycotoxin producing fungal molds on the grains.
2. To study any mycotoxins production by the molds in the grains.
3. To evolve suggestion for preventing mycotoxin production in grains.

Project Title: Breakage of rice grain during milling associated with
a fungus, Trichoconis padwickii.

Objectives:

Good quality grains should not crack during milling. Previous reports (Ou, 1971) indicated that if the grains carried the fungus (seed-borne), it has a tendency to crack during normal milling operation. Needless to say this adversely affects the market value of the whole seed lot. It is intended to reinvestigate the association of grains brittleness with Trichoconis padwickii.

AGRICULTURAL MACHINERY AND EQUIPMENT CENTER

(Additional Information)

AUGUST 1978

Tentative Training Program for Agricultural Machinery and
Equipment Center

One of the objectives of the center is to provide training services on agricultural machinery and equipment for students, extension workers, farmers, and government officers from various agencies. The training activitive will be concerned with operation, performance and care (maintenance and repair) of important farm machinery and equipment, design and fabrication of simple farm equipment. The detail of agencies requiring training service, activity, number of participant per year and duration are presented in table.

Anticipated training program for
Farm Equipment operation, maintenance, design and fabrication
Agricultural Machinery and Equipment Center

Agency/Participant	Training activity	Number of participant/year	Training Period (week)
1. Agricultural Extension Department			
- Officer	1, 2	60 (4 groups)	2
- Farmer Leader	1, 2	80 (4 groups)	2
2. Accelerated Rural Development office			
- Officer	1, 2, 3	60 (4 groups)	2 - 6
- Farmer Leader	1, 2	60 (4 groups)	2
3. Community Development office			
- Officer	1, 2, 3	30 (1 group)	2 - 6
- Farmer Leader	1, 2	60 (4 groups)	2
4. Social Welfare Department			
- Officer	1, 2, 3	30 (3 groups)	2 - 6
- Farmer Leader	1, 2	60 (4 groups)	2

Agency/Participant	Training activity *	Number of participant/year	Training Period (week)
5. Farmer Around Kamphaengsaen campus	1, 2	100 (4 groups)	2
6. Kasetsart University Staff			
K.U. Research Station (approx. 10 stations)			
Farm equipment officer	1, 2	20 (1 group)	2
Faculties			
Students	1, 2, 3	60 (3 groups)	4
7. Agricultural Colleges & Institutes			
(only officer)	1, 2, 3	60 (3 groups)	2
8. Technical Colleges & Institutes			
(only officer)	1, 2, 3	30 (2 groups)	2
9. Local Farm Equipment Manufacturer			
	1, 3	60 (3 groups)	2
Total		770 (44 groups)	

* Training activities :-

- 1 = Farm machinery and equipment operation
- 2 = Farm machinery and equipment maintenance and repair
- 3 = Simple farm machinery and equipment design and fabrication

Duration

March to May training for farmer leader, farmer, etc.

June to September training for Officer

November to December training for local manufacturer

October to November training for student

April to May training for student

NATIONAL AGRICULTURAL EXTENSION AND
SERVICE CENTER

(Additional Information)

AUGUST 1978

NATIONAL AGRICULTURAL EXTENSION AND TRAINING SERVICE CENTER

KAMPHAENSAEN CAMPUS

KASETSART UNIVERSITY

(Training plan)

514

Estimation of Training Courses and participant of The National
Agricultural Extension and Training Service Center, for Government Agency
per year

1. Agricultural Extension Department

Officer

- 1.1 Extension Methodology and Agricultural Development (1060
Extension workers)
- 1.2 Communication Media Production (40 Technical officers)

Total 1100

Farmer leader

- 1.3 Swine Production (250 Farmer leaders)
- 1.4 Mushroom culture (370 Farmer leaders)
- 1.5 Agronomy (Sugar can, Maize, Sorghum, legume etc.)
(220 Farmer leaders)
- 1.6 Horticulture (120 Farmer leaders)
- 1.7 Poultry Production (160 Farmer leaders)
- 1.8 Farm Machinery (80 Farmer leaders)

