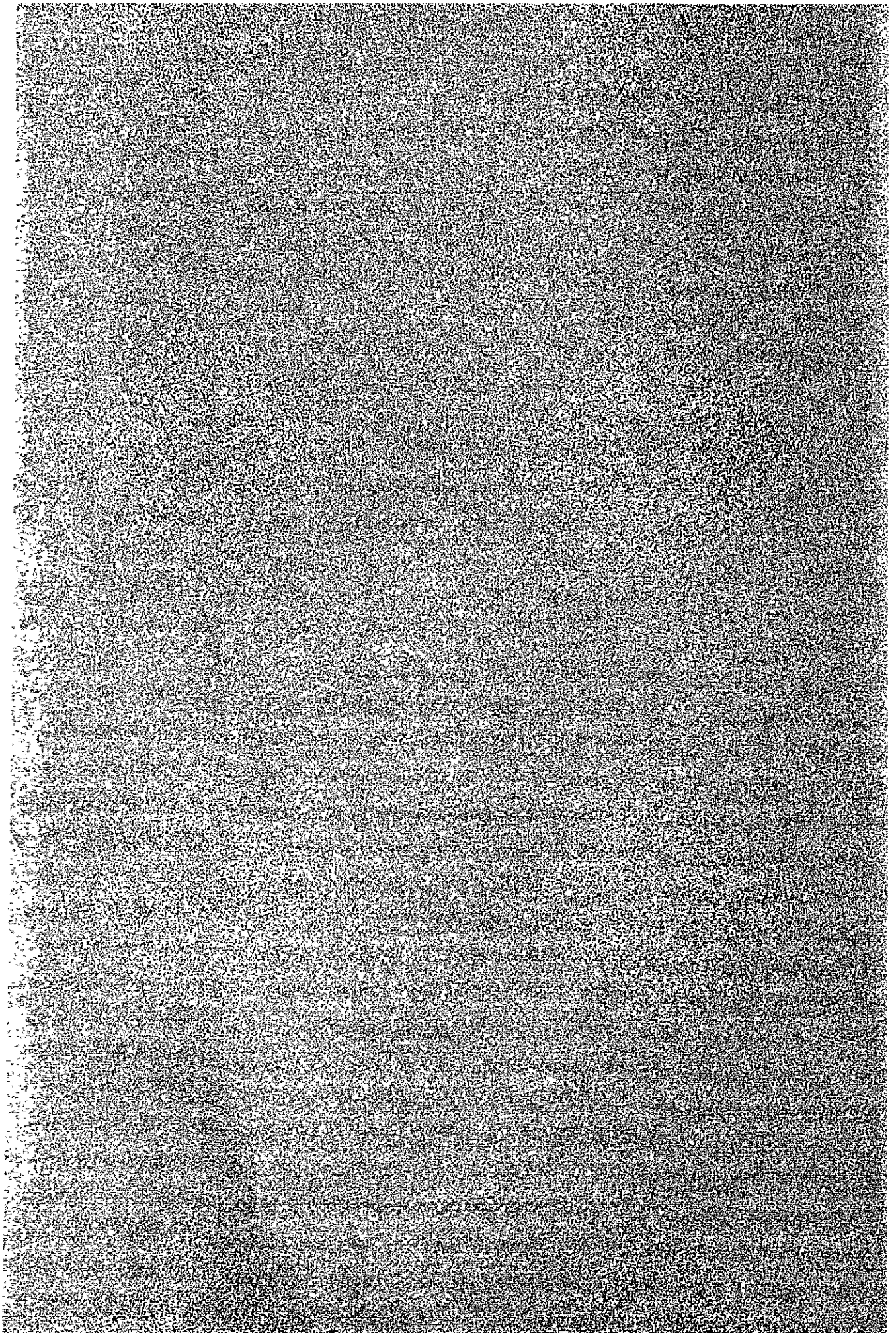


# Appendix



Appendix-1. Line of aerial photos and location of photo-mosaics.  
 (page 7 )

Table-1-A. Number and line of aerial photos.

No. of line	No. of photo	Sub-total	No of line	No. of photo	Sub-total
L 1	1 ~ 35	35	L 20	1 ~ 46	46
L 2	1 ~ 35	35	L 21	1 ~ 50	50
L 3	1 ~ 35	35	L 22	1 ~ 53	53
L 4	1 ~ 39	39	L 23	1 ~ 55	55
L 5	1 ~ 40	40	L 24	1 ~ 57	57
L 6	1 ~ 41	41	L 25	1 ~ 59	59
L 7	1 ~ 39	39	L 26	1 ~ 58	58
L 8	1 ~ 39	39	L 27	1 ~ 58	58
L 9	1 ~ 38	38	L 28	1 ~ 62	62
L 10	1 ~ 40	40	L 29 I	1 ~ 29	29
L 11	1 ~ 40	40	L 29 II	1 ~ 33	33
L 12	1 ~ 45	45	L 30	1 ~ 57	57
L 12 I	1 ~ 5	5	L 31	1 ~ 57	57
L 13	1 ~ 48	48	L 32	1 ~ 60	60
L 14	1 ~ 45	45	L 33	1 ~ 59	59
L 15	1 ~ 45	45	L 34	1 ~ 57	57
L 16	1 ~ 44	44	L 35	1 ~ 60	60
L 17	1 ~ 49	49	L 36	1 ~ 58	58
L 18	1 ~ 46	46			
L 19	1 ~ 45	45	Total		1,761

Table-1-B. Relationship between photo-mosaics and topographic maps.

Code No. of photo-mosaic	Code No. of topo. map	Code No. of photo-mosaic	Code No. of topo. map
1	5 6 7 6 - II - N	31	5 5 7 5 - II - II
2	" - " - I	32	5 6 7 5 - III - III
3	5 7 7 6 - III - N	33	" - " - II
4	" - " - I	34	" - II - III
5	5 6 7 6 - III - II	35	" - " - II
6	" - II - III	36	5 7 7 5 - III - III
7	" - " - II	37	" - " - II
8	5 7 7 6 - III - III	38	" - II - III
9	" - " - II	39	5 5 7 4 - I - I
10	" - II - III	40	5 6 7 4 - N - N
11	5 6 7 5 - N - I	41	" - " - I
12	" - I - N	42	" - I - N
13	" - " - I	43	" - " - I
14	5 7 7 5 - N - N	44	5 7 7 4 - N - N
15	" - " - I	45	" - " - I
16	" - I - N	46	" - I - N
17	5 6 7 5 - N - II	47	" - " - I
18	" - I - III	48	5 5 7 4 - I - II
19	" - " - II	49	5 6 7 4 - N - III
20	5 7 7 5 - N - III	50	" - " - II
21	" - " - II	51	" - I - III
22	" - I - III	52	" - " - II
23	" - " - II	53	5 7 7 4 - N - III
24	5 6 7 5 - III - N	54	" - " - II
25	" - " - I	55	" - I - III
26	" - II - N	56	" - " - II
27	" - " - I		
28	5 7 7 5 - III - N		
29	" - " - I		
30	" - II - N		
		Total	5 6

Appendix-2. Detail of aerial photography. (page 13)

1. Aerial Photography:

1.1 Planning, comprises selecting flying courses and making work schedule. Flying courses should be arranged and selected on the following basis.

- a) Flying courses be straight from west to east.
- b) Flying courses be arranged in such a way to cover prospected areas with the minimum number of photos.
- c) Flying programs be arranged so as to facilitate such works as the orientation of control points needed for aerial triangulation imaging the requirement of it in the future.

1.2 Aerial photo taking.

Aerial photographing will be carried out to cover the area of approximately 15,000 Km<sup>2</sup>.

- Aerial photo scale : 1/20,000
- Photo overlap : 60% ± 5%
- Photo sidelap : 30% ± 5%
- Type : vertical, black & white panchromatic.

1.3 Development and printing.

Development of panchromatic films should be processed in the following manner.

- a) Fixation be conducted perfectly so as to avoid exposing.
- b) Films be sufficiently washed so that no chemicals will remain.
- c) Films be dried quickly and both end of films shall remain more than 1 m before cutting.
- d) Special care be given against shrinkage of films.
- e) Marks of indicators be printed clearly.
- f) The print size be 23 cm x 23 cm.

#### 1.4 Orientation of aerial photos.

Aerial photos will be inspected based on the technical specification.

Special attention shall be given to the following items.

- Sidelap and overlap
- Cloud coverage
- Scale/flight height
- Tilt and grabbing

Each principal point of the aerial photos shall be plotted on the index map.

If the sidelap is less than 25%, an additional flight run shall be done as an insertion of the aerialphoto strip.

If every 5 serial photos are covered with cloud more than 3%, reflight shall be done.

