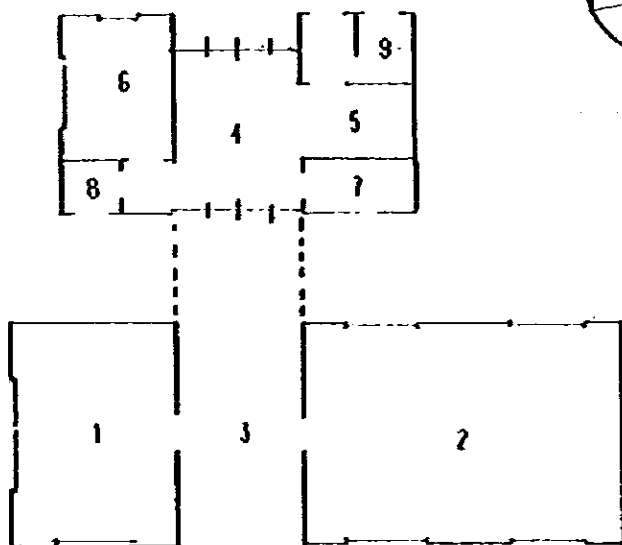
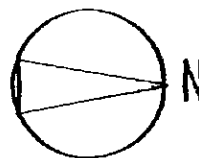
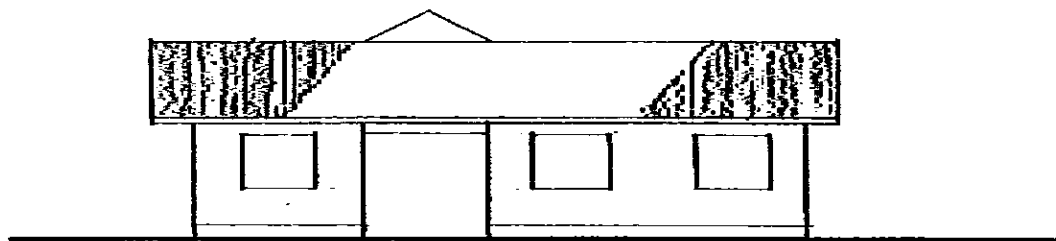
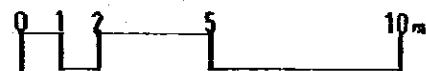


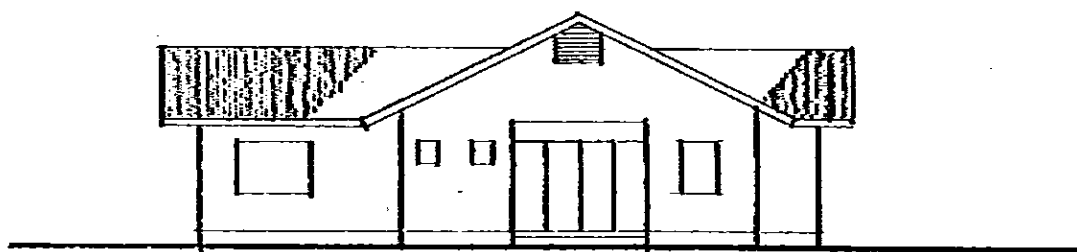
Fig. 37 Floor Plan and General Drawings of Pest Observatory Unit



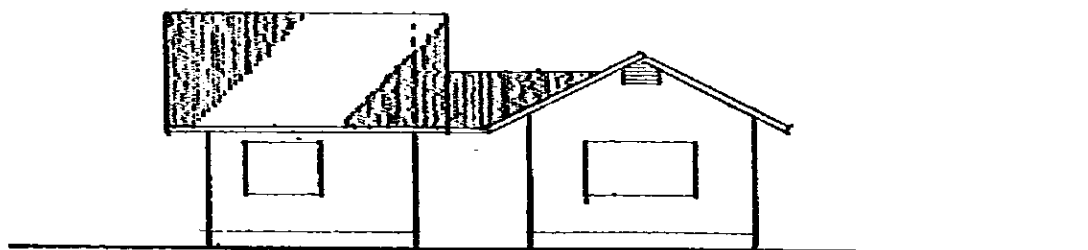
- 1 OFFICE
- 2 PROJECT ROOM
- 3 FREE SPACE
- 4 LIVING ROOM
- 5 KITCHEN
- 6 BED ROOM
- 7 STORAGE
- 8 LAVATORY
- 9 SHOWER ROOM



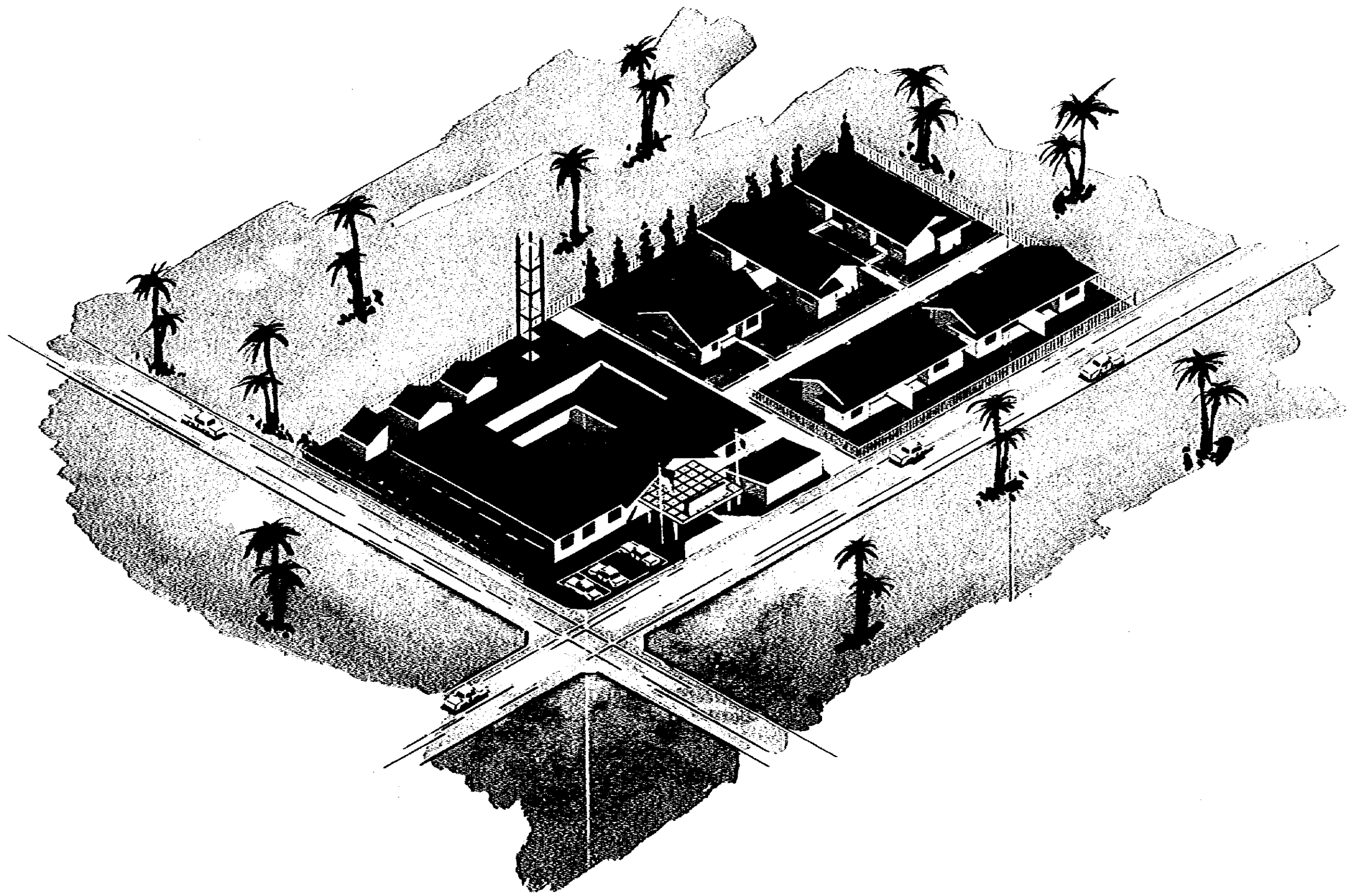
EAST ELV



WEST ELV

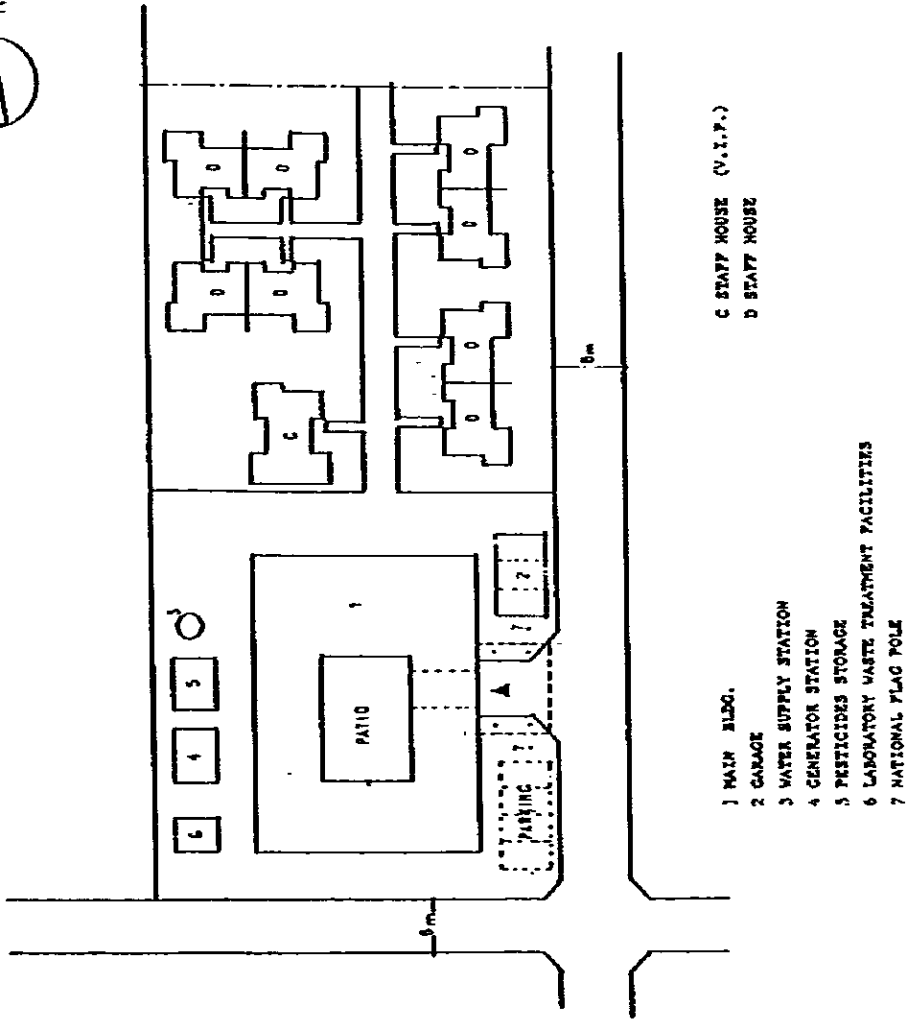


SOUTH ELV



PESTICIDE LABORATORY

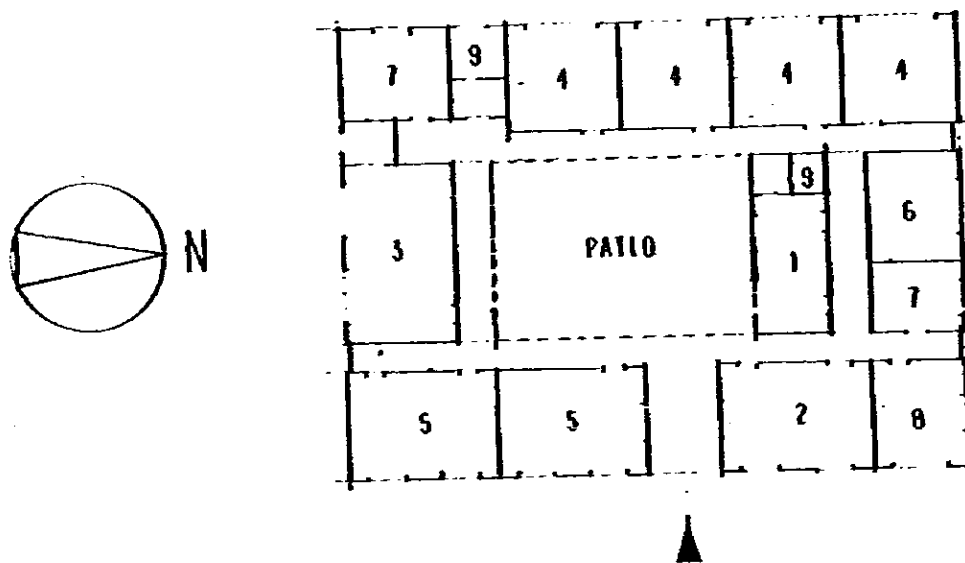
Fig. 39 Block Plan of Pesticide Laboratory



SCALE : 1 / 500

BLOCK PLAN OF PESTICIDE LABORATORY AREA

Fig. 40 Floor Plan of Pesticide Laboratory



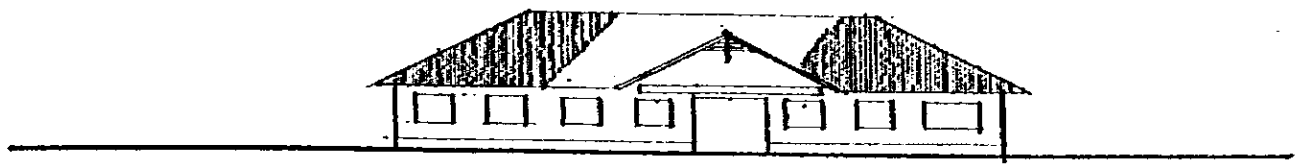
- 1 DIRECTOR
- 2 ADMINISTRATION
- 3 MEETING ROOM
- 4 LABORATORY
- 5 STAFF ROOM
- 6 EXHIBITION ROOM
- 7 STORAGE
- 8 PREPARATION ROOM
- 9 LAVATORY

SCALE : 1 / 400

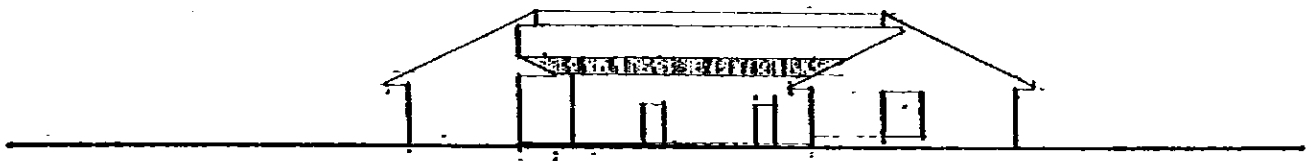


PESTICIDE LABORATORY

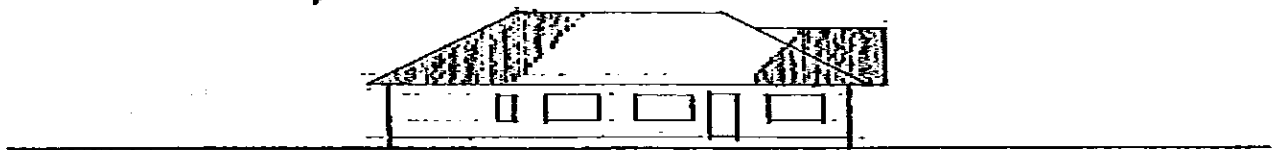
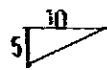
Fig. 41 General Drawings of Pesticide Laboratory



EAST ELEVATION



A - A SECTION



SOUTH ELEVATION



NORTH ELEVATION

PESTICIDE LABORATORY

SCALE : 1 / 400

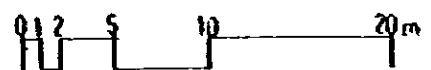
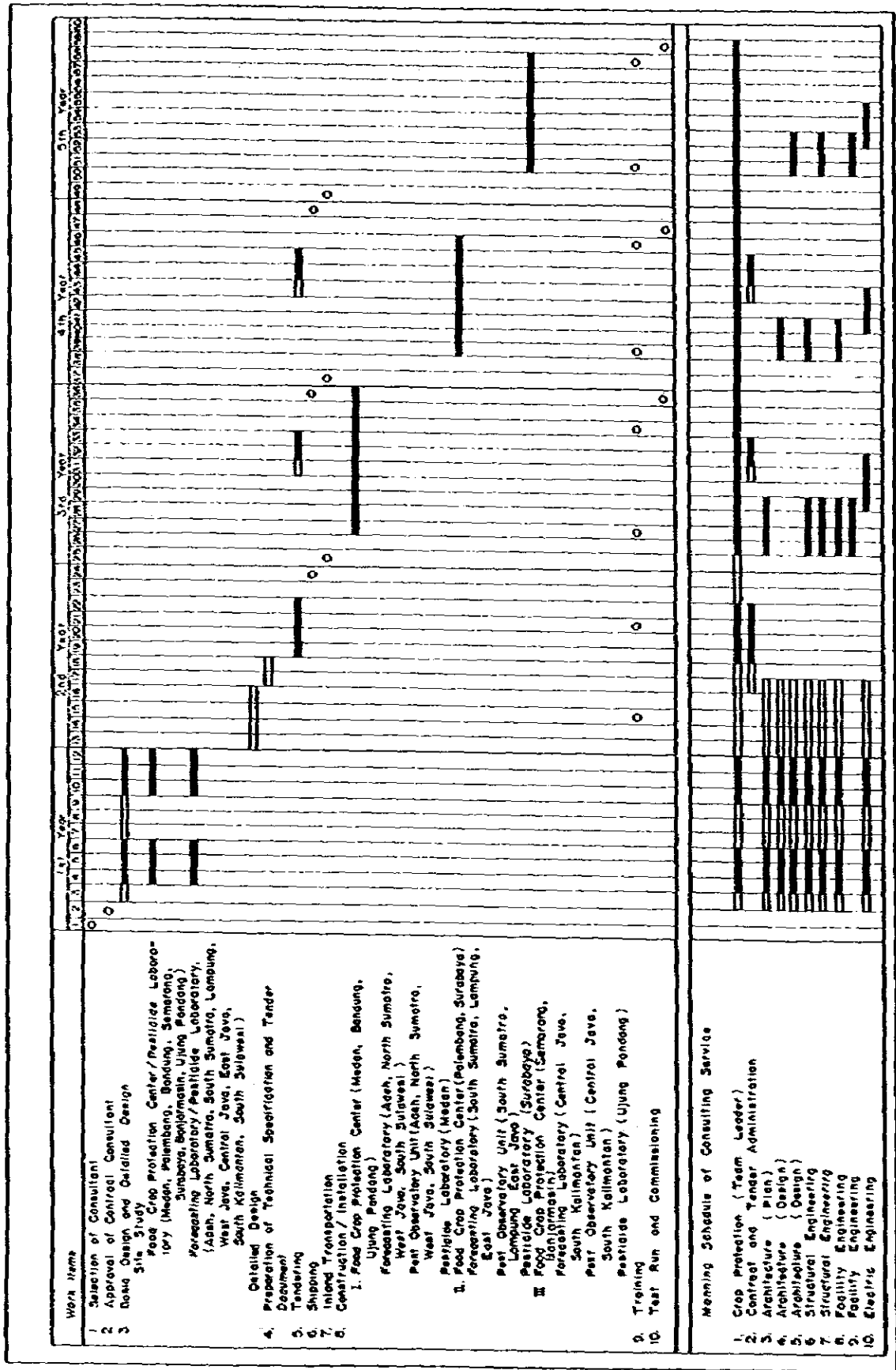


