Table AT-6-11 Ranking Evaluation Matrix for Prioritization of the Potential Orchard Development Sites and Projects in North Sumatra

	Project Code/		(I) Durian	NS(DR)-1	NS(DR)-2	NS(DR)-3	(2) Mangosteen	NS(MN)-1	NS(MN)-2	(3) Marquisa	NS(MA)-1 Karo	(4) Rambutan	NS(RB)-1 Langkat	(5) Salak		Notes:		
Key Assessament Factors	Development Dismets			Dairi	Tapanuli Tengah	NS(DR)-3 Tapanuli Utara	Sen	Tapanuli Selatan	NS(MN)-2 Tapanuli Utara	ī	Karo	u	Langkat		Tapanuli Selatan	SCORING	(2) Cood (3) Not Good	(t) None
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useN (1)	Physiography Soils			-	-	7		C4	C4 	ļ <u>.</u>	C4		r.,		r.	NS = North S	DR = Durian MN = Mango	MA = Marqu
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g.	mampolayab bredoso iiori sol bnefansi aldelievA	¥(1)		C1	۲۱	-		C ŧ	-		C1		2		~		RB = Ramb SK = Salak	
	Availability of water resources	7			6	₩.		-	 		F		٠.			,	RB = Rambutan SK = Salak	
C2) Se Produ	Availability of recommended variety	1		(1) (1)		-		_	_		- 2		2				i g	
(2) Seedling Production	Reliability of recommended mother plant variety Seedliab guality	~		C.1	77			64	7		- 2		7		-			
(3)	Extension service system	ο.		7	<u>~</u>	6.1		-	7		63		и			KEK	2	<u>₹</u>
(3) Institutional Capability	Service capacity of extension morkers	30.5		٠٠,	۳,	۴.			۴.		7		۴.		-	WEIGHT RATIO	(2) Seedling Production (3) Institutional Capability	4) Deveopment Needs
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(<u>4)</u>	Alleriation of poverty			۳.	e,	<u>ر</u>		r1			-		_		e4		n tion ability	ĝ
(4) Development Needs	Opportunity of employment generation is a siniteged francism of the regional disparities			3 2	3	3					3 2				2		0.05	0
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seds	Environmentally friendly development			-	3	۲,		61	_		3		3		e1			
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(6) Crop Marketability	Accessibility to regional markets	(6) S			-	-		-	-		•		3				0.17	8
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(7) Prof	Crop budget analysing production cost and returns	(7)-1		C a	64	c 1		-	-		7		7		3			
(7) Crop Profitability	tasmsviupes tetiges goistoss (eiliat	1			61	ļ		-			7		64		64			
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Source: JICA Study Team

Table AT-6-12 Ranking Evaluation Matrix for Prioritization of the Potential Orchard Development Sites and Projects in West Java

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(4) Development Needs	Contribution to reduction of the regional dispanies	2 (4)-3		-	!			_		-		7		2	6	0.05
5	Opportunity of employment generation	3		C4				7		۳.		6)		C 4		e ility
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Source: JICA Study Team

Table AT-6-13 Ranking Evaluation Matrix for Prioritization of the Potential Orchard Development Sites and Projects in East Java

	Key Assessment Factors		Ranking			€	(1) Natura	ral Condition	htoon		. G &	(2) Seedling Production	Sul	(S) In	(3) Institutional Capability	lan ,	(4)	evelor	(4) Development Needs	Needs	<	(5) Social Acceptability	ocial ability		Σ	(6) Crop Marketability	ob		() Pro	(7) Crop Profitability	ż.
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Table AT-6-14 Ranking Evaluation Matrix for Prioritization of the Potential Orchard Development Sites and Projects in South Sulawesi

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Table AT-6-15 Ranking Evaluation Matrix for Proritization of the Potential Orchard Development Sites and Projects in the Study Provinces

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Clamis 44 7.60 (49) 2 1 2 2 2 1 1 1			2 2 2 (6) 2 2 2	(6) 1 (7)
SS(AV)-1 Guwa 37 739 150 2 1 2 1 1 1 1 (9) 1	(9) 1 2 2	(3) 1 3 2 (4) 3 2 1 1 1 (8)	3 3 2 60 3 2 2	2 (13) 1 2 1 (5)

Table AT-6-16 Evaluation Results of the Prioritized Orchard Development Projects (ODPs)

Project Code	Accumulated	Weighted	Priority Ranking	(Weighted Points)	Propos	<u>ęd Implem</u>	otation
Development District	s Scores	Points	Fach Province	Study Area	Phase P	Phase H**	Phase II
1. North Sumatra			1				
1) Durian						İ	!
NS(DR)-1 Dain	59	9.12	1 4	15		0	ł
NS(DR)-2 Tapanuli Tengah	65	[0.13	3	5	0	† Y	į ir ir
NS(DR)-3 Tapanoli Utara	59	9.12	5	16		0	•
• • • •	"	7.1,2	{	10		1 9	
2) Mungosteen							
NS(MN)-1 Tapanuli Selatan	51	7.95	8	31		1	. 0
NS(MN)-2 - Tapaauli Utara -	52	8.15	7	30			O
3) Marquisa						:	
NS(MA)-1 Karo	65	10.43	2	2	Ο.	i	•
4) Ranshidan				-			
NS(RB)-1 Langkat	69	10.93	l 1	ı	0)
5) Salak	1					4	-
NS(SK)-1 Tapanuli Selatan	55	881	6	22		O	
						: 0	
2. West Java	l						į
II Avocado	- 1					:	:
WI(AV)-1 Bandung	51	7.75	5	34	*	į ·	0
2) Duly			"	-7		1	
	49	7.0					_
** ** * * * * * * * * * * * * * * * * *	49	7.60	6	36			0
3) Durian	_						i
WJ(DR)-I Bogor	63	9.50	2	. 11	, O.,	1	
4) Mango	:		İ			ļ	
WJ(MO)-1 Sumedang	62	9.59	1	9	Ö		İ
(5) Mangosteen	` I ` :						
WJ(MN)-1 Purwakarta	57	901	4	19		0	
6) Salak	·					1 0	
WJ(SK)-1 Tasikmalaya	58	9.21	3		\sim		
WIGNET TANKHAMYA		9.21	,	12	0		<u>i</u>
3. East Java						1	
1) Avocado	l i						İ
		0.13	1 3 1				
FJ(AV)-1 Lumajang	58	9.17	6	13		0.	
2) Banana							
EJ(BA) 1 Jombang	66	10.40	1	3	O.		
EJ(BA)-2 Lumajang	65	10.18	. 2	4	0		i ! .
(3) Daku	i		ł				
EJ(DX)-1 Tulungagung	60	9.67	5	8		O*	
(4) Durian						1	
FJ(DR)-1 Jombang	62	9.72	4	7			
FJ(DR)-2 Trenggalek	56	8 89	8	21	. •	O	
(5) Mango				=: .			
FJ(MO)-I Pasuruan	58	9.03	7	18		0	i
(6) Salat	,,,,	7.0	f	10		$\mathbf{P}_{\mathbf{r}}$	
	2.	10.00	l .	ا ر	^	2	
FJ(SK)-1 Malang	63	10.09	3	6	0	1	!
			I		·	:	·
4. South Sulawesi						1	
(1) Avocado						1	
SS(AV)-1 Gowa	50	7.59	15	37		[O
SS(AV)-2 Soppeng	51	7.86	12	32			Ŏ
(2) Mango			[i ~ .
SS(MO)-1 Sidenreng Rappar	ng 51	1.72	14	35		· · · · · · · · · ·	Ō
SS(MO)-2 Majene	55	8.44	i	25			ŏ
SS(MO)-3 Bone	55	8.18	ir i	29		<u> </u>	ŏ
SS(MO)-4 Maros	57	8.76	5	23		0	
SS(MO)-5 Wajo	59	9.11	3	17		O.	
(3) Mangosteen				*!			
		1 10		, ,			
	51	7.78	13	33			, <u>Q</u> .
SS(MN)-2 Polewali Mamasa	54	8.19	iộ i	28		į	0
(4) Marquisa]		I			1.	
SS(MA)-1 Gowa	57	8 97	4	20	. " '	O	
SS(MA)-2 Tana Toraja	54	8.41	9	27		:	0
(5) Rambutan			I '			• • • •	
SS(RB)-1 Mamuju	63	9.52		10	· · · O · · ·	1	
SS(RB)-2 Enrekang	54	8.42	8	26	9	£ 11 1 1 1	^
SS(RB)-3 Pinrang	58	8.61	6				0
SS(RB) 4 Barru	60		<u>.</u>	24	O,	0	ļ
	• • • • • • • • • • • • • • • • • • • •	9.16		14			

Notes: * The first priority ODPs proposed to be implemented in Phase I (Short-term Action Plan period) will be developed in stages even in Phase II and Phase III by expanding their schemes.

** The secondary group of ODPs will be implemented in Phase II (medium-term period) and also expanded in Phase III.

O* This ODP for Avocado, Duku or Mangosteen Production was firstly ranked as first priority group, but its implementation was postoponed in Phase II in view of their present difficulties in procuring a good deal of high quality seedlings.

Source: JICA Study Team

Table AT-6-17 Orchard Development Scenarios by Orchard Development Site and Project (1/2)

	Phase I	Phase II	Phase III
Project Code/ Development Districts	Up to 2003 (Repelita VII)	2004 - 2008 (Repelita VIII)	2009 - 2018 (Repelita IX & X)
1 North Sumatrra			
(1) Durian			
NS(DR)-1 Dairi		A-II	A-11 / A-111(E&P)
NS(DR)-2 Tapanuli Tengah	A-II	A-II / A-III(E)	A-II / A-III(E&P)
NS(DR)-3 Tapanoli Utara		A-II	A-II / A-III(E&P)
(2) Mangosteen NS(MN)-1 Tapanuli Selatan	***************************************		A-1
NS(MN)-2 Tapanuli Utara	**************************************	-	A-I
(3) Marquisa	***************************************		
NS(MA)-1 Karo	А-Н(Р)	А-Ш(Р&Е)	A-III(P&E)
(4) Rambutan			
NS(RB)-1 Langkat	A-II	A-11 / A-111(E)	А-Ш(Е&Р)
(5) Salak			
NS(SK)-1 Tapanuli Selatan	-	A-II	A-II / A-III(E&P)
2. West Java			
(I) Avocado			
WJ(AV)-1 Bandung	-	-	A-1[
(2) Duku WJ(DK)-1 Ciamis			A-I / A-II
(3) Durian			N-17 A-11
WJ(DR)-1 Bogor	A-I / A-JI	A-II	A-II
(4) Mango	an annual common chambers services according to the		
WJ(MO)-1 Sumedang	A-II	A-II / A-III(E&P)	A-III(E&P)
(5) Mangosteen			
WJ(MN)-1 Purwakarta	=	A-1 / A-11	A-II / A-III(E)
(6) Salak WJ(SK)-1 Tasikmalaya	A-II	A-II	A-II
WI(SK)-1 Tosikiliataya	X-11	A-11	A-11
3. East Java			
(1) Avocado EJ(AV)-1 Lumajang		A-I / A-II	Δ_11
(2) Banana	<u>-</u>	A-17 A-II	A-11
EJ(BA)-1 Jombang	A-111(P)	А-Ш(Р&Е)	A-1II(P&E)
EJ(BA)-2 Lumajang	A-II	A-II	A-III(P&E)
(3) Duku			
EJ(DK)-1 Tulungagung	*	A-I	A-1/A-II
(4) Durian			
EJ(DR)-1 Jombang	A-I	A-1 / A-11	A-II
EJ(DR)-2 Trenggalek		A-I	A-1 / A-11
(5) Mango		A III A DIGIS	A THEVET OF THE
EJ(MO)-1 Pasuruan	-	A-II/ A-III(E)	A-Hf(E&P)
(6) Salak EJ(SK)-1 Malang	A-[/ A-][A-I(Δ_111/G 8. D/
12(OK)-1 Molang	V-(1 V-H	Y-10	A-III(E&P)

Table AT-6-17 Orchard Development Scenarios by Orchard Development Site and Project (2/2)