Appendix-3. Mensuration (page 23 or 46)

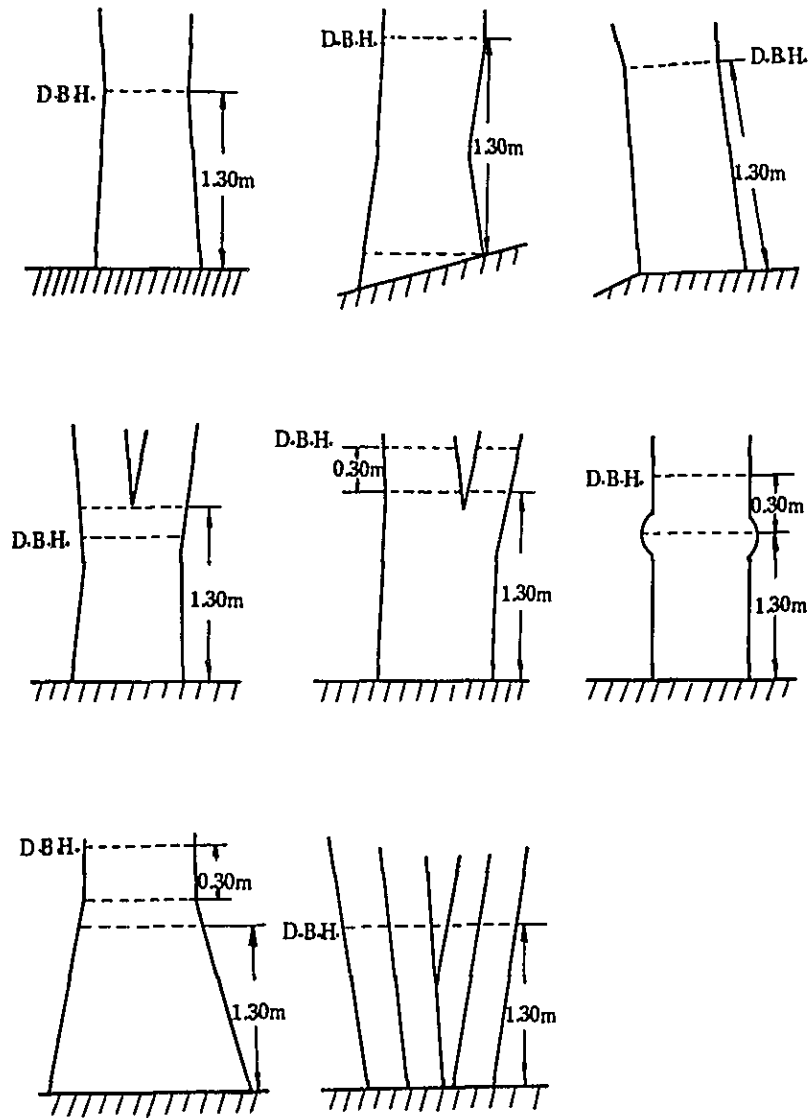
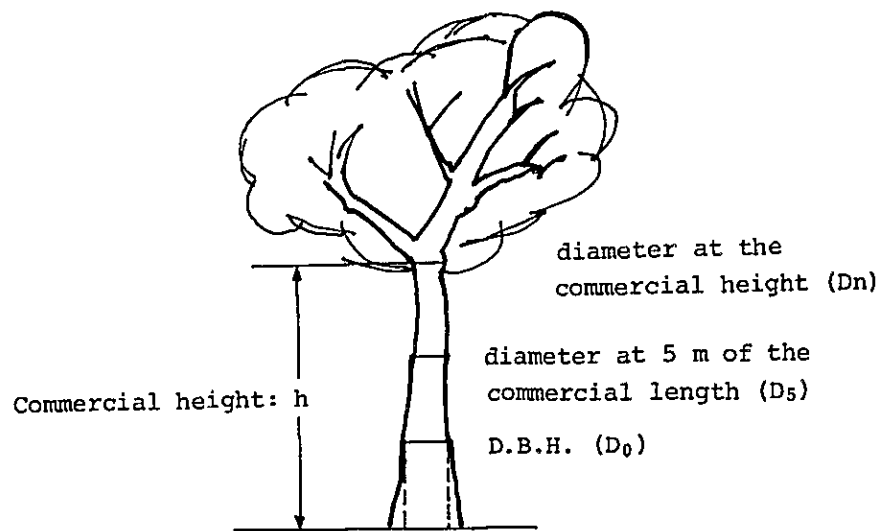
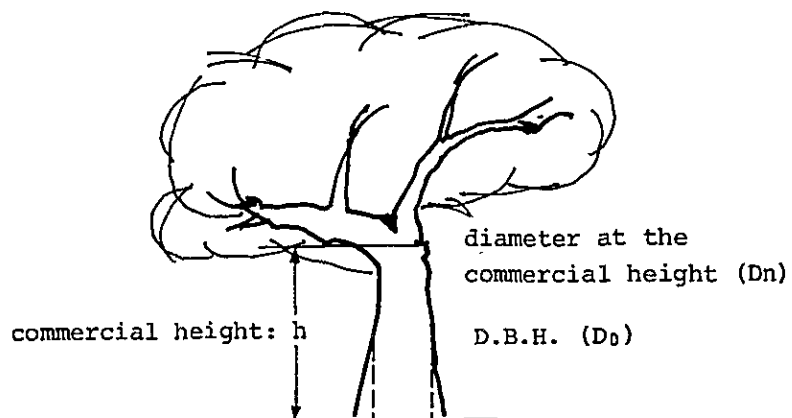


Figure-3-A. Diameter of Breast Height (D.B.H.) in different situation.

Commercial height more than 5 m.



Commercial height less than 5m



$$\text{where, } g_n = \frac{\pi}{4} D_n^2$$

$$g_5 = \frac{\pi}{4} D_5^2$$

$$g_0 = \frac{\pi}{4} D_0^2$$

Figure-3-B. Measurement of commercial height.



Appendix-4. Form for noting on the field survey. (page 23 )

INVENTARIO FORESTAL DE LA ZONA NORESTE  
EN LA REPÚBLICA DEL PARAGUAY

N° \_\_\_\_\_

M. A. G.

S. F. N

J I C A

N° DE PARCELA		REGIÓN	ILUSTRACION						
SUBN DE PARCELA		LUGAR							
TAMAÑO DE PARCELA		TIPO DE BOSQUE							
FECHA		ANOTADOR							
N° DE ARBOL	ESPECIE	DAP	ALTURA (M)		DIANETRO FUSTEC C (CM)		OBSERVACIONES	VOLUMEN	F.F
			COM	TOTAL	5M	ALT COM			
1									
2									
3									
4									
5									
6									
7									
8									
9									
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
0									

Appendix-5. List of species by class of utility. (page 33)

[ Class A ]

Code No.	Local name	Family	Genus
1	Cedro	<i>Meliaceae</i>	<i>Cedrela</i>
2	Guatambú	<i>Dutaceae</i>	<i>Balfourodendron</i>
3	Incienso	<i>Leguminosae</i>	<i>Myrcarpus</i>
4	Kurupay	<i>Leguminosae</i>	<i>Piptadenia</i>
5	Lapacho	<i>Bignoniaceae</i>	<i>Tabebuia</i>
6	Peterevú	<i>Boraginaceae</i>	<i>Coroia</i>
7	Taperyva Guasú	<i>Leguminosae</i>	<i>Ferreirea</i>
8	Urunde y mí	<i>Anacardiaceae</i>	<i>Astronium</i>
9	Yvyrá ró	<i>Leguminosae</i>	<i>Pterogine</i>

[ Class B ]

Code No.	Local name	Family	Genus
17	Cancharana	<i>Meliaceae</i>	<i>Cabralea</i>
18	Kirandý	<i>Apocynaceae</i>	<i>Aspidosperma quirandy</i>
19	Kurupáy rá	<i>Leguminosae</i>	<i>Piptadenia rigida</i>
20	Laurel aju y	<i>Lauraceae</i>	<i>Ocotea</i>
21	Laurel guaricá	<i>Lauraceae</i>	<i>Nectandra</i>
22	Tatajyvá	<i>Moraceae</i>	<i>Clorophora</i>
23	Timbó	<i>Leguminosae</i>	<i>Enterolobium</i>
25	Yvyrá pytá	<i>Leguminosae</i>	<i>Peltophorum</i>
26	Peroba	<i>Apocynaceae</i>	<i>Aspidosperma</i>
27	Kurupay curú	<i>Leguminosae</i>	<i>Piptadeniamacrocar</i>

[ Class C ]

Code No.	Local name	Family	Genus
36	Caroba	<i>Bignoniaceae</i>	<i>Jacaranda</i>
37	Colita	<i>Boraginaceae</i>	<i>Cordia</i>
38	Chipá rupá	<i>Euphorbiaceae</i>	<i>Alchornea</i>
39	Guajayví	<i>Boraginaceae</i>	<i>Patagonula</i>
41	Jata yvá	<i>Leguminosae</i>	<i>Hymenaea</i>
42	Kupa y	<i>Leguminosae</i>	<i>Copaifera</i>
43	Laurel canela	<i>Lauraceae</i>	<i>Nectandra</i>
47	Laurel	<i>Lauraceae</i>	<i>Nectandra</i>
48	Manduvirá	<i>Leguminosae</i>	<i>Pithecellobium saman</i>
49	Marmelero	<i>Polygonaceae</i>	<i>Ruprechtia</i>
50	Morosyvo	<i>Leguminosae</i>	<i>Plathimena</i>
51	Tata juvá	<i>Moraceae</i>	<i>Clorophora</i>
52	Urunde y pará	<i>Anacardiaceae</i>	<i>Astonium</i>
53	Yvá ró	<i>Rosaceae</i>	<i>Prunus</i>

Code No.	Local name	Family	Genus
54	Yvopé	<i>Leguminosae</i>	<i>Gleditsia</i>
55	Yvyrá oví	<i>Rutaceae</i>	<i>Helietta</i>
56	Yvyrá pepé	<i>Leguminosae</i>	<i>Holocalyx</i>
57	Zota caballo	<i>Tiliaceae</i>	<i>Luehea</i> spp.
61	Guaingul pire	<i>Polygonaceae</i>	<i>Ruprechtia</i>
62	Gujayví raí	<i>Sapotaceae</i>	<i>Bumelia</i>

[ Class D ]

