

RICE MECHANIZATION PILOT PROJECT (RMP)

5TH JOINT COMMITTEE MEETING
July 1, 1985

Japanese Technical Cooperation for the Rice Mechanization Pilot Project,
Agricultural Mechanization Research Institute, Agricultural Research Center,
Ministry of Agriculture.

FIFTH JOINT COMMITTEE MEETING

- I. Date : July 1, 1985
- II. Place : At the conference room of the
Agricultural Mechanization Research
Institute
- III. Attendance :

Egyptian side

- | | |
|-----------------------------|---|
| 1. Dr. Ahmed El Sahrigi | Director General, Agricultural
Mechanization Projects |
| 2. Dr. Mohamed El Ansary | Dputy Director, Agricultural
Mechanization Projects |
| 3. Mr. Osama Kamel | Site Manager, Rice Mechanization
Center. |
| 4. Mr. Ibrahim Mohamed Nour | Engineer, Workshop, Rice Mech-
anization Center. |
| 5. Mr. Mostafa Abbas | Engineer, Machinery Div., Rice
Mechanization Center. |
| 6. Mr. Aba El Kawey Tanga | Agronomist , Agronomy Div., Rice
Mechanization Center. |
| 7. Mr. Hamdy Emar | " |
| 8. Mr. Abd El Mageid Romeih | Engineer, Machinery Div., Rice
Mechanization Center. |

Japanese side

- | | |
|--------------------------|---|
| 1. Dr. Takayuki TANAKA | Team Leader of Japanese Experts |
| 2. Mr. Seikichi SUGAWARA | Expert on Agricultural Mechanization |
| 3. Mr. Teruhisa NUMBA | Expert of Rice Cultivation |
| 4. Mr. Yasuhiro KIMURA | Expert on Agricultural Machinery |
| 5. Mr. Kimio MIURA | Coordinator/Liaison Officer |
| 6. Mr. Shozo MATSUURA | Dputy Representative, JICA CAIRO OFFICE |

Observer

Dr. Aly El Hossary

Undersecretary, Agricultural
Engineering Affairs

IV. Agenda of the meeting

1. The progress and accomplishments in the implementation of the Rice Mechanization Project.
2. Annual operational work plan for the Rice Mechanization Pilot Project.
3. Others.

V. Meeting Minutes

Dr. Ahmed El Sahrighi, Director General of the Agricultural Mechanization Projects opened the meeting by an introductory speech, Saying:

Gentlemen, I take this opportunity to express our thanks to all the members of the committee who attended this meeting and our gratitude to the Japanese people, JICA management, JICA Cairo office and our dear friends of the Japanese Team headed by Dr. T. Tanaka.

Dr. Ali El Hossary, Undersecretary for Agricultural Engineering Affairs then added that the project is one of the most successful projects in Egypt. Because under the direction of Dr. El Sahrighi has made significant contribution towards achieving it's goals with the sincere cooperation of the Japanese government, JICA and the Japanese Team.

By now we have mechanized thirty thousand feddans of farmer's land and as the time progresses we see the Egyptian farmers mechanizing their operations after they had absorbed the technology introduced by the project..

The following are the conclusions of the discussions.

1. Dr. Ahmed El Sahrighi, Chairman of joint committee requested that the spore trap units to be provided by JICA and a Short Term expert to be assigned to the project on time in order to study the pathogenic races, forecasting of outbreak for the control of blast disease.
2. It is proposed that an RMC symposium will be held around February 1986 for reviewing the research activities which are being conducted by JICA and the project will request the participation of some Japanese scientists in the symposium.

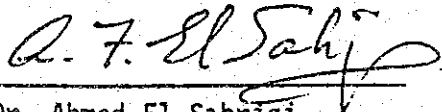
3. We have a plan to improve the experimental field at Meet El Dyba, expand the irrigation canal and prevention of water leaks out in the field.
4. It is necessary to evaluate the different factors such as seedling establishment rate, weed control, physiological actions for calper coated seeds and Yield per unit area.
5. The Japanese experts and their counterparts reviewed the performance of various activities during the year 1984/1985 in detail.

Dr. Takayuki Tanaka, Japanese Team leader stated the following remarks.

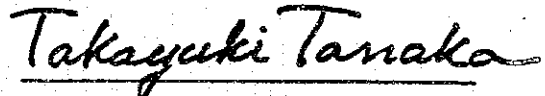
My sincere thanks to Dr. Ahmed El Sahrigi, Director of the Agricultural Mechanization Projects who have arranged this joint committee meeting which is a very important method to review and discuss our activities during the year 1984/1985 and our future workplan for 1985/1986.