Project Code/	Development Districts	Phase I Up to 2003 (Repelita VII)	Phase II 2004 - 2008 (Repelita VIII)	Phase III 2009 - 2018 (Repelita IX & X)
4. South S	Julawesi			
(1) Avocade	,	į		
SS(AV)-1	Gowa	→	•	A-I / A-II
SS(AV)-2	Soppeng	-	•	A-1 / A-11
(2) Mango	***************************************			
SS(MO)-1	Sidenreng Rappang		-	A-1 / A-11
SS(MO)-2	Majene	-	*	A-1 / A-11
SS(MO)-3	Bone	-	*	A-II
SS(MO)-4	Maros	=	A-I / A-II	A-II
SS(MO)-5	Wajo	•	A-1 / A-11	A-II
(3) Mangos	teen			
SS(MN)-1	Tana Toraja	-	<u> </u>	A-I / A-II
SS(MN)-2	Polewali Mamasa	-	·•	A-I / A-II
(4) Marqui:	sa		***************************************	***************************************
SS(MA)-1	Gowa	-	A-I / A-II	A-II / A-III(P&E)
SS(MA)-2	Tana Toraja	-	-	A-I / A-II
(5) Rambut	an			41/100100000000000000000000000000000000
SS(RB)-1	Mamuju	A-I / A-II	A-II / A-III(E)	A-III(E&P)
SS(RB)-2	Enrekang	-	-	A-1 / A-11
SS(RB)-3	Pinrang	-	A-I / A-II	A-III(E&P)
SS(RB)-4	Barru	A-I / A-II	A-II	A-III(E&P)

Notes: A-I (Alternative I) = Local market based development

A-II (Alternative II) = Regional & Urban Oriented Development

A-III (Alternative III) = Export & Agro-industry Driven Development

A-III(E) = Alternative mainly aiming at "Export" promotion

• A-III(P) = Alternative primarily aiming at "Processing" development

Table AT-7-1 List of the Programs Proposed in Master Plan Study

Code No.	Description	Primary Objectives
I.	Programs at Central Level	
NP-I	Formation of Institutional Linkage for Horticulture Agribusiness Development	To establish a closer linkage connecting the MOA and other relevant ministries and agencies as well as private sector focusing upon promotion of downstream activities of borticulture agribusiness development
NP-2	Strengthening of Intra-ministerial Coordination System for Orchard Development	To extend the ongoing efforts to upgrade coordination activities among DGFCH and other Directorate Generals including Agencies under MOA as well as Directorates within DGFCH in respect to technical and administrative aspects.
NP-3	Rationalization of Supporting Services for Credit Facilities and Marketing Promotion	To strengthen financial and marketing mechanism for the benefit of small and holding fruit growers
NP-4	Strengthening of Research and Development Activities for Introduction and Breeding of High Quality New Pruit Varieties	To upgrade the institutional and technical capacities for introduction and development of new varieties as the basic material to support horticulture agribusiness development.
NP-5	Strengthening of New Technology Adaptability Trial Operation System	 To strengthen the new technology assessment system for tropical feuits
NP-6	Rationalization of Fruit Seedling Inspection System	 To rationalize the seed certification and control service system with a view to guarantee the variety and quality of fruit seedlings
NP-7	Strengthening of Plant Quarantine System	 To continue and extend the ongoing strengthening efforts of the plant quarantine system in Indonesia
II.	Programs at Provincial Level	
PP-1	Strengthening of Project Planning Capacity at Provincial Level	 To upgrade capability and skills of Provincial Government staff on horticulture agribusiness development planning
PP-2	Strengthening of Management Capability Building of Provincial staff	 To provide Provincial Government staff with management training programs to improve their monitoring and manage- ment capacity
PP-3	Improvement of High Quality Seedling Propagation and Distribution System	 To set up large scale foundation blocks to maintain mother plants of the target fruits, and multiplication blocks of scions to maintain and multiply the recommended varieties and species as material supply sources to private nurseries
PP-4	Institutional and Technical Capability Building of Private Nurseries	 To organize private seed growers into cooperatives and to upgrade the propagation capacity of quality fruit seedlings in private nurseries
PP-5	Enhancement of Extension Staff's Knowledge on Horticulture Agribusiness Development	To provide a series of training opportunities to subject matter specialists (PPS) and food crop extension workers (PPL)
PP-6	Upgrading of Market Information System	To enhance contents of the existing services and to extend service areas
PP-7	Institutional Development for Association of Fruit Growers' Groups	- To generate the better bargaining power to fresh fruit markets
III.	Programs at District Level	and processing industry
DP-I	Establishment of Orchard as Core of Target Fruit	To establish a core of high profitable horticulture agribusines:
DP-2	Growing Area Introduction and Practice of Market-oriented Quality Fruit Growing Techniques	development areas To train participatory farmers to produce and market quality fruits with provision of a series of training programs covering
DP-3	Establishment of On-farm Level Extension Service System	farm management, post-harvest handling & marketing aspects To establish new on-farm level extension service system taking into account the limitation of PPLs.
DP-4	Development of Post-harvest Handling System	To introduce post-harvest handling practices as a prerequisite of fruit growers' groups to market their products with consumers' preferable quality
DP-5	Improvement of Access Facilities to Markets	To link newly developed fruit growing areas with local markets for ensuring timely delivery of planting materials and carrying out of harvested fruits under all-weathered condition
DP-6	Improvement of Local Market Facilities	To reduce handling losses in local markets of fresh fruit collection, storage and distribution system is improved in capacity and function of facilities
DP-7	Institutional Strengthening of Small Landholding Fruit Growers	To assure the better bargaining position through recognition of the brand name of fruits in the market

Table AT-7-2 Orchard Development Scale by Phase

Province	District	Target Fruit		Target A	Area (ha)	
			Phase I	Phase II	Phase III	Total
	Dairi	Durian		300		300
	Tapanuli Tengah	Durian	500			500
	Tapanuli Utara	Durian		500		500
North Sumatra	Tapanuli Utara	Mangosteen			500	500
	Tapanuli Selatan	Mangosteen			500	500
	Karo	Marquisa	500			500
	Langkat	Rambutan	500			500
	Tapanuli Selatan	Salak		500		500
Total			1,500	1,300	1,000	3,800

Province	District	Target Fruit		Target A	\rea (ha)	
		,	Phase 1	Phase II	Phase III	Total
	Bandung	Avocado			500	500
	Ciamis	Duku			500	500
West Java	Bogor	Durian	500			500
	Sumedang	Mango	500			500
	Purwakarta	Mangosteen		500		500
	Tasikmalaya	Salak	500	1		500
Sub-total			1,500	500	1,000	3,000

Province	District	Target Fruit		Target A	Area (ha)	
			Phase I	Phase II	Phase III	Total
	Lumajang	Avocado		500		500
	Jombang	Banana	500			500
	Lumajang	Banana	500			500
East Java	Tulungagung	Duku		500		500
	Jombang	Durian	500	1		500
	Trenggalek	Durian		500		500
	Pasuruan	Mango	1	500		500
	Malang	Salak	500		1	500
Total			2,000	2,000	0	4,000

Province	District	Target Fruit		Target /	\rea (ha)	
	}		Phase I	Phase II	Phase III	Total
	Gowa	Avocado			500	500
	Soppeng	Avocado			500	500
	Sidenreng Rappang	Mango			500	500
	Majene	Mango			500	500
	Bone	Mango			500	500
South Sulawesi	Maros	Mango		500	l	500
	Wajo	Mango		500		500
	Tana Toraja	Mangosteen		· .	500	500
	Polewali Mamasa	Mangosteen		<u> </u>	500	500
	Gowa	Marquisa		500		500
	Tana Toraja	Marquisa	·		500	500
	Mamuju	Rambutan	500			500
	Enrekang	Rambutan			500	500
	Pinrang	Rambutan		500		500
	Barru	Rambutan	500			500
Total			1,000	2,000	4,500	7,500
Grand Total			6,000	5,800	6,500	18,300

Table AT-7-3 Major Working Items for Orchard Development Projects

Project Code	District	Target Fruit	Land Preparation	Watering Facilities	Drainage System	Road Facilities	Protection Fence	Post-harvest Facilities
NORTH SU	MATRA							
NS(DR)-1	Dairi	Durian	0	О	-	0	-	0
NS(DR)-2	Tapanuli Tengah	Ducian	0	-	0	0	-	0
NS(DR)-3	Tapanuli Utara	Durian	0	О	-	0	-	0
NS(MN)-I	Tapanuli Selatan	Mangosteen	0	O	-	0	-	0
NS(MN)-2	Tapanuli Utara	Mangosteen	0	0	-	0		0
NS(MA)-1	Karo	Marquisa	O	О	-	0	-	0
NS(RB)-1	Langkat	Rambutan	O	0	O.	0	-	O
NS(SK)-1	Tapanuli Selatan	Salak	0	0.		0	-	0
WEST JAV	Λ							
WJ(AV)-I	Bandung	Avocado	O	0		O	٠.	O
WJ(DK)-1	Ciamis	Doku	0	0	-	0		0
WJ(DR)-1	Bogor	Durian	О	О	-	0	-	О
WJ(MO)-I	Sumedang	Mango	O	0	-	0		O
WJ(MN)-1	Purwakarta	Mangosteen	0	O	-	0	-	0
WJ(SK)-1	Tasikmalaya	Salak	0	0	-	0		О
EAST JAVA		ľ	Ì			1		
EJ(AV)-1	Lumajang	Avocado	<u>, 0</u>	O	-	0	-	О
EJ(BA)-1	Jombang	Banana		0	. -	0]	О
EJ(BA)-2	Lumajang	Banana		0	-	0	<u>.</u>	0
EJ(DK)-1	Tulungagung	Duku	-	0	-	0		0
EJ(DR)-1	Jombang	Durian	. 0	0		0		О
EJ(DR)-2	Trenggalek	Durian	O	0	-	. 0	-	0
EJ(MO)-1	Pasuruan	Mango	-	0	-	0	-	0
EJ(SK)-1	Malang	Salak		0		0		0
SOUTH SUI								
SS(AV)-1	Gowa	Avocado	О	0		0		O
SS(AV)-2	Soppeng	Avocado	O '	0		0	0	O
SS(MO)-1	Sidenreng Rappang	Mango	O	О	-	О		O
SS(MO)-2	Majene	Mango	0	0		O		0
SS(MO)-3	Bone	Mango	O	0		0		O
SS(MO)-4	Maros	Mango	0	0	-	0] -	O
SS(MO)-5	Wajo	Mango	0	. 0		0	-	0
SS(MN)-1	Tana Toraja	Mangosteen	0	0		0	-	0
SS(MN)-2	Polewali Mamasa	Mangosteen	0	0	-	0	0	0
SS(MA)-I	Gowa	Marquisa	0	0	•	0		0
SS(MA)-2	Tana Toraja	Marquisa	0	-	-	0		0
SS(RB)-1	Mamuju	Rambutan	0	0	O	0	.	0
SS(RB)-2	Enrekang	Rambutan	0	0		0	O	0
SS(RB)-3	Pinrang	Rambutan	0	, 0		0	ļ <u>.</u> ļ	O
SS(RB)-4	Barru	Rambutan	0	0	<u> </u>	0	Ó	0

Table AT-7-4 Cost Estimate

					Cost					ē		
Code Description		Phase	1-	+		Phase				• . L .	- 124 A section	7000
	Preparation C	onstruction	Activity	Total	Preparation	Activity	Operation	Total		Construction	Activity	1000
Programs at National Level	3,478	3,478 7,729	1611	12,401	0	0	2,328	2.328	0	0	3.749	3.7.9
NP-1 Formation of Institutional Linkage for Horuculture	0	0	256	955	0	5	1,083	1,083	ō	Š	1.744	7.7.
Agribusiness, Development NP-2 Strengthening of Inter-ministenal Coordination System	0	0	988	556	0	0	1.083	1,083	ō	0	1,744	1,744
10t Orchard Development NP-3 Rationalization of Supporting Services for Credit	1.667	0	0	1,667	0	0	0	0	0	0	0	0
Factitues and Marketing Promotion NP-4 Strengthening of Research and Development Activities for	4	3.556	95.	4,056	0	0	108	801	0	0	174	7,77
NP-5 Strengthening of New Technology Adaptability Thal	4	787	23	757	0	0	Z	24	0	0	62	£8
NP-6 Rationalization of Fruit Seedling Inspection System	33	333	0	367	0	0	0	0	0	Ö	0	0
NP-7 Strengthening of Plant Quarantine System	688	3.556	0	4,444	0	0	0	0	0	0	0	0
Programs at Provincial Level	956	1,778	878	3,281	0	0	1,005	1,005	0	0	1,660	1,660
PP-1 Strengthening of Project Planning Capacity at Provincial Level	٥	0	167	291	0		325	325	o	o ·	SE3.	523
PP.2 Strengthening of Management Capability Building of	ó	0	167	167	0	0	328	325	0	0	523	523
Pp.3 Improvement of High Quality Seedling Propagation and Distribution System	178	1,778	0	1,956	0	0	0	0	-	ō-	0	0
PP-4 Institutional and Technical Capability Building of	3	0	13	458	0	0	0	0	Ó	0	0	0
PP-5 Enhancement Extension Staff's Knowledge on Extension Staff's Knowledge on Extension Programment	0	0	9	98	0	0	139	139	0	0	អ	223
PP-6 Upgrading of Market Information System	333	0	0	333	0	0	0	0	Õ	0	0	0
PP-7 Institutional Development for Association of Fruit Growers Groups	0	0	11.5	115	0	0	217	217	٥	0	391	391
Programs at District Level	3,445	14,135	2,630	20,210	3,677	18,639	4,542	26,858	5.291	34,630	7,712	47.633
DP-1 Establishment of Orchard as Core of Target Fruit Growning Area	2,831	11,648	191	15,246	3,477	18,102	1,441	23,023	5,030	33.633	2,607	11,270
DP-2 Introduction and Practice of Market-oriented Quality Fruit Growing Techniques	0	0	250	250	0	0	127	125	O	o i	058	850
DP-3 Establishment of On-farm Level Extension Service System	0	0	1,537	1,537	0	0	2,476	2,476	φ	9	3,987	5,987
DP-4 Development of Post-harvest Handling System	æ	354	0	389	Z.	537	0	290	100	766	0	1,097
DP-5 Improvement of Access Facilities to Markets	133	0	0	133	147	0	0	1.57	161	0	0	191
DP-6 Improvement of Local Market Facilities	4	2,133	0	2,578	0	0	7	7	0	0	8	જ
DP-7 Institutional Strengthening of Smallholding Fruit Growers	0	0	11	11	0	0	7	##1	0	0	797	797
Grand Total	7,878	23,641	4,373	35,892	3,677	18,639	7,874	30,190	5.291	34,630	13,121	53,042
Source: JICA Study Team												

