

(8) Overall evaluation of SF activities

There used to be a lot of speculation, at the beginning of this Project phase, that to start five SF in such far-away places, with nearly 50 feddans in each would likely bog down. Because there were hundreds of presumable problems to be solved before the start, such as, a) housing, accommodations for assigned staff, operators and laborers, b) Coordination with State farms about usage of water, facilities, etc. c) transportation of machinery and materials, d) storage of these, e) countermeasures for machinery trouble, f) impeding factors were not yet cleared then, etc., etc., etc.

All those worries were realized during the very first year, and those who were connected with the SF really "struggled in the mud". Final agreements with the State farms solved most of the administrative problems during the second year. However, the water shortage problem became worse and considerably diminished the yields in two SF. After the second year of operation, the infrastructures of all SF had been rearranged by the budget of JICA, and the efficiency of machinery jumped up during the last year (1989). But, unfortunately, the yield decreased in one of the SF due to the inexperience of a new staff member.

However, as a summerization, SF activities during the three years ('87-'89) could be said to be a struggle on the one hand and at the same time an "absolute success" on the other. The targets in SF can be summarized as follows; 1) successful operation of the mechanized rice cultivation system and 2) to clarify the regional impeding factors and to discover their

countermeasures. And, when the achievement of these targets is assessed, it can be said that more than the expectation was obtained. Especially, it is worthwhile noting that the average yield in all SF exceeded the national average during the final year. This record was achieved not in the farmer's well-managed field but at isolated places where there were no facilities and no equipment. Furthermore, it is surprising that the assigned staff members have been living in humble cottages along with the operators and laborers. The highest appreciation must be given to the assigned staff.

Most of the impeding factors were cleared up and their countermeasures thought out. Further study of the salinity problems is essential, however, salinity remains as one of the biggest problems for Egyptian agriculture in the future.

Table (1) Results of Demonstration Operation in SF - (1987 - 1989)

Name of SF.	Year	Cultivated Area(f)	Total Prod.(t)	Average Yield (t/f)	Average Yield (t/ha)	Increase Ratio (%) to Previous year	Increase Ratio (%) to first year
Gimmeza	1987	45	123.7	2.75	6.54	--	--
	1988	37.5	134.0	3.57	8.51	+30%	+30%
	1989	39	142.2	3.65	8.68	+ 2%	+33%
Misir	1987	45	89.1	1.98	4.71	--	--
	1988	45	69.4	1.54	3.67	-22%	-22%
	1989	45	140.2	3.12	7.42	+102%	+58%
Saft Khalid	1987	45	82.9	1.84	4.39	--	--
	1988	45	72.3	1.61	3.83	-13%	-13%
	1989	41.5	85.0	2.05	4.88	+27%	+11%
Idfina	1987	35	71.8	2.05	4.88	--	--
	1988	35	68.1	1.95	4.63	- 5%	- 5%
	1989	35	80.3	2.29	5.46	+18%	+12%
Serw	1987	45	55.0	1.22	2.91	--	--
	1988	45	92.0	2.04	4.87	+67%	+67%
	1989	45	82.0	1.82	4.33	-11%	+49%
All SF.	1987	215	422.5	1.97	4.68	--	--
Average	1988	207.5	435.8	2.10	5.00	+ 7%	+ 7%
(Total)	1989	205.5	529.7	2.58	6.14	+23%	+31%