Last year we encountered some difficulties in implementation due to irrigation water shortage. However, through the hard efforts of our Egyptian counterparts and the Japanese experts we were able to obtain several important results. I am pleased of their efforts and proud of their cooperation.

The year 1985/1986 is the last year for the technical cooperation project and I will try to do our best to achieve more results.



Dr. Ahmed El Sahrigi
Director General, Agricultural
Mechanization Projects.



Dr. Takayuki Tanaka
Team Leader of Japanese
Experts.

THE PROGRESS AND ACHIVEMENT IN THE IMPLEMENTATION OF THE RICE
MECHANIZATION PILOT PROJECT (RMP)

Activities of the RMP
Project from April 1984
to March 1985

Japanese Technical Cooperation for the Rice Mechanization Pilot Project

THE PROGRESS AND ACHIEVEMENT IN THE IMPLEMENTATION OF THE RICE MECHANIZATION
PILOT PROJECT

I. Verifying experiment on mechanized rice farming

1. Selection of suitable variety for mechanized rice cultivation (Agronomy Div.)

According to the results of varietal trials used by Akihikari, Nipponbare, Giza-172 and 173 which were selected through varietal trials in 1983 at the Kallin Center, The Akihikari and Nipponbare had shown high adaptation for mechanized rice cultivation with the yield of 9.2 and 8.1 ton per ha. respectively.

But, remaining two varieties such as Giza-172 and 173 showed some difficulty for mechanized rice cultivation because of lodging and blast disease.

2. Establishment of raising seedling method (Agronomy Div.)

The raising of healthy seedling is most important points to stimulate the initial growth of rice plants and expanding of yield capacity such as panicle number per unit area and spikelet number per panicle in mechanized rice cultivation. And the seeds quantity per tray are related to the following points;

- (1) Occurrence of high missing hills
- (2) Ununiformal seedling number per hill
- (3) Quality of seedling

Above mentioned points are strongly influenced to grain yield. The optimum seeds quantity and raising duration should be 200 g per tray by dry seeds and 21 days respectively. And nitrogen fertilizer application to a seedling tray is about 5 g at the time of 2 days before transplanting and it is effective for promotion of initial growth after transplanting.

Contrary to this points, treatment of zinc sulfate which applied 5 g per tray at the time of 5 days before transplanting were indicated high efficiency to promote the initial growth and grain yield increase.

3. Establishment of fertilization techniques (Agronomy Div.)

Nitrogen, phosphate and potassium three major elements were confirmed to be indispensable through the trials of 1983. As a result of statistically examined the relation between establishment of yield and each element had shown significant differences of spikelets per unit area. And it indicated that the balance of

Three major elements were very important at the initial and middle stages of rice plant growth.

On the other hand, the soils in Nile Delta is extremely low contents of organic matter. therefore, compost application trials were conducted and confirmed that the high efficiency in the rice plants.

Through various trials and observations conducted past three years, it had shown the extremely close plus correlation between spikelet number and grain yield per m². According to this points, grain yield were determined with the volume of yield capacity which produce before heading of rice plants.

The reasons of this factors are the amount of extremely high radiation at after heading of rice plants and it is most advantagous points to rice cultivation as well as mechanized rice cultivation in Egypt.

With above connection, two factor trials were conducted such as planting density and nitrogen fertilizer quantity to ensure the spikelets number per unit area on the mechanized rice cultivation, and obtained following results;

- (1) Nitrogen quantity is suitable between 100 to 150 kg per ha. with dense transplanting such as 27.7 hills per m²
- (2) Plots of 200 kg per ha. of nitrogen in both 18.5 and 27.7 per m² observed the yield decreasing due to over growth and lodging

4. Seedling establishment on mechanized direct seeding method with dry field condition (Agronomy Div.)

As a result of seeding trials, it was confirmed that establishment ratio of seedling had been increased along with soil crushing ratio and irrigation method had been more strongly influenced to it.

Namely, the plot of flood water irrigation method had been sharply down the seedling establishment ratio against maximum seedling establishment with 80 % of soil moisture absorption method which put the water to small ditch in the plot and absorpt the water in the soils.

5. Improvemnet of raising seedling method (Mechanization Div.)

The method of raising seedling had been contributed to meet special kind of soil conditions such as high PH value and cohesive soil etc., in Nile Delta since project was started. However, it has been also pointed out that the raising seedling method should be more improved in order to obtain healthy seedling in this region through the advice and guidance activities of Kafr El Sheikh which was planned by MOA since 1983.