Table AT-7-5 Anticipated Job Creation for Farming Practices of the Proposed Orchards*

(1) North Sumatra Province (Unit: toan-days) Labor Requirements Project Code No. District Target Fruit Phase I Phase II Phase III Total Average 1,117,590 2,962,500 1,675,150 875,000 875,000 L. NS(DR)-1 Dairi * Durian 91,590 1,026,000 2. NS(DR)-2 3. NS(DR)-3 4. NS(MN)-1 5. NS(MN)-2 6. NS(MA)-1 Tapanuli Tengah Tapanuli Utara Durian 152,500 610,000 2,200,000 1,522,500 875,000 875,000 152,650 Dorian Tapanuli Utara Mangosteen Tapanuti Selatan Mangosteen Karo 556,600 1,006,600 900,000 2,463,200 Marquisa NS(RB)-1 Langkat Rambutan 108,450 212,000 1,000,000 1,320,450 8. NS(SK)-1 Tapanuli Selatan Salak 543,000 1,830,000 2,373,000 Total. 817,550 2,615,840 10,228,500 13,661,890 Average Per-day Labor Requirements 448 1,433 2,802 1,871

(2) West Java Pro	vince			· · · · · · · · · · · · · · · · · · ·	(Unit: m.	an-days)
		1 (Labor Req	airements	
Project Code No.	District	Target Fruit	Phase 1	Phase II	Phase III	Total Average
1. WJ(AV)-1 2. WJ(DK)-1 3. WJ(DR)-1 4. WJ(MO)-1 5. WJ(MN)-1 6. WJ(SK)-1	Bandung Ciamis Bogor Sumedang Purwakarta Tasikmalaya	Avecado Đuku Đurian Mango Mangosteen Salak	152,650 125,000 543,000	610,000 645,000 132,500 830,000	907,650 620,000 2,200,000 2,250,000 2,655,000 2,000,000	907,650 620,000 2,962,650 3,020,000 2,787,500 3,373,000
Total	•		820,650	2,217,500	10,632,650	13,670,800
Average Per-day I	abor Requirement	s	450	1,215	2,913	1,873

(3) East Java Prov	ince				(Unit : ma	n-days)
				Labor Rec	uirements	
Project Code No.	District	Target Fruit	Phase I	Phase (i	Phase III	Total Average
1. EJ(AV)-1	Lumajang	Avocado		152,650	2,217,500	2,370,150
2. EJ(BA)-1	Jombang	Banana	1,334,500	1,272,250	2,625,750	5,232,500
3. EJ(BA)-2	Lumajang	Banana	1,334,500	1,272,250	2,625,750	5,232,500
4, FJ(DK)-1	Tulungagung	Duku		125,000	1,770,000	1,895,000
5. EJ(DR)-1	Jombang	Duriaa	152,650	610,000	2,200,000	2,962,650
6. FJ(DR)-2	Trenggalek	Durian	- 1	152,650	1,710,000	1,862,650
7. EJ(MO)-1	Pasuruan	Mango	. 1	125,000	1,770,000	1,895,000
8. EJ(SK)-1	Malang	Salak	543,000	830,000	2,000,000	3,373,000
Total		<u> </u>	3,364,650	4,539,800	16,919,000	24,823,450
Average Per-day I	abor Requirement	s	1,844	2,488	4,635	3,400

				Labor Rec	uirements	
Project Code No.	District	Target Fruit	Phase I	Phase II	Phase III	Total Averag
1. SS(AV)-1	Gowa	Avocado			907,650	907,650
2. SS(AV)-2	Soppeng	Avocado	- 1	-	907,650	907,65
3. SS(MO)-1	Sidereng Rappang	Mango	-	- [770,000	770,00
4. SS(MO)-2	Majene	Mango	- 1	-	770,000	770,00
5. SS(MO)-3	Bone	Mango	-	-	770,000	770,00
6. \$S(MO)-4	Maros	Mango		125,000	1,745,000	1,870,00
7. SS(MO)-5	Wajo	Mango	-	125,000	1,745,000	1,870,00
8. SS(MN)-1	Tana Toraja	Mangosteen	- 1		875,000	875,00
9. SS(MN)-2	Polewali Mamasa	Mangosteen	-		875,090	875.00
0. SS(MA)-1	Gowa	Marquisa	-	556,600	67,875,000	68,431,60
IL SS(MA)-2	Tana Toraja	Marquisa		- 1	1,006,600	1,006,60
2. SS(RB)-1	Mamoju	Rambutan	108,450	212,000	1,000,000	1,320,45
3. SS(RB)-2	Enrekang	Rambutan	-	· - I	320,450	320,45
4. SS(RB)-3	Pinrang	Rambutan	- 1	108,450	712,000	820,45
5. SS(RB)-4	Barru	Rambutan	108,450	212,000	E,000,000	1,320,45
Total	•		216,900	1,339,050	81,279,350	82,835,300
Average Per-day I	Labor Requirements		119	734	22,268	11,34

2,860

5,870

32,619

18,492

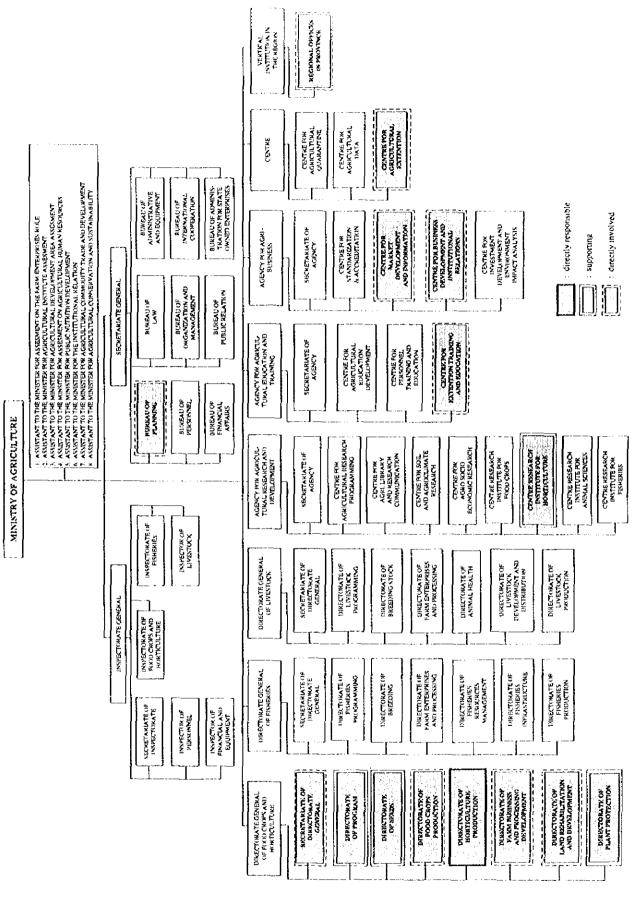
Note: * The development scale is set at 500 ha for each development site, except 300 ha in Dairi (North Sumatra). Source: Tables B-4-14 (1/9) to B-4-14 (9/9) in Appendix B: Annual Labor Requirements by Farming Practice.