FIG. 42 Proposed Implementation Schedule of Project



Home Office Work Field Work Short Period Execution

Fig. 43 Estimated Hectare-yield Curve of Paddy Rice in Indonesia

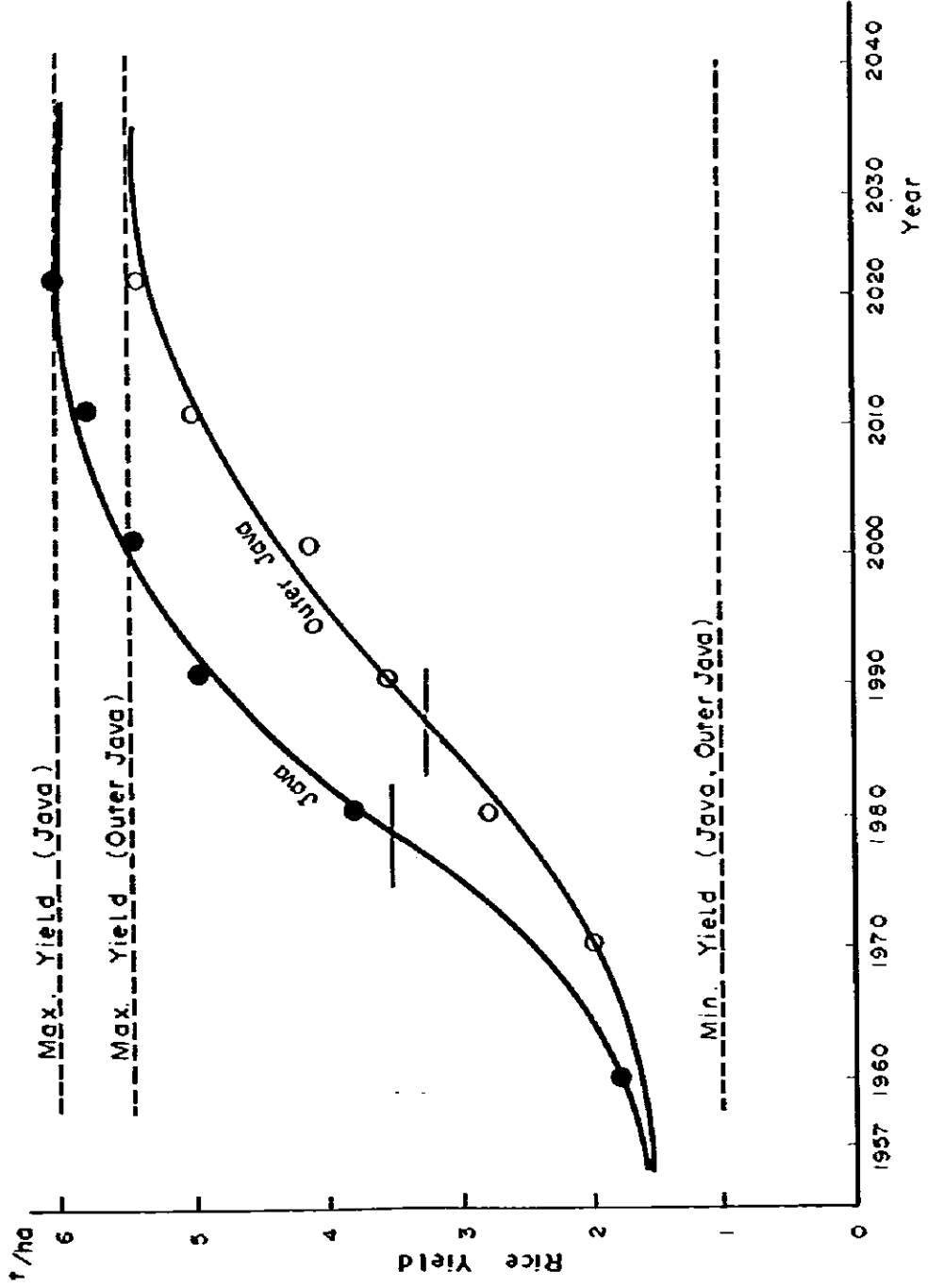


Table 1 Proposed Location of Food Crop Protection Center and Responsible Province

Location	Object Responsible Province	Additional Responsible Province (in Future)
Madan	Aceh, North Sumatra	West Sumatra, Riau
Palembang	South Sumatra, Lampung	Bengkulu, Jambi
Bandung	West Java	Jakarta
Semarang	Central Java	Yogyakarta
Surabaya	East Java	Bali, Nusa Tenggara Timur
Banjarmasin	South Kalimantan	Central, West, East Kalimantan
Ujung Pandang	South Sulawesi	Central, North, Southeast Sulawesi

Table 2 Monthly Mean Temperature at Selected Meteorological Station in 1977-1978

Station	year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Difference
1. Banda Aceh (Blang Bintang)	1977	25.9	25.8	26.4	26.8	27.0	27.4	27.6	27.3	25.5	25.5	25.3	25.3	2.3
	1978	25.9	26.4	26.3	26.7	27.5	27.6	26.5	27.0	26.4	26.0	26.1	25.8	1.8
2. Medan (Polonia)	1977	26.0	25.6	26.2	27.1	27.0	26.7	27.2	26.0	26.5	25.9	25.8	26.0	1.6
	1978	25.9	26.8	26.8	26.8	27.3	26.8	26.1	26.6	26.1	25.8	25.8	25.8	1.5
3. Padang (Yabin)	1977	26.1	25.7	26.6	26.7	26.4	26.3	25.9	25.8	26.0	25.8	25.7	26.1	1.0
	1978	26.1	26.2	26.5	26.5	26.7	26.2	25.8	26.0	25.5	25.8	25.9	26.1	1.2
4. Pakanbaru (Simpang Tiga)	1977	25.1	25.1	26.2	26.6	26.8	26.8	26.3	26.0	26.3	26.2	26.1	26.1	1.7
	1978	25.9	26.6	27.0	27.0	27.2	26.9	26.4	26.6	26.2	26.2	26.0	-	1.3
5. Jambi (Pal Merah)	1977	26.1	25.4	26.0	26.3	26.7	26.3	26.5	26.2	26.3	27.0	26.2	26.1	1.6
	1978	26.1	26.1	26.7	26.5	27.0	26.8	26.2	26.5	26.0	26.5	26.1	25.8	1.2
6. Palembang (Talang Botutu)	1977	26.0	25.5	25.8	26.6	26.7	26.6	26.6	26.2	26.8	27.2	26.6	26.1	1.3
	1978	25.9	26.0	26.6	27.0	27.0	26.9	26.1	26.5	26.1	26.5	26.4	25.8	1.2
7. Bengkulu (Padang Kemiling)	1977	25.8	25.9	26.4	26.8	26.7	26.4	25.9	25.7	25.5	26.6	25.9	26.5	1.3
	1978	25.7	26.0	26.5	26.1	26.8	25.6	25.6	25.8	25.2	25.6	25.8	25.7	1.6
8. Jakarta (O.B.S.)	1977	26.3	26.0	26.7	27.6	28.1	26.9	27.4	27.5	27.6	28.7	28.0	27.1	2.7
	1978	26.6	27.0	27.3	27.6	28.1	27.1	27.1	27.5	27.3	27.3	27.5	26.7	1.4
9. Bandung (H. Sastranegara)	1977	22.2	22.0	22.2	22.9	23.0	21.4	21.8	22.1	22.8	24.5	23.5	23.1	3.1
	1978	22.4	23.0	22.6	22.8	23.2	22.4	22.0	22.5	22.5	23.0	22.8	22.4	0.8
10. Semarang (A. Yani)	1977	26.3	25.5	26.3	27.5	27.9	27.5	26.2	26.4	27.4	28.8	28.4	27.1	3.3
	1978	26.3	26.7	27.2	27.3	28.0	27.1	26.7	27.3	27.3	28.0	27.7	27.1	1.7
11. Surabaya (Perak)	1977	27.2	26.9	26.7	27.9	28.0	27.1	25.8	26.0	27.2	29.1	29.6	27.4	3.6
	1978	26.7	27.2	27.2	27.8	28.0	27.0	26.8	27.3	27.5	28.8	28.5	27.3	2.1
12. Denpasar	1977	27.8	27.3	27.6	27.4	27.1	26.4	25.3	25.1	25.6	27.1	28.0	28.0	2.9
	1978	28.0	27.2	27.8	27.7	27.0	26.6	26.2	26.3	26.4	27.3	27.5	27.5	1.8
13. Ujung Pandang (Hasanuddin)	1977	25.3	25.3	26.1	26.1	26.4	25.5	25.2	25.7	26.8	27.2	27.1	26.1	2.0
	1978	25.9	26.0	26.2	26.4	26.6	26.2	25.7	26.2	26.1	26.5	26.3	25.7	0.8

°C

Table 3 Monthly Mean Maximum Temperature at selected Meteorological Station in 1977-1978

°C

Station	year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Difference
1. Banda Aceh (Blang Bintang)	1977	31.1	31.3	32.2	32.7	33.7	33.5	33.8	34.0	33.2	31.5	31.0	31.2	3.0
	1978	31.5	31.7	32.4	32.9	32.8	33.1	31.6	32.6	31.8	31.1	31.7	30.6	2.5
2. Medan (Polonia)	1977	31.3	31.0	31.6	32.8	-	-	-	-	-	-	-	-	-
	1978	-	-	-	-	32.8	31.9	31.1	31.8	31.0	30.7	30.8	30.4	-
3. Padang (Yabin)	1977	30.5	30.7	31.0	31.2	30.9	30.7	30.6	30.4	30.3	30.2	30.1	-	1.1
	1978	30.4	30.9	30.9	30.9	31.2	31.7	30.3	30.1	30.1	30.3	29.8	30.3	1.8
4. Pekanbaru (Simpang Tiga)	1977	31.4	31.4	32.3	33.0	33.6	33.5	32.5	31.8	33.0	31.9	32.1	32.4	2.2
	1978	32.2	32.6	33.4	33.4	33.6	33.0	32.4	32.8	32.8	32.8	32.0	-	1.6
5. Jambi (Pal Merah)	1977	31.3	30.5	31.5	32.3	32.2	32.9	32.1	32.1	31.9	32.9	31.5	31.2	2.4
	1978	31.0	31.1	32.2	32.5	32.4	32.1	32.0	32.7	32.2	32.3	31.0	30.1	1.7
6. Palembang (Talang Betutu)	1977	30.5	30.0	30.4	31.5	31.9	31.6	31.9	32.1	32.3	33.3	31.7	30.6	3.3
	1978	30.1	30.8	31.6	32.0	31.8	31.9	30.6	31.8	31.1	31.7	31.1	30.1	1.9
7. Bengkulu (Padang Kemiling)	1977	32.2	32.7	33.5	34.7	34.6	33.9	33.3	33.1	32.6	33.3	32.6	32.8	1.7
	1978	31.8	33.0	32.8	31.4	31.7	30.6	30.4	30.9	30.2	30.4	30.6	30.6	2.8
8. Jakarta (O.B.S.)	1977	30.5	29.7	30.6	32.5	33.1	31.6	32.6	32.9	32.8	34.4	32.6	30.7	4.7
	1978	30.9	31.5	32.0	33.0	33.0	31.8	32.1	32.5	32.4	32.4	32.7	30.7	2.3
9. Bandung (H. Sastranegara)	1977	27.6	27.3	27.6	29.1	29.3	28.4	28.9	29.3	29.8	31.2	29.9	28.7	2.6
	1978	27.5	28.4	28.2	28.8	28.8	27.6	27.7	28.4	28.0	28.7	28.7	28.0	1.3
10. Semarang (A. Yani)	1977	29.8	29.6	29.5	31.8	32.0	31.9	33.0	33.4	33.8	35.4	33.2	30.7	5.9
	1978	30.1	30.3	31.4	32.0	32.7	31.9	32.2	33.3	32.6	33.3	31.7	30.9	3.2
11. Surabaya (Perak)	1977	31.5	30.9	30.7	31.8	32.2	31.0	30.9	31.3	32.5	34.7	34.6	31.9	4.0
	1978	30.7	30.7	30.7	-	-	-	-	31.5	32.3	33.4	33.0	31.1	2.7
12. Denpasar	1977	30.9	30.3	30.7	30.6	30.0	29.2	27.8	27.8	28.4	30.2	31.3	31.0	3.5
	1978	30.9	30.9	31.0	30.9	31.6	29.3	29.1	29.3	29.0	30.1	30.7	30.7	2.6
13. Ujung Pandang (Ihasuddin)	1977	28.7	28.7	30.5	38.8	31.3	30.9	31.7	32.1	33.5	33.9	32.9	30.2	10.1
	1978	30.0	29.5	30.6	31.2	31.2	31.2	30.5	31.6	31.7	32.3	31.4	29.6	28

Table 4 Monthly Mean Minimum Temperature at Selected Meteorological Station in 1977-1978

°C

Station	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Difference
1. Banda Aceh (Blang Bintang)	1977	21.4	20.5	21.2	21.6	22.1	21.7	22.4	-	-	-	-	-	-
	1978	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Medan (Polonia)	1977	-	21.7	22.2	22.7	22.3	22.4	22.2	22.0	22.4	22.4	22.4	22.2	1.0
	1978	21.5	22.1	22.5	22.4	23.0	22.4	21.8	22.1	22.0	21.9	22.0	21.9	1.5
3. Padang (Yabin)	1977	22.9	22.1	22.9	23.3	22.8	23.3	22.1	21.8	22.7	22.4	22.8	22.7	1.5
	1978	22.4	22.7	22.9	23.1	22.3	22.0	22.0	22.5	21.9	22.2	22.2	22.3	1.1
4. Pekanbaru (Simpang Tiga)	1977	21.5	21.0	21.9	22.3	22.2	21.6	21.3	22.1	21.1	21.9	22.2	21.9	1.3
	1978	21.6	21.9	22.2	22.3	22.6	21.9	21.8	21.9	21.5	21.5	22.3	-	1.1
5. Jambi (Pal Merah)	1977	22.4	22.1	22.4	22.7	23.4	22.6	22.7	21.8	22.2	22.9	22.7	23.0	1.6
	1978	23.1	23.0	23.2	23.0	23.0	22.9	22.5	22.7	22.2	22.7	22.8	23.1	1.0
6. Palembang (Talang Betutu)	1977	23.1	22.5	23.1	23.7	23.4	22.9	22.6	22.0	22.4	22.4	23.2	23.1	1.7
	1978	22.8	23.0	23.3	23.5	23.9	23.0	22.5	22.8	22.5	23.0	23.0	23.0	1.1
7. Bengkulu (Padang Kemiling)	1977	21.9	21.7	22.2	22.5	22.0	22.0	21.4	21.3	20.9	22.7	22.4	22.4	1.4
	1978	21.9	22.4	22.7	22.5	23.1	22.1	22.0	22.2	21.9	22.2	22.3	22.2	1.2
8. Jakarta (O.B.S.)	1977	23.6	23.6	24.0	24.4	24.4	23.7	23.1	23.2	23.2	24.2	24.2	23.7	1.2
	1978	23.9	24.2	24.0	24.2	24.5	23.9	23.5	23.6	23.5	23.6	23.6	24.0	1.0
9. Bandung (H. Sastranegara)	1977	18.4	18.7	18.7	18.8	17.7	17.8	15.0	15.4	16.4	17.3	18.2	18.6	3.7
	1978	18.7	18.0	18.6	17.5	18.9	18.5	17.4	17.4	17.3	17.8	17.6	18.6	1.6
10. Semarang (A. Yani)	1977	23.3	23.3	23.5	23.9	24.0	24.0	21.2	21.3	22.3	23.5	24.0	23.8	2.8
	1978	23.7	23.9	24.2	24.5	24.8	23.5	22.6	22.9	23.0	23.6	23.6	-	1.5
11. Surabaya (Parak)	1977	24.3	23.8	23.9	24.3	24.0	23.6	21.2	21.2	22.7	23.9	25.2	24.3	4.0
	1978	24.0	24.3	24.7	24.7	24.8	24.2	23.2	23.3	23.5	24.4	24.7	24.3	1.5
12. Denpasar	1977	24.5	24.1	24.4	24.1	23.9	23.8	23.1	22.2	22.9	23.5	24.1	24.6	2.4
	1978	25.2	24.4	24.6	24.4	24.7	24.0	23.7	23.6	23.6	23.8	24.2	24.3	1.6
13. Ujung Pandang (Hasanuddin)	1977	22.7	22.8	23.0	22.1	23.0	21.8	20.2	20.6	21.0	20.4	22.6	23.4	3.0
	1978	23.6	23.5	23.3	23.0	23.4	22.9	22.3	22.0	22.2	22.0	22.6	23.3	1.6

Table 5 Monthly Precipitation at Selected Meteorological Station in 1978-1979

Station	year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total (mm)
1. Banda Aceh (Blang Bintang)	1978	90	91	30	207	103	51	64	122	167	52	338	105	1,420
	1979	117	118	165	50	162	89	190	21	171	177	143	257	1,640
2. Medan (Polonia)	1978	116	84	27	346	119	110	220	145	132	318	402	21	2,040
	1979	117	19	108	186	123	82	222	201	288	458	222	219	2,241
3. Padang (Yabin)	1978	240	329	237	525	280	307	372	224	516	416	696	190	4,332
	1979	493	341	312	207	328	387	487	304	108	684	247	145	4,173
4. Pekanbaru (Simpang Tiga)	1978	122	148	117	241	45	208	125	84	198	190	616	196	2,288
	1979	195	192	374	332	110	205	175	139	132	-	447	-	-
5. Jambi (Pal Merah)	1978	210	307	148	302	140	230	129	134	207	368	317	218	2,710
	1979	200	154	172	256	221	98	82	79	168	272	245	285	2,292
6. Palembang (Talang Betutu)	1978	247	137	214	279	107	127	90	109	129	249	427	438	2,583
	1979	361	228	293	310	223	145	204	157	148	345	280	263	2,957
7. Bengkulu (Padang Kemiling)	1978	286	593	198	281	371	150	303	148	317	351	646	339	3,973
	1979	648	243	435	250	158	254	282	223	297	428	337	590	4,143
8. Tanjung Karang (Branti)	1978	342	451	155	267	130	-	-	62	163	95	60	258	-
	1979	92	248	461	81	134	126	153	192	108	152	107	258	2,112
9. Jakarta (O.B.S.)	1978	728	227	229	112	137	39	78	37	73	129	185	321	2,275
	1979	212	282	274	68	137	167	114	79	130	128	183	264	2,018
10. Bandung (H. Sastranegara)	1978	187	155	190	384	135	37	5	98	171	223	381	-	-
	1979	231	114	364	184	285	200	100	98	185	185	299	381	2,574
11. Semarang (A. Yani)	1978	908	104	188	275	282	55	44	75	147	79	221	119	2,545
	1979	536	248	380	138	232	139	70	169	218	223	338	290	3,007
12. Yogyakarta	1978	260	102	247	143	247	67	85	1	34	36	70	403	1,695
	1979	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Surabaya (Perak)	1978	360	234	311	267	161	10	8	-	18	30	73	273	-
	1979	719	490	138	134	109	10	25	50	45	43	86	344	2,202
Average		327	225	230	234	177	137	151	125	174	235	295	269	2,630

Table 6 Monthly Mean Relative Humidity at Selected Meteorological Station in 1977-1978

2

Station	year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Difference
1. Banda Aceh (Blang Bintang)	1977	81	80	79	82	80	76	71	72	71	88	88	87	17
	1978	81	81	82	82	78	72	75	69	69	76	83	82	84
2. Medan (Polonia)	1977	80	82	80	79	78	78	74	82	81	85	84	83	11
	1978	81	77	79	79	81	80	82	80	82	84	83	83	7
3. Padang (Yabin)	1977	83	80	82	84	83	80	81	81	82	86	85	85	6
	1978	82	82	84	82	82	80	81	81	81	83	84	84	4
4. Pekanbaru (Simpang Tiga)	1977	85	86	83	85	84	82	83	84	84	85	86	85	4
	1978	85	84	85	84	84	80	83	81	82	81	85	-	5
5. Jambi (Pai Merah)	1977	82	85	84	86	83	83	81	79	82	79	84	85	7
	1978	84	85	84	84	84	82	84	81	83	82	84	85	4
6. Palembang (Talang Botutu)	1977	87	87	89	88	87	85	82	79	77	75	84	87	14
	1978	87	87	86	85	86	82	85	83	83	85	85	87	5
7. Bengkulu (Padang Kemiling)	1977	87	84	84	86	83	84	88	88	88	87	88	85	5
	1978	87	84	86	86	85	85	85	84	86	86	85	87	3
8. Jakarta (O.B.S.)	1977	83	85	83	80	76	81	70	68	69	66	72	78	19
	1978	79	79	78	74	76	77	74	72	72	73	73	80	8
9. Bandung (H. Sastranegara)	1977	85	80	80	82	81	84	73	69	68	62	76	81	24
	1978	83	82	86	81	83	83	80	76	78	79	79	85	10
10. Semarang (A. Yani)	1977	82	84	84	78	75	74	68	66	65	63	72	80	21
	1978	83	83	81	76	78	78	76	72	75	73	75	81	11
11. Surabaya (Perak)	1977	80	81	86	79	76	77	69	66	63	58	63	79	23
	1978	84	82	83	78	79	81	74	71	70	66	70	81	18
12. Denpasar	1977	76	77	77	77	77	74	71	71	73	73	73	73	6
	1978	75	75	77	75	79	81	76	76	77	77	77	78	6
13. Ujung Pandang (Hasanuddin)	1977	87	88	89	83	81	79	72	70	62	61	75	85	27
	1978	85	85	84	81	84	81	81	77	78	76	81	87	11

Table 7 Monthly Mean Duration of Sunshine at Selected Meteorological Station in 1977-1978