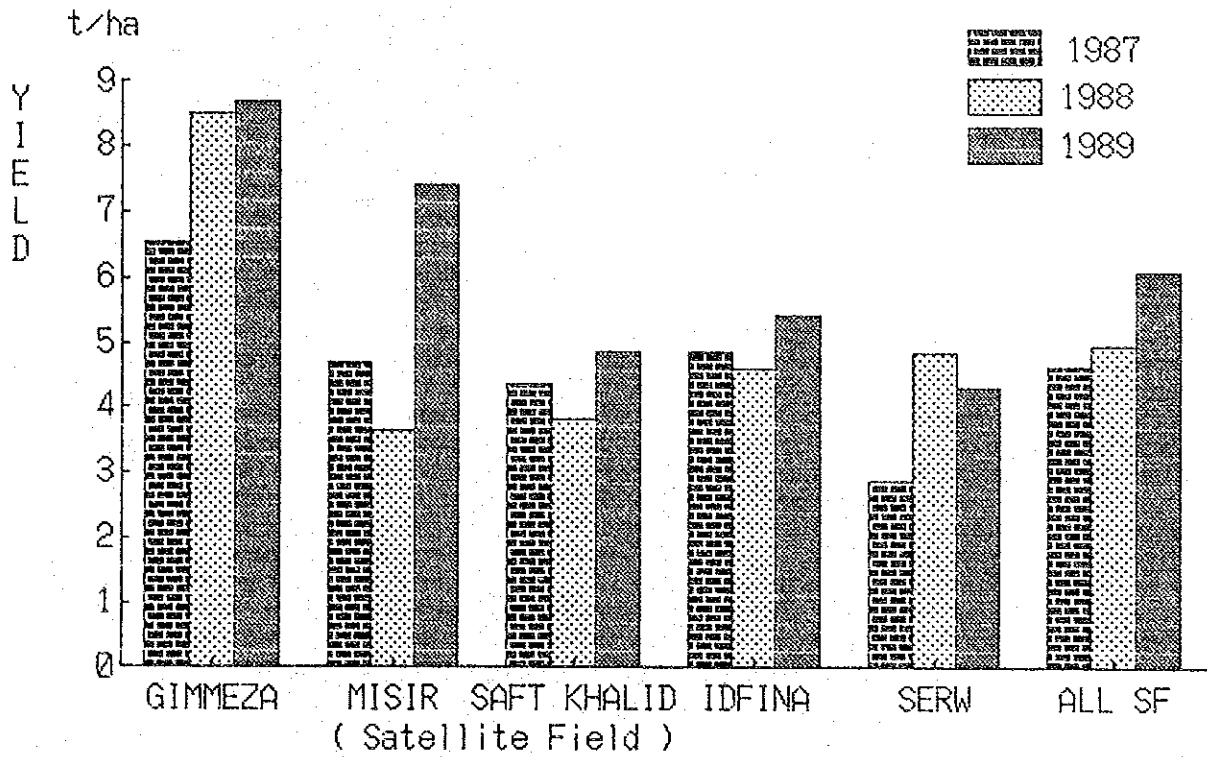


Fig. 1 Results of Demonstration in SF (1987 to 1989)

SATELLITE FIELD OPERATION - (1)



Picture V-2-1 Sowing work to seeding tray
(Misir SF)



Picture V-2-2 Scene of seedbed
(Saft Khalid SF)

SATELLITE FIELD OPERATION - (2)



Picture V-2-3 Transplanting operation
(Gimmeza SF)



Picture V-2-4 Scene after transplanting
(Misir SF)

SATELLITE FIELD OPERATION - (3)

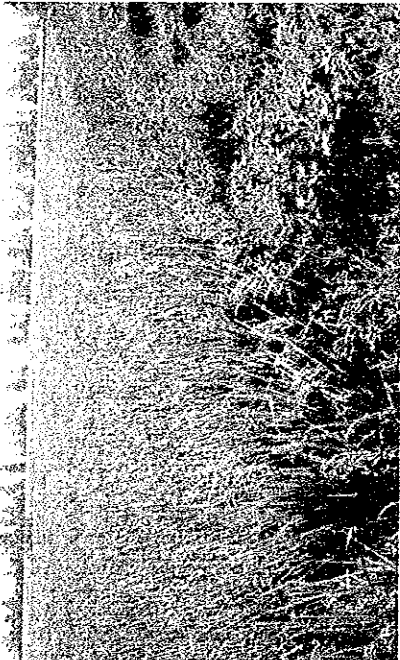


Picture V-2-5 Field demonstration with the
attendance of His excellency, Japanese
Ambassador (Gimmeza SF)