The trials had been conducted to obtain health seedling and following points were cleared ;

- (1) The normal soils which was selected from remarkable crop growing area such as wheat and clover was adapted for bed soil rather than Tameiya. The Tameiya was required to prevent stuck up seedling with transplanting fingers which was designed by crack type push rod at the early stage but it had been already improved to spring type push rod which could be avoid the trouble of stuck up seedling with transplanting fingers.
- (2) Zinc application for seedling bed soils had been recongnized to good effect for healhy seedling growth.
- (3) The effect of sulfuric acid for PH value adjustment of bed soils was reaffirmed for seedling growth

6. Seasonal change of cropping for mechanized rice cultivation (Mechanization Div.)

The Rice cultivation in Nile Delta is completely included under the alternation of land usage between dry and flooded conditions. The cropping season for rice cultivation is strongly restrained by pre-crop harvesting and post-crop planting season.

On the other hand, in order to develop mechanized rice cultivation system, it is very much important to make clear the condition of the possibility of expansion of rice cropping season with high yield for late planting. The expanded rice cropping season will make more high workikng efficiency per year for machinery utilization.

The trials were conducted with the standpoint of above mentioned by use of early, middle and late maturing varieties. The cropping seasons were set up from 15th of May up to 20th of July with 14 different stages of transplanting.

The results of trials were as follows:

- (1) It was cleared that the variation of growth period for paddy plant was controled by two factors such as number of days from transplanting up to heading and ripeing days. The variation of growth period were as follows;
 - i) Akihikari , 3 days
 - ii) Giza 173 , 4 days
 - iii) Giza 172 , 19 days

(2) The most suitable cropping season of three varieties was confirmed 30th May with highest yield which were obtained 11.2 ton/ha for Giza 172, 10.29 ton/ha for Giza 173 and 9.71 ton/ha for Akihikari. And it was cleared that the variation of yield by seasonal change of cropping for paddy plant were influenced by number of spikelets /m² which has cleared that the tendency to decrease before and after 30th of May.

(3) In order to obtain 6 ton/ha, the suitable cropping seasons for transplanting can be determined as follows;

- i) Akihikari and Giza 173, 15th May to 15th June
- ii) Giza 172, 15th May to 5th July

And also harvesting period for above three varieties were confirmed by the following trials;

- i) Akihikari, 23rd Aug. to 21st Oct.
- ii) Giza 173, 24th Sep. to 23rd Oct.
- iii) Giza 172, 6th Oct. to 15th Nov.

Consequently, the working duration for rice transplanter and combine by utilized three different varieties such as early, middle and late maturing varieties are possible to extend as follows;

- i) Working duration per year for rice transplanting, 50 days
- ii) Working duration per year for combine, 82 days

(4) In order to obtain high yield under the late planting cultivation, the following points should be investigated;

- i) Establishment of healthy raising seedling method
- ii) Selection of short-culmed and panicle weight type variety
- iii) Modification of rice transplanter for more dense planting
- iv) Establishment of a method for early stage growth acceleration
- v) Establishment of optimum fertilizer application method including times and quality

7. Verification trials of rice transplanters (Mechanization Div.)

The field capacity and transplanting accuracy were investigated for 4 row warking type, 6 row riding type and 8 row riding type.

It was cleared that the transplanting accuracy for three different kinds of transplanters were almost the same and the field capacity were also not much differentiation. But the exhaustion by utilized 4 row warking type transplanter is still remaining as problem.

8. Weed control (mechanization Div.)

(1) Paddy weeds of R.M.C. are identified and the main weeds were as follow;

- i) Echnochloacrus -galli
- ii) E. colonum
- iii) Cyperus difformis
- iv) C.rotundus
- v) Ammannia Spp.
- vi) Panicum repens
- vii) Cynodon D.
- viii) Paspalum paspaloides
- ix) Scirpus Spp.
- x) Eclipta-alba

(2) On mechanization transplanting cultivation, in the case that irrigation water is sufficient and Cyperus rotundus is not so much, one application is suitable (for exmample, Pyrazolate butachlar granule, CNP butachlor granule etc.). In the case that irrigation water is not sufficient or Cyperus rotundus immerges to much, systematic treatments combined with early stage treatment and post emergence treatment will be suitable.

