

Table 59 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1980/I (1/2)

1980/I	Y 1980																	Unit: %
	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	
Total Area	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	7
18,573 ha	D	23	4	15	22	29	5	12	19	26	3	10	17	24	31	7	14	6
Phase 1 : Nursery 117 ha; Main field 4,433 ha																		
Nursery		25	60	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	7	73	98	99	99	99	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		13	35	40	67	75	80	90	100	100	100	100	100	100	100	100	100	100
Transplanting								7	10	65	80	93	100	100	100	100	100	100
Flowering																		
Ripening																		
Harvesting																		
Phase 2 : Nursery 201 ha; Main field 5,026 ha																		
Nursery			14	31	80	95	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		35	50	78	96	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			10	23	30	35	78	93	100	100	100	100	100	100	100	100	100	100
Transplanting								1	10	15	35	80	85	90	99	100	100	100
Flowering																		
Ripening																		
Harvesting																		
Phase 3 : Nursery 195 ha; Main field 4,864 ha																		
Nursery										60	70	100	100	100	100	100	100	100
Presaturation						18	24	55	85	85	90	95	100	100	100	100	100	100
Land preparation							5	15	35	40	65	85	100	100	100	100	100	100
Transplanting										2	10	51	56	60	62	80	100	100
Flowering																		
Ripening																		
Harvesting																		
Phase 4 : Nursery 170 ha; Main field 4,250 ha																		
Nursery										30	50	60	100	100	100	100	100	100
Presaturation										55	60	65	81	91	95	100	100	100
Land preparation										10	18	18	21	30	45	68	85	100
Transplanting													4	5	7	12	30	80
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 25

Table 60 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1980/I (2/2)

		Unit: %																	
1980/I	Y 1980																		
Total Area	M	7	7	8	8	8	8	8	9	9	9	9	10	10	10	10	11	11	
18,573 ha	D	12	19	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	
Phase 1 :		Nursery 117 ha, Main field 4,433 ha																	
Nursery		100	100	100	100	100	100	100											
Presaturation		100	100	100	100	100	100	100											
Land preparation		100	100	100	100	100	100	100											
Transplanting		100	100	100	100	100	100	100											
Flowering		75	80	53	15														
Ripening			20	37	60	70	10												
Harvesting				10	25	30	90	100											
Phase 2 :		Nursery 201 ha, Main field 5,026 ha																	
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		5	10	70	75	62	15	10											
Ripening					20	30	60	27	25	10									
Harvesting					5	8	25	63	75	90	100								
Phase 3 :		Nursery 195 ha, Main field 4,864 ha																	
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering								70	73	60	40	35	10	5					
Ripening								8	23	25	30	25	30	20	5				
Harvesting								4	15	30	40	60	75	95	100				
Phase 4 :		Nursery 170 ha, Main field 4,250 ha																	
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering								20	55	75	69	50	25	10					
Ripening								5	7	18	33	50	45	30	10	1			
Harvesting									3	7	12	25	45	70	90	99	100		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 25

Table 61 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1980/I (1/2)

1980/I	Y 1980														Unit: %			
Total Area	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	7
24,534 ha	D	23	4	15	22	29	5	12	19	26	3	10	17	24	31	7	14	6
Phase 1 : Nursery 237 ha; Main field 5,915 ha																		
Nursery		25	96	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	15	43	91	97	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		9	46	64	87	96	99	100	100	100	100	100	100	100	100	100	100	100
Transplanting						1	6	22	55	77	96	100	100	100	100	100	100	100
Flowering																		
Ripening																		
Harvesting																		
Phase 2 : Nursery 148 ha; Main field 3,708 ha																		
Nursery		25	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	20	72	97	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		10	45	66	78	90	96	99	100	100	100	100	100	100	100	100	100	100
Transplanting								2	8	18	58	80	97	98	100	100		
Flowering																		
Ripening																		
Harvesting																		
Phase 3 : Nursery 363 ha; Main field 9,077 ha																		
Nursery		5	30	62	75	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		20	57	93	98	99	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		13	27	55	65	77	89	96	100	100	100	100	100	100	100	100	100	100
Transplanting								2	16	31	41	61	74	90	99			
Flowering																		
Ripening																		
Harvesting																		
Phase 4 : Nursery 233 ha; Main field 5,834 ha																		
Nursery		25	63	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		75	81	81	88	94	98	99	100	100	100	100	100	100	100	100	100	100
Land preparation		23	39	51	62	74	98	98	98	99	100	100	100	100	100	100	100	100
Transplanting								2	13	31	50	55	72	85				
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year; M: Month, D: Date

Source; Refs. 22 and 25

Table 62 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1980/I (2/2)

1980/I	Y 1980																Unit: %	
	M	7	8	8	8	8	8	9	9	9	9	10	10	10	10	11		11
	D	12	19	2	9	16	23	30	6	13	20	27	4	11	18	25		1
Total Area	24,534 ha																	
Phase 1 : Nursery 237 ha; Main field 5,915 ha																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Flowering	64	70	49	25	15	5	2											
Ripening	2	17	34	41	40	30	28	4										
Harvesting		2	15	34	45	65	70	96	100									
Phase 2 : Nursery 148 ha; Main field 3,708 ha																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Flowering	4	7	40	61	71	57	55	40										
Ripening			1	6	14	26	15	10	30	14	6	3						
Harvesting						7	20	50	70	86	94	97	100					
Phase 3 : Nursery 363 ha; Main field 9,077 ha																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Flowering	1	2	12	27	30	53	46	43	29	13	10	1						
Ripening				1	3	11	8	20	26	27	28	11	4	1				
Harvesting						1	1	22	42	60	62	89	96	99	100			
Phase 4 : Nursery 233 ha; Main field 5,834 ha																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Flowering		5	8	23	40	47	40	53	43	36	22	17	11	10	5	3		
Ripening					1	7	4	26	32	29	49	15	10	10	10	12	10	
Harvesting						3	3	11	15	25	29	68	79	80	85	85	90	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 25

Table 63 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1980/II (1/2)

1980/II	Y 1980												Unit: %			
	M	9	10	10	10	10	11	11	11	11	11	12	12	12	12	12
Total Area	D	27	4	11	18	25	1	8	15	22	29	6	13	20		
Phase 1 : Nursery 212 ha; Main field 5,298 ha																
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		64	73	86	89	97	100	100	100	100	100	100	100	100	100	100
Transplanting		3	7	22	36	74	86	91	100	100	100	100	100	100	100	100
Flowering																
Ripening																
Harvesting																
Phase 2 : Nursery 205 ha; Main field 5,127 ha																
Nursery		50	80	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		19	33	52	73	84	97	100	100	100	100	100	100	100	100	100
Transplanting				4	13	27	50	69	85	92	97	100	100	100	100	100
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 324 ha; Main field 8,105 ha																
Nursery		5	20	30	60	80	95	95	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		3	9	14	26	33	59	70	79	88	97	100	100	100	100	100
Transplanting				1	2	3	8	17	32	52	68	81	92	99		
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month; D: Date

Source; Refs. C 22 and C 26

Table 64 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1980/II (2/2)

Unit: %

1980/II	Y '80	1981											
Total Area	M 12	1	1	1	1	2	2	2	3	3	3	4	4
18,530 ha	D 27	3	10	17	31	7	21	28	14	21	28	4	11

Phase 1 : Nursery 212 ha; Main field 5,298 ha

Nursery	100	100	100	100	100	100	100	100	100				
Presaturation	100	100	100	100	100	100	100	100	100				
Land preparation	100	100	100	100	100	100	100	100	100				
Transplanting	100	100	100	100	100	100	100	100	100				
Flowering		60	80	90	100								
Ripening		5	35	40	70	90	96	100					
Harvesting			10	12	50	72	93	96	100				

Phase 2 : Nursery 205 ha; Main field 5,127 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100		
Presaturation	100	100	100	100	100	100	100	100	100	100	100		
Land preparation	100	100	100	100	100	100	100	100	100	100	100		
Transplanting	100	100	100	100	100	100	100	100	100	100	100		
Flowering		50	70	70	100								
Ripening		1	5	5	43	72	73	91	99	100			
Harvesting			1	1	16	20	65	78	92	99	100		

Phase 3 : Nursery 324 ha; Main field 8,105 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	
Flowering		20	30	35	55	59	61	90	99	100			
Ripening			1	1	12	18	59	72	82	98	100		
Harvesting					2	3	12	21	63	82	99	100	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 65 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1980/II (1/2)

Unit: %

1980/II	Y 1980												
Total Area	M 9	10	10	10	10	11	11	11	11	1	12	12	12
31,902 ha	D 27	4	11	18	25	1	8	15	22	29	6	13	20
Phase 1 : Nursery 173 ha; Main field 4,330 ha													
Nursery	81	90	92	99	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	43	51	64	87	94	99	100	100	100	100	100	100	100
Transplanting			2	9	27	52	69	85	98	100	100	100	100
Flowering													
Ripening													
Harvesting													
Phase 2 : Nursery 436 ha; Main field 10,890 ha													
Nursery	29	54	78	89	99	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	10	16	28	52	71	84	95	99	100	100	100	100	100
Transplanting				2	5	23	45	67	86	97	99	100	100
Flowering													
Ripening													
Harvesting													
Phase 3 : Nursery 667 ha; Main field 16,682 ha													
Nursery	4	4	11	36	56	80	98	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	1	1	8	9	21	36	59	72	88	97	100	100	100
Transplanting						3	7	17	34	52	80	93	99
Flowering													
Ripening													
Harvesting													

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 66 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1980/II (2/2)

Unit: %

1980	Y '80	1981											
Total Area	M 12	1	1	1	1	2	2	2	3	3	3	4	4
31,902 ha	D 27	3	10	17	31	7	21	27	14	21	28	4	11

Phase 1 : Nursery 173 ha; Main field 4,330 ha

Nursery	100	100	100	100	100	100	100	100	100	100			
Presaturation	100	100	100	100	100	100	100	100	100	100			
Land preparation	100	100	100	100	100	100	100	100	100	100			
Transplanting	100	100	100	100	100	100	100	100	100	100			
Flowering		53	75	89	100								
Ripening			3	19	60	87	97	100					
Harvesting				2	33	47	83	97	100				

Phase 2 : Nursery 436 ha; Main field 10,890 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100		
Presaturation	100	100	100	100	100	100	100	100	100	100	100		
Land preparation	100	100	100	100	100	100	100	100	100	100	100		
Transplanting	100	100	100	100	100	100	100	100	100	100	100		
Flowering		15	40	62	92	98	98	100					
Ripening				1	28	72	82	99	100				
Harvesting					5	17	57	79	99	100			

Phase 3 : Nursery 667 ha; Main field 16,682 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		2	5	17	50	61	68	91	100				
Ripening					19	27	59	67	80	95	100		
Harvesting					1	2	12	26	58	78	95	100	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 67 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1980/II (1/2)

Unit: %														
1980	Y 1980													
Total Area	M	9	10	10	10	10	11	11	11	11	11	12	12	12
20,894 ha	D	27	4	11	18	25	1	8	15	22	29	6	13	20
Phase 1 : Nursery 201 ha; Main field 5,033 ha														
Nursery	95	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	70	80	82	84	100	100	100	100	100	100	100	100	100	100
Transplanting		2	5	42	65	80	92	98	100	100	100	100	100	100
Flowering														
Ripening														
Harvesting														
Phase 2 : Nursery 212 ha; Main field 5,302 ha														
Nursery	8	30	90	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	15	25	30	60	75	90	92	100	100	100	100	100	100	100
Transplanting					5	25	45	60	80	90	99	100	100	100
Flowering														
Ripening														
Harvesting														
Phase 3 : Nursery 422 ha; Main field 10,559 ha														
Nursery	3	5	24	40	80	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		3	10	12	20	40	55	80	90	95	98	100	100	100
Transplanting							4	15	25	35	62	82	98	98
Flowering														
Ripening														
Harvesting														

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 68 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1980/II (2/2)

Unit: %

1980/II	Y '80	1981											
Total Area	M 12	1	1	1	1	2	2	2	3	3	3	4	4
20,894 ha	D 27	3	10	17	31	7	21	28	14	21	28	4	11

Phase 1 : Nursery 201 ha; Main field 5,033 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		80	85	100									
Ripening			85	60	90	97	99	100					
Harvesting			1	10	50	80	98	99					

Phase 2 : Nursery 212 ha; Main field 5,302 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		24	30	60	100								
Ripening				10	35	43	68	88	98	100			
Harvesting				1	15	25	70	78	90	98	100		

Phase 3 : Nursery 422 ha; Main field 10,559 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	98	98	100	100	100	100	100	100	100	100	100	100	100
Flowering				15	35	55	60	80	100				
Ripening					2	5	30	35	55	85	95	98	98
Harvesting						5	15	20	55	70	95	98	98

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 69 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1980/II (1/2)

													Unit: %	
1980/II	Y 1980													
Total Area	M 9	10	10	10	10	11	11	11	11	11	12	12	12	
24,534 ha	D 27	4	11	18	25	1	8	15	22	29	6	13	20	
Phase 1 : Nursery 237 ha; Main field 5,915 ha														
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	57	75	85	87	98	99	100	100	100	100	100	100	100	100
Transplanting		15	25	37	54	72	90	95	99	100	100	100	100	100
Flowering														
Ripening														
Harvesting														
Phase 2 : Nursery 148 ha; Main field 3,708 ha														
Nursery	50	50	75	88	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	10	15	30	58	86	90	90	92	95	100	100	100	100	100
Transplanting				3	6	30	40	60	70	85	95	100	100	100
Flowering														
Ripening														
Harvesting														
Phase 3 : Nursery 597 ha; Main field 14,911 ha														
Nursery		25	50	63	75	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		5	20	26	38	50	68	80	90	92	95	98	98	98
Transplanting				2	3	5	15	30	40	60	86	92	95	95
Flowering														
Ripening														
Harvesting														

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 70 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1980/II (2/2)

Unit: %

1980	Y '80	1981											
Total Area	M 12	1	1	1	1	2	2	2	3	3	3	4	4
24,534 ha	D 27	3	10	17	31	7	21	28	14	21	28	4	11

Phase 1 : Nursery 237 ha; Main field 5,915 ha

Nursery	100	100	100	100	100	100	100	100	100	100			
Presaturation	100	100	100	100	100	100	100	100	100	100			
Land preparation	100	100	100	100	100	100	100	100	100	100			
Transplanting	100	100	100	100	100	100	100	100	100	100			
Flowering		80	100										
Ripening		20	40	31	76	93	98	100					
Harvesting			5	10	37	70	95	98	100				

Phase 2 : Nursery 148 ha; Main field 3,708 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100		
Presaturation	100	100	100	100	100	100	100	100	100	100	100		
Land preparation	100	100	100	100	100	100	100	100	100	100	100		
Transplanting	100	100	100	100	100	100	100	100	100	100	100		
Flowering		13	32	63	84	85	100						
Ripening					30	40	75	95	100				
Harvesting					8	20	52	75	95	100			

Phase 3 : Nursery 597 ha; Main field 14,911 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	99			100	100	100	100	100	100	100	100	100	100
Transplanting	99	99	99	99	100	100	100	100	100	100	100	100	100
Flowering		8	10	20	40	50	68	90	95	98	100		
Ripening				1	4	15	25	70	80	87	90	100	
Harvesting					1	10	25	35	60	75	85	90	100

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 26

Table 71 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1981/I (1/2)

1981/I	Y	1981																Unit: %	
Total Area	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	6	6
16,963 ha	D	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	16	23
Phase 1 :	Nursery 134 ha; Main field 4,835 ha																		
Nursery				50	67	95	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	49	78	92	96	98	99	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			26	49	63	76	90	90	94	100	100	100	100	100	100	100	100	100	100
Transplanting								12	38	63	84	100	100	100	100	100	100	100	100
Flowering																			
Ripening																			
Harvesting																			
Phase 2 :	Nursery 184 ha; Main field 4,601 ha																		
Nursery					17	56	79	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			43	72	84	99	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				11	27	42	56	66	81	88	97	99	100	100	100	100	100	100	100
Transplanting									1	8	22	58	80	95	98	99	100	100	100
Flowering																			
Ripening																			
Harvesting																			
Phase 3 :	Nursery 141 ha; Main field 3,520 ha																		
Nursery						2	31	52	93	100	100	100	100	100	100	100	100	100	100
Presaturation					50	95	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation						11	26	52	72	86	99	100	100	100	100	100	100	100	100
Transplanting										6	25	45	64	89	92	99	100	100	100
Flowering																			
Ripening																			
Harvesting																			
Phase 4 :	Nursery 160 ha; Main field 4,007 ha																		
Nursery						10	36	73	96	100	100	100	100	100	100	100	100	100	100
Presaturation						99	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation						10	17	48	64	84	95	95	100	100	100	100	100	100	100
Transplanting											3	15	38	67	91	100	100	100	100
Flowering																			
Ripening																			
Harvesting																			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 27

Table 72 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1981/I (2/2)

1981/I Total Area 16,963 ha	Y 1981																Unit: %			
	M	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10		10	10	10
	D	30	7	13	20	27	3	10	17	24	31	7	14	21	30	7		14	21	28
Phase 1 :	Nursery 134 ha; Main field 4,835 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	33	50	80	90	99	99	100													
Ripening				10	42	65	99	100												
Harvesting					5	34	61	85	93	100										
Phase 2 :	Nursery 184 ha; Main field 4,601 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	2	7	12	45	74	80	98	100												
Ripening				2	17	17	55	71	89	100										
Harvesting					1	2	14	29	53	76	83	94	100							
Phase 3 :	Nursery 141 ha; Main field 3,520 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering				5	13	38	51	88	96	100										
Ripening							1	4	9	45	73	96	100							
Harvesting								1	1	21	34	65	80	95	100					
Phase 4 :	Nursery 160 ha; Main field 4,007 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering							11	28	59	89	100									
Ripening									10	36	59	90	100							
Harvesting										4	14	36	61	94	100					

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 27

Table 73 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1981/I (1/2)

Unit: %

1981/I	Y	1981																	
Total Area	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6	6	6
30,138 ha	D	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	16	23
Phase 1 :	Nursery 173 ha; Main field 4,330 ha																		
Nursery				25	59	75	90	96	100	100	100	100	100	100	100	100	100	100	100
Presaturation		32	59	76	87	95	97	98	100	100	100	100	100	100	100	100	100	100	100
Land preparation			1	10	23	39	53	73	88	99	100	100	100	100	100	100	100	100	100
Transplanting								1	5	30	65	74	81	86	92	97	99	100	100
Flowering																			
Ripening																			
Harvesting																			
Phase 2 :	Nursery 421 ha; Main field 10,508 ha																		
Nursery						1	14	49	67	99	100	100	100	100	100	100	100	100	100
Presaturation			4	15	42	73	98	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				1	4	12	25	43	60	84	95	100	100	100	100	100	100	100	100
Transplanting										4	12	38	67	81	93	99	100	100	100
Flowering																			
Ripening																			
Harvesting																			
Phase 3 :	Nursery 313 ha; Main field 7,832 ha																		
Nursery						3	5	18	39	64	79	89	100	100	100	100	100	100	100
Presaturation						10	54	91	100	100	100	100	100	100	100	100	100	100	100
Land preparation						1	3	13	31	44	63	81	97	100	100	100	100	100	100
Transplanting										2	2	4	8	21	40	69	84	98	98
Flowering																			
Ripening																			
Harvesting																			
Phase 4 :	Nursery 299 ha; Main field 7,468 ha																		
Nursery										5	32	64	85	100	100	100	100	100	100
Presaturation										68	96	100	100	100	100	100	100	100	100
Land preparation										9	28	43	59	72	84	84	100	100	100
Transplanting														1	4	14	27	46	79
Flowering																			
Ripening																			
Harvesting																			

Remarks; Y: Year, M: Month; D: Date

Source; Refs. 22 and 27

Table 74

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1981/I (2/2)

1981/I	Y 1981																Unit: %			
	D	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10		10	10	10
Total Area 30,138 ha	M	30	7	13	20	27	3	10	17	24	31	7	14	21	30	7	14	21	28	
<hr/>																				
Phase 1 :	Nursery 173 ha; Main field 4,330 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	23	61	69	78	85	92	95	99	100											
Ripening				21	22	44	67	87	95	97	99	100								
Harvesting					6	15	43	67	80	88	92	97	99	100						
<hr/>																				
Phase 2 :	Nursery 421 ha; Main field 10,508 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		1	8	19	29	67	90	96	99	100										
Ripening					1	8	28	59	71	77	90	98	100							
Harvesting						1	7	17	35	51	77	87	97	99	100					
<hr/>																				
Phase 3 :	Nursery 313 ha; Main field 7,832 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering				2	3	11	19	51	83	96	100									
Ripening						1	2	14	15	30	47	78	91	97	100					
Harvesting							1	1	1	3	9	16	31	53	73	92	98	100		
<hr/>																				
Phase 4 :	Nursery 299 ha; Main field 7,468 ha																			
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering						1	7	25	59	84	94	99	100							
Ripening										7	13	57	70	91	95					
Harvesting											1	10	22	41	76	93	100			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 27

Table 75 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1981/I (1/2)

1981/I	Y 1981																Unit: %			
	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6		6	6	6
Total Area 18,573 ha	D	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	16	23	
<hr/>																				
Phase 1 :	Nursery 177 ha; Main field 4,433 ha																			
Nursery		5	10	45	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	22	59	75	85	90	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		7	15	25	35	60	75	85	95	100	100	100	100	100	100	100	100	100	100	100
Transplanting							1	20	25	70	90	95	98	100	100	100	100	100	100	100
Flowering																				3
Ripening																				
Harvesting																				
Phase 2 :	Nursery 209 ha; Main field 5,228 ha																			
Nursery				10	15	20	85	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation				30	45	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				5	10	15	40	50	80	90	95	100	100	100	100	100	100	100	100	100
Transplanting										8	20	30	60	75	75	90	100	100	100	100
Flowering																				
Ripening																				
Harvesting																				
Phase 3 :	Nursery 186 ha; Main field 4,662 ha																			
Nursery									15	40	70	100	100	100	100	100	100	100	100	100
Presaturation						3	30	50	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation								5	20	40	55	80	100	100	100	100	100	100	100	100
Transplanting												5	16	30	30	70	80	94		
Flowering																				
Ripening																				
Harvesting																				
Phase 4 :	Nursery 170 ha; Main field 4,250 ha																			
Nursery									5	30	50	100	100	100	100	100	100	100	100	100
Presaturation									20	80	100	100	100	100	100	100	100	100	100	100
Land preparation									5	30	40	50	70	85	85	100	100	100	100	100
Transplanting														2	2	15	25	40		
Flowering																				
Ripening																				
Harvesting																				

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 27

Table 76

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1981/I (2/2)

1981	Y 1981																Unit: %			
	M	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10		10	10	10
Total Area 18,573 ha	D	30	7	13	20	27	3	10	17	24	31	7	14	21	30	7	14	21	28	
Phase 1 : Nursery 177 ha; Main field 4,433 ha																				
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		20	70	75	90	95	100													
Ripening			1	3	35	45	90	98	98	98	99	99	100							
Harvesting					2	8	70	78	87	90	96	99	99	100						
Phase 2 : Nursery 209 ha; Main field 5,228 ha																				
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering			2	6	25	50	70	80	100											
Ripening							10	30	45	80	95	98	100							
Harvesting							3	8	15	30	80	96	99	100						
Phase 3 : Nursery 186 ha; Main field 4,662 ha																				
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering						15	25	35	90	95	100									
Ripening							1	1	3	10	50	90	95	100						
Harvesting									1	5	15	55	75	95	97	100				
Phase 4 : Nursery 170 ha; Main field 4,250 ha																				
Nursery		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering						5	10	20	25	35	70	90	100							
Ripening									1	1	5	15	35	45	70	95				
Harvesting											1	10	20	25	50	75	85	95	99	

Remarks; Y: Year, M: Month, D: Date

Source: Refs. C 22 and C 27

Table 77

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1981/I (1/2)

1981/I	Y 1981																	Unit: %				
	M	2	3	3	3	3	4	4	4	4	5	5	5	5	5	6	6		6	6		
Total Area	D	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	16	23			
24,534 ha																						
Phase 1 : Nursery 237 ha; Main field 5,915 ha																						
Nursery				25	70	75	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	32	66	74	86	90	93	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation		15	30	51	75	78	90	92	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting							5	15	30	50	80	95	99	100	100	100	100	100	100	100	100	
Flowering																					10	
Ripening																						
Harvesting																						
Phase 2 : Nursery 148 ha; Main field 3,708 ha																						
Nursery				5	10	60	80	85	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation		1	42	65	90	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Land preparation			10	20	45	65	84	95	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting									5	15	40	70	73	90	100	100	100	100	100	100	100	
Flowering																						
Ripening																						
Harvesting																						
Phase 3 : Nursery 363 ha; Main field 9,077 ha																						
Nursery							10	10	30	50	80	90	95	100	100	100	100	100	100	100	100	
Presaturation						4	75	85	95	96	98	99	100	100	100	100	100	100	100	100	100	
Land preparation						3	15	33	33	64	75	80	93	100	100	100	100	100	100	100	100	
Transplanting										1	1	5	14	30	62	80	95					
Flowering																						
Ripening																						
Harvesting																						
Phase 4 : Nursery 234 ha; Main field 5,834 ha																						
Nursery									5	10	57	75	80	100	100	100	100	100	100	100	100	
Presaturation									25	28	90	90	92	95	95	100	100	100	100	100	100	
Land preparation									10	15	52	70	77	80	85	90	90					
Transplanting											5	6	10	18	35	54	65	75				
Flowering																						
Ripening																						
Harvesting																						

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 27

Table 78 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1981/I (2/2)

Unit: %

1981/I	Y 1981																		
Total Area	M	6	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10	10	10
24,534 ha	D	30	7	13	20	27	3	10	17	24	31	7	14	21	30	7	14	21	28

Phase 1 : Nursery 237 ha; Main field 5,915 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	30	65	83	100																
Ripening			14	25	40	80	85	94	100											
Harvesting			1	3	10	45	50	75	85	98	100									

Phase 2 : Nursery 148 ha; Main field 3,708 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering			10	20	30	75	80	92	95	98	100									
Ripening							20	30	65	75	85	90	98	100						
Harvesting								1	18	25	60	70	85	99	100					

Phase 3 : Nursery 363 ha; Main field 9,077 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering			1	1	2	16	29	45	55	95	100									
Ripening								1	2	10	24	35	75	90	100					
Harvesting										1	5	17	30	50	83	95	98	100		

Phase 4 : Nursery 234 ha; Main field 5,834 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation															100	100	100	100	100	100
Transplanting	90	92	92	92	94	94									100	100	100	100	100	100
Flowering		1	3	3	4	12	25	30	40	70	75	100								
Ripening						2	7	7	8	30	32	60	63	77	100					
Harvesting						1	3	3	4	15	16	20	34	58	85	92	100			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 27

Table 79 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1981/II (1/2)

Unit: %

1981/II	Y 1981															
Total Area	M	8	8	9	9	9	9	10	10	10	10	11	12	12	12	
18,530 ha	D	24	31	7	14	21	30	7	14	21	28	4	2	9	16	23
Phase 1 : Nursery 212 ha; Main field 5,298 ha																
Nursery		5	25	50		95	100	100	100	100	100	100	100	100	100	100
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		10	15	25	40	53	80	82	88	89	100	100	100	100	100	100
Transplanting						1	2		3	17	58					100
Flowering																20
Ripening																
Harvesting																
Phase 2 : Nursery 205 ha; Main field 5,127 ha																
Nursery				3		51		95	96	96	100	100	100	100	100	100
Presaturation					100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				4	14	24	69	72	75	76	78	88	100	100	100	100
Transplanting									1	2	23					100
Flowering																10
Ripening																
Harvesting																
Phase 3 : Nursery 324 ha; Main field 8,105 ha																
Nursery								23	25	71	89	100	100	100	100	100
Presaturation								100	100	100	100	100	100	100	100	100
Land preparation								5	8	12	35	52	74	100	100	100
Transplanting												1				100
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 80 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1981/II (2/2)