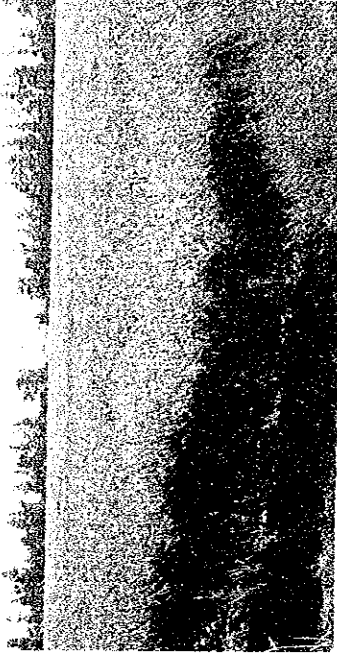


Picture V-2-6 Jubilant staff in charge for
perspective bumper crop
(Misir SF)

SATELLITE FIELD OPERATION - (4)

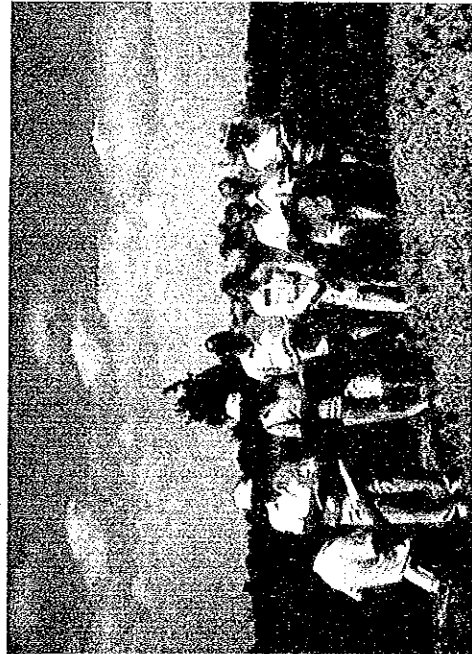


Picture V-2-7 Near to harvest
(Saft Khalid SF)

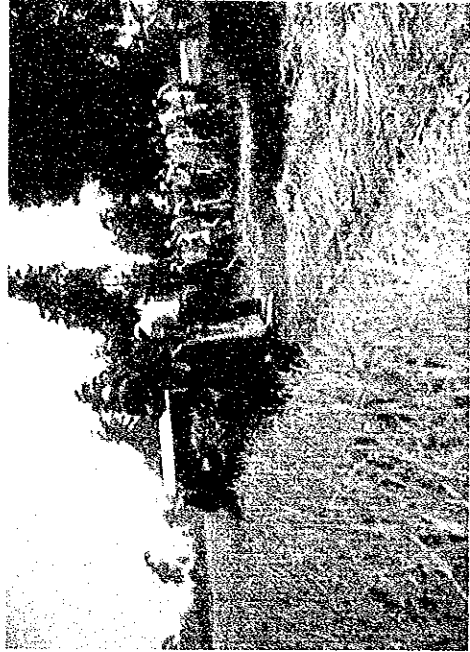


Picture V-2-8 Near to harvest
(Saft Khalid SF)

SATELLITE FIELD OPERATION - (5)



Picture V-2-9 Field Study
(Serw SF)



Picture V-2-10 Field Seminar of Harvest
(Gimmeza SF)

VI. SUMMARIZATION OF THE GENERAL AFFAIRS OF R M P P 1986~1990
RESULTS OF THE TECHNICAL COOPERATION PROGRAM

1. R.M.C. Seminars:

R.M.C. "Seminars" were conducted on a regular basis by Japanese Experts and their Egyptian Counterpart Personnel in order to publicize the results of the verifying trials carried out in the Project and investigation in the Nile Delta. These "Seminars" played an important role in the exchange of technical views on Mechanized Rice Cultivation and it's related subjects with the researchers of the National Rice Research Institute, professors of Tanta University and extension offices. 31 subjects were lectured on in the R.M.C. "Seminars".