9. Establishment of plowing and leveling method (Machinery Div.)

Soils in the Delta shows remarkable hardness due to dry conditions and its plowing works are so difficult. Therefore, investigation of hard variation of soils from the last irrigation stage of winter crops to the plowing for rice cultivation. had been conducted and was cleared that the soils above 15 cm of upper layer had been increased its hardness by the passage of time. But below 15 cm of soil layer were almost no variation.

The relationship between soil hardness and plowing methods were also investigated from standpoint of harrowing capacity (efficiency). According to the results, the rotary plowing method was recognized advantage for harrowing capacity compare with chisel plow. However, the differentiation of harrowing capacity had no meaning after irrigated to the field.

Because of melting, for instance, the big soils (10 cm ϕ) was melted within 30 minutes after absorbed irrigation water.

The chisel plowing method was confirmed that suitable method for plowing in this region with high working capacity and high working efficiency compare with the other plowing methods.

10. Suitable working method of walking type transplanter (Machinery Div.)

Soils in Nile Delta shows remarkable stickiness when water supply to the field. consequently, operation of walking type transplanters are made great tiredness, so the operators are more fond of riding type transplanters. But the machines cost between the both are quite different. So the suitable working method of walking type transplanters were examined in order to selection of types of transplanters and which is meet to the scale of farming. As a result, walking type transplanter's accuracy was very high at the time of 2 days after puddling with 13 cm of plowing depth and operator's tiredness was less than 3 days after puddling.

11. Improvement for establishment of seedling by mechanical direct sowing on dry condition (Machinery Div.)

Aim at low cost of raising nursery and expenses for transplanting works, the trial was carried out relation between plowing system and ratio of seedling establishment by mechanical dry direct sowing.

The following were confirmed;

- (1) The ratio of seedling establishment was closely related with the ratio of plowing clod diameter
- (2) Rotary plowing method for 3 times was shown 60 % establishment and which was higher than chisel plowing

12. Mechanical harvesting (Machinery Div.)

Reaper(no binding type)combination with thresher and head threshing type combine were conducted as the system of mechanical harvesting.

Both reaper and combine were good results except complete lodging of rice plants. The reaping direction of 45 lodging degree could reaped in either way and grain losses were very less. But complete lodging field were necessary to reaped by following ar left direction.

The rate to working by reaper was recorded 1.5 hours and working efficiency was shown 88.86. From this point of view, reaper is essentially expected to combine with thresher.

Harvesting by combine for long straw variety(Giza-172) was trouble with discharge because straw stucked in the outlet device, but working speed down around 0.4m/Sec., it could be easily harvested within 5 % of grain loss.

II. Economic study on mechanized rice farming

- (1) Expenses of mechanized transplanting and those of conventional transplanting per feddan were calculated and made a report on the basis of collected data by the Mechanization Div.. It shows that mechanized transplanting is 11LE (13 %) cheaper in cost than conventional transplanting
- (2) The cost was divided into nursery and transplanting, cost of nursery is 4.85 LE (13 %) higher for the mechanized transplanting and the cost of transplanting, 15.85 LE (35 %) cheaper for the mechanized transplanting
- (3) Study on harvesting compare with combine and conventional method is being conducted in the experimental field at Meet El Dyba.

III. Establishment of the mechanical rice farming system

The four different of rice mechanization farming systems which were considered to adapt for this region's circumstances were planned according to the verification trials and survey results. These four systems will be conducted as verification trials to collect more detail data in 1985/86 at RMC.

IV. Advice and guidance on training for operational and maintenance of agricultural machinery

The training activity was conducted since Oct. 1982 at Kallin Center. The trainees had been mainly selected from Kafr El Sheikh governorate but after established Rice Mechanization Center with full accommodation for trainees in April 1984 at Meet El Dyba, the trainees were selected all the governorate which were conducted mechanized rice cultivation system. The number of trainees by governoratewise since Oct, 1982 up to Feb, 1985 were mentioned as follows;

- | | |
|-------------|----|
| (1) Bihira | 13 |
| (2) Sharkia | 10 |
| (3) Kalubia | 8 |

(4) El-Menia	1
(5) Cairo	1
(6) Kafr El Sheikh	441
(7) Gharbia	9
(8) Beniswif	1

Total	484
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V. Advice and guidance for the demonstration of mechanized rice farming

- (1) Demonstration of mechanized rice cultivation is being conducted in the experimental field at Meet El Dyba
- (2) The advice and guidance for mechanized rice cultivation demonstration area t Kafr El Sheikh governorate were conducted form end of April up to the first week of July for 2552 feddans . The technical differentiaition between trained engineer and untrained are clearly recognized.