Total 1200

2. Community Development Department

Officer

- 2.1 Seminar on Improvement of Public Pasture and water Source
for Agriculture (60 officers)
- 2.2 Agricultural Extension and Animal Husbandry (60 officers)
- 2.3 Cooperative for Production (120 officers and committee of
Coop. group)
- 2.4 Community Development.(200 officers for Province Development
- 2.5 Seminar on Community Development.(300 officers for development
in specific area.)
- 2.6 Community Development.(200 officers for district development)
- 2.7 Seminar on Technology Transfer (50)
- 2.8 Work Shop, on Agricultural Problems.(100 Foreign participants)

2.9 Public Pasture Management. (135 Farmers, member of the
beef cattle group.)

2.10 Agricultural Development. (100 local leaders)

Total 1325

3. Social Welfare Department

3.1 Extension Methododoly (50 Distric officers from Self-
Help Settlements.)

3.2 Agronomy (60 Farmer leaders)

3.3 Horticulture (60 Farmer leaders)

Total 170

4. Bangkok Methopolitan

4.1 Agricultural Extersion and Development (64 officers)

4.2 Agronomy (100 Farmer leaders)

4.3 Horticulture (100 Farmer leaders)

4.4 Swine Production (100 Farmer leaders)

4.5 Poultry Production (100 Farmer leaders)

4.6 Mushroom culture (100 Farmer leaders)

Total 564

5. Office of Army Officers Development.

5.1 Agronomy (50 commissional officers)

5.2 Horticulture (50 commissional officers)

5.3 Fishory (30 commissional officers)

5.4 Animal Husbandry (50 commissional officers)

5.5 Mushroom culture (40 commissional officers)

Total 220

5.6 General Agricultural and Fishery (for 500 non-commissional
officers)

Total 500

6. *Accelerated* Execllorated Rural Development Office.

6.1 Agricultural Extension (100 officers)

6.2 Poultry Production (300 local leaders)

- 6.3 Swine Production (200 local leaders)
- 6.4 Cattle Production (200 local leaders)
- 6.5 Mushroom culture (300 local leaders)
- 6.6 Agronomy (300 local leaders)
- 6.7 Horticulture (100 local leaders)
- 6.8 Fishery (60 local leaders)
- 6.9 Farm Machinery (60 local leaders)

Total 1620

7. Kasetsart University Staff.

- 7.1 A.V. Media Production (100 K.U.staff)

8. Foreigner officers.

- 8.1 Communication Media Production (70 International officers)
- 8.2 Corn and Sorghum Production (30 International officers)

Total 100

9. Ministry of Education

- 9.1 A.V. Media Production 60
- 9.2 Communication Media Production 60

Total 120

10. People around Kam phaengsaen Campus.

- General Subject. 550

Total 550

Grand Total 7569

The table show : Organization subject and participant per month

4

January

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	Seminar on Improvement of Public Pasture and Water Source for Agr. ↔ (60 Officers.)	Extension Methodology and Agricultural Development (120 officers)	Agr. Ext. and Animal Husbandry (30 officer.)	Agr. Ext. and Animal Husbandry (30 Officers.)
2 Community Development Department		Community Development		
3 Social Welfare Department		(50 Officers for Province Development)		
4 Accelerated Rural Development Office.	Extension Methodology (50 Officers) ↔ Poultry Production (50 Farmer leader)	Community Development (50 Officers for Development in specific area)		
Total	260	270	250	250