Station	Year	Hour													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		
1. Banda Aceh (Blang Bintang)	1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Medan (Polonia)	1977	39	42	52	55	48	52	55	48	50	30	36	47	45	45
	1978	52	61	43	49	50	48	42	45	38	39	45	45	45	45
3. Padang (Yabin)	1977	57	44	66	55	68	64	61	58	42	40	44	62	45	42
	1978	40	58	53	57	49	51	56	54	42	52	45	42	45	42
4. Pekanbaru (Simpang Tiga)	1977	42	46	48	55	70	75	65	48	42	54	40	48	40	48
	1978	47	45	48	58	55	56	60	48	51	44	57	-	-	-
5. Jambi (Pal Merah)	1977	41	46	45	51	66	60	76	62	55	63	43	50	43	50
	1978	-	59	48	56	49	53	48	60	41	52	44	38	44	38
6. Palembang (Talang Betutu)	1977	48	43	43	62	73	68	71	68	71	68	57	50	57	50
	1978	45	50	54	66	52	68	50	54	50	56	50	48	50	48
7. Bengkulu (Padang Kemiling)	1977	65	58	68	74	80	74	69	78	64	76	54	61	54	61
	1978	58	67	61	62	69	66	62	61	64	56	60	51	60	51
8. Jakarta (O.B.S.)	1977	33	22	43	63	76	61	91	84	80	87	62	40	62	40
	1978	41	47	40	70	66	40	59	68	58	60	59	27	60	59
9. Bandung (H. Sastranegara)	1977	45	34	43	54	59	53	69	81	71	65	50	57	50	57
	1978	45	65	44	63	61	49	55	70	52	59	51	42	51	42
10. Semarang (A. Yani)	1977	24	20	56	46	56	-	-	40	75	59	53	-	-	-
	1978	-	-	-	-	-	-	-	-	-	-	-	55	-	55
11. Surabaya (Perak)	1977	58	41	62	84	90	77	99	97	96	100	91	59	91	59
	1978	49	65	49	79	63	57	75	84	80	75	68	49	75	68
12. Denpasar	1977	59	44	75	91	94	87	86	87	84	83	84	67	84	67
	1978	61	66	73	86	74	67	73	86	70	84	74	61	84	61
13. Ujung Pandang (Hasanuddin)	1977	-	-	60	81	84	67	95	94	98	99	84	59	84	59
	1978	48	52	63	81	70	75	70	85	79	88	71	46	88	71

Table 8 Rice Insect Pests in Indonesia

<u>Species</u>	<u>Common Name</u>	<u>Local Name</u>
<u>Agromyza oryzae</u> Munakata	Rice leaf miner	Penggerek daun
<u>Atherigonia oryzae</u> Mall.	Rice seedling fly	Lalat bibit padi
<u>A. exigua</u> Stein	"	"
<u>Baliothrips biformis</u> Bagn.	Rice thrips	Trips padi
<u>Chilo polychrysus</u> (Meyr.)	Dark-headed rice borer	Penggerek padi kepala hitam
<u>C. suppressalis</u> Wek.	Striped rice borer	Penggerek batang, Penggerek padi bergaris
<u>Cnaphalocrosis medinalis</u> Guen.	Rice leaf holder	Hama putih palsu, Hama penggulung daun
<u>Dieladisa armigera</u> (Ol.)	Rice hispa	Hispa padi
<u>Crylotalpa africana</u> Pal.	African mole cricket	Orong-orong
<u>Hydrellia philippina</u> Ferino	Rice whorl maggot	Hama lalat daun padi, Lalat daun, Ulat pemakan tepi daun
<u>Lagynotomus elongatus</u> Dall.	Rice stink bug	Kepik padi
<u>Leptocoris oratorius</u> F.	Rice bug	Walang sangit
<u>L. acutus</u> Thumb.	"	"
<u>L. chinensis</u> Dall.	"	"
<u>Mythimna separata</u> Wlk.	Paddy army worm	Ulat tanah, Ulat tentara, Ulat tentara-kuning
<u>M. loreyi</u> Dup.	Leaf-eating caterpillar	"
<u>Naranga aenescens</u> Moore	Rice green caterpillar	Ulat padi hidjau
<u>Nephotettix nigropictus</u> Stål.	Green rice leafhopper	Wereng padi hidjau, Wereng daun
<u>N. virescens</u> Dist.	"	"
<u>Nezara viridula</u> L.	Southern green stink bug	Kepik padi hidjau, Kepik idjo
<u>Nilaparvata lugens</u> Stål.	Brown plant hopper	Hama wereng, Wereng padi coklat
<u>Nymphula depunctalis</u> Guen.	Rice case worm	Hama putih
<u>Orseolia oryzae</u> Wood-Mason	Rice gall midge	Hama ganjur
<u>Recilia dorsalis</u> Motsch.	Zig zag winged leafhopper	Wereng padi biku-biku
<u>Rhopalosiphum rufiabdominalis</u> (Sasaki)	Red rice root aphid	Kutu akar
<u>Scotinophara cinerea</u> LeG.	Rice black bug	Kepinding tanah, Kepinding air
<u>Sesamia inferens</u> Wlk.	Pink borer	Penggerek batang padi merah jambu, Penggerek merah jambu
<u>Sogatella furcifera</u> Horv.	White backed plant hopper	Wereng punggung putih, Wereng padi berpunggung putih
<u>Spodoptera maurita</u> Boisd.	Paddy swarming caterpillar	Ulat grayak, Ulat tanah, Ulat tentara kelabu, Ulat tentara-hitam
<u>S. exempta</u> Wlk.	African army worm	"
<u>S. litura</u> F.	Tobacco cutworm	Ulat tentara hidjau, Ulat coklat kilan
<u>Susumia exigua</u> (Butt.)	Rice leaf roller	Penggulung daun padi
<u>Tryporyza incertulas</u> Wlk.	Yellow rice borer	Penggerek padi kuning, Penggerek batang, Penggerek Kuning, Penggerek batang kuning
<u>T. innotata</u> Wlk.	White rice borer	Penggerek batang, Penggerek padi putih, Penggerek batang putih
<u>Valanga</u> sp.	Small rice grass hopper	Belalang padi

Table 9 Rice Diseases in Indonesia

<u>Species</u>	<u>Common Name</u>	<u>Local Name</u>
<u>Cylindrocladium scoparium</u> Morgan	Sheath net-blotch	
<u>Gibberella moniliforme</u> (Sheld.) Wintel.	Bakanae disease	Penyakit Bakanae
<u>Helminthosporium oryzae</u> Breda de Haan	Brown leaf spot	Penyakit becak coklat daun, Helminthosporium
<u>H. sigmoideum</u> Cav. var. <u>irregulare</u> Cralley et Tullis	Stem rot	Penyakit busuk batang
<u>Leptosphaeria salvinii</u> Catt.	"	"
<u>Pyricularia oryzae</u> Cav.	Blast	Penyakit blast, Pyricularia, Penyakit gelang buku, Penyakit tergantung gejalanya
	Leaf blast	Penyakit pada daun, Penyakit busuk daun
	Neck blast	Penyakit busuk leher
<u>Rhynchosporium oryzae</u> Hashioka et Yokogi	Leaf scald	Penyakit becak daun Fusarium
<u>Sphaerulina oryzina</u> Hara	Narrow brown leaf spot	Noda daun Cercospora, Penyakit becak bergaris daun, Penyakit becak daun Cercospora, Penyakit coklat daun
<u>Thanatephorus cucumeris</u> (Frank) Donk	Sheath blight	Penyakit busuk pelipah daun, Penyakit kudis, Penyakit Kudis batang, Penyakit busuk upih
<u>Ustilagoidea virescens</u> (Cke.) Tak.	False smut	Penyakit noda palsu
<u>Xanthomonas oryzae</u> (Uyeda et Ishiyama) Dowson	Bacterial leaf blight	Penyakit busuk bakteri daun, Keresek
<u>X. translucens</u> f. sp. <u>oryzicola</u> (Fang et al.) Braobury	Bacterial leaf streak	Penyakit bakteri daun bergaris

Table 10 Rice Virus Diseases and their Vectors in Indonesia

<u>Common Name</u>	<u>Vector</u>	<u>Local Name of Disease</u>
Grassy stunt	<u>Nilaparvata lugens</u>	Penyakit kerdil rumput
Orange leaf	<u>Pecilia dorsalis</u>	Down orange
Ragged stunt	<u>Nilaparvata lugens</u>	Penyakit kerdil hampa
Tungro	<u>Nephotettix virescens</u> <u>N. nigropictus</u>	Tungro, Mentek, Penyakit habang
Yellow dwarf	<u>Nephotettix virescens</u>	Penyakit kerdil kuning

Table 11 Rice Pest Damaged Areas in 1000 ha by Selected Province in 1978

Pest Species Provinces	Stem borers	Gall midge	Brown plant hopper	Rice bug	Armyworms Cutworms and holders	Rice thrips	Rice hispas	Grass hoppers	Green rice leafhoppers	Rice black bugs
Aceh	2,605	121	28,831	3,861	963	0	15	0	129	1,904
North Sumatra	7,688	25	4,761	4,653	164	0	2	0	163	4,153
Riau	3,658	9	478	3,661	312	0	0	0	0	1,800
West Sumatra	2,990	70	1,713	3,834	28	0	4	0	15	626
Jambi	2,069	0	6,360	10,907	0	0	559	0	1,118	687
Bengkulu	0	0	0	872	0	0	0	0	0	0
South Sumatra	1,981	706	10,201	5,105	27	14	2	0	1,745	1,844
Lampung	10,865	1,232	4,577	8,467	7,181	32	125	0	11	1,326
Jakarta	116	16	0	61	0	0	0	0	4	27
West Java	110,345	31,919	55,473	81,407	15,948	279	123	1,221	1,877	33,304
Central Java	91,769	20,805	73,175	70,290	16,544	39	0	317	1,593	8,352
Yogyakarta	3,033	680	15,841	4,194	737	7	0	75	82	968
East Java	28,961	8,244	47,235	14,243	9,191	11	0	0	437	579
Bali	2,300	68	10,961	439	426	168	0	0	0	133
West Nusa Tenggara	14,227	353	14,920	2,106	307	53	0	56	17	52
East Nusa Tenggara	386	1	94	248	27	0	0	0	47	0
East Timor	-	-	-	-	-	-	-	-	-	-
Maluku	135	0	50	0	23	0	0	0	0	0
Irian Jaya	-	-	-	-	-	-	-	-	-	-
East Kalimantan	1,370	0	158	489	469	12	1	0	11	0
West Kalimantan	3,675	0	2,374	881	54	0	0	0	0	185
Central Kalimantan	619	36	1,593	868	5	0	0	-	0	0
South Kalimantan	4,302	0	4,580	4,126	34	0	0	0	0	0
North Sulawesi	1,502	0	2,941	4,641	157	12	0	0	0	10
Central Sulawesi	437	4	234	152	162	0	0	0	2	0
South Sulawesi	10,736	95	31,133	6,401	3,210	0	0	0	0	0
Southeast Sulawesi	2,972	125	1,400	2,096	463	0	35	0	0	45
Total Area	314,748	64,509	319,083	234,062	56,632	627	866	1,669	7,251	56,031
Relative Abundance	26.4%	5.4%	26.8%	19.6%	4.7%	0.1%	0.1%	0.2%	0.6%	4.7%

Table 12 Rice Pest Damaged Areas in 1000 ha by Selected Province in 1980

Pest Species Provinces	Stem borers	Gall midge	Brown plant hopper	Rice bug	Armyworms Cutworms and holders	Rice thrips	Rice hispas	Grass hoppers	Green rice leafhoppers	Rice black bugs
Aceh	7,226	0	8,056	2,408	3,521	0	0	0	117	314
North Sumatra	4,406	0	8,589	5,557	639	0	0	0	82	4,230
Riau	1,538	3	188	1,691	102	1	0	0	6	713
West Sumatra	1,476	0	5,452	2,262	128	10	0	0	0	726
Jambi	2,046	0	897	1,063	304	0	0	0	78	578
Bengkulu	83	487	382	272	208	0	0	0	0	260
South Sumatra	1,358	0	1,923	169	113	0	0	0	5	108
Lampung	9,793	501	5,069	4,511	1,142	0	0	0	0	257
Jakarta	45	13	6	96	54	0	0	0	0	0
West Java	57,778	15,640	26,794	24,658	17,219	410	0	1,994	1,424	2,319
Central Java	74,697	11,111	3,527	38,313	16,846	209	0	0	963	1,293
Yogyakarta	6,345	191	1,312	2,184	897	0	0	0	4	63
East Java	7,231	788	1,101	25,746	5,503	31	1	0	386	119
Bali	4,196	133	503	1,508	641	245	0	0	0	5
West Nusa Tenggara	6,319	7,443	2,697	3,885	1,461	552	0	0	16	0
East Nusa Tenggara	75	0	329	322	0	0	0	0	0	0
East Timor	-	-	-	-	-	-	-	-	-	-
Maluku	66	0	0	0	0	0	0	0	0	0
Irian Jaya	-	-	-	-	-	-	-	-	-	-
East Kalimantan	330	30	6	271	9	0	0	0	26	3
West Kalimantan	-	-	-	-	-	-	0	0	10	0
Central Kalimantan	-	-	-	-	-	-	12	0	0	0
South Kalimantan	2,788	240	6,148	1,435	80	0	0	0	0	0
North Sulawesi	970	5	19	2,206	326	0	0	0	0	0
Central Sulawesi	-	-	-	-	-	-	-	-	-	-
South Sulawesi	29,441	6	5,943	0,376	7,653	51	0	0	0	0
Southeast Sulawesi	6,538	0	177	760	359	0	0	0	0	0
Total Area	224,745	36,571	79,118	125,693	57,203	1,509	13	1,994	3,117	10,988
Relative Abundance	33.5%	5.5%	11.8%	18.7%	8.5%	0.2%	0.0%	0.3%	0.5%	1.6%

Table 13 Rice Pest Damaged Areas in 1000 ha by Project Related Province in 1978

Pest Species Provinces	Stem borers	Gall midge	Brown plant hopper	Rice bug	Armyworms Cutworms	Leaf rollers and holders	Rice thrips	Grass hoppers	Green rice leafhoppers	Rice black bugs	Total
Aceh*	2,605 (6.4%)	121 (0.3%)	28,831 (70.3%)	3,861 (9.4%)	963 (2.4%)	2,582 (6.3%)	0 (0.0%)	0 (0.0%)	129 (0.3%)	1,904 (4.6%)	40,996 (100.0%)
North Sumatra	7,688 (27.7%)	25 (0.1%)	4,761 (17.2%)	4,653 (16.8%)	164 (0.6%)	6,125 (22.0%)	0 (0.0%)	0 (0.0%)	163 (0.6%)	4,153 (15.0%)	27,732 (100.0%)
West Sumatra**	2,990 (21.2%)	70 (0.5%)	1,713 (12.2%)	3,834 (27.2%)	28 (0.2%)	4,820 (34.2%)	0 (0.0%)	0 (0.0%)	15 (0.1%)	626 (4.4%)	14,096 (100.0%)
South Sumatra**	1,981 (8.4%)	706 (3.0%)	10,201 (43.4%)	5,103 (21.7%)	27 (0.1%)	1,867 (8.0%)	14 (0.1%)	0 (0.0%)	1,745 (7.4%)	1,844 (7.9%)	23,490 (100.0%)
Lampung*	10,865 (27.2%)	1,232 (3.1%)	4,577 (11.4%)	8,467 (21.2%)	7,181 (18.0%)	6,273 (15.7%)	32 (0.1%)	0 (0.0%)	11 (0.0%)	1,326 (3.3%)	39,564 (100.0%)
West Java	110,345 (30.1%)	31,919 (8.7%)	55,473 (15.2%)	81,407 (22.2%)	15,948 (4.4%)	34,500 (9.4%)	279 (0.1%)	1,221 (0.3%)	1,877 (0.5%)	33,304 (9.1%)	366,273 (100.0%)
Central Java**	81,769 (28.9%)	20,805 (6.6%)	73,175 (23.1%)	70,290 (22.1%)	16,544 (5.2%)	34,631 (10.9%)	39 (0.0%)	317 (0.1%)	1,593 (0.5%)	8,352 (2.6%)	317,515 (100.0%)
East Java	28,961 (25.6%)	8,244 (7.3%)	47,235 (41.7%)	14,243 (12.6%)	9,191 (8.1%)	4,339 (3.8%)	11 (0.0%)	0 (0.0%)	437 (0.4%)	579 (0.5%)	113,240 (100.0%)
Ball**	2,300 (13.2%)	68 (0.4%)	10,961 (62.8%)	439 (2.5%)	426 (2.4%)	2,961 (17.0%)	168 (0.9%)	0 (0.0%)	0 (0.0%)	133 (0.8%)	117,456 (100.0%)
South Kalimantan	4,302 (28.1%)	0 (0.0%)	4,590 (29.9%)	4,126 (26.9%)	34 (0.2%)	2,285 (14.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	15,327 (100.0%)
South Sulawesi	16,736 (23.5%)	95 (0.1%)	31,133 (43.6%)	6,461 (9.1%)	3,210 (4.5%)	13,654 (19.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	71,289 (100.0%)
Total Average	181,542	63,285	272,640	202,886	53,716	114,037	543	1,538	5,970	52,221	948,378
Relative Abundance	(19.1%)	(6.7%)	(28.8%)	(21.4%)	(5.7%)	(12.0%)	(0.0%)	(0.2%)	(0.6%)	(5.5%)	(100.0%)

Notes: * Provinces not projected but included in present field studies

** Provinces projected but excluded from present field studies

Table 14 Rice Pest Damaged Areas in 1000 ha by Project Related Province in 1980

Pest Species Provinces	Stem borers	Gall midge	Brown plant hopper	Rice bug	Armyworms Cutworms	Leaf rollers and holders	Rice thrips	Grass hoppers	Green rice leafhoppers	Rice black bugs	Total
Aceh*	7,226 (25.9%)	0 (0.0%)	8,056 (28.9%)	2,408 (8.7%)	3,521 (12.6%)	6,245 (22.4%)	0 (0.0%)	0 (0.0%)	117 (0.4%)	314 (1.1%)	27,887 (100.0%)
North Sumatra	4,406 (15.2%)	0 (0.0%)	8,589 (29.6%)	5,557 (19.1%)	639 (2.2%)	5,529 (19.0%)	0 (0.0%)	0 (0.0%)	82 (0.3%)	4,230 (14.6%)	29,032 (100.0%)
West Sumatra**	1,476 (10.9%)	0 (0.0%)	5,452 (40.5%)	2,262 (16.8%)	128 (1.0%)	3,400 (25.3%)	10 (0.1%)	0 (0.0%)	0 (0.0%)	726 (5.4%)	13,454 (100.0%)
South Sumatra**	1,358 (33.0%)	0 (0.0%)	1,923 (46.8%)	169 (4.1%)	113 (2.8%)	437 (10.6%)	0 (0.0%)	0 (0.0%)	5 (0.1%)	108 (2.6%)	4,113 (100.0%)
Lampung*	9,793 (25.6%)	501 (1.3%)	5,069 (13.2%)	4,511 (11.8%)	1,142 (3.0%)	16,976 (44.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	257 (0.7%)	38,249 (100.0%)
West Java	57,778 (33.7%)	15,640 (9.1%)	26,794 (15.6%)	24,658 (14.4%)	17,219 (10.1%)	23,145 (13.5%)	410 (0.2%)	1,994 (1.2%)	1,424 (0.8%)	2,319 (1.4%)	171,381 (100.0%)
Central Java**	74,697 (42.7%)	11,111 (6.4%)	3,527 (2.0%)	39,313 (21.9%)	16,848 (9.7%)	27,850 (15.9%)	209 (0.1%)	0 (0.0%)	963 (0.6%)	1,293 (0.7%)	174,809 (100.0%)
East Java	7,231 (16.0%)	768 (1.7%)	1,101 (2.4%)	25,746 (56.8%)	5,503 (12.2%)	4,413 (9.7%)	31 (0.1%)	0 (0.0%)	386 (0.8%)	119 (0.3%)	45,298 (100.0%)
Ball**	4,196 (39.6%)	133 (1.2%)	503 (4.8%)	1,508 (14.2%)	641 (6.0%)	3,378 (31.8%)	245 (2.3%)	0 (0.0%)	0 (0.0%)	5 (0.1%)	10,610 (100.0%)
South Kalimantan	2,788 (23.4%)	240 (2.0%)	6,148 (51.6%)	1,435 (12.1%)	80 (0.7%)	1,217 (10.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	11,898 (100.0%)
South Sulawesi	29,441 (42.2%)	6 (0.0%)	5,943 (8.5%)	6,376 (9.2%)	7,653 (10.9)	20,283 (29.1%)	51 (0.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	69,753 (100.0%)
Total Average	200,390	28,399	73,105	112,943	53,485	112,873	956	1,994	2,977	9,371	596,493
Relative Abundance	(33.6%)	(4.7%)	(12.3%)	(18.9%)	(9.0%)	(18.9%)	(0.2%)	(0.3%)	(0.5%)	(1.6%)	(100.0%)

Notes: * Provinces not projected but included in present field studies

** Provinces projected but excluded from present field studies

Table 15-a Pesticides Prepared for BIMAS/INMAS Programme in 1977

No.		Registered name		Formulation	Active ingredient
1	Insecticide	Agrothion	50EC	Emulsifiable concentration	Organophosphorus
2.	"	Azodrin	15WSC	Water soluble powder	"
3.	"	Basazinon	45/30EC	Emulsifiable concentration	Organophosphorus + carbamate
4.	"	Basudin	60EC	"	Organophosphorus
5.	"	Basudin	10G	Granule	"
6.	"	Baycarb	500EC	Emulsifiable concentration	Carbamate
7.	"	Brantasan	450/300EC	"	Organophosphorus + carbamate
8.	"	Curaterr	3G	Granule	Carbamate
9.	"	Cytroland	2G	"	Organophosphorus
10.	"	Diazinon	60EC	Emulsifiable concentration	"
11.	"	Dimecron	50SCW	Water soluble powder	"
12.	"	Dursban	20EC	Emulsifiable concentration	"
13.	"	Ekalux	5G	Granule	"
14.	"	Elsan	60EC	Emulsifiable concentration	"
15.	"	Elstar	45/30EC	"	Organophosphorus + carbamate
16.	"	Emulthion	TM	?	?
17.	"	Folithion	50EC	Emulsifiable concentration	Organophosphorus
18.	"	Pomadol	50EC	"	"
19.	"	Furadan	3G	Granule	Carbamate
20.	"	Hopein	50EC	Emulsifiable concentration	"
21.	"	Hostathion	40EC	"	Organophosphorus
22.	"	Karphos	25EC	"	"
23.	"	Lebaycid	550EC	"	"
24.	"	Mibas	200/100EC	"	Organophosphorus + carbamate
25.	"	Mipein	50WP	Wettable powder	Carbamate