Unit: %

1981/II	Y '81 1982														
Total Area	M 12	1	1	1	1	2	2	2	2	3	3	3	3	3	4
18,530 ha	D 30	7	13	20	27	7	10	17	24	3	10	17	24	31	7

Phase 1 : Nursery 212 ha; Main field 5,298 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	35	62	83	91	100										
Ripening		4	11	17	37	47	86	100							
Harvesting			4	5	9	18	47	86	97	100					

Phase 2 : Nursery 205 ha; Main field 5,127 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	20	29	67	80	89	100									
Ripening			1	2	15	43	60	83	92	97	100				
Harvesting					2	10	28	48	71	86	96	98	100		

Phase 3 : Nursery 324 ha; Main field 8,105 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering			7	14	33	71	82	99	100						
Ripening					1	2	6	16	40	70	92				
Harvesting							2	5	9	33	59	70	92	100	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 81 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1981/II (1/2)

Unit: %

1981/II	Y 1981															
Total Area	M	8	8	9	9	9	9	10	10	10	10	11	12	12	12	12
31,902 ha	D	24	31	7	14	21	30	7	14	21	28	4	2	9	16	23
Phase 1 : Nursery 173 ha; Main field 4,330 ha																
Nursery				6	26	61	62	69	90	98	99	100	100	100	100	100
Presaturation		23		66	73	83	86	88	93	100	100	100	100	100	100	100
Land preparation				5	14	28	46	55	63	80	88	92	100	100	100	100
Transplanting								1	2	8	34	62	98	99	100	100
Flowering																6
Ripening																
Harvesting																
Phase 2 : Nursery 436 ha; Main field 10,890 ha																
Nursery								1	2	33	57	81	99	100	100	100
Presaturation				20	42	59	87	92	97	98	99	99	100	100	100	100
Land preparation					2	5	32	44	68	89	94	100	100	100	100	100
Transplanting									1	15	34	99	100	100	100	100
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 667 ha; Main field 10,682 ha																
Nursery									3	22	54	78	100	100	100	100
Presaturation									12	67	97	99	100	100	100	100
Land preparation									4	12	25	36	100	100	100	100
Transplanting											1	1	35	71	94	100
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 82 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1981/II (2/2)

Unit: %

1981/II	Y '81 1982														
Total Area	M 12	1	1	1	1	2	2	2	2	3	3	3	3	3	4
31,902 ha	D 30	7	13	20	27	7	10	17	24	3	10	17	24	31	7
Phase 1 :	Nursery 173 ha; Main field 4,330 ha														
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	28	51	65	87	95	97	99	100							
Ripening			3	16	37	59	79	86	90	93	96	100			
Harvesting				2	7	24	47	66	80	87	93	97	98	100	
Phase 2 :	Nursery 436 ha; Main field 10,890 ha														
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	5	10	40	60	83	90	100								
Ripening			1	1	12	27	51	74	85	94	99	100			
Harvesting				1	2	4	14	34	52	74	85	93	98	99	100
Phase 3 :	Nursery 667 ha; Main field 10,682 ha														
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		1	2	4	8	28	48	74	94	99	100				
Ripening						2	4	8	11	23	59	88	100		
Harvesting							1	3	4	8	16	39	67	91	99

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 83 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1981/II (1/2)

Unit: %

1981/II	Y 1981															
Total Area	M	8	8	9	9	9	10	10	10	10	11	12	12	12	12	
20,894 ha	D	24	31	7	14	21	30	7	14	21	28	4	2	9	16	23

Phase 1 : Nursery 201 ha; Main field 5,033 ha

Nursery	10	20	75	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	30	60	80	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	15	20	80	85	88	90	92	98	99	100	100	100	100	100	100	100
Transplanting						2	10	18	30	50	85	100	100	100	100	100
Flowering																55
Harvesting																

Phase 2 : Nursery 212 ha; Main field 5,302 ha

Nursery					20	40	70	80	100	100	100	100	100	100	100	100
Presaturation			10	10	80	85	85	95	100	100	100	100	100	100	100	100
Land preparation				5	15	25	30	45	60	80	85	100	100	100	100	100
Transplanting									3	10	20	90	100	100	100	100
Flowering																
Ripening																
Harvesting																

Phase 3 : Nursery 423 ha; Main field 10,559 ha

Nursery						5	20	25	50	80	100	100	100	100	100	
Presaturation					10	15	25	100	100	100	100	100	100	100	100	
Land preparation						5	10	20	30	40	80	95	100	100	100	
Transplanting											2	45	70	94	95	
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 84 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1981/II (2/2)

Unit: %

1981/II	Y '81 1982														
Total Area	M 12	1	1	1	1	2	2	2	2	3	3	3	3	3	4
20,894 ha	D 30	7	13	20	27	7	10	17	24	3	10	17	24	31	7
Phase 1 : Nursery 201 ha; Main field 5,033 ha															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	65	75	85	90	99	100									
Ripening		7	12	50	75	90	90	96	99	99	100				
Harvesting				8	40	60	80	85	97	98	99	100			
Phase 2 : Nursery 212 ha; Main field 5,302 ha															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	5	7	15	35	60	80	99	100							
Ripening				3	8	40	45	85	90	95	100				
Harvesting					1	5	10	25	60	75	90	98	100		
Phase 3 : Nursery 423 ha; Main field 10,559 ha															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	97	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Flowering				3	10	50	55	60	75	90	98				
Ripening						2	4	10	15	25	50	65	97	98	
Harvesting						1	1	5	10	15	25	40	70	85	95

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 85 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1981/II (1/2)

Unit: %

1981/II	Y 1981															
Total Area	M	8	8	9	9	9	9	10	10	10	10	11	12	12	12	
24,534 ha	D	24	31	7	14	21	30	7	14	21	28	4	2	9	16	23
Phase 1 : Nursery 237 ha; Main field 5,915 ha																
Nursery		1	1	50	60	85	100	100	100	100	100	100	100	100	100	100
Presaturation		60	65	70	80	100	100	100	100	100	100	100	100	100	100	100
Land preparation		25	25	30	60	80	85	90	95	100	100	100	100	100	100	100
Transplanting						3	20	25	30	45	50	90	100	100	100	100
Flowering															10	30
Ripening																
Harvesting																
Phase 2 : Nursery 149 ha; Main field 3,708 ha																
Nursery							40	65	85	90	100	100	100	100	100	100
Presaturation				10	35	70	90	100	100	100	100	100	100	100	100	100
Land preparation				2	6	25	40	60	70	85	95	100	100	100	100	100
Transplanting									18	40	50	98	100	100	100	100
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 596 ha; Main field 14,911 ha																
Nursery							10	60	70	80	100	100	100	100	100	100
Presaturation							100	100	100	100	100	100	100	100	100	100
Land preparation							10	25	40	45	100	100	100	100	100	100
Transplanting								5	6	9	50	69	90	92		
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 86 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1981/II (2/2)

Unit: %

1981/II	Y '81	1982													
Total Area	M 12	1	1	1	1	2	2	2	2	3	3	3	3	3	4
24,534 ha	D 30	7	13	20	27	7	10	17	24	3	10	27	24	31	7

Phase 1 : Nursery 237 ha; Main field 5,915 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	60	80	94	100											
Ripening	10	32	34	53	75	90	100								
Harvesting	1	8	10	27	35	60	88	95	100						

Phase 2 : Nursery 149 ha; Main field 3,708 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	5	8	25	48	65	80	100								
Ripening					1	25	30	70	75	85	90	100			
Harvesting						5	10	30	35	45	60	97	100		

Phase 3 : Nursery 596 ha; Main field 14,911 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Flowering			2	9	17	25	46	75	84	90	92	95			
Ripening					3	5	9	17	24	45	53	84	92	95	
Harvesting					1	2	4	6	10	20	29	43	62	85	85

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 28

Table 87 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1982/I (1/2)

Unit: %

1982/I	Y 1982																	
Total Area	M	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	7	7
16,963 ha	D	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Phase 1 :	Nursery 194 ha; Main field 4,835 ha																	
Nursery			10	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	21	79	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		2	3	34	48	70	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting							1	5	23	52	73	100	100	100	100	100	100	100
Flowering																		
Ripening																		
Harvesting																		
Phase 2 :	Nursery 184 ha; Main field 4,601 ha (Direct seeding 20 ha*)																	
Nursery			23	58	94	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			2	11	25	48	70	88	96	100	100	100	100	100	100	100	100	100
Transplanting								1	17	52	84	96	99	100	100	100	100	100
Direct seeding*								0	0	0	0	0	0	0	0	0	0	0
Flowering																		
Ripening																		
Harvesting																		
Phase 3 :	Nursery 141 ha; Main field 3,520 ha (Direct seeding 208 ha**)																	
Nursery			59	76	86	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			60	60	79	92	96	100	100	100	100	100	100	100	100	100	100	100
Transplanting								11	39	57	73	89	94	94	94	94	94	94
Direct seeding**								6	6	6	6	6	6	6	6	6	6	6
Flowering																		
Ripening																		
Harvesting																		
Phase 4 :	Nursery 160 ha; Main field 4,007 ha (Direct seeding 66 ha)																	
Nursery			43	56	90	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			28	33	60	75	91	94	98	100	100	100	100	100	100	100	100	100
Transplanting								7	22	38	65	84	94	98	98	98	98	98
Direct seeding								2	2	2	2	2	2	2	2	2	2	2
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 20 ha.

** : Including voluntary germination area of 173 ha.

Source; Refs. C 22 and C 29

Table 88 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1982/I (2/2)

Unit: %

1982/I	Y	1982																	
Total Area	M	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	11	12
16,963 ha	D	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1

Phase 1 : Nursery 194 ha; Main field 4,835 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering	5	10	10	69	90	98	100												
Ripening					2	17	45	88	96	100									
Harvesting						3	17	39	61	85	99	100							

Phase 2 : Nursery 184 ha; Main field 4,601 ha (Direct seeding 20 ha*)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Direct seeding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flowering	2	5	5	31	39	76	86	100											
Ripening					1	2	8	42	70	97	100								
Harvesting							2	10	24	63	74	94	100						

Phase 3 : Nursery 141 ha; Main field 3,520 ha (Direct seeding 208 ha**)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Direct seeding**	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Flowering	6	6	18	23	34	57	75	89	96	100									
Ripening					10	10	12	55	69	81	98	99	100						
Harvesting					5	5	9	19	25	50	69	93	94	100					

Phase 4 : Nursery 160 ha; Main field 4,007 ha (Direct seeding 66 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Direct seeding	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Flowering				11	23	45	72	83	94	100									
Ripening							10	24	44	82	94	100							
Harvesting								2	7	35	58	84	96	100					

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 20 ha.

**: Including voluntary germination area of 173 ha.

Source; Refs. C 22 and C 29

Table 89 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1982/I (1/2)

1982/I	Y 1982																Unit: %	
	M	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7		7
Total Area 30,139 ha	D	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Phase 1 : Nursery 173 ha; Main field 4,330 ha (Direct seeding 157 ha)																		
Nursery				22	48	74	96	100	100	100	100	100	100	100	100	100	100	100
Presaturation	18	50	85	96	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	3	6	22	46	68	82	91	92	100	100	100	100	100	100	100	100	100	100
Transplanting							2	2	12	28	67	89	95	95	96	96	96	96
Direct seeding								4	4	4	4	4	4	4	4	4	4	4
Flowering																		5
Ripening																		15
Harvesting																		
Phase 2 : Nursery 420 ha; Main field 10,508 ha (Direct seeding 3,706 ha*)																		
Nursery				2	54	54	71	76	79	80	80	82	82	100	100	100	100	100
Presaturation				24	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				21	42	52	76	87	99	100	100	100	100	100	100	100	100	100
Transplanting								0	0	12	36	49	61	65	65	65	65	65
Direct seeding*							32	35	35	35	35	35	35	35	35	35	35	35
Flowering																	11	19
Ripening																		31
Harvesting																		
Phase 3 : Nursery 313 ha; Main field 7,832 ha (Direct seeding 884 ha**)																		
Nursery				20	49	90	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				27	56	79	89	95	100	100	100	100	100	100	100	100	100	100
Transplanting								0	1	6	27	46	66	78	85	86	87	87
Direct seeding**							2	5	8	9	10	11	11	11	11	11	11	11
Flowering																		1
Ripening																		1
Harvesting																		
Phase 4 : Nursery 299 ha; Main field 7,469 ha (Direct seeding 808 ha***)																		
Nursery				6	58	94	96	100	100	100	100	100	100	100	100	100	100	100
Presaturation				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				23	52	79	80	98	99	99	100	100	100	100	100	100	100	100
Transplanting								1	1	8	34	59	78	80	89	89	89	89
Direct seeding***							3	3	8	10	11	11	11	11	11	11	11	11
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 93 ha.

**: Including voluntary germination area of 4 ha.

***: Including voluntary germination area of 28 ha.

Source; Refs. C 22 and C 29

Table 90

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1982/I (2/2)

		Unit: %																	
1982/I	Y 1982																		
Total Area	M	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	11	12
30,139 ha	D	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1
Phase 1 :	Nursery 173 ha; Main field 4,330 ha (Direct seeding 157 ha)																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
Direct seeding	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Flowering	31	54	71	82	93	99	100												
Ripening		5	7	11	17	37	56	69	100										
Harvesting				1	4	17	35	55	79	92	97	100							
Phase 2 :	Nursery 420 ha; Main field 10,508 ha (Direct seeding 3,706 ha*)																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Direct seeding*	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Flowering	40	42	56	72	80	91	98	100											
Ripening	2	16	24	37	42	48	56	72	82	85	100								
Harvesting		3	7	16	23	35	43	57	63	68	83	94	95	100					
Phase 3 :	Nursery 313 ha; Main field 7,832 ha (Direct seeding 884 ha **)																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
Direct seeding**	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Flowering	4	5	12	26	49	65	78	96	99	99	100								
Ripening			1	3	7	11	20	38	54	76	91	97	98	100					
Harvesting				1	2	3	5	9	23	41	60	83	94	98	100				
Phase 4 :	Nursery 299 ha; Main field 7,469 ha (Direct seeding 808 ha***)																		
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
Direct seeding	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Flowering	6	12	24	32	53	73	89	98	99	100									
Ripening				1	1	18	32	55	69	86	100								
Harvesting				1	1	4	6	10	24	40	67	93	100						

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 93 ha.

**: Including voluntary germination area of 4 ha.

***: Including voluntary germination area of 28 ha.

Source; Refs. C 22 and C 29

Table 91 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1982/I (1/2)

		Unit: %																
1982/I	Y 1982																	
Total Area	M	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	7	7
18,573 ha	D	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Phase 1 :		Nursery 177 ha; Main field 4,433 ha (Direct seeding 311 ha)																
Nursery		10	30	70	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		20	84	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		1	2	10	25	35	60	67	80	90	100	100	100	100	100	100	100	100
Transplanting								2	13	35	70	92	93	93	93	93	93	93
Direct seeding								6	7	7	7	7	7	7	7	7	7	7
Flowering																		2
Ripening																		10
Harvesting																		
Phase 2 :		Nursery 209 ha; Main field 5,228 ha (Direct seeding 523 ha)																
Nursery			3	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			3	10	40	50	60	75	100	100	100	100	100	100	100	100	100	100
Transplanting								1	20	55	70	85	90	90	90	90	90	90
Direct Seeding								1	2	10	10	10	10	10	10	10	10	10
Flowering																		3
Ripening																		
Harvesting																		
Phase 3 :		Nursery 187 ha; Main field 4,662 ha (Direct seeding 232 ha)																
Nursery				30	40	80	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation				85	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				5	8	50	50	70	85	100	100	100	100	100	100	100	100	100
Transplanting									2	20	45	60	75	85	95	95	95	95
Direct seeding									5	5	5	5	5	5	5	5	5	5
Flowering																		
Ripening																		
Harvesting																		
Phase 4 :		Nursery 170 ha; Main field 4,250 ha (Direct seeding 213 ha)																
Nursery				30	40	60	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation				85	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation				3	5	20	40	55	65	90	95	99	100	100	100	100	100	100
Transplanting									5	30	45	60	75	93	95	95	95	95
Direct seeding									2	5	5	5	5	5	5	5	5	5
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 29

Table 92

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1982/I (2/2)

Unit: %

1982/I	Y	1982																	
Total Area	M	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	11	12
18,573 ha	D	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1

Phase 1 : Nursery 177 ha; Main field 4,433 ha (Direct seeding 311 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Direct seeding	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Flowering	35	55	80	90	100														
Ripening	1	4	5	10	25	50	85	90	100										
Harvesting		1	1	5	7	18	45	65	86	92	99	100							

Phase 2 : Nursery 209 ha; Main field 5,228 ha (Direct seeding 523 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Direct seeding	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Flowering	15	25	34	50	65	75	90	92	100										
Ripening		1	2	4	10	20	30	45	60	85	95	98	100						
Harvesting			1	2	4	10	15	44	50	65	80	90	98	100					

Phase 3 : Nursery 187 ha; Main field 4,662 ha (Direct seeding 232 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Direct seeding	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Flowering		2	10	25	30	40	60	83	95	100									
Ripening				1	3	10	20	33	40	65	85	95	100						
Harvesting					1	3	10	13	25	45	60	75	85	100					

Phase 4 : Nursery 170 ha; Main field 4,250 ha (Direct seeding 213 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Direct seeding	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Flowering				1	5	15	30	60	75	90	100								
Ripening								5	15	35	60	75	90	97	100				
Harvesting									5	5	25	40	60	90	99	100			

Remarks; Y: Year; M: Month; D: Date

Source; Refs. C 22 and C 29

Table 93 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1982/I (1/2)

Unit: %

1982/I	Y 1982																	
Total Area	M	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	
24,534 ha	D	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Phase 1 :	Nursery 236 ha; Main field 5,915 ha (Direct seeding 2,129 ha)																	
Nursery	40	50	80	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	10	40	65	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	2	20	55	75	90	90	99	100	100	100	100	100	100	100	100	100	100	100
Transplanting							5	13	25	41	51	64	64	64	64	64	64	64
Direct seeding						20	22	24	35	35	36	36	36	36	36	36	36	36
Flowering																	9	12
Ripening																		
Harvesting																		
Phase 2 :	Nursery 148 ha; Main field 3,708 ha (Direct seeding 2,299 ha)																	
Nursery			30	40	60	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			55	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			22	35	58	80	89	94	95	98	100	100	100	100	100	100	100	100
Transplanting										4	11	26	26	33	37	37	38	38
Direct seeding						16	48	57	60	61	64	68	62	62	62	62	62	62
Flowering																		15
Ripening																		
Harvesting																		
Phase 3 :	Nursery 363 ha; Main field 9,077 ha (Direct seeding 2,411 ha*)																	
Nursery			20	60	65	80	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation			60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			12	40	56	68	80	82	94	96	99	99	99	99	99	99	99	100
Transplanting										5	20	37	53	65	67	70	70	70
Direct seeding*						18	22	27	32	35	35	35	30	27	27	27	27	27
Flowering																		2
Ripening																		
Harvesting																		
Phase 4 :	Nursery 210 ha; Main field 5,834 ha (Direct seeding 3,232 ha **)																	
Nursery			20	40	42	60	75	75	85	90	90	90	90	90	90	90	90	90
Presaturation			70	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation			37	56	60	72	80	85	87	89	90	90	90	90	90	90	90	90
Transplanting										5	8	14	26	32	32	34	34	34
Direct seeding**						51	52	53	60	65	65	65	60	55	55	55	55	53
Flowering																		31
Ripening																		
Harvesting																		

Remakrs; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 142 ha.

** : Including voluntary germination area of 607 ha.

Source; Refs. C 22 and C 29

Table 94 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1982/I (2/2)

Unit: %

1982/I	Y	1982																	
Total Area	M	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	11	12
24,534 ha	D	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1

Phase 1 : Nursery 236 ha; Main field 5,915 ha (Direct seeding 2,129 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Direct seeding	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Flowering	28	53	84	86	98	100													
Ripening	3	4	19	22	40	52	83	93	96	98	100								
Harvesting			2	8	14	23	37	54	69	87	95	99	100						

Phase 2 : Nursery 148 ha; Main field 3,708 ha (Direct seeding 2,299 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Direct seeding*	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Flowering	38	43	47	53	62	69	91	91	100										
Ripening	6	12	30	39	49	53	57	59	65	85	91	100							
Harvesting		3	12	20	30	35	40	43	48	61	72	84	96	100					

Phase 3 : Nursery 363 ha; Main field 9,077 ha (Direct seeding 2,411 ha*)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	72	72	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
Direct seeding*	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Flowering	7	8	14	26	36	43	51	65	95	100									
Ripening	2	3	7	9	14	17	22	42	45	47	55	81	90	92	93	98	100		
Harvesting			2	6	9	11	13	18	25	29	39	55	74	83	84	95	97	99	

Phase 4 : Nursery 210 ha; Main field 5,834 ha (Direct seeding 3,232 ha **)

Nursery	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Transplanting	34	34	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35	35	35
Direct seeding**	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Flowering	52	59	64	70	77	78	84	88											
Ripening	14	20	29	48	56	59	67	70	74	78	81	88							
Harvesting		17	27	34	40	43	51	55	61	62	71	76	87	87	88				

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 142 ha.

**: Including voluntary germination area of 607 ha.

Source; Refs. C 22 and C 29

Table 95 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICTS I AND II OF MUDA AREA FOR CROP SEASON 1982/II (1/2)

District I	Y 1982														1983			Unit: %	
	M	9	9	10	10	10	10	11	11	11	11	12	12	12	12	12	1	1	1
Total Area 18,530 ha	D	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19
Phase 1 : Nursery 212 ha; Main field 5,298 ha																			
Nursery		3	12	60	84	96	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		5	9	18	39	48	70	84	91	98	100	100	100	100	100	100	100	100	100
Transplanting					1	1	5	9	22	59	87	95	100	100	100	100	100	100	100
Flowering																		8	22
Ripening																			
Harvesting																			
Phase 2 : Nursery 205 ha; Main field 5,127 ha																			
Nursery		4	10	27	50	70	98	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		3	6	14	24	49	72	86	95	98	100	100	100	100	100	100	100	100	100
Transplanting					0	1	7	17	39	56	79	94	97	98	100	100	100	100	100
Flowering																		3	9
Ripening																			
Harvesting																			
Phase 3 : Nursery 324 ha; Main field 8,105 ha (Direct seeding 173 ha)																			
Nursery		7	7	30	42	67	92	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		4	6	6	19	27	44	63	73	88	96	99	100	100	100	100	100	100	100
Transplanting					0	2	6	11	20	34	57	80	90	95	97	97	97	97	97
Direct seeding						1	1	2	2	2	2	2	2	2	2	2	2	2	2
Flowering																		2	6
Ripening																			
Harvesting																			
District II																			
Total Area																			
31,902 ha																			
Phase 1 : Nursery 608 ha; Main field 15,220 ha (Direct seeding 2,443 ha)																			
Nursery		1	7	15	30	53	71	80	83	87	87	87	87	87	87	87	87	87	87
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		19	24	30	34	47	59	74	86	92	97	99	100	100	100	100	100	100	100
Transplanting					1	9	17	25	34	54	67	78	82	83	83	84	84	84	84
Direct seeding					3	7	10	11	11	14	15	16	16	16	16	16	16	16	16
Flowering														7	13	20	40	44	44
Ripening																1	4	7	7
Harvesting																			2
Phase 2 : Nursery 667 ha; Main field 16,682 ha (Direct seeding 4,963 ha)																			
Nursery				6	12	37	58	73	85	85	92	93	93	93	93	93	93	93	93
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		1	1	4	13	27	46	68	80	91	98	100	100	100	100	100	100	100	100
Transplanting					0	0	1	2	9	19	28	44	55	64	70	70	70	70	70
Direct seeding					0	1	1	2	4	8	9	15	23	27	30	30	30	30	30
Flowering															2	4	6	13	13
Ripening																		1	2
Harvesting																			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 30

Table 96

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICTS I AND II OF MUDA AREA FOR CROP SEASON 1982/II (2/2)

Unit: %

District I	Y 1983																	
Total Area	M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
18,530 ha	D	26	2	9	16	23	3	16	23	30	6	13	20	27	4	11	18	25

Phase 1 : Nursery 212 ha; Main field 5,298 ha

Nursery	100	100	100	100	100	100	100	100	100
Presaturation	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100
Flowering	54	68	45	100					
Ripening	3	5	17	31	52	66	98	100	
Harvesting		3	4	13	25	40	95	100	

Phase 2 : Nursery 205 ha; Main field 5,127 ha

Nursery	100	100	100	100	100	100	100	100	100	100
Presaturation	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100
Flowering	30	54	69	94	96	100				
Ripening	1	4	5	14	35	48	93	97	100	
Harvesting		1	1	3	10	24	67	83	97	100

Phase 3 : Nursery 324 ha; Main field 8,105 ha (Direct seeding 173 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100
Presaturation	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100
Transplanting	97	97	97	97	97	97	97	97	97	97	97
Direct seeding	2	2	2	2	2	2	2	2	2	2	2
Flowering	17	27	46	71	90	94	99				
Ripening	1	4	8	13	22	32	71	88	97	99	
Harvesting		1	2	4	9	17	46	67	85	98	99

District II
Total Area
31,902 ha

Phase 1 : Nursery 608 ha; Main field 15,220 ha (Direct seeding 2,443 ha)

Nursery	87	87	87	87	87	87	87	87	87	87
Presaturation	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100
Transplanting	84	84	84	84	84	84	84	84	84	84
Direct seeding	16	16	16	16	16	16	16	16	16	16
Flowering	57	74	84	93	97	99	100			
Ripening	21	31	38	51	63	78	98	99	100	
Harvesting	6	15	24	32	45	58	91	97	99	100

Phase 2 : Nursery 667 ha; Main field 16,682 ha (Direct seeding 4,963 ha)

Nursery	93	93	93	93	93	93	93	93	93	93	93
Presaturation	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100
Transplanting	70	70	70	70	70	70	70	70	70	70	70
Direct seeding	30	30	30	30	30	30	30	30	30	30	30
Flowering	22	34	47	57	81	97	100				
Ripening	2	3	10	14	26	45	76	90	97	99	100
Harvesting	1	2	3	5	8	16	45	62	78	90	99

Remarks; Y: Year, M: Month, D: Date

Source, Refs. C 22 and C 30

Table 97 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICTS III AND IV OF MUDA AREA FOR CROP SEASON 1982/II (1/2)

		Unit: %																	
District III	Y	1983																	
Total Area	M	9	9	10	10	10	10	11	11	11	11	12	12	12	12	12	1	1	1
20,934 ha	D	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19
Phase 1 :		Nursery 197 ha; Main field 5,033 ha (Direct seeding 805 ha)																	
Nursery						27	50	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		3	7	20	27	41	61	78	89	95	100	100	100	100	100	100	100	100	100
Transplanting					1	3	13	27	37	59	71	81	83	83	83	83	83	83	83
Direct seeding					1	3	7	10	13	13	14	16	16	16	16	16	16	16	16
Flowering														1	4	4	20	38	61
Ripening																		8	16
Harvesting																		1	1
Phase 2 :		Nursery 212 ha; Main field 5,302 ha (Direct seeding 848 ha)																	
Nursery						10	50	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation					10	20	35	60	90	99	100	100	100	100	100	100	100	100	100
Transplanting						1	1	10	15	30	45	60	75	84	84	84	84	84	84
Direct seeding						1	2	4	8	8	15	15	15	15	16	16	16	16	16
Flowering																		9	15
Ripening																			5
Harvesting																			
Phase 3 :		Nursery 423 ha; Main field 10,599 ha (Direct seeding 2,218 ha)																	
Nursery						10	60	95	100	100	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation					5	15	30	45	65	85	97	100	100	100	100	100	100	100	100
Transplanting						3	10	20	35	50	70	74	74	77	77	79	79	79	79
Direct seeding							2	5	7	10	15	18	20	20	21	21	21	21	21
Flowering																		5	15
Ripening																			
Harvesting																			
District IV																			
Total Area																			
24,534 ha																			
Phase 1 :		Nursery 654 ha; Main field 16,352 ha (Direct seeding 6,375 ha)																	
Nursery			6	10	40	70	80	90	95	98	100	100	100	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		19	25	35	43	57	65	76	82	89	92	93	94	100	100	100	100	100	100
Transplanting					3	5	10	18	27	34	43	49	51	55	55	56	58	58	60
Direct seeding					1	11	17	21	26	30	31	33	34	35	37	38	38	39	39
Flowering														5	8	18	29	40	56
Ripening																1	5	11	21
Harvesting																		2	6
Phase 2 :		Nursery 327 ha; Main field 8,182 ha (Direct seeding 4,385 ha)																	
Nursery						2	5	60	70	80	85	90	95	100	100	100	100	100	100
Presaturation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		4	3	4	5	7	17	30	35	53	63	66	81	88	91	93	96	96	96
Transplanting					0	1	1	3	3	6	11	16	20	24	26	26	37	37	39
Direct seeding					3	4	5	5	6	12	16	19	32	42	47	47	52	52	52
Flowering																			4
Ripening																			1
Harvesting																			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 30