Code No.	Local name	Family	Genus
77	Aguaí	<i>Sapotaceae</i>	<i>Chrysophyllum</i>
78	Amba y	<i>Moraceae</i>	<i>Cecropia adenopus</i>
79	Amba y guasú	<i>Araliaceae</i>	<i>Didymopanax</i>
80	Amores secos	<i>Tiliaceae</i>	<i>Heliocarpus</i>
81	Burro ka á	<i>Flacourtiaceae</i>	<i>Casearia</i>
82	Canelón pytá	<i>Myrsinaceae</i>	<i>Rapanea</i> spp.
84	Cedrillo	<i>Meliaceae</i>	<i>Guarea pohlii</i>
85	Naranja jai	<i>Rutaceae</i>	<i>Citrus</i>
86	Tembetary	<i>Rutaceae</i>	<i>Fagara</i>
89	Jagua rata y	<i>Sapindaceae</i>	<i>Cupania</i>
92	Kambá a ká	<i>Sterculiaceae</i>	<i>Guazuma ulmifolia</i>
95	Kurupika y	<i>Euphorbiaceae</i>	<i>Sapium</i> spp.
96	Loro blanco	<i>Malvaceae</i>	<i>Bastardiopsis</i>
97	Marinero	<i>Meliaceae</i>	<i>Guarea</i>
98	Mbavy	<i>Flacourtiaceae</i>	<i>Banra</i>
100	Ñuinuí ray í	<i>Meliaceae</i>	<i>Guarea</i> sp.
101	Pakurí	<i>Guttiferae</i>	<i>Rhoedia</i>
103	Palo amargo	<i>Simarubaceae</i>	<i>Aeschrion</i> sp.
104	Palo blanco	<i>Rubiaceae</i>	<i>Calycophyllum</i>
105	Para para y	<i>Araliaceae</i>	<i>Pentapanax</i>
107	Pykasú rembiú	<i>Sapotaceae</i>	<i>Chrysophyllum</i>
109	Sapirangy	<i>Apocynaceae</i>	<i>Peschier</i>
110	Tala	—	—
112	Tarumá	<i>Verbenaceae</i>	<i>Vitex</i>
114	Palo vino	<i>Vocsiaceae</i>	<i>Vochysia</i>
116	Ysapy y pytá	<i>Leguminosae</i>	<i>Machaerium</i>
117	Ysy	<i>Nyctaginaceae</i>	<i>Reichembachia</i>
118	Yvá poroitý	<i>Myrtaceae</i>	<i>Myrciaria</i>
120	Yvyrá jú	<i>Leguminosae</i>	<i>Albizzia</i>
121	Yvyrá katú	<i>Annonaceae</i>	<i>Xilopia</i>
122	Yvyrá piú	<i>Sapindaceae</i>	<i>Diatenopterix</i>
126	Palo haya	<i>Araliaceae</i>	<i>Pentapanax angelicifolium</i>
127	Amba y ra	<i>Araliaceae</i>	<i>Dendropanax</i>

Code No.	Local name	Family	Genus
128	Canelón	<i>Myrsinaceae</i>	<i>Rapanea</i>
129	Taruma guasú	<i>Verbenaceae</i>	<i>Vitez</i>

[ Class E ]

Code No.	Local name	Family	Genus
146	Ñuatí arroyo	<i>Achatocarpaceae</i>	<i>Achatocarpus</i>
148	Aratikú	<i>Annonaceae</i>	<i>Rollinia</i>
150	Chichita	<i>Anacardiaceae</i>	<i>Lithraea</i>
153	Ñangapirý	<i>Myrtaceae</i>	<i>Eugenia</i>
154	Fumobravo	<i>Solanaceae</i>	<i>Solanum</i> sp.
155	Guapo y	<i>Moraceae</i>	<i>Ficus</i>
156	Guasú mandió	<i>Euphorbiaceae</i>	<i>Mandihat</i>
157	Guavijú	<i>Myrtaceae</i>	<i>Eugenia</i>
158	Guavirá	<i>Myrtaceae</i>	<i>Cubmanesia</i>
159	Ingá	<i>Leguminosae</i>	<i>Inga</i>
160	Ká rá	<i>Aquifoliaceae</i>	<i>Ilex brevicuspis</i>
161	Jacaratiá	<i>Caricaceae</i>	<i>Jacaratiá</i>
162	Jukerí guasú	<i>Leguminosae</i>	<i>Acacia</i>
163	Ka á	<i>Aquifoliaceae</i>	<i>Ilex paraguariensis</i>
164	Katiguá	<i>Meliaceae</i>	<i>Trichilia</i>
165	Kurundiý	<i>Ulmaceae</i>	<i>Trema</i>
167	Mborevi ka á	<i>Rubiaceae</i>	<i>Rudgea</i>
168	Molle	—	—
172	Ñandú apusa	<i>Myrtaceae</i>	<i>Briota</i>
173	Ñandypá	<i>Moraceae</i>	<i>Sorocea</i>
174	Ñandypá guasú	<i>Rubiaceae</i>	<i>Genipa</i>
180	Ombú	<i>Phytolaccaceae</i>	<i>Phytolacca</i>
182	Pynó guasú	<i>Urticaceae</i>	<i>Urera</i>
183	Rabo itá	<i>Leguminosae</i>	<i>Lonchocarpus</i> sp.
184	Rabo molle	<i>Leguminosae</i>	<i>Lonchocarpus</i> sp.
185	Samu hú	<i>Bombacaceae</i>	<i>Chorisia</i>
186	Sangre de dragón	<i>Euphorbiaceae</i>	<i>Croton</i>
188	Tataré	<i>Leguminosae</i>	<i>Pithecellobium scalare</i>
193	Cocotero	<i>Palmaceae</i>	<i>Acrocomia</i>
194	Gallo espuela	—	—
195	Manaue	—	—
196	No identifikado	—	—
197	Noaga	—	—
198	Pindó	<i>Palmaceae</i>	<i>Arecastrum</i>
199	Para todo	<i>Bignoniaceae</i>	<i>Tabebuia</i>
200	Yusy y	<i>Ulmaceae</i>	<i>Celtis</i>
201	Ysy rá	—	—
202	Tacuara	—	—
203	Plomo	—	—
204	Ñanal	—	—

Appendix-6. Number of trees per hectare by species. (page 33)

Species	Phot-stratum	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Peroba		15.7	34.0	44.7	9.0	24.6	11.0		6.5	17.0	23.1
Class A											
Cedro		2.0	3.7	4.0	3.3	3.4	1.0	4.5	1.0	2.0	3.1
Guatambú		7.3	6.0	3.0	1.3	6.0	4.0		2.5	5.5	4.7
Incienso		0.3	0.4	0.7		1.8	4.5		15.0	0.5	1.8
Kurupay		0.7	3.5	1.0	2.0	1.8	4.0	5.5	3.5	2.5	2.7
Lapacho		2.0	0.7			1.4		1.5	6.5	2.0	1.3
Peterevú		0.7	1.2	1.3	6.7	2.6	2.0		1.0		1.8
Taperyva guasú			2.0	2.3	0.3	4.6	3.5	1.0	2.0	1.0	2.1
Urunde y mí		0.3	0.1			0.2	3.0				0.3
Yvyrá ró			1.0	1.7	0.3				1.5	0.5	0.6
Class B											
Cancharana		5.0	1.2	17.3	2.7	4.2	3.5	5.5	0.5	2.0	4.1
Kirandý		1.0					0.5			0.5	0.2
Kurupay rá		1.0	3.4	2.3	4.3	5.8	6.0		1.5	1.5	3.3
Laurel aju y		0.7				0.4					0.1
Laurel guaica						0.2					—
Tatajyvá			0.6	2.0	0.3	2.0	2.0				0.8
Timbó		0.7	0.2	0.7	1.0	0.2					0.3
Yvyrá pytá		12.0	4.7	2.0	6.3	8.0	4.5	2.5	3.5	4.5	5.6
Kurupay curú			0.1	0.3							0.1
Class C											
Caroba			0.2			1.0					0.1
Colita		0.3	0.7	1.0	2.0	3.4			1.0		0.8
Chipá rupá		3.7	2.0	12.3	6.7	5.8	1.0		0.5	1.0	3.4
Guajayví		6.3	4.9	2.7			0.5	2.0	1.0	10.5	4.2
Jata yvá		0.3	0.3	0.3		3.4					0.2
Kupa y		0.3	2.6	2.7	37.0	5.2	1.0	4.5	11.0	3.5	6.3
Laurel canela			4.1			7.8		15.5		4.0	3.3
Laurel		12.3	11.9	24.0	32.3	0.4	11.5	27.5	12.0	10.0	15.2
Manduvirá		6.0	0.6	0.7	3.7	0.2	2.0		2.0	3.5	1.7
Marmelero		1.0	0.1	0.3							0.2
Morosyvo							0.5	1.0	16.0		1.1
Tata juvá		1.7	1.5	0.7	3.0	0.6	2.0		0.5	1.0	1.3
Urunde y pará		8.3	6.0	7.3	1.7	6.8	3.0		25.0	5.0	6.6
Yvá ró		1.0	0.8	5.0	6.3	1.4	0.5				1.7
Yvopé			0.1								—
Yvyrá oví		4.3	7.5	1.3	8.7	3.2		29.0	3.0	2.0	6.3
Yvyrá pepé		3.0	3.4	2.3	1.0	2.8	1.0			14.0	3.0
Zota caballo			0.1								—
Guaingul pire		0.7							0.5	3.5	0.3
Guajayví raí						0.4			0.5		0.1
Class D											
Aguaí		9.7	9.0	10.7	5.0	7.2	13.5		0.5	8.0	7.7
Amba y		4.3	0.9	0.7	4.0	0.6	1.0		1.5		1.4
Amba y guasú			0.4	0.3						1.0	0.2
Amores secos		0.3	0.2	1.3	7.3	2.0	1.5				1.4