Table 15-b Pesticides Prepared for BIMAS/INMAS Programme in 1977

No.		Registered name		Formulation	Active ingredient
26.	Insecticide	Mipcicon	6/4G	Granule	Organophosphorus + carbamate
27.	"	Nogos	50EC	Emulsifiable concentration	Organophosphorus
28.	"	Padan	50SP	?	Carbamate
29.	"	Padacin	2/3G	Granule	Carbamate
30.	"	Phosvel	300EC	Emulsifiable concentration	Organophosphorus
31.	"	Sevin	85SP	?	Carbamate
32.	"	Sumibas	75EC	Emulsifiable concentration	Organophosphorus + carbamate
33.	"	Sumithion	50EC	"	Organophosphorus
34.	"	Surecide	25EC	"	"
35.	"	Thiodan	35EC	"	Organochlorine
36.	"	Thiodan	25ULV	Oil soluble	"
37.	"	Trithion	4E	Emulsifiable concentration	Organophosphorus
38.	Fungicide Bactericide	Antracol	70WP	Wettable powder	Sulfurous
39.	"	Daconil	75WP	"	
40.	"	Dithone	M-45, 80WP	"	Sulfurous
41.	"	Ridomil	35SD		
42.	Rodenticide	Diphacin	110		
43.	"	Klerat	RM		
44.	"	Racumin	57WP		
45.	"	Tomorin			
46.	"	Zinephosphide			

Table 17-a Distribution of Insecticides, Bactericides/Fungicides, and Rodenticides for BIMAS/INMAS Programme by Province in 1978-1981

Pesticides Province	1978/1979 (- 1979 March 31)						1979 April - 1979 September						1979 October - 1980 March							
	Insecticide		Fungicide		Rodenticide		Insecticide		Fungicide		Rodenticide		Insecticide		Fungicide		Rodenticide		Total	
	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total	Bactericide	Total
Banda Aceh	-	42,296	89	818	43,203	20,914	-	141	21,055	86,722	21	221	86,964	-	-	-	-	-	-	-
North Sumatra	-	152,373	-	2,275	154,648	105,264.39	-	1,108	106,372.39	203,293	580	1,402	205,373	-	-	-	-	-	-	-
West Sumatra	-	28,464	13	2,246	30,723	65,130.84	7	1,291	66,428.84	74,515	-	61	74,576	-	-	-	-	-	-	-
Riau	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jambi	-	14,689	42	1,474	16,205	-	-	-	-	5,745	-	287	6,032	-	-	-	-	-	-	-
South Sumatra	-	47,333	11	2,705	50,049	43,432	-	1,152	44,584	117,805	3	7,589	125,397	-	-	-	-	-	-	-
Bengkulu	-	3,117	-	116	3,233	-	-	-	-	5,254	-	12	5,266	-	-	-	-	-	-	-
Lampung	-	57,137	1,336	8,335	67,408	52,121.8	368	193	52,682.8	140,401	918	1,761	143,100	-	-	-	-	-	-	-
West Java	-	533,955	368	6,328	540,651	563,430	165	3,658	567,253	758,828	60	5,864	764,752	-	-	-	-	-	-	-
Yogyakarta	-	97,783	635	1,046	99,464	57,665	-	526	58,191	43,932	-	114	44,046	-	-	-	-	-	-	-
Central Java	-	680,353	4,518	12,073	686,944	380,042.23	-	2,109	382,151.23	695,801	-	5,064	700,865	-	-	-	-	-	-	-
East Java	-	366,610	1,023	12,764	380,397	384,951.36	100	6,237	391,288.36	730,944	224	7,028	738,196	-	-	-	-	-	-	-
South Sulawesi	-	137,369	1,173	1,921	140,463	21,835.91	-	130	21,965.91	115,492	-	6,401	121,893	-	-	-	-	-	-	-
North Sulawesi	-	16,591	73	69	16,733	7,248.11	-	11	7,259.11	470	-	16	486	-	-	-	-	-	-	-
Central Sulawesi	-	2,379	-	138	2,517	1,116	-	2	1,118	1,422	-	20	1,442	-	-	-	-	-	-	-
Southeast Sulawesi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kalimantan	-	27,854	-	4,742	32,596	19,726	-	59	19,785	12,995	-	1,135	14,130	-	-	-	-	-	-	-
Bali	-	63,936	85	1,936	65,957	80,924	134	1,998	83,056	98,471	-	41	98,512	-	-	-	-	-	-	-
Maluku	-	581	-	14	595	-	-	-	-	-	-	307	101,319	-	-	-	-	-	-	-
West Nusa Tenggara	-	16,472	-	25	16,497	40,696	-	-	40,696	101,012	-	-	-	-	-	-	-	-	-	-
East Nusa Tenggara	-	-	-	-	-	-	-	790	790	-	-	-	-	-	-	-	-	-	-	-
Lombok	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pusat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	2,289,232	9,366	59,625	2,358,283	1,844,497.5	774	19,405	1,864,676.5	3,193,102	1,906	37,843	3,232,851	-	-	-	-	-	-	-

Table 17-b Distribution of Insecticides, Bactericides/Fungicides, and Rodenticides for BIMAS/INMAS Programme by Province in 1978-1981

kg

Pesticides Province	1980 April - 1980 September				1980 October - 1981 March				1981 April - 1981 September			
	Insecticide		Fungicide		Insecticide		Fungicide		Insecticide		Fungicide	
	Bactericide	Rodenticide	Bactericide	Rodenticide	Bactericide	Rodenticide	Bactericide	Rodenticide	Bactericide	Rodenticide	Bactericide	Rodenticide
Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	
Banda Aceh	46,489	29	183	46,701	68,394	613	3,600	72,607	43,428	260	137	43,825
North Sumatra	235,913	8,500	2,138	246,571	285,415	3,464	7,291	296,170	348,157	5,204	4,938	358,399
West Sumatra	85,405	-	717	86,122	114,885	2,272	500	117,657	108,382	1,407	1,026	110,815
Riau	-	-	-	-	19,172	13	-	19,185	46,431	-	45	46,476
Jambi	17,214	-	692	17,906	14,623	448	-	15,071	14,094	90	452	14,636
South Sumatra	123,975	24	5,552	129,551	164,731	6,150	-	170,881	84,083	37	2,776	86,896
Bengkulu	13,327	-	657	13,984	15,224	556	-	15,780	9,298	7	113	9,418
Lampung	106,544	1,355	1,834	109,733	164,431	3,276	3,303	171,010	78,419	1,599	3,100	83,118
West Java	802,895	15,471	3,096	821,462	1,007,071	7,084	17,415	1,031,570	1,050,071	19,502	3,017	1,072,590
Yogyakarta	62,111	2,000	395	64,506	109,694	344	1,000	111,038	74,800	2,705	97	77,602
Central Java	572,333	12,662	3,295	588,290	940,675	4,241	15,026	959,942	847,979	11,394	3,342	862,715
East Java	737,182	3,153	3,696	744,031	1,091,320	3,438	14,859	1,109,617	963,768	14,330	2,896	980,994
South Sulawesi	90,602	225	422	91,249	92,926	1,027	-	93,953	278,632	678	7,649	286,959
North Sulawesi	7,152	12	198	7,352	23,396	57	1,224	24,677	25,129	772	629	26,530
Central Sulawesi	14,721	-	330	15,051	23,338	945	-	24,283	25,079	-	451	25,530
Southeast Sulawesi	18,250	-	2,450	20,700	5,630	555	-	6,185	26,433	-	528	26,961
Kalimantan	11,024	-	1,212	12,236	21,865	1,147	-	23,012	48,387	201	5,612	54,200
Bali	134,505	1,270	11	135,786	128,274	-	780	129,054	174,622	-	343	174,965
Maluku	-	-	-	-	-	-	-	-	-	-	-	-
West Nusa Tenggara	3,763	-	67	3,830	22,351	1,336	5,795	29,482	23,947	1,031	601	25,579
East Nusa Tenggara	-	-	-	-	-	-	-	-	-	-	-	-
Lombok	34,227	-	71	34,298	118,007	3,384	9,113	130,504	74,877	2,293	442	77,612
Pusat	55,732	-	8,360	64,092	51,244	13,797	313	65,354	117,032	360	19,250	136,642
Total	3,173,364	44,701	35,386	3,253,451	4,482,686	54,147	80,219	4,617,022	4,463,048	61,870	57,444	4,582,362

Table 18-a Pesticide Distribution by Registered/Brand Names in 1979-1981

kg

Registered name	1979 April - Sept.	1979 Oct.- 1980 March	1980 April - Sept.	1980 Oct.- 1981 March	1981 April - Sept.	Total
Agrothion 50EC	101,648	178,442	158,803	127,800	174,479	741,172
Azodrin 15WSC	-	107,625	230,683	165,494	241,716	745,528
Basazinon 45/30EC	-	-	-	151,122	164,266	315,388
Basudin 60EC	-	-	-	304,519	271,905	576,424
Basudin 10G	996.56	92	3	2	0	1,093
Brantasan 450/300EC	-	-	-	177,806	136,175	313,981
Curaterr 3G	-	-	-	245	24,137	24,382
Diazinon 60EC	-	-	-	531,681	386,784	918,465
Diazinon 60EC/Basudin 60EC	677,881	1,142,510	911,664	-	-	2,732,055
Dimecron 50SCW	707	283	1,121	73,282	66,792	142,185
Dursaban 20EC	364,943	259,306	207,090	341,301	442,548	1,615,188
Ekalux 5G	-	-	-	32,269	11,938	44,207
Elsan 60EC	113,426	214,693	177,192	158,705	167,233	831,249
Elstar 45/30EC	-	-	-	185,889	133,613	505,391
Emulthion TM	-	-	-	117,143	89,645	206,788
Polithion 50EC	31,228	40	538	60,104	41,916	133,826
Fomadol 50EC	-	2,816	20,596	25,686	10,125	59,223
Puradan 3G	5,199.08	38,193	85,482	90,100	122,276	341,250
Hopcin 50EC	-	95,147	168,342	150,396	162,889	576,774
Hostathion 40EC	-	-	-	25,791	20,675	46,466
Lebaycid 550EC	128,280	-	-	275,632	420,642	824,554
Mibas 200/100EC	-	-	-	33,407	71,601	105,008
Mipcin 50WP	-	-	-	144,184	112,408	256,592
Mipcinon 6/4G	-	-	-	18,912	22,506	41,418
Nogos 50EC	84,081	116,406	31,944	89,973	21,129	343,543
Padan 50SP	101	75	15	0	0	191
Padmcin 2/3G	-	-	-	4,141	10,918	15,059

Table 18-b Pesticide Distribution by Registered/Brand Names in 1979-1981

kg

Registered name	1979 April - Sept.	1979 Oct.- 1980 March	1980 April - Sept.	1980 Oct.- 1981 March	1981 April - Sept.	Total
Phosvel 300EC	9,185	635	17,910	21,648	1,480	50,858
Sevin 85SP	245,053	405,018	317,329	489,225	468,800	1,925,425
Sumibas 75EC	-	104,613	169,074	200,539	211,863	581,580
Sumithion 50EC	29,997	72,494	133,444	118,559	123,700	478,194
Surecide 25EC	102	383	223	-	10	718
Thiodan 35EC	51,243	85,633	145,743	146,694	116,109	545,422
Thiodan 25ULV	-	-	-	-	2	-
Trithion 4E	-	90,883	119,103	116,074	168,115	494,175
Sub-total	1,844,497.64	3,193,102	3,173,364	4,480,166	4,463,048	-
Antracol 70WP	234	287	43,727	21,110	320	65,678
Daconil 75WP	165	-	1	33,698	14,280	48,144
Dithane M-45	375	1,619	964	22,577	35,325	60,860
Sub-total	774	1,906	44,692	77,385	49,925	-
Diphacin 110	2,102	5,197	1,406	3,590	655	12,950
Klerat RM	-	-	-	8,674	27,485	36,159
Racumin 57WP	4,419	13,541	17,338	22,214	18,286	75,818
Tomorin	981	1,618	224	95	658	3,576
Zincphosphide	11,903	17,487	16,398	15,479	10,360	71,627
Sub-total	19,405	37,843	35,386	50,052	57,444	-
Cyrolene 2C	-	-	-	43,556	9,744	53,300
Ridomil 35SD	-	-	-	2,834	2,201	5,035

Table 19 Resistant Rice Variety Against Rice Insect Pests

Variety	Brown Planthopper			White back planthopper	Green rice leafhopper	Rice borers	Gall midge
	Biotype						
	1	2	3				
PB5	S	S	S	S	S	S	S
PB8	S	S	S	S	S	S	S
PB20	S	S	S	S	S	S	S
Pelita	S	S	S	S	S	S	S
Si Ampat (C4)	S	S	S	S	S	MR	S
PB26	R	S	R	S	MR	R	S
PB28	R	S	R	S	MR	R	S
IR29	R	S	R	S	MR	R	S
PB30	R	S	R	S	MR	R	S
PB32	R	R	S	S	MR	R	S
PB34	R	S	R	S	MR	R	S
PB36	R	R	S	S	S*	R	S*
PB38	R	R	S	S	S*	MR	S*
IR40							
IR42	R	R	S		R		
Brantas	R	S	R	S	S		S
Serayu	R	S	R				
Citarum	R	S	MR	MR	MR		S
Asahan	R	S	MR	S	S		S
Ayung	R	MR	R	S	S	S	
Cisadane	R	MR	R	S	S		
Cimandiri	R	MR			R	S	S
Semeru	R	MR			R	S	S

R = resistant

S = susceptible

MR= moderately resistant

MS= moderately susceptible

Table 20 Resistant Rice Variety Against Rice Diseases

Variety	Grassy staut	Rice Virus Disease		Bacterial leaf blight	Blast	Cercospora leaf spot	Sheath blight
		Ragged staut	Tungro				
PB5	S	S	S	S	MS		MS
PB8	S	S	S	S			MR
PB28			MR				S
Pelita	S	S	S	MR			
Si Ampat (C4)			MR	MS	MR		MR
PB26	MS	S	R	S			
PB28	R	S	R	R/S			
IR29							
PB30	R	S	R	MS			
PB32	MR	S	MR	MR			
PB34	R	S				S	S
PB36	R	S		MS	MR		MS
PB38	R	S	MR	MR	MS		MS
IR40	M	S	R	-	R		M*
IR42	R	S	R	R	R	M*	S
IR50							
IR52							
IR54							
Brantas		MR			S	S	
Serayu	R		MR	S		R	
Citarum	MS	MS		MS	S	MR	
Asahan	R	MR	MR	S	MR	R	
Ayung	S	S	R	R	S		S
Cisadane	S	S		R	S		S
Cimandiri	R			R	S		S
Semeru	MR	S		R	S	S	S

R = resistant

S = susceptible

MR= moderately resistant

MS= moderately susceptible

M*= Intermediate

Table 21 Advancement of BIMAS/INMAS Programme Areas in 1000 ha
in Indonesia

Year	BIMAS	INMAS	Sub-total (A)	Total paddy acreage (B)	Rate (A/B)
1970	1,235	849	2,084	8,140	26%
1971	1,419	1,467	2,886	8,320	35
1972	1,243	2,020	3,263	7,980	41
1973	1,889	2,220	4,110	8,380	49
1974	2,996	1,094	4,090	8,510	48
1975	3,086	1,161	4,247	8,500	50
1976	2,974	1,500	4,474	8,370	53
1977	2,493	2,718	5,211	8,360	62

Table 22 Rice Production in Indonesia

<u>Total Cultivated Acreage (x 1,000 ha)</u>		<u>1961-65</u>	<u>1969-71</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
		7,036	8,158	8,537	8,765	8,369	8,360	8,812	8,804	9,000
		(100)	(116)	(121)	(125)	(119)	(119)	(125)	(125)	(128)
<u>Yield (Kg/ha)</u>										
		1,762	2,346	2,632	2,575	2,784	2,794	2,921	2,985	3,187
		(100)	(133)	(149)	(146)	(158)	(158)	(166)	(169)	(180)
<u>Total Yield (x 1,000 MT)</u>										
		12,396	19,136	22,473	22,570	23,301	23,356	25,739	26,283	28,680
		(100)	(154)	(181)	(182)	(188)	(188)	(208)	(212)	(231)

Source: FAO Production Yearbook 1976; 1978; 1980

Table 23 Gross Domestic Product at Constant 1973 Market Prices in 1000 Million Rupiahs
by Industrial Origin

	1975		1978		1980	
1. Agriculture, Livestock, Forestry & Fishery	2,811.2	36.8	3,134.8	33.1	3,438.5	31.4
1.1 Farm Food Crops	(1,696.1)	(22.2)	(1,835.8)	(19.4)	(2,093.7)	(19.1)
1.2 Farm Non Food Crops	(312.2)	(4.1)	(388.2)	(4.1)	(425.2)	(3.9)
1.3 Estate Crops	(183.2)	(2.4)	(209.5)	(2.2)	(230.0)	(2.1)
1.4 Livestock and Products	(202.4)	(2.7)	(184.2)	(1.9)	(211.3)	(1.9)
1.5 Forestry	(273.8)	(3.6)	(351.6)	(3.7)	(292.1)	(1.7)
1.6 Fishery	(143.5)	(1.8)	(165.5)	(1.8)	(182.2)	(1.7)
2. Mining and Quarrying	828.1	10.9	1,048.8	11.1	1,034.6	9.5
3. Manufacturing Industries	847.9	11.1	1,176.5	12.4	1,568.9	14.3
4. Electricity, Gas and Water Supply	41.2	0.5	56.9	0.6	77.9	0.7
5. Construction	364.8	4.8	528.9	5.6	628.5	5.7
6. Wholesale and Retail Trade	1,293.8	17.0	1,530.3	16.1	1,789.6	16.3
7. Transport	302.7	4.0	490.1	5.2	595.5	5.4
8. Banking and Other Financial Intermediaries	101.6	1.3	164.6	1.7	205.0	1.9
9. Ownership of Dwelling	198.4	2.6	287.6	3.0	331.6	3.0
10. Public Administration and Defense	564.1	7.4	767.9	8.1	972.5	8.9
11. Services	277.0	3.6	296.9	3.1	311.3	2.9
12. Gross Domestic Product	7,630.8	100.0	9,483.3	100.0	10,953.9	100.0

Table 24 Farm and Estate Agricultures in Indonesia in 1973

	Farm Agriculture			Estates		
	Number	Area (Ha)	Average size (Ha)	Number	Area (Ha)	Av. Size (Ha)
JAVA	8,664,446	5,505,215	0.64	773	677,562	876.54
SUMATRA	2,847,068	3,802,749	1.31	594	1,314,367	2,212.74
KALIMANTAN	689,195	1,868,144	2.71	85	59,255	697.12
SULAWESI	1,101,187	1,523,485	1.38	236	128,007	542.42
OTHERS	1,071,646	1,468,588	1.37	113	46,454	411.10
TOTAL	14,373,542	14,168,181	0.99	1,801	2,225,645	1,235.78

Source: 1973 Agricultural Census, Agriculture: Vol.1

Table 25 Population Censuses in 1971 and 1980

Province	September 24	October 31	Average Growth
	1971	1980	per year 1971 - 1980
Aceh	2,008,595	2,611,271	2.93
North Sumara	6,623,831	8,360,894	2.60
West Sumatra	2,793,196	3,406,816	2.71
Riau	1,641,545	2,168,535	3.11
Jambi	1,006,084	1,445,994	4.07
South Sumatra	3,440,573	4,629,801	3.32
Bengkulu	519,316	768,064	4.39
Lampung	2,777,008	4,624,785	5.77
SUMATRA	20,808,148	28,016,160	3.32
Jakarta	4,579,303	6,503,449	3.39
West Java	21,623,529	27,453,525	2.66
Central Java	21,877,136	25,372,889	1.64
JAVA	76,086,327	91,269,528	2.02
Bali	1,782,529	2,469,930	1.69
West Nusa Tenggara	1,807,830	2,724,664	2.36
East Nusa Tenggara	1,967,297	2,737,166	1.95
East Timor	-	555,350	-
NUSA TENGGARA	5,557,656	8,487,110	2.01*
West Kalimantan	2,019,936	2,486,068	2.31
Central Kalimantan	701,936	954,353	3.43
South Kalimantan	1,699,105	2,064,649	2.16
East Kalimantan	733,797	1,218,016	5.73
KALIMANTAN	5,154,774	6,723,086	2.96
North Sulawesi	1,718,543	2,115,384	2.31
Central Sulawesi	913,662	1,289,635	3.86
South Sulawesi	5,180,576	6,062,212	1.74
South East Sulawesi	714,120	942,302	3.09
SULAWESI	8,526,901	10,409,533	2.22
Maluku	1,089,565	1,411,06	2.88
Irian Jaya	923,440	1,173,875	2.67
MALUKU & IRIAN JAYA	2,013,005	2,584,881	2.79
INDONESIA	119,208,229	147,490,793	2.32*