Table 98 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICTS III AND IV OF MUDA AREA FOR CROP SEASON 1982/II (2/2)

Unit: %

District III	Y 1983																		
Total Area	M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	
20,934 ha	D	26	2	9	16	23	3	16	23	30	6	13	20	27	4	11	18	25	
Phase 1 :		Nursery 197 ha; Main field 5,033 ha (Direct seeding 805 ha)																	
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	
Direct seeding	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Flowering	72	84	99																
Ripening	26	40	49	74	90	96	99												
Harvesting	6	25	34	40	55	75	96	99											
Phase 2 :		Nursery 212 ha; Main field 5,302 ha (Direct seeding 848 ha)																	
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	
Direct seeding	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Flowering	55	70	85	92	100														
Ripening	10	25	35	45	60	70	95	99	100										
Harvesting	3	13	23	30	40	50	75	87	95	100									
Phase 3 :		Nursery 423 ha; Main field 10,599 ha (Direct seeding 2,218 ha)																	
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
Direct seeding	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Flowering	30	40	50	65	75	80	96	98	100										
Ripening		5	15	25	35	45	65	70	88	99	99	99	99	100					
Harvesting		3	5	10	20	28	45	55	70	85	94	96	99	99	100				
District IV																			
Total Area	24,534 ha																		
Phase 1 :		Nursery 654 ha; Main field 16,352 ha (Direct seeding 6,375 ha)																	
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Transplanting	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
Direct seeding	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
Flowering	62	73	79	85	93	96	99												
Ripening	27	35	43	58	71	79	91	93	96	99									
Harvesting	12	20	28	38	53	61	85	90	93	95	97	99							
Phase 2 :		Nursery 327 ha; Main field 8,182 ha (Direct seeding 4,385 ha)																	
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	
Transplanting	40	40	40	40	41	41	41	41	42	42	42	42	42	42	42	42	42	42	
Direct seeding	52	52	52	52	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
Flowering	10	20	22	27	36	47	59	63	84	88	90	94	95						
Ripening	2	7	10	13	17	26	33	38	52	72	74	88	90	95					
Harvesting	1	2	2	5	6	12	28	30	38	49	57	82	85	86	92	92	95		

Remarks; Y: Year, M: Month, D: Data

Source; Refs. 22 and 30

Table 99 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1983/I (1/3)

Unit: %

1983/I	Y 1983															
Total Area	M	3	3	4	4	4	4	5	5	5	5	6	6	6	6	
16,963 ha	D	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29

Phase 1 : Nursery 193 ha; Main field 4,835 ha (Direct seeding 130 ha)

Nursery		4	33	69	90	100	100	100	100	100	100	100	100	100	100	100
Presaturation	36	72	83	94	97	98	100	100	100	100	100	100	100	100	100	100
Land preparation	15	27	47	59	69	78	89	98	99	99	100	100	100	100	100	100
Transplanting							2	12	48	81	95	97	97	97	97	97
Direct seeding	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flowering																
Ripening																
Harvesting																

Phase 2 : Nursery 184 ha; Main field 4,601 ha (Direct seeding 322 ha)

Nursery		2	6	25	53	77	81	100	100	100	100	100	100	100	100	100
Presaturation		24	56	74	81	90	93	100	100	100	100	100	100	100	100	100
Land preparation	2	11	24	36	45	55	71	83	91	98	99	99	99	100	100	100
Transplanting								1	15	45	73	90	93	93	93	93
Direct seeding			3	4	4	4	5	7	7	7	7	7	7	7	7	7
Flowering																
Ripening																
Harvesting																

Phase 3 : Nursery 141 ha; Main field 3,520 ha (Direct seeding 1,334 ha)

Nursery							10	10	10	39	54	80	93	100	100	100
Presaturation										40	40	80	95	100	100	100
Land preparation		1	1	1	1	9	20	42	56	66	76	86	94	96	96	96
Transplanting											7	22	30	40	40	40
Direct seeding									7	8	10	11	12	16	16	16
Flowering																
Ripening																
Harvesting																

Phase 4 : Nursery 160 ha; Main field 4,007 ha (Direct seeding 1,126 ha)

Nursery												13	25	40	40	40
Presaturation												30	30	50	75	80
Land preparation							2	8	15	34	47	51	53	57	57	57
Transplanting												1	1	2	2	2
Direct seeding												24	24	28	28	28
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 100 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1983/I (2/3)

Unit: %

1983	Y 1983															
Total Area	M	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10
16,963 ha	D	6	13	20	27	3	10	17	24	31	7	14	21	28	5	12
Phase 1 : Nursery 193 ha; Main field 4,835 ha (Direct seeding 130 ha)																
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
Direct seeding	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flowering	3	4	8	23	64	91	100									
Ripening					2	5	13	22	62	90	100					
Harvesting						1	3	5	21	51	82	94	99	100		
Phase 2 : Nursery 184 ha; Main field 4,601 ha (Direct seeding 322 ha)																
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Direct seeding	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Flowering		3	3	6	18	34	60	79	92	97	100					
Ripening					1	2	3	8	28	52	83	98	99	100		
Harvesting						1	2	3	8	21	43	69	88	97	100	
Phase 3 : Nursery 141 ha; Main field 3,520 ha (Direct seeding 1,334 ha)																
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	96	96	98	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	40	41	41	43	43	58	62	62	62	62	62	62	62	62	62	62
Direct seeding	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Flowering						7	12	22	43	64	69	75	76	80	81	
Ripening									6	24	38	59	68	71	76	
Harvesting										3	17	40	56	66	72	
Phase 4 : Nursery 160 ha; Main field 4,007 ha (Direct seeding 1,126 ha)																
Nursery	60	60	60	60	60	60	66	72	72	72	72	72	72	72	72	72
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	67	72	75	77	82	92	93	96	98	100	100	100	100	100	100	100
Transplanting	2	2	2	3	8	15	23	31	48	55	64	71	72	72	72	72
Direct seeding	26	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Flowering							7	10	13	29	30	32	39	49	49	
Ripening									1	23	27	29	30	42	42	
Harvesting										2	4	17	24	24	28	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 101 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1983/I (3/3)

Unit: %

1983/I	Y 1983												1984			
Total Area	M	10	10	10	11	11	11	11	12	12	12	12	1	1	1	1
16,963 ha	D	19	26	31	7	16	23	30	7	14	21	28	4	11	18	25
Phase 1 : Nursery 193 ha; Main field 4,835 ha (Direct seeding 130 ha)																
Nursery																
Presaturation																
Land preparation																
Transplanting																
Direct seeding																
Flowering																
Ripening																
Harvesting																
Phase 2 : Nursery 184 ha; Main field 4,601 ha (Direct seeding 322 ha)																
Nursery																
Presaturation																
Land preparation																
Transplanting																
Direct seeding																
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 141 ha; Main field 3,520 ha (Direct seeding 1,334 ha)																
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Direct seeding	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Flowering	84	89	89	92	93	98	100									
Ripening	76	82	82	87	91	93	95	96	100							
Harvesting	74	75	75	79	86	89	92	94	96	96	100	100	100	100	100	100
Phase 4 : Nursery 160 ha; Main field 4,007 ha (Direct seeding 1,126 ha)																
Nursery	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
Direct seeding	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Flowering	49	50	50	71	88	99	100									
Ripening	43	43	43	44	47	61	64	76	94	97	100					
Harvesting	30	30	30	32	33	39	52	60	77	84	99	99	100	100	100	100

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 102 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1983/I (1/3)

Unit: %

1983/I	Y 1983															
Total Area	M 3	3	4	4	4	4	5	5	5	5	6	6	6	6		
30,139 ha	D 23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	
Phase 1 : Nursery 421 ha; Main field 10,508 ha (Direct seeding 2,722 ha)																
Nursery			9	37	59	75	79	80	80	80	80	80	80	80	80	
Presaturation	50	52	62	78	84	87	92	98	98	100	100	100	100	100	100	
Land preparation	12	26	38	60	68	83	90	98	98	100	100	100	100	100	100	
Transplanting							2	16	41	57	67	74	74	74	74	
Direct seeding				4	7	18	22	24	24	26	26	26	26	26	26	
															6	
Ripening																
Harvesting																
Phase 2 : Nursery 173 ha; Main field 4,330 ha (Direct seeding 39 ha)																
Nursery				19	58	73	84	84	94	94	100	100	100	100	100	
Presaturation				23	55	82	91	95	98	100	100	100	100	100	100	
Land preparation				9	22	41	60	70	82	95	98	100	100	100	100	
Transplanting									2	10	33	56	81	94	97	
Direct seeding								1	1	1	1	1	1	1	1	
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 330 ha; Main field 8,267 ha (Direct seeding 4,265 ha)																
Nursery									1	4	6	8	9	12	15	
Presaturation				1	1	1	1	1	4	13	51	62	90	100	100	
Land preparation				1	10	22	33	42	51	63	76	83	91	92	95	
Transplanting									1	2	4	6	8	8	11	
Direct seeding										2	13	16	18	26	35	
Flowering																
Ripening																
Harvesting																
Phase 4 : Nursery 282 ha; Main field 7,034 ha (Direct seeding 5,592 ha)																
Nursery													1	1	2	6
Presaturation													1	45	91	95
Land preparation				1	8	22	34	50	68	74	80	83	86	90	92	
Transplanting														1	1	3
Direct seeding															55	70
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 103 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1983/I (2/3)

Unit: %

1983/I	Y 1983															
Total Area	M	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10
30,139 ha	D	6	13	20	27	3	10	17	24	31	7	14	21	28	5	12
Phase 1 : Nursery 421 ha; Main field 10,508 ha (Direct seeding 2,722 ha)																
Nursery	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
Direct seeding	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Flowering	9	10	26	48	67	86	93	100								
Ripening			2	3	14	23	38	55	80	94	99	100				
Harvesting					3	7	11	29	58	75	84	95	99	100		
Phase 2 : Nursery 173 ha; Main field 4,330 ha (Direct seeding 39 ha)																
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Direct seeding	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Flowering			1	8	34	54	82	96	99	100						
Ripening						1	7	11	42	68	93	100				
Harvesting							1	4	16	31	54	82	96	100		
Phase 3 : Nursery 330 ha; Main field 8,267 ha (Direct seeding 4,265 ha)																
Nursery	21	21	28	35	42	42	42	48	48	48	48	48	48	48	48	48
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	96	96	96	96	99	99	100	100	100	100	100	100	100	100	100	100
Transplanting	11	11	11	15	19	27	32	33	38	43	44	47	48	48	48	48
Direct seeding	39	43	49	52	52	52	52	52	52	52	52	52	52	52	52	52
Flowering				2	2	7	19	29	37	47	47	58	63	65	67	67
Ripening								1	5	15	36	42	50	53	57	57
Harvesting									1	5	12	15	28	41	48	48
Phase 4 : Nursery 282 ha; Main field 7,034 ha (Direct seeding 5,592 ha)																
Nursery	12	12	15	18	20	20	20	20	20	20	20	20	20	20	20	20
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	94	94	94	95	96	98	100	100	100	100	100	100	100	100	100	100
Transplanting	4	6	7	7	10	13	15	16	17	18	20	20	20	20	20	20
Direct seeding	73	74	77	80	80	80	80	80	80	80	80	80	80	80	80	80
Flowering					2	12	18	39	61	73	84	84	85	86	87	87
Ripening									2	19	47	57	74	82	86	86
Harvesting											6	17	44	70	81	81

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 104 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1983/I (3/3)

														Unit: %		
1983/I	Y 1983												1984			
Total Area	M	10	10	11	11	11	11	12	12	12	12	1	1	1	1	
30,139 ha	D	19	26	31	7	16	23	30	7	14	21	28	4	11	18	25
Phase 1 : Nursery 421 ha; Main field 10,508 ha (Direct seeding 2,722 ha)																
Nursery																
Presaturation																
Land preparation																
Transplanting																
Direct seeding																
Flowering																
Ripening																
Harvesting																
Phase 2 : Nursery 173 ha; Main field 4,330 ha (Direct seeding 39 ha)																
Nursery																
Presaturation																
Land preparation																
Transplanting																
Direct seeding																
Flowering																
Ripening																
Harvesting																
Phase 3 : Nursery 330 ha; Main field 8,267 ha (Direct seeding 4,265 ha)																
Nursery	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Direct seeding	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Flowering	79	81	84	90	92	95	97	97	97	98	99	99	99	100		
Ripening	60	63	69	73	75	79	86	87	91	95	97	97	97	99	100	
Harvesting	53	54	60	62	64	69	78	79	83	86	96	97	97	100		
Phase 4 : Nursery 282 ha; Main field 7,034 ha (Direct seeding 5,592 ha)																
Nursery	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Transplanting	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Direct seeding	80	80	80	80	80	80	80	80	80	80	80	80	80	80		
Flowering	88	92	94	96	96	97	98	99	99	100						
Ripening	86	86	86	87	88	91	93	94	95	99	100					
Harvesting	85	86	86	86	87	90	91	92	94	96	97	99	100			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 105 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1983/I (1/3)

Unit: %

1983/I	Y 1983																
Total Area	M	3	3	4	4	4	4	5	5	5	5	6	6	6	6		
18,573 ha	D	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	
Phase 1 : Nursery 221 ha; Main field 5,529 ha (Direct seeding 995 ha)																	
Nursery			10	30	50	70	80	82	82	82	82	82	82	82	82	82	
Presaturation	47	65	75	80	90	90	95	95	98	100	100	100	100	100	100	100	
Land preparation	3	18	25	55	65	70	85	94	96	98	100	100	100	100	100	100	
Transplanting						5	10	18	30	45	65	80	82	82	82	82	
Direct seeding		9	10	15	15	18	18	18	18	18	18	18	18	18	18	18	
Flowering																1	
Ripening																	
Harvesting																	
Phase 2 : Nursery 258 ha; Main field 6,451 ha (Direct seeding 1,290 ha)																	
Nursery				10	25	50	65	80	80	80	80	80	80	80	80	80	
Presaturation		20	45	65	75	95	95	97	100	100	100	100	100	100	100	100	
Land preparation		7	12	20	35	55	65	85	95	100	100	100	100	100	100	100	
Transplanting						2	5	15	25	45	60	75	79	80	80	80	
Direct seeding		3	5	8	10	14	16	20	20	20	20	20	20	20	20	20	
Flowering																	
Ripening																	
Harvesting																	
Phase 3 : Nursery 94 ha; Main field 2,342 ha (Direct seeding 399 ha)																	
Nursery															10	55	75
Presaturation								10	10	25	100	100	100	100	100	100	
Land preparation								3	10	15	20	24	30	50	75	75	
Transplanting															2	2	
Direct seeding															2	7	15
Flowering																	
Ripening																	
Harvesting																	
Phase 4 : Nursery 170 ha; Main field 4,251 ha (Direct seeding 1,785 ha)																	
Nursery															20	60	70
Presaturation								10	10	33	100	100	100	100	100	100	
Land preparation								10	15	25	35	40	60	75	95	95	
Transplanting																1	
Direct seeding										2	5	7	12	15	22	22	
Flowering																	
Ripening																	
Harvesting																	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31.

Table 106 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1983/I (2/3)

Unit: %

1983/I	Y 1983														
Total Area	M 7	7	7	7	8	8	8	8	8	9	9	9	9	10	10
18,573 ha	D 6	13	20	27	3	10	17	24	31	7	14	21	28	5	12

Phase 1 : Nursery 221 ha; Main field 5,529 ha (Direct seeding 995 ha)

Nursery	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Direct seeding	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Flowering	9	11	20	55	67	85	88	95	98	100					
Ripening					12	20	25	55	75	85	95	100			
Harvesting					4	10	14	25	45	68	85	95	98	99	100

Phase 2 : Nursery 258 ha; Main field 6,451 ha (Direct seeding 1,290 ha)

Nursery	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Direct seeding	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Flowering			1	15	20	35	40	60	85	90	98	100			
Ripening						4	5	15	30	37	60	75	82	95	100
Harvesting							2	4	15	25	35	60	70	82	95

Phase 3 : Nursery 94 ha; Main field 2,342 ha (Direct seeding 339 ha)

Nursery	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	80	90	95	98	100	100	100	100	100	100	100	100	100	100	100
Transplanting	10	17	25	30	50	65	65	80	83	83	83	83	83	83	83
Direct seeding	15	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Flowering								5	20	23	28	40	50	50	60
Ripening											5	8	12	15	18
Harvesting												5	8	12	15

Phase 4 : Nursery 170 ha; Main field 4,251 ha (Direct seeding 1,785 ha)

Nursery	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	98	99	99	99	100	100	100	100	100	100	100	100	100	100	100
Transplanting	5	8	10	15	22	30	30	55	56	56	56	56	56	56	57
Direct seeding	30	30	33	35	35	35	35	40	42	42	42	42	42	42	42
Flowering								4	10	13	20	35	40	45	50
Ripening											4	6	10	15	20
Harvesting												4	7	10	15

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 107 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1983/I (3/3)

														Unit: %		
1983/I	Y 1983												1984			
Total Area	D	10	10	10	11	11	11	11	12	12	12	12	1	1	1	1
18,573 ha	M	19	26	31	7	16	23	30	7	14	21	28	4	11	18	25
Phase 1 : Nursery 221 ha; Main field 5,529 ha (Direct seeding 995 ha)																
Nursery																
Presaturation																
Land preparation																
Transplanting																
Direct seeding																
Flowering																
Ripening																
Harvesting																
Phase 2 : Nursery 258 ha; Main field 6,451 ha (Direct seeding 1,290 ha)																
Nursery 80																
Presaturation 100																
Land preparation 100																
Transplanting 80																
Direct seeding 20																
Flowering																
Ripening																
Harvesting 100																
Phase 3 : Nursery 94 ha; Main field 2,342 ha (Direct seeding 399 ha)																
Nursery 80 80 80 80 80 80 80 80 80 80 80 80																
Presaturation 100 100 100 100 100 100 100 100 100 100 100 100																
Land preparation 100 100 100 100 100 100 100 100 100 100 100 100																
Transplanting 83 83 83 83 83 83 83 83 83 83 83 83																
Direct seeding 17 17 17 17 17 17 17 17 17 17 17 17																
Flowering 65 75 80 83 95 100																
Ripening 22 30 40 44 55 65 80 90 95 99 100																
Harvesting 18 22 30 34 50 55 65 80 80 95 98 100																
Phase 4 : Nursery 170 ha; Main field 4,251 ha (Direct seeding 1,785 ha)																
Nursery 70 70 70 70 70 70 70 70 70 70 70 70 70 70																
Presaturation 100 100 100 100 100 100 100 100 100 100 100 100 100 100																
Land preparation 100 100 100 100 100 100 100 100 100 100 100 100 100 100																
Transplanting 57 57 57 57 57 57 57 57 57 57 57 57 57 57																
Direct seeding 42 42 42 42 42 42 42 42 42 42 42 42 42 42																
Flowering 55 60 70 72 85 90 95 99																
Ripening 22 25 30 32 40 45 55 65 80 86 93 96 99																
Harvesting 20 22 25 27 35 40 48 55 65 74 85 94 96 99																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 108 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1983/I (1/3)

Unit: %

1983/I	Y 1983															
Total Area	M	3	3	4	4	4	4	5	5	5	5	6	6	6	6	
24,534 ha	D	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29

Phase 1 : Nursery 289 ha; Main field 7,227 ha (Direct seeding 4,855 ha)

Nursery				2	10	30	40	45	45	45	45	45	45	45	45	45
Presaturation	22	55	71	83	89	94	100	100	100	100	100	100	100	100	100	100
Land preparation	45	75	80	89	91	95	99	99	99	99	99	99	99	99	99	99
Transplanting						1	4	10	17	23	31	31	31	32	32	
Direct seeding				35	40	49	51	59	65	66	67	67	67	67	67	
Flowering																19
Ripening																
Harvesting																

Phase 2 : Nursery 330 ha; Main field 8,230 ha (Direct seeding 3,619 ha)

Nursery				2	10	20	30	40	50	60	60	60	60	60	60	60
Presaturation		5	8	47	74	81	93	99	100	100	100	100	100	100	100	100
Land preparation	9	18	26	41	57	67	67	88	91	94	97	99	100	100	100	100
Transplanting								4	10	20	35	47	47	54	55	
Direct seeding				10	22	25	29	30	31	35	36	42	42	43	43	
Flowering																
Ripening																
Harvesting																

Phase 3 : Nursery 363 ha; Main field 9,077 ha (Direct seeding 6,081 ha)

Nursery								5	10	15	20	25	50	55	55	
Presaturation								50	100	100	100	100	100	100	100	100
Land preparation	1	1	1	1	3	11	15	41	53	60	68	71	76	78	81	
Transplanting											1	1	2	3	15	
Direct seeding								1	2	4	8	14	20	25	39	
Flowering																
Ripening																
Harvesting																

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 109 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1983/I (2/3)

Unit: %

1983/I	Y 1983															
Total Area	M	7	7	7	7	8	8	8	8	8	9	9	9	9	10	10
24,534 ha	D	6	13	20	27	3	10	17	24	31	7	14	21	28	5	12

Phase 1 : Nursery 289 ha; Main field 7,227 ha (Direct seeding 4,855 ha)

Nursery	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	99	99	99	99	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	32	32	32	32	32	33	33	33	33	33	33	33	33	33	33	33
Direct seeding	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Flowering	28	35	46	67	79	89	93	95	98	99	100					
Ripening			6	19	30	43	57	66	89	95	99	100				
Harvesting				4	9	19	32	47	71	82	86	93	96	96	96	98

Phase 2 : Nursery 330 ha; Main field 8,230 ha (Direct seeding 3,619 ha)

Nursery	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	55	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Direct seeding	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Flowering	2	3	21	32	49	60	72	98	98	98	99	100				
Ripening			1	5	12	21	34	58	59	59	80	86	91	95	97	
Harvesting					2	4	11	22	32	32	56	70	81	88	93	

Phase 3 : Nursery 363 ha; Main field 9,077 ha (Direct seeding 6,081 ha)

Nursery	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	84	87	87	87	95	95	95	95	95	95	95	95	95	95	95	95
Transplanting	6	12	12	12	18	19	22	23	23	23	23	23	23	23	23	23
Direct seeding	44	44	60	61	67	67	67	67	67	67	67	67	67	67	67	67
Flowering				7	8	8	16	23	23	33	40	41	48	55	56	
Ripening									1	9	15	17	26	34	35	
Harvesting										3	6	7	13	23	26	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 110 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
OF MUDA AREA FOR CROP SEASON 1983/I (3/3)

Unit: %

1983/I	Y 1983										1984					
Total Area	M	10	10	10	11	11	11	11	12	12	12	12	1	1	1	1
24,534 ha	D	19	26	31	7	16	23	30	7	14	21	28	4	11	18	25

Phase 1 : Nursery 289 ha; Main field 7,227 ha (Direct seeding 4,855 ha)

Nursery	45
Presaturation	100
Land preparation	100
Transplanting	33
Direct seeding	67
Flowering	
Ripening	
Harvesting	100

Phase 2 : Nursery 330 ha; Main field 8,230 ha (Direct seeding 3,619 ha)

Nursery	60	60	60	60	60
Presaturation	100	100	100	100	100
Land preparation	100	100	100	100	100
Transplanting	56	56	56	56	56
Direct seeding	44	44	44	44	44
Flowering					
Ripening	99	100			
Harvesting	97	98	99	99	100

Phase 3 : Nursery 363 ha; Main field 9,077 ha (Direct seeding 6,081 ha)

Nursery	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Transplanting	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Direct seeding	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Flowering	69	74	75	81	87	87	87	88	88	90				
Ripening	50	60	63	69	75	76	80	83	83	87	87	89	89	90
Harvesting	39	44	49	55	61	69	71	78	78	80	84	88	88	89

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 31

Table 111 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I OF MUDA AREA FOR CROP SEASON 1983/II (1/2)

1983/II	Y 1983														Unit: %			
	M	8	8	9	9	9	9	10	10	10	10	10	11	11		11	11	12
	D	24	30	7	14	21	28	5	12	19	26	31	7	16		23	30	7
Phase 1 : Nursery 208 ha; Main field 5,194 ha																		
Nursery				4	16	38	59	85	96	100	100	100	100	100	100	100	100	
Presaturation				-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation				3	5	16	23	32	52	60	80	100	100	100	100	100	100	
Transplanting									5	6	9	45	79	90	100	100		
Flowering																		
Ripening																		
Harvesting																		
Phase 2 : Nursery 201 ha; Main field 5,026 ha (Direct seeding 20 ha)																		
Nursery				4	27	47	90	100	100	100	100	100	100	100	100	100	100	
Presaturation				-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Land preparation				1	21	35	46	60	75	85	97	99	100	100	100	100		
Transplanting									5	6	22	50	79	96	100			
Direct seeding												0	0	0	0			
Flowering																		
Ripening																		
Harvesting																		
Phase 3 : Nursery 335 ha; Main field 8,383 ha (Direct seeding 956 ha)																		
Nursery							12	34	35	35	40	44	52	52	52			
Presaturation							-	-	-	-	-	-	-	-	-	-	-	
Land preparation				2	10	12	26	37	38	45	50	54	57	58				
Transplanting									1	3	3	8	18	28	35	42		
Direct seeding									6	7	7	10	10	11	11	11		
Flowering																		
Ripening																		
Harvesting																		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. 22 and 32

Table 112

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
OF MUDA AREA FOR CROP SEASON 1983/II (2/2)

Unit: %

1983/II	Y	1983		1984													
Total Area	M	12	12	12	1	1	1	1	2	2	2	2	2	3	3	3	3
18,603 ha	D	14	21	28	4	11	18	25	1	8	15	22	29	7	14	21	28

Phase 1 : Nursery 208 ha; Main field 5,194 ha

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering		2	2	10	36	54	90	97	100								
Ripening							2	8	19	36	70	93	100				
Harvesting								3	8	14	26	43	73	96	100		

Phase 2 : Nursery 201 ha; Main field 5,026 ha (Direct seeding 20 ha)

Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Direct seeding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flowering	1	1	2	7	23	36	75	89	99	100							
Ripening							4	8	24	49	79	100					
Harvesting								2	3	9	19	40	62	84	90	100	

Phase 3 : Nursery 335 ha; Main field 8,383 ha (Direct seeding 956 ha)

Nursery	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	69	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Transplanting	45	47	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
Direct seeding	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Flowering				6	9	18	35	46	51	55	56	59	60				
Ripening							3	8	17	31	33	50	55	60			
Harvesting								1	4	11	18	38	41	53	60		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 113 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II OF MUDA AREA FOR CROP SEASON 1983/II (1/2)

Unit: %

1983/II	Y 1983																
	M	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11	12
Total Area	D	24	30	7	14	21	28	5	12	19	26	31	7	16	23	30	7
Phase 1 : Nursery 442 ha; Main field 11,058 ha (Direct seeding 2,189 ha)																	
Nursery				1	4	25	40	62	70	83	83	83	83	83	83	83	83
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		6	13	23	35	49	68	81	93	98	99	100	100	100	100	100	100
Transplanting								4	9	18	46	54	72	78	80	80	
Direct seeding							1	7	11	15	17	18	19	19	20	20	
Flowering																	
Ripening																	
Harvesting																	
Phase 2 : Nursery 168 ha; Main field 4,204 ha (Direct seeding 160 ha)																	
Nursery					6	16	36	81	92	98	98	98	98	98	98	98	98
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation					3	14	30	45	59	81	100	100	100	100	100	100	100
Transplanting										6	30	49	75	90	96		
Direct seeding										1	2	4	4	4	4	4	4
Flowering																	
Ripening																	
Harvesting																	
Phase 3 : Nursery 665 ha; Main field 16,640 ha (Direct seeding 8,253 ha)																	
Nursery						5	8	13	24	25	34	34	34	34	34	34	34
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation						9	25	40	49	57	62	64	66	69	70		
Transplanting									1	3	6	8	10	15	16	17	
Direct seeding									1	1	8	17	33	39	44	47	47
Flowering																	
Ripening																	
Harvesting																	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 114