<u>Subjects</u>	<u>Lecturers</u>	<u>Dates</u>
1)- Economic Effects of Mechanization Technology on the Development of Rice Farming.	Dr.H.Horiuchi	3.25.1986
2)- Basic Experiment on the Stabilization and Establishment of Seedlings with Direct-Sowing.	Mr.M.Nakayama Mr.Hamdy.E.	4.23.1986
3)- Paddy Soil Desalting and Early Establishment of Seedlings.	Mr.T.Shigyo	4.23.1986
4)- Field Observation Studies on Blast Occurrence and Meteorological Conditions in Paddy Fields, the Nile Delta Egypt.	Dr.O.Horino Mr.Fathy N. Mr.M. Yousef	9.24.1986
5)- Agricultural Extension Service in Japan.	Mr.Fetoh.H.	11.25.1986
6)- Physico-Chemical Analysis of Paddy Soils and irrigation Water in the Nile Delta State farms.	Mr.M.Morooka Mr.Alaa Shamly Mr.Nour El-Din Mr.Hassan Sabri	4.26.1987
7)- Survey for Five Satellite Fields on the Rice Mechanization Pilot Project.	Mr.S.Hosono Mr.A.Ectiar Mr.E.El-Gawad	5. 3.1987

8)- On the Requirements for Extending Mechanical Rice Farming in Five Satellite Fields.	Mr.H.Kawakami Mr.A.G.E.Baly	6.21.1987
9)- Guidance and Advice on Mechanized Rice Transplanting in the Five Satellite Fields.	Mr.K.Yamashita	7.28.1987
10)- Basic Experiment on Stabilization and Establishment of Seedlings in the Direct-Seeding Rice Cultivation System.	Mr.Watanabe Mr.Ibrahim.Z.	8.20.1987
11)- Genetic and Pathological Studies on the Resistance of Rice to Bacterial Blight	Dr.O.Horino	11. 3.1987
12)- Race Distribution of Rice Blast Fungus, Pyricularia Oryzae in the Oryzae in the Nile Delta.	Dr.O.Horino Mr.F.Nemr Mr.M.Yousef	11.22.1987
13)- Advanced Weed Control in R.M.P.P	Mr.H.Morita	3.13.1988
14)- System Analysis of Farm Work Study on Farm Operation System Simulation Based on R.M.C Standard Mechanized Rice Farming System.	Mr.K.Shimonasako	4.10.1988
15)- Results of Study Concerning Agricultural Extension Service on R.M.C Mechanization Rice Farming System.	Mr.F.Nissin Mr.A.G.Bali	5.25.1988
16)- Results of Verification Trials in 1987.	Mr.I.Matsumoto Mr.M.Kholy	7.21.1988
17)- (1) Weed Control (2) Direct-Sowing in Japan	Mr.Sabri Mr.I.Zohier	8.15.1988
18)- The Survey of Direct-Sowing Technology.	Dr.N.Ito	9. 8.1988
19)- Rice Blast Control In Japan	Mr.Fathy.N.	11.16.1988
20)- Mechanical Harvesting	Mr.Refai Refai	11.23.1988
21)- Rice Mechanization and the Constraints in Egypt	Dr.T.Murakami	12.18.1988
**		
22)- Salt Injuries to Rice Plants	Mr.H.Niki	12.25.1988
23)- Agricultural Extension Service in Japan	Mr.M.H.Omar	12.28.1988