Note: * excluding East Timor

Source: Biro Pusat Statistik, Sensus Penduduk 1980

Table 26 Areas, Population and Paddy Production by Island in Indonesia

	AREA		POPULATION				PADDY PRODUCTION			
	KM ²	%	Number	1971 %	No./KM ²	Number	%	No./KM ²	1979 ton	1980 ton
Jakarta	590	0.03	4,579,303	3.84	7,762	6,503,449	4.41	11,023	47,096	62,126
West Java	46,300	2.41	21,623,529	18.14	467	27,453,525	18.61	593	5,860,613	6,594,511
Central Java	34,206	1.78	21,977,136	18.35	640	25,372,889	17.20	742	4,305,991	5,178,386
Yogyakarta	3,169	0.17	2,489,360	2.09	786	2,750,813	1.87	868	383,426	473,543
East Java	47,922	2.50	25,516,999	21.41	532	29,188,852	19.79	609	5,385,308	6,111,937
JAVA	132,187	6.89	76,086,327	633.83	576	91,269,528	61.88	690	15,982,434	18,420,506
SUMATRA	473,606	24.67	20,808,148	17.46	44	28,016,160	19.00	59	5,395,728	5,678,670
KALIMANTAN	539,460	28.11	5,154,774	4.32	10	6,723,086	4.56	12	1,484,465	1,627,799
SULAWESI	189,216	9.85	8,526,901	7.15	45	10,409,533	7.05	55	2,135,152	2,285,766
NUSA TENGGARA	88,488	4.61	6,619,074	5.55	75	8,487,110	5.76	96	1,330,949	1,611,374
MALUKU & I. JAYA	496,486	25.87	2,013,005	1.69	4	2,584,881	1.75	5	21,528	27,790
INDONESIA	1,919,443	100.00	119,208,229	100.00	62	147,490,298	100.00	77	26,350,256	29,651,505

Source: Biro Pusat Statistik

Table 27 Production of Main Food Crops in 1979 in Indonesia

Commodity	JAVA				Outer JAVA				INDONESIA			
	Area Harvested	Production	Yield/ha	Area Harvested	Production	Yield/ha	Area Harvested	Production	Yield/ha	Area Harvested	Production	Yield/ha
Wet Land Rice*	4,467 (58%)	15,206 (63%)	34.04	3,186	9,059	28.43	7,653	24,265	30.28			
Dry Land Rice*	289 (2%)	437 (2%)	14.44	951	1,177	12.38	1,240	1,614	13.30			
Maize	2,126 (70%)	2,819 (73%)	13.26	902	1,036	11.49	3,028	3,855	12.73			
Cassava	1,009 (73%)	9,471 (73%)	94	374	9,490	93	1,383	12,961	94			
Sweet Potatoes	132 (45%)	1,007 (45%)	77	161	1,228	76	293	2,235	76			
Peanuts	315 (76%)	254 (74%)	8.07	99	87	8.79	414	341	8.23			
Soy Beans	499 (77%)	406 (78%)	8.14	147	116	7.89	646	522	8.07			

* dry unhusked rice

Source: Statistical Pocket book of Indonesia 1979/1979

Table 28 Number and Area of Farmers by Size of Holding in Indonesia in 1973

Size of Holding	JAVA		Outer JAVA		INDONESIA	
	Number of Farms	%	Number of Farms	%	Number of Farms	%
< 0.2	1,832,100	21.1	451,303	7.9	2,283,403	15.9
0.2 - 0.5	3,142,721	36.3	1,134,634	19.9	4,277,355	29.8
0.5 - 1.0	2,150,847	24.8	1,403,450	24.6	3,554,297	24.7
1.0 - 2.0	1,128,752	13.0	1,468,885	25.7	2,597,637	18.1
2.0 - 5.0	369,821	4.3	983,662	17.2	1,353,483	9.4
2.0 - 5.0	369,821	4.3	983,662	17.2	1,353,483	9.4
5.0 +	40,205	0.5	267,163	4.7	307,368	2.1
Total	8,664,446	100.0	5,709,096	100.0	14,373,543	100.0

Source: 1973 Agricultural Census, Agriculture: Vol.1

Table 29 Area Harvested and Paddy Production in Indonesia in 1980

PROVINCE	Wet Land Rice			Dry Land Rice			Wet Land - Dry Land Rice		
	Area Harvested (ha)	Yield/ha (kg)	Production (Ton)	Area Harvested (ha)	Yield/ha (kg)	Production (Ton)	Area Harvested (ha)	Yield/ha (kg)	Production (Ton)
Aceh	208,423	31.16	649,464	11,857	14.40	17,074	229,280	30.26	666,538
North Sumatra	445,323	31.58	1,406,457	117,318	16.11	188,999	582,641	28.36	1,595,456
West Sumatra	291,246	35.73	1,040,520	7,065	14.99	10,590	298,311	35.24	1,051,110
Riau	81,770	23.36	190,988	40,881	13.00	53,145	122,651	19.90	244,133
Jambi	131,680	27.97	368,281	19,177	11.06	21,210	150,857	25.82	389,491
South Sumatra	242,944	29.03	705,217	108,596	15.44	167,363	351,340	24.84	872,580
Bengkulu	48,178	29.43	141,772	22,330	13.97	31,195	70,508	24.53	172,967
Lampung	151,049	33.29	502,824	121,651	15.09	183,571	272,700	25.17	686,395
<u>SUMATRA</u>	<u>1,600,613</u>	<u>31.27</u>	<u>5,005,523</u>	<u>448,675</u>	<u>15.00</u>	<u>673,147</u>	<u>2,049,288</u>	<u>27.71</u>	<u>5,678,670</u>
Jakarta	20,519	29.92	61,394	489	14.97	732	21,008	29.57	62,126
West Java	1,743,937	36.77	6,411,939	115,302	15.83	182,575	1,859,239	35.47	6,594,511
Central Java	1,296,298	39.39	5,105,702	42,347	17.18	72,684	1,338,645	38.68	5,178,386
Yogyakarta	99,679	42.72	425,808	29,751	16.04	47,735	129,430	36.59	473,543
East Java	1,368,504	43.99	6,020,254	60,313	15.20	91,683	1,428,817	42.78	6,111,937
<u>JAVA & MADURA</u>	<u>4,528,937</u>	<u>39.80</u>	<u>16,025,097</u>	<u>248,202</u>	<u>15.93</u>	<u>395,409</u>	<u>4,777,139</u>	<u>38.56</u>	<u>18,420,506</u>
Bali	174,900	41.01	717,187	6,542	13.28	8,688	181,422	40.01	725,875
West Nusatenggara	199,624	32.23	643,471	20,788	13.46	27,981	220,412	30.46	671,452
East Nusatenggara	48,243	25.10	121,090	82,555	11.26	92,937	130,798	16.36	214,047
East Timor*	-	-	-	-	-	-	-	-	-
<u>BALI & NUSATENGGARA</u>	<u>422,767</u>	<u>35.05</u>	<u>1,481,748</u>	<u>109,885</u>	<u>11.80</u>	<u>129,626</u>	<u>532,652</u>	<u>30.25</u>	<u>1,611,374</u>
West Kalimantan	187,842	22.08	414,755	116,300	11.42	132,815	304,142	18.00	547,570
Central Kalimantan	72,116	19.80	142,790	50,123	12.67	63,506	122,239	16.88	206,296
South Kalimantan	268,582	25.94	696,723	29,113	13.18	38,371	297,695	24.69	735,094
East Kalimantan	36,321	20.93	76,020	45,064	13.94	62,819	81,385	17.06	138,839
<u>KALIMANTAN</u>	<u>564,861</u>	<u>23.55</u>	<u>1,330,288</u>	<u>240,600</u>	<u>12.37</u>	<u>297,511</u>	<u>805,461</u>	<u>20.21</u>	<u>1,627,799</u>
North Sulawesi	55,771	33.22	185,271	10,249	14.50	14,861	66,020	30.31	200,132
Central Sulawesi	70,248	24.14	169,579	48,256	12.24	59,065	118,504	19.29	228,644
South Sulawesi	564,896	31.16	1,760,035	28,694	13.20	37,823	593,550	30.29	1,797,859
South-East Sulawesi	14,151	22.52	31,868	21,820	12.61	27,263	35,771	16.53	59,131
<u>SULAWESI</u>	<u>705,066</u>	<u>30.45</u>	<u>2,146,764</u>	<u>108,779</u>	<u>12.78</u>	<u>139,012</u>	<u>813,845</u>	<u>28.09</u>	<u>2,285,766</u>
Maluku	516	22.50	1,161	24,130	9.60	23,155	24,646	9.87	24,326
Irian Jaya	1,286	19.57	2,517	748	12.66	947	2,034	17.03	3,484
<u>MALUKU & IRIAN JAYA</u>	<u>1,802</u>	<u>20.41</u>	<u>3,678</u>	<u>24,878</u>	<u>9.89</u>	<u>24,112</u>	<u>26,680</u>	<u>10.42</u>	<u>27,790</u>
Outside Java	3,295,109	30.25	9,967,991	992,817	13.54	1,263,408	4,227,926	26.56	11,231,399
<u>INDONESIA</u>	<u>7,824,046</u>	<u>35.78</u>	<u>27,993,088</u>	<u>1,181,019</u>	<u>14.05</u>	<u>1,658,917</u>	<u>9,005,065</u>	<u>32.93</u>	<u>29,651,905</u>

* Data not available.

Note: Net Harvested Area, dry unhusked rice production, 100kg

Source: Biro Pusat Statistik

Milled rice: 20,163,295 ton

Table 30 Summary of Building Coverages of Constructing Facilities and Estimated Man Power and Water Supply by Proposed Structures

	Food Crop Protection Center	Forecasting Laboratory	Pest Observatory Unit	Pesticide Laboratory
1. Administration	301.5 m ²	130 m ²	27 m ²	110 m ²
2. Meeting Room	274.5	98	-	60
3. Office/Experimental Room	258.0	180	51	246
4. Library	72.0	-	-	-
5. Rest Room	44.0	26	-	23
6. Residence	740.0	270	52	470
Sub-Total	1,856.5	762	130	909
7. Staff Number	90	40	5	40
8. Water Supply/Day	20.08 ton	9.05 ton	1.51 ton	9.71 ton
9. Maximum Water Supply/hr	2,156.00 ton	996.00 ton	168.00 ton	1,078.00 ton

Table 31-a List of Equipments Proposed

	Number	Sum (Yen)	Remarks
Binocular stereo-microscope	172	29,240,000	Shimazu VGU-Z
Binocular stereo-zoom-microscope	40	8,000,000	Olympus SZ-Tr
Biological binocular microscope	56	15,680,000	Shimazu SLB
Universal microscope	16	26,736,000	Olympus AHB-LB
Reflect microscope	1	1,660,000	Eiko Seiki
Microscope lighting apparatus	48	2,064,000	Olympus
Camera (35mm)	32	4,800,000	
Video set	1	466,000	
Slide projector	9	900,000	Sony
Day-light screen	9	405,000	
Electronic calculator	390	3,822,000	Casio
Telecopier	28	35,000,000	Fuji Xerox 485
Personal computer	1	390,000	PC-3200 S
Copy machine set	4	3,840,000	Ricopy DT5700R
Inter-phone set	36	5,400,000	
Telephone	3	900,000	
Typewriter	3	300,000	
Voltage stabilizer	12	6,000,000	Ikeda Rika
Fish toxicity test chamber	1	1,950,000	Shimazu
Momentum measuring apparatus	1	4,610,000	Kokusan Enshinki H-103N
Centrifuge set	6	3,744,000	Hitachi RX-208
Refrigerator	12	2,340,000	Hitachi RL-338SS
Deep Freezer	3	1,878,000	Asahi Life Science ALSCO-35LT
Auto cube-ice machine	4	1,000,000	
Ventilation fan	60	600,000	
Auto sterilizer	1	330,000	
Incubator	3	1,470,000	
Constant temperature oven	27	1,863,000	Kiya IT-4
"	7	2,023,000	Kett SP-1
Constant temperature innoculator	28	61,600,000	Kiya
Grain moisture meter	1	90,000	
Rice yield analyzer	8	560,000	

Table 31-b List of Equipments Proposed

	Number	Sum (Yen)	Remarks
Ripening rate measuring apparatus	29	17,400,000	Fujimoto Kagaku
Miniature thresher	29	8,410,000	" "
Seedling case set	280	2,380,000	Kiya
High speed automatic cutter	4	800,000	Yoshizumi Sangyo
Vacuum dryer	3	1,350,000	Yamato DP-31
Vacuum pump	3	378,000	Yamato PD-100
Rotary vaccum evaporator	6	900,000	Tokyo Rikakikai N-I
Top loading balance (capacity 5kg)	1	60,000	
Electric precision balance	3	1,980,000	
" "	6	3,180,000	
Analytical electric precision balance	3	2,550,000	
" "	6	8,340,000	
Electrophoresis apparatus	4	825,600	Cosmo
Ultra-violet light detection lamp	2	116,000	Irie Manufactory
High performance liquid Chromatography set	1	9,759,000	Shimazu LC-3A
" "	3	25,497,000	Shimazu LC-3A
Packed column set	4	5,440,000	Shimazu
Gaschromatography set	1	15,720,000	Shimazu
" "	3	24,180,000	Shimazu
Packed column set	4	1,280,000	Shimazu
Thin layer chromatography set	3	1,236,000	Mitamura Rikenko
Recording data processor	3	3,000,000	Shimazu
Recording Spectrophotometer	3	9,186,000	Shimazu
Oscilloscope	1	540,000	Yokogawa Denki
Flash point measuring apparatus	2	500,000	
Accelerated storage measuring apparatus	3	495,000	Yamato Kagaku
Bulk/tap density measuring apparatus	1	62,000	Sogo Rikagaku
Flowability measuring apparatus	1	20,000	" "
Particle size measuring apparatus	1	28,000	" "
Dispersibility measuring apparatus	1	200,000	" "
Hardness test apparatus	1	262,000	" "
Thermometer set	3	300,000	" "
Viscosimeter	3	1,287,000	Toshiba System VS
P-H meter	3	594,000	Toa Denpa HM-20E

Table 31-c List of Equipments Proposed

	Number	Sum (Yen)	Remarks
Hydrometer set	3	141,000	Sogo Rikagaku
Automatic potential difference titrator	6	3,315,000	Kyoto Denshi Kogyo
Soxlet extractor	30	600,000	Sogo Rikagaku
Concentration apparatus	15	1,245,000	"
Distilling apparatus	3	300,000	"
High purity auto-still	4	4,420,000	Yamato Kogaku PF-12
Hydrogen leak detector	4	2,000,000	Daika Kogyo
Instrument shelter	20	3,200,000	
Thermograph	20	560,000	
Hygograph	20	620,000	
Recording wind vane & anemograph	20	1,200,000	
Raingauge	20	560,000	
Solarimeter	20	7,180,000	
Ultrasonic pipet washer	5	1,690,000	Yamato Kagaku AW-31
Ultrasonic cleaner	1	748,000	Toyo Kagaku UC-6100
Oven dryer	9	1,152,000	Yamato Kagaku DG-41
Desiccator	290	1,218,000	Mini Desiccator
Automatic mortar	1	333,000	Nitto Kagaku
Standard sieve set	3	243,000	"
"	1	117,000	Nitto Kagaku
Electric sieve	4	560,000	Nitto Kagaku ANF-30
Rotary spore-trap	40	5,600,000	Hokuriku Noshi Type
Light trap	40	27,600,000	Auto daily catcher
Micro-syringe	59	6,490,000	Kiya Seisakujo
Mass-rearing cabinet	290	5,742,000	Sanshine Kogyo
Laboratory dish (Senale)	7,800	2,340,000	
Sample jar	18,500	1,850,000	
Killing jar	780	702,000	
Hurricane lamp	1,960	1,372,000	
Tweezer	780	1,092,000	
Magnifier lense	1,055	2,637,500	
Hand numbering apparatus	1,055	2,110,000	
Insect net	3,720	2,046,000	
Insect sweeping net set	915	2,470,500	

Table 31-d List of Equipments Proposed

	Number	Sum (Yen)	Remarks
Stop watch	6	75,000	
Laboratory timer	6	138,000	
Laboratory clock	12	360,000	
Tester	3	54,000	
Tool kit	3	60,000	
Grinder	2	370,000	
Shaker set	1	630,000	
" "	3	1,320,000	Yamato Kagaku SA-51
" "	3	960,000	Irie Shokai 2G-4
Gas cylinder carrier	1	50,000	Iwaki V-DN
Gas cylinder stand	5	100,000	
Muffle furnace	3	780,000	Yamato Kagaku FM-5
Hot plate	6	360,000	Yamato Kagaku HK-41
Mantle heater	3	207,000	" " MA-2904
" "	3	201,000	" " MA-2903
Water bath	3	360,000	Yamato Kagaku BS-64
" "	3	279,000	" " BS-68
Labo-stierer	3	267,000	" " LR-41
Mag-mixer	3	267,000	" " M-66
" "	3	123,000	" " MH-61
Touch-mixer	3	63,000	" " MT-11
Juicer-mixer	9	225,000	National MX-1505
Handy aspirator	3	165,000	Yamato Kagaku WP-11
Gas burner	1	13,000	
Compressor	1	60,000	
Glass cutter set	1	9,000	
Safety mask	150	720,000	
Safety glasses	30	105,000	
Safety glove	30	150,000	
Fire extinguisher (powder)	45	675,000	
Eye-washer	3	33,000	
Glass wares	4	3,000,000	
Experimental supplies	32	32,000,000	

Table 31-e List of Equipments Proposed

	Number	Sum (Yen)	Remarks
Solvents	4	600,000	
Standard chemical reagents	4	600,000	
Draft chamber	9	9,000,000	Yamato Kagaku
Laboratory cart	3	93,000	" "
"	3	60,000	" "
Cooking set	3	150,000	Daika Kogyo
Laboratory waste incinerator	10	23,000,000	Meiho Sha
"	1	12,000,000	" "
Toxic gas incinerator	10	30,000,000	Sanei Seisakujo
"	1	6,270,000	" "
Air conditioner	138	41,400,000	
Insect specimen cabinet	195	58,500,000	Shiga-Konchu No.485-I
Portable insect specimen box	645	1,612,500	Shiga-Konchu No.441
Mist-blower	1,000	70,000,000	Maruyama Seisakujo
Jeep	47	117,500,000	
Pick-up Jeep	7	17,500,000	
Moter-cycle	382	72,198,000	GI-100 (Honda)
GRAND TOTAL		976,071,000	

Table 32-a Area Harvested and Production of
Paddy Rice of 9 Provinces in 1980

	Area Harvested (ha)	Yield/ha (ton)	Production (ton)
West Java	1,859,239	3.547	6,594,514
Central Java	1,338,645	3.868	5,178,386
East Java	1,428,817	4.278	6,111,937
3 Provinces:	4,626,701	3.866	17,884,837
Aceh	220,280	3.026	666,538
North Sumatra	562,641	2.836	1,595,456
South Sumatra	351,340	2.484	872,580
Lampung	272,700	2.517	686,395
South Kalimantan	297,695	2.469	735,094
South Sulawesi	593,550	3.029	1,797,859
6 Provinces:	2,298,206	2.763	6,348,922
Total :	6,924,907	3.499	24,233,759

Source: Biro Pusat Statistik

Table 32-b

Estimated Area Harvested and Production of Paddy
Rice of 9 Provinces for the Project life span
(under "without Project" condition)

Year	3 Java Provinces			6 Outer Java Provinces			TOTAL	
	Area Harvested	Yield	Production	Area Harvested	Yield	Production	Area Harvested	Production
	×10 ⁶ ha	ton	×10 ⁶ ton	×10 ⁶ ha	ton	×10 ⁶ ton	×10 ⁶ ha	×10 ⁶ ton
1983	4.63	430	1991	244	295	720	7.07	2711
84	"	440	2037	249	30	747	7.12	2784
85	"	450	2084	254	305	775	7.17	2859
86	"	460	2130	259	31	803	7.22	2933
87	"	470	2176	265	315	835	7.28	3011
88	"	480	2222	270	32	864	7.33	3086
89	"	490	2269	276	325	897	7.39	3166
90	"	50	2315	282	33	931	7.45	3246
91	"	504	2334	288	338	973	7.51	3307
92	"	508	2352	294	346	1017	7.57	3369
93	"	512	2371	300	354	1062	7.63	3433
94	"	516	2389	306	362	1108	7.69	3497
95	"	520	2408	313	370	1158	7.76	3566
96	"	524	2426	319	378	1206	7.82	3632
97	"	528	2445	326	386	1258	7.89	3703
98	"	532	2463	333	392	1305	7.96	3768
99	"	536	2482	340	404	1374	8.03	3856
2000	"	540	2500	347	41	1423	8.10	3923
01	"	544	2519	354	419	1483	8.17	4002
02	"	548	2537	362	428	1549	8.25	4086
03	"	552	2556	369	437	1613	8.32	4169
04	"	556	2574	377	446	1681	8.40	4255
05	"	560	2593	385	455	1752	8.48	4345
06	"	564	2611	393	464	1824	8.56	4435
07	"	568	2630	401	473	1897	8.64	4527
08	"	572	2648	410	482	1976	8.73	4624
09	"	576	2667	418	491	2052	8.81	4719
10	"	580	2685	427	50	2135	8.90	4820
11	"	582	2695	436	505	2202	8.99	4897
12	"	584	2704	445	51	2270	9.08	4974
13	"	586	2713	455	515	2343	9.18	5056
14	"	588	2722	464	52	2413	9.27	5135
15	"	590	2732	474	525	2489	9.37	5221
16	"	592	2741	484	53	2565	9.47	5306
17	"	594	2750	494	535	2643	9.57	5393
18	"	596	2759	504	54	2723	9.67	5482
19	"	598	2769	515	"	2781	9.78	5550
20	"	60	2778	526	"	2840	9.89	5618
21	"	"	"	537	"	2900	10.00	5678
22	"	"	"	548	"	2959	10.11	5737
23	"	"	"	560	"	3024	10.23	5802
24	"	"	"	571	"	3083	10.34	5861
25	"	"	"	583	"	3148	10.46	5926
26	"	"	"	596	"	3218	10.59	5996
27	"	"	"	608	"	3283	10.71	6061
28	"	"	"	621	"	3353	10.84	6131
29	"	"	"	634	"	3424	10.97	6202
30	"	"	"	647	"	3494	11.10	6272
31	"	"	"	661	"	3569	11.24	6347
32	"	"	"	675	"	3644	11.38	6422