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department		Extension Methodology and Agricultural Development (120 Extension Workers)	Extension Methodology and Agricultural Development (120 Extension Workers)	
2 Community Development Department	Seminar on Community Development (300 Officers for Province Development)		Communication Media Production (20 Officers Technical)	
3 Social Welfare Department		Horticulture (60 local leaders)	Horticulture (60 local leaders)	
4 Bangkok Metropolitan				Agronomy (50 Farmer leaders)
5 Office of Army Officer Development		Agronomy (50 Commissioned Officers)	Horticulture (50 Commissioned Officers)	
6 Accelerated Rural Development Office		Poultry Production (50 Farmer leaders)	Poultry Production (50 Farmer leaders)	Poultry Production (50 farmer leaders)
Total	300	280	300	240

March

6

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	<p>Communication Media Production (20 Officers : Technical) Swine Production (50 Farmer leaders)</p> <p>Poultry Production (50 Farmer leaders)</p>	<p>Extension Methodology and Agricultural Development (120 Extension Workers)</p>		
2 Bangkok Metropolitan	<p>Agr. Ext. and Development (64 Officers)</p> <p>Agronomy (50 Farmer leaders)</p>			<p>Poultry Production (50 Farmer leaders)</p>
3 Office of Army Officers Development		<p>Swine Production (50 local leaders)</p> <p>Fishery (30 commissional Officers)</p>	<p>Horticulture (50 local leaders)</p>	<p>Horticulture (50 local leaders)</p> <p>Swine Production (50 local leaders)</p>
4 Accelerated Rural Development Office	<p>Poultry Production (50 Farmer leaders)</p>		<p>Swine Production (50 Farmer leaders)</p>	
Total	284	270	270	270

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
	<p>Summer session for 550 Farmers and Public around Kamphuengsaen Campus in general subject such as : Horticulture, Agronomy, Fishery, Animal Husbandry, Mushroom Culture and Production, Food Technology, Home Canning, Artificial Flower Making, Handicrafts. Preservation of Agr. Production, Farm Machinery etc.</p> <p>(Some of them stay at the Center Dormitory; and ^{Others in} at ^{the} with their homes and may use some classroom in Kamphuengsaen Campus.)</p>			
Total				550

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	<p>1. Extension Methodology and Agr. Development (120 Extension Workers)</p>	<p>1. Extension Methodology and Agr. Development (120 Extension Workers)</p>	<p>1. Extension Methodology and Agr. Development (120 Extension Workers)</p>	<p>1. Extension Methodology and Agr. Development (120 Extension Workers)</p>
2 Bangkok Metropolitan	<p>2. Swine Production (50 Farmer leaders)</p> <p>3. Mushroom Culture (50 Farmer leaders)</p> <p>6. Poultry Production (60 Farmer leader)</p> <p>1. Poultry Production (50 local leaders)</p>	<p>4. Mushroom Culture (80 Farmer leaders) (2 group)</p>	<p>Farm Machinery (80 Farmer leaders) (2 group)</p>	<p>2. Poultry Production (50 local leader)</p> <p>3. Mushroom Culture (50 local leaders)</p>
3 Office of Army Officers Development	<p>(1) Animal Husbandry (50 Commissioned officers)</p>		<p>(2) Mushroom Culture (40 Commissioned officers)</p>	<p>A.V. Media Production (40 K.U. staff) Cattle Production (50 farmer leader)</p>
4 K.U. Staff				
5 Accelerated Rural Development Office	<p>Swine Production (50 Farmers leaders)</p>	<p>Swine Production (50 farmer leaders)</p>	<p>Swine Production (50 farmer leaders)</p>	
T-tal	310	300	290	310

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	Mushroom Culture (50 Farmer leader)	Extension Methodology and Agr. Development (120 Extension Workers) Mushroom Culture (50 Farmer Leaders)	Mushroom Culture (50 Farmer leaders)	
2 Bangkok Metropolitan	Mushroom Culture (50 local leaders)			
3 Community Development Department		Semina on Technology Transfer (50 Officers for Development in specific area.) Public Pasture Management (50 Farmer member of the cattle group)		
4 K.U. Staff	A.V. Media Production (60 K.U.staff)(2 group)			
5 Foreigner Officer			Communication Media Production (40 International Foreign Officers)	
6 Accelerated Rural Development Office	Cattle Production (100 Farmer leaders) (2 group)		Cattle Production (50 Farmers Leaders)	Mushroom Culture (120 Farmer leaders) (2 group)
Total	260	270	260	280