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
OF MUDA AREA FOR CROP SEASON 1983/II (2/2)

Unit: %

1983/II	Y 1983			1984													
Total Area	M	12	12	1	1	1	1	2	2	2	2	2	3	3	3	3	
31,902 ha	D	14	21	28	4	11	18	25	1	8	15	22	29	7	14	21	28
Phase 1	Nursery 442 ha; Main field 11,058 ha (Direct seeding 2,189 ha)																
Nursery	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Direct seeding	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Flowering	1	4	12	34	56	78	92	99	100								
Ripening					6	16	31	49	77	94	100						
Harvesting						7	13	23	39	60	77	93	98	99	100		
Phase 2 :	Nursery 168 ha; Main field 4,204 ha (Direct seeding 160 ha)																
Nursery	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
Direct seeding	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Flowering				2	4	18	47	72	89	97	100						
Ripening									1	26	57	78	97	100			
Harvesting										3	23	47	70	90	100		
Phase 3 :	Nursery 665 ha; Main field 16,640 ha (Direct seeding 8,253 ha)																
Nursery	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Transplanting	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Direct seeding	49	49	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Flowering				4	11	21	33	47	60	64	57	68	69				
Ripening						1	3	9	18	33	47	65	67	69			
Harvesting							1	2	4	9	24	38	51	65	68	69	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 115

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
OF MUDA AREA FOR CROP SEASON 1983/II (1/2)

Unit: %

1983/II	Y 1983																
Total Area	M	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11	12
20,894 ha	D	24	30	7	14	21	28	5	12	19	26	31	7	16	23	30	7
Phase 1 :	Nursery 262 ha; Main field 6,552 ha (Direct seeding 1,442 ha)																
Nursery			8	10	20	25	28	35	75	80	82	82	82	82	82	82	82
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation		5	8	20	22	26	30	40	75	85	90	92	100	100	100	100	100
Transplanting									12	25	56	63	77	78	78	78	78
Direct seeding				2	3	3	6	8	15	18	18	22	22	22	22	22	22
Flowering																	
Ripening																	
Harvesting																	
Phase 2 :	Nursery 265 ha; Main field 6,615 ha (Direct seeding 2,315 ha)																
Nursery						2	5	20	40	50	50	50	65	65	65	65	65
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation				4	6	15	20	30	40	80	82	98	100	100	100	100	100
Transplanting											15	23	35	45	53	60	60
Direct seeding								2	3	5	15	23	35	35	35	35	35
Flowering																	
Ripening																	
Harvesting																	
Phase 3 :	Nursery 308 ha; Main field 7,727 ha (Direct seeding 1,004 ha)																
Nursery												1	1	1	1	1	1
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation							5	7	8	12	12	13	14	14	14	14	14
Transplanting												1	1	1	1	1	1
Direct seeding								1	2	4	6	7	10	12	13	13	13
Flowering																	
Ripening																	
Harvesting																	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 116 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III OF MUDA AREA FOR CROP SEASON 1983/II (2/2)

Unit: %

1983/II Total Area 20,894 ha	Y 1983		1984															
	M	D	12	12	12	1	1	1	1	2	2	2	2	2	3	3	3	3
			14	21	28	4	11	18	25	1	8	15	22	29	7	14	21	28
Phase 1 :	Nursery 262 ha; Main field 6,552 ha (Direct seeding 1,442 ha)																	
Nursery	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Direct seeding	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Flowering				40	100													
Ripening				5	7	15	20	28	50	65	95	100						
Harvesting				5	7	15	20	28	50	65	95	100						
Phase 2 :	Nursery 265 ha; Main field 6,615 ha (Direct seeding 2,315 ha)																	
Nursery	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Direct seeding	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Flowering				5	8	20	30	50	65	85	100							
Ripening								6	10	17	25	45	70	90	100			
Harvesting								6	10	17	25	45	65	87	90	95		
Phase 3 :	Nursery 308 ha; Main field 7,727 ha (Direct seeding 1,004 ha)																	
Nursery	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Transplanting	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Direct seeding	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Flowering						3	5	6	13	14								
Ripening									1	5	7	10	14					
Harvesting									1	5	7	10	11	12	12	12		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 117 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1983/II (1/2)

Unit: %

1983/II	Y 1983																
Total Area	M	8	8	9	9	9	9	10	10	10	10	10	11	11	11	11	12
24,534 ha	D	24	30	7	14	21	28	5	12	19	26	31	7	16	23	30	7
Phase 1 :	Nursery 309 ha; Main field 7,730 ha (Direct seeding 3,324 ha)																
Nursery	10	10	15	16	20	40	60	80	90	95	95	95	95	95	95	95	95
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	6	13	30	35	67	79	82	95	95	96	96	98	99	99	99	99	99
Transplanting							1	10	16	25	30	38	42	46	49	50	
Direct seeding							8	9	22	29	39	40	41	43	43	43	
Flowering																	
Ripening																	
Harvesting																	
Phase 2 :	Nursery 327 ha; Main field 8,176 ha (Direct seeding 3,757 ha)																
Nursery			5	8	10	20	40	69	70	80	80	80	80	80	80	80	80
Presaturation			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation			11	12	20	26	36	49	60	71	77	85	94	94	98	98	
Transplanting							1	2	7	13	24	30	38	45	52	54	
Direct seeding						1	4	12	19	25	29	37	42	44	45	46	
Flowering																	
Ripening																	
Harvesting																	
Phase 3 :	Nursery 344 ha; Main field 8,628 ha (Direct seeding 3,507 ha)																
Nursery							10	15	20	30	30	30	30	30	30	30	30
Presaturation							-	-	-	-	-	-	-	-	-	-	-
Land preparation						7	10	14	19	30	33	42	43	43	45		
Transplanting								2	2	2	2	2	2	2	2	3	
Direct seeding							2	2	7	16	25	34	38	38	38		
Flowering																	
Ripening																	
Harvesting																	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 118 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV OF MUDA AREA FOR CROP SEASON 1983/II (2/2)

Unit: %

1983/II Total Area 24,534 ha	Y 1983		1984															
	M	D	12	12	12	1	1	1	1	2	2	2	2	2	3	3	3	3
			14	21	28	4	11	18	25	1	8	15	22	29	7	14	21	28
Phase 1	Nursery 309 ha; Main field 7,730 ha (Direct seeding 3,324 ha)																	
Nursery	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	50	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
Direct seeding	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Flowering	1	3	33	53	67	83	88	96	97									
Ripening				4	16	31	51	68	78	87	91	94	97					
Harvesting				1	3	11	22	45	58	73	83	89	94	95	97			
Phase 2 :	Nursery 327 ha; Main field 8,176 ha (Direct seeding 3,757 ha)																	
Nursery	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
Direct seeding	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Flowering		1	10	28	48	60	71	79	90	94	99	99	99	99	100			
Ripening				2	7	18	32	36	52	62	78	90	92	98	99	99		
Harvesting					1	3	6	14	33	44	58	71	83	90	97	97		
Phase 3 :	Nursery 344 ha; Main field 8,628 ha (Direct seeding 3,507 ha)																	
Nursery	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Presaturation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Land preparation	45	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Transplanting	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Direct seeding	38	38	39	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
Flowering					1	5	6	16	25	27	42	44						
Ripening								2	8	11	22	26	35	37	42	44		
Harvesting								1	2	3	9	14	29	33	41	41		

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 32

Table 119 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

Unit: %

1984/I	Y 1984												
Total Area	M 3	3	3	3	4	4	4	4	5	5	5	5	5
16,143 ha	D 7	14	21	28	4	11	18	25	2	9	16	23	30

Phase 1 :	Nursery 158 ha; Main field 3,945 ha (Direct seeding 12 ha)												
Nursery			28	43	82	92	100	100	100	100	100	100	100
Presaturation	20	55	99	100	100	100	100	100	100	100	100	100	100
Land preparation	2	13	30	50	68	83	94	96	100	100	100	100	100
Transplanting							0	8	22	61	87	99	100
Direct seeding								0	0	0	0	0	0
Flowering													
Ripening													
Harvesting													
Phase 2 :	Nursery 106 ha; Main field 2,644 ha (Direct seeding 325 ha)												
Nursery			7	34	45	56	91	100	100	100	100	100	100
Presaturation	27	65	88	100	100	100	100	100	100	100	100	100	100
Land preparation	12	12	34	57	72	92	100	100	100	100	100	100	100
Transplanting								2	11	42	67	76	88
Direct seeding							1	3	4	10	12	12	12
Flowering													
Ripening													
Harvesting													
Phase 3 :	Nursery 184 ha; Main field 4,603 ha (Direct seeding 1,427 ha)												
Nursery							44	46	46	46	46	46	46
Presaturation						60	80	100	100	100	100	100	100
Land preparation	9	11	17	25	39	59	67	79	83	87	88	88	88
Transplanting										1	3	5	7
Direct seeding									10	20	30	31	31
Flowering													
Ripening													
Harvesting													
Phase 4 :	Nursery 198 ha; Main field 4,951 ha (Direct seeding 901 ha)												
Nursery							17	18	18	18	41	41	41
Presaturation						50	80	100	100	100	100	100	100
Land preparation	6	6	7	14	20	32	37	39	39	44	45	53	53
Transplanting										2	7	14	14
Direct seeding													18
Flowering													
Ripening													
Harvesting													

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 120 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

Unit: %

1984/I	Y 1984												
Total Area	M 6	6	6	6	7	7	7	7	8	8	8	8	8
16,143 ha	D 7	13	20	27	4	11	18	25	1	8	15	22	29
Phase 1 :	Nursery 158 ha; Main field 3,945 ha (Direct seeding 12 ha)												
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	100	100	100	100	100	100	100	100	100	100	100	100	100
Direct seeding	0	0	0	0	0	0	0	0	0	0	0	0	0
Flowering					3	11	41	57	92	92	100		
Ripening								3	4	28	65	88	100
Harvesting										2	19	41	60
Phase 2 :	Nursery 106 ha; Main field 2,644 ha (Direct seeding 325 ha)												
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	88	88	88	88	88	88	88	88	88	88	88	88	88
Direct seeding	12	12	12	12	12	12	12	12	12	12	12	12	12
Flowering					9	13	24	39	75	87	97	100	
Ripening							2	3	8	56	57	62	87
Harvesting									3	3	9	35	51
Phase 3 :	Nursery 184 ha; Main field 4,603 ha (Direct seeding 1,427 ha)												
Nursery	46	46	46	46	46	46	46	46	46	46	46	46	46
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	88	88	88	88	88	88	88	88	88	88	88	88	88
Transplanting	35	35	35	35	35	35	35	35	35	35	35	35	35
Direct seeding	31	31	31	31	31	31	31	31	31	31	31	31	31
Flowering					2	15	32	46	65	66			
Ripening							9	27	51	54	65	65	65
Harvesting								5	18	27	30	58	59
Phase 4 :	Nursery 198 ha; Main field 4,951 ha (Direct seeding 901 ha)												
Nursery	41	41	41	41	41	41	41	41	41	41	41	41	41
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	53	53	53	53	53	53	53	53	53	53	53	53	53
Transplanting	22	22	22	22	22	22	22	22	22	22	22	22	22
Direct seeding	18	18	18	18	18	18	18	18	18	18	18	18	18
Flowering					27	30	32	33	33	39	40		
Ripening							4	7	17	24	25	38	39
Harvesting								2	8	14	23	31	34

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and 33

Table 121 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

1984/I	Y 1984														Unit: %				
Total Area	M	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5			
1,322 ha	D	4	7	11	14	18	21	25	28	4	11	18	25	2	9	16			
Phase 1 :	Nursery 11 ha; Main field 285 ha (Direct seeding 3 ha)																		
Nursery					13	46	58	78	100	100	100	100	100	100	100	100			
Presaturation		38	99	100	100	100	100	100	100	100	100	100	100	100	100	100			
Land preparation		20	21	27	52	64	80	87	98	99	100	100	100	100	100	100			
Transplanting												5	41	70	91	97			
Direct seeding												1	1	1	1	1			
Flowering																			
Ripening																			
Harvesting																			
Phase 2 :	Nursery 12 ha; Main field 289 ha (Direct seeding 2 ha)																		
Nursery					4	28	42	60	99	100	100	100	100	100	100	100			
Presaturation		65	98	100	100	100	100	100	100	100	100	100	100	100	100	100			
Land preparation		1	13	28	47	66	86	97	99	100	100	100	100	100	100	100			
Transplanting												1	12	56	89	98			
Direct seeding												1	1	1	1	1			
Flowering																			
Ripening																			
Harvesting																			
Phase 3 :	Nursery 7 ha; Main field 182 ha																		
Nursery					4	16	43	89	100	100	100	100	100	100	100	100			
Presaturation		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100			
Land preparation		19	40	48	74	87	96	100	100	100	100	100	100	100	100	100			
Transplanting												7	31	93	96				
Flowering																			
Ripening																			
Harvesting																			
Phase 4 :	Nursery 10 ha; Main field 239 ha (Direct seeding 30 ha)																		
Nursery					6	15	64	79	100	100	100	100	100	100	100	100			
Presaturation					80	97	100	100	100	100	100	100	100	100	100	100			
Land preparation					42	69	87	93	99	100	100	100	100	100	100	100			
Transplanting												3	20	54	75				
Direct seeding												6	12	12	12				
Flowering																			
Ripening																			
Harvesting																			
Phase 5 :	Nursery 9 ha; Main field 214 ha (Direct seeding 1 ha)																		
Nursery									53	69	100	100	100	100	100	100			
Presaturation					5	11	86	100	100	100	100	100	100	100	100	100			
Land preparation					10	10	54	82	90	97	100	100	100	100	100	100			
Transplanting													6	40	83				
Direct seeding																			
Flowering																			
Ripening																			
Harvesting																			
Phase 6 :	Nursery 4 ha; Main field 113 ha (Direct seeding 12 ha)																		
Nursery									7	42	84	97	100	100	100	100			
Presaturation									73	92	100	100	100	100	100	100			
Land preparation					15	22	52	64	85	100	100	100	100	100	100	100			
Transplanting													1	3	34	74			
Direct seeding													9	11	11	11			
Flowering																			
Ripening																			
Harvesting																			

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 122

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT I
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

1984/I	Y 1984														Unit: %	
	M	5	5	6	6	6	6	7	7	7	8	8	8	8		9
Total Area	M	5	5	6	6	6	6	7	7	7	8	8	8	8	9	
1,322 ha	D	23	30	7	13	20	27	11	18	25	1	8	15	22	29	5
Phase 1 :	Nursery 11 ha; Main field 285 ha (Direct seeding 3 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Direct seeding	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Flowering								24	60	89	99	100				
Ripening											10	41	70	93	100	
Harvesting											12	46	73	92		
Phase 2 :	Nursery 12 ha; Main field 289 ha (Direct seeding 2 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Direct seeding	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Flowering								1	20	50	83	100				
Ripening										1	1	3	17	65	85	100
Harvesting											1	26	60	89		
Phase 3 :	Nursery 7 ha; Main field 182 ha															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Flowering								5	18	66	98	100				
Ripening										3	5	11	44	83	100	
Harvesting										1	1	4	15	43	83	
Phase 4 :	Nursery 10 ha; Main field 239 ha (Direct seeding 30 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Direct seeding	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Flowering								9	13	26	50	87	100			
Ripening										6	12	15	20	46	70	92
Harvesting										2	5	14	15	20	36	61
Phase 5 :	Nursery 9 ha; Main field 214 ha (Direct seeding 1 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Direct seeding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flowering										9	40	81	97	100		
Ripening												3	26	55	91	
Harvesting												1	6	20	50	
Phase 6 :	Nursery 4 ha; Main field 113 ha (Direct seeding 12 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	88	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
Direct seeding	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Flowering								11	12	21	35	63	95	100		
Ripening										4	4	8	11	27	41	63
Harvesting												8	11	16	20	34

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 123 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

													Unit: %	
1984/I	Y 1984													
Total Area	M	3	3	3	4	4	4	4	5	5	5	5	5	
29,435 ha	D	7	14	21	28	4	11	18	25	2	9	16	23	30
Phase 1 : Nursery 264 ha; Main field 6,608 ha (Direct seeding 1,156 ha)														
Nursery		2	14	30	68	78	93	95	100	100	100	100	100	100
Presaturation	16	32	85	86	94	99	100	100	100	100	100	100	100	100
Land preparation	1	6	21	33	59	84	87	96	100	100	100	100	100	100
Transplanting							1	6	17	43	61	77	82	
Direct seeding				1	3	7	11	16	18	18	18	18	18	
Flowering														
Ripening														
Harvesting														
Phase 2 : Nursery 302 ha; Main field 7,559 ha (Direct seeding 1,512 ha)														
Nursery		2	2	15	45	65	85	86	92	92	92	92	92	92
Presaturation	1	10	40	77	91	96	96	100	100	100	100	100	100	100
Land preparation		10	11	24	50	70	89	96	100	100	100	100	100	100
Transplanting								1	10	34	52	65	79	
Direct seeding							7	11	12	18	20	20	20	
Flowering														
Ripening														
Harvesting														
Phase 3 : Nursery 60 ha; Main field 4,206 ha (Direct seeding 799 ha)														
Nursery				1	1	6	8	9	10	13	13	13	13	16
Presaturation				100	100	100	100	100	100	100	100	100	100	100
Land preparation				4	36	46	59	60	64	73	75	83	83	
Transplanting									1	10	14	33	43	
Direct seeding					2	2	5	11	13	14	15	19	19	
Flowering														
Ripening														
Harvesting														
Phase 4 : Nursery 23 ha; Main field 11,062 ha (Direct seeding 10,056 ha)														
Nursery				1	2	7	8	8	8	8	8	9	9	
Presaturation				52	58	74	79	96	97	100	100	100	100	
Land preparation				45	57	71	75	76	81	91	92	98	98	
Transplanting									1	3	4	5	7	
Direct seeding					4	14	59	74	76	83	87	90	90	
Flowering														
Ripening														
Harvesting														

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 124 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

Unit: %

1984/I	Y 1984												
Total Area	M 6	6	6	6	7	7	7	7	8	8	8	8	8
29,435 ha	D 7	13	20	27	4	11	18	25	1	8	15	22	29
Phase 1 :	Nursery 264 ha; Main field 6,608 ha (Direct seeding 1,156 ha)												
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	82	82	82	82	82	82	82	82	82	82	82	82	82
Direct seeding	18	18	18	18	18	18	18	18	18	18	18	18	18
Flowering				1	5	15	40	66	85	98	100		
Ripening								4	16	32	60	80	97
Harvesting									1	5	16	34	57
Phase 2 :	Nursery 302 ha; Main field 7,559 ha (Direct seeding 1,512 ha)												
Nursery	92	92	92	92	92	92	92	92	92	92	92	92	92
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	80	80	80	80	80	80	80	80	80	80	80	80	80
Direct seeding	20	20	20	20	20	20	20	20	20	20	20	20	20
Flowering				2	2	10	32	62	79	90	100		
Ripening							2	4	10	16	52	73	99
Harvesting									2	3	14	26	50
Phase 3 :	Nursery 60 ha; Main field 4,206 ha (Direct seeding 799 ha)												
Nursery	29	29	29	29	29	29	29	29	29	29	29	29	29
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	83	83	83	83	83	83	83	83	83	83	83	83	83
Transplanting	43	43	49	49	49	49	49	49	49	49	49	49	49
Direct seeding	19	19	19	19	19	19	19	19	19	19	19	19	19
Flowering					35	35	50	62	64	68			
Ripening							3	4	15	27	51	62	68
Harvesting								1	5	8	26	49	60
Phase 4 :	Nursery 23 ha; Main field 11,062 ha (Direct seeding 10,056 ha)												
Nursery	9	9	9	9	9	9	9	9	9	9	9	9	9
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	7	7	7	7	7	7	7	7	7	7	7	7	7
Direct seeding	90	90	91	91	91	91	91	91	91	91	91	91	91
Flowering					15	30	84	94	96	96	98		
Ripening							10	31	58	71	85	86	98
Harvesting								5	16	31	65	83	92

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 125

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

1984/I	Unit: %														
	Y 1984														
	M 3 3 3 3 3 3 3 3 4 4 4 4 5 5 5														
Total Area 1,814 ha	D 4 7 11 14 18 21 25 28 4 11 18 25 2 9 16														
Phase 1 :	Nursery 18 ha; Main field 439 ha (Direct seeding 19 ha)														
Nursery	9	20	23	57	80	89	100	100	100	100	100	100	100	100	100
Presaturation	73	93	95	95	100	100	100	100	100	100	100	100	100	100	100
Land preparation	9	38	44	62	77	91	98	100	100	100	100	100	100	100	100
Transplanting						1	9	30	56	73	81				
Direct seeding						1	1	4	3	4	4	4			
Flowering															
Ripening															
Harvesting															
Phase 2 :	Nursery 15 ha; Main field 364 ha (Direct seeding 40 ha)														
Nursery		2	17	53	84	88	95	95	95	95	95	95	95	95	95
Presaturation		75	99	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation		23	53	64	90	92	97	100	100	100	100	100	100	100	100
Transplanting						1	3	22	40	68	78				
Direct seeding						1	1	1	3	7	7	9			
Flowering															
Ripening															
Harvesting															
Phase 3 :	Nursery 12 ha; Main field 298 ha (Direct seeding 39 ha)														
Nursery			2	45	81	89	99	99	99	99	99	99	99	99	99
Presaturation			99	99	100	100	100	100	100	100	100	100	100	100	100
Land preparation			29	67	95	97	100	100	100	100	100	100	100	100	100
Transplanting									19	41	59	76			
Direct seeding								2	5	12	12	12			
Flowering															
Ripening															
Harvesting															
Phase 4 :	Nursery 12 ha; Main field 310 ha (Direct seeding 52 ha)														
Nursery			1	23	74	82	91	93	93	93	93	93	93	93	93
Presaturation			74	81	99	99	99	100	100	100	100	100	100	100	100
Land preparation			13	48	86	93	97	100	100	100	100	100	100	100	100
Transplanting									23	26	55	75			
Direct seeding								3	3	7	9	11	14		
Flowering															
Ripening															
Harvesting															
Phase 5 :	Nursery 9 ha; Main field 233 ha (Direct seeding 35 ha)														
Nursery				22	80	82	88	95	95	95	95	95	95	95	95
Presaturation			77	82	93	100	100	100	100	100	100	100	100	100	100
Land preparation			13	39	87	90	96	97	100	100	100	100	100	100	100
Transplanting									2	18	47	75			
Direct seeding									2	8	9	12	13		
Flowering															
Ripening															
Harvesting															
Phase 6 :	Nursery 7 ha; Main field 170 ha (Direct seeding 22 ha)														
Nursery				11	71	91	100	100	100	100	100	100	100	100	100
Presaturation			78	81	100	100	100	100	100	100	100	100	100	100	100
Land preparation			2	26	75	89	100	100	100	100	100	100	100	100	100
Transplanting									5	8	26	68			
Direct seeding									2	6	11	17			
Flowering															
Ripening															
Harvesting															

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 126

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT II
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

1984/I Total Area 1,814 ha	Y 1984															Unit: %
	M	5	6	6	6	6	7	7	7	8	8	8	8	8	9	
	D	23	30	7	13	20	27	11	18	25	1	8	15	22	29	5
Phase 1 :	Nursery 18 ha; Main field 439 ha (Direct seeding 19 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	92	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
Direct seeding	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Flowering							4	33	53	75	93	100				
Ripening									2	9	18	46	72	95	98	
Harvesting										1	1	10	35	52	74	
Phase 2 :	Nursery 15 ha; Main field 364 ha (Direct seeding 40 ha)															
Nursery	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	86	88	88	88	88	88	88	88	88	88	89	89	89	89	89	89
Direct seeding	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Flowering							1	22	35	69	96	99	100			
Ripening										5	14	34	60	79	96	
Harvesting											2	5	20	43	67	
Phase 3 :	Nursery 12 ha; Main field 298 ha (Direct seeding 39 ha)															
Nursery	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	84	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Direct seeding	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Flowering								6	34	69	91	100				
Ripening										4	11	28	64	82	96	
Harvesting											1	6	19	51	69	
Phase 4 :	Nursery 12 ha; Main field 310 ha (Direct seeding 52 ha)															
Nursery	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	82	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Direct seeding	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Flowering								9	21	56	85	98	100			
Ripening											4	19	49	72	90	
Harvesting											1	6	16	49	64	
Phase 5 :	Nursery 9 ha; Main field 233 ha (Direct seeding 35 ha)															
Nursery	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	82	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
Direct seeding	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Flowering								33	50	67	88	99	100			
Ripening										1	1	10	44	73	98	
Harvesting												1	5	34	68	
Phase 6 :	Nursery 7 ha; Main field 170 ha (Direct seeding 22 ha)															
Nursery	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Direct seeding	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Flowering								1	9	35	81	97	100			
Ripening												4	20	51	91	
Harvesting													3	21	41	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 127 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

Unit: %

1984/I	Y 1984												
Total Area	M 3	3	3	3	4	4	4	4	5	5	5	5	5
18,702 ha	D 7	14	21	28	4	11	18	25	2	9	16	23	30

Phase 1 : Nursery 191 ha; Main field 4,779 ha (Direct seeding 1,529 ha)

Nursery				20	30	40	70	70	70	70	70	70	70
Presaturation	2	35	80	95	100	100	100	100	100	100	100	100	100
Land preparation	35	44	52	60	65	72	90	97	99	99	99	99	99
Transplanting								2	9	12	29	52	65
Direct seeding						2	8	13	22	28	32	32	32
Flowering													
Ripening													
Harvesting													

Phase 2 : Nursery 105 ha; Main field 2,632 ha (Direct seeding 579 ha)

Nursery				2	5	20	20	25	25	25	30	30	60
Presaturation		5	35	75	80	100	100	100	100	100	100	100	100
Land preparation		2	10	12	24	45	65	80	95	100	100	100	100
Transplanting											18	46	68
Direct seeding							4	10	20	22	22	22	22
Flowering													
Ripening													
Harvesting													

Phase 3 : Main field 6,194 ha (Direct seeding 6,194 ha*)

Presaturation								100	100	100	100	100	100
Land preparation		6	9	10	18	20	23	30	45	60	75	75	75
Direct seeding*							3	8	18	30	45	75	75
Flowering													
Ripening													
Harvesting													

Phase 4 : Main field 5,097 ha (Direct seeding 4,842 ha**)

Presaturation								100	100	100	100	100	100
Land preparation				19	22	27	30	55	60	65	80	80	80
Direct seeding**					12	14	16	33	38	42	53	80	80
Flowering													
Ripening													
Harvesting													

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 1,549 ha

** : Including voluntary germination area of 509 ha

Source; Refs. C 22 and C 33

Table 128 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT III
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

Unit: %

1984/I	Y 1984												
Total Area	M 6	6	6	6	7	7	7	7	8	8	8	8	8
18,702 ha	D 7	13	20	27	4	11	18	25	1	8	15	22	29