Species	Phot-stratum		A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Burro ka á				0.4			1.6	1.5		3.0		0.7
Canelon pytá											0.5	—
Cedrillo				0.1			0.6					0.1
Naranja jai				0.2		0.3	1.8					0.4
Tembetary	0.3		1.0	0.7	0.3	3.4	0.5					1.0
Jagua rata y	6.7		0.9	2.3	1.0	2.0		0.5			3.0	1.8
Kambá a ka	0.3		0.3	0.7	3.7							0.5
Kurupika y	0.3		0.1						0.5		0.5	0.1
Loro blanco	2.7		0.5	1.0	1.7	0.6	0.5			0.5	0.5	0.8
Marinero	3.0		4.0	25.7	12.0	9.6	19.0				5.0	8.1
Mbavy	5.3		8.5	13.0	4.7	3.6	18.5	1.5		2.5	11.5	7.5
Nuinui ray í	0.7		1.3	2.0	7.0	2.2					1.5	1.8
Pakurí	1.3		26.5	23.0		24.8	19.0				10.5	16.3
Palo amargo				0.1								—
Palo blanco	6.3		2.3	1.7	0.7	1.0	3.5				1.5	2.0
Para para y	0.7		0.3	0.3		0.2						0.2
Pykasú rembiú	1.7		1.0	8.7		6.6	6.0			1.0		2.8
Sapirangy				0.8		0.3	0.6			1.0	2.0	0.6
Tala				0.3				1.0			0.5	0.2
Tarumá	2.3		1.0	1.3	2.3	2.4	1.0			2.0	1.0	1.5
Palo vino				2.0	0.3				2.5	26.0		2.0
Ysapy y pytá	3.0		3.6	1.3	10.7	3.8	2.5		2.5	2.0	2.5	3.7
Ysy	2.3		8.5	15.7	3.3	12.4	21.0			6.0	0.5	8.3
Yvá poroitý	14.0		20.6	14.3	21.7	54.4	12.0	10.0		89.5	125.5	34.4
Yvyrá jú	1.7		2.1		5.7	0.8	2.5				0.5	1.7
Yvyrá katú	0.3			4.0		1.2	9.5					1.2
Yvyrá piú	26.3		25.1	17.7	0.7	21.2	12.5			3.5	20.0	17.6
Palo haya				0.2	0.3		0.8	0.5				0.3
Amba y rá	1.0		0.9	1.3								0.5
Canelon	2.0		2.6	10.3	0.3	1.4	2.0			3.5	1.0	2.6
Taruma guasú				0.2						1.5		0.2
Class E												
Nuati arroyo	0.7		0.3	0.7						3.0		0.4
Aratikú	5.3		0.2		4.3	1.0	0.5			1.5		1.3
Chichita											2.0	0.1
Nangapirý	7.0		10.4	10.7	3.3	18.6	6.0	167.5		23.0	12.5	21.2
Fumo bravo			0.9	0.7	1.3	0.4		1.5		0.5	2.0	0.8
Guapo y			1.1	1.0		1.2	0.5				1.0	0.7
Guasú mandió							0.5					—
Guavijú						2.0						0.3
Guavirá	2.0		2.8	5.0	0.3	3.0	1.0			1.5	4.0	2.4
Ingá	2.3		3.7	1.0	1.7	1.2	1.5			6.0	1.5	2.4
Kaá rá				0.3								—
Jacaratiá	8.3		4.6	0.7	5.7	1.2	3.0				2.5	3.6
Jukerí guasú	4.7		2.6	4.7	2.0		3.0					1.7
Ka á	1.3			16.3	0.3				10.0	0.5		1.3

Species	Phot-stratum		A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Katiguá			16.7	13.3		7.3	5.8	8.0		1.5	6.5	9.8
Kurundiý			0.3	0.1	5.7	0.3		10.5				0.8
Mborevi ka á			3.3	4.7		4.0	12.2	8.0	2.5	36.5	0.5	7.6
Molle							0.2					—
Ñandú apusa			0.7	0.2	3.3					0.5		0.2
Ñandypá			3.0	1.5		1.0	1.0	0.5	0.5	0.5	1.5	1.5
Nandypá guasú				0.3		0.7						0.2
Ombú			8.7	2.3	0.7	13.0	8.4	3.0			1.0	4.4
Pynó guasú			0.3	1.0		3.3	8.2	1.5			6.5	2.4
Rabo itá			0.3	0.9	0.6		3.2	0.5				0.9
Rabo molle				0.1			0.6					0.1
Samu hú				5.5		1.0	0.4	1.0				1.9
Sangre de dragón			10.7	5.7	2.0		2.6					3.4
Tataré						1.0			32.0	12.5		2.9
Cocotero			0.3			0.7				1.5		0.2
Gallo espuela					0.3							—
Manaué										6.0		0.4
No identificado			13.3	7.0	19.0	8.0	5.8	18.5	13.0	15.0	2.5	9.9
Noaga			2.3	1.6	1.0	0.7	2.6	1.5		9.5		2.0
Pindó			4.3	1.6	8.7	25.3	20.8	43.0	84.5	2.0	3.5	15.7
Para todo										12.5		0.8
Yusy ý			4.0	0.7		2.7	3.2	2.5			1.0	1.4
Ysy rá				0.1			0.2	1.0				0.2
Tacuara												0.1
Plomo				0.1								—
Sañal				0.1		0.7						0.1
<b>Total</b>			<b>295.3</b>	<b>306.9</b>	<b>389.7</b>	<b>321.7</b>	<b>380.2</b>	<b>337.0</b>	<b>429.0</b>	<b>396.0</b>	<b>343.0</b>	<b>343.8</b>

Appendix-7. Number of trees in detail. (page 35)

Table-7-A. Number of trees by species and by sample plot. (1)

Sample plot No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total		
Species Photo-stratum	A2	A1	B2	A3	A1	E	A2	A1	A2	A3	A2	M	M	M2	M2	M2	M	M3	M3	M2	B1	E	B1	A2	B2	M2	A2	A2	A2	A2	A2	A3	A3	Total	
Peroba	32	14	1	25	27	16	20	6	68	66	21	17	7	63	10	10	18	36	50	32	22	43	740												
<b>Class A</b>																																			
Cedro	2	1		3				5	1	2	9	2	6	9	3			2			5	4	4	1	2	5	6	2							99
Guatambú				1	6	2	8	16	1	6		4	3	1	22			8			2	9	12	5	2	9									149
Incienso			29		1	1	2			2				6				7			1	2			1	2								56	
Kurupay	1		7		1	1	10	4	2	2		1	6		1			5			9	4	2	6	7	1								86	
Lapacho			6		2			4	1						1						6	4	3											40	
Peterevú			2	1	1		1	1		4		13	5	3	7	1		1		3	5	1	1	1	1	2	2							57	
Taperyva guasú			3	1		1		1		4	1		7	4	4	1		6		1	3	1	1	1	1	5	7	4					66		
Urundé y mí								1					1					6																9	
Yvyrá ró			3	3		1												1								3								20	
<b>Class B</b>																																			
Cancharana				23	3			12		10	6	1	6								7	4	4	11		1	15								131
Kirandó	1							2							2			1			1	1												5	
Kurupay rá	4	2	2			2	2	1	2	2	8	1	3	13	2	6	9	10	2	8			1	4	3	2	5	2	2	2	5	3		104	
Laurel aju y			1		1																													4	
Laurel guaicá														1				4																1	
Tatajyvá	1			1				5	1	1	1	1	10										2		2				1					27	
Timbó		1		1				1		1	1				1												1							10	
Yvyrá pytá	5	11	3	2	4	3	21	2	4	2		16	13	14	7	3	7	2	5	3		6	2	9	4	1	11	2					178		
Kurupay curú			1																				1											2	
<b>Class C</b>																																			
Caroba																																			2
Colita	2		1					1				6			2																				24
Chitpá rupá	5	1		26	13	5	19	5	3	6	1	20	5	6	12			1			2	2	16	4	1	2	1	2	3	7	2	6	2	110	
Guajayví																																		133	
Jata yvá				1																														5	
Kupa y	2		12	5			2	1	1	3	3	108	2	3	7	1	1	2			2	7	7			10	6	4	9	3	2		203		
Laurel canela																																		106	
Laurel	2	10	29	11		5	2	24	14	16	32	22	59	7	7	5	18	4	19	9	46	15	9	10	14	11	21	20	6	7	7	27	486		
Manduivirá	5	4	2	9	7	7	4	2	2	3	3	1	1	1	10	3	1	3	1							1	1						54		
Marmelero							1	1																										6	
Morosyó			32																			2												35	





Table-7-A. Number of trees by species and by sample plot. (3)

Sample Plot No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total
Species	A2	A1	B2	A3	A1	E	A2	A1	A2	A3	A2	M	M	M2	M2	M2	M	M3	M3	M2	B1	E	B1	A2	B2	M2	A2	A2	A2	A2	A2	A3	
Tarumá			4	2			7					6	1	1	4			1	1	1	1	2	2	2	1	7	3	3	2			2	48
Palo vino			51	5	2	3	5	5	2	1	4	15	9	5	4	2	8	3	2	4	3	2	5	7	4	4	1	2	6	3	4	2	64
Ysapy y pytá	2	2	12	45			1	7	16	1	1	9	9	4	11		1	1	41	43	1	1	12	4	4	35	15	5	5	2	2	119	
Ysý																																266	
Yvá poroitý	10	3	7	7	20	5	5	19	25	9	3	65			102	13			24	43	5	246	5	179	114	41	27	81	9	27	1,102		
Yyvrá jú	2				3	1	1	2	1		1			3	1	1	17	5					1			1	5	2	7		53		
Yyvrá katú				12															19	6												38	
Yyvrá piú	57	22		1	37	17	46	20	40	44	49	1	16	28	43	1	15	10	11			23	3	7	8	21	14	6	6	9	8	563	
Palo haya		1		1														1					1			4	2					8	
Amba y rá				3	2		8																				3	2	4	1	7	84	
Canelon			7	18	1	1	1	5	2	6	13	1		2	2	1		4	1	1		1			3	1	3	2	4	1	7	84	
Taruma guasú																									3	1	1	1				5	
Class E																																	
Nuati arroyo					2																					6		3					13
Aratikó	9	3				4		7			1	12		5					1								1					40	
Chichita																																	4
Nangapitý	1	12	4	11	7	8	18	2	2	7	13	10		3	40	6			12	15	184	17	151	3	42	29	19	25	20	2	14	678	
Fumo bravo				1				1	1	1	1	4		2	2						2	4	1	2	1	1	5	1	1	1	25		
Guapo y				1				2	2					2	1			1		1		2	2			2	4	1	2		23		
Guasú mandió																																1	
Guavijú																																10	
Guavirá	1	1	2	1	2	4	2	3	3	2	3	5	1	5	4	2	3	3	2	6	5	4	1	16	1		2	3	1	13	3	12	78
Inga			12	1		2	1	7	6			2	2	4							2	1					2	3				76	
Kaa rá				1																													1
Jacaratiá	4	11			7	4	5	7	3	2	11	5	5	2	1	3	12	1	5			1	5	5	3	1						7	114
Jukerf guasú	1	4			2	4	2	8	4	1	2	4					2	6						4	4	1	2	6	9	1	54		
Ka á				14				4				1											13	1	1	1						40	
Katiguá	25	1	1	10	44	12	30	5	1	34	46	9	9	3	4	15	13	14	2	4	7	1	1	12	2	3	7	1	3	8	5	315	
Kurundiý								1				1							21													24	
Mborev ka á	1	1	2	12		2	9	1		1	4	12		2	2			16	12	2	2	1	3	7	71	47	14	20	4	242			
Molle																																1	
Nandú apusa	1		1		1	1	1	1																								5	
Nandypá			1	2	2	1	7	7		7	3	3	1	1	1	2		1	1	1		2	1	2		10				1	48		