Table 33

Economic Benefit

	Paddy Rice Production WITH Project (x10 ⁶ ton)	Paddy Rice Production WITHOUT Project (x10 ⁶ ton)	Incremental Production (x10 ⁶ ton)	Price of Paddy Rice (US\$/ton)	Value of Incremental Production (x10 ⁶ US\$)
1983	27.11	27.11	0	208	0
84	27.84	27.84	0	"	0
85	28.59	28.59	0	"	0
86	29.33	29.33	0	"	0
87	30.11	30.11	0	"	0
88	30.90	30.86	0.04	"	8.32
89	31.70	31.66	"	"	"
90	32.50	32.46	"	"	"
91	33.11	33.07	"	"	"
92	33.73	33.69	"	"	"
93	34.37	34.33	"	"	"
94	35.01	34.97	"	"	"
95	35.70	35.66	"	"	"
96	36.37	36.32	0.05	"	10.40
97	37.08	37.03	"	"	"
98	37.92	37.68	0.24	"	49.92
99	38.80	38.56	"	"	"
2000	39.48	39.23	0.25	"	52.00
01	40.27	40.02	"	"	"
02	41.12	40.86	0.26	"	54.08
03	41.95	41.69	"	"	"
04	42.82	42.55	0.27	"	56.16
05	43.72	43.45	"	"	"
06	44.63	44.35	0.28	"	58.24
07	45.55	45.27	"	"	"
08	46.53	46.24	0.29	"	60.32
09	47.48	47.19	"	"	"
10	48.50	48.20	0.30	"	62.40
11	49.28	48.97	0.31	"	64.48
12	50.05	49.74	"	"	"
13	51.19	50.56	0.63	"	131.04
14	51.99	51.35	0.64	"	133.12
15	52.86	52.21	0.65	"	135.20
16	53.72	53.06	0.66	"	137.28
17	54.60	53.93	0.67	"	139.36
18	55.51	54.82	0.69	"	143.52
19	56.19	55.50	"	"	"
20	56.88	56.18	0.70	"	145.60
21	57.49	56.78	0.71	"	147.68
22	58.09	57.37	0.72	"	149.76
23	58.75	58.02	0.73	"	151.84
24	59.34	58.61	"	"	"
25	60.00	59.26	0.74	"	153.92
26	60.71	59.96	0.75	"	156.00
27	61.37	60.61	0.76	"	158.08
28	62.08	61.31	0.77	"	160.16
29	62.80	62.02	0.78	"	162.24
30	63.50	62.72	"	"	"
31	64.26	63.47	0.79	"	164.32
32	65.02	64.22	0.80	"	166.40

* Reduction of Rate of Pest Damage

1. 1st - 5th year : 0%
2. 6th - 15th " : 0.1%
3. 16th - 30th " : 0.5%
4. 31st - 50th " : 1.0%

Table 34 Estimated Project CostUnit: 10³ US\$

	Foreign Currency	Local Currency	Total
Building & Facility	9,205	17,413	26,618
Equipment	3,075	0	3,075
Spareparts	1,230	0	1,230
Vehicle	829	0	829
Training	0	120	120
Land Acquisition	0	5,700	5,700
O/M Cost	0	2,684	2,684
Consulting Service	1,792	0	1,792
Physical Contingency	2,419	3,888	6,307
Total	18,550	29,805	48,355

Table 35 Calculatuib of Economic Internal Rate of Return

(1000 US\$)

Year	Investment Cost	O & M Cost	Benefits	Cash Flow
1983	736	0	0	736
84	488	0	0	488
85	20,669	0	0	20,669
86	13,867	0	0	13,867
87	12,596	0	0	12,596
88	0	225	8,320	8,095
89	0	"	"	"
90	0	"	"	"
91	0	"	"	"
92	0	"	"	"
93	0	"	"	"
94	0	"	"	"
95	0	"	"	"
96	0	"	10,400	10,175
97	0	"	"	"
98	0	"	49,920	49,695
99	0	"	"	"
2000	0	"	52,000	51,775
01	0	"	"	"
02	0	"	54,080	53,855
03	0	"	"	"
04	0	"	56,160	55,935
05	0	"	"	"
06	0	"	58,240	58,015
07	0	"	"	"
08	0	"	60,320	60,095
09	0	"	"	"
10	0	"	62,400	62,175
11	0	"	64,480	64,255
12	0	"	"	"
13	0	"	131,040	130,815
14	0	"	133,120	132,895
15	0	"	135,200	134,975
16	0	"	137,280	137,055
17	0	"	139,360	139,135
18	0	"	143,520	143,295
19	0	"	"	"
20	0	"	145,600	145,375
21	0	"	147,680	147,455
22	0	"	149,760	149,535
23	0	"	151,840	151,615
24	0	"	"	"
25	0	"	153,920	153,695
26	0	"	156,000	155,775
27	0	"	158,080	157,855
28	0	"	160,160	159,935
29	0	"	162,240	162,015
30	0	"	"	"
31	0	"	164,320	164,095
32	0	"	166,400	166,175

EIRR = 22.82%

Table 36 Economic Price of Thai Milled Rice

1982 Market Price <u>1/</u>	US\$/mt	464.00
Quality Adjustment	%	80.00
Adjusted Price	US\$/mt	371.20
Shipping and Handling	US\$/mt	20.00
CIF Jakarta	US\$/mt	391.20
Equivalent in Rupiah	Rp	254,280.00
Domestic Transport/ Handling to Mill	Rp	15,000.00
Processing Ratio	%	55.00
Processing Charge	Rp	-15,000.00
Transport/Handling to Farm Gate	Rp	-3,000.00
Farm Gate Economic Price	Rp	133,104.00

1/ : Thai 5% Broken Rice, FOB Bangkok

Source : IBRD's "Price Prospects for Major Primary Commodities", Jan. 1980

APPENDIX - B

ALLOCATION TABLE FOR LOCAL/FOREIGN CURRENCY OF BUILDING AND FACILITY COSTS

Building and Facility (General)	1
Food Crop Protection Center	2
Pesticide Laboratory	13
Forecasting Laboratory	24
Pest Observatory Unit	32

APPENDIX - B

General

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			318,373,900		Food Crop Protection Center	287,210,380				172,836,450		
			55,687,550		Pesticide Laboratory	150,737,770				55,110,220		
			49,051,000		Forecasting Laboratory	128,205,430				79,154,430		
			3,524,600		Test Observatory Unit	16,276,000				12,751,500		
			222,637,050		GRAND TOTAL	582,459,580				359,852,530		

Food Crop Protection Center

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					51	Common Temporary Work	5,959,000			5,959,000	2.52	
			57,793,900		52	Building Work	170,722,380			172,836,480		
			18,459,000		53	Electrical Installation Work	23,594,000			5,405,000		
			33,085,000		54	Plumbing Equipment Work	44,055,000			5,970,000		
					55	Handling Expenses	42,880,000			42,880,000		
			114,373,900			GRAND TOTAL	287,210,380			172,836,480		
					52	Building Work						
			33,530,600		I	Main Building	97,176,100			57,645,500		
			1,937,000		II	Storage	4,138,000			2,231,000		
			637,300		III	Generator Station	1,381,900			744,600		
			389,500		IV	Incinerator Station	903,900			514,400		
			2,399,500		V	Staff House (VIP)	11,957,180			9,557,680		
			9,630,000		VI	Staff House	43,156,000			38,526,000		
			3,306,000		VII	Crop Protection Brigade	1,009,300			3,703,300		
			57,793,900			TOTAL	170,722,380			112,922,450		
					I	Main Building						
					1	Temporary Work	2,600,000	1	set	2,600,000		
					2	Earth Work	1,450,000	1	set	1,450,000		
			4,560,000		3	Foundation	11,200,000	1	set	6,650,000		
			17,300,000		4	Steel Work	34,600,000	1	set	17,300,000		
			4,490,000		5	Auto-cured light-weight Concrete Work	6,720,000	1	set	2,240,000		
					6	Wood Work	13,000,000			13,000,000		
					7	Roofing & Steel Metal Work	7,000,000			7,000,000		
			262,800		8	Tile Work	396,400	1	set	133,600		
			432,300		9	Plastering	1,703,000			1,270,700		
			4,250,000		10	Aluminum Sash	5,200,000			950,000		
					11	Wooden Finishes	450,000			450,000		
			420,000		12	Glazing Work	570,000			150,000		
			625,500		13	Painting Work	1,476,700	1	set	831,200		
			5,100,000		14	Interior Finish Work	7,800,000	1	set	2,700,000		
			2,100,000		15	Miscellaneous Work	3,000,000	1	set	900,000		
			33,530,600			TOTAL	97,176,100			57,645,500		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					1 Temporary Work		1	set		2,600,000		
					TOTAL					2,600,000		
					2 Earth Work		1	set		3,450,000		
					TOTAL					3,450,000		
					3 Foundation (Reinforced Concrete Work)							
					Agregate		1	set		2,300,000		
130	c	18,000	2,340,000		Cement							
					Labor Cost		350	m ³	1,500	525,000		
					Labor Cost		860	m ²	2,550	2,150,000		
37	c	60,000	2,220,000		Reinforcement							
					Labor Cost		37	c	45,000	1,665,000		
			4,560,000		TOTAL					6,640,000		
					4 Steel Work							
173	c	100,000	17,300,000		Material							
					Labor Cost		173	c	100,000	17,300,000		
					TOTAL					17,300,000		
					5 Auto-casted light-weight Concrete Work							
1390	m ²	3,200	4,450,000		Material							
					Labor Cost		1,400		1,600	2,240,000		
			4,450,000		TOTAL					2,240,000		
					6 Wood Work							
					Structural Finishing Carpentry		18	m ³	75,000	5,850,000		
					Labor Cost		800	days	8,500	6,800,000		
					Falls		1	set		350,000		
					TOTAL					13,000,000		
					7 Roofing & Steel Metal Work							
					do		1,077	m ²	6,500	7,000,500		
					TOTAL					7,000,500		
					8 Tile Work							
14	m ²	4,000	56,000		Resale Tile (floor)		14	m ²	2,000	28,000		
44	"	4,700	206,900		do (wall)		44	"	2,400	105,600		
			262,800		TOTAL					133,500		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					9	Plastering						
24	t	18,000	432,300	cement	Plastering Work Labor Cost		3,310	m ²	970	1,270,700		
			432,300		TOTAL					1,270,700		
					10	Aluminum Sash & Windows						
1	set		3,900,000		Aluminum Sash							
					Labor Cost		1	set		800,000		
1	set		350,000		Heavy-weight Rolling Shutter							
					Light-weight Rolling Shutter							
					Labor Cost		1	m ²		150,000		
			4,250,000		TOTAL					950,000		
					11	Wooden Fixtures						
					Door		23		17,500	402,500		
					Labor Cost		23		2,500	57,500		
					TOTAL					460,000		
					12	Glazing Work						
1	set		1,851,000		Glazing Work		1	set		650,000		
			1,851,000		TOTAL					650,000		
					13	Painting Work						
					Steel Part Oil Paint		17.5	t	12,000	210,000		
					Wooden Part Oil Paint		442.0	m	350	154,700		
1,393	m ²	450	625,500		Acrylic Resin		1,390	m ²	350	486,500		
			625,500		TOTAL					851,200		
					14	Interior Finish Work						
1	set		5,100,000		Interior Finish Work		1	set		2,700,000		
			5,100,000		TOTAL					2,700,000		
					15	Miscellaneous Works						
1	set		2,100,000		Miscellaneous Work		1	set		900,000		
			2,100,000		TOTAL					900,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					II Storage 10 m x 8 m							
					1 Temporary Work	40,000				40,000		
					2 Earth Work	102,000				102,000		
					3 Foundation	910,000						
19.85	c	18,000	135,000		Cement							
2.3	c	60,000	138,000		Reinforcement							
					Others		1	set		477,000		
7.85	c	100,000	785,000		4 Steel Work	1,565,000						
					Materials							
					Labor Cost							
					5 Roofing & Steel Metal Work	342,000	1	set		342,000		
			340,000	ALC	6 Plastering Work	525,000				485,000		
					7 Plastering	78,000						
1.28	c	18,000	23,000		Cement							
					Aggregate Labor Cost		57	m ²		55,000		
					8 Aluminum Sash	300,000						
1	set		250,000		Sash							
					Labor Cost					60,000		
					9 Painting Work	100,000				100,000		
			95,000		10 Interior Finish Work	145,000				50,000		
			90,000		11 Miscellaneous Works	130,000				40,000		
			1,507,000		TOTAL	4,138,000				2,231,000		
					III Generator Station							
					6 m x 5 m							
					1 Temporary Work	30,000	1	set		30,000		
					2 Earth Work	33,000	1	"		33,000		
					3 Foundation	248,400						
3.5	c	18,000	63,000		Cement							
0.65	c	60,000	39,000		Reinforcement							
					Others					144,000		
					4 Steel Work	480,000						
2.4	c	100,000	240,000		Materials							
					Labor Cost		2.4	c	100,000	240,000		
					5 Roofing & Steel Metal Work	108,000				108,000		
1	set		115,000	ALC	6 Plastering Work	148,000						
										54,000	Labor Cost	
					7 Plastering	26,500						
			9,100		Cement							
					Labor Cost		18	m ²	970	17,400		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
1	set		76,800		8	Aluminum Sash	96,000					
						Labor Cost					19,200	
1	set		27,000		9	Glazing Work	36,000					
						Labor Cost					9,000	
					10	Painting Work (Coating)	54,000				54,000	
			30,000		11	Interior Finish Work	48,000				18,000	
			36,000		12	Miscellaneous Work	54,000				18,000	
			637,300			TOTAL	1,381,900				744,600	
			358,500		IV	Incinerator Station	903,900				514,400	
					V	Staff House (VIP) 2 Buildings						
					1	Temporary Work	530,000				530,000	
					2	Foundation Work						
5	c	18,000	108,000			Cement						
2.8	c	63,000	48,000			Reinforcement						
						Others					511,650	
			156,000			SCB-TOTAL					511,650	
					3	Wood Work	5,633,000				5,633,000	
					4	Roofing Work	952,000				952,000	
					5	Tile Work						
25	m ²	4,000	112,000			Materials			1	set	59,500	
						Labor Cost						
			112,000			SCB-TOTAL	171,500				59,500	
					6	Plastering						
11.15	c	18,900	201,300			Cement						
						Labor Cost					583,000	
			201,300			SCB-TOTAL	793,000				591,700	
					7	Aluminum Sash	1,360,000					
			1,115,200			Sash						
						Labor Cost		1	set		244,800	
			1,115,200			SCB-TOTAL	1,360,000				244,800	
					8	Wooden Fixtures	370,000				370,000	
			92,000		9	Glazing Work	120,000				30,000	Labor
					10	Painting Work (Coating)	250,000				250,000	
			585,000		11	Interior Finish Work	900,000				315,000	
			140,000		12	Miscellaneous Work	700,000				60,000	
			2,359,500			TOTAL	11,957,160				9,557,450	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					Y1 Staff House 12 Buildings							
1	set		444,000		1 Temporary Work	2,172,000	1	set		2,172,000		
					2 Foundation Work	2,520,000	1	-		2,076,000		
					3 Wood Work	22,718,400	1	-		22,718,400		
					4 Roofing & Steel Metal Work	3,744,000	1	-		3,744,000		
1	-		452,000		5 Tile Work	700,800	1	-		238,800		
1	-		831,600		6 Plastering	3,276,000	1	-		2,444,400		
1	-		4,512,000		7 Aluminium Sash	5,502,000	1	-		1,591,200		
					8 Wooden Fixtures	1,591,200	1	-		120,000		
1	-		350,400		9 Glazing Work	470,400	1	-		950,400		
					10 Painting Work	850,400	1	-		1,300,800		
1	-		2,400,000		11 Interior Finish Work	3,700,800	1	-		270,000		
					12 Miscellaneous Work	900,000	1	-				
			9,630,000		TOTAL	48,156,000				38,576,000		
					Staff House 12 Buildings							
					1 Temporary Work		1	set		2,172,000		
					2 Foundation Work							
15.4	c	18,000	275,200		Cement							
2.43	c	60,000	145,800		Reinforcement							
					Labor Cost		2.43	c	45,000	111,600		
					Molding Box		276	m ²	2,900	800,400		
					Plastering Work		300	m	400	132,000		
					Other Labor Cost		1	set		1,032,000		
			444,000		SCB-TOTAL	2,520,000				2,076,000		
					3 Wood Work							
					Structural Finishing Carpentry		150.00	m ²		12,006,000		
					Labor Cost		1,176			9,530,600		
					Nails		1	set		712,800		
					SCB-TOTAL					22,718,400		
					4 Roofing & Steel Metal Work							
					ϵ		576	m ²	6,300	3,744,000		
					SCB-TOTAL					3,744,000		
					5 Tile Work							
1	set		452,000		Materials							
					Labor Cost		1	set		238,800		
			452,000		SCB-TOTAL					238,800		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
15.2	t	18,000	831,600	Cement	6	Plastering						
						Plastering Work		2,520	m ²	970	2,446,400	
						Labor Cost						
			831,600			SUB-TOTAL						
1	set		4,512,000		7	Aluminum Sash						
						Aluminum Sash						
						Labor Cost		1	set		990,000	
			4,512,000			SUB-TOTAL					990,000	
					8	Wooden Fixtures						
						Wooden Fixtures		1	set		1,300,800	
						Labor Cost		1	set		200,400	
						SUB-TOTAL					1,501,200	
1	set		350,400		9	Glazing Work						
						Materials						
						Labor Cost		1	set		120,000	
			350,400			SUB-TOTAL					120,000	
					10	Painting Work						
						Painting Work		1	set		950,400	
						SUB-TOTAL					950,400	
1	set		2,400,000		11	Interior Finish Work						
						Materials						
						Labor Cost		1	set		1,300,800	
			2,400,000			SUB-TOTAL					1,300,800	
1	set		630,000		12	Miscellaneous Works						
						Materials						
						Labor Cost		1	set		270,000	
			630,000			SUB-TOTAL					270,000	
					VII	Crop Protection Brigade						
					1	Temporary Work	65,000				65,000	
					2	Earth Work	165,000				165,000	
					3	Foundation						
17.5	5	18,300	315,000			Cement						
1.7	5	63,000	222,000			Reinforcement						
						Others	1,319,000	1	set		773,000	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
12.6	t	100,000	1,260,000		4 Steel Work	2,520,000						
					Materials							
					Labor Cost		12.6	t	100,000	1,260,000		
1	set		552,000	ALC	5 Roofing & Steel Metal Work	552,000	1	set		552,000		
					6 Plastering Work	845,000	1	set		294,000		
					7 Plastering							
2.0	t	18,000	36,000	Concrete	Plastering Work	123,000	90	m ²	970	87,300		
1	set		442,000		8 Aluminium Sash	552,000	1	set		110,000		
1	set		138,000		9 Glazing Work	184,000				65,000		
					10 Painting Work	184,000	1	set		184,000		
					11 Interior Finish Work	267,000	1	set		92,000		
					12 Miscellaneous Work	240,000	1	set		74,000		
			3,306,000		TOTAL	7,009,300				3,703,300		
					53 Electrical Installation Work							
			2,330,000		1 Substation System	2,450,000	Labour	Cost		70,000		
			3,940,000		2 Generator System	4,060,000	Labour	Cost		120,000		
			2,470,000		3 Trunk Line Wiring	2,930,000	Labour	Cost		430,000		
			3,100,000		4 Lighting & Receptacle System	5,700,000	Labour	Cost		2,690,000		
			200,000		5 Telephone Wiring	300,000	Labour	Cost		100,000		
			360,000		6 T.V. Party-line System	450,000	Labour	Cost		43,000		
			400,000		7 Broadcast System	450,000	Labour	Cost		50,000		
			220,000		8 Interphone System	250,000	Labour	Cost		30,000		
			1,650,000		9 Automatic Fire Alarm System	2,000,000	Labour	Cost		350,000		
			270,000		10 Lightning Conductor System	340,000	Labour	Cost		70,000		
			14,910,000		SUB-TOTAL (a)	18,800,000				3,863,000		
					Director House C Type for 2 buildings							
			1,000,000		1 Trunk Line Wiring	1,200,000	Labour	Cost		200,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
			600,000		2	Lighting & Receptacle System	600,000	labour	Cost		200,000	
			28,000		3	Telephone Piping	40,000	labour	Cost		12,000	
			65,000		4	T.V. Party-line System	50,000	labour	Cost		5,000	
			1,473,000			Sub-TOTAL (b)	1,890,000				417,000	
						Staff House D Type 50 m ² for 1 Building						
			150,000		1	Lighting & Receptacle System	210,000	labour	Cost		60,000	
			8,000		2	Telephone Piping	16,000	labour	Cost		6,000	
			15,000		3	T.V. Party-line System	18,000	labour	Cost		3,000	
			173,000			Sub-TOTAL (1 set)	242,000				69,000	
			2,076,000			Sub-TOTAL (12 sets) (c)	2,934,000				828,000	
			18,459,000			GRAND TOTAL (a) + (b) + (c)	23,594,000				5,105,000	
			900,000		54	Plumbing Equipment Work						
			13,560,000		1	Plumbing Equipment Work	1,500,000				600,000	
			3,220,000		2	Water Tower Station	14,550,000				1,400,000	
					3	Water Supply Installation Work	4,600,000				1,380,000	
			2,590,000		4	Hot Water Supply	-					
					5	Drainage & Venting Installation Work	3,700,000				1,110,000	
			490,000		6	Fire Extinguishing Equipment	-					
			2,060,000		7	LPG Installation Work	600,000				120,000	
			14,855,000		8	Septic Tank	2,500,000				500,000	
			440,000		9	Cooling Installation	15,595,000				700,000	
					10	Ventilating System	600,000				160,000	
			38,033,000		11	Well						
						TOTAL	44,055,000				9,970,000	