Phase 1 :	Nursery 191 ha; Main field 4,779 ha (Direct seeding 1,529 ha)												
Nursery	70	70	70	70	70	70	70	70	70	70	70	70	70
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	99	99	99	99	99	99	99	99	99	99	99	99	99
Transplanting	67	67	67	67	67	67	67	67	67	67	67	67	67
Direct seeding	32	32	32	32	32	32	32	32	32	32	32	32	32
Flowering					5	10	15	25	42	65	75	96	99
Ripening										5	30	50	79
Harvesting											2	6	30
Phase 2 :	Nursery 105 ha; Main field 2,632 ha (Direct seeding 579 ha)												
Nursery	60	60	60	60	60	60	60	60	60	60	60	60	60
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	78	78	78	78	78	78	78	78	78	78	78	78	78
Direct seeding	22	22	22	22	22	22	22	22	22	22	22	22	22
Flowering						5	16	30	40	65	93	100	
Ripening											25	50	76
Harvesting											7	14	34
Phase 3 :	Main field 6,194 ha (Direct seeding 6,194 ha*)												
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	75	75	75	75	75	75	75	75	75	75	75	75	75
Direct seeding*	75	100	100	100	100	100	100	100	100	100	100	100	100
Flowering						5	22	39	50	70	75	100	
Ripening										5	15	71	95
Harvesting											2	34	59
Phase 4 :	Main field 5,097 ha (Direct seeding 4,842 ha**)												
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	80	90	90	90	90	90	90	90	90	90	90	90	90
Direct seeding*	80	95	95	95	95	95	95	95	95	95	95	95	95
Flowering						10	30	50	61	85	90	95	
Ripening							2	5	23	35	55	88	90
Harvesting								5	6	12	40	49	65

Remarks; Y: Year, M: Month, D: Date

*: Including voluntary germination area of 1,549 ha

** : Including voluntary germination area of 509 ha

Source; Refs. C 22 and C 33

Table 129 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

													Unit: %	
1984/I	Y 1984													
Total Area	M 3	3	3	3	4	4	4	4	5	5	5	5	5	
21,821 ha	D 7	14	21	28	4	11	18	25	2	9	16	23	30	
Phase 1 : Nursery 180 ha; Main field 4,509 ha (Direct seeding 2,029 ha)														
Nursery					5	5	5	14	20	20	20	30	32	32
Presaturation	14	36	42	58	71	88	100	100	100	100	100	100	100	100
Land preparation	16	61	67	74	84	84	86	88	88	88	88	88	88	88
Transplanting								2	6	9	25	31	31	
Direct seeding						3	4	17	30	37	40	43	44	
Flowering														
Ripening														
Harvesting														
Phase 2 : Nursery 79 ha; Main field 1,974 ha (Direct seeding 1,186 ha)														
Nursery					5	5	8	10	11	11	11	15	18	18
Presaturation	1	25	54	94	97	100	100	100	100	100	100	100	100	100
Land preparation		35	46	61	71	82	87	91	91	97	99	100	100	100
Transplanting									1	1	30	30	32	
Direct seeding						2	7	13	20	22	39	49	60	
Flowering														
Ripening														
Harvesting														
Phase 3 : Main field 12,546 ha (Direct seeding) 10,251 ha)														
Presaturation								100	100	100	100	100	100	100
Land preparation	10	20	30	44	50	59	69	76	79	86	88	89	89	
Transplanting											2	3	5	
Direct seeding							45	56	57	72	74	77	78	
Flowering														
Ripening														
Harvesting														
Phase 4 : Main field 2,792 ha (Direct seeding 2,535 ha)														
Presaturation								100	100	100	100	100	100	100
Land preparation	14	27	38	44	68	69	92	95	97	98	99	99	100	
Transplanting													5	
Direct seeding							53	68	73	73	84	91	91	
Flowering														
Ripening														
Harvesting														

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 130 RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
(MUDA I SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

Unit: %

1984/I	Y 1984												
Total Area	M 6	6	6	6	7	7	7	7	8	8	8	8	8
21,821 ha	D 7	13	20	27	4	11	18	25	1	8	15	22	29
Phase 1 :	Nursery 180 ha; Main field 4,509 ha (Direct seeding 2,029 ha)												
Nursery	32	32	32	32	32	32	32	32	32	32	32	32	32
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	88	88	88	88	88	88	88	88	88	88	88	88	88
Transplanting	31	37	39	39	39	42	42	42	42	42	42	42	42
Direct seeding	44	45	45	45	45	45	45	45	45	45	45	45	45
Flowering				1	2	22	30	40	53	60	73	87	
Ripening								5	5	8	25	38	48
Harvesting									1	2	4	10	25
Phase 2 :	Nursery 79 ha; Main field 1,974 ha (Direct seeding 1,186 ha)												
Nursery	18	18	18	18	18	18	18	18	18	18	18	18	18
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	34	35	35	35	35	40	40	40	40	40	40	40	40
Direct seeding	60	60	60	60	60	60	60	60	60	60	60	60	60
Flowering					2	8	15	23	55	70	91	98	98
Ripening								1	2	2	10	18	53
Harvesting										1	2	4	14
Phase 3 :	Main field 12,546 ha (Direct seeding 10,251 ha)												
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	93	93	93	93	93	93	93	93	93	93	93	93	93
Transplanting	8	8	11	11	11	11	11	11	11	11	11	11	11
Direct seeding	79	81	81	81	81	81	82	82	82	82	82	82	82
Flowering				18	37	55	65	70	74	78	83	85	87
Ripening						1	9	21	41	53	64	69	76
Harvesting								4	15	27	47	57	67
Phase 4 :	Main field 2,792 ha (Direct seeding 2,535 ha)												
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	5	9	9	9	9	9	9	9	9	9	9	9	9
Direct seeding	91	91	91	91	91	91	91	91	91	91	91	91	91
Flowering				13	44	74	78	85	88	92	93	96	98
Ripening						1	18	27	43	53	62	67	76
Harvesting								8	18	27	46	56	63

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 131

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (1/2)

1984/I	Y 1984														Unit: %						
	M	3	3	3	3	3	3	3	3	4	4	4	4	5		5	5				
Total Area																					
1,697 ha	D	4	7	11	14	18	21	25	28	4	11	18	25	2	9	16					
Phase 1 :	Nursery 15 ha; Main field 382 ha (Direct seeding 211 ha)																				
Nursery															7	15	23	24	24	24	24
Presaturation	77	84	94	98	99	99	100	100	100	100	100	100	100	100	100	100					
Land preparation	42	42	48	57	79	90	92	92	95	98	98	100	100	100	100	100					
Transplanting															1	1	2	8	14	16	
Direct seeding															7	11	20	22	41	46	48
Flowering																					
Ripening																					
Harvesting																					
Phase 2 :	Nursery 15 ha; Main field 378 ha (Direct seeding 163 ha)																				
Nursery															5	14	24	24	24	24	24
Presaturation	60	87	96	97	98	99	100	100	100	100	100	100	100	100	100	100					
Land preparation	43	48	62	69	77	84	95	99	100	100	100	100	100	100	100	100					
Transplanting															3	11	16				
Direct seeding															2	11	14	21	31	32	
Flowering																					
Ripening																					
Harvesting																					
Phase 3 :	Nursery 12 ha; Main field 308 ha (Direct seeding 155 ha)																				
Nursery															7	16	16	16	16	16	
Presaturation	62	97	99	99	100	100	100	100	100	100	100	100	100	100	100						
Land preparation	35	45	58	71	95	100	100	100	100	100	100	100	100	100	100						
Transplanting															1	5	14				
Direct seeding															1	12	18	30	38	41	
Flowering																					
Ripening																					
Harvesting																					
Phase 4 :	Nursery 12 ha; Main field 303 ha (Direct seeding 174 ha)																				
Nursery															8	17	18	19	19	19	
Presaturation	9	59	81	98	100	100	100	100	100	100	100	100	100	100	100						
Land preparation	14	48	56	86	91	94	95	98	99	100	100	100	100	100	100						
Transplanting															1	3	7				
Direct seeding															7	20	35	52	54		
Flowering																					
Ripening																					
Harvesting																					
Phase 5 :	Nursery 9 ha; Main field 224 ha (Direct seeding 114 ha)																				
Nursery															5	12	13	14	14	14	
Presaturation	4	6	94	100	100	100	100	100	100	100	100	100	100	100	100						
Land preparation	6	7	16	78	93	99	99	100	100	100	100	100	100	100	100						
Transplanting															6	7					
Direct seeding															11	20	23	38	45	45	
Flowering																					
Ripening																					
Harvesting																					
Phase 6 :	Nursery 5 ha; Main field 102 ha (Direct seeding 51 ha)																				
Nursery															11	11	11	11	11	11	
Presaturation	19	19	73	100	100	100	100	100	100	100	100	100	100	100	100						
Land preparation	20	20	37	59	91	100	100	100	100	100	100	100	100	100	100						
Transplanting															1	4					
Direct seeding															4	12	39	42	42		
Flowering																					
Ripening																					
Harvesting																					

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 132

RECORD ON PROGRESS OF FIELD ACTIVITIES IN DISTRICT IV
(MUDA II SCHEME) OF MUDA AREA FOR CROP SEASON 1984/I (2/2)

1984/I Total Area 1,697 ha	Y 1984														Unit: %
	M	5	6	6	6	7	7	7	8	8	8	8	8	9	
	D	23	30	7	13	20	27	11	18	25	1	8	15	22	
Phase 1 :	Nursery 15 ha; Main field 382 ha (Direct seeding 211 ha)														
Nursery	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	33	36	44	44	44	44	44	44	44	44	44	44	44	44	44
Direct seeding	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
Flowering							8	21	33	42	54	95	99		
Ripening									1	2	9	37	64	81	
Harvesting											1	11	28	42	
Phase 2 :	Nursery 15 ha; Main field 378 ha (Direct seeding 163 ha)														
Nursery	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	36	38	56	56	57	57	57	57	57	57	57	57	57	57	57
Direct seeding	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Flowering							2	7	18	28	41	93	99	99	
Ripening											4	23	54	72	
Harvesting												2	5	17	
Phase 3 :	Nursery 12 ha; Main field 308 ha (Direct seeding 155 ha)														
Nursery	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	25	28	49	49	49	49	50	50	50	50	50	50	50	50	50
Direct seeding	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Flowering							2	4	17	40	51	92	98	99	
Ripening											2	20	47	75	
Harvesting													5	21	
Phase 4 :	Nursery 12 ha; Main field 303 ha (Direct seeding 174 ha)														
Nursery	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	17	19	39	40	40	40	43	43	43	43	43	43	43	43	43
Direct seeding	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Flowering							1	2		40	56	91	100		
Ripening												13	42	71	
Harvesting												1	3	14	
Phase 5 :	Nursery 9 ha; Main field 224 ha (Direct seeding 114 ha)														
Nursery	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	12	14	49	49	49	49	49	49	49	49	49	49	49	49	49
Direct seeding	51	51	51	51	51	51	51	51	15	51	51	51	51	51	51
Flowering							2	10	25	38	48	94	99	100	
Ripening										3	10	15	54	79	
Harvesting											1	10	15	29	
Phase 6 :	Nursery 5 ha; Main field 102 ha (Direct seeding 51 ha)														
Nursery	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Presaturation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Land preparation	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Transplanting	6	7	49	49	49	49	49	49	49	49	49	49	49	49	49
Direct seeding	50	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Flowering									6	18	22	98	100		
Ripening													54	70	
Harvesting														10	

Remarks; Y: Year, M: Month, D: Date

Source; Refs. C 22 and C 33

Table 133 SUMMARY OF COMMENCEMENT AND COMPLETION
 DATES OF PRESATURATION/LAND PREPARATION
 AND HARVESTING IN MUDA AREA

Year	Crop Season	Item	Phase			
			1	2	3	4
1979	Off	Planted area (ha)	16,139	30,017	17,945	24,258
		Presaturation	1/2-12/5	15/2-31/7	1/3-15/8	15/3-15/8
		Harvesting	-27/9	-27/9	1/8-6/11	10/8-6/11
	Main	Planted area (ha)	25,647	33,023	37,337	
		Land preparation	15/8-31/10	1/9-28/11	12/9-10/12	
		Harvesting	20/12-4/3	1/1-22/3	9/1-6/4	
1980	Off	Planted area (ha)	19,398	23,791	25,102	21,175
		Presaturation	15/2-12/4	7/3-24/5	29/3-7/6	19/4-14/6
		Harvesting	15/7-15/9	5/8-15/10	9/8-1/11	16/8-15/11
	Main	Planted area (ha)	20,575	25,027	50,256	
		Land preparation	23/8-11/8	20/9-20/11	20/9-27/12	
		Harvesting	1/1-7/3	10/1-28/3	24/1-11/4	
1981	Off	Planted area (ha)	19,512	24,044	25,090	21,519
		Presaturation	15/2-18/4	8/3-25/4	29/3-23/5	19/4-13/6
		Harvesting	12/7-21/9	27/7-30/9	27/7-21/10	3/8-28/10
	Main	Planted area (ha)	20,575	25,027	50,256	
		Land preparation	20/8-16/11	31/8-25/11	23/9-9/12	
		Harvesting	20/12-15/3	20/1-29/3	27/1-14/4	
1982	Off	Planted area (ha)	19,513	24,044	25,091	20,885
		Presaturation	1/4-5/5	22/4-5/5	28/4-19/5	25/4-19/5
		Harvesting	11/8-27/10	3/8-3/11	11/8-1/12	4/8-1/12
	Main	Planted area (ha)	31,744	34,899	18,855	
		Presaturation	15/9-15/12	29/9-5/1	20/10-15/12	
		Harvesting	8/1-20/4	19/1-22/4	26/1-20/4	
1983	Off	Planted area (ha)	28,076	23,612	22,298	15,247
		Presaturation	15/3-1/6	15/3-25/5	6/4-29/6	13/4-6/7
		Harvesting	20/7-19/10	27/7-7/11	29/8-18/1	31/8-18/1
	Main	Planted area (ha)	30,310	23,985	21,259	
		Presaturation	16/8-23/11	30/8-7/12	28/9-21/12	
		Harvesting	4/1-31/3	4/1-31/3	18/1-31/3	

Source; Refs. C 22 to C 23

Table 134 PROGRESS OF DIRECT SEEDING IN MUDA AREA

Year	Crop Season	District				Total	Unit: ha
		I	II	III	IV		Proportion (%)
1977	Off	-	-	-	9	9	0
	Main	-	-	-	-	-	-
1978	Off	-	-	-	17	17	0
	Main	-	-	-	85	85	0.1
1979	Off	-	-	-	32	32	0
	Main	-	-	-	181	181	0.2
1980	Off	-	-	-	662	662	0.7
	Main	-	116	-	742	858	0.9
1981	Off	55	2,045	452	1,574	4,126	4.6
	Main	27	2,252	467	3,669	6,415	6.9
1982	Off	293	5,533	1,279	11,470	18,575	20.7
	Main	173	7,406	3,871	10,733	22,183	23
1983	Off	2,912	12,618	4,469	14,555	34,554	38
	Main	976	10,602	4,761	10,588	26,927	35
1984	Off	2,713	13,730	13,144	16,869	46,456	53
		(48)	(207)	(-)	(868)	(1,123)	

Remark; Figures in the parentheses indicate direct seeding area under the Muda II scheme.

Source; Refs. C 29 to C 34

Table 135 COMPARISON OF WATER REQUIREMENT BETWEEN
TRANSPLANTING AND DIRECT SEEDING SYSTEMS

Unit: mm

Activities	Transplanting			Direct Seeding		
	Off-	Main	Total	Off-	Main	Total
	Season	Season		Season	Season	
Nursery bed supply	20	13	33	-	-	-
Presaturation supply	378	235	613	394	245	639
Farm management loss (Drainage before sowing)	-	-	-	70	70	140
Supplementary supply	846	808	1,654	1,122	1,090	2,212
Total	1,244	1,056	2,300	1,586	1,405	2,991

Source; Refs. C 34 and C 35

Table 136 AREA AFFECTED BY INSECT PESTS AND
PADDY DISEASES IN MUDA AREA

Year	Area Affected by Brown Planthopper and White-back Planthopper		Area Affected by Penyakit Merach (Rice Tungro)	
	Off- Season	Main Season	Off- Season	Main Season
1980	648	20	-	-
1981	585	30	(-)	(-)
1982	7,303	458	5,870 (125)	14 (-)
1983	8,564	3,310	5,570 (1,983)	269 (-)
			8,460 (2,006)	195 (-)

Remark; Figures in the parentheses indicate areas
suffering 75 to 100% yield loss.

Source; Ref. C 36

Table 137 FARM FAMILY SIZE AND AGE DISTRIBUTION
IN SAMPLE AREAS OF MUDA SCHEME

Item	Farm Size					Weighted Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Above 3.45 ha	
(1) Muda II Scheme Area						
0 - 15 years	1.7	2.1	2.3	1.5	1.5	1.9
16 - 60 years	2.5	2.7	3.5	3.3	3.8	2.9
Over 60 years	0.3	0.2	0.2	0.4	0.5	0.3
Total	4.5	5.0	6.0	5.2	5.8	5.1
Average age	45.2	42.1	50.7	51.9	47.6	45.6
Male	2.4	2.4	3.1	2.5	2.5	2.6
Female	2.1	2.6	2.9	2.7	3.3	2.5
(2) Non-Muda II Scheme Area						
0 - 15 years	1.8	2.1	1.4	1.3	1.9	1.8
16 - 60 years	2.8	3.2	3.4	3.7	4.1	3.2
Over 60 years	0.3	0.2	0.3	0.3	0.3	0.3
Total	4.9	5.5	5.1	5.3	6.3	5.3
Average age	44.9	46.8	49.7	52.5	51.7	47.2
Male	2.5	2.8	2.7	2.6	3.1	2.7
Female	2.4	2.7	2.4	2.7	3.2	2.6

Source; Ref. C 37

Table 138 LAND TENURE IN MUDA AREA FOR 1955 TO 1975/76

Year	Tenurial Status			Total
	Owner	Tenant	Owner- Tenant	
1955				
No. of farmers	17,502	19,596	9,449	46,547
Proportion	37.6%	42.1%	20.3%	100.0%
Mean farm size	1.70 ha	1.94 ha	2.95 ha	2.06 ha
1966				
No. of farmers	22,198	20,606	6,968	49,772
Proportion	44.6%	41.4%	14.0%	100.0%
Mean farm size	1.46 ha	1.54 ha	2.47 ha	1.62 ha
1972/73				
No. of farmers	19,325	16,514	8,082	43,921
Proportion	44.0%	37.6%	18.4%	100.0%
Mean farm size	1.58 ha	1.30 ha	2.31 ha	1.62 ha
1975/76				
No. of farmers	34,313	14,985	11,866	61,164
Proportion	56.1%	24.5%	19.4%	100.0%
Mean farm size	1.30 ha	1.50 ha	2.67 ha	1.62 ha

Source; Refs. C 38 and C 39

Table 139 FARM SIZE DISTRIBUTION BY LAND TENURE IN
SAMPLE AREAS OF MUDA SCHEME

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.50 - 3.45 ha	Above 3.45 ha	
(1) Muda II Scheme Area						
Owner						
No. of farm	39	25	13	4	3	84
Average size	0.51	1.09	2.03	2.73	4.19	1.19
Tenant						
No. of farm	10	23	9	2	2	46
Average size	0.49	1.15	2.12	2.80	3.63	1.37
Owner/Tenant						
No. of farm	2	3	4	4	5	18
Average size	0.59	1.44	2.24	2.92	6.72	3.11
Familial Tenure without Rent (B.S.T.S.)						
No. of farm	6	2	-	1	-	9
Average size	0.54	1.01	-	2.88	-	0.90
Other Combinations						
No. of farm	-	2	-	-	1	3
Average size	-	1.15	-	-	3.52	2.34
Total						
No. of farm	57	55	26	11	11	160
Average size	0.51	1.13	2.09	2.83	5.03	1.44
(2) Non-Muda II Scheme Area						
Owner						
No. of farm	29	25	10	-	1	65
Average size	0.47	1.19	2.14	-	4.24	1.05
Tenant						
No. of farm	13	11	9	3	2	38
Average size	0.53	1.35	2.08	2.94	3.95	1.50
Owner/Tenant						
No. of farm	2	21	7	2	6	38
Average size	0.58	1.27	2.10	3.09	4.13	1.79
B.S.T.S.						
No. of farm	4	1	-	-	-	5
Average size	0.49	1.51	-	-	-	0.69
Other Combinations						
No. of farm	3	5	-	1	-	9
Average size	0.29	1.29	-	2.88	-	1.20
Total						
No. of farm	51	63	26	6	9	155
Average size	0.49	1.26	2.11	2.98	4.10	1.33

Source; Ref. C 37

Table 140 AVERAGE FARM SIZE BY LAND TENURE STRATUM
IN WHOLE SAMPLE AREAS OF MUDA SCHEME

Strata	No. of Farmers	Proportion (%)	Average Farm Size (ha)
Owner	149	47.3	1.11
Tenants	84	26.7	1.43
Owner/Tenants	56	17.8	2.21
B.S.T.S.*	14	4.4	0.83
Other Combinations	12	3.8	1.29
Total	315	100.0	1.39

Remark; *: Bukan Sendiri Tanpa Sewa
(Financial tenure without rent)

Source; Ref. C 37

Table 141 PARCEL AND NURSERY CHARACTERISTICS
IN SAMPLE AREAS OF MUDA SCHEME

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Average No. of parcels	2.4	3.5	5.2	5.8	11.0	4.0
Average parcel area (ha)	0.26	0.37	0.49	0.60	0.49	0.37
Average nursery area (ha)	0.02	0.05	0.07	0.11	0.18	0.06
Proportion of farmers using others' nurseries (%)	31.5	14.3	4.2	-	-	16.2
(2) Non-Muda II Scheme Area						
Average No. of parcels	1.9	4.1	4.7	6.8	10.7	3.9
Average parcel area (ha)	0.29	0.37	0.60	0.69	0.58	0.40
Average nursery area (ha)	0.02	0.05	0.07	0.12	0.17	0.06
Proportion of farmers using others' nurseries (%)	39.6	10.4	-	-	-	17.4

Source; Ref. C 37

Table 142 LABOUR USE FOR PADDY CULTIVATION
IN SAMPLE AREAS OF MUDA SCHEME

Unit: Man-hour/farm household

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Seed preparation and nursery	24.05	30.10	42.06	47.61	51.35	32.46
Land preparation	10.41	14.81	30.88	38.54	79.00	21.59
Transplanting	73.67	155.17	331.24	308.18	593.33	190.41
Paddy management	43.68	54.55	72.75	82.32	110.90	59.18
Harvesting	6.59	44.26	62.88	132.05	28.15	39.21
Post-harvest works	5.05	15.28	20.52	47.05	63.65	17.90
Total	163.45	314.17	560.33	655.75	926.38	360.75
(2) Non-Muda II Scheme Area						
Seed preparation and nursery	22.95	35.89	32.21	54.08	56.90	32.92
Land preparation	9.45	19.74	23.00	60.50	30.43	19.03
Transplanting	72.71	161.17	287.92	496.80	483.99	174.06
Paddy management	66.85	75.95	90.93	122.33	105.00	78.36
Harvesting	15.03	18.31	14.93	33.17	84.86	18.69
Post-harvest works	8.51	10.83	12.66	21.42	1.64	10.33
Total	195.50	321.89	461.65	788.30	762.82	333.39

Source; Ref. C 37

Table 143 LABOUR USE FOR PADDY CULTIVATION PER
HECTARE IN SAMPLE AREAS OF MUDA SCHEME

Unit: Man-hour/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Seed preparation and nursery	47.02	26.57	20.10	16.87	10.23	22.61
Land preparation	20.35	13.08	14.75	13.63	15.72	15.03
Transplanting	142.49	136.96	158.91	109.07	110.04	132.51
Paddy management	85.42	48.14	34.76	29.15	22.09	41.21
Harvesting	12.90	39.06	30.05	46.74	5.60	27.30
Post-harvest works	9.88	13.50	9.81	16.66	12.66	12.45
Total	318.06	277.31	268.38	232.12	176.34	251.11
(2) Non-Muda II Scheme Area						
Seed preparation and nursery	46.78	28.52	15.27	18.16	13.88	24.69
Land preparation	19.27	15.69	10.92	20.31	7.44	14.26
Transplanting	148.23	129.45	137.83	148.44	109.97	132.51
Paddy management	136.27	60.34	43.13	41.04	25.63	58.74
Harvesting	30.64	14.57	7.10	11.13	20.69	15.37
Post-harvest works	17.36	8.59	6.02	7.20	0.42	0.42
Total	398.55	257.16	220.27	246.28	178.03	245.99

Source; Ref. C 37

Table 144 HIRED LABOUR UTILIZATION PER FARM HOUSEHOLD
IN SAMPLE AREAS OF MUDA SCHEME

Unit: Man-hour/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Seed preparation and nursery	0.67	0.41	0.35	-	1.00	0.50
Land preparation	0.60	0.54	2.17	1.45	27.60	2.62
Transplanting	30.73	64.90	189.93	188.36	513.00	107.37
Paddy management	0.34	0.21	-	1.27	-	0.29
Harvesting	2.78	11.44	21.63	64.05	24.20	14.56
Post-harvest works	2.70	6.20	11.90	8.59	56.80	9.30
Total	37.82	83.70	225.98	263.72	622.60	134.64
(2) Non-Muda II Scheme Area						
Seed preparation and nursery	0.22	0.07	-	0.17	0.04	0.11
Land preparation	0.30	0.62	0.19	-	14.57	1.09
Transplanting	25.54	99.69	200.47	391.20	445.33	112.89
Paddy management	0.09	-	-	8.33	11.43	0.90
Harvesting	6.81	13.24	8.74	30.33	54.71	11.36
Post-harvest works	1.05	5.43	9.71	14.75	1.00	4.79
Total	34.01	119.05	219.11	444.78	527.08	131.14

Source; Ref. C 37

Table 145 LABOUR USE PATTERN BY FARM SIZE
IN SAMPLE AREAS OF MUDA SCHEME

Unit: %

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Paddy production						
- Family labour	68.2	54.6	46.1	47.4	35.1	51.1
- Group labour	10.5	19.5	13.5	12.5	-	12.4
- Hired labour	21.3	25.9	40.4	40.1	64.9	36.5
Harvesting and Post-harvest works						
- Family labour	52.1	36.7	33.7	32.2	11.8	33.6
- Group labour	-	33.7	26.1	27.2	-	24.6
- Hired labour	47.9	29.6	40.2	40.6	88.2	41.8
Overall activities						
- Family labour	67.5	51.3	44.8	43.2	34.1	48.6
- Group labour	8.9	22.1	15.3	16.6	-	14.2
- Hired labour	23.6	26.6	39.9	40.2	65.9	37.2
(2) Non-Muda II Scheme Area						
Paddy production						
- Family labour	72.5	56.6	51.6	43.5	30.8	55.3
- Group labour	12.3	9.1	2.2	2.0	-	6.9
- Hired labour	15.2	34.3	46.2	54.5	69.2	37.8
Harvesting and Post-harvest works						
- Family labour	61.1	32.0	30.3	17.4	35.6	38.4
- Group labour	5.5	4.0	2.9	-	-	9.2
- Hired labour	33.4	64.0	66.8	82.6	64.4	52.4
Overall activities						
- Family labour	71.2	55.0	51.8	44.4	33.2	54.5
- Group labour	11.2	7.8	2.1	1.8	-	6.1
- Hired labour	17.6	37.2	46.1	53.8	66.8	39.4

Source; Ref. C 37

Table 146 EXPENDITURE AND RECEIPT FOR
FARM ACTIVITIES BY FARM SIZE
IN SAMPLE AREAS OF MUDA SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Bleow 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Muda II Scheme Area						
Ploughing						
- Expenditure	40.15	35.03	30.32	30.13	13.68	29.10
- Receipts	56.22	-	3.66	-	0.23	7.85
- Net balance	16.07	-35.03	-26.66	-30.13	-13.45	-21.25
Transplanting						
- Expenditure	46.38	132.79	292.08	308.86	561.95	167.54
- Receipts	40.09	18.66	1.17	2.36	-	21.06
- Net balance	-6.29	-114.13	-290.92	-306.50	-561.95	-146.48
Harvesting						
- Expenditure	126.89	252.58	471.46	629.06	1,309.97	337.62
- Receipts	3.33	18.34	0.83	1.82	-	8.05
- Net balance	-123.56	-234.24	-470.63	-627.25	-1,309.97	-329.57
(2) Non-Muda II Scheme Area						
Ploughing						
- Expenditure	69.61	180.02	211.68	273.12	511.61	168.24
- Receipts	-	-	-	-	-	-
- Net balance	-69.61	-180.02	-211.68	-273.12	-511.61	-168.24
Transplanting						
- Expenditure	41.59	167.96	284.21	442.00	542.29	172.26
- Receipts	46.23	8.52	7.14	5.83	-	19.97
- Net balance	4.64	-159.44	-277.07	-436.17	-542.29	-152.29
Harvesting						
- Expenditure	109.03	304.11	524.98	750.37	1,023.43	322.69
- Receipts	2.76	1.36	16.94	-	-	3.85
- Net balance	-106.27	-302.75	-508.04	-750.37	-1,023.43	-318.84