VI. Model infrastructure

The second improvement of experimental filed at Meet El Dyba was made to expand irrigation canel and installation of water supply pump with the total cost of twenty eight (28)million Japanese yen.

VII. Dispatch of expert

Six long-term experts and four short-term experts were dispatched to the Project

VIII. Supply of equipment and machinery

Total amount of grant aid for equipment and machinery was ninety five (95) million yen for fiscal year 1984

IX. Training of Egyptian personnel in Japan

Six counterpart officials were participated in (1) group training (2) Individual training and (3) Observational tour

ANNUAL OPERATIONAL WORK PLAN FOR THE RICE MECHANIZATION PILOT PROJECT
(RMP)

As a guide line for
RMP Project from April
1985 to March 1986

Japanese Technical Cooperation for the Rice Mechanization Pilot Project

Annual Operational work Plan for 1985/86

Item	Month	Remarks
	4 5 6 7 8 9 10 11 12 1 2 3	
I. Verifying experiment on mechanized rice farming		
1) Preparation of the experimental field		
2) Verifying experiment on mechanization		
(a) Planting density and nitrogen quantity		
(b) Nitrogen quantity and its different split application		
(c) Plowing depth and grain yield difference		
(d) Compost application		
(e) Different nitrogen application time trial		
(f) Relationship between irrigation method, nitrogen application method and inter-node elongation		
(g) Varietal trial		

Model infrastructure works

Agronomy Div.

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Item	Month	4 5 6 7 8 9 10 11 12 1 2 3												Remarks	
(h) Growth trail of different leaf-age seedling under the salinity condition															Agronomy Div.
(i) Relationship between plowing depth and transplanter's accuracy															Mechanization and machinery Divs.
(j) Study on rice blast disease and its control															"
(k) Weed control															"
(l) Trial for seedling (Study on H ₂ SO ₄ .Ph, Ec, Cl and Zink)															"
(m) Suitable time for harvesting															"
(n) Trial for drying system															"
(o) Data collection of maintenance and repair															"
(p) Variation of soil hardness for clover and wheat field from last irrigation															"
(q) Relationship between soil hardness and plowing method by chisel, rotary plow															"

Item	Month												Remarks
	4	5	6	7	8	9	10	11	12	1	2	3	
II. Economic study on mechanized rice farming 1) Survey on existing farming system 2) Economic analysis of traditional rice farming and mechanized rice farming													Mechanization and machinery Divs.
III. Establishment of mechanized rice farming system 1) Data collection and analysis on traditional cultivation system 2) Study on farming system (a) Traditional method (b) Mechanized method 3) Establishment													Mechanization and machinery Divs. " "
IV. Advice and guidance on training for operation and maintenance of agricultural machinery													

Item	Month												Remarks
	4	5	6	7	8	9	10	11	12	1	2	3	
1) Advice and guidance for making training curriculum	---	---	---	---	---	---	---	---	---	---	---	---	Agronomy, mechanization and machinery Divs.
2) Making training material and equipment	---	---	---	---	---	---	---	---	---	---	---	---	Film shooting
3) Conducting training activities	---	---	---	---	---	---	---	---	---	---	---	---	"
V. Advice and guidance for the demonstration activities of mechanized rice farming	---	---	---	---	---	---	---	---	---	---	---	---	"
1) Execution of demonstration (Method, Operation and management)	---	---	---	---	---	---	---	---	---	---	---	---	"
2) Others	---	---	---	---	---	---	---	---	---	---	---	---	"

Item	Month												Remarks
	4	5	6	7	8	9	10	11	12	1	2	3	
VI. Seminar	—	—	—	—	—	—	—	—	—	—	—	—	
VII. Lecture on rice cultivation, mechanization and others													
VIII. Symposium													Will be requested short-term experts
IX. Observational trip													Agricultural research institutes and others related organizations
X. Japanese class													

Item	Month	4 5 6 7 8 9 10 11 12 1 2 3												Remarks	
XI. Dispatch of Japanese expert (Long-term assignment) 1) Team Leader Dr. T. Tanaka 2) Agricultural Machinery Mr. S. Sugawara Mr. Y. Kimura 3) Rice cultivation Mr. T. Numba 4) Liaison Officer Mr. K. Miura (Sort-term assignment) 1) Blast Disease control 2) Agricultural Machinery 3) Paddy water management															
															'84.4.3 - '86.4.2
															'83.3.4. - '86.8.17
															'81.12.8 - '85.12.7
															'82.2.9 - '86.2.8
															'85.5.7 - '86.8.17
															'85.7 - 9 (3 months)
															'85.7 - 9 (3 months)
															'85.7 - 9 (3 months)