24)- Rice Pest Control (6-17-1989)	Dr.S.Mochida	1.17.1989

25)- Agricultural Machinery in Japan	Dr.N.Kawamura	1.26.1989

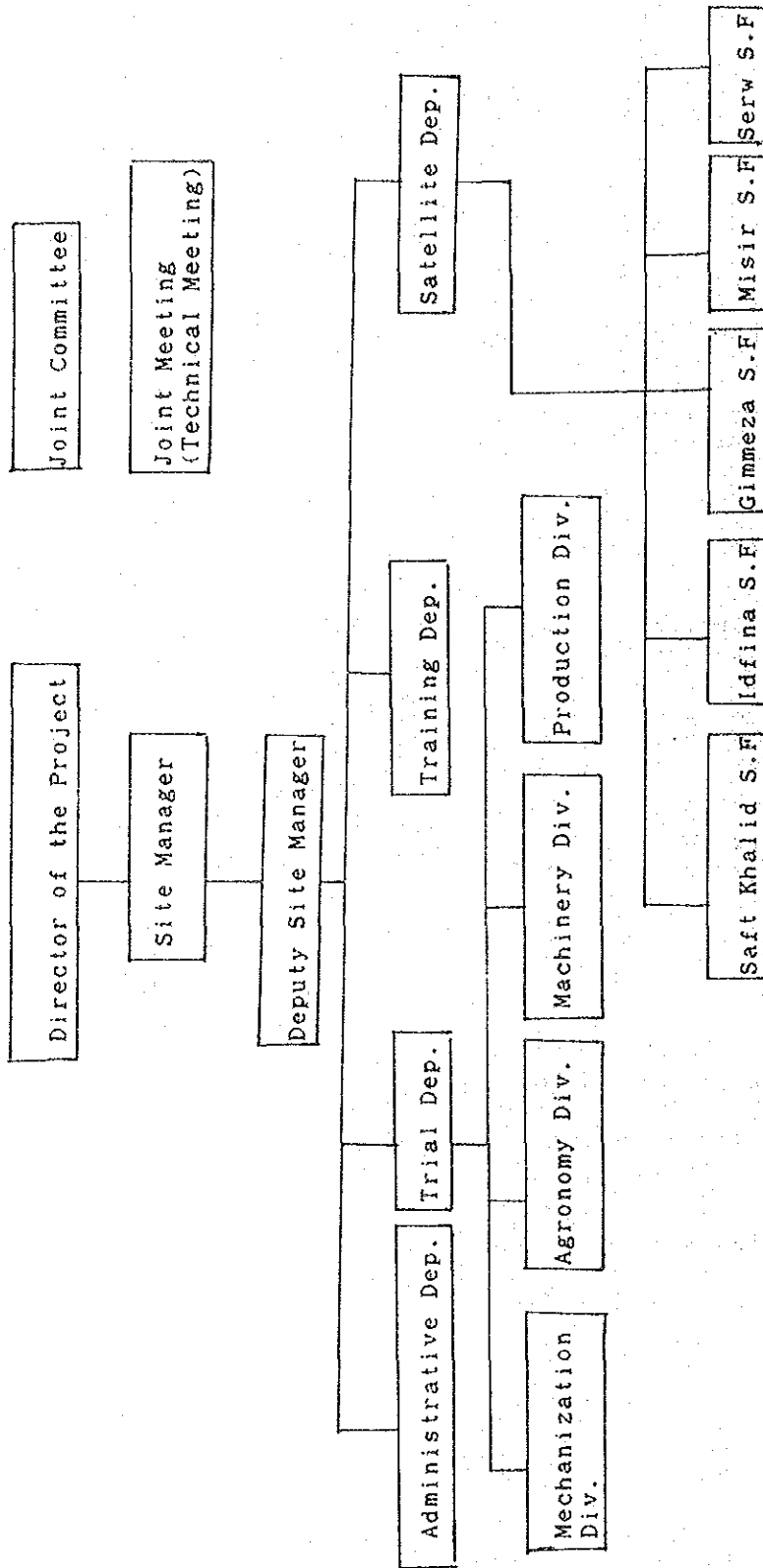
26)- Introduction of RMC	Mr.T.Kato	2. 5.1989
27)- Salt Injuries to Rice Plants	Mr.Samir Khadre	4. 5.1989
28)- Effects of Oil and Lubrication on the Machines.	Mr.El-Batawy	5.22.1989
29)- Current Technology and Topics in Agricultural Mechanization	Dr.Ito	8.30.1989
30)- Agricultural Machinery in Japan	Dr.Ito	9. 3.1989
31)- Intermediate Seedlings	Mr.H.Niki Mr.Rabia H.	9. 6.1989
32)- Weed Control in the Direct-Sowing Cultivation Method	Mr.H.Niki Mr.Mohamed Sh.	10.31.1989
33)- Sowing Density in the Direct-Sowing Cultivation Method on Flooded Fields	Mr.Mustafa E.	12.25.1989
34)- Water Management in the Direct-Sowing Cultivation Method on Dry Fields	Mr.Ibrahim Z.	12.25.1989
35)- Economic Effects of the Mechanized Direct-Sowing Rice Cultivation System.	Mr.Masaki U. Mr.Essam M. Mr.Abdel G.	12.27.1989