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	<p>Mushroom Culture (50 Farmer leaders)</p> <p>Public Pasture Management (50 Farmers member of the cattle group)</p>	<p>Swine Production (50 Farmer Leaders)</p> <p>Mushroom Culture (50 Farmer leaders)</p>	<p>Extension Methology and Agr. Development (120 Extension Workers)</p> <p>Mushroom Culture (50 Farmer leaders)</p>	<p>Public Pasture Management (50 Farmers member of the cattle group)</p>
2 Community Development Department	<p>Semina on Agr. Ext. Methodology (30 International Officers)</p>	<p>Corn and Sorghum Production Training</p>		
3 Foreigner Officer	<p>(30 International Officers) (The Training may be at The National Corn and Sorghum Research Center.)</p>			
4 Accellerated Rural Development Office	<p>Mushroom Culture (60 Farmer leaders)</p>	<p>Mushroom Culture (120 Farmer leaders) (2 group)</p>		
Total	270	250	250	320

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	Horticulture (100 Farmer leaders) (2 group)	Horticulture (50 Farmer leaders)	Extension Methodology and Agr. Development (120 Extension Workers)	
2 Foreign Officer		Corn and Sorghum Production Training (30 International Officers)		
3 Accelerated Rural Development Office	Agronomy (50 Farmer leaders)	Agronomy (50 Farmer leaders)	Communication Media Production (35 International Officers)	
			Agronomy (50 Farmer leaders)	Agronomy (50 Farmer leaders)
			Horticulture (50 Farmer leaders)	Horticulture (50 Farmer leaders)
Total	250	250	285	285

September

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Foreigner Officer		Corn and Sorghum Production Training (30 International Officers.)		
Total	30	30	30	30

October

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	Agronomy (50 Farmer leaders)	Swine Production (50 Farmer leaders) Agronomy (50 Farmer leaders)		
2 Community Development Department	Agronomy (50 Farmer leaders)	Community Development (50 Officers for Province Development)	Community Development (50 Officers for Distric Development)	
3 Foreigner Officer	Agr. Development (50 local leaders)	Corn and Sorghum Production Training (30 International Officers)		
4 Accelerated Rural Development Office			Farm Machinery (60 Farmer leaders) (2 group)	Farm Machinery (60 Farmer leaders) (2 group)
Total	280	230	240	190

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department		Swine Production (50 Farmer Leaders)	Extension Methodology and Agr. Development (120 Extension Workers)	
		Cooperative for Production Cooperative for Production (30 Officers)	Agronomy (50 Farmer Leaders)	Agronomy (60 Farmer Leaders)
2 Community Development Department		Community Development (30 Officers)	Community Development	
			(50 Officers for Province Development)	
3 Ministry of Education			Community Development (50 Officers for District Development)	
		A.V. Media Production (60 Officers)(2 group)		
Total	240	300	270	280

Organization	Subject and Participant			
	Week 1	Week 2	Week 3	Week 4
1 Agricultural Extension Department	← Cooperative for Production (30 Officers) →	← Extension Methodology and Agr. Development (100 Extension Workers) →		
2 Community Development Department	← Cooperative for Production (30 Officers) →	← Community Development (50 Officers for Province Development) →		
3 Accelerated Rural Development Office	← Community Development (50 Officers for District Development) →	← Agricultural Extension (50 Officers) →	← Agricultural Extension (50 Officers) →	← Semina on Agr. Problems (100 Foreign Officers) →
4 Ministry of Education				← Communication Media Production (60 Officers)(2 group) →
Total	230	280	250	260

* Remark For the 500 non-commissional officers the center will give the lecture in the military campus. Because, they suppose to stay in campus.

JICA