Item	Month												Remarks
	4	5	6	7	8	9	10	11	12	1	2	3	
4) Mechanized rice farming													'85.10 - 12 (3 months)
5) Rice cultivation													'85. 7 - 9 (3 months)
6) Training material (16 m/m Film)													3 Persons x 2 times (4 weeks x 2)
XII. Training of Egyptian personnel in Japan													
1) Mr. Said El Mosely El Shahawy													Observational tour (2 weeks)
2) Mr. Mohamed Yusef Abd El Maule													Agricultural Extension (3 months) 8.15 ~ 6.12.84
3) Mr. Abd El Gawad El Aziz Al Sulliman													Weed control (From June 6 for 2 months)
4) Mr. Mustafa Mohamed Fayed Esea													Rice cultivation (9 months)
5) Mr. Abd El Gawad El Saud Baly													Economic analysis (3 months)
6) Mr. Ibrahim Aly Yousef Khaia													Agricultural Machinery (6 months)
7) Mr. Asar Mohamed Asar													Rice Production and Mechanization (9 months)

Item	Month	Remarks
	4 5 6 7 8 9 10 11 12 1 2 3	
XIII. Provision of equipment and machinery	— — —	Transplanters, combine and others

Training Program of rice mechanization

1st day	Opening and orientation	9:00 - 10:00
	Preliminary test	10:00 - 11:00
	Mechanization in Egypt	11:00 - 13:00
	Planning for mechanized rice transpl- lanting	14:00 - 16:00
.....		
2nd day	Soil selection for seedling boxes and seedling preparation	9:00 - 11:00
	Seed selection, soaking and seed desinfection	11:00 - 16:00
.....		
3rd day	Suitable time for transplanting and quality of seedling	9:00 - 11:00
	Seedling disease and its control	11:00 - 13:00
	Zink and micro elements	14:00 - 15:00
	Film (Rice Cultivation in Japan)	15:00 - 16:00
.....		
4th day	Paddy field preparation	9:00 - 10:00
	Kinds of soil for seedling boxes	10:00 - 11:00
	Practice of seed hastening	11:00 - 13:00
.....		
5th day	Rice cultivation technics and stage of growth	9:00 - 13:00
	Practice for soil selection and fill up to seedling boxes	14:00 - 16:00
.....		
6th day	Direct sowing	9:00 - 10:00
	Economic study for mechanized rice cultivation	10:00 - 13:00
	Practice of sowing and pile up seedling boxes	14:00 - 16:00

7th day	Rice transplanter	9:00 - 13:00
	Practice of rice transplanter	14:00 - 16:00
.....		
8th day	Relation between panicle formation and maxium tillering stage	9:00 - 13:00
	Greening of seedling	14:00 - 16:00
.....		
9th day	Cost of mechanized rice transplanting	9:00 - 11:00
	Paddy weeds and its control	11:00 - 13:00
	Practice of greening	14:00 - 16:00
.....		
10th day	Operation and maintenance of transplanter	9:00 - 11:00
	Practice for operation of transplanter	11:00 - 16:00
.....		
11th day	Fertilizer application and its effect	9:00 - 13:00
	Maintenance and daily checking of transplanter	14:00 - 16:00
.....		
12th day	Adjustment of transplanter and its practice	9:00 - 16:00
.....		
13th day	Practice of fertilizer application	9:00 - 16:00
.....		
14th day	Harvesting with reaper, binder, harvester, and thresher	9:00 - 13:00
	Practice of harvesting machines	14:00 - 16:00
.....		
15th day	Traditional and mechnized rice cultivation	9:00 - 11:00
	Practice of combine	14:00 - 16:00
16th day	Final evaluation test and closing celemony	9:00 - 13:00