Source; Ref. C 37

Table 147 AVERAGE PADDY EXPENDITURE AND INCOME
IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	6.83	5.71	22.40	22.40	88.16	15.17
- Insecticides	0.17	1.51	9.50	11.90	21.57	4.31
- Fungicides & weedicides	0.26	0.69	0.89	0.96	1.44	0.64
- Other inputs	24.03	7.36	30.97	35.92	40.86	21.01
- Land preparation						
. Labour	-	0.11	-	-	11.40	0.77
. Tractor	71.38	138.05	220.76	296.14	239.09	145.38
- Transplanting	46.38	132.79	292.08	308.86	591.95	167.54
- Harvesting	126.89	252.58	471.46	629.06	1,309.97	337.62
- Other labour charges	13.64	19.98	43.09	57.92	65.59	26.99
- Transportation	38.69	93.32	174.68	169.22	479.75	117.20
- Land rent	41.76	271.78	403.65	442.55	1,041.50	273.84
- Taxes	96.98	146.19	235.67	448.37	530.77	189.16
- Others	-	0.11	1.75	-	-	0.31
Total	467.01	1,070.18	1,906.90	2,423.30	4,422.05	1,299.94
(2) Paddy Income						
- Paddy sales	595.49	1,393.92	2,599.85	3,503.52	6,941.78	1,810.12
- Labour income	43.42	37.00	2.00	4.18	-	29.11
- Land preparation income	100.00	-	26.67	-	4.00	39.23
- Other income	8.61	1.25	3.33	-	5.00	4.29
- Gross cash income	747.52	1,432.17	2,631.85	3,507.70	6,950.78	1,882.75
- Value of unsold paddy	279.25	546.05	966.61	1,213.96	1,248.95	610.97
Total gross in- come from paddy	1,026.77	1,978.22	3,598.46	4,721.66	8,199.73	2,493.72
(3) Net Income						
- Net cash income from paddy	280.51	361.99	724.95	1,084.40	2,528.73	582.81
- Net income from paddy	559.76	908.04	1,691.56	2,298.36	3,777.68	1,193.78
- Cash subsidy	216.33	500.76	973.45	1,129.60	2,300.52	635.60
- Total net income from paddy	776.09	1,408.80	2,665.01	3,427.96	6,078.20	1,829.38

Source; Ref. C 37

Table 148 AVERAGE PADDY EXPENDITURE AND INCOME
IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	0.67	4.00	5.62	-	162.59	10.44
- Insecticides	0.19	3.20	6.34	-	0.74	2.43
- Fungicides & weedicides	-	1.24	6.11	5.83	6.86	1.97
- Other inputs	2.75	6.99	3.46	19.00	16.57	6.06
- Land preparation						
. Labour	0.31	-	-	12.83	30.53	2.05
. Tractor	69.61	180.02	211.68	273.12	511.61	168.24
- Transplanting	41.59	167.96	284.21	442.00	542.29	172.26
- Harvesting	109.03	304.11	524.98	750.37	1,023.43	322.69
- Other labour charges	4.29	14.48	12.55	38.20	84.12	15.15
- Transportation	27.55	86.72	104.77	219.12	194.43	80.60
- Land rent	76.06	264.91	520.33	1,068.33	1,232.86	317.90
- Taxes	63.30	251.34	279.20	321.53	325.33	200.99
- Others	0.04	3.73	23.81	3.33	-	5.18
Total	395.39	1,288.70	1,983.06	3,153.66	4,131.36	1,305.96
(2) Paddy Income						
- Paddy sales	618.42	1,680.88	2,910.37	3,018.14	5,850.09	1,761.61
- Labour income	48.99	9.88	24.08	5.83	-	23.82
- Land preparation income	-	-	-	-	-	-
- Other income	23.58	6.69	-	-	-	10.60
- Gross cash income	690.99	1,697.45	2,934.45	3,023.97	5,850.09	1,796.03
- Value of unsold paddy	241.33	539.83	635.87	887.98	591.32	473.64
Total gross in- come from paddy	932.32	2,237.28	3,570.32	3,911.95	6,441.41	2,269.67
(3) Net Income						
- Net cash income from paddy	295.60	408.75	951.39	-129.69	1,718.73	490.07
- Net income from paddy	536.93	948.58	1,587.26	758.29	2,310.05	963.71
- Cash subsidy	238.71	600.00	1,068.29	934.87	2,099.33	633.54
- Total net income from paddy	775.64	1,548.58	2,655.55	1,693.16	4,409.38	1,597.25

Source; Ref. C 37

Table 149

PADDY EXPENDITURE AND INCOME OF OWNERS
IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	9.32	3.20	5.00	39.25	130.67	12.77
- Insecticides	-	1.19	14.98	20.23	60.63	5.83
- Fungicides & weedicides	0.19	0.30	1.17	-	-	0.35
- Other inputs	6.05	12.83	20.48	-	58.13	11.91
- Land preparation						
. Labour	-	0.24	-	-	-	0.07
. Tractor	74.75	128.09	289.87	355.25	298.42	145.22
- Transplanting	40.82	131.88	301.25	287.50	642.50	141.98
- Harvesting	131.74	247.21	464.25	500.00	1,047.33	268.74
- Other labour charges	14.36	24.04	43.73	39.16	28.53	23.45
- Transportation	40.42	91.02	159.50	157.50	304.53	89.24
- Land rent	-	-	-	-	-	-
- Taxes	101.23	151.34	287.77	623.55	10.00	166.15
- Others	-	-	3.50	-	-	0.52
Total	418.88	791.34	1,591.50	2,022.44	2,580.74	866.23
(2) Paddy Income						
- Paddy sales	598.23	1,347.24	2,634.64	3,739.29	5,196.26	1,456.51
- Labour income	49.08	48.56	3.33	6.00	-	38.20
- Land preparation income	-	-	-	-	-	-
- Other income	6.76	1.80	6.67	-	-	4.63
- Gross cash income	654.07	1,397.60	2,644.64	3,745.29	5,196.26	1,499.34
- Value of unsold paddy	287.52	561.35	1,292.52	1,062.43	1,704.96	611.69
Total gross in- come from paddy	941.59	1,958.95	3,937.16	4,807.72	6,901.22	2,111.03
(3) Net Income						
- Net cash income from paddy	235.19	606.26	1,053.14	1,722.85	2,615.52	633.11
- Net income from paddy	522.71	1,167.61	2,345.66	2,785.28	4,320.48	1,244.80
- Cash subsidy	213.80	490.80	1,068.78	1,097.20	1,449.98	515.37
- Total net income from paddy	736.51	1,658.41	3,414.44	3,882.48	5,770.46	1,760.17

Source; Ref. C 37

Table 150 PADDY EXPENDITURE AND INCOME OF TENANTS
IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	7.29	59.69	-	-	14.50
- Insecticides	-	0.22	5.01	-	1.20	1.06
- Fungicides & weedicides	0.39	0.29	0.94	5.30	-	0.64
- Other inputs	119.32	1.19	20.69	8.00	1.85	28.60
- Land preparation						
. Labour	-	-	-	-	-	-
. Tractor	53.67	128.67	257.47	400.50	307.50	156.60
- Transplanting	56.28	124.77	297.13	255.00	655.00	171.07
- Harvesting	107.59	240.01	533.00	679.50	1,013.50	319.52
- Other labour charges	11.96	16.73	51.19	59.75	143.55	29.45
- Transportation	44.22	95.04	194.73	204.00	347.50	118.66
- Land rent	232.89	558.75	1,001.56	850.00	1,462.50	625.41
- Taxes	100.83	125.14	237.58	408.50	529.70	170.84
- Others	-	-	-	-	-	-
Total	727.15	1,298.10	2,658.99	2,870.55	4,462.30	1,636.35
(2) Paddy Income						
- Paddy sales	645.73	1,364.56	2,691.28	3,805.60	5,421.72	1,745.47
- Labour income	16.67	21.17	-	11.00	-	15.11
- Land preparation income	600.00	-	-	-	-	120.00
- Other income	23.89	1.04	-	-	25.00	6.44
- Gross cash income	1,286.29	1,386.77	2,691.28	3,816.60	5,446.72	1,887.02
- Value of unsold paddy	180.44	516.48	617.38	829.75	1,037.69	504.30
Total gross in- come from paddy	1,466.73	1,903.25	3,308.66	4,646.35	6,484.41	2,391.32
(3) Net Income						
- Net cash income from paddy	559.14	88.67	32.29	946.05	984.42	250.67
- Net income from paddy	739.58	605.15	649.67	1,775.80	2,022.11	754.97
- Cash subsidy	258.88	526.87	898.86	1,339.60	1,911.80	637.08
- Total net income from paddy	998.46	1,132.02	1,548.53	3,115.40	3,933.91	1,392.05

Source; Ref. C 37

Table 151 PADDY EXPENDITURE AND INCOME OF OWNER-TENANTS
IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M₹/farm household

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	9.60	-	21.60	122.25	35.54
- Insecticides	-	-	2.00	12.50	7.85	5.26
- Fungicides & weedicides	-	-	-	-	11.45	2.69
- Other inputs	-	-	83.00	32.28	57.63	40.68
- Land preparation	-	-	-	-	28.50	6.71
. Labour	-	-	-	-	28.50	6.71
. Tractor	83.26	243.43	190.00	258.88	220.15	210.17
- Transplanting	27.50	191.67	254.50	434.38	483.00	312.79
- Harvesting	105.00	402.65	370.00	724.98	1,757.15	754.50
- Other labour charges	10.80	30.35	25.00	81.64	55.28	44.72
- Transportation	15.00	48.92	180.25	160.35	733.10	263.03
- Land rent	79.40	286.67	418.75	792.00	1,872.50	785.40
- Taxes	68.80	285.68	75.55	378.98	766.87	345.90
- Others	-	-	-	-	-	-
Total	389.76	1,498.97	1,599.05	2,897.59	6,115.73	2,807.39
(2) Paddy Income						
- Paddy sales	335.90	1,960.50	2,312.64	3,326.28	9,358.73	3,914.35
- Labour income	-	-	2.00	-	-	0.47
- Land preparation income	-	-	160.00	160.00	10.00	77.65
- Other income	-	-	-	-	-	-
Gross cash income	335.90	1,960.50	2,474.64	3,486.28	9,368.73	3,992.47
- Value of unsold paddy	266.34	788.22	687.35	1,280.54	1,089.62	889.85
Total gross in- come from paddy	602.24	2,748.72	3,161.99	4,766.82	10,458.35	4,882.32
(3) Net Income						
- Net cash income from paddy	-53.86	461.53	875.59	588.69	3,253.00	1,185.08
- Net income from paddy	212.48	1,249.75	1,562.94	1,869.23	4,342.62	2,074.93
- Cash subsidy	118.00	516.77	836.65	1,150.40	3,213.30	1,328.45
Total net income from paddy	330.48	1,766.52	2,399.59	3,019.63	7,555.92	3,403.38

Source; Ref. C 37

Table 152 PADDY EXPENDITURE AND INCOME OF OWNERS
IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	1.04	4.44	6.00	-	-	3.11
- Insecticides	0.34	1.72	2.90	-	-	1.25
- Fungicides & weedicides	-	0.24	4.13	-	-	0.63
- Other inputs	4.61	8.48	0.56	-	13.00	5.89
- Land preparation						
. Labour	0.56	-	-	-	213.75	3.63
. Tractor	64.48	177.05	196.56	-	356.25	134.13
- Transplanting	39.52	151.28	243.75	-	150.00	115.10
- Harvesting	98.80	289.41	545.06	-	997.50	251.42
- Other labour charges	5.17	14.02	9.09	-	224.15	12.93
- Transportation	26.61	88.99	113.75	-	140.00	66.21
- Land rent	-	-	-	-	-	-
- Taxes	66.70	244.39	302.83	-	1,359.28	193.36
- Others	0.07	-	25.00	-	-	3.21
Total	307.90	980.02	1,449.63	-	3,453.93	790.87
(2) Paddy Income						
- Paddy sales	604.72	1,489.07	2,713.60	-	5,290.88	1,325.90
- Labour income	66.63	8.89	-	-	-	32.37
- Land preparation income	-	-	-	-	-	-
- Other income	5.56	9.26	-	-	-	6.35
- Gross cash income	676.91	1,507.22	2,713.60	-	5,290.88	1,364.62
- Value of unsold paddy	222.22	557.29	608.88	-	510.52	419.50
Total gross in- come from paddy	899.13	2,064.51	3,322.48	-	5,801.40	1,784.12
(3) Net Income						
- Net cash income from paddy	369.01	527.20	1,263.97	-	1,836.95	573.75
- Net income from paddy	591.23	1,084.49	1,872.85	-	2,347.47	993.25
- Cash subsidy	222.06	520.93	966.89	-	1,889.60	471.20
- Total net income from paddy	813.29	1,605.42	2,839.74	-	4,237.07	1,464.45

Source; Ref. C 37

Table 153 PADDY EXPENDITURE AND INCOME OF TENANTS
IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	-	-	-	193.25	10.74
- Insecticides	-	9.49	9.86	-	-	5.08
- Fungicides & weedicides	-	0.38	1.46	5.00	-	0.83
- Other inputs	0.42	2.96	0.17	8.67	-	1.88
- Land preparation						
. Labour	-	-	-	25.67	-	2.14
. Tractor	68.75	158.44	215.57	332.00	633.50	180.51
- Transplanting	47.21	175.00	292.14	442.33	662.50	204.54
- Harvesting	94.13	335.35	539.50	798.57	1,028.75	371.76
- Other labour charges	2.62	22.72	16.09	58.53	14.60	17.26
- Transportation	28.96	64.56	74.86	183.07	155.00	69.59
- Land rent	247.58	684.25	1,237.14	1,503.33	2,060.00	790.89
- Taxes	73.02	294.19	263.74	317.72	-	200.16
- Others	-	-	-	-	-	-
Total	562.69	1,747.34	2,650.53	3,674.89	4,747.60	1,855.38
(2) Paddy Income						
- Paddy sales	699.54	2,013.27	3,004.04	3,082.35	6,521.62	2,107.56
- Labour income	29.33	7.17	21.43	11.67	-	17.31
- Land preparation income	-	-	-	-	-	-
- Other income	70.58	6.33	-	-	-	25.64
- Gross cash income	799.45	2,026.77	3,025.47	3,094.02	6,521.62	2,150.51
- Value of unsold paddy	262.94	566.19	666.65	1,134.12	610.41	534.42
Total gross in- come from paddy	1,062.39	2,592.96	3,692.12	4,228.14	7,132.03	2,684.93
(3) Net Income						
- Net cash income from paddy	236.76	279.43	374.94	-580.87	1,774.02	295.13
- Net income from paddy	499.70	845.62	1,041.59	553.25	2,384.43	829.55
- Cash subsidy	258.38	706.61	1,120.31	742.20	2,360.00	732.78
- Total net income from paddy	758.08	1,552.23	2,161.90	1,295.45	4,744.43	1,562.33

Source; Ref. C 37

Table 154 PADDY EXPENDITURE AND INCOME OF OWNER-TENANTS
IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/farm household

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	1.20	6.59	11.67	-	187.90	26.92
- Insecticides	-	1.35	6.83	-	1.30	2.11
- Fungicides & weedicides	-	0.55	5.18	10.00	12.00	3.08
- Other inputs	-	9.19	4.42	44.00	25.75	11.66
- Land preparation						
. Labour	-	-	-	-	-	-
. Tractor	147.25	192.25	227.29	321.37	489.50	235.79
- Transplanting	32.50	177.90	328.92	542.50	424.00	242.59
- Harvesting	169.00	302.85	481.25	730.00	1,027.38	429.38
- Other labour charges	0.95	10.96	13.05	21.80	83.88	19.46
- Transportation	39.00	94.65	127.68	382.75	227.75	127.86
- Land rent	162.50	380.40	377.83	537.50	1,127.50	459.60
- Taxes	33.90	241.93	265.75	480.50	229.50	246.22
- Others	-	-	50.00	-	-	8.33
Total	586.30	1,418.62	1,899.87	3,070.42	3,836.46	1,813.00
(2) Paddy Income						
- Paddy sales	1,091.16	1,793.37	3,063.43	2,730.72	5,654.13	2,447.09
- Labour income	52.00	11.64	59.17	-	-	19.86
- Land preparation income	-	-	-	-	-	-
- Other income	-	3.09	-	-	-	1.89
- Gross cash income						
- Value of unsold paddy	1,143.16	1,808.10	3,122.60	2,730.72	5,654.13	2,468.84
	259.13	454.73	635.97	788.40	601.99	508.97
Total gross in- come from paddy	1,402.29	2,262.83	3,758.57	3,519.12	6,256.12	2,977.81
(3) Net Income						
- Net cash income from paddy	556.86	389.48	1,222.73	-339.70	1,817.67	655.84
- Net income from paddy	815.99	844.21	1,858.70	448.70	2,419.66	1,164.81
- Cash subsidy	374.70	649.38	1,142.80	981.55	2,019.93	887.09
- Total net income from paddy	1,190.69	1,493.59	3,001.50	1,430.25	4,439.59	2,051.90

Source; Ref. C 37

Table 155 AVERAGE PER HECTARE PADDY EXPENDITURE AND INCOME IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	13.36	5.04	10.71	7.83	12.53	10.57
- Insecticides	0.31	1.37	4.52	4.21	4.31	3.03
- Fungicides & weedicides	0.52	0.63	0.42	0.35	0.28	0.42
- Other inputs	46.99	6.50	14.78	12.69	8.14	14.64
- Land preparation						
. Labour	-	0.10	-	-	2.26	0.52
. Tractor	139.64	121.83	105.42	104.79	47.58	101.21
- Transplanting	90.67	117.21	139.50	109.31	111.85	116.65
- Harvesting	248.12	222.94	225.20	222.63	260.71	235.04
- Other labour charges	26.68	17.63	20.59	20.49	18.04	18.78
- Transportation	75.65	82.36	83.44	59.89	95.47	81.59
- Land rent	81.66	239.82	192.86	156.61	207.29	190.66
- Taxes	189.62	129.03	112.58	158.70	105.63	131.86
- Others	-	0.10	0.83	-	-	0.21
Total	913.22	944.56	910.85	857.50	874.09	905.18
(2) Paddy Income						
- Paddy sales	1,164.40	1,230.31	1,241.85	1,239.94	1,381.60	1,260.22
- Labour income	84.90	32.66	0.94	1.50	-	20.24
- Land preparation income	195.53	-	12.73	-	0.80	27.30
- Other income	16.83	1.11	1.60	-	1.01	2.99
- Gross cash income	1,461.66	1,264.08	1,257.12	1,241.44	1,383.41	1,310.75
- Value of unsold paddy	546.05	481.95	461.70	429.63	248.57	425.36
Total gross in- come from paddy	2,007.71	1,746.03	1,718.82	1,671.07	1,631.98	1,736.11
(3) Net Income						
- Net cash income from paddy	548.44	319.52	346.27	383.94	509.32	405.57
- Net income from paddy	1,094.49	801.47	807.97	813.57	757.89	830.93
- Cash subsidy	422.99	441.98	464.97	399.80	457.88	442.51
- Total net income from paddy	1,517.48	1,243.45	1,272.94	1,213.37	1,215.77	1,273.43

Source; Ref. C 37

Table 156

AVERAGE PER HECTARE PADDY EXPENDITURE AND
INCOME IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Ave- rage
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	1.36	3.16	2.68	-	39.68	7.72
- Insecticides	0.38	2.54	2.99	-	0.17	1.84
- Fungicides & weedicides	-	0.97	2.92	1.95	1.67	1.46
- Other inputs	5.60	5.56	1.63	6.36	4.03	4.56
- Land preparation						
. Labour	0.63	-	-	4.31	7.44	1.53
. Tractor	141.90	143.05	100.38	91.65	124.89	126.15
- Transplanting	84.79	133.49	134.74	148.30	132.37	127.17
- Harvesting	213.03	241.69	248.89	251.74	249.79	241.96
- Other labour charges	8.73	11.51	5.95	12.80	20.52	11.37
- Transportation	56.17	68.93	49.67	73.52	47.43	60.45
- Land rent	155.05	210.53	246.69	358.41	300.88	240.39
- Taxes	129.03	199.74	132.37	107.89	79.44	150.70
- Others	0.07	2.96	11.30	1.11	-	3.90
Total	796.74	1,024.13	940.21	1,058.04	1,008.31	979.20
(2) Paddy Income						
- Paddy sales	1,260.74	1,335.83	1,379.86	1,012.58	1,427.82	1,320.94
- Labour income	99.64	7.86	4.45	1.95	-	17.86
- Land preparation income	-	-	-	-	-	-
- Other income	48.07	5.32	-	-	-	7.96
- Gross cash income	1,408.45	1,349.01	1,384.31	1,014.53	1,427.82	1,346.76
- Value of unsold paddy	491.96	429.01	301.48	297.93	144.34	355.17
Total gross in- come from paddy	1,900.41	1,778.02	1,685.79	1,312.46	1,572.16	1,701.93
(3) Net Income						
- Net cash income from paddy	611.71	324.88	444.10	-43.51	419.51	367.56
- Net income from paddy	1,103.67	753.89	745.58	254.42	563.85	722.73
- Cash subsidy	486.64	476.83	506.57	313.65	512.38	475.06
- Total net income from paddy	1,590.31	1,230.72	1,252.15	568.07	1,076.23	1,197.79

Source; Ref. C 37

Table 157 PER HECTARE PADDY EXPENDITURE AND INCOME OF OWNERS IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	18.12	2.92	2.47	14.36	31.16	10.99
- Insecticides	-	1.08	7.37	7.41	14.47	5.01
- Fungicides & weedicides	0.38	0.28	0.59	-	-	0.31
- Other inputs	11.76	11.29	10.09	-	13.88	10.26
- Land preparation						
. Labour	-	0.21	-	-	-	0.07
. Tractor	145.38	117.63	142.91	130.04	71.16	125.00
- Transplanting	79.40	121.10	148.55	105.24	153.24	122.22
- Harvesting	256.26	227.04	228.89	183.05	249.79	231.36
- Other labour charges	27.93	22.58	21.55	14.33	6.82	20.17
- Transportation	78.64	83.58	78.64	57.67	72.62	76.83
- Land rent	-	-	-	-	-	-
- Taxes	196.89	138.98	141.87	228.30	2.40	143.53
- Others	-	-	1.74	-	-	0.45
Total	814.76	726.69	784.67	740.40	615.54	746.20
(2) Paddy Income						
- Paddy sales	1,163.60	1,230.26	1,299.00	1,368.98	1,239.25	1,253.88
- Labour income	95.47	44.59	1.64	2.19	-	32.87
- Land preparation income	-	-	-	-	-	-
- Other income	13.15	8.67	3.30	-	-	4.00
- Gross cash income	1,272.22	1,283.52	1,303.94	1,371.17	1,239.25	1,290.75
- Value of unsold paddy	559.23	515.51	637.27	388.94	406.61	526.60
Total gross in- come from paddy	1,831.45	1,799.03	1,941.21	1,760.11	1,645.86	1,817.35
(3) Net Income						
- Net cash income from paddy	457.46	556.83	519.27	630.77	623.71	544.55
- Net income from paddy	1,016.69	1,072.34	1,156.54	1,019.71	1,030.32	1,071.15
- Cash subsidy	415.86	450.75	526.95	401.67	345.82	443.69
- Total net income from paddy	1,432.55	1,523.09	1,683.49	1,421.38	1,376.14	1,514.84

Source; Ref. C 37

Table 158 PER HECTARE PADDY EXPENDITURE AND INCOME OF TENANTS IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	6.33	28.14	-	-	10.57
- Insecticides	-	0.17	2.37	-	0.35	0.77
- Fungicides & weedicides	0.80	0.24	0.45	1.88	-	0.45
- Other inputs	245.89	1.04	9.77	2.85	0.52	20.83
- Land preparation						
. Labour	-	-	-	-	-	-
. Tractor	110.60	111.89	121.42	142.88	84.72	114.04
- Transplanting	115.96	108.51	140.13	90.95	180.44	124.58
- Harvesting	221.72	208.71	251.36	242.38	279.21	232.68
- Other labour charges	24.62	14.54	24.14	21.32	39.54	21.46
- Transportation	91.13	82.64	91.82	72.76	95.72	86.39
- Land rent	479.93	485.88	472.33	303.21	402.89	455.42
- Taxes	207.78	108.83	112.03	145.73	145.94	124.41
- Others	-	-	-	-	-	-
Total	1,498.43	1,128.78	1,253.96	1,023.96	1,229.33	1,191.60
(2) Paddy Income						
- Paddy sales	1,330.65	1,186.13	1,269.19	1,357.53	1,493.59	1,271.04
- Labour income	34.33	18.90	-	3.93	-	10.99
- Land preparation income	1,236.43	-	-	-	-	87.37
- Other income	49.21	0.90	-	-	6.88	4.70
- Gross cash income	2,650.62	1,205.93	1,269.19	1,361.46	1,500.47	1,374.09
- Value of unsold paddy	371.83	449.11	291.15	295.98	285.86	367.21
Total gross in- come from paddy	3,022.45	1,655.04	1,560.34	1,657.44	1,786.33	1,741.30
(3) Net Income						
- Net cash income from paddy	1,152.19	77.15	15.23	337.50	271.14	182.49
- Net income from paddy	1,524.02	526.26	306.38	633.48	557.00	549.70
- Cash subsidy	533.46	458.16	423.90	477.84	526.67	463.79
- Total net income from paddy	2,057.48	984.42	730.28	1,111.32	1,083.67	1,013.49

Source; Ref. C 37

Table 159

PER HECTARE PADDY EXPENDITURE AND INCOME OF
OWNER-TENANTS IN SAMPLE AREAS OF MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	6.68	-	7.37	18.19	11.44
- Insecticides	-	-	0.90	4.28	1.18	1.70
- Fungicides & weedicides	-	-	-	-	1.70	0.87
- Other inputs	-	-	37.15	11.06	8.59	13.08
- Land preparation						
. Labour	-	-	-	-	4.24	2.16
. Tractor	165.48	169.34	85.00	88.69	32.76	67.65
- Transplanting	54.64	133.31	113.83	148.86	71.86	100.69
- Harvesting	208.68	280.08	165.52	248.43	261.44	242.83
- Other labour charges	23.34	21.11	11.20	27.96	8.21	14.40
- Transportation	29.81	34.01	80.62	54.95	109.07	84.65
- Land rent	157.80	199.39	187.33	271.39	278.62	252.78
- Taxes	136.72	198.75	33.81	129.87	114.12	111.33
- Others	-	-	-	-	-	-
Total	776.47	1,042.67	715.36	992.86	909.98	903.58
(2) Paddy Income						
- Paddy sales	667.57	1,363.72	1,034.53	1,139.78	1,392.48	1,259.87
- Labour income	-	-	0.90	-	-	0.14
- Land preparation income	-	-	71.58	54.80	1.50	25.01
- Other income	-	-	2.43	-	-	-
- Gross cash income	667.57	1,363.72	1,109.44	1,194.58	1,393.98	1,285.02
- Value of unsold paddy	529.32	548.28	305.07	438.78	162.11	286.38
Total gross in- come from paddy	1,196.89	1,912.00	1,414.51	1,633.36	1,556.09	1,571.40
(3) Net Income						
- Net cash income from paddy	-108.90	321.05	394.08	201.72	484.00	381.44
- Net income from paddy	420.42	869.33	699.15	640.50	646.11	667.82
- Cash subsidy	234.52	359.45	374.27	394.20	477.95	427.59
- Total net income from paddy	654.94	1,228.78	1,073.42	1,034.70	1,124.06	1,095.41