Table-7-A. Number of trees by species and by sample plot. (4)

Sample Plot No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total	
Species	A2	A1	B2	A3	A1	E	A2	A1	A2	A3	A2	M	M	M2	M2	M	M3	M3	M3	M2	B1	E	B1	A2	B2	M2	A2	A2	A2	A2	A2	A3	Total	
<i>Photo-strictum</i>	12	15		1	11	2	7			1	1		11	31	39	6																	5	
<i>Nandypa guasú</i>																																		140
Ombú						13	9	1					31	10	10	1	2																	78
Pynó guasú	1	1					1							3	16	1																	29	
Rabo itá																																		4
Rabo molle							45						2																					62
Samu hú							1	32																3										62
Sangre de dragón																								27		13	2	10	17				103	
Tataré			25				1					3																					92	
Cocotero		1	3														2																6	
Gallo espuela										1																							1	
Manate			12																														12	
No identificado	9	5	11	47	3	5	1	32	15	6		16	11	7	2	8	37			2	25		1	15	19	7	1	12	4	4	318			
Noaga			19					7	5			1	2		1					6				1		5	8					63		
Pindó	2	4	3	19	6	2	3			4		64	2	96	6	10	85			46	5		5	3	1	2	1	2	8	3	501			
Para todo			25																														25	
Yusy y	1	12				2									1	8										1		2				45		
Ysy rá																																	6	
Tacuara																																		3
Plomo																																		3
Sañal																																		1
Total	221	221	372	453	263	180	346	402	312	368	383	340	321	398	424	352	304	320	354	341	399	506	459	286	426	386	447	289	344	190	251	348	11,000	

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (1)

P 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	1	1	1								3
B	24	6	5	2	2	2	1				42
C	7	7	3		1						18
D	55	29	13	3							100
E Defec- tive	44	11		2		1					58
Total	131	54	22	7	3	3	1				221

P 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	2										2
B	26	1	2							1	30
C	18	4	3	5	1	1					32
D	30	23	9	10	3						75
E Defec- tive	58	12	4	1		1					76
				3	1	2					6
Total	134	40	18	19	5	4				1	221

P 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	29	15	6								50
B	4										4
C	65	30	11	2	1						109
D	41	22	17	5							85
E Defec- tive	76	34	7	4	2	1					124
Total	215	101	41	11	3	1					372

P 4

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	5	1	2								8
B	21	9	15	6	3						54
C	41	20	18	7		1	3				90
D	112	49	8	1		1					171
E Defec- tive	82	27	7	1	2	1					120
	6	3	1								10
Total	267	109	51	15	5	3	3				453

P 5

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	4	1	3	3							11
B	18	6	5	1	2	1		1			35
C	16	17	3	2	2	3				1	43
D	44	23	14	4							85
E Defec- tive	62	16	4	2	2						86
	1	1	1								3
Total	145	64	30	12	6	4		1		1	263

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (2)

P 6

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	2	1	2		1						6
B	11	4	2		2	2					21
C	20	8	7	1	2	1					39
D	35	9	7	3							54
E	44	10	4	1							59
Defective	1										1
Total	113	32	22	5	5	3					180

P 7

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	11	2	2	2	1	2					20
B	14	3	1	1	2	1					22
C	32	16	9	3	3	1	1				65
D	60	29	16	3	2						110
E	65	12	14	16	11	1	2	1	2		124
Defective	4		1								5
Total	186	62	43	25	19	5	3	1	2		346

P 8

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	11	5	6	3	1		1				27
B	24	10	5	1	1	1	1				43
C	27	24	7	7	3	1					69
D	76	38	7	1	1	1					124
E	93	25	13	1							132
Defective	2	4			1						7
Total	233	106	38	13	7	3	2				402

P 9

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	2	1	1	2					1		7
B	28	15	12	3	5	3	2		1	1	70
C	15	6	6	2							29
D	105	40	14	1							160
E	22	9	8								39
Defective	2	1	3			1					7
Total	174	72	44	8	5	4	2		2	1	312

P 10

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	6	2	4	2		1	1				16
B	32	17	12	7	6	8	4		1	1	88
C	16	12	6	1		1		1			37
D	77	52	19	3	1	1	2	1			156
E	53	12	1	2	2						70
Defective										1	1
Total	184	95	42	15	9	11	7	2	1	2	368

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (3)

P 11

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	7	4	3								14
B	13	6	3	7	6	2			1		38
C	31	19	14	2	1	2	2	1			72
D	104	23	16	7	3	2	1				156
E	69	15	7	3			1				95
Defective	6	2									8
Total	230	69	43	19	10	6	4	1	1		383

P 12

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	1	1									2
B	1		1								2
C	78	42	22	8	1	1					152
D	72	16									88
E	94	1									95
Defective	1										1
Total	247	60	23	8	1	1					340

P 13

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	16	4									20
B	30	2						1			33
C	75	26	9								110
D	57	10	1	2							70
E	36	10	3	1							50
Defective	27	6	5								38
Total	241	58	18	3				1			321

P 14

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	11	7	4	8				1			31
B	21	10	2	2	2						37
C	14	4	2	1	3	2					26
D	67	18	14	8	2	1					110
E	149	25	8	5	1	2	1	2	1		194
Defective											
Total	262	64	30	24	8	5	1	3	1		398

P 15

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	3	5	2	3							13
B	6	4	4	5	2	1					22
C	30	24	13	5	4	1					77
D	168	59	10	1							238
E	51	4		1							56
Defective	10	4	1	2	1						18
Total	268	100	30	17	7	2					424

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (4)

P 16

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
A	11	10	7	3							31
B	50	14	6	4	3			1			78
C	12	9	2	2	1	1	2				29
D	69	20	14	10	2						115
E	61	28	7	1	1						98
Defective	1										1
Total	204	81	36	20	7	1	2	1			352

P 17

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
A	9	3	2	2							16
B	15	4	1	2	2		1				25
C	15	13	5	1	1		1				36
D	75	27	8								110
E	83	21	8		1			1	1		115
Defective				1				1			2
Total	197	68	24	6	4		2	2	1		304

P 18

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	101--	Total
A	16	10	4	4		1	1				36
B	8	6	2	1	1	1				1	20
C	10	6	3	1							20
D	49	21	13	2							85
E	138	11	3	4	1		1				158
Defective						1					1
Total	221	54	25	12	2	3	2			1	320

P 19

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
A	2	5				1					8
B	11	3	6	3	4	3	3	1			34
C	15	7	1	2							25
D	117	54	27	8	1	1					208
E	60	6	4	1	1						72
Defective	5				2						7
Total	210	75	38	14	8	5	3	1			354

P 20

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
A	5	7	3	2	1						18
B	22	5	4	5	4	3	1	1	1		46
C	20	9	5	1		2	1				38
D	118	46	13	2							179
E	37	11	2	2		1					53
Defective	1	3		1		1		1			7
Total	203	81	27	13	5	7	2	2	1		341

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (5)

P 21

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	10	2	2								14
B	2	1									3
C	60	9	3								72
D	10										10
E	252	30	3	1							286
Defective	10	3			1						14
Total	344	45	8	1	1						399

P 22

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	6	3	7	2	1	1	2				22
B	17	6	1	1	3			1			29
C	34	18	11	5	4	1					73
D	248	68	13	3		1					333
E	34	3									37
Defective	4		3	3	1			1			12
Total	343	98	35	14	9	3	2	2			506

P 23

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	6	3	1								10
B	9	3	1								13
C	70	9	5	1							85
D	20	3	1								24
E	301	23	2	1							327
Defective											
Total	406	41	10	2							459

P 24

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	11	5	1	1	1			1			20
B	46	15	4	2	4	2	1	1			75
C	19	6									25
D	55	6	2								63
E	54	36	7	2							99
Defective	1	3									4
Total	186	71	14	5	5	2	1	2			286

P 25

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	7	3	1	2	2	1					16
B	8	4	2	2		2	1	1			20
C	13	11	3	5	1	2					35
D	124	62	13	1	1						201
E	135	4	1								140
Defective	4	2			1	1					8
Total	291	86	20	10	5	6	1	1			420



Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (6)

P 26

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	4	3	3	3							13
B	1	4	7	6	9	1	2	1			31
C	11	6	5	5	1	3	1				32
D	71	64	11	6							152
E	83	11	6		1						101
Defec- tive	30	16	6	2	1	2					57
Total	200	104	38	22	12	6	3	1			386

P 27

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	18	2	2	4	1						27
B	1			2	7	2					12
C	60	29	7	7	2	1	1				107
D	168	54	18	4		1					245
E	40	5	5	1							52
Defec- tive	3		1					1			4
Total	290	90	33	18	10	4	1	1			447