APPENDIX -- B

Foreign Currency					Building Facility		Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks
					54 Plumbing Work						
			800,000		1 Plumbing Equipment Work						
			100,000		Sanitary Fixture						
					Cock (Faucet)						
			900,000		Labour Cost		1	set		600,000	
					SUB-TOTAL	1,500,000					
					2 Water Tower Station						
			3,900,000	10t	Water Tank						
			3,070,000	215a	Tower						
			500,000		Foundation Labour Cost					1,400,000	
			13,560,000		SUB-TOTAL	16,950,000				1,400,000	
					3 Water Supply Installation Work						
			1,030,000		Vinyl Pipe						
			270,000		Joint and Others						
			400,000		Valve						
			100,000		Anti-Leak Materials						
			920,000		Materials						
					Labour Cost		1	set		1,380,000	
			3,220,000		SUB-TOTAL					1,380,000	
					4 Hot Water Supply	-					
					5 Drainage & Venting Installation Work						
			140,000		Drainage Fittings						
			185,000		Vinyl Chloride Fittings						
			100,000		Drainage Leaden Pipe Fittings						
			370,000		Drainage Cast Iron Pipe						
			185,000		Metal						
			270,000		Anti-Leak Materials						
			240,000		Miscellaneous		1	set		1,110,000	
			2,549,000		SUB-TOTAL	3,700,000				1,110,000	
					6 Fire Extinguishing Equipment	-					
					7 LPG Installation Work						
			310,000		Joint and Others						
			50,000		Valve						
			120,000		Miscellaneous						
					Labour Cost		1	set		120,000	
			480,000		SUB-TOTAL	600,000				120,000	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			1,200,000		8 Septic Tank							
			800,000		Water Tank (50 persons)							
			2,000,000		Water Tank (35 persons)							
					Labor Cost		1	set		500,000		
					SUB-TOTAL	2,500,000				500,000		
					9 Cooling Installation							
1			3,560,000	3382-024	Large Heating Room 214.5 m ²							
					50700 Kcal/H							
1		935,000	935,000	3382-006	Small Heating Room 60 m ²							
					13700 Kcal/H							
1		595,000	595,000	3382-003								
5		690,000	5,520,000	3382-004								
3		755,000	2,855,000	3382-006								
			1,400,000		Electrical Work & Materials							
					Labor Cost		1	set		700,000		
14			14,835,000		SUB-TOTAL	15,595,000				700,000		
					10 Ventilating System							
2		22,000	440,000		Ventilation Fan		1	set		160,000		
			640,000		SUB-TOTAL	600,000				160,000		
					11 Well							
			114,373,900		TOTAL	287,210,380				177,836,450		

APPENDIX - B

Pesticide Laboratory

Foreign Currency					Building Facility		Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks
					51	Common Temporary Work	3,114,000			3,114,000	2.51
			30,144,550		52	Building Work	92,655,770			62,552,220	
			10,448,000		53	Electrical Installation Work	13,581,000			3,133,000	
			15,035,000		54	Plumbing Equipment Work	18,295,000			3,200,000	16.64 15
					55	Expenses	23,111,000			23,111,000	
			55,697,550			TOTAL	150,797,770			95,110,220	
					52	Building Work					
			20,534,200		I	Main Building	51,043,100			30,568,900	
			1,192,750		II	Director House 1 Building	5,978,590			4,778,840	
			6,414,100		III	Staff House 8 Buildings	32,045,080			25,630,950	
			1,935,500		IV	Storage	3,630,000			1,633,500	
			30,144,550			TOTAL	92,655,770			62,552,220	
					53	Electric Installation Work (see page 20)					
					I	Main Building					
					1	Temporary Work	1,450,000	1	set	1,450,000	
					2	Earth Work	770,000	1	set	770,000	
			2,450,000		3	Foundation	6,000,000			3,540,000	
			9,200,000		4	Steel Work	18,400,000			9,200,000	
			1,855,000		5	Auto-claved Light-weight Concrete Work	2,771,200			915,200	
					6	Wood Work	7,006,500			7,006,500	
					7	Roofing & Steel Metal Work	3,705,000			3,705,000	
			144,800		8	Tile Work	218,400			73,600	
			222,000		9	Plastering	956,000			679,000	
			2,271,400		10	Aluminum Sash	2,770,000			458,600	
			259,000		11	Wooden Fixtures	280,000			280,000	
			2,697,500		12	Glasing Work	350,000			91,000	
			1,099,000		13	Painting Work	745,000			426,500	
					14	Interior Finish Work	4,150,000			1,452,500	
					15	Miscellaneous Work	1,570,000			471,000	
			20,534,200			TOTAL	51,043,100			30,568,900	
					1	Temporary Work					
					20			1	set	1,450,000	
						SUB-TOTAL					

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					2 Earth Work							
					do		1	set		770,000		
					SUB-TOTAL							
					3 Foundation (Reinforced Concrete Work)							
					Materials		1	set		1,200,000		
73	t	1,800	1,260,000		Cement		200	m ³	1,500	300,000		
					Labor Cost		456	m ²	2,500	1,140,000		
23	t	50,000	1,200,000		Reinforcement		20	t	45,000	900,000		
					Labor Cost							
			2,450,000		SUB-TOTAL					3,540,000		
					4 Steel Work							
92	t	100,000	9,200,000		Material							
					Labor Cost		92	t	100,000	9,200,000		
			9,200,000		SUB-TOTAL					9,200,000		
					5 Auto-claved Light-Weight Concrete Work							
383	m ²	3,230	1,855,000		Material							
					Labor Cost		572		1,600	915,200		
			1,855,000		SUB-TOTAL					915,200		
					6 Wood Work							
					Structural Finishing Carpentry		42	m ²	75,000	3,150,000		
					Labor Cost		428	Per- son	8,500	3,645,500		
					Falls		1			210,000		
					SUB-TOTAL					7,005,500		
					7 Roofing & Steel Metal Work		570	m ²	6,500	3,705,000		
					SUB-TOTAL					3,705,000		
					8 Tile Work							
5	m ²	4,000	32,000		Mosaic Tile (floor)		8	m ²	2,000	16,000		
		4,700	112,800		do (wall)		24	m ²	2,400	57,600		
			144,800		SUB-TOTAL					73,600		

APPENDIX - B

Foreign Currency					Building Facility		Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks
690	m ²	330	227,000		9 Plastering						
					Plastering Work		700	m ²	970	679,000	
			227,000		Labor Cost						
					SUB-TOTAL					679,000	
					10 Aluminum Sash & Windows						
1	set		2,077,500		Aluminum Sash						
					Labor Cost		1	set		615,500	
1	set		193,900		Heavy-weight Rolling Shutter						
					Light-weight Rolling Shutter						
					Labor Cost		1	set		83,100	
			2,271,400		SUB-TOTAL					698,600	
					11 Wooden Fixtures						
					Doors		14	piece	17,500	245,000	
					Labor Cost		14	"	2,500	35,000	
					SUB-TOTAL					280,000	
					12 Glazing Work						
1	set		259,000		do		1	set		91,000	
			259,000		SUB-TOTAL					91,000	
					13 Painting Work						
					Steel Part Oil Paint		9	c	12,000	108,000	
					Wooden Part Oil Paint		210	m	350	73,500	
210	m ²	450	319,500		Acrylic Resin		700	m ²	350	245,000	
			319,500		SUB-TOTAL					426,500	
					14 Interior Finish Work						
1	set		2,697,500		do		1	set		1,452,500	
			2,697,500		SUB-TOTAL					1,452,500	
					15 Miscellaneous Work						
			1,099,000		do					671,000	
			1,099,000		SUB-TOTAL					671,000	
					11 Director House						
					1 Temporary Work	265,000				265,000	
			78,000		2 Foundation Work	333,840				255,840	
					3 Wood Work	2,816,500				2,816,500	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
					4	Roofing & Steel Metal Work	481,000				481,000	
			56,000		5	Tile Work	85,750				29,750	
			100,650		6	Plastering	356,500				255,850	
			557,600		7	Aluminium Sash	680,000				122,400	
					8	Wooden Fixtures	185,000				185,000	
			45,000		9	Glazing Work	60,000				15,000	
					10	Painting Work	125,000				125,000	
			292,500		11	Interior Finish Work	450,000				157,500	
			70,000		12	Miscellaneous Work	100,000				30,000	
			1,197,750			TOTAL	5,578,590				4,778,850	
					III	Staff House 8 Buildings						
					1	Temporary Work	1,450,000				1,450,000	
			300,000		2	Foundation Work	1,484,480				1,384,480	
					3	Wood Work	15,125,000				15,125,000	
					4	Roofing & Steel Metal Work	2,502,500				2,502,500	
			312,000		5	Tile Work	471,800				159,800	
			531,300		6	Plastering	2,121,300				1,590,000	
			3,009,400		7	Aluminium Sash	3,670,000				659,600	
					8	Wooden Fixtures	1,000,000				1,000,000	
			223,400		9	Glazing Work	310,000				80,600	
			1,612,000		10	Painting Work	630,000				630,000	
			470,000		11	Interior Finish Work	2,480,000				668,000	
					12	Miscellaneous Work	600,000				180,000	
			6,414,100			TOTAL	32,045,080				25,630,530	
					IV	STORAGE						
			1,501,500		1	Storage & Generator Station	2,720,000				1,728,500	
			495,000		2	Exciter Station	900,000				405,000	
			1,996,500			TOTAL	3,620,000				1,633,500	
					II	Director House 1 Building						
					1	Temporary Work		1	set		265,000	
						SUB-TOTAL					265,000	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					2	Foundation Work					55,000	
						Excavation		20	m ²	1,950	39,000	
						Fill Back		15	m ²	810	12,150	
						Surplus Soil Disposal		8	m ³	850	6,800	
						Cobblestone		3	m ²	6,780	20,340	
						Aggregate		1	set		39,650	
	t	18,000	54,000			Cement						
						Labor Cost		6	m ³	1,500	9,000	
0.4	t	60,000	24,000			Reinforcement					9,150	
						Labor Cost		0.4	t	4,500	18,000	
						Modling Box		33	m ²	2,970	95,700	
						Plastering Work		38	m	400	15,200	
			78,000			SUB-TOTAL				255,840	5,250	
					3	Wood Work						
						Structural Finishing		20	m ³	7,500	1,500,000	
						Carpentry						
						Labor Cost		145	Person	8,500	1,232,500	
						Nails		1	set		84,000	
						SUB-TOTAL				2,816,500		
					4	Roofing & Steel Metal Work						
						do		24	m ²	6,500	451,000	
						SUB-TOTAL				451,000		
					5	Tile Work						
14	m ²	4,000	56,000			Materials						
						Labor Cost		1	set		29,750	
			56,000			SUB-TOTAL				29,750		
					6	Plastering						
305	m ²	330	100,650	material		Plastering		305	m ²	970	295,850	
						Labor Cost						
			100,650			SUB-TOTAL				295,850		
					7	Aluminum Sash						
1	set		557,600			Aluminum Sash						
						Labor Cost		1	set		122,400	
			557,600			SUB-TOTAL				122,400		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					8	Wooden fixtures						
						Wooden fixtures		1	set	159,100		
						Labor Cost		1	set	25,900		
						SUB-TOTAL				185,000		
					9	Glazing Work						
1	set		45,000			Materials						
						Labor Cost		1	set	15,000		
			45,000			SUB-TOTAL				15,000		
					10	Painting Work						
						SUB-TOTAL		1	set	125,000		
					11	Interior finish Work						
1	set		292,500			Materials						
						Labor Cost		1	set	157,500		
					12	Miscellaneous Work						
1	set		70,000			Materials						
						Labor Cost		1	set	30,000		
			70,000			SUB-TOTAL				30,000		
					III	Staff House						
						8 Buildings						
					1	Temporary Work		1	set	1,450,000		
						SUB-TOTAL						
					2	Foundation Work						
						Excavation		103	m ³	1,950	200,850	
						Fill Back		83	m ³	810	67,230	
						Surplus Soil Disposal		40	m ³	850	34,000	
						Cobblestone		15	m ³	6,780	101,700	
						Aggregate		1	set	250,500		
11	t	18,000	198,000			Cement						
						Labor Work		36	m ³	1,500	54,000	
17	t	60,000	102,000			Reinforcement						
						Labor Work		1.7	t	45,000	76,500	
						Molding Box		179	m ²	2,900	519,100	
						Plastering Work		209	m	400	83,600	
			300,000			SUB-TOTAL				1,386,480		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					3	Wood Work						
						Structure Machinery		107	75,000	8,025,000		
						Labor Cost		282	8,590	6,617,000		
						Nails		1	set	453,000		
						SUB-TOTAL				15,125,000		
					4	Roofing & Steel Metal Work						
						do		385	m ²	6,500	2,502,500	
						SUB-TOTAL				2,502,500		
					5	Tile Work					470,000	
78	m ²	4,000	312,000			Materials						
						Labor Cost		1	set	159,800		
			312,000			SUB-TOTAL				159,800		
					6	Plastering						
619	m ²	330	531,300	material		Plastering Work		1,640	m ²	920	1,590,600	
			531,300			Labor Cost						
						SUB-TOTAL				1,590,600		
					7	Aluminum Sash						
1	set		3,009,400			Aluminum Sash						
						Labor Cost		1	set	660,600		
			3,009,400			SUB-TOTAL				660,600		
					8	Wooden Fixtures						
						Wooden Fixtures		1	set	870,000		
						Labor Cost		1	set	130,000		
						SUB-TOTAL				1,000,000		
					9	Glazing Work						
1	set		229,400			Materials						
						Labor Cost		1	set	80,600		
			229,400			SUB-TOTAL				80,600		
					10	Painting Work						
						Painting Work		1	set	630,600		
						SUB-TOTAL				630,600		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
1	set		1,612,000		11 Interior Finish Work							
					Materials							
					Labor Cost		1	set		868,000		
			1,612,000		SUB-TOTAL					868,000		
1	set		420,000		12 Miscellaneous Work							
					Materials							
					Labor Cost		1	set		180,000		
			420,000		SUB-TOTAL					180,000		
1	set		1,501,500		13 Storage							
1	set		435,000		1 Storage & Generator Station		1	set		1,228,500		
					2 Incinerator Station		1	set		605,000		
			1,936,500		SUB-TOTAL					1,833,500		
			7,990,000		53 Electrical Installation Work							
			1,235,000		1 Main Building	10,100,000				2,110,000		
			1,224,000		11 Director House	1,545,000				311,000		
			10,449,000		111 Staff House	1,936,000				717,000		
					TOTAL	13,581,000				3,133,000		
			2,730,000		1 Main Building							
			1,600,000		1 Generator System	3,000,000				270,000		
			2,000,000		2 Trunk Line Wiring	2,000,000				600,000		
			125,000		3 Lighting & Receptacle System	3,000,000				1,000,000		
			125,000		4 Telephone Piping	200,000				75,000		
			265,000		5 T.V. Party-line System	250,000				75,000		
			135,000		6 Broadcast System	300,000				35,000		
			550,000		7 Interphone System	150,000				15,000		
			7,990,000		8 Fire Alarm System	1,200,000				260,000		
					TOTAL	10,100,000				2,110,000		
			1,020,000		11 Director House & Building							
			150,000		1 Trunk Line Wiring	1,200,000				180,000		
			17,000		2 Lighting & Receptacle System	300,000				120,000		
					3 Telephone Piping	20,000				8,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
			1,234,000		4	T.V. Party-Line System	25,000				3,000	
						TOTAL	1,545,000				311,000	
			1,090,000		III	Staff House 8 Buildings						
			64,000		1	Lighting & Receptacle System	1,650,000				650,000	
			120,000		2	Telephone Piping	112,000				48,000	
			1,224,000		3	T.V. Party-Line System	144,000				24,000	
						TOTAL	1,936,000				712,000	
			2,130,000		1	Generator System	3,000,000				270,000	
			1,600,000		2	Trunk Line Wiring	7,000,000				400,000	
			2,000,000		3	Lighting & Receptacle System	3,000,000				1,000,000	
			125,000		4	Telephone Piping	200,000				75,000	
			125,000		5	T.V. Party-Line System	250,000				75,000	
			265,000		6	Broadcast System	300,000				35,000	
			135,000		7	Interphone System	150,000				15,000	
			550,000		8	Fire Alarm System	1,200,000				240,000	
			7,990,000			TOTAL (a)	10,100,000				2,210,000	
						Pesticide Laboratory C Type Director House						
			1,020,000		1	Trunk Line Wiring	1,200,000				180,000	
			150,000		2	Lighting & Receptacle System	200,000				120,000	
			12,000		3	Telephone Piping	20,000				8,000	
			22,000		4	T.V. Party-Line System	25,000				3,000	
			1,234,000			TOTAL (b)	1,545,000				311,000	
						Pesticide Laboratory D Type Staff House						
			130,000		1	Lighting & Receptacle System	210,000				80,000	
			8,000		2	Telephone Piping	14,000				6,000	
			15,000		3	T.V. Party-Line System	18,000				3,000	
			153,000			SUB-TOTAL	242,000				89,000	
			1,244,000			SUB-TOTAL (B sets) (c)	1,936,000				712,000	
			10,448,000			TOTAL (a) + (b) + (c)	12,581,000				3,133,000	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			680,000		54 Plumbing Equipment Work							
			2,240,000		1 Plumbing Equipment Work	800,000				320,000		
			1,680,000		2 Water Tower Station Work	2,800,000				560,000		
					3 Water Supply Installation Work	2,400,000				220,000		
					4 Hot Water Supply	-						
			1,400,000		5 Drainage & Venting Installation Work	2,000,000				600,000		
					6 Fire Extinguishing Equipment	-						
			240,000		7 LPG Installation Work	300,000				60,000		
			800,000		8 Septic Tank	1,000,000				200,000		
			7,595,000		9 Cooling Installation	8,095,000				500,000		
			650,000		10 Ventilating System	900,000				240,000		
					11 Well							
			15,095,000		TOTAL	18,235,000				3,200,000		
					54 Plumbing Equipment Work							
			430,000		1 Plumbing Equipment Work							
			50,000		Sanitary Fixtures							
					Cock (Faucet)							
					Labor Cost		1	set		320,000		
			480,000		SUB-TOTAL	800,000				320,000		
					2 Water Tower Station Work							
			600,000	4x	Water tank							
			1,240,000	TOTO	Tower							
			400,000		Pump							
					Foundation Labor Cost					560,000		
			2,240,000		SUB-TOTAL	2,800,000				560,000		
					3 Water Supply Installation Work							
			540,000		Vinyl Pipe							
			400,000		Joint and Others							
			200,000		Valve							
			60,000		Anti-Leak Materials							
			450,000		Miscellaneous							
					Labor Cost		1	set		220,000		
			1,650,000		SUB-TOTAL	2,400,000						

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Re- marks	Name	Cost	Number	Unit	Unit Price	Cost	Re- marks	
			600,000		4 Hot Water Supply							
			100,000		5 Drainage & Venting Installation Work							
			50,000		Drainage Fittings							
			200,000		Vinyl Chloride Fittings							
			100,000		Drainage Leaden Pipe Fittings							
			150,000		Drainage Cast Iron Pipe							
			600,000		Metal							
					Anti-Sev Materials						600,000	
					Miscellaneous							
					Labor Cost							
			1,600,000		SUB-TOTAL	2,000,000					600,000	
					6 Fire Extinguishing Equipment							
			155,000		7 LPG Installation Work							
			25,000		Joint and Others							
			60,000		Valve							
					Miscellaneous							
					Labor Cost						60,000	
			240,000		SUB-TOTAL	300,000					60,000	
					8 Septic Tank							
			800,000		Water Tank (35 persons)							
					Labor Cost		1	set			200,000	
			800,000		SUB-TOTAL	1,000,000					200,000	
					9 Cooling Installation							
1	unit		955,000	35-RE -006	Small Meeting Room 60 m ²							
6	-		3,570,000	35-RE -003	7600 Kcal/h							
3	-	90,000	2,070,000		8700 Kcal/h							
			1,000,000		Materials							
					Labor Cost		1	set			500,000	
			2,595,000		SUB-TOTAL	8,095,000					500,000	
					10 Ventilating System							
30	-	22,000	660,000		Ventilation Fan							
					Labor Cost						240,000	
			660,000		SUB-TOTAL	900,000					240,000	
					11 Well							
			55,697,550		TOTAL	150,797,770					95,110,220	