Average Per-day Labor Requirements

THE STUDY ON THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

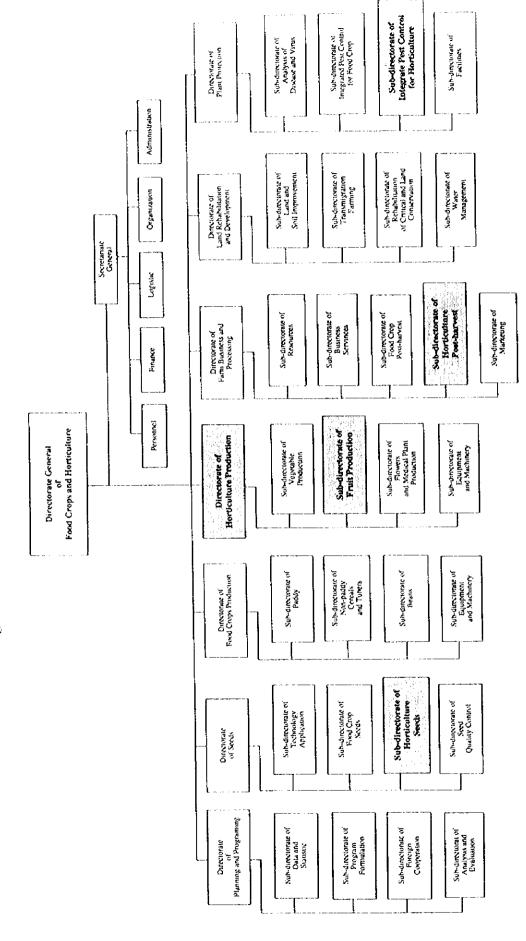
Figures

Figure AT-2-1 ORGANIZATION STRUCTURE OF MINISTRY OF AGRICULTURE



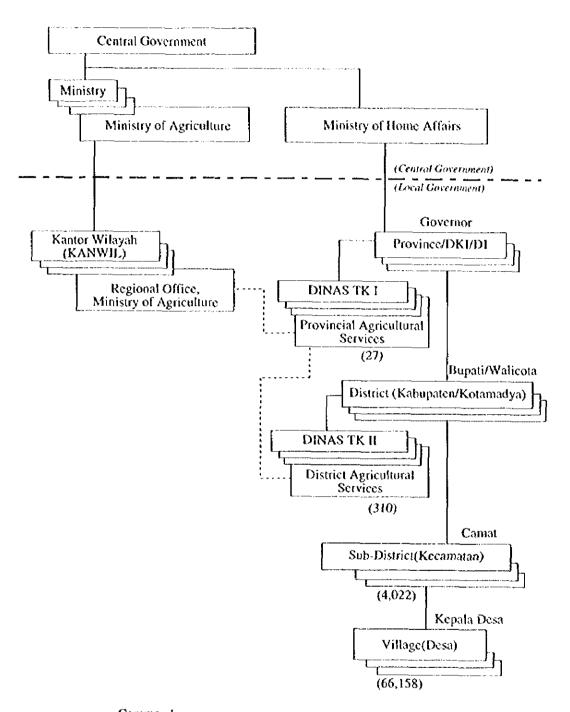
Source: DGFCH, MILIA

Figure AT-2-2 ORGANIZATION OF DGFCH, MOA



Source: DGFCH, MOA

Figure AT-2-3 ADMINISTRATIVE STRUCTURE IN INDONESIA

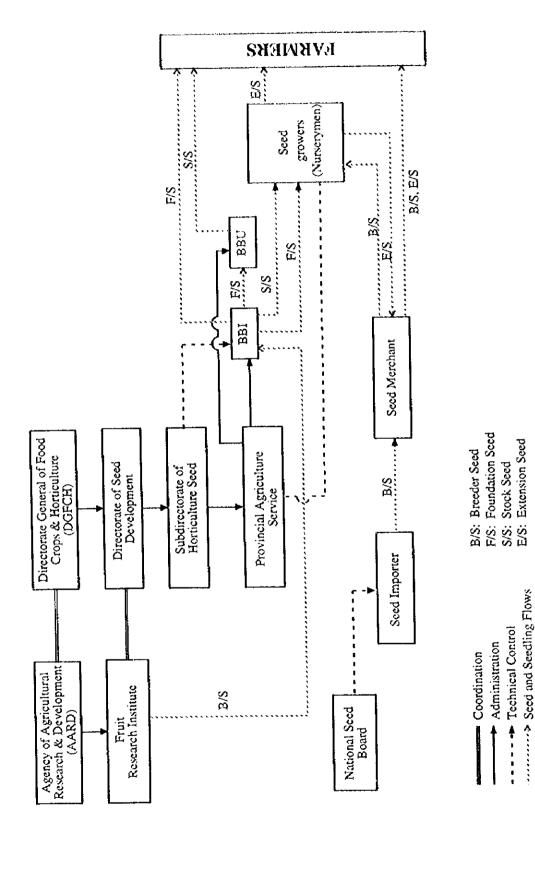


————Command ———Coordination

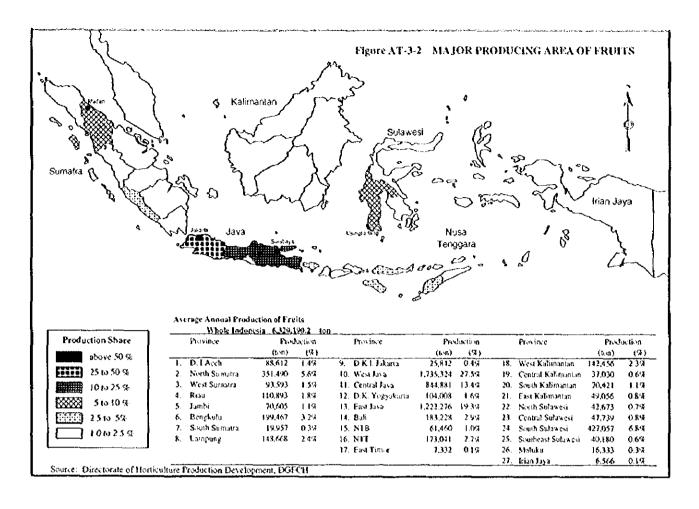
Source: DGFCH, MOA

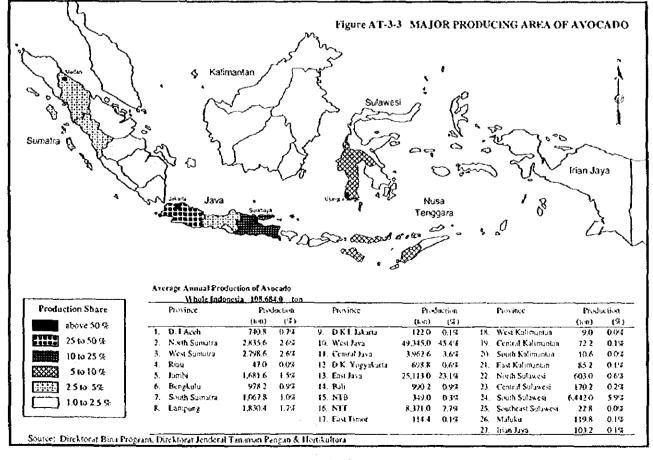
^{*()} is the total number of institutions in the country.

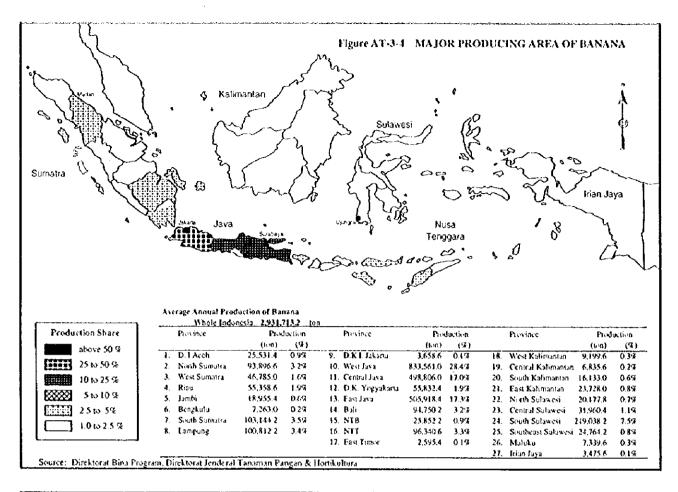
Figure AT-3-1 ORGANIZATION OF MULTIPLICATION AND DISTRIBUTION OF FRUIT SEEDLINGS

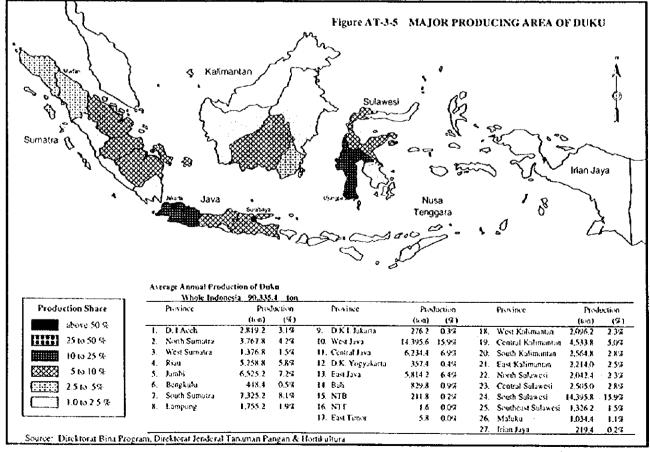


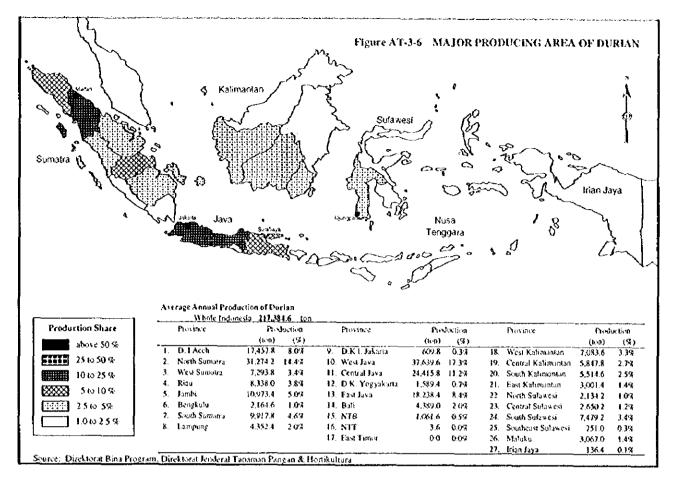
Source: DGFCH

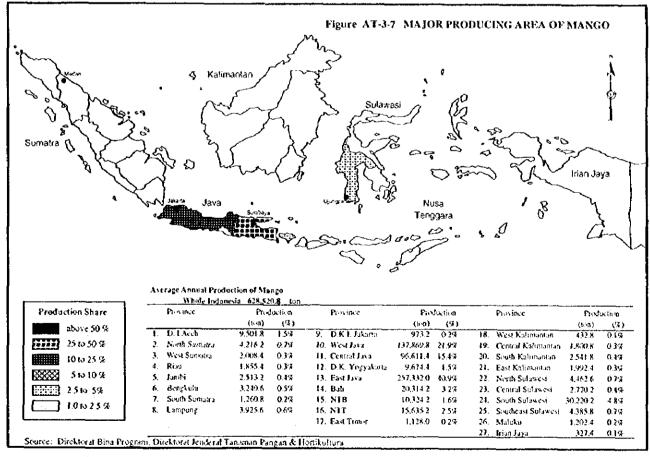


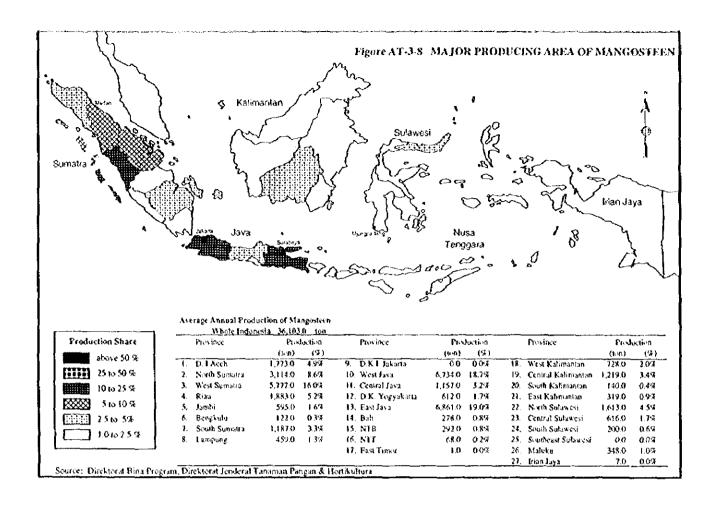


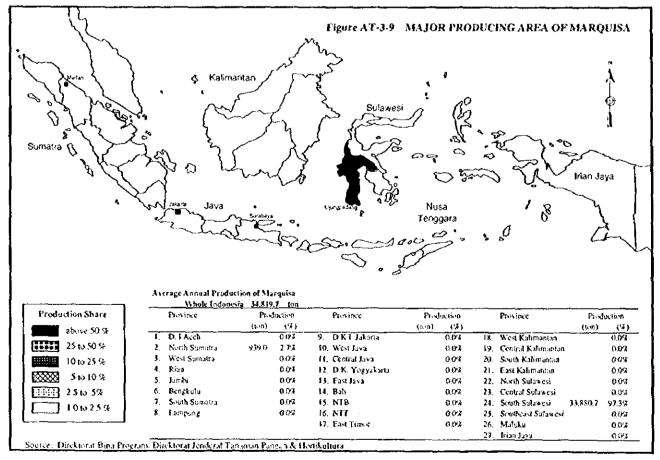


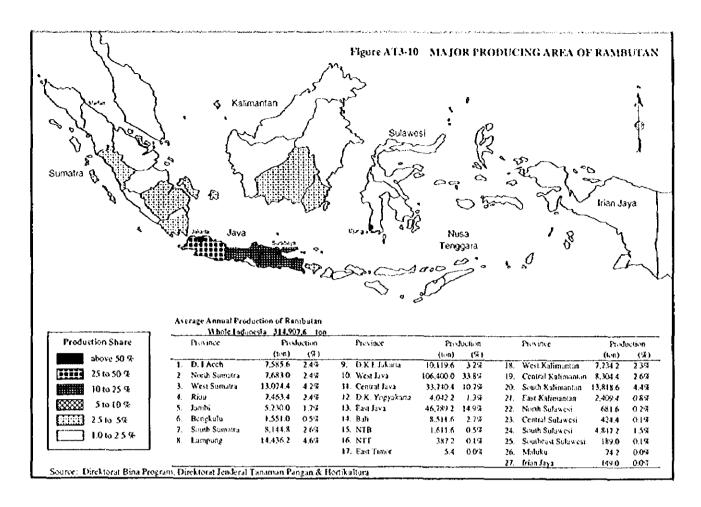


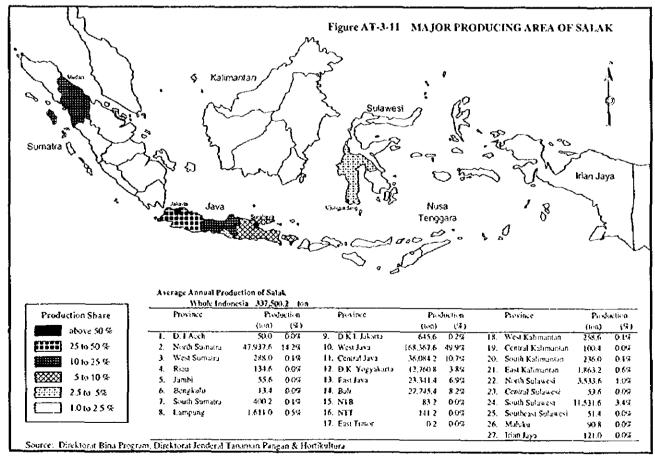








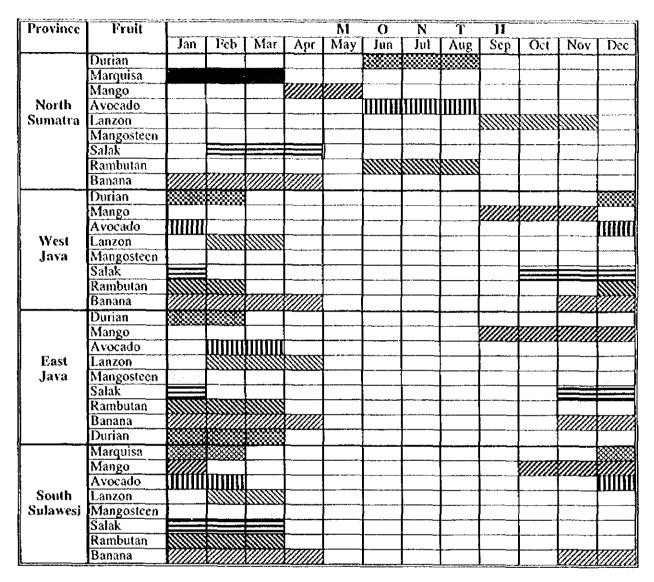




Producers Collectors Roadside and Rural local Traders/Agents village markets consumers Rural Traders/Carriers Hired transporters packing houses Wholesale distribution markets Producers / Wholesalers Commission agents Marketing cooperatives Retail markets/Retailers Growers' association representatives Marketing cooperatives Street sellers / Hawkers Supermarkets / Selfservices Retailers Consumers (Households, Processors, Export)