P 28

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	3			2							5
B	16	9	3	5	3	1	1				38
C	21	11	6	2	3	1	3	1			48
D	79	24	10	1	1	1					116
E	57	8	4								69
Defec- tive	6	5	1	1							13
Total	182	7	24	11	7	3	4	1			289

P 29

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	3	6	5	4	1	1			1		21
B	21	12	8	5	5	1	1				53
C	18	2	7	2	1			1			31
D	73	65	13	1							152
E	56	11	3	2							72
Defec- tive	6	5	2	1				1			15
Total	177	101	38	15	7	2	1	2	1		344

P 30

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	10	3	2	1	1						17
B	18	6	1	1	3	2	2	2	1	3	39
C	10	5	2	1							18
D	32	6	6								44
E	34	16	8	3							61
Defec- tive	5	4	1					1			11
Total	109	40	20	6	4	2	2	3	1	3	190

Table-7-B. Number of trees by sample plot, by diameter class, and by class of utility. (7)

P 31

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	22	7	4	4	4	3			1		45
B	15	7	5	6	2		2	1		1	39
C	25	14	2	2	1	1		1			46
D	42	20	2		1						65
E	38	7	6	1	1				2		55
Defective	1										1
Total	143	55	19	13	9	4	2	2	3	1	251

P 32

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	4	2	4	4		1	2				17
B	18	15	9	5	2	1	3	2	3	6	64
C	24	12	7	4	4	1					52
D	93	37	10	3	1		1				145
E	40	15	7	1	1	1					65
Defective	3	1		1							5
Total	182	82	37	18	8	4	6	2	3	6	348

Total of sample plots

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	258	124	84	61	15	12	7	2	3		566
B	551	207	129	85	85	40	26	14	8	15	1,160
C	922	435	207	87	41	28	15	5			1,740
D	2,546	1,017	339	93	19	10	4	1			4,029
E	2,501	469	156	60	27	9	5	5	6		3,238
Defective	140	63	26	15	9	8		5		1	267
Total	6,918	2,315	941	401	196	107	57	32	17	16	11,000

Table-7-C. Number of trees per hectare by photo-strata, by diameter class, and class of utility. (1)

A 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	5.7	2.0	3.0	2.0	0.3		0.3				13.3
B	22.7	5.7	4.0	0.7	1.0	0.7	0.3	0.3		0.7	36.0
C	20.3	15.0	4.3	4.7	2.0	1.7					48.0
D	50.0	28.0	10.0	5.0	1.3	0.3					94.7
E	71.0	17.7	7.0	1.3	0.7	0.3					98.0
Defective	1.0	1.7	0.3	1.0	0.7	0.7					5.3
Total	170.7	70.0	28.7	14.7	6.0	3.7	0.7	0.3	0.0	0.7	295.3

A 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	8.8	3.1	2.1	2.0	0.9	0.6		0.1	0.3		17.9
B	19.6	7.9	4.2	3.4	3.9	1.6	1.0	0.4	0.3	0.5	42.8
C	23.8	11.5	5.6	2.1	1.2	0.6	0.7	0.4			45.9
D	77.3	29.6	11.0	2.0	0.7	0.4	0.1				121.1
E	47.9	13.0	6.2	3.0	1.2	0.2	0.3	0.2	0.4		72.4
Defective	3.4	2.0	0.9	0.2		0.1		0.2			6.8
Total	180.8	67.1	30.0	12.7	7.9	3.5	2.1	1.3	1.0	0.5	306.9

A 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	5.0	1.7	3.3	2.0		0.7	1.0				13.7
B	23.7	13.7	12.0	6.0	3.7	3.0	2.3	0.7	1.3	2.3	68.7
C	27.0	14.7	10.3	4.0	1.3	1.0	1.0	0.3			59.7
D	94.0	46.0	12.3	2.3	0.7	0.7	1.0	0.3			157.3
E	58.3	18.0	5.0	1.3	1.7	0.7					85.0
Defective	3.0	1.3	0.3	0.3						0.3	5.3
Total	211.0	95.3	43.3	16.0	7.3	6.0	5.3	1.3	1.3	2.7	389.7

M

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	9.7	2.7	0.7	0.7							13.7
B	17.7	2.0	1.0	0.7	0.7		0.3	0.3			22.7
C	57.3	27.7	12.3	3.0	0.7	0.3	0.3				101.7
D	69.7	18.3	3.3	0.7							92.0
E	71.3	11.0	3.7	0.3	0.3			0.3	0.3		87.3
Defective	2.7	0.3	0.7	0.3				0.3			4.3
Total	228.3	62.0	21.7	5.7	1.7	0.3	0.7	1.0	0.3	0.0	321.7

M 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	6.8	6.4	3.8	4.0	0.2			0.2			21.4
B	20.4	7.8	4.6	4.4	4.0	1.0	0.6	0.6	0.2		43.6
C	17.8	10.8	5.6	2.8	1.8	1.8	0.8				41.4
D	101.8	43.0	12.8	5.4	0.8	0.2					164.0
E	77.8	16.2	4.6	1.8	0.6	0.6	0.2	0.4	0.2		102.4
Defective	2.8	1.8	0.8	0.8	0.4	0.6		0.2			7.4
Total	227.4	86.0	32.2	19.2	7.8	4.2	1.6	1.4	0.4	0.0	380.2

Table-7-C. Number of trees per hectare by photo-strata, by diameter class, and class of utility. (2)

M 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	9.0	7.5	2.0	2.0		1.0	0.5				22.0
B	9.5	4.5	4.0	2.0	2.5	2.0	1.5	0.5		0.5	27.0
C	12.5	6.5	2.0	1.5							22.5
D	83.0	37.5	20.0	5.0	0.5	0.5					146.5
E	99.0	8.5	3.5	2.5	1.0		0.5				115.0
Defective	2.5				1.0	0.5					4.0
Total	215.5	64.5	31.5	13.0	5.0	4.0	2.5	0.5	0.0	0.5	337.0

B 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	8.5	2.5	1.5								12.5
B	5.5	2.0	0.5								8.0
C	65.0	9.0	4.0	0.5							78.5
D	15.5	1.5	0.5								17.5
E	277.5	26.5	2.5	1.0							307.5
Defective	3.0	1.5			0.5						5.0
Total	375.0	43.0	9.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0	429.0

B 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	18.0	9.0	3.5	1.0	1.0	0.5					33.0
B	6.0	2.0	1.0	1.0		1.0	0.5	0.5			12.0
C	39.0	20.5	7.0	3.5	1.0	1.0					72.0
D	82.5	42.0	15.0	3.0	0.5						143.0
E	105.5	19.0	4.0	2.0	1.0	0.5					132.0
Defective	2.0	1.0			0.5	0.5					4.0
Total	253.0	93.5	30.5	10.5	4.0	3.5	0.5	0.5	0.0	0.0	396.0

E

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	4.0	2.0	4.5	1.0	1.0	0.5	1.0				14.0
B	14.0	5.0	1.5	0.5	2.5	1.0		0.5			25.0
C	27.0	13.0	9.0	3.0	3.0	1.0					56.0
D	141.5	38.5	10.0	3.0		0.5					193.5
E	39.0	6.5	2.0	0.5							48.0
Defective	2.5		1.5	1.5	0.5			0.5			6.5
Total	228.0	65.0	28.5	9.5	7.0	3.0	1.0	1.0	0.0	0.0	343.0

Me.

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	8.2	3.9	2.6	1.9	0.5	0.4	0.2	0.1	0.1		17.8
B	17.5	6.5	4.1	2.7	2.7	1.3	0.8	0.4	0.3	0.5	36.6
C	29.0	13.7	6.5	2.7	1.3	0.9	0.5	0.2			54.7
D	80.2	32.1	10.7	2.9	0.6	0.3	0.1				127.0
E	78.5	14.8	4.9	1.9	0.8	0.3	0.2	0.2	0.2		101.6
Defective	2.8	1.4	0.6	0.4	0.3	0.3		0.2			5.9
Total	216.2	72.3	29.4	12.5	6.1	3.3	1.8	1.0	0.5	0.5	343.8

Table-7-D. Number of trees by sample plot and by sub-plot.

Codo No.	Field No.	Photo-stratum	No. of sub-plot										Total
			1	2	3	4	5	6	7	8	9	10	
1	2	A2	13	24	17	29	18	22	22	28	24	24	221
2	26	A1	20	21	25	14	20	14	37	24	20	26	221
3	3	B2	51	40	44	47	43	32	28	31	29	27	372
4	6	A3	46	47	50	42	48	39	48	52	37	44	453
5	5	A1	32	28	38	32	42	16	21	14	18	22	263
6	7	E	19	8	16	15	22	16	16	23	23	22	180
7	31	A2	40	28	43	17	42	45	43	26	28	34	346
8	8	A1	29	40	24	50	34	46	48	49	49	33	402
9	9	A2	52	33	21	28	33	18	36	37	34	20	312
10	32	A3	30	33	42	39	43	41	33	39	41	27	368
11	10	A2	40	42	45	34	30	35	37	45	35	40	383
12	12	M	40	42	24	28	41	31	33	30	35	36	340
13	13	M	14	38	37	47	49	38	12	16	42	28	321
14	14	M2	37	66	43	36	32	53	46	34	20	31	398
15	16	M2	34	40	42	35	50	52	42	42	45	42	424
16	17	M2	24	44	34	48	39	32	14	48	35	34	352
17	18	M	37	27	35	38	26	6	21	45	34	35	304
18	15	M3	31	41	50	40	27	29	26	24	17	35	320
19	19	M3	44	37	32	35	32	37	27	34	32	44	354
20	24	M2	35	27	35	29	40	33	39	29	27	47	341
21	21	B1	27	38	48	35	43	48	41	32	44	43	399
22	22	E	61	50	43	54	41	40	39	42	55	81	506
23	23	B1	35	36	38	46	55	62	38	41	61	47	459
24	23'	A2	38	45	16	18	23	43	31	17	28	27	286
25	1	B2	34	46	62	47	56	41	33	48	32	21	420
26	33	M2	40	41	57	38	39	50	31	35	19	36	386
27	25	A2	29	36	39	49	52	46	49	50	43	54	447
28	24'	A2	29	25	21	25	49	26	39	24	29	22	289
29	28	A2	50	32	31	26	41	37	37	30	36	24	344
30	29	A2	35	19	18	24	18	9	13	14	9	31	190
31	30	A2	19	28	16	18	18	30	28	32	37	25	251
32	34	A3	43	48	30	45	34	38	28	22	33	27	348
Total												11,000	

Table-7-E. Number of defective trees and volume.