Source; Ref. C 37

Table 160 PER HECTARE PADDY EXPENDITURE AND INCOME OF OWNERS IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	2.23	3.72	2.82	-	-	2.96
- Insecticides	0.73	1.43	1.36	-	-	1.18
- Fungicides & weedicides	-	0.21	1.91	-	-	0.59
- Other inputs	9.84	7.10	0.28	-	2.78	5.60
- Land preparation						
. Labour	1.18	-	-	-	50.40	3.44
. Tractor	137.83	148.34	91.92	-	83.99	127.64
- Transplanting	84.48	126.77	113.97	-	35.37	109.52
- Harvesting	211.18	242.52	254.90	-	235.22	239.25
- Other labour charges	11.06	11.75	4.24	-	52.87	12.31
- Transportation	56.90	74.57	53.18	-	33.01	63.02
- Land rent	-	-	-	-	-	-
- Taxes	142.58	204.78	141.62	-	320.50	184.03
- Others	0.17	-	11.69	-	-	3.06
Total	658.18	821.19	677.89	-	814.14	752.60
(2) Paddy Income						
- Paddy sales	1,292.67	1,247.73	1,268.95	-	1,247.56	1,261.78
- Labour income	142.42	7.44	-	-	-	30.82
- Land preparation income	-	-	-	-	-	-
- Other income	11.86	7.76	-	-	-	6.05
- Gross cash income	1,446.95	1,262.93	1,268.95	-	1,247.56	1,298.65
- Value of unsold paddy	475.03	466.96	284.74	-	120.37	399.20
Total gross in- come from paddy	1,921.98	1,729.89	1,553.69	-	1,367.93	1,697.85
(3) Net Income						
- Net cash income from paddy	788.77	441.74	591.06	-	433.42	546.05
- Net income from paddy	1,263.80	908.70	875.80	-	553.79	945.25
- Cash subsidy	474.68	436.49	452.14	-	445.57	448.42
- Total net income from paddy	1,738.48	1,345.19	1,327.94	-	999.36	1,393.67

Source; Ref. C 37

Table 161 PER HECTARE PADDY EXPENDITURE AND INCOME OF TENANTS IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	-	-	-	-	48.87	7.16
- Insecticides	-	7.06	4.73	-	-	3.41
- Fungicides & weedicides	-	0.28	0.70	1.70	-	0.56
- Other inputs	0.80	2.19	0.07	2.96	-	1.25
- Land preparation						
. Labour	-	-	-	8.73	-	1.43
. Tractor	129.56	117.66	103.40	112.83	160.23	120.65
- Transplanting	87.92	129.97	140.16	150.32	167.57	136.72
- Harvesting	177.34	249.06	258.80	271.42	260.22	248.50
- Other labour charges	4.94	16.87	7.72	19.89	3.69	11.51
- Transportation	54.57	47.93	35.93	62.22	39.20	46.54
- Land rent	466.51	508.13	593.48	510.96	521.07	528.69
- Taxes	137.59	218.49	126.53	107.99	-	133.80
- Others	-	-	-	-	-	-
Total	1,059.23	1,297.64	1,271.52	1,249.02	1,200.85	1,240.22
(2) Paddy Income						
- Paddy sales	1,318.09	1,495.12	1,441.11	1,047.61	1,649.62	1,408.87
- Labour income	55.27	5.32	10.29	3.96	-	11.58
- Land preparation income	-	-	-	-	-	-
- Other income	133.00	4.70	-	-	-	17.15
- Gross cash income	1,506.36	1,505.14	1,451.40	1,051.57	1,649.62	1,437.60
- Value of unsold paddy	495.44	420.46	319.80	385.47	154.38	357.26
Total gross in- come from paddy	2,001.80	1,925.59	1,771.21	1,437.04	1,804.00	1,794.86
(3) Net Income						
- Net cash income from paddy	447.13	207.50	179.88	-197.45	448.77	197.38
- Net income from paddy	942.57	627.95	499.68	188.02	603.15	554.64
- Cash subsidy	488.73	524.34	537.46	252.26	597.70	489.84
- Total net income from paddy	1,431.30	1,152.30	1,037.14	440.28	1,200.85	1,044.48

Source; Ref. C 37

Table 162 PER HECTARE PADDY EXPENDITURE AND INCOME OF OWNER-TENANTS IN SAMPLE AREAS OF NON-MUDA II SCHEME

Unit: M\$/ha

Item	Farm Size					Average
	Below 0.86 ha	0.86 - 1.73 ha	1.73 - 2.59 ha	2.59 - 3.45 ha	Over 3.45 ha	
(1) Paddy Expenditure						
- Fertilizer	2.09	5.18	5.56	-	45.46	15.06
- Insecticides	-	1.08	3.27	-	0.31	1.18
- Fungicides & weedicides	-	0.42	2.47	3.23	2.89	1.74
- Other inputs	-	7.23	2.12	14.23	6.23	6.50
- Land preparation						
. Labour	-	-	-	-	-	-
. Tractor	256.09	151.33	108.30	103.96	118.43	131.82
- Transplanting	56.52	140.02	156.72	175.53	102.60	135.61
- Harvesting	293.89	238.42	229.27	236.19	248.57	240.02
- Other labour charges	1.67	8.63	6.23	7.06	20.28	10.89
- Transportation	67.82	74.50	60.83	123.82	55.09	71.47
- Land rent	282.58	299.45	180.03	173.90	272.79	256.89
- Taxes	58.95	190.46	126.60	155.47	55.54	137.62
- Others	-	-	23.82	-	-	4.66
Total	1,019.61	1,116.72	905.22	993.39	928.17	1,013.46
(2) Paddy Income						
- Paddy sales	1,897.53	1,411.75	1,459.54	883.48	1,368.00	1,367.88
- Labour income	90.43	9.15	28.21	-	-	11.09
- Land preparation income	-	-	-	-	-	-
- Other income	-	2.43	-	-	-	-
- Gross cash income	1,987.96	1,423.33	1,487.75	883.48	1,368.00	1,379.97
- Value of unsold paddy	450.64	357.96	303.00	255.08	145.66	284.50
Total gross in- come from paddy	2,438.60	1,781.29	1,790.75	1,138.56	1,513.66	1,664.47
(3) Net Income						
- Net cash income from paddy	968.34	306.61	582.53	-109.91	439.83	366.51
- Net income from paddy	1,418.99	664.57	885.53	145.17	585.49	651.01
- Cash subsidy	651.60	511.20	687.39	317.58	488.73	495.86
- Total net income from paddy	2,070.59	1,175.77	1,572.93	462.75	1,074.22	1,146.87

Source; Ref. C 37

Table 163 AVERAGE COST OF PADDY PRODUCTION PER HECTARE
PER SEASON IN MUDA IRRIGATION SCHEME FOR 1977-79

Unit: M\$/ha

Cost Component	1977/78		1978/79		1979/80	
	Off	Main	Off	Main	Off	Main
(1) Material Input						
Urea	57.06	73.22	-	77.20	73.76	6.23
Mixed fertilizer	39.02	-	-	46.85	49.97	1.61
Compound fertilizer	-	49.69	-	10.28	13.49	1.70
Ammophas	-	-	-	1.06	0.84	0.64
Other fertilizers	10.58	9.49	-	2.99	4.30	2.57
Furadan 2G	-	-	-	5.76	5.29	2.30
Endosulfan G	-	-	-	4.94	3.19	1.14
Gamma BHC	5.26	8.90	-	1.85	3.19	3.06
Sevin	-	-	-	0.17	0.22	0.17
Other pesticides & insecticides	2.40	1.83	-	0.15	5.46	4.79
Seed	16.38	18.93	-	18.58	18.56	19.52
Sub-total	130.70	162.06	-	169.83	178.27	43.73
(2) Labour Cost						
Land ploughing	110.33	113.50	-	116.81	117.25	140.95
Nursery preparation	31.80	32.72	-	23.50	15.77	17.50
Raking & levelling	14.73	11.71	-	13.10	15.72	15.10
Pumping water	-	6.00	-	0.44	4.35	7.26
Carrying seedlings	-	22.93	-	21.20	23.87	23.52
Carrying seeds	-	-	-	-	-	-
Repairing bunds	16.38	17.52	-	14.60	19.27	19.89
Transplanting	116.78	120.98	-	122.69	126.62	141.45
Seeding wages	-	-	-	-	-	-
Replacing seeding	20.26	22.98	-	16.85	18.29	19.60
Fertiliser & insecticide application	13.86	16.19	-	16.26	15.62	15.72
Weeding	28.20	23.13	-	15.47	23.23	23.92
Harvesting	197.47	196.25	-	206.78	258.53	214.76
In-field transportation	60.59	48.75	-	53.05	65.29	64.89
Winnowing	15.67	16.75	-	3.88	2.64	2.20
Transporting fertiliser	-	-	-	-	-	3.95
Filling paddy into gunny	-	-	-	-	-	9.96
Drying paddy	-	-	-	-	-	5.58
Sub-total	626.07	649.41	-	624.63	706.45	726.25
(3) Land Rent	376.60	425.84	-	457.92	450.63	449.69
(4) Cost of Production						
Owner	756.77	811.47	-	794.46	884.72	769.98
Tenant	1,133.37	1,237.31	-	1,252.38	1,335.35	1,219.67

Source; Refs. C 34 and C 40

Table 164 AVERAGE COST OF PADDY PRODUCTION PER HECTARE
PER SEASON IN MUDA IRRIGATION SCHEME FOR 1980-82

Unit: M\$/ha

Cost Component	1980/81		1981/82		1982/83	
	Off	Main	Off	Main	Off	Main
(1) Material Input						
Urea	7.59	4.27	2.05	2.22	2.05	5.14
Mixed fertiliser	2.37	1.46	1.11	1.39	0.14	0.45
Compound fertiliser	1.53	2.65	1.01	2.02	1.11	0.83
Amnophas	0.07	0.13	0.00	0.00	0.00	-
Other fertilisers	2.20	3.43	1.95	1.32	0.14	0.59
Furadan 2G	1.19	1.71	0.69	1.42	3.48	4.97
Endosulfan G	0.20	0.13	0.07	0.03	0.07	0.07
Gamma BHC	1.53	0.99	1.18	1.04	0.87	0.56
Sevin	0.10	0.11	0.07	0.42	0.45	0.07
Other pesticides & insecticides	3.61	2.63	5.35	3.27	5.98	7.09
Seed	18.06	20.56	23.35	26.58	27.31	27.00
Sub-total	38.45	38.07	36.83	39.71	41.60	46.77
(2) Labour Cost						
Land ploughing	145.62	159.11	170.72	173.74	182.65	182.82
Nursery preparation	24.14	23.95	27.69	30.09	36.17	29.40
Raking & levelling	19.84	18.14	17.10	21.86	22.27	25.12
Pumping water	3.26	5.91	1.04	7.96	4.10	8.55
Carrying seedling	27.30	28.91	32.63	33.60	32.42	26.97
Carrying seeds	-	-	-	-	1.22	3.30
Repairing bunds	27.60	25.55	31.38	32.84	41.11	35.13
Transplanting	159.77	176.63	199.66	207.03	190.85	176.60
Seeding wages	-	-	-	-	1.81	4.48
Replacing seedling	20.11	21.75	26.44	30.30	33.85	31.90
Fertiliser & insecticide application	15.59	21.97	17.51	18.42	18.10	19.36
Weeding	23.28	22.76	23.35	22.20	29.99	24.74
Harvesting	240.78	244.64	237.74	230.06	232.81	224.71
In-field transportation	79.81	78.20	68.35	58.24	43.12	49.62
Winnowing	2.77	0.74	0.07	0.07	0.00	0.14
Transporting fertiliser	4.82	5.64	6.60	6.53	7.05	7.26
Filling paddy into gunny	23.03	25.74	28.74	31.03	25.61	33.01
Drying paddy	33.21	16.11	6.32	4.52	11.71	4.87
Sub-total	850.93	875.75	895.34	908.49	914.84	887.98
(3) Land Rent	459.56	506.83	528.27	560.69	598.67	604.48
(4) Cost of Production						
Owner	889.38	913.82	932.17	948.20	956.44	934.75
Tenant	1,348.94	1,420.65	1,460.44	1,508.89	1,555.11	1,539.23

Source; Refs. C 34 and C 40

Table 165 COMPARISON OF PADDY PRODUCTION COST BETWEEN
DIRECT SEEDING AND TRANSPLANTING SYSTEMS

Unit: M\$/ha

Items	1982		1982		1982	
	Off-Season		Main Season		Average	
	Trans- planting	Direct seeding	Trans- planting	Direct seeding	Trans- planting	Direct seeding
(1) Material Input						
Urea	2.70	1.97	7.02	4.81	4.86	3.39
Mixed fertilizer	-	0.16	-	0.45	-	0.30
Compound fertilizer	0.86	1.15	-	-	0.43	0.58
Amnophas	-	0.01	-	-	-	-
Other fertilizers	1.29	0.03	0.10	0.73	0.69	0.38
Furadan 2G	4.25	3.42	4.97	4.73	4.61	4.07
Endosulfan G	-	0.07	-	0.12	-	0.10
Gamma BHC	0.27	0.94	0.43	0.50	0.35	0.72
Sevin	0.21	0.43	0.11	0.05	0.16	0.24
Other pesticides & insecticides	6.17	5.93	9.11	6.43	7.64	6.18
Seed	24.99	27.39	28.36	26.94	26.68	27.17
Sub-total	40.74	41.50	50.10	44.76	45.42	43.13
(2) Labour Cost						
Land ploughing	169.27	183.07	178.73	182.93	174.00	183.00
Nursery preparation	1.87	39.83	2.53	34.10	2.20	36.97
Raking & levelling	30.17	21.17	30.56	39.94	30.37	30.56
Pumping water	8.40	3.66	5.54	7.45	6.97	5.56
Carrying seedlings	-	35.84	-	31.87	-	33.86
Carrying seeds	10.42	-	20.86	-	15.64	-
Repairing bunds	34.88	41.43	35.77	35.67	35.33	38.55
Transplanting	-	211.23	-	210.29	-	210.76
Seedling wages	20.18	-	27.53	-	23.86	-
Replacing seeding	34.62	33.79	41.22	29.82	37.92	31.81
Fertilizer & insecti- cide application	18.28	18.09	20.44	19.12	19.36	18.61
Weeding	27.04	29.42	26.61	25.19	26.83	27.31
Harvesting	229.30	241.40	220.30	236.38	224.79	239.64
In-field transportation	41.72	43.27	51.92	51.11	46.82	47.19
Winnowing	-	-	-	0.13	-	0.06
Transporting fertilizer	6.85	7.06	7.37	7.26	7.11	7.16
Filling paddy into gunny	31.34	23.96	33.61	32.01	32.48	27.99
Drying paddy	11.30	11.52	10.46	3.77	10.88	7.65
Sub-total	675.64	944.74	713.45	947.04	694.56	946.68
Total	716.38	986.24	763.55	991.80	739.98	989.31

Source: Ref. C 41

Table 166 PADDY PRODUCTION COST IN OUTSIDE MUDA AREA

Items	Perlis/Kedah		Pulau Pinang		Nation Average	
	M\$/ha	%	M\$/ha	%	M\$/ha	%
(1) Inputs						
Seedling	55.25	2.90	53.72	2.84	45.96	2.60
Fertilizer	215.31	11.29	156.62	8.27	208.31	11.80
Chemical	34.62	1.82	11.00	0.58	56.54	3.21
Sub-total	305.18	16.01	221.34	11.69	310.81	17.61
(2) Labour & Contract Cost						
Nursery preparation	95.51	5.01	27.48	1.45	57.43	3.25
Land preparation	391.77	20.55	366.36	19.35	362.01	20.51
Bund repair	84.02	4.41	73.27	3.87	53.80	3.04
Transplanting	322.28	16.90	274.79	14.52	301.72	17.10
Fertilizing	50.61	2.65	47.32	2.50	60.27	3.42
Spraying	71.74	3.76				
Weeding	105.02	5.51	61.06	3.23	82.93	4.70
Harvesting, threshing & transport	363.00	19.04	656.40	34.68	536.03	30.37
Winnowing & cleaning	73.02	3.83	122.12	6.45		
Drying	44.50	2.33	42.75	2.26		
Sub-total	1,601.47	83.99	1,671.55	88.31	1,454.19	82.39
Total	1,906.65	100.00	1,892.89	100.00	1,765.00	100.00

Source; Refs. C 42 and C 43

Table 167 DOUBLE CROPPING PERIOD OF 12 CULTURAL TYPES

Unit: days

Cultural Type	Cultural Method	Off-Season	Main Season	Total Growing Period
A	T + T	G + 15	G + 15	2G + 30
B	T + D	G + 15	G + 23	2G + 38
C	T + M	G + 15	G + 12	2G + 27
D	T + T (Ex)	G + 15	G + 5	2G + 20
E	D + T	G + 8	G + 15	2G + 23
F	D + D	G + 8	G + 23	2G + 31
G	D + M	G + 8	G + 12	2G + 20
H	D + T (Ex)	G + 8	G + 5	2G + 13
I	M + T	G - 3	G + 15	2G + 12
J	M + D	G - 3	G + 23	2G + 20
K	M + M	G - 3	G + 12	2G + 9
L	M + T (Ex)	G - 3	G + 5	2G + 2

Remarks; G : Growing period of introduced variety
 T : Manual transplanting culture
 D : Direct seeding culture
 M : Mechanical transplanting culture
 T (Ex) : Transplanting culture with exclusive nursery

Source; Ref. C 44

Table 168 RELATIONSHIP BETWEEN GROWING PERIOD AND YIELD
IN TARC EXPERIMENTAL FIELD OF MUDA AREA AND MARDI

Variety	Growing Period (days)			Paddy Yield (ton/ha)		
	Off	Main	Average	Off	Main	Average
(1) TARC Pilot Project Area, Irrigation Block ACRBD 4 (1970)						
MR 7	122	119	121	4.39	5.11	4.75
Vaya	127	123	125	4.87	4.17	4.52
Seribu Gantang	133	129	131	5.86	5.45	5.66
MR 27	-	129	-	-	5.52	-
MR 1	141	132	137	6.61	6.31	6.46
Bahagia	146	134	140	4.40	5.16	4.78
(2) MARDI Bumbong Lima Branch Station						
IR 28	105*	103	104*	1.58*	2.48	2.03*
IR 36	119	109	115	3.92	3.69	3.81
IR 50	107	104	106	3.32	3.52	3.42
MR 7	122	119	121	3.72	3.69	3.71
IR 24	121	123	122	3.79	3.81	3.80
MR 65	122	126	124	4.29	4.08	4.19
IR 42	141	133	137	4.20	4.22	4.21
Seribu Gantang	131	129	130	4.05	4.02	4.04
Anak Dara	133	134	134	4.20	4.48	4.34
MR 10	148	132	143	3.33	4.10	3.72
MR 1	144	129	137	3.51	4.09	3.80
MR 73	146	129	138	3.39	4.73	4.06

Remark; *: Heavy damage by rat

Source; Ref. C 44

Table 169 MAXIMUM TOTAL PRODUCT, DOUBLE CROPPING AREA
AND VARIETY USED BY CULTURAL TYPE

Cultural Type	Maximum Total Product		Area of Double Cropping (%)	Variety Used (day)
	Product Index	Increase		
A	169.1	100	86.4	125
B	161.3	95	76.6	125
C	172.0	102	90.0	125
D	178.8	106	98.5	125
E	175.9	104	94.9	125
F	176.1	104	95.1	125
G	178.8	106	98.5	125
H	183.5	109	94.9	130
I	184.6	109	96.1	130
J	178.8	106	98.5	125
K	187.7	111	99.7	130
L	196.1	116	96.1	135

Source; Ref. C 44

Table 170 FUTURE IRRIGATION AREA IN MUDA AREA

Unit: ha

	1983		1990		2000	
	Main	Off	Main	Off	Main	Off
Pelubang North						
MADA						
Perlis	18,400	16,800	18,200	16,900	17,800	17,800
Kedah	31,800	30,000	31,600	30,300	30,700	30,700
Sub-total	50,200	46,800	49,800	47,200	48,500	48,500
Fringe area	879	818	879	818	879	818
Sub-total	51,079	47,618	50,679	48,018	49,379	49,318
Pelubang South						
MADA	45,000	42,700	44,600	42,700	43,500	43,500
Fringe area	985	718	985	718	985	718
Sub-total	45,985	43,418	45,585	43,418	44,485	44,218
Total	97,064	91,036	96,264	91,436	93,864	93,536

Table 171 PROSPECTED ANNUAL SCHEDULE OF TERTIARY DEVELOPMENT IN MUDA AREA

Unit: ha

Year	Season	Muda I	Muda II	Muda III	Construction
1983	Off	89,500			
	Main	95,200			
1984	Off	86,100			4,800
	Main	90,300	4,800		
1985	Off	79,500	4,800		5,200
	Main	85,000	10,000		
1986	Off	74,300	10,000		5,200
	Main	79,700	15,200		
1987	Off	69,100	15,200		5,200
	Main	74,400	20,400		
1988	Off	64,000	20,400		5,100
	Main	69,100	25,500		
1989	Off	58,900	25,500		5,500
	Main	63,500	25,500	5,500	
1990	Off	53,400	25,500	5,500	5,500
	Main	57,900	25,500	11,000	
1991	Off	47,300	25,500	11,000	6,100
	Main	51,700	25,500	17,100	
1992	Off	41,000	25,500	17,100	6,300
	Main	45,300	25,500	23,400	
1993	Off	34,700	25,500	23,400	6,300
	Main	38,900	25,500	29,700	
1994	Off	28,400	25,500	29,700	6,300
	Main	32,500	25,500	36,000	
1995	Off	22,100	25,500	36,000	6,300
	Main	26,000	25,500	42,300	
1996	Off	15,800	25,500	42,300	6,300
	Main	19,500	25,500	48,600	
1997	Off	9,500	25,500	48,600	6,300
	Main	13,000	25,500	54,900	
1998	Off	3,200	25,500	61,200	6,300
	Main	6,500	25,500	61,200	
1999	Off	0	25,500	61,200	5,300
	Main	0	25,500	66,500	
2000	Off	0	25,500	66,500	
	Main	0	25,500	66,500	

Table 172

PROJECTED MINOR IRRIGATION AREA BY
RIVER BASIN IN THE REGION

River Basin	Unit: ha					
	1983		1990		2000	
	Main	Off	Main	Off	Main	Off
(1) Kedah River Basin						
Main stream						
Minor schemes	0	0	92	92	440	440
MADA Fringe area	1,864	1,536	1,864	1,536	1,864	1,864
Sub-total	1,864	1,536	1,956	1,628	2,304	2,304
Tributaries	1,503	855	2,102	1,146	2,833	2,253
Total	3,367	2,391	4,058	2,774	5,137	4,557
(2) Muda River Basin						
Main stream						
Kedah	2,704	2,655	4,814	4,786	4,861	4,861
P. Pinang	8,611	8,611	8,413	8,413	8,413	8,413
Sub-total	11,315	11,266	13,227	13,199	13,274	13,274
Tributaries	1,702	982	3,355	2,750	5,395	4,163
Total	13,017	12,248	16,582	15,949	18,669	17,437
(3) Perai River Basin						
Kedah	451	119	236	181	457	402
P. Pinang	4,778	4,778	4,498	4,498	4,498	4,498
Total	5,229	4,897	4,734	4,679	4,955	4,900
Grand Total	21,613	19,536	25,374	23,402	28,761	26,894

Remark; Control drainage scheme is excluded from projection.

Table 173 ANNUAL DEVELOPMENT SCHEDULE OF
MINOR IRRIGATION SCHEMES

Unit: ha

Year	MADA Canal	Kedah River		Muda River		Perai River
		Main Stream	Tributaries	Main Stream	Tributaries	
1983	-	-	-	-	-	-
1984	-	-	159	463	462	-
1985	-	-	206	1,460	518	-
1986	-	-	-	-	-	-
1987	-	-	-	-	-	-
1988	-	92	100	94	606	63
1989	-	-	134	93	658	68
1990	-	-	-	-	-	-
1991	-	-	-	-	-	-
1992	-	-	-	-	-	-
1993	-	-	143	-	342	-
1994	-	50	104	-	378	30
1995	-	96	162	-	377	48
1996	-	-	-	-	-	-
1997	-	-	-	-	-	-
1998	-	148	110	23	497	43
1999	-	54	212	24	446	100
2000	-	-	-	-	-	-
Total	-	440	1,330	2,157	4,284	352

Remark; Control drainage scheme is excluded from
this projection.

Table 174 AVERAGE PADDY YIELD BY LOCALITY
IN MUDA AREA FOR 1981-83

Unit: kg/ha

Locality	1981 Off	1981 Main	1982 Off	1982 Main
District I				
A	4,299	5,424	1,300	4,455
B	4,826	4,840	2,070	4,758
C	4,711	4,561	1,362	4,645
D	4,903	4,993	1,462	4,550
E	4,792	4,695	4,396	4,556
Weighted average	4,668	4,901	2,399	4,592
District II				
A	4,200	4,520	2,229	4,203
B	4,427	5,090	2,985	4,700
C	4,374	4,672	4,085	4,657
D	4,123	4,530	3,245	4,236
E	4,259	4,964	3,632	4,296
F	5,106	4,493	2,997	3,969
G	3,724	4,257	3,459	4,090
H	4,303	4,838	3,834	4,318
I	4,681	4,746	4,038	4,462
Weighted average	4,386	4,713	3,419	4,358
District III				
A	4,508	4,114	4,144	4,682
B	4,755	4,343	3,359	4,281
C	5,604	5,096	4,200	3,868
D	4,574	5,196	3,124	4,384
E	3,273	4,798	3,155	2,421
F	3,668	4,681	2,295	4,213
Weighted average	4,483	4,710	3,479	4,032
District IV				
A	5,702	4,896	4,412	4,149
B	5,139	4,122	3,562	4,115
C	4,873	4,447	3,273	3,520
D	3,875	4,841	4,032	4,251
E	3,103	4,442	3,336	4,369
F	3,708	4,691	3,314	4,671
G	3,438	4,228	2,843	3,068
Weighted average	4,180	4,538	3,528	4,034
Whole Muda	4,401	4,702	3,262	4,250

Table 175 INCREASED PADDY PRODUCTION BY SUFFICIENT
WATER SUPPLY TO THE REGION

	Unit: ton		
	Without Project	With Project	Incremental Production
Kedah River System			
MADA			
Main	380,800	460,000	79,200
Off	266,400	460,000	193,600
Sub-total	647,200	920,000	272,800
Minor projects depending on MADA canal/main stream			
Rainfed	968	0	-968
Main	5,965	10,321	4,356
Off	4,915	10,321	5,406
Sub-total	11,848	20,642	8,794
Minor projects in tributaries			
Rainfed	2,926	0	-2,926
Main	4,810	10,795	5,985
Off	2,736	9,027	6,291
Sub-total	10,472	19,822	9,350
Muda River System			
Minor projects depending on main stream			
Rainfed	5,520	0	-5,520
Main	52,941	61,595	8,654
Off	51,722	61,482	9,760
Sub-total	110,183	123,077	12,894
Minor projects in tributaries			
Rainfed	9,425	0	-9,425
Main	5,446	22,833	17,387
Off	3,142	17,457	14,315
Sub-total	18,013	40,290	22,277
The Region Total	797,716	1,123,831	326,115

Table 176 PROJECTED PRODUCTION OF RUBBER IN THREE STATES

Unit: 10³ DRC tons

State	1982	1985	1990	2000
Perlis	7	7	7	7
Kedah	213	244	266	406
P. Pinang	39	127	135	223

Table 177 PROJECTED PRODUCTION OF OIL PALM IN THREE STATES

Unit: 10³ FFB tons

State	1982	1985	1990	2000
Perlis	-	-	-	-
Kedah	120	120	140	160
P. Pinang	48	89	91	150

Table 178 PROCESSING WATER REQUIREMENT BY PALM OIL MILL

Unit: 10³ m³/y

Basin No.	Palm Oil Mill No.	Water Demand			
		1982	1985	1990	2000
5	1	29	48	48	60
6	2	3	12	12	40
	3	5	23	24	80
	4	1	24	25	40

Table 179 PROCESSING WATER REQUIREMENT BY RUBBER FACTORY

Unit: $10^3 \text{ m}^3/\text{y}$

Basin No.	Rubber Factory No.	Water Requirement				
		1982	1985	1990	2000	
3	1	48	51	56	66	
	2	96	102	112	133	
4	3	57	62	68	81	
	4	57	62	68	95	
	5	19	21	23	27	
	6	370	394	432	610	
	7	193	205	225	368	
	8	386	410	450	637	
	9	178	178	178	178	
	11	145	158	179	312	
	13	217	237	269	325	
	19	70	70	70	70	
5	1001	21	76	152	440	
	10	25	25	25	25	
	12	73	73	73	73	
	14	123	123	123	123	
	15	130	142	162	229	
	16	294	294	294	294	
	17	171	171	171	171	
	18	123	123	123	123	
	20	62	62	62	62	
	21	37	37	37	37	
	31	620	632	649	959	
	34	18	18	18	18	
	36	34	34	34	34	
	6	22	109	119	135	191
		23	173	176	180	267
		24	183	247	346	916
		25	404	411	422	825
26		161	164	169	330	
27		111	115	120	329	
28		27	27	27	27	
29		89	91	93	138	
30		68	68	68	68	
32		105	105	105	105	
33		31	31	31	31	
35		9	9	9	9	
1002		2	8	14	261	
7	37	741	821	902	1,582	

Table 180 DERIVATION OF ECONOMIC FARM GATE PRICE
OF PADDY (1983 Constant Dollar)

Description	Unit	Amount	
		Financial	Economic
Export Price, Thai 5% broken, F.O.B., Bangkok*1	US\$/ton	426	426
Price after allowing for 10% dis- count in quality*2	US\$/ton	383	383
Ocean freight and insurance	US\$/ton	25*3	25
Price of rice, C.I.F. Port Klang	US\$/ton	408	408
Price of rice, C.I.F. Port Klang*4	M\$/ton	938	938
Port handling charges and transport charges to Kuala Lumpur	M\$/ton	35*3	23
Wholesale price of rice in Kuala Lumpur*5	M\$/ton	973	961
Transportation cost from Project Area to Kuala Lumpur	M\$/ton	34*6	22
Wholesale price of rice in Alor Setar	M\$/ton	939	939
Paddy equivalent price*7	M\$/ton	610	610
Milling Cost less price of by-product	M\$/ton	70	62
Farm gate price of paddy*8	M\$/ton	540	548

Remarks; *1 : Average for projected rice price of period 1990-1995
(Ref.37) is US\$426/tonne (1983 constant dollar)

*2 : Rice produced in project area is assumed to be
equivalent to Thai 15% broken, i.e. 10% cheaper than
Thai 5% broken (Ref. 36)

*3 : Actual ocean freight, insurance, port handling and
local transportation cost from Port Klang to Kuala
Lumpur in 1983 is M\$/tonne (LPN)

*4 : The conversion rate from US\$ to M\$ ranges from about
2.27 to 2.34 in 1983 (New Straits Times daily Bank
Negara Rates) and an average of 2.30 is assumed.