Figure AT-3-12 PRINCIPAL DISTRIBUTION CHANNEL OF FRESH FRUITS

Figure AT-4-1 PEAK FRUIT SEASON IN THE STUDY AREA



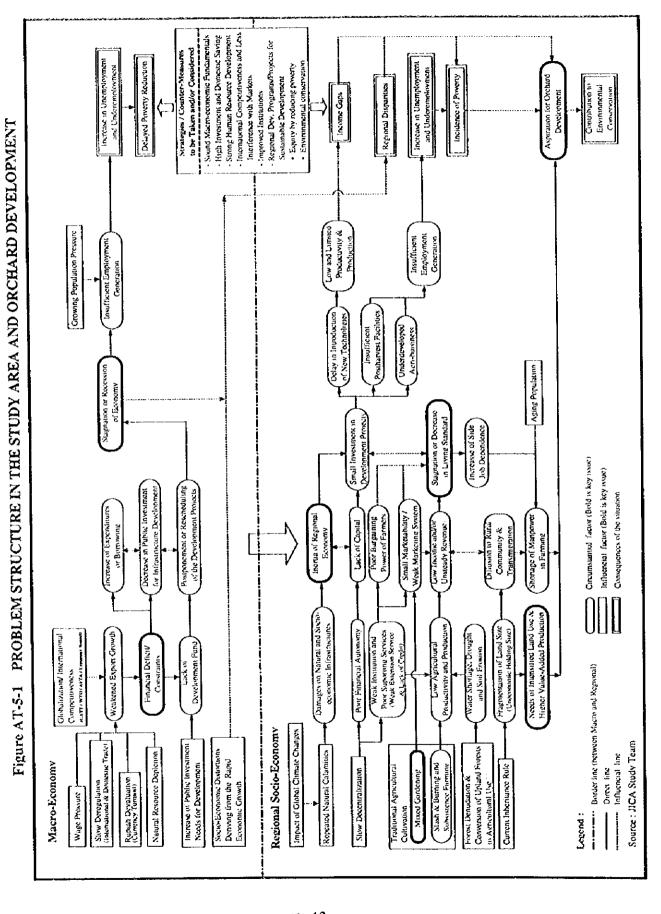


Figure AT-6-1 CONCEPTUAL FRAMEWORK FOR ORCHARD DEVELOPMENT BY STUDY PROVINCES

North Sumatra

Estate type of agricultural production is developed

- Relatively higher per capita GRDP
 - Undeveloped road network
- Potential sites for fruit growing are located in remote and marginal areas (plateaus & foothills) of the western part of the Province

Major Characteristics

Gateway to Indochina countries

Intensification / Diversification

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Development of the western Districts of the Province, especially located in the marginal or remote plateaus & foothills

- value-added or small scale agro-industry Establishment of the access road network of high to major cities or markets Promotion production
- 1) Durian : Dairi, Tapanuli Tengah & Tapanuli Utara
 - 2) Mangoyteen: Tapanuli Selatan & Tapanuli Utara

Areas (Districts)

msingolsvo@gnisimor9

- 3) Marquisa: Karo
- 5) Salak: Tapanuh Selatan 4) Rambytan: Langkat
- Strengthening coordination framework for orchard development (DGFCH - regional
- 3) Improvement of the basic infrastructure such as road to market, facilities for irrigation, 2) Strengthening the capacity of provincial agencies for orchard development institutions - private sector)

esigstent2 % anol9

Instrigolered sized

4) Support program to upgrade the production plantings (for both extension workers & growers) electric power, storage, processing, etc. technique on fruit cultivation in mixed

West Java

Large population (over 40 million) and high urbanization ratio (42,7%)

Very low population growth rate (annual Agro-based society with large share of

average at 0.82%)

working population in the primary sector

- Relatively higher yields of the food crops

- Fertile soils for crops production

- gug Relatively developed irrigation systems Higher population growth (2.1%) density (866 persons/km2)
 - Big potentials for agro-industry develop-Higher urban poverty incidence
- Deforestation and watershed degradation

Intensification / Conservation

Promotion of agro-processing industry employment Improvement in livelihood of the small landholding farmers living in central mountainous and southern foothill areas generate 9

especially in central mountainous and Promotion of the small scale (or home) agro-industry to produce the value-added

southern dissected plateaus and foothills

income through orchard development,

Increase of the small landholding farmers'

Intensification / Conservation

- the ö opportunities
- systematic marketing system to cope with the increasing inflow of food crops Establishment
- 1) Avocado: Bandung
- 3) Durian: Bogor 2) Duke : Clamis
- 5) Mangosteen: Purwakarta 4) Mango: Sumedang
 - 5) Salak : Tasikmalaya
- groups to make better market compedition narketing management system through strengthening the activities of farmers' Establishment of the post-harvest and

materials and their provision and propagation

Strengthening of research activities on amelioration of the high quality planting

reatment, and capability building of PPSs Strengthening of the extension system for fruit cultivation and post-harvest and PPLs 6

Reorientation of cooperation program for the

regional orchard development to improve the

tripartite parmership: fruit growers' groups -

provincial agencies - private sector

value-added commodities (export & local market)

production system to produce more higher

Establishment of the market-oriented

to the fruit growers

groups and their bargaining power in the Institutional strengthening to empower the small landholding fruit growers' <u></u>

South Sulawesi

- "Food basker" for the eastern part of Large land area (72,781 km2) with small population density of 106 persons/km2
- Less urbanized society with 71.7% of products (e.g. paddy, vegetables, etc.) indonesia with surplus of agricultural
 - rural population
- Low incidence of poverty and high per capita calone consumption

ទ័

population (over 4 million) below Existence of a large number

poverty line

Diversification / Extensification

- the small landholding farmers living in the improvement in the standard of living of marginal upland areas
- Enhancement of the processing capabilities Promotion of inter-islands trade and to treat the surplus products transportation system
 - · Strengthening of extension system

Strengthening of the farmers' organizations

commodities

- 1) Avocado : Gowa & Soppeng
- 2) Mango: Sidrap, Majene, Bone, Maros & Wajo

2) Banana : Jombang & Lumajang

1) Avocado : Lumajang

3) Duku : Tulungagung.

4) Durian : Jombang & Trenggalek

5) Mango: Pasuran

6) Salak : Malang

- 3) Mangosteen: Tana Toraja & Polmas
 - 4) Marquisa: Gowa & Tana Toraja 5) Rambutan: Mamuju, Enrekang,
 - Pinrang & Barru
- Promotion of agro-processing industry to create job opportunities
- 2) Introduction of a "long-term" credit system to the periods between tree crops plantings (with reasonable interest rates) corresponding and their harvests
- trading deregulation, optimum land use and 13) Policy and legal arrangement program to cope with the current framework issues relating to development paradigms like ownership, etc.

