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PD-AAL-940

Thailand Industrial Extension Project

Progress in Fiscal Year Ending 31 August, 1981

1. Equipment Development

Test and development activities covered 14 projects in this fiscal year. In general these development programs meet the objectives of the strategy statement. Details of the projects are in the last two semi-annual reports.

a. TH-8 axial flow thresher for rice, sorghum(a) and soybeans(a)

b. Buffalo plow, reduced draft(b). Four prototypes built.

c. Plow sole fertilizer applicator(b)

d. Manual transplanter, mat type seedlings(b)

e. Manual transplanter, traditional washed seedling(a)

f. Upland seeder(b)

g. Paddy seeder

h. "Cyclone" manual broadcast seeder(a). Four prototypes built.

i. Inclined plate planter

j. Upland hand weeder. Six prototypes built by Ministry for use in rainfed project in Northeast.

k. Cutter-bar reaper(a)

l. Power tiller - improved steering clutch(a)

m. Four wheel small tractor

n. Batch dryer - Fabricated rice hull furnace for BD-2.

(a) Project started in this fiscal year

(b) Present test and development phase completed during the period.

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2. Equipment Demonstrations during first fiscal year. These were expressly for showing an audience, not exclusively for test.

	Region					
	Central	N	NE	E	S	Total
TH-8 thresher	Rice	Soybean			(3) Rice	5
TR-1 transplanter	2		1	1		4
Paddy seeder	1	2				3
Cyclone seeder	1	2				3
Buffalo plow			1			1
	5	5	2	1	3	16

3. Equipment Exhibits

Various machines were displayed at six locations throughout Thailand during the fiscal year. A staff member was furnished to explain the machines and answer questions. The average duration of the exhibits was 6 days. Additionally machines were loaned to the Science Museum in Bangkok on June 3 for approximately two months. The exhibits are usually held in conjunction with a local activity for farmers and others. They are well attended and provide an opportunity for promoting appropirate farm mechanization.

4. Number of manufacturers that started production and units produced by region. Number of firms are in parenthesis.

	Region					
	Central	N	NE	E	S	Total
a. Axial Flow Thresher			(3)932		(1)	(4)933
b. Transplanter, 5 Row Manual		(1)3	(3)32	(1)10		(5)45
c. Upland Seeder		(1)1				(1)1
d. Extendable Lug Wheel	(1)4					(1)4

The popular IRRI design axial flow thresher continues to show expanded activity because of additional new manufacturers. Five firms have each built one to thirty transplanters. This activity has been impaired because of problems with mat type seedling culture. The cooperative project plans to modify one machine for use with traditional seedling for evaluation. Upland seeder blueprints were issued to one manufacturer. Then a problem with seed coverage in certain seedbeds developed so further distribution was halted. Revised blueprints will be available early in the second fiscal year.and issued to firms who have expressed interest in this machine. Ten of the eleven instances of new production of IRRI designs in the first fiscal year are located outside the heavier industrialized central plain area.

5. Number of firms by region that signed the IRRI memorandum of agreement for the first time:

	Region					
	Central	N	NE	E	S	Total
Total Signed	8	13	1		1	23
In Production AFT	3	3				6
Built or Building Prototype						
AFT		3				3
TR-1	2				1	3
Not Yet Active						
AFT	1	5				6
TR-1	2	2				4
B. Plow		2	1			3
PT-3		1				1

The greatest interest in new production of IRRI designs was in the northern region. The firms that signed but are not yet active have potential for doing so in the second fiscal year. Additionally a few who signed earlier were given blueprints of the transplanter; one requested prints for the BD-2 dryer.

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6. Translation to Thai Language

The ASAE standard 211.3, covering V-belt drives was translated to Thai and distributed to over 60 manufacturers during the first fiscal year. This should help them in improving belt drives, particularly in using larger idler pulleys, and appropriate pulley groove dimensions, with a substantial potential for reducing the belt replacement cost to Thai farmers.

7. Training course for manufacturers, presented in Thai

A five day course in October, 1980 was attended by representatives from thirteen manufacturers of IRRI designs. The course covered machines, production engineering, business management, blueprint reading and related topics in the classroom; laboratory test, demonstration, and a field trip to manufacturers. The course was enthusiastically received. A 6 day course is planned for October, 1982.

8. Personnel Training and Development

a. A new AED engineer was assigned to the cooperative project through rotation.

b. An IRRI junior engineer attended an Agricultural Engineering training course at Los Banos for two weeks in June, 1981.

c. Guidance and direction to cooperative project engineers was provided with emphasis on preplanning, increasing efficiency and motivation.

9. Cooperation with Other Groups

This proceeded with various groups as per the planned strategy. Significant increased activity developed with the farm machinery section of the Department of Extension. This should be mutually beneficial in promoting appropriate mechanization.

a. One of their engineers attended the training course for manufacturers, held at Bangkok in October, 1980.

b. Extension personnel at Phitsanuloke participated in the buffalo plow project by running a comparative test with lower specific draft recommended moldboards vs a local plow, with buffalo power with significant results.

c. Their farm machinery section is getting five pairs of two recommended moldboards fabricated to assist in promotional activities with farmers and manufacturers.

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d. A transplanter demonstration was held in cooperation with an extension activity at Singburi

e. Another of their engineers attended the two week training course at Los Banos in June 1981

f. An IRRI engineer was provided to assist for one day at each of four extension training courses for extension personnel at Chainat. The IRRI designs were covered in classroom presentation and in demonstration. Subsequently this material will be given by the extension staff.

10. Increase Thai Staff

A former employee who left Dec. 31, 1978 to pursue a M.S. degree rejoined the staff on June 16, 1981. This will be a significant help in expediting both development projects and in providing technical assistance to manufacturers.

11. Equipment Priorities - Work Plan Targets

The buffalo plow blueprints have been given to three manufacturers, as indicated earlier. The plow sole fertilizer applicator and upland hand weeder are also at this stage, which places the project on target; however no manufacturer interest has developed thus far. Both tools will be given increased emphasis in the second fiscal year. The paddy seeder and inclined plate planter are scheduled for completion of the test and development phase during year two. In addition, the manual cyclone seeder and TH-8 thresher modification for sorghum and rice may also be finalized by August 31, 1982.

AID 492-CA-1707 (Extension of Small Scale Agricultural Equipment - IRRI) THAILAND

Budget Proposal
For the Period from September 1, 1981 to August 31, 1982
(in US $)

1. Salaries and Wages	
a. Support Staff	$19,700
b. Hourly Help	1,000
	$20,700
2. Overhead	$ 3,040
3. Fringe Benefits	$ 6,850
4. Travel and Transportation	
a. South & Southeast Asia Travel	$ 2,000
b. Attendance at Scientific Meetings	2,380
c. Local Travel (Project)	5,930
	$10,310
5. Equipment, Materials and Supplies	$12,500
6. Training	$ 2,000
7. Studies	$ 2,000
T o t a l	$57,400

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