RMC Seminar

No.	Subject	Lecturer	Date
1.	Weed control in Egyptian paddy field	Dr.Minoru TAKABAYASHI	2nd Sep. 1984
2.	Studies on the light-curves of carbon assimilation of rice plants	Dr.Takayuki TANAKA	28th Oct. 1984
3.	The economic advantage of rice mechanization in small and middle size farmers	Mr.Setsuya HARADA	25th Nov. 1984
4.	Raising seedling and rice transplanting	Mr.Abdel Gawad E.Baly Mr.Ahmed Mohamed Ential	6th Janu.1985
5.	Mechanized harvesting	Mr.Seikichi SUGAWARA Mr.Fatehi El-Nemr	27th Janu.1985
6.	Nitrogen transformation and tis effect for paddy plant and paddy plant seasonal change	Mr.Nour El-Din Saleh Mr.Yasuhiro KIMURA Mr.Essam Ghazy Mr.Asar Mohamed	25th Mar. 1985
7.	Framework of rice mechanization system for middle and small scale farmers	Mr.Shouichi KIMURA	7th Apl. 1985
8.	* Paddy weed control Mr.Fatehi El Nemr 30th June 1985
9.	* Problems of traditional rice cultivation technics and technical improvements in mechanized transplanting	Mr.Mohamed Itman Mr.Abdel Rahman Imara	8th July 1985
10.	* Results of trials and survey in Agronomy ,1984	Mr.Teruhisa NAMBA Mr.El Tanga	Aug. 1985

* = Tentative plan

Publication of Annual Report, Text book, Technical manual and others

No.	Title	O:accomplished P:Planning		Remarks
		O	P	
1.	Annual Report 1982/83	0		In english
2.	Preliminary Report on Research Highlights in in 1983	0		"
3.	Results of the trial and survey in agronomy Division, RMP in 1983/84	0		"
4.	Theory and practice of fertilizer techniques	0		"
5.	General information of RICE MECHANIZATION CENTER	0		"
6.	Nursery and mechanized transplanting	0		In alabic
7.	Raising seedling and mechanized harvesting	0		"
8.	Annual Report 1984/85	P		In english
9.	Report on the Rice Mechanization Pilot Project from 1981 to 1986	P		"

Local cost allocation for the Project

No.	Item	year	Expenditure	Contents
1.	Grant Aid	1982	One billion four hundred million yen	Construction of Rice Mechanization Center, Auditorium, others
2.	Model Infra-Structure	1981	Nine million yen	Improvement of Kallin Experimental Field
3.	Pilot Infra-Structure	1982	Fifty seven million yen	Construction of Meet El Dyba Experimental Field
4.	Model Infra-Structure	1984	Twenty eight million yen	Improvement of Meet El Dyba Experimental Field (Expansion of irrigation canal, installation of pump, and others)
5.	Model Infra-Structure	1985	Thirty million yen	Improvement of Meet El Dyba Experimental Field (Construction of under-drains and others)

Dispatched Expert

(Long term)

<u>Name</u>	<u>Assignment</u>	<u>Duration</u>
1. DR. Toyoo TOMITA	Team Leader	April 6, 1982-April 5, 1984
2. DR. Takayuki TANAKA	Team Leader	April 3, 1984-April 2, 1986
3. MR. Seikichi SUGAWARA	Agricultural Machinery	March 4, 1983-August 17, 1985
4. MR. Teruhisa NUMBA	Rice Cultivation	Feb. 9, 1982-Feb. 8, 1985
5. MR. Yasuhiro KIMURA	Agricultural Machinery	Decem. 8, 1981-Decem. 7, 1985
6. MR. Takeshi NARUSE	Coordinator/ Liaison Officer	FEB. 9, 1982-Feb. 8, 1985
7. MR. Kimio MIURA	Coordinator/ Liaison Officer	May 7, 1985-August 17, 1985

(Short term)

<u>Name</u>	<u>Assignment</u>	<u>Duration</u>
1. MR. Toyoo TOMITA	Team Leader	Decem. 8, 1981-March 7, 1982
2. MR. Yasuo MATSUBARA	Field Improvement	March 10, 1982-June 1, 1982
3. MR. Mitsuo KURAKAZU	"	Oct. 7, 1982-June 30, 1983
4. MR. Yasuo HIROSE	"	Decem. 7, 1982-June 22, 1983
5. DR. Tadano HATANO	Economic Analysis	Oct. 21, 1983-Decem. 20, 1983
6. DR. Kaoru SEINO	Soil and Fertilizer	Oct. 21, 1983-Nov. 20, 1983
7. MR. Tomizo KATOH	Agricultural Machinery	Janu. 6, 1984-Feb. 5, 1984
8. DR. Minoru TAKABAYASHI	Weed control	July 7, 1984-Sept. 6, 1984