APPENDIX - B

Forecasting Laboratory

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks		Name	Cost	Number	Unit	Unit Price	Cost	Remarks
			25,783,000		51	Common Temporary Work	2,643,000				2,643,000	
			8,288,000		52	Building Work	78,506,430				51,723,430	
			13,950,000		53	Electrical Installation	10,755,000				2,467,000	
					54	Plumbing Equipment Work	16,460,000				2,480,000	
					55	Handling Expenses	19,841,000				19,841,000	
			49,051,000			TOTAL	128,205,430				79,154,430	
					52	Building Work						
			19,990,200		I	Main Building	49,511,400				29,521,200	
			1,501,500		II	Storage 6 m x 5 m	2,730,000				1,228,500	
			495,000			Generator Station 6 m x 5 m	900,000				405,000	
			359,500			Incinerator Station 5 m x 4 m	903,900				514,400	
						Window Screen 6 m x 9 m	2,460,000				2,460,000	
			1,199,750		III	Staff Zone (VIP) 1 Building	5,978,590				4,778,840	
			3,207,050			Staff House (VIP) D Type 4 Buildings	16,022,540				12,815,490	
			26,783,000			TOTAL	78,506,430				51,723,430	
						Main Building						
1	set				1	Temporary Work	1,350,000	1	set		1,350,000	
1	"				2	Earth Work	750,000	1	"		750,000	
1	"		2,424,000		3	Foundation	5,877,000	1	"		3,453,000	
1	"		9,000,000		4	Steel Work	18,000,000	1	"		9,000,000	
1	"		1,811,200		5	Auto-claved light-weight Concrete Work	2,702,400	1	"		891,200	
					6	Wood Work	6,686,000	1	"		6,686,000	
					7	Roofing & Steel Metal Work	3,600,000	1	"		3,600,000	
1	set		136,100		8	Tile Work	205,300	1	"		69,200	
1	"		201,300		9	Plastering	802,700	1	"		601,400	
1	"		2,214,000		10	Aluminium Sash	2,700,000	1	"		486,000	
					11	Wooden Fixtures	280,000	1	"		280,000	
1	set		244,000		12	Glassing Work	330,000	1	"		85,800	
1	"		309,600		13	Painting Work	727,700	1	"		418,100	
1	"		2,600,000		14	Interior Finish Work	4,000,000	1	"		1,400,000	
1	"		1,050,000		15	Miscellaneous Work	1,500,000	1	"		450,000	
			19,990,200			TOTAL	49,511,400				29,521,200	

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					1	Temporary Work		1	set	1,350,000		
						SUB-TOTAL				1,350,000		
					2	Earth Work		1	set	250,000		
						SUB-TOTAL				250,000		
					3	Foundation						
						Aggregate		1	set	1,160,000		
45	c	18,000	1,224,000			Cement						
						Labor Cost	194	m ³	1,500	291,000		
						Molding Box	441		2,500	1,102,500		
20	c	60,000	1,200,000			Reinforcement						
						Labor Cost	20	t	45,000	900,000		
			2,424,000			SUB-TOTAL				3,453,000		
					4	Steel Work						
33	c		9,000,000			Material						
						Labor Cost	90	t	100,000	9,000,000		
			9,000,000			SUB-TOTAL				9,000,000		
					5	Auto-cured light-weight Concrete Work						
566		3,200	1,811,200			Material						
						Labor Cost	557		1,650	831,200		
			1,811,200			SUB-TOTAL				831,200		
					6	Wood Work						
						Structural Finishing Carpentry	40		75,000	3,000,000		
						Labor Cost	410		8,500	3,485,000		
						Nails	1	set		201,000		
						SUB-TOTAL				6,686,000		
					7	Roofing & Steel Metal Work				3,600,000		
						do						
						SUB-TOTAL				3,600,000		
					8	Tile Work						
7	m ²	4,000	28,000			Keramic Tile (floor)	7		2,000	14,000		
23	"	4,200	168,100			do (wall)	23		2,400	55,200		
			196,100			SUB-TOTAL				69,200		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
11-13		330	201,300		9 Plastering							
			201,300		Plastering Work		620	m ²	920	601,400		
					SUB-TOTAL					601,400		
1	set		2,025,000		10 Aluminum Sash							
					Aluminum Sash							
					Labor Cost		1	set		405,000		
1	set		159,000		Heavy-weight Rolling Shutter							
					Light-weight Rolling Shutter							
					Labor Cost		1	set		81,000		
			2,214,000		SUB-TOTAL					486,000		
					11 Wooden Sinteres							
					Door		14	Place	17,500	245,000		
					Labor Cost		14	Place	2,500	35,000		
					SUB-TOTAL					280,000		
					12 Glazing Work							
			244,700		do		1	set		85,800		
			244,700		SUB-TOTAL					85,800		
					13 Painting Work							
					Steel Part Oil Paint		9	t	12,000	108,000		
					Wooden Part Oil Paint		206	m	350	72,100		
535	m ²	350	309,600		Acrylic Resin		480	m ²	350	168,000		
			309,600		SUB-TOTAL					418,100		
					14 Interior Finish Work							
					do							
					Labor Cost		1	set		1,400,000		
			2,600,000		SUB-TOTAL					1,400,000		
					15 Miscellaneous Works							
					Miscellaneous Works		1	set		450,000		
			1,050,000		SUB-TOTAL					450,000		
					STAFF HOUSE & Buildings							
					1 Temporary Work	724,000				724,000		
			148,000		2 Foundation Work	840,000				692,000		
					3 Earth Work	1,572,000				7,522,000		
					4 Roofing & Sheet Metal Work	1,248,000				1,248,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			154,000		5	Tile Work	233,600			79,600		
			272,200		6	Plastering	1,092,000			814,800		
			1,504,000		7	Aluminum Sash	1,834,000			330,000		
					8	Wooden Fixtures	500,400			500,600		
			116,800		9	Glazing Work	156,800			40,000		
					10	Painting Work (Coating)	316,800			316,800		
			800,000		11	Interior Finish Work	1,233,600			433,600		
			210,000		12	Miscellaneous Work	271,340			61,340		
			3,210,000			TOTAL	15,022,540			12,812,540		
						STAFF HOUSE 1 Building						
					1	Temporary Work	181,000			181,000		
			37,000		2	Foundation Work	210,600			173,000		
					3	Wood Work	1,893,200			1,893,200		
					4	Roofing & Steel Metal Work	312,000			312,000		
			38,500		5	Tile Work	59,400			19,900		
			69,300		6	Plastering	273,000			203,200		
			376,000		7	Aluminum Sash	458,500			82,500		
					8	Wooden Fixtures	125,100			125,000		
			29,200		9	Glazing Work	39,200			10,000		
					10	Painting Work	79,200			79,200		
			200,000		11	Interior Finish Work	308,400			108,400		
			52,500		12	Miscellaneous Work	75,000			22,500		
			802,500			TOTAL	4,013,000			3,210,500		
					1	Temporary Work		1	set	181,000		
						SUB-TOTAL				181,000		
1.36	t	18,000	24,600		2	Foundation Work				65,000		
0.21	t	60,000	12,400			Reinforcement						
						Labor Cost		0.21	t	45,000	10,000	
						Molding Box		23	m ²	2,900	67,000	
						Plastering Work		27.5	m	400	11,000	
			37,000			SUB-TOTAL	210,000			173,000		
					3	Wood Work						
						Structural Finishing Carpentry		13.35		75,000	1,000,000	
						Labor Cost		58		3,500	833,300	
						Falls		1	set		59,400	
						SUB-TOTAL				1,893,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					4	Roofing & Steel Metal Work		48	m ²	6,500	312,000	
						SUB-TOTAL				312,000		
1	set		38,500		5	Tile Work						
						Materials		1	set		19,900	
						Labor Cost						
						SUB-TOTAL				19,900		
3.83	c	18,000	69,300		5	Plastering						
						Plastering Work		210	m ²	970	203,700	
			69,300			SUB-TOTAL				203,700		
1	set		376,000		7	Aluminum Sash						
						Aluminum Sash						
						Labor Cost		1	set		82,500	
			376,000			SUB-TOTAL				82,500		
					8	Wooden Frames						
						Wooden Frames					108,400	
						Labor Cost		1	set		16,700	
						SUB-TOTAL				125,100		
1	set		29,700		9	Glasng Work						
						Materials						
						Labor Cost		1	set		10,000	
			29,700			SUB-TOTAL				10,000		
					10	Painting Work (Coating)						
						Painting Work		1	set		79,200	
						SUB-TOTAL				79,200		
1	set		200,000		11	Interior Finish Work						
						Materials						
						Labor Cost		1	set		108,400	
			200,000			SUB-TOTAL				108,400		
1	set		52,500		12	Miscellaneous Work						
						Materials						
						Labor Cost		1	set		22,500	
			52,500			SUB-TOTAL				22,500		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			7,255,000		53 Electrical Installation Work							
			2,600,000		I Main Building	9,410,000				2,155,000		
			728,000		II D Type 4 Buildings	980,000				252,000		
			305,000		III C Type 1 Building	365,000				60,000		
			8,288,000		TOTAL	10,755,000				2,467,000		
					Forecasting Laboratory							
					C Type Building							
					D Type Building							
			2,600,000		1 Generator System	3,000,000	Labor	Cost		400,000		
			1,500,000		2 Trunk Line Wiring	1,800,000				300,000		
			1,620,000		3 Lighting & Receptacle System	2,700,000	-			1,080,000		
			170,000		4 Telephone Piping	180,000	-			60,000		
			190,000		5 T.V. Party-line System	220,000	-			30,000		
			270,000		6 Broadcast System	300,000	-			30,000		
			135,000		7 Interphone System	150,000	-			15,000		
			820,000		8 Fire Alarm System	1,060,000	-			240,000		
			7,255,000		SUB-TOTAL (a)					2,155,000		
					Forecasting Laboratory							
					D Type Building							
			150,000		1 Lighting & Receptacle System	200,000				50,000		
			12,000		2 Telephone Piping	20,000				8,000		
			20,000		3 T.V. Party-line System	25,000	Labor	Cost		5,000		
			182,000		SUB-TOTAL (b)	245,000				63,000		
			728,000		SUB-TOTAL (4 Buildings)	980,000				252,000		
					Forecasting Laboratory							
					C Type Building							
			255,000		1 Lighting & Receptacle System	300,000	Labor	Cost		45,000		
			20,000		2 Telephone Piping	30,000	-			10,000		
			30,000		3 T.V. Party-line System	35,000	-			5,000		
			305,000		SUB-TOTAL (c)	365,000				60,000		
			8,288,000		Total (a) + (b) + (c)	10,755,000				2,467,000		
					54 Plumbing Equipment Work							
			360,000		1 Plumbing Equipment Work	600,000				240,000		
			2,240,000		2 Water Tower Station Work	2,800,000				560,000		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			1,330,000		3 Water Supply Installation Work	1,900,000				570,000		
					4 Hot Water Supply							
			1,050,000		5 Drainage & Venting Installation Work	1,500,000				450,000		
					6 Fire Extinguishing Equipment							
			160,000		7 LPG Installation Work	200,000				60,000		
			800,000		8 Septic Tank	1,000,000				200,000		
			7,710,000		9 Cooling Installation	8,010,000				300,000		
			330,000		10 Ventilating System	450,000				120,000		
					11 Well							
			13,580,000		TOTAL	16,450,000				2,480,000		
					14 Plumbing Work							
					1 Plumbing Equipment Work							
			320,000		Sanitary Fixtures							
			40,000		Cock (Faucet)							
					Labor Cost		1	set		240,000		
			360,000		SUB-TOTAL							
					2 Water Tower Station Work							
			600,000	4c	Water Tank							
				TOTO	Steel Tower							
			1,240,000		Pump							
			500,000		Labor Cost					560,000		
			2,240,000		SUB-TOTAL	2,800,000				560,000		
					3 Water Supply Installation Work							
			430,000		Vinyl Pipe							
			300,000		Joint and Others							
			140,000		Valve							
			80,000		Anti-Cor Materials							
			380,000		Miscellaneous							
					Labor Work					570,000		
			1,330,000		SUB-TOTAL	1,900,000				570,000		
					4 Hot Water Supply							
					5 Drainage & Venting Installation Work							
			300,000		Drainage Fittings							
			15,000		Vinyl Chloride Fittings							

APPENDIX -- B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			35,000		Drainage Leader Pipe Fittings							
			170,000		Drainage Cast Iron Pipe							
			75,000		Metal							
			95,000		Anti-Cew Materials							
			300,000		Miscellaneous							
					Labor Cost			1	set	450,000		
			1,050,000		SUB-TOTAL	1,500,000				450,000		
					6 Fire Extinguishing Equipment	-						
					7 LPG Installation Work							
			105,000		Joint and Others							
			15,000		Valve							
			40,000		Miscellaneous							
					Labor Cost			1	set	40,000		
			160,000		SUB-TOTAL	200,000				40,000		
					8 Septic Tank							
			850,000		Water Tank (35 persons)							
					Labor Cost					200,000		
					SUB-TOTAL	1,000,000				200,000		
					9 Cooling Installation							
			2,100,000	38-72-012	Medium Meeting Room 98 m ²							
2	unit	595,000	1,190,000	38-72-003	7,650 Kcal/H							
4	"	855,000	3,820,000	38-72-006	13,700 Kcal/H							
			600,000		Materials							
					Labor Cost					300,000		
			7,710,000		SUB-TOTAL	7,740,000				300,000		
					10 Ventilating System							
15	"	22,000	330,000		Ventilation Fan							
					Labor Cost					120,000		
					SUB-TOTAL	450,000				120,000		
					11 Well							
			49,051,000		TOTAL	128,265,430				79,154,430		

Pest Observatory Unit

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					51	Common Temporary Work	681,000			681,000	4.9%	
			2,206,600		52	Building Work	10,796,000			8,589,000		
			228,000		53	Electrical Installation Work	283,000			55,000		
			1,090,000		54	Plumbing Equipment Work	1,490,000			600,000	8.2% 1.5	
					55	Handling Expenses	3,026,000			3,026,000		
			3,524,600			TOTAL	16,276,000			12,751,400		
					52	Building Work						
1	set		126,000		1	Temporary Work	485,000	1	set	485,000		
					2	Foundation Work	581,900	1	"	455,900		
					3	Wood Work	5,267,500	1	"	5,267,500		
					4	Roofing & Steel Metal Work	884,000			834,000		
			136,100		5	Tile Work	205,300	1	"	69,200		
			75,900		6	Plastering	318,400	1	"	242,500		
			403,200		7	Auto-claved Light-weight Concrete Work	601,600	1	"	153,400		
			574,000		8	Aluminum Sash	700,000	1	"	126,000		
					9	Wooden Fixtures	360,000	1	"	360,000		
			81,400		10	Glazing Work	110,600			28,600		
			85,500		11	Painting Work	292,300			116,800		
			409,500		12	Interior Finish Work	630,000	1	"	220,500		
			315,000		13	Miscellaneous Work	450,000			135,000		
			2,206,600			TOTAL	10,796,000			8,589,400		
					1	Main Building						
					1	Temporary Work		1	set	485,000		
						SUB-TOTAL				485,000		
					2	Foundation Work		1	set	205,200		
5	t	18,000	90,000			Cement						
						Labor Cost 0.03		12	m ³	1,500	18,000	
0.5	t	60,000	30,000	0.06		Reinforcement						
						Labor Cost 0.05		0.6	t	65,000	27,000	
						Holding Box 0.21		61	m ³	2,900	176,900	
						Plastering Work 0.05		72	m	400	28,800	
			126,000			SUB-TOTAL				455,900		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
					3 Wood Work							
					Structural Finishing Carpentry		32	m ³	75,000	2,400,000		
					Labor Work		319	t	8,500	2,711,500		
					Falls		1	set		156,000		
					SUB-TOTAL					5,267,500		
					4 Roofing & Steel Metal Work		136	m ²	6,500	884,000		
					SUB-TOTAL					884,000		
					5 Tile Work							
7	m ²	4,000	28,000		Mosaic Tile (floor)		7	m ²	2,000	14,000		
23	"	4,700	108,100		do (wall)		23	"	2,400	55,200		
			136,100		SUB-TOTAL					69,200		
					6 Plastering							
4.22	t	18,000	75,900		Plastering Work		250	m ²	970	242,500		
			75,900		Labor Cost							
					SUB-TOTAL					242,500		
					7 Auto-claved Light-weight Concrete Work							
126	m ²	3,200	403,200		Material							
			403,200		Labor Cost		124	m ²	1,600	198,400		
					SUB-TOTAL					198,400		
					8 Aluminum Sash							
1	set		574,000		Aluminum Sash							
			574,000		Labor Cost		1	set		126,000		
					SUB-TOTAL					126,000		
					9 Wooden Fixtures							
					Door		18	set	17,500	315,000		
					Labor Cost		18	place	2,500	45,000		
			315,000		SUB-TOTAL					360,000		
					10 Glazing Work							
1	set		81,400		Glazing Work		1	set		28,600		
			81,400		SUB-TOTAL					28,600		
					11 Painting Work							
190	m ²	450	85,500		Steel Part Oil Painting		2.5	t	12,000	30,000		
					Wooden Part Oil Painting		58	m	350	20,300		

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			85,500		Acrylic Resin		190	m ²	350	66,500		
					SUB-TOTAL					116,800		
1	set		409,500		12 Interior Finish Work							
			409,500		do		1	set		220,500		
					SUB-TOTAL					220,500		
2	set		315,000		13 Miscellaneous Works							
			315,000		do		1	set		135,000		
					SUB-TOTAL					135,000		
					53 Electrical Installation Work							
			190,000	Lighting Fixtures, Conduit Pipe, To Cable, Conduit in Borehole Box, Wiring Materials	1 Lighting & Receptacle System	230,000				40,000		
			18,000	Lighting Fixtures, Wiring Materials Conduit Pipe, Box, To Cable Conduit in Borehole	2 Telephone Piping	28,000				10,000		
			20,000	Access, Section Box, Conduit Pipe, To Cable, Conduit in Borehole Box	3 T.V. Party-line System	25,000				5,000		
			228,000		GRAND TOTAL	283,000				55,000		
					54 Plumbing Equipment Work							
			78,000		1 Plumbing Equipment Work	130,000				52,000		
			160,000		2 Water Tower Station Work							
			280,000		Pump	200,000				40,000		
					3 Water Supply Installation Work	400,000				120,000		
			210,000		4 Hot Water Supply	-						
					5 Drainage & Venting Installation Work	300,000				90,000		
			55,000		6 Fire Extinguishing Equipment	-						
			240,000		7 LPG Installation Work	70,000				14,000		
					8 Septic Tank	300,000				60,000		
			66,000		9 Cooling Installation	-						
			1,090,600		10 Ventilating System	90,000				24,000		
					TOTAL	1,490,000				400,000		
			70,000		1 Plumbing Equipment Work							
			8,000		Sanitary Fixtures							
					Cock (Faucet)							
			78,000		Labor Cost		1	set		52,000		
					SUB-TOTAL	130,000				52,000		
			160,000		2 Water Tower Station							
					Pump							

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			160,000		Labor Cost					40,000		
					SUB-TOTAL	200,000				40,000		
				3	Water Supply Installation Work							
			90,000		Vinyl Pipe							
			30,000		Joint and Others							
			30,000		Valve							
			50,000		Anti-leak Materials							
			80,000		Miscellaneous							
					Labor Cost					120,000		
			280,000		SUB-TOTAL	400,000				120,000		
				4	Hot Water Supply	-						
				5	Drainage & Venting Installation Work							
			60,000		Drainage Pipe Fittings							
			15,000		Vinyl Chloride Fittings							
			8,000		Drainage Leaden Pipe Fittings							
			30,000		Drainage Cast Iron Pipe							
			20,000		Metal							
			11,000		Anti-leak Materials							
			60,000		Miscellaneous							
					Labor Cost		1	set		50,000		
			210,000		SUB-TOTAL	300,000				50,000		
				6	Fire Extinguishing Equipment	-						
				7	LPG Installation Work							
			35,000		Joint and Others							
			7,000		Valve							
			14,000		Miscellaneous							
					Labor Cost		1	set		14,000		
			56,000		SUB-TOTAL	20,000				14,000		
				8	Septic Tank							
			240,000		Water Tank (5 persons)							
					Labor Cost		1	set		60,000		
			240,000		SUB-TOTAL	300,000				60,000		
				9	Cooling Installation							
				10	Ventilating System							
1		22,000	65,000		Ventilation Fan							

APPENDIX - B

Foreign Currency					Building Facility			Local Currency				
Number	Unit	Unit Price	Cost	Remarks	Name	Cost	Number	Unit	Unit Price	Cost	Remarks	
			65,000		Labor Cost					24,000		
			3,524,600		SUB-TOTAL	90,000				24,000		
					TOTAL	15,276,000				12,751,499		

JICA