Source: JICA Study Team

Focus

Development

Figure AT-6-2 CONCEPT OF ORCHARD DEVELOPMENT SCENARIO

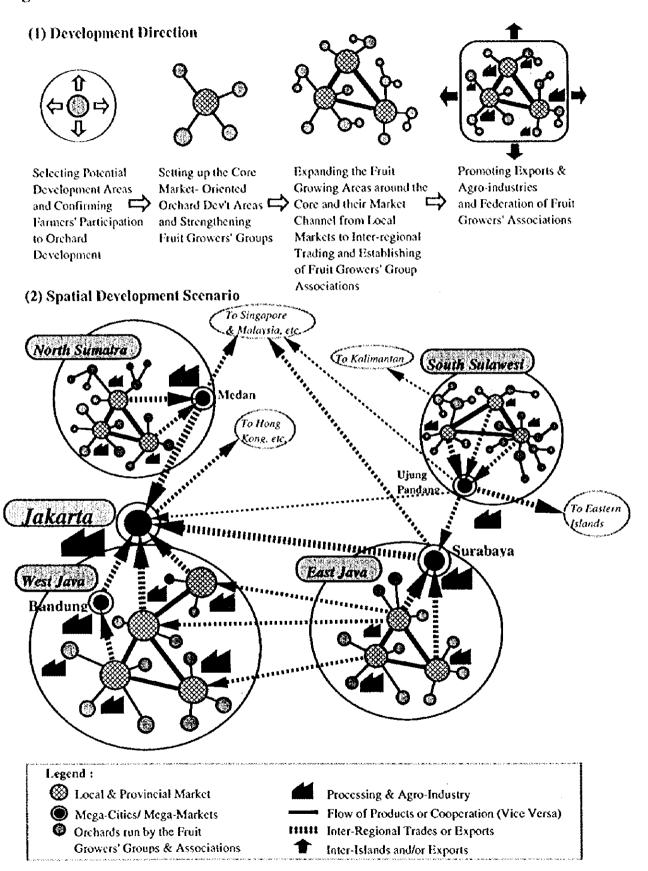


Figure AT-6-2 CONCEPT OF ORCHARD DEVELOPMENT SCENARIO

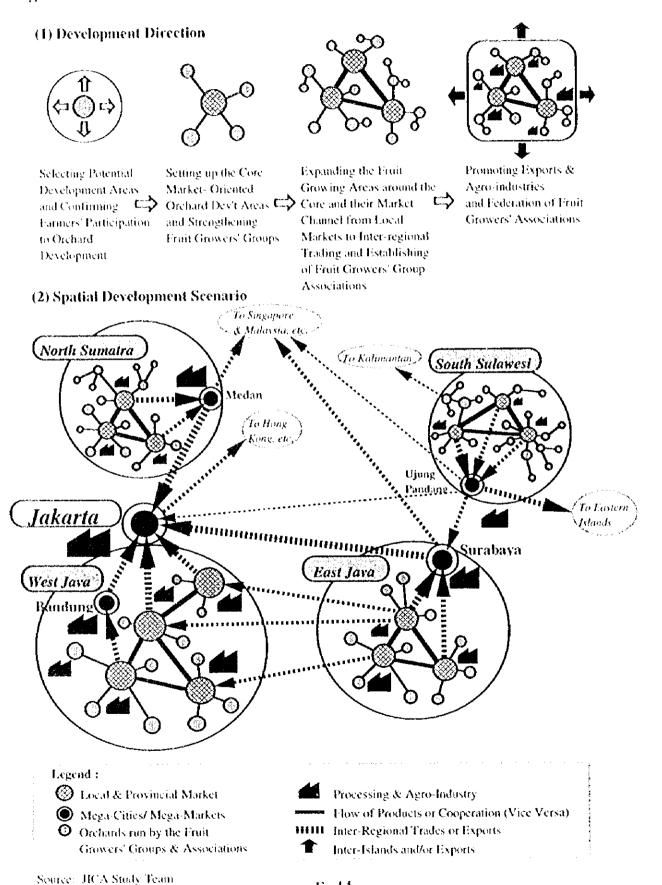


Figure AT-6-3 GENERAL FLOW FOR EVALUATION OF THE FRUIT POTENTIALS AND MASTER PLANNING

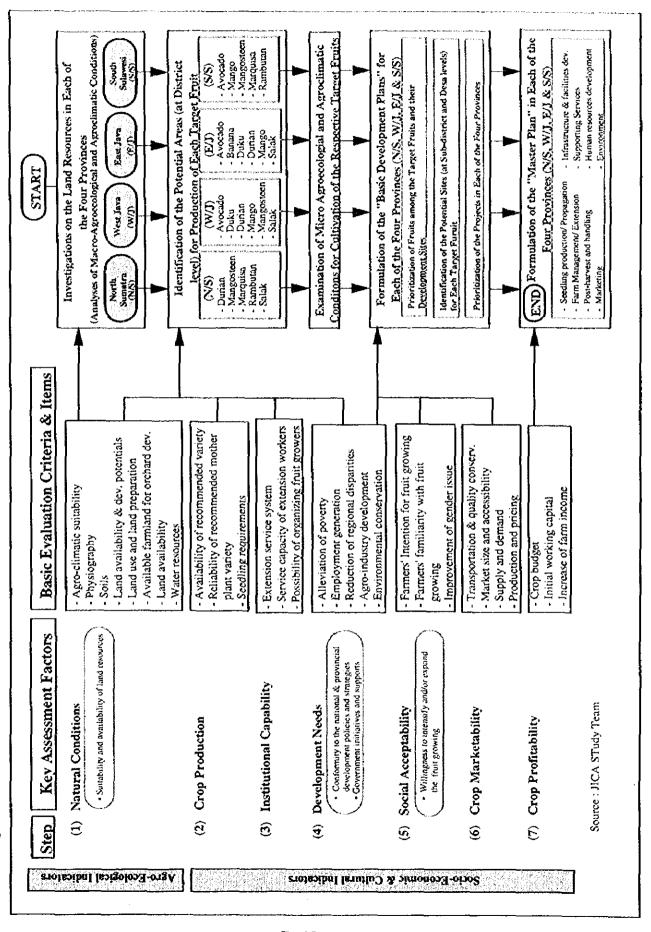


Figure AT-6-3 GENERAL FLOW FOR EVALUATION OF THE FRUIT POTENTIALS AND MASTER PLANNING

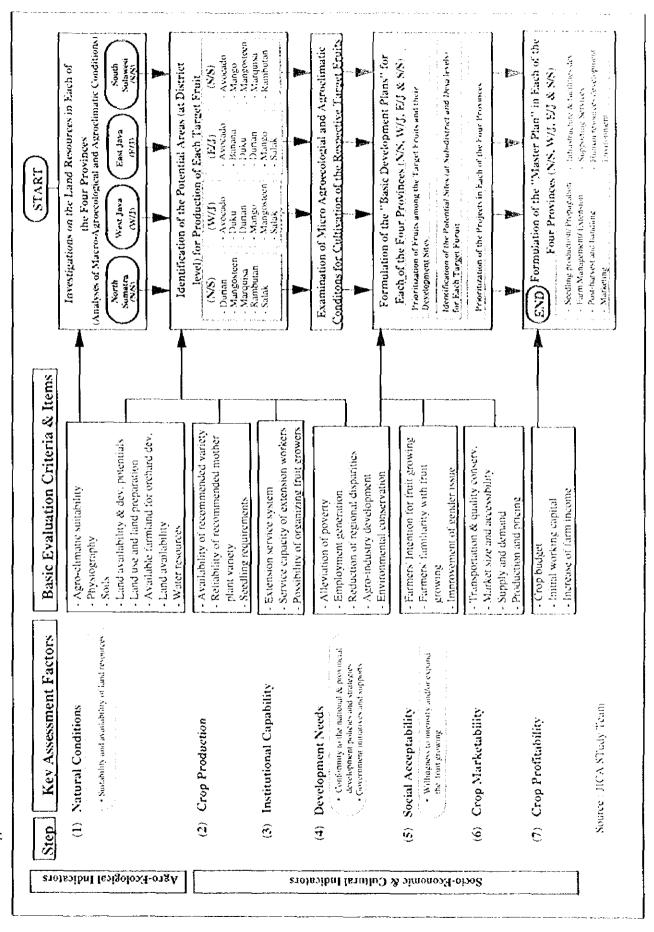
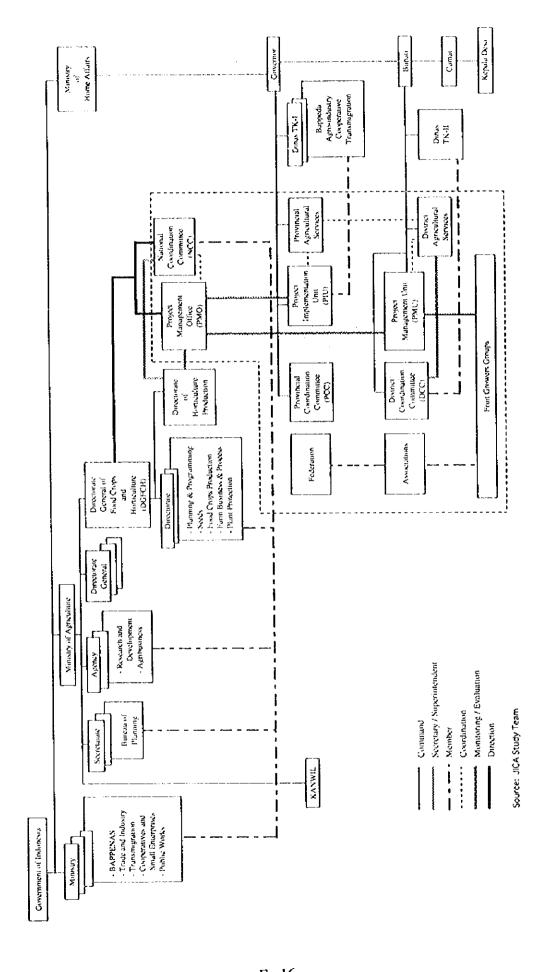


Figure AT-7-1 IMPLEMENTATION ORGANIZATION



F - 16

Figure AT-7-2 IMPLEMENTATION SCHEDULE

		Dhass I		á	II.				Phone III			
Oxfe	of of I	Un to 2003 (Repelita VII)	iro VII)	2004 to 200	2004 to 2008 (Repelita VIII)	-	2009 to 2013 (Renelita VIX)	(Renelita V	(X)	2014 to 2018 (Repellia XX)	8 (Repelita	íxx
	86.	10. 0	702 703	20 20	20. 8)` ∞	01, 60.	11.	13 114	15. 7	11. 91.	×Ι
Programs at Central Level							[
NP-1 Formation of Institutional Linkage for Hornculture		-				1	-		-	-	- :	
			 -				-					
NP-2 Strengthening of Inter-ministenal Coordination System			_			-	_				-	I
NP-3 Rationalization of Supporting Services for Credit Excitities and Marketing Promotion	Щ	П	· · · · · · · · · · · · · · · · · · ·								···	
NP-4 Strengthening of Research and Development Activities for	·	<u>'</u>									+	
	777					į		Ļ				
NP-5 Strengthening of New Technology Adaptability Thal Operation System			min.									
NP-6 Rationalization of Fruit Seedling Inspection System		8										
NP-7 Strengthening of Plant Quarantine System	YIIIII.											
Programs at Provincial Level		 	-		 	-	-		-			-
PP-1 Strengthening of Project Planning Capacity at Provincial Level			-				 -					-
PP-2 Strengthening of Management Capability Building of Provincial Staff									-			
						1	-					Ī
PP-3 Improvement of High Quality Seedling Propagation and Distribution System					I						- -	
PP-4 Institutional and Technical Capability Building of Private Nursenes				 		-			 			
PP-5 Enhancement of Extension Staff's Knowledge on						-					 	
- 1						-		_	1	~ [-	-[_
PP-6 Upgrading of Market Information System	<u> </u>											
PP-7 Institutional Development for Association of Fruit Growers' Group												10101
Programs at District Level	-					-		-		-	ļ	-
DP-1 Establishment of Orchard as Core of Target Fruit Growing Appa		annununun.		annonno.		IJ	annananan	2222	;			
DP-2 Introduction and Practice of Market-oriented Quality Fruit Growing Techniques											 	
DP-3 Establishment of On-farm Level Extension Service System												
DP-4 Development of Post-harvest Handling System			CHILD.								.	
DP.5 Improvement of Access Facilities to Markets	-	 -	T		 -				- -	- [- -	
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DP-6 Improvement of Local Market Facilities							-			- 1	- 1	
DP-7 Institutional Strengthening of Smallholding Fruit Growers								-				
Note: Feasibility Study & Detailed Design or Preparation of Program								_	-		-	

Note: : Feasibility Study & Detailed Design or Preparation of Program (2222): Provision of Facilities and Equipment : Project Activity Source: JICA Study Team

THE STUDY ON THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

Attachments

SCOPE OF WORK

FOR

THESTUDY

ON

THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

IN

INDONESIA

AGREED UPON

BETWEEN

THE DIRECTORATE GENERAL OF FOOD CROPS AND HORTICULTURE

MINISTRY OF AGRICULTURE

THE REPUBLIC OF INDONESIA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, March 20, 1997

Mr. Amrin Kahar

Director General of Food Crops and Horticulture,

Ministry of Agriculture

Mr. Kazuo SAMOTO

Leader of Preparatory Study Team,

Japan International Cooperation Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of Indonesia (hereinafter referred to as "GOI"), the Government of Japan (hereinafter referred to as "GOJ") has decided to conduct the Study on the improvement in quality of the tropical fruits in the Republic of Indonesia (hereinafter referred to as "the Study"), in accordance with the relevant laws and regulations in force in Japan.

Accordingly, Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the GOJ, will undertake the Study in close cooperation with the authorities concerned of the GOI.

The present document sets forth the Scope of Work with regard to the Study.

IL OBJECTIVES OF THE STUDY

The objectives of the Study are;

- 1. to prepare a Master Plan for each four provinces to increase in small scale farmers' income through improvement in quality of the target tropical fruits correspond to need for supply for domestic and international market, and
- 2. to carry out, in the course of the Study, technology transfer to the Indonesian counterpart personnel concerned.

III. STUDY AREA and TARGET TROPICAL FRUITS

The Study covers some 238,000km² located in four provinces and nine target tropical fruits as follows (See location map attached as ANNEX I, and list of the relation between each target tropical fruits and provinces as ANNEX II);

- North Sumatera province: Durian, Marquisa, Mangosteen, Salak, Rambutan

- West Java province : Durian, Mango, Avocado, Duku, Mangosteen, Salak

- East Java province : Durian, Mango, Avocado, Duku, Salak, Banana

- South Sulawesi province : Marquisa, Mango, Avocado, Mangosteen, Rambutan



Ja

IV. SCOPE OF THE STUDY

In order to achieve the above objectives, the Study will consist of field work in Indonesia and home work in Japan.

- 1. Field work in Indonesia.
- 1-1. To collect and review;
 - relevant data and information on the past activities of the Directorate General of Food Crops and Horticulture(hereinafter referred as to DGFCH) and other relevant organizations.
 - relevant plan and projects including OECF project (Integrate Horticulture Development in Upland Areas, IHDUP).
- 1-2. To conduct field survey and investigation on following items,
 - (1) natural condition including,
 - location, area and topography
 - meteorology and hydrology
 - geology
 - soils
 - -vegetation
 - others
 - (2) socio-economic condition including,
 - economic indices
 - social infrastructure
 - demographic condition
 - national and regional development plan
 - gender
 - others
 - (3) agricultural condition including,
 - seedling preparation and distribution system
 - present land use
 - farming practices
 - research activities
 - supporting services
 - agricultural economy
 - post-harvest and processing system
 - marketing system and analysis
 - agro-infrastructure and maintenance
 - farmers' organization
 - others including agro-industry (home-industry)

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- (4) rural infrastructure (farm road, etc.)
- (5) environmental condition
- 1-3. To assess and analyze collected data and information.
- 1-4. To identify major constraints and development potential.
- 1-5. To prepare a Master Plan on the improvement in quality of the tropical fruits for each four provinces considering the DGFCH and other related organizations' activities in future. The plan shall include the results of selection and prioritization of potential area(s) with following items.
 - (1) improvement plan for preparation, production technology and distribution system of seedling,
 - (2) improvement plan for farming practices,
 - (3) improvement plan for post harvest and marketing system.
- 2. Home work in Japan

To make the Draft Final Reports and Final Reports considering some comments from Indonesia side.

V. STUDY SCHEDULE

The Study will be carried out in accordance with the attached tentative schedule. (See ANNEX II)

VI. REPORTS

IICA shall prepare and submit the following reports in English to the Government of Indonesia.

1. Inception Report

Forty (40) copies at the commencement of the field study in Indonesia.

2. Interim Report

Forty (40) copies at the halfway of the field study in Indonesia.

3. Progress Report

Forty (40) copies at the end of the field study in Indonesia.

4. Draft Final Report

Forty (40) copies after the end of the home office work in Japan. The Government of Indonesia will provide JICA with its comments on the Draft Final Report within one (1) month after receipt of the Draft Final Report.

5. Final Report

Sixty (60) copies within two (2) months after receipt of the Government of Indonesia's comments on the Draft Final Report.

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VII. UNDERTAKING OF THE GOVERNMENT OF INDONESIA

- 1. To facilitate smooth conduct of the study, the Government of Indonesia shall take necessary measures;
 - 1-1, to secure the safety of the Japanese study team,
 - 1-2. to permit the members of the Japanese study team to enter, leave and sojourn in the Republic of Indonesia for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
 - 1-3. to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into the Republic of Indonesia for the conduct of the Study,
 - 1-4. to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study.
 - 1-5. to provide necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into the Republic of Indonesia from Japan in connection with the implementation of the Study,
 - 1-6. to secure permission for entry into private properties or restricted areas for the implementation of the Study.
 - 1-7. to secure permission for the Japanese study team to take all data and documents (including photographs and maps) related to the Study out of the Republic of Indonesia to Japan and
 - 1-8. to provide medical services as needed. Its expense will be chargeable on the members of the Japanese study team.
 - 2. The Government of Indonesia shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.