* Rice Research Center Seminar ** Ain Shams University Seminar

*** Agricultural Mechanization Research Institute

2. Operation and Organization of R.M.C

Chart : Operational/Organizational Chart of the Rice
Mechanization Project



VII. ANNUAL REPORT ON PROJECT ACTIVITIES AND TRAINING MATERIALS.

The Project has prepared an "Annual Report" which covers its activities and achievements to date and includes an inventory of training materials and aids. Amongst the training materials is a 15m/m film and relevant pamphlet produced to introduce the activities and objectives of the Project. In making the 16m/m film, a film crew was sent to the Rice Mechanization Center in order to shoot on the spot photographs of the actual activities in progress both in the interior and the exterior of the Center.

As covered in the "Annual Report", the following is a list of the documentation and information material now available at the center.

1. "Annual Report, 1982-1983" ;
2. Preliminary Report on Research Highlights in 1983;
3. Results of the Trials and Survey Conducted by the Agronomy Division
4. General Information on the Rice Mechanization Center; (No. 1)
5. Theory and Practice of Fertilizer Techniques;
6. Annual Report, 1984-85;
7. The Field Practice of Mechanized Rice Cultivation ;
8. Rice Transplanter Manual (Safe Handling and Maintenance);
9. Manual of Salt-Feeding Type Combine Harvester
(Safe Handling and Maintenance);
10. General Information on the Rice Mechanization Center; (No. 2)
11. Reports Training Course in Japan In R.M.C12. Technical Report and Seminar V-1~V-5 (Combined and Leather covered)

13. Annual Report 1987/1988

14. Annual Report 1988/1989

15. Farmer Training Text Book (Making Mechanical Nursery)

VIII. PROVISION OF MACHINERY AND EQUIPMENT

The total amount of the grant for equipment and machinery was One Million Seven Hundred Thirty Thousand Dollars (US \$ 1,730,000) as of March 1990. Most of the machinery and equipment are Properly utilized under Sound Conditions and well maintained.