9.	MR. Kooichi INOUE	Drawing of Irrigation facilities	August 17, 1984 - Sept. 15, 1984
10.	MR. Masaru SHIBATA	Soil and under drains	"
11.	MR. Setsuya HARADA	Economic Analysis	Sept. 15, 1984 - Decem. 13, 1984
12.	MR. Shoichi KIMURA	Mechanization System	Feb. 12, 1985 - April 11, 1985
13.	MR. Kooichi INOUE	Field Improve- ment	
14.	MR. Mitsuo KURAKAZU	"	"
15.	MR. Tetsuya WATANABE	Audio Visual Aid	March 3, 1985 - March 17, 1985
16.	MR. Kunihiko MASUMI	Coordinator/ Liaison Officer	Feb. 21, 1985 - May 20, 1985
17.	MR. Tetsuya WATANABE	Audio Visual Aid	June 11, 1985 - July 7, 1985
18.	MR. Kuniyasu SAGARA	"	"
19.	MR. Kazushige FUJISAKI	"	"
20.	MR. Tetsuya WATANABE	Audio Visual Aid	Oct. 1, 1985 - Oct 25, 1985
21.	MR. Kuniyasu SAGARA	"	"
22.	MR. Kazushige FUJISAKI	"	"

Provision of Equipment

No.	Year	Expenditure (Budget)	Provided equipment
1.	1981	Thirty Million Yen	1. Tractors 2. Transplanters 3. Vehicles 4. Nursery facilities 5. Ohters
2.	1982	Forty Million Yen	1. Combines 2. Harvesters 3. Vehicles 4. Laboratory equipment 5. Others
3.	1983	Eighty seven million Yen	1. Bulldozer 2. Tractors 3. Combines 4. Transplanters 5. Sowing plant 6. Ohters
4.	1984	Ninety five million Yen	1. Vehicles 2. Solar dryers 3. Milling machine 4. Laboratory equipment 5. Agricultural chemical 6. Office supplies 7. Others
5.	1985	Fifty five million Yen	1. Transplanters 2. Combine 3. Agricultural chemicals 4. Spare parts for Agricultural machinery 5. Others

Training of Egyptian counterpart personnel

No.	Year	Name of participants	Duration	Contents of training
1.	1981	Dr. Hossary	Oct.17,1981 - Oct.24,1981	Observational tour to Tsukuba Science City
2.	1982	Mr. Osama K.	April 25,1982-May 18,1982	Observational tour to Tsukuba Science City and Agricultural machinery Companies
3.	1982	Mr. A.Mageid	Oct. 16,1982 - Nov. 15,1982	Observation of Agricultural machinery companies
4.	1983	Mr. El Tanga	Feb.26,1983 - Dec. 14,1983	Group training on Rice cultivation
5.	1983	Dr. A.F. Sahrigi	Feb.6,1983 - Feb. 17,1983	Observational tour to Tsukuba Science City and Agricultural machinery companies
6.	1983	Dr. Zakaria El H.	Oct.16,1983 - Oct.29,1983	Observational tour to Kyushu Agricultural Experiment Station, Agricultural Extension office and others
7.	1983	Mr. Doma	May 10,1983 - May 29,1983	Observational tour to Agricultural machinery companies
8.	1984	Mr. Hamdy M.E.	March 29,1984-Oct.31,1984	Individual Training in Akita Prefectural Agricultural Experiment Station
9.	1984	Mr. Nour Saler	March 1,1984 - Oct.31,1984	"
10.	1984	Mr. Mustafa S.A.	Feb. 23, 1984- Nov.30,1984	Group training on Rice Mechanization

11.	1984	Mr. El Sombaty	July 9, 1984 - July 25, 1984	Observational tour to Agricultural Experiment Station and others
12.	1984	Mr. A.M. Ahtiyal	June 28, 1984-August 31, 1984	Individual training on Weed control
13.	1984	Mr. N. Bideer	June 14, 1984-Dec. 22, 1984	Group training on Maintenance of agricultural machinery
14.	1984	Mr. Osama K.	Nov. 28, 1984 - Dec. 17, 1984	Observational tour to Tsukuba science city and others
15.	1985	Mr. Samir	Feb. 25, 1985- Nov. 30, 1985	Group training on Rice Cultivation
16.	1985	Mr. Essam M. Chazy	"	Group training on Rice Mechanization
17.	1985	Mr. Abd El Gawad	June 6, 1985 - August 5, 1985	Individual training on weed control
18.	1985	Mr. Muhamed Yusef M.	August 15, 1985-Dec 14, 1985	Group training on Agricultural extension

Provision of operational budget for the Project by G.R.F.

Year	Budget	Remarks
1982/83	140.000 LE	1 US \$ = 1.32 LE
1983/84	90.000 LE	
1984/85	90.000 LE	
1985/86	90.000 LE	
1986/87	90.000 LE	
Total	550.000 LE	

XVIII. Operational Organizational Chart of the Project