- 3. DGFCH, Ministry of Agriculture (MOA) shall act as counterpart agencies to the Japanese Study Team and also as the coordinating body in relation with other governmental organizations and non-governmental organizations concerned for smooth implementation of the Study.
- 4. DGFCH shall, at it's own expenses, provide the Japanese study team with the following, in cooperation with other organizations concerned;
 - 4-1, available data and information related to the Study,
 - 4-2, counterpart personnel,
 - 4-3. suitable office spaces with necessary equipment and furniture in Jakarta and study sites,
 - 4-4. credentials or identification cards, and

VIII. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures;

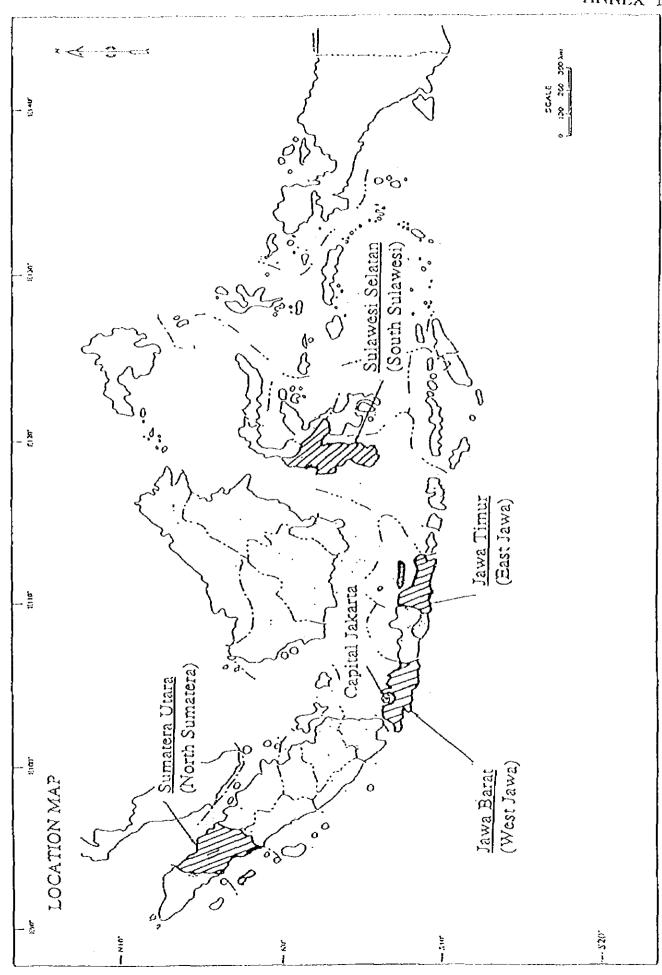
- 1. to dispatch, at its own expense, study team to the Republic of Indonesia, and
- to pursue technology transfer to the Indonesian counterpart personnel in the course of the Study.

IX. CONSULTATION

JICA and DGFCH shall consult with each other in respect of any matter that may arise from or in connection with the Study.



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ANNEX II

THE RELATION BETWEEN EACH TARGET FRUITS AND PROVINCE

	Province					
Fruits	North Sumatera	West Java	East Java	South Sulawesi		
Durian	0	0	0			
Marquisa	0					
Mango		0	0	0		
Avocado		0	0	0		
Duku		0	0			
Mangosteen	0	0		0		
Salak	0	0	0			
Rambutan	0			0		
Banana			0			



ANNEX II

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12
Item	<u> </u>		·									
Work												
in												
Indonesia							0207120.11			ļ	·	
Work										!		
in									ĺ			
Japan											'	
	Δ		[[]	^			
Reports	Ic/R		ĺ	1	IUI	,	P/	-	t/R			Δ F/R
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Ic/R: Inception Report, It/R: Interim Report, P/R: Progress Report, Df/R: Draft Final Report, F/R: Final Report



MINUTES OF MEETING

ON

SCOPE OF WORK

FOR

THE STUDY

ON

THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

IN

INDONESIA

AGREED UPON

BETWEEN

THE DIRECTORATE GENERAL OF FOOD CROPS AND HORTICULTURE

MINISTRY OF AGRICULTURE

THE REPUBLIC OF INDONESIA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, March 20, 1997

lec Mr. Amrin Kahar

Director General of Food Crops and Horticulture,

Ministry of Agriculture

Mr. Kazuo SAMOTO

Leader of Preparatory Study Team,

Japan International Cooperation Agency

The preparatory study team (hereinaster referred to as "the Team") organized by the Japan International Cooperation Agency (hereinaster referred to as "JICA"), and headed by Mr. Kazuo SAMOTO, visited the Republic of Indonesia March 9 to 26, 1997 for the purpose of discussing and confirming the Scope of Work for the Study on Improvement in quality of the tropical fruits in the Republic of Indonesia (hereinaster referred to as "the Study")

The Team had a series of discussions with the officials concerned at Directorate General of Food Crops and Horticulture (hereinafter referred to as "DGFCH") and other organizations on the Scope of Work. The list of participants in the meetings is attached in the ANNEX I.

As the result of the discussions, the Team and DGFCH agreed on the Scope of Work.

The following are main issues discussed and agreed upon by both sides in relation to the Scope of Work for the Study.

1. Both sides agreed that the Study would cover the following target tropical fruits in each four provinces.

North Sumatera
West Java
East Java
Durian, Marquisa, Mangosteen, Salak, Rambutan
Durian, Mango, Avocado, Duku, Mangosteen, Salak
Durian, Mango, Avocado, Duku, Salak, Banana
South Sulawesi
Marquisa, Mango, Avocado, Mangosteen, Rambutan

- 2. The Team requested that counterpart personnel to the Japanese study team, necessary for smooth and effective implementation of the Study, be assigned in Jakarta and each four provinces. DGFCH agreed with the idea and promised to be responsible for the request.
- 3. The Team suggested that a Steering Committee (hereinafter referred to as "the Committee") for the smooth and effective implementation of the Study, be organized by relevant departments and organizations of the GOI, and be held at least three times on Inception Report, Interim Report, Draft Final Report. DGFCH agreed with the idea and promised to organize the Committee as ANNEX II.
- 4. DGFCH requested counterpart training in Japan. The Team promised to convey its request to the JICA headquarters in Tokyo.
- 5. DGFCH requested to hold the workshop which explains the results of the Study.
- 6. DGFCH shall provide offices for the Japanese study team equipped with telephone(s) of communication facilities, electricity, water supply and necessary number of desks and chairs will be provided in Jakarta and four provinces.
- 7. DGFCII requested that the following equipment necessary for the Study be arranged by JICA. The Team promised to convey its request to the JICA headquarters in Tokyo.
 - vehicle(s) with driver(s)
- 8. The Team agreed forty copies of the Inception Report, Interim Report, Progress Report, Draft Final Report will be submitted to DGFCH.
- 9. DGFCH agreed that the Final Report would be available to any person who is interested in the Study.

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LIST OF PARTICIPANTS

[Directorate General of Food Crops and Horticulture (DGFCH), MOA (HDQ in Jakarta)] 1. Mr. Amrin Kahar Director General of Food Crops and Horticulture 2. Ir. Soemitro Arintadisastra, Ph.D. Director of Planning and Programming, DGFCH 3. Mr. Muhamad Sidik M.Sc. Secretary to the DGFCH 4. Dr. Ir. Edward Napitupulu Head of Sub-Directorate of Foreign Cooperation 5. Dr. Nyoman Oka, Tridiaja Head of Sub-Directorate of Farm Business & Processing for Horticulture 6. Mr. Suroto Head of Sub-Directorate of Horticulture Seed, DGFCH 7. Mr. Achmad Fuadi Head of Section of Preparation for Foreign Cooperation. DGFCH 8. Mr. Muhammad Staff, Directorate of Seed Development 9. Mr. Rusli Hukum Staff, Directorate of Hocticulture Production Development 10. Mrs. Ari Staff, Directorate of Horticulture Production Development 11. Mr. Widjatmiko Staff, Directorate of Planning and Programming, DGFCH 12. Mrs. Wijayanti Staff, Directorate of Planning and Programming, DGFCH 13. Mr. Naotoshi Kakiya Senior Advisor of the DGFCH, JICA Expert 14. Mr. Hajime Nakahigashi Advisor to the DGFCH, JICA Expect 15. Mr. Y. Sugii JICA Expert to the DGFCH

[The Preparatory Study Team, Japan International Cooperation Agency (JICA)]

1. Mr. Kazuo Samoto Team Leader
2. Mr. Kazuyuki Abe Fruit Cropping

3. Mr. Katsuhisa Suzuki Post-harvesting & Marketing

4. Mr. Tetsuya Kihira Marketing Analysis

5. Mr. Makoto Takahashi Coordinator

(JICA Jakarta Office)

1. Mr. Masahiro Tawa Assistant Resident Representative



MINUTES OF DISCUSSION

ON

INCEPTION REPORT

FOR

STUDY

ON

THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

IN

INDONESIA

AGREED UPON

BETWEEN

THE DIRECTORATE GENERAL OF FOOD CROPS AND HORTICULTURE

MINISTRY OF AGRICULTURE

THE REPUBLIC OF INDONESIA

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, July 28, 1997

Mr. Amrin Kahar

Director General of Food Crops and Horticulture,

Ministry of Agriculture

Mr. Yutaka Matsumoto Leader of Study Team

Japan International Cooperation Agency

Dr. Kazuyuki Abe

Leader of Advisory Team

Japan International Cooperation Agency

The advisory team headed by Dr. Kazuyuki Abe and the study team (hereinaster referred to as "the Team") headed by Mr. Yutaka Matsumoto, both organized by the Japan International Cooperation Agency (hereinaster referred to as "JICA"), visited the Republic of Indonesia on July 21 to 29, 1997 for the purpose of making presentation and discussion about the contents of the Inception Report on "Improvement in Quality of the Tropical Fruits in the Republic of Indonesia" (hereinaster referred to as "the Study).

The Team had a series of discussions with the officials concerned at Directorate General of Food Crops and Horticulture (hereinafter to as "DGFCH") of the Ministry of Agriculture and other organizations on the plan of operation presented in the Inception Report. The list of participants in the meetings is attached in the ANNEX-1.

As the result of the discussions, the Team and DGFCH agreed on the basic approach, plan of operation and work schedule of the Study.

The following are main issues discussed and agreed upon by both sides in relation to the focal points of the Study.

- 1. The Team will pay its special attention to the following points, as mentioned in the Inception Report, in the course of the Study on order to formulate practical action programs:
 - BAPPENAS's mainconcern about how to establish fruit industry from upstream of downstream in line with the Government's concepts of agri-business development;
 - Prevailing condition of fruit nurseries operated by both public and private sectors;
 - Registration and maintenance system of mother plants;
 - Current seedling production system of BBI and BBU;
 - Selection of potential and priority locations in each Province;
 - Establishment of fruit orchard (fruit producing area) coupled with small land ownership and farmer's willingness to participation into market-oriented fruit commodity development activities;
 - Organization of participatory farmers;
 - Transfer of technology in the field of processing and post-harvest; and
 - Quality standard in relation to preference of markets and consumers.
- 2. The Team will prepare questionnaire form for data an information collection matching with the capacity of local government's staff.

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LIST OF PARTICIPANTS

Directorate General of Food Crops and Horticulture (DGFCH), MOA

1. Mr. Muhammad Sidik M. Sc. Secretary to the DGFCH 2. . Mr. M. Munawir Director of Seed Production 3. Dr. Ir. Edward Napitupulu Head of Sub-Directorate of Foreign Cooperation 4. Mr. Winny D. Wibawa Head of Sub-Directorate of Fruit Production, DGFCH 5. Mr. Achmad Fuadi Head of Section of Preparation for Foreign Cooperation, DGFCH 6. Mr. Samad Siam Sub-Directorate of Farm Business and **Processing** 7. Mr. Muhammad Staff, Directorate of Seed Development 8. Mr. Bambang Budhianto Staff, Directorate of Seed Production 9. Mr. Yul H. Bahar Staff, Directorate of Planning and Programming, DGFCH 10. Mr. Naotoshi Kakiya JICA Expert Senior Advisor for Integrated Agriculture and Rural Development, Bureau of Foreign Cooperation, MOA 11. Mr. Hajime Nakahigashi JICA Expert Advisor for Integrated Agriculture and Rural Development, Bureau of Foreign Cooperation, MOA 12. Mr. Y. Sugii JICA Expert to the DGFCH

The Advisory Team, Japan International Cooperation Agency (JICA)

1. Dr. Kazuyuki Abe Team Leader

2. Mr. Shinjiro Amameishi Coordinator

JICA Indonesia Office

1. Mr. Eiji Inui Assistant Resident Representative

JICA Study Team

1. Mr. Yutaka Matsumoto Team Leader

Mr. Fumihiko Furuichi Co-Team Leader, Farm Economy

3. Dr. Hiroshi Daito Seedling Production

4. Mr. Takeshi Saito Post-harvest and Marketing

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MINUTES OF DISCUSSION
ON
INTERIM REPORT
FOR
THE STUDY

ON

THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

AGREED UPON
BETWEEN
THE DIRECTORATE GENERAL OF FOOD CROPS AND HORTICULTURE
MINISTRY OF AGRICULTURE
THE REPUBLIC OF INDONESIA
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, November 26, 1997

Dr. Ir. Chairil A. Rasahan, MSc

Director General of Food Crops and Horticulture

Ministry of Agriculture

Mr. Yutaka Matsumoto

Team Leader

Japan International Cooperation Agency

Mr. Jun Shimada

Leader of Advisory Team

Japan International Cooperation Agency

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The Advisory Team headed by Mr. Jun Shimada and the Study Team (hereinafter referred to as "the Team") headed by Mr. Yutaka Matsumoto, both organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA"), visited the Republic of Indonesia on November 19,1997 for the purpose of making presentation and discussion about the contents of the Interim Report on "Improvement in Quality of the Tropical Fruits" (hereinafter referred to as "the Study").