*5 : Assume parity of rice price in Kuala Lumpur

*6 : This is the difference in actual wholesale
price of rice in Alor Star and Kuala Lumpur in
1983 for all grades of rice. Market transportation
cost in 1983 is about M\$30/tonne (Market Survey).

*7 : Milling rate of 65% (LPN)

*8 : Actual 1982/83 main season farm gate price of paddy
is \$468/tonne (Ref. 24). The rice produced comprises
about 67% medium grain type and 33% long grain type
with about 8% broken.

Table 181 FINANCIAL AND ECONOMIC PADDY PRODUCTION COST
AT 1983 CONSTANT PRICES IN MUDA AREA FOR
1982/83 MAIN SEASON

Description	Weighted Average Cost (M\$/ha)	
	Financial	Economic
<u>Material Inputs</u>		
Urea	5.14	4.42
Mixed fertilizers	0.45	0.39
Compound fertilizers	0.83	0.71
Ammophos	-	-
Other fertilizers	0.59	0.51
Furadan 26	4.97	4.27
Eudosulfan G	0.07	0.06
Gamma GHC	0.56	0.48
Sevin	0.07	0.06
Other chemicals	7.09	6.10
Seeds	27.00	23.22
Fertilizers subsidy*	125.00	107.50
Sub-total:	171.77	147.72
<u>Preharvesting Labour Inputs</u>		
Ploughing	182.82	131.63
Nursery preparation	29.40	14.70
Raking, levelling	25.12	12.58
Pumping water	8.55	4.27
Transporting seedlings	26.97	13.48
Transporting seeds	3.30	1.65
Repair bunds	35.13	17.57
Planting	176.60	127.15
Seeding wages	4.48	2.25
Replacement of planting	31.90	15.96
Fertilizer and chemical application	19.36	9.68
Weeding	24.74	12.37
Fertilizer Transport	7.26	5.22
Sub-total:	575.63	368.51
<u>Harvesting Labour Inputs</u>		
Cutting	6.26	4.51
Threshing	5.07	3.65
Transporting paddy	49.62	35.72
Winnowing	0.14	0.11
Harvesting machinery fee	213.78	153.92
Sacking paddy	33.01	16.51
Drying	4.87	2.44
Sub-total:	312.75	216.86
<u>Land Rent</u>	285.00	204.82
Total:	1,345.15	937.91

Remark; *: Subsidized price is estimated based on the following costs, i.e. M\$378/ton for Mixture of 19,216 tons, M\$428/ton for Urea of 9,607 tons and M\$705/ton for Ammophos of 960 tons.

Source; Ref. C 45

Table 182 ESTIMATED AVERAGE PADDY YIELD AND ECONOMIC NET PRODUCTION VALUE

Scheme	Yield (ton/ha)	Gross Pro- duction Value (M\$/ha)	Pro- duction Cost (M\$/ha)	Net Produc- tion Value (M\$/ha)
1. With Insufficient Irrigation Water Supply				
1.1 MADA				
- Without tertiary development	4.0	2,192	892	1,300
1.2 Rainfed	2.2	1,206	796	410
1.3 Existing minor irrigation	3.2	1,754	844	910
2. With Sufficient Irrigation Water Supply				
2.1 MADA				
- With tertiary development	5.0	2,740	938	1,802
- Without tertiary development	4.0	2,192	892	1,300
2.2 Minor irrigation				
- New projects	4.5	2,466	916	1,550

Remark; Economic production value is projected to 1995 onward at 1983 constant price.

Table 183 TOTAL ECONOMIC NET PRODUCTION
VALUE IN 2003 ONWARD UNDER WITH
AND WITHOUT PROJECT CONDITIONS

Unit: M\$10⁶

	Without Project	With Project	Increment
Kedah River System			
MADA	210.3	331.6	121.3
Minor projects depending on MADA canal/main stream	6.0	9.7	3.7
Minor projects in tributaries	2.7	6.5	3.8
Muda River System			
Minor projects depending on main stream	29.5	50.5	21.0
Minor projects in tributaries	3.7	13.3	9.6

Table 184 ECONOMIC COST AND BENEFIT STREAMS OF MUDA IRRIGATION PROJECT

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1981	5.18	-	5.18	210.34	210.34	-
1982	17.71	-	17.71	210.34	210.34	-
1983	30.82	-	29.49	210.34	210.34	-
1984	37.01	0.26	20.88	210.34	210.34	-
1985	37.37	0.80	21.17	210.34	210.34	-
1986	37.51	1.36	24.45	210.34	210.34	-
1987	38.26	1.92	31.82	210.34	210.34	-
1988	39.17	2.47	39.16	210.34	210.34	-
1989	39.60	3.05	42.65	210.34	210.34	-
1990	39.60	3.64	43.24	210.34	252.40	42.06
1991	39.60	4.23	43.83	210.34	271.57	61.23
1992	39.60	4.82	44.42	210.34	276.96	66.62
1993	42.06	5.41	47.47	210.34	281.75	71.41
1994	45.00	6.01	51.01	210.34	287.14	76.80
1995	47.94	6.60	54.54	210.34	292.53	82.19
1996	50.40	7.27	57.67	210.34	297.48	87.14
1997	42.00	8.03	50.03	210.34	303.03	92.69
1998	25.20	8.79	33.99	210.34	308.92	98.58
1999	8.40	9.55	17.95	210.34	317.99	107.65
2000	-	9.94	9.94	210.34	324.65	114.31
2001	-	9.94	9.94	210.34	328.49	118.15
2002	-	9.94	9.94	210.34	330.79	120.45
2003	-	9.94	9.94	210.34	331.56	121.22
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2032	-	9.94	9.94	210.34	331.56	121.22

Table 185 ECONOMIC COST AND BENEFIT STREAMS OF
MINOR IRRIGATION SCHEMES IN FRINGE
AREA ALONG MADA CANAL

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	-	-	-	5.84	5.84	-
1983	-	-	-	5.84	5.84	-
1984	-	-	-	5.84	5.84	-
1985	-	-	-	5.84	5.84	-
1986	-	-	-	5.84	5.84	-
1987	-	-	-	5.84	5.84	-
1988	-	-	-	5.84	5.84	-
1989	-	-	-	5.84	5.84	-
1990	-	-	-	5.84	8.41	2.57
1991	-	-	-	5.84	8.45	2.61
1992	-	-	-	5.84	8.48	2.64
1993	-	-	-	5.84	8.52	2.68
1994	-	-	-	5.84	8.52	2.68
1995	-	-	-	5.84	8.52	2.68
1996	-	-	-	5.84	8.52	2.68
1997	-	-	-	5.84	8.52	2.68
1998	-	-	-	5.84	8.52	2.68
1999	-	-	-	5.84	8.52	2.68
2000	-	-	-	5.84	8.52	2.68
2001	-	-	-	5.84	8.52	2.68
2002	-	-	-	5.84	8.52	2.68
2003	-	-	-	5.84	8.52	2.68
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2032	-	-	-	5.84	8.52	2.68

Table 186 ECONOMIC COST AND BENEFIT STREAMS OF
MINOR IRRIGATION SCHEMES ALONG MAIN
STREAM OF THE KEDAH RIVER

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	-	-	-	0.18	0.18	-
1983	-	-	-	0.18	0.18	-
1984	-	-	-	0.18	0.18	-
1985	-	-	-	0.18	0.18	-
1986	0.25	-	0.25	0.18	0.18	-
1987	0.34	-	0.34	0.18	0.18	-
1988	0.25	-	0.25	0.18	0.18	-
1989	-	0.01	0.01	0.18	0.18	-
1990	-	0.01	0.01	0.18	0.39	0.21
1991	-	0.01	0.01	0.18	0.41	0.23
1992	0.14	0.01	0.15	0.18	0.43	0.25
1993	0.45	0.01	0.46	0.18	0.43	0.25
1994	0.49	0.01	0.50	0.18	0.43	0.25
1995	0.27	0.02	0.29	0.18	0.53	0.35
1996	0.41	0.03	0.44	0.18	0.73	0.55
1997	0.69	0.03	0.72	0.18	0.77	0.59
1998	0.61	0.03	0.64	0.18	0.86	0.68
1999	0.15	0.05	0.20	0.18	0.96	0.78
2000	-	0.06	0.06	0.18	1.11	0.93
2001	-	0.06	0.06	0.18	1.15	0.97
2002	-	0.06	0.06	0.18	1.20	1.02
2003	-	0.06	0.06	0.18	1.21	1.03
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2032	-	0.06	0.06	0.18	1.21	1.03

Table 187 ECONOMIC COST AND BENEFIT STREAMS OF
MINOR IRRIGATION SCHEMES ALONG
TRIBUTARIES OF THE KEDAH RIVER

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	0.43	-	0.43	2.70	2.70	-
1983	0.86	-	0.86	2.70	2.70	-
1984	0.81	-	0.81	2.70	2.70	-
1985	0.28	0.02	0.30	2.70	2.82	0.12
1986	0.28	0.02	0.30	2.70	3.14	0.44
1987	0.74	0.02	0.76	2.70	3.19	0.49
1988	0.77	0.02	0.79	2.70	3.24	0.54
1989	0.37	0.04	0.41	2.70	3.45	0.75
1990	-	0.05	0.05	2.70	3.70	1.00
1991	0.39	0.05	0.44	2.70	4.51	1.81
1992	0.81	0.05	0.86	2.70	4.62	1.92
1993	1.22	0.05	1.27	2.70	4.72	2.02
1994	0.88	0.07	0.95	2.70	5.05	2.35
1995	0.45	0.09	0.54	2.70	5.24	2.54
1996	0.30	0.11	0.41	2.70	5.52	2.82
1997	0.99	0.11	1.10	2.70	5.60	2.90
1998	1.09	0.11	1.20	2.70	5.65	2.95
1999	0.59	0.13	0.72	2.70	5.84	3.14
2000	-	0.15	0.15	2.70	6.31	3.61
2001	-	0.15	0.15	2.70	6.37	3.67
2002	-	0.15	0.15	2.70	6.43	3.73
2003	-	0.15	0.15	2.70	6.47	3.77
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2032	-	0.15	0.15	2.70	6.47	3.77

Table 188 ECONOMIC COST AND BENEFIT STREAMS OF
MINOR IRRIGATION SCHEMES ALONG MAIN
STREAM OF THE MUDA RIVER

Unit: M\$106

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	0.99	-	0.99	21.43	21.43	-
1983	2.42	-	2.42	21.43	21.43	-
1984	2.45	-	2.45	21.43	21.43	-
1985	1.09	0.05	1.14	21.43	28.48	7.05
1986	1.31	0.10	1.41	21.43	32.56	11.13
1987	3.44	0.10	3.54	21.43	35.20	13.77
1988	3.57	0.10	3.67	21.43	37.85	16.42
1989	1.70	0.17	1.87	21.13	37.51	16.38
1990	-	0.25	0.25	21.07	37.05	15.98
1991	0.95	0.25	1.20	21.07	40.96	19.89
1992	2.31	0.25	2.56	21.07	41.00	19.93
1993	3.38	0.25	3.63	21.07	41.02	19.95
1994	2.43	0.30	2.73	21.07	41.03	19.96
1995	1.04	0.35	1.39	21.07	41.03	19.96
1996	1.37	0.40	1.77	21.07	41.03	19.96
1997	3.06	0.40	3.46	21.07	41.03	19.96
1998	3.01	0.40	3.41	21.07	41.03	19.96
1999	1.23	0.47	1.70	21.07	41.07	20.00
2000	-	0.53	0.53	21.07	41.13	20.06
2001	-	0.53	0.53	21.07	41.14	20.07
2002	-	0.53	0.53	21.07	41.15	20.08
2003	-	0.53	0.53	21.07	41.15	20.08
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2032	-	0.53	0.53	21.07	41.15	20.08

Table 189 ECONOMIC COST AND BENEFIT STREAMS OF
MINOR IRRIGATION SCHEMES ALONG
TRIBUTARIES OF THE MUDA RIVER

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	1.09	-	1.09	4.20	4.20	-
1983	3.59	-	3.59	4.20	4.20	-
1984	3.94	-	3.94	3.70	3.70	-
1985	2.14	0.05	2.19	3.66	4.48	0.82
1986	0.20	0.16	0.36	3.66	5.30	1.64
1987	0.50	0.16	0.66	3.66	5.47	1.81
1988	0.50	0.16	0.66	3.66	5.65	1.99
1989	0.23	0.17	0.40	3.66	6.90	3.24
1990	-	0.18	0.18	3.66	8.29	4.63
1991	-	0.18	0.18	3.66	8.58	4.92
1992	-	0.18	0.18	3.66	8.85	5.19
1993	-	0.18	0.18	3.66	8.99	5.33
1994	-	0.18	0.18	3.66	9.54	5.88
1995	-	0.18	0.18	3.66	10.12	6.46
1996	0.06	0.18	0.24	3.66	10.90	7.24
1997	0.15	0.18	0.33	3.66	11.10	7.44
1998	0.15	0.18	0.33	3.66	11.23	7.57
1999	0.07	0.19	0.26	3.66	12.31	8.65
2000	-	0.19	0.19	3.66	12.77	9.11
2001	-	0.19	0.19	3.66	12.98	9.32
2002	-	0.19	0.19	3.66	13.18	9.52
2003	-	0.19	0.19	3.66	13.28	9.62
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2032	-	0.19	0.19	3.66	13.28	9.62

Table 190 ECONOMIC COST AND BENEFIT STREAMS
OF MINOR IRRIGATION SCHEMES IN
THE PERAI RIVER BASIN

Unit: M\$10⁶

Year	Irrigation Cost			Net Production Value		
	Capital	Incremental O&M	Total	Without Project	With Project	Incremental
1982	-	-	-	9.36	9.36	-
1983	-	-	-	9.36	9.36	-
1984	-	-	-	9.36	9.36	-
1985	-	-	-	9.21	9.21	-
1986	0.17	-	0.17	9.05	9.05	-
1987	0.42	-	0.42	9.01	9.01	-
1988	0.42	-	0.42	9.01	9.01	-
1989	0.19	0.01	0.20	8.47	8.60	0.13
1990	-	0.02	0.02	8.47	8.75	0.28
1991	-	0.02	0.02	8.47	8.78	0.31
1992	0.08	0.02	0.10	8.47	8.81	0.34
1993	0.24	0.02	0.26	8.47	8.83	0.36
1994	0.26	0.02	0.28	8.47	8.83	0.36
1995	0.13	0.02	0.15	8.47	8.89	0.42
1996	0.12	0.03	0.15	8.47	8.99	0.52
1997	0.44	0.03	0.47	8.47	9.01	0.54
1998	0.49	0.03	0.52	8.47	9.03	0.56
1999	0.28	0.03	0.31	8.47	9.12	0.65
2000	-	0.05	0.05	8.47	9.24	0.77
2001	-	0.05	0.05	8.47	9.37	0.90
2002	-	0.05	0.05	8.47	9.40	0.93
2003	-	0.05	0.05	8.47	9.42	0.95
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2032	-	0.05	0.05	8.47	9.42	0.95

Table 191 ECONOMIC NET PRODUCTION VALUE OF CROP
FOR ESTIMATING PRODUCTION FOREGONE

Crop	Yield (ton/ha)	Price (M\$/ton)	Gross Value (M\$/ha)	Production Cost (M\$/ha)	Net Value (M\$/ha)
Rubber					
RISDA & Smallholder	0.7	3,100	2,170	870	1,300
Mixed horticulture *	10.0	40	400	300	100
Paddy (Rainfed)	1.5	548	822	652	170
Forest					
Alienated	-	-	-	-	-
Unalienated	-	-	-	-	-

Remark; *: Represented by cassava

Table 192 TYPICAL FARM BUDGET OF AVERAGE
FARM HOUSEHOLD FOR ONE CROP SEASON

Unit : M\$/ha

	Without-project		With-project	
	MADA	Rainfed	MADA	Minor
(1) Paddy Expenditure				
Material inputs	46.77	36.55	50.17	46.77
Hired machineries	407.53	318.55	437.18	407.53
Hired labour	423.57	331.09	454.38	423.57
Transportation	56.88	42.55	61.02	54.44
Taxes and others	96.14	96.14	96.14	96.14
(Cost for land owner)	(1,030.89)	(824.88)	(1,098.89)	(1,028.45)
Land rent	285.00	285.00	285.00	285.00
Total	1,315.89	1,109.88	1,383.89	1,313.45
(2) Paddy Income				
Paddy sales	1,576.80	604.80	1,971.00	1,773.90
Labour income	19.13	170.70	19.13	19.13
Other income	19.76	49.38	19.76	19.76
Gross cash income	(1,615.69)	(824.88)	(2,009.89)	(1,812.79)
Value of unsold paddy	583.20	583.20	729.00	656.10
Total	2,198.89	1,408.08	2,738.89	2,468.89
(3) Net Income				
Net cash income from paddy	584.80	0	911.00	784.34
Net income from paddy (A)	883.00	298.20	1,355.00	1,155.44
Cash subsidy (B)	457.88	457.88	457.88	457.88
Total (A + B)	1,340.88	756.08	1,812.88	1,613.32
(4) Increase in cash income from paddy cultivation	-	-	326.20	784.34

FIGURES

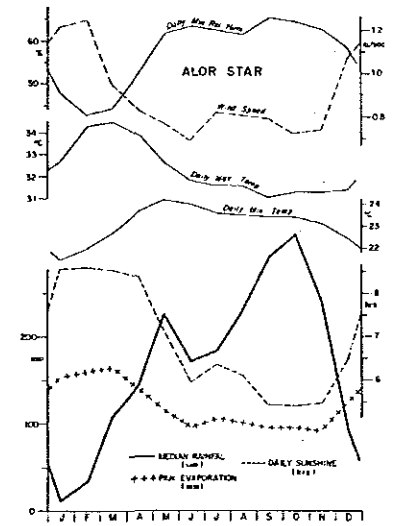
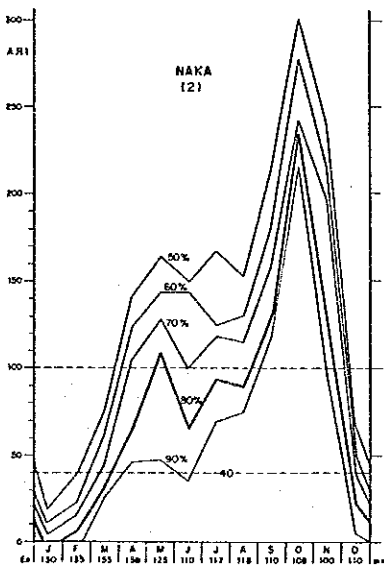
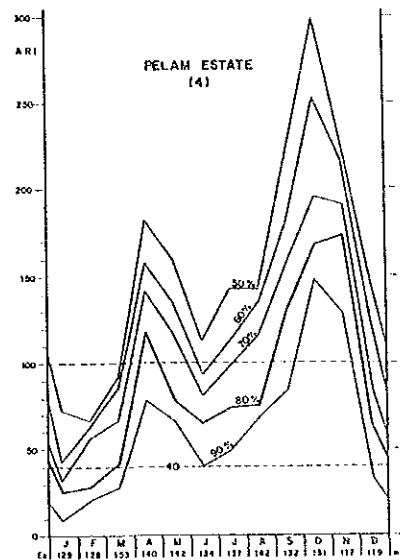
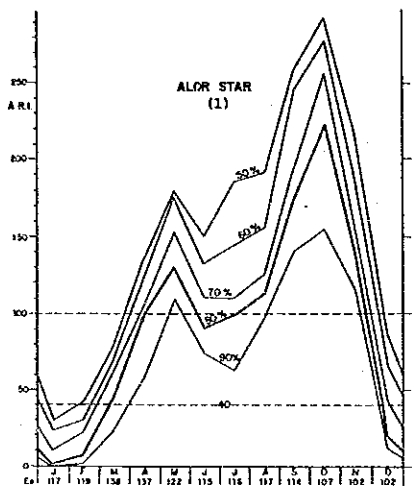
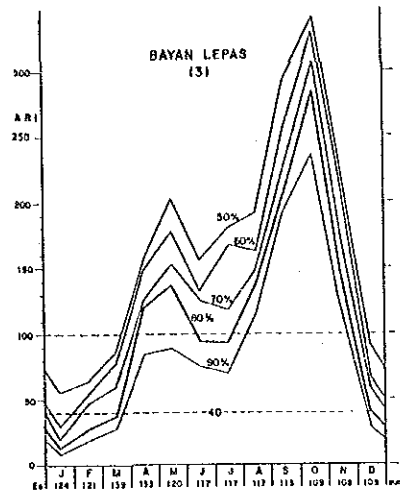
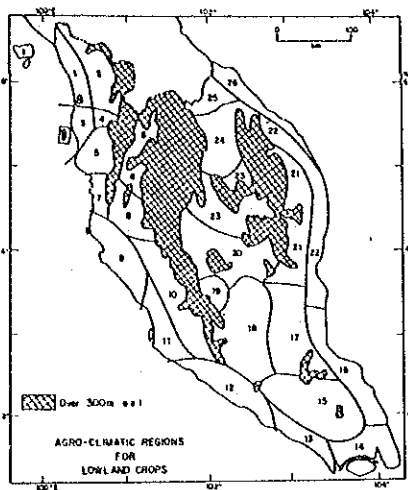


Fig. 1 Agroclimatic Condition in the Region

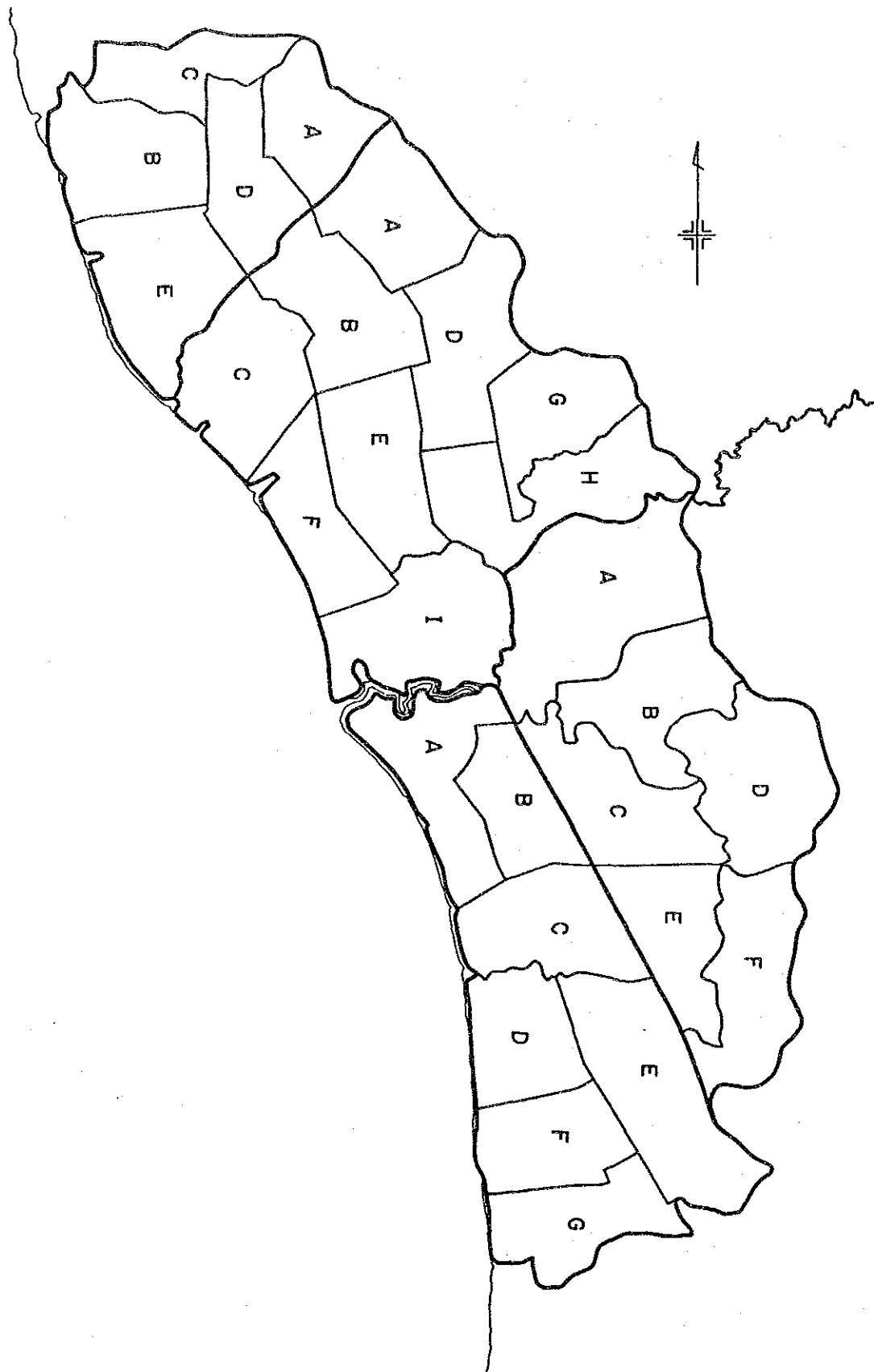


Fig. 2 Location of District and Locality in Muda Scheme

GOVERNMENT OF MALAYSIA
 NATIONAL WATER RESOURCES STUDY, MALAYSIA
 PERLIS-KEDAH-PULAU PINANG
 REGIONAL WATER RESOURCES STUDY PART 2
 JAPAN INTERNATIONAL COOPERATION AGENCY