Year	Equipment and Machinery	Expenditure
86/87	Copy Machine 1, Direct Seeding Machine 1, Seeder 1, Tractor 5, Cage Wheel 5, Water Pump 5, Power Sprayer 5, Soil Selector 5, Puddler 5, Transplanter 5, Anemometer 3, Submargible Pump 1, Control Pannel 1, Sterilization System 1, Cone Penetrometer 1, Chlorophy Meter 1, Agricultural Chemicals Spareparts of Machinery and Vehicles and Others	US\$ 418,000
87/88	Combine 5, Motor Cycle 6, Sprayer 1, Broad-caster 1, Grain Cruck Inspector 2, Mini Culti. 3, Subsoiler 1, Moistuer Meter 1, PH Meter 2, Thresher 2, Agricultural Chemicals, Spareparts of Machinery and Vehicles and Others	US\$ 533,000
88/89	Tractor 5, Pick up Track 1, Type Writer 1, Toyota S/T Wagon 2, Copy Machine 1, Generator 1, Rice Transplanter 1, Rigidity Tester 1, Grain Sample Dividers 1, Quadrat Sampling Thresher 1, Reverse Oamosis Fresh Water Maher 1, Portable bag Closer 1, Prefab House 1, Submersible Pump 1, Panaward 2, Printer NEC 1, Spareparts of Machinery	US\$ 250,000
89/90	Automatic Barancer 4, Splayer 10, Washing Machine 3, Hydraulic Crage Jack 1, Electric Bench Grinder 1, Timing Light 1, Prefab House 2, Grain Moisture Tester 2, CHINO Recorder 1, Censor 5, Agricultural Chemic-als, Sapreparts of Machinery and Vichles and Others	US\$ 529,000
Total		US\$ 1,730,000

IX. PILOT INFRASTRUCTURE (236 Feddans):

For improvements to the five satellite farms, pilot infrastructure work was done in 1988 with the total cost of One Hundred and Thirty Thousand US Dollars (US\$ 130,000) for irrigation and drainage canals, farm roads and other related facilities.

X. ASSISTANCE TO EGYPTIAN LOCAL BUDGET

1. TEXTBOOKS :

Text books were prepared during the period 1989 to 1990 with a total cost of Thirteen Thousand US Dollars (US\$ 13,000); (technical reports), farmer training text books, and other printing in (Arabic).

2. TRAINING :

The total cost which the Japanese Government paid for the implementation of training for the operation and maintenance of agricultural machinery in 1988 and 1989, was Ninety Three Thousand US Dollars (US\$ 93,000) (for extension officers, farmers and others related training).

3. IMPLEMENTATION :

Additionally, for implementation of the Project, the total cost of One Hundred and Twenty-Nine US Dollars (US\$ 129,000) was paid by the Government of Japan.

4. MOREOVER :

The total cost of Thirty Four Thousand US Dollars (US\$ 34,000) will be paid by the Government of Japan until March 1990.

5. OPERATIONAL BUDGET ALLOCATION FROM THE GOVERNMENT OF EGYPT

From the year 1986 to 1990, the total funding was Thirty Five Thousand US Dollars (US\$ 35,000) for the Project.

XI. ASSIGNMENT OF JAPANESE EXPERTS

Eight long-term experts were assigned to the Project in accordance with the field of experts described in the "Record of Discussions". The total assignment period of these experts was two hundred and thirteen man/months (213 m/m) representing 96.8 % of the full assignment of two hundred and twenty man/months (220 m/m)

With respect to short-term experts. Seventee were assigned for a total period of thirty-two man/months (32 m/m). The majority of the long and short-term experts were satisfactorily assigned.

LIST OF JAPANESE EXPERTS

1. LONG TERM EXPERTS

<u>Field of Experts</u>	<u>Name of Expert</u>	<u>Duration of Assignment</u>
(1) Team Leader	Dr.Syuji Ishihara	8. 5.86 - 6. 16.88
	Dr.Toshio Murakami	10. 6.88 - 3. 31.90
(2) Coordinator	Mr.Kimio Miura	5. 7.85 - 3. 31.88
	Mr.Takao Edagawa	5. 4.88 - 5. 3.90
(3) Rice Cultivation	Mr.Hikaru Niki	8. 5.86 - 3. 31.90

(4) Agricultural	Mr.Tomizou Kato	8. 5.86 - 3. 31.90
Machinery	Mr.Iwao Matsumoto	8. 5.86 - 8. 3.88
	Mr.Kyuichi Sakamoto	11.23.88 - 3. 31.90