In the meeting held at the Directorate General of Food Crops and Horticulture (hereinafter referred to as "DGFCH") of the Ministry of Agriculture on November 25, 1997, the Team had a series of discussions with the officials concerned of the DGFCH and other organizations about the basic plan of horticulture development in four Provinces; namely, North Sumatra, West Java, East Java and South Sulawesi, presented in the Interim Report. This meeting was chaired by Dr. Ir. Tom Edward M. Napitupulu, Director of Programming and Planning of the DGFCH. The list of participants in the meeting is attached as ANNEX-1.

As the result of the discussions, the Team and the DGFCII agreed on the basic plan of horticulture development in four Provinces and work schedule of the Phase-II of the Study.

The followings are focal points discussed and agreed upon by both sides:

- 1. The Team will pay its further attention to comments and suggestions given by Indonesian side and itemized below, in formulating a comprehensive horticulture development plan in the course of the Phase-II of the Study:
 - a. Seedlings: For introduction of new fruit varieties from abroad, attention needs to be paid to Indonesia's plant quarantine system, legal regulation and plant genetic resources. The ongoing mother plant inventory by the Directorate of Seed Production is to be referred to the Study. Special consideration is required for strengthening the existing seed production and certification systems;
 - b. Farm Management: Because of importance of water supply to orchard, practical system of watering is to be examined in the Study. Shifting from fruit gardening to orchard is indispensable for horticulture development, but application of an effective method to consolidate small land pieces into one large lot is very difficult especially in Java. Taking such prevailing land resources situation into account, therefore, practical lend consolidation need to be considered:
 - c. Post-harvest Handling: Attractiveness of packaging system needs to be considered;
 - d. Marketing: Special consideration is taken into account for developing market channel of quality fruits to fulfill the downstream demand including five stars hotels, restaurants, fruit shops, and so on;
 - e. Farmers Organization and Human Resources Development: As establishment of fruit growers association is the key for orchard development in Indonesia, details of its process

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- and function need to be included into the final development plan. Attention is paid to capability building of extension workers coupled with utilization of NGO due to lack of resource persons with overall knowledge of fruit growing to marketing; and
- f. Orchard Development and Quality improvement Plan: Formulation of the future development programs need to focus upon prioritization of target fruits and potential areas in four Provinces. In this regard, inter-ministry coordination and on-going agri-business development projects have to be taken into consideration.
- 2. The Team will make the next presentation concerning an outline of comprehensive development plan at the end of January 1998 to invite your comments before starting preparation of the Draft Final Report in Japan.

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ANNEX-1

LIST OF PARTICIPANTS

Indonesian Side

1.	Dr. Ir. Tom Edward M. Napitupulu	Director, Directorate of Planning and Programming, Directorate General of Food Crops and Horticulture (DGFCH), Ministry of Agriculture (MOA)	
2.	Dr. Gellwynn Yusuf	Bureau of Agriculture and Forestry,	
		National Development Planning Board (BAPPENAS)	
3.	Anwar Sunari	Bureau of Agriculture and Forestry, BAPPENAS	
4.	Adib Busro	Directorate General of Agriculture and Forestry Product, Ministry of Industry and Trade	
5.	I Wayan Sidhya	Bureau of Planning, Secretariat General, MOA	
6.	Yandri	Bureau of Foreign Cooperation, Secretariat General, MOA	
7.	Zahron Helmy	Agricultural Extension Center, Secretariat General, MOA	
8.	Robert Sibarani	Agency for Agribusiness, MOA	
9.	Supriyadi	Agency for Agricultural Research and Development (AARD), MOA	
10.	Dr. Prabowo T.	Center for Horticulture Research and development, AARD	
11.	Rusti Hukum	Directorate of Horticulture Production, DGFCH	
12.	Soeroto	Directorate of Seed Development, DGFCH	
13.	Muhammad	Directorate of Seed Development, DGFCH	
14.	Kismosatmoro	Directorate of Farm Business and Product Processing Development, DGFCH	
15,	Sidik Rosyadi	Directorate of Planning and Programming, DGFCH	
16.	Supriyadi	Directorate of Planning and Programming, DGFCH	
17.	Ronizon Ali	Directorate of Planning and Programming, DGFCH	
18.	Agus Wediyanto	Directorate of Planning and Programming, DGFCH	
19.	Hilma Maizir	Directorate of Planning and Programming, DGFCH	
20.	Kumia Nur	Directorate of Planning and Programming, DGFCH	
21.	Yenny NS	Directorate of Planning and Programming, DGFCH	
22.	Sri Wijayanti	Directorate of Planning and Programming, DGFCH	
23.	Yul H. Bahar	Directorate of Planning and Programming, DGFCH	
24.	Agus Solihin	Directorate of Planning and Programming, DGFCH	
25,	Solelia HR	Directorate of Planning and Programming, DGFCH	
26.	Tommy Nugraha	Horticulture Agribusiness Development (P2AH) Project Office (Integrated Horticulture Development in Upland Areas, IHDUA), DGFCH	

Japanese Representatives and Experts

27.	Eiji Inui	Assistant Resident Representative, IICA Indonesia Office
28.	Naotoshi Kakiya	HCA Expert/Advisor for Third Umbrella Cooperation
29.	Hajime Nakahigashi	JICA Expert/Advisor for Third Umbrella Cooperation
30.	Yutaka Sugii	JICA Expert/Advisor for DGFCH

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HCA Advisory Team

31. Jun Shimada Team Leader
32. Kazumi Yoshihara Coordinator

JICA Study Team

31.	Yutaka Matsumoto	Team Leader
32.	Fumihiko Furuichi	Co-Team Leader/Farm Economy
33.	Hiroshi Daito	Seedling Production Expert
34.	Moehd. Baga Kalie	Cultivation/Extension Expert
35 .	Takeshi Saito	Post-harvest Handling and Marketing Expert
36.	Ridhwan D. Marwy	Rural Society/Gender Expert
37 .	Dr. Irlan Soejono, MSc	Market Analysis Expert
38.	Kenji Kyovizumi	Infrastructure and Facilities Expert

MINUTES OF DISCUSSION ON DRAFT FINAL REPORT FOR THE STUDY ON THE IMPROVEMENT IN QUALITY OF THE TROPICAL FRUITS

AGREED UPON BETWEEN THE DIRECTORATE GENERAL OF FOOD CROPS AND HORTICULTURE MINISTRY OF AGRICULTURE THE REPUBLIC OF INDONESIA AND JAPAN INTERNATIONAL COOPERATION AGENCY

Jakarta, April 9, 1998

Dr. Ir. Chairil A. Rasahan, MSc.

Director General of Food Crops and Horticulture

Ministry of Agriculture

Mr. Yutaka Matsumoto

Team Leader

Japan International Cooperation Agency

Mr. Shinjiro Amameishi

Leader of Advisory Team

Japan International Cooperation Agency

The Advisory Team headed by Mr. Shinjiro Amameishi and the Study Team (hereinaster referred to as "the Team") headed by Mr. Yutaka Matsumoto, both organized by the Japan International Cooperation Agency (hereinaster referred to as "JICA"), visited the Republic of Indonesia on March 29, 1998 for the purpose of making presentation and discussion about the contents of the Drast Report on Improvement in Quality of the Tropical Fruits (hereinaster referred to as "the Study").

In the meeting held at the Directorate General of Food Crops and Horticulture (hereinafter referred to as "DGFCH") of the Ministry of Agriculture on March 31, 1998, the Team had a series of discussions with the officials concerned of the DGFCH and relevant agencies about the results of the Study covering four Provinces; namely North Sumatra, West Java, East Java and South Sulawesi. This meeting was chaired by Dr. Ir. Tom Edward M. Napitupulu, Director of Programming and Planning of the DGFCH. The list of participants in the meeting is attached as ANNEX-1.

As the result of the discussions, the Team and the DGFCH agreed on the master plan focusing upon quality improvement and production development of the nine target fruits presented in the Draft Final Report as well as how to utilize the final outputs of the Study.

The followings are focal points discussed and agreed upon by both sides.

1. The Team will pay its further attention to comments and suggestions given by the Indonesian side and itemized below in preparing the Final Report:

a. Programs at Central Level

- To make an additional recommendation on how to substantialize five programs for quality seedling production and distribution through accelerating research and development works as well as strengthening private nurseries activities including establishment of foundation block (FB) to select and maintain mother plants; and
- To consider the current enlargement of organization and function of the Assessment Institutes for Agricultural Technology (BPTP).

b. Programs at Provincial Level

- To pay attention to the project monitoring aspects in formulating the programs for "Strengthening of Project Planning Capacity at Provincial and District Levels" and "Strengthening of Management Capability Building of Provincial and District Staffs"; and
- To include post-harvest handling, processing (home industry) and transportation aspects in the training program for "Enhancement of Extension Staff's Knowledge on Horticulture Agribusiness Development".

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c. Programs at District Level

- To consider the possibilities of increasing varieties for effective market promotion of target fruits;
- To indicate a realistic approach to promotion of partnership between farmers' groups and private sector;
- To give more detailed explanation on the program of "Introduction and Practice of Market Oriented Quality Fruit Growing Techniques" in connection with improvement of fruit quality;
- To consider quality improvement measures in processing fresh fruits in the program of "Development of Post-harvest Handling System"; and
- To review how to improve the present fruit trading system for enabling farmers to enter into fruit marketing and trading activities.

d. Implementation Schedule

- To reconsider implementation plans from the viewpoint of accelerating target realization and packaging of the whole orchard development programs at 37 sites.
- 2. The Team will prepare the Final Report in May after receiving additional comments from the Government of Indonesia by the end of April 1998. In preparing the Final Report, the Study Team will pay its special attention to the discussion results obtained through a series of meeting in Jakarta and seminars in the four Provinces. The Final Report will be submitted to the Indonesian side through JICA by the end of May 1998.

In the meeting, the DGFCH stressed that the pressing needs to tackle the current economic crisis in rural areas are to increase farmers income and to create new job opportunities. Agribusiness horticulture development can be largely expected to contribute as most effective countermeasures to meet such requirements, especially in critical areas depending those economy on upland crop cultivation. In this connection, the DGFCH expressed the necessity of urgent implementation of recommended programs in the master plan and its plan for taking necessary action to enter into the next stage directing towards program implementation as soon as possible.



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LIST OF PARTICIPANTS

Indonesia Side

1.	U.K. Anggro	Biro Perencanaan
2.	M. Winarno	Direktur, Bina Produksi Hortikultura
3.	Ketut Kariah	Badan Agribisnis
<i>3</i> . 4.	M. Munawir	Director of Seed Development
5.	Nasrun Hasibuan	Direktur Bimus
	•	
6.	Achmad Faudi	Bigram
7.	Agus Wediyanto	Bigram
8.	Suhatril	Setditjen TPH
9.	Hari Priyono	Dit. Bigram
10.	Muhammad	Dit. Benih
11.	Sidik Rosyadi	Dit Bigram
12.	Martha S.	Dit Bigram
13.	Reni M.	Dit Bigram
14.	Sarlistyaningsih	Bigram
15.	Yul H. Bahar	Bina Progam
16.	Hilman	Dit. Bigram
17.	Binawi	Agribisnis
18.	Kismosatmoro	Dit. Binus TPH
19.	Nyoman Oka Tridjaja	Rancapanen, Dit Benih
20.	Endang Kunwidayadi	Badan Letbung
21.	Zahron Helmy	Bappenas
22.	Edward Napitupulu	Direktur, Bigram
23.	Yandri	KLN
24.	Adhi Santika	Pusat Hortikultura
25.	Oerni, K.	Pusat Hortikultura
26.	Winarny	Dit. Hortikultura

Japanese Representatives and Experts

27.	Yutaka Sugii	JICA Expert/Advisor for Third Umbrella Cooperation
28.	Hajime Nakahigashi	JICA Expert/Advisor for Third Umbrella Cooperation
29.	Yasue Yoshinari	JICA Indonesia Office
30.	Shinjiro Amameishi	JICA Advisory Team

JICA Study Team

m Economy
Expert
n Expert
r Expert
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