Item Code No.	curvado	descorchado	hueco	inclinado	podrido	roto	seco	semi seco	sin copa	sin gajo	sin hoja	Total No. of trees	Volume (m <sup>3</sup> )
1												0	0
2			1	1	1			3				6	4.55
3									8			0	0
4				1					2			9	1.35
5				1					1			3	0.26
6									1			1	0.03
7				4					1			5	0.32
8			1	2	1	1						7	1.03
9			1	5								6	2.54
10			1									1	3.48
11									8			8	0.45
12									1			1	0.08
13				9		1						10	0.89
14			2	8				1	2			13	3.81
15			1									1	0.03
16			2									2	4.12
17			1									1	1.33
18			2	4				1				7	1.98
19			2	5				2				7	5.32
20			2	6				2				10	0.67
21			1	8				2				12	8.52
22		1										0	0
23			3	3					1			4	0.42
24			3	6				2				8	3.20
25			3	3	2			3				16	5.22
26				3					1			4	0.50
27			1	1						11		13	2.33
28			1	2					11			15	3.69
29	1			2					8		1	11	5.17
30				2					1			1	0.09
31			2	71	2	2	3	16	50	11	1	186	62.47
32												4	1.10
Total	1	1	28	71	2	2	3	16	50	11	1	186	62.47

Appendix-8. Formulas for calculating thickness of bark. (page 46)

All the volume was calculated without bark. This method and the coefficient by species are according to the FAO report which established four formulas by species, which can be brought together into four groups. The four formulas are as follows;

Group I;  $y = 0.0236x + 0.0093$

Group II;  $y = 0.0632x + 0.0023$

Group III;  $y = 0.0768x + 0.0013$

Group IV ;  $y = 0.0824x + 0.0030$

where,  $y$ : thickness of bark  
 $x$ : D.B.H.

In addition, since it is a major feature of the study area, Peroba was calculated with another formula designed specially for Peroba as follows;

Peroba ;  $y = 0.0586x + 0.0221$

The four groups' are as follows;

Code number of species

Group I: 8,19,25,36,39,41,42,43,47,49,50,52,55,56,57,81,82,  
84,85,86,89,92,98,101,102,103,104,110,112,116,117,  
122,129,154,155,156,157,158,161,162,164,165,172,180,  
182,186

Group II: 2,3,4,5,6,9,17,18,21,23,27,37,38,48,51,53,54,61,62,  
77,78,80,95,96,97,107,109,114,118,120,121,126,127,  
128,146,148,150,159,160,163,167,168,173,174,183,184,  
187,188,193,194,195,196,197,198,199,200,201,202,203  
204

Group III: 20,79,100,105,153

Group IV: 1, 7,22,91,185

Appendix-9. Volume in detail. (page 48 )

Table-9-A. Volume (m<sup>3</sup>) by species and by sample plot. (1)

Sample plot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total			
Species	A 1	A 2	B 2	A 3	A 1	E	A 2	A 1	A 2	A 3	A 2	M	M	M 2	M 2	M 2	M	M 3	M 3	M 2	B 1	E	B 1	A 2	B 1	A 2	M 2	M 2	A 2	A 2	A 2	A 2	A 3	Total		
Proba	12.31	1.03	0.07	6.40	11.18	4.68	5.84	1.81	4.04	4.08	13.76	0.92	0.92		2.31	11.26	5.72	16.39	12.69		2.62		19.76	14.27	23.24			60.23	13.65	94.06	451.59					
Class A																																				
Cedro	0.21	0.02		1.11	0.07	0.40	0.52	2.84	0.27	0.72		0.18	0.18	1.77	0.24		0.21	1.68			0.18	1.65	0.37	0.14	0.72	1.66	1.02	1.07		0.31	1.54	2.49	19.48			
Guatambú				0.07	2.99	0.40	0.52	2.84	0.27	0.72		0.13	0.13	1.59	0.33	5.47		1.96			1.03	3.93		1.59	0.47	0.65	0.84	4.35	0.67	1.19	1.81	33.81				
Incense			2.73		0.11	0.25	0.07			0.45				2.40				0.48	0.27	0.17				0.18	1.31			0.92	0.05			9.38				
Kurupay	0.06	1.10			0.10	0.29	5.68		2.28	4.99		0.03	0.03	4.63			0.11	1.44	3.51		1.03	5.50	0.29	5.98		0.63	3.44	2.12	9.56	1.62		54.48				
Lapacho	0.37				0.50			2.87	4.08		0.11						0.59			3.51		2.95	0.54				3.26		1.38			26.64				
Petereré					0.44		0.34	0.88			0.77	1.37	2.21				0.98	2.01	0.67	0.44	1.36		0.04				0.20		0.05	0.31	1.51	2.76	16.52			
Taperya guasú				0.51	0.42	0.07				3.66	0.04	1.81	0.81	1.75	0.81	1.75	0.02	0.57	0.35	0.27	0.01	0.24	0.03			0.04	1.23	2.60	0.73	3.15	0.33		19.20			
Urundo y m <sup>l</sup>							0.50					0.88					0.06	2.41												0.01	0.01		3.79			
Yuyá ró				0.50	0.15	0.61																					1.77		0.28	1.83	3.06		8.28			
Class B																																				
Cancharana				7.42	0.51			1.55		2.60	0.68	0.24	0.26				0.29	0.06				0.31	0.81				0.25	3.72			0.64	0.19	0.07	8.92	30.82	
Kirandý	0.02							0.06																											0.09	
Kurupay ró	1.26	0.53		0.31		0.21	0.14	1.07	3.34	4.64	0.02	0.19	2.59	1.23	6.06	0.91	1.60	3.61	6.70			3.74				1.91	1.80			0.72	0.19	0.25	1.55	4.03	48.79	
Laurel alu y					0.07																														0.47	
Laurel gualcá														0.10																					0.10	
Tatajyvá	0.04			0.46						3.83	1.18		0.02	2.32			0.07	0.58										0.91		0.51		0.02			8.65	
Timbó	5.63	0.08		0.08			1.12			1.47	0.62								0.12															10.48		
Yuyá pvlá	1.75	0.43	0.07	0.18	6.53	0.53	3.01	3.73	7.63	2.09		2.84	2.48	5.64	0.43	1.63	5.03	4.50	3.53	0.16	4.84	0.59	0.65	0.54	0.58	9.51	0.82		0.56	8.49			79.15			
Kurupay curú				0.63																														0.74		
Class C																																				
Garoba																																				
Ceilita		0.01						0.02					0.19		0.05																				0.16	
Chipá rupá	0.50	0.49		5.53			1.40	0.33	0.25			2.48	2.38		1.58			0.02	0.13	0.41		1.05				0.08	0.16	2.45		0.10	0.21	0.30	0.19	2.72	22.25	
Guajayví	0.40	0.45			3.27	1.70	5.36	2.46	0.67	4.61	2.22			2.94	6.47				0.01	4.47		5.84	0.47	0.01	0.57	0.49	0.29	2.71	3.96	0.56	2.17	2.44		54.37		
Jata yvá				1.39							2.05																								7.06	
Kupa y	0.06			2.05	7.35		2.12	0.19	0.84	0.84	2.35	2.00	0.02	1.65	5.09	0.03	0.04	0.10			0.07	3.43	0.79				4.69	4.49	2.96	8.46	0.12	3.50		71.76		
Laurel canela		0.23												3.72						0.73	0.49	1.21	2.21	0.03			0.97	3.94		1.83			15.19			
Laurel	0.56	0.73	4.32	0.93	0.42	0.27	4.55	1.05	1.33	6.79	1.29	6.58	0.62	1.67	0.17	1.60	0.90	3.21	0.90	2.47	1.58	0.45	0.83	3.26			1.42	2.86	2.67	0.31	0.32	0.26	4.14	59.10		
Manduvirá		0.69	0.26	0.84	1.03		0.97			0.76		0.02	0.03			3.89	0.37	0.09														0.47			11.03	
Marmelero				1.50			0.06	0.21	0.10																										3.44	



Table-9-A. Volume (m<sup>3</sup>) by species and by sample plot. (2)