2. SHORT TERM EXPERTS

(1) Rice Disease	Mr.Osamu Horino	8.16.86 - 9. 28.86
(2) " "	Mr.Osamu Horino	10. 3.87 - 11. 27.87
(3) Water Utilization Plan	Mr.Hosono	2.27.87 - 5. 7.87
(4) Soil Fertility	Mr.Minoru Morooka	3.27.87 - 4. 27.87
(5) Economic Management	Mr.Hidekazu Kawakami	3.27.87 - 6. 26.87
(6) Economic Management	Mr.Maski Umemoto	11.11.89 - 1. 7.90
(7) Agricultural Machinery	Mr.Keichirou Yamashita	5.15.87 - 7. 7.87
(8) Agricultural Machinery	Mr.Keichirou Yamashita	10. 3.87 - 12. 9.87
(9) Direct Seeding	Mr.Toshimichi Watanabe	7. 3.87 - 8. 28.87
(10) "	Dr.Nobutaka Ito	8.20.88 - 9. 13.88
(11) "	Mr.Iwao Matsumoto	5.13.89 - 6. 10.89
(12) "	Dr.Nobutaka Ito	7.19.89 - 9. 5.89
(13) Weed Control	Mr.Hirohiko Morita	1.13.88 - 3. 18.88

(14) Mechanization System	Mr.Hiroshi Simonasako	2.17.88 - 4. 17.88
(15) Extension	Mr.Akira Nakajima	4. 3.88 - 5. 31.88
(16) Land Consolidation	Mr.Keiji Sekio	2.15.89 - 5. 30.89
(17) Land Consolidation	Mr.Yosio Morichika	3.15.89 - 5.28.89

XII TRAINING OF EGYPTIAN PERSONNEL IN JAPAN

Nineteen counterparts were trained either in Japan or in another country. The field of training covered courses on: a) agricultural machinery, b) agricultural extension, c) rice cultivation, and so on. Additionally, three counterparts will be received in Japan for training during the final year of the Project.

LIST OF PARTICIPANTS IN COUNTERPART TRAINING IN JAPAN

Name	Training Objectives	Duration
Mr.Shawky Mohamed	Rice Disease and Insect Pest	86. 6. 2 - 86.12. 9
Mr.M.Kholy	Agricultural Machinery	86. 6. 4 - 86.12.10
Mr.Fituh Mahmoud	Agricultural Extension	86. 7.14 - 86.10.24
Mr.Alaa Attia Eid	Mechanized Rice Cultivation	86. 7.20 - 86.10.30
Mr.Rabeya A.A.Hamada	Weed Control	86. 6.25 - 86. 8.24
Mr.A.Cassab	Rice Cultivation	87. 2. 5 - 87.10. 9
Mr.Abdel Basset	Mechanized Rice Cultivation	87. 2. 5 - 87.12.28
Mr.El Said A.R.	Rice Disease and Insect Pest	87. 6. 1 - 87.12. 8
Mr.Essam El Din	Agricultural Machinery Maintenance	87. 6. 4 - 87.12.19
Mr.Abdel Rahman	Direct Seeding	87. 7.27 - 87.10.23
Mr.l.Zohier	Agricultural Extension	88. 3.29 - 88. 7.19
Mr.Sabri Wahab	Weed Control	88. 3.29 - 88. 7.19
Mr.Refaei Abu Shieshoa	Agricultural Machinery	88. 8.17 - 88.10.17
Mr.Mahmoud Hamad Omar	Agricultural Extension	88. 9. 9 - 88.11.21
Mr.Fathy Ibrahim	Direct Seeding	88. 6.24 - 88.10.13
Mr.M.Kholy	Agricultural Machinery	89. 1.31 - 91. 1.10
	(The third country)	

Mr. Abedl Fadiel	Agricultural Extension	89. 3.10 - 89. 7.23
Mr. Hamed Mursy M.A.Z.	Agricultural Machinery	89. 5. 8 - 89.11.24
Mr. Alaa M. El Shamly	Direct Seeding	89 .8.25 - 89.12. 3

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