Sample plot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total			
mososyd			5.85																				0.76													
Tata juv	0.61	1.02	0.53			0.91	0.07				8.22		0.06	0.13	3.57	0.39			1.41																	
Urunde y par	2.14	3.33	3.61	2.70	2.72	0.02	0.93	4.06	1.29	0.28	3.52		0.27	3.72	3.41			0.91	0.06	0.14		5.36		0.15	0.30	1.18	3.64	0.08	0.68	1.55	3.07	49.49				
Yv				3.62				0.56	0.18	0.08	0.85		2.19						0.03	0.61				0.08												
Yvop	0.08																																			
Yvyr	0.19	0.29		0.16			2.86	0.15		0.75		0.91	0.12	2.89	0.28						0.34	0.53	1.53		0.94	0.14	3.37			0.37	0.17	15.99				
Yvyr pap	0.11	1.52			0.90	2.31	0.06		0.95	0.67	0.03	0.13	0.40	2.77	1.95	0.02			0.21	0.24	2.47						0.66	1.16	1.36	2.40	1.23	19.32				
Zota caballo						0.33																					0.14									
Guatigul pirc																											0.14									
Guatigul raf															0.52									0.01												
Class D'																																				
Agua	0.19	0.90		0.81	0.11	0.18	0.44	0.79	0.05	0.26	1.81		0.05	0.90	0.33	0.46	0.60	1.32	0.84	0.49		0.77		0.19	0.02	0.06	0.80	0.34	0.87	1.03	0.99	15.87				
Amba y	0.01	0.71	0.12	0.08			0.07	0.06		0.07	0.09		0.28	0.15	0.22	0.08	0.11		0.10								0.54	0.06	0.36	0.05	0.17	3.12				
Amba y guasu							0.62																				0.23									
Amores secos								0.04		0.56	0.54		0.17	0.46	0.57	2.49	0.08		0.15		0.11					0.49	0.01	0.02								
Burro ka k			0.04											0.20																						
Caneion pyta																																				
Cedrillo																																				
Naranja jat																																				
Tembetary	0.17	0.05								1.37	0.03																									
Jagua rata y		0.02		0.75		0.17		0.94		0.04			0.04	0.15	0.06	1.01		0.01			0.02	0.36		0.04		0.19	0.09	0.13	1.00	0.52	0.07	4.83				
Kamba a ka		0.02		0.03						0.04			0.07	0.42			0.50																			
Kurupiba y																																				
Loro blanco	0.09			0.58	1.81	0.38	0.19	0.43		0.11			1.36		0.28				0.98		0.06															
Marhero				2.04	0.13	0.92	0.11	1.20		9.34	9.17		0.72	5.61	0.13		1.66	0.12	2.47	1.93		0.06		0.11												
Mhav	0.08	0.16	0.14	0.47	0.14	0.11	0.56	1.07	2.75	2.99	1.37		0.21	1.03	1.25	0.08	2.04	3.71	2.48	0.10	0.02	2.79	0.05	1.17	0.12	0.02	0.87	0.25	2.68	0.04	0.92	6.05	35.74			
Nutmai ray i																																				
Pakur				0.13		0.06		0.04	0.15				0.56	0.44	0.76		0.14																			
Palo Amargo				2.76	0.04			0.06	4.15		2.19				0.12	2.99			4.89	2.81		0.89		0.27	1.93	1.11	66	3.07	2.62	1.09	6.27	47.81				
Palo blanco	1.19	12.28			0.04	1.12	2.78	0.17	0.75	3.19				0.59		1.41	0.40	0.22	4.27		0.06										1.04					
Para para y								0.10		0.12	0.29																									
Pytsu remblu	0.11			0.38	0.03	0.60	0.17			1.88			0.01	0.02		0.53		0.38		0.14	0.26			0.03	0.17	0.04	0.07	0.05	0.56	5.92						
Sapirangy																																				
Tala	0.01																																			
Taruna				0.48	0.07			1.29				0.25	0.14		0.48			0.02		0.24	0.20			0.12		1.04	1.53	0.37		0.08	7.21					





Table-9-B. Volume per hectare by species and by photo-strata. (1)

Species Photo-stratum	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Peroba	4.67	20.23	47.05	2.21	9.90	8.19		7.17	3.65	14.1
<b>Class A</b>										
Cedro	0.20	0.53	1.49	0.19	0.73	0.94	0.28	0.36	0.83	0.6
Guatambú	1.94	0.94	0.86	0.04	1.81	0.98		0.23	2.16	1.1
Incienso	0.04	0.10	0.15		0.78	0.37		1.46	0.12	0.3
Kurupay	0.05	2.91	2.20	0.49	1.09	1.76	0.66	0.55	2.89	1.7
Lapacho	1.12	0.92			0.82		0.27	3.23	1.47	0.8
Peterevú	0.44	0.32	0.92	1.13	0.91	0.56		0.09		0.5
Taperyva guasú		0.68	1.54	0.01	1.18	0.46	0.02	0.28	0.16	0.6
Urunde y mí	0.17				0.18	1.20				0.1
Yvyrá ró		0.39	1.07	0.02				0.25	0.31	0.3
<b>Class B</b>										
Cancharana	0.69	0.16	6.31	0.19	0.91	0.87	0.41	0.21	0.16	1.0
Kirandú	0.03					0.01				—
Kurupáy rá	0.23	1.17	2.56	0.37	3.32	2.61		0.90	1.97	1.52
Laurel aju y	0.06				0.06					—
Laurel guaica					0.02					—
Tatajyvá		0.19	1.43	0.01	0.46	0.06				0.3
Timbó	2.25	0.15	0.52	0.19	0.01					0.3
Yvyrá pytá	3.32	2.76	2.60	1.49	2.53	4.76	0.38	0.30	2.89	2.5
Kurupay curú		0.01	0.21							—
<b>Class C</b>										
Caroba		0.02								—
Colita	0.01	0.02	0.04	0.06	0.03			0.01		—
Chipá rupá	0.47	0.17	2.83	0.83	1.36	0.07		0.08	0.53	0.7
Guajayví	1.97	1.83	2.35		2.87	0.01	0.23	0.34	3.77	1.7
Jato yvá	0.15	0.52	0.46							0.2
Kupa y	0.06	2.04	2.73	6.86	2.25	0.05	0.43	3.37	1.72	2.2
Laurel canela		0.59			1.09		1.35		0.60	0.5
Laurel	1.90	1.53	3.26	3.15	0.95	2.06	1.46	1.99	1.00	1.8
Manduvirá	0.79	0.18	0.09	1.30	0.10	0.23		0.35	0.52	0.3
Marmelero	0.57		0.03		0.31					0.1
Morosyvo						0.03	0.38	2.93		0.2
Tatajuvá	0.23	1.04	0.78	1.21	0.31	0.19		0.51	0.46	0.7
Urunde y pará	3.37	1.44	2.02	0.09	1.69	0.48		1.95	2.69	1.5
Yvá ró	0.19	0.13	1.32	0.73	0.12	0.02				0.3
Yvopé		0.01								—
Yvyrá oví	0.15	0.68	0.36	0.34	0.66		0.93	0.47	0.27	0.5
Yvyrá pepé	0.81	0.70	0.63	0.05	0.57	0.10			2.39	0.6
Zota caballo		0.01								—
Guatngul pire	0.09							0.02	0.17	—
Guajayví raí					0.10			0.01		—
<b>Class D</b>										
Aguaí	0.60	0.60	0.69	0.22	0.45	1.08		0.01	0.47	0.5
Amba y	0.26	0.11	0.05	0.13	0.09	0.05		0.06		0.1
Amba y guasú		0.09	0.06							—
Amores secos	0.01	0.06	0.22	0.88	0.30	0.08			0.04	0.2

Table-9-B. Volume per hectare by species and by photo-strata. (2)

Species	Photo-stratum	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Burro Ka á			0.01			0.04	0.04		0.07		—
Canelon pytá										0.06	—
Cedrillo						0.01					—
Naranja jai						0.04					—
Tembetary		0.02	0.09	0.46	0.01	0.24	0.01				0.1
Jagua rata ý		0.32	0.18	0.28	0.02	0.12		0.01		0.26	0.2
Kambá a ká		0.01	0.02	0.07	0.17						—
Kurupika ý		0.01	0.01					0.03		0.02	—
Loro blanco		0.75	0.05	0.23	0.45	0.06	0.49		0.02	0.19	0.2
Marinero		0.44	0.96	4.61	0.79	1.53	1.29			0.49	1.2
Mbavý		0.46	1.07	3.17	0.75	0.50	3.10	0.04	0.13	1.45	1.1
Nuinuí ray í		0.01	0.08	0.07	0.23	0.24				0.03	0.1
Pakurí		0.03	2.50	3.02		1.57	2.44			0.44	1.5
Palo amargo			—								—
Palo blanco		4.16	0.58	1.06	0.13	0.42	2.25			0.56	0.9
Para para y		0.03	0.03	0.04		0.01					—
Pykasú rembiú		0.20	0.03	0.82		0.36	0.19		0.19		0.2
Sapirangý			0.04			0.04			0.09	0.13	—
Tala			0.02				0.02			0.01	—
Tarumá		0.43	0.29	0.05	0.13	0.35	0.01		0.24	0.10	0.2
Palo vino				0.27	0.03			0.22	5.05		0.4
Ysapy ý pytá		0.36	0.36	0.12	0.66	0.38	0.08	0.15	0.64	0.37	0.4
Ysyra jú		0.18	1.20	2.21	0.23	1.63	3.22		1.04	0.01	1.1
Yvá poroitý		1.00	1.70	0.83	0.69	4.36	0.71	0.44	6.96	9.67	2.6
Yvyra jú		0.33	0.46		1.17	0.11	0.34			0.05	0.3
Yvyá katú		0.05		0.39		0.31	4.75				0.4
Yvyá piú		3.05	3.48	3.32	0.01	3.96	2.35		0.89	4.37	2.8
Palo haya			0.31	0.85		0.51	0.01				0.3
Amba ý rá		0.23	0.03	0.31							0.1
Canelon		0.21	0.57	1.56	0.02	0.21	0.34		0.24	0.08	0.4
Taruma guasú			0.34						0.48		0.1
Class E											
Nuati arroyo		0.03	0.01	0.04					0.16		—
Aratikú		0.38	0.01		0.47	0.20	0.02		1.01		0.2
Chichita										0.07	—
Nangapirý		0.56	0.60	1.50	0.08	0.97	1.90	3.98	0.87	0.63	1.0
Fumo bravo			0.14	0.17	0.02	0.01		0.04	0.05	0.06	0.1
Guapo ý			0.13	0.50		0.36	0.01			0.06	0.1
Guasú mandió							0.01				—
Guavijú						0.19					—
Guavirá		0.43	0.39	0.86	0.01	0.41	0.11		0.08	0.40	0.3
Ingá		0.45	0.48	0.42	0.26	0.14	0.15		0.97	0.29	0.4
Kaá rá				0.02							—
Jacaratiá		1.04	0.94	0.39	1.10	0.41	0.17			0.15	0.6
Jukerí guasú		0.31	0.27	0.07	0.10		0.35				0.2
Ka á		0.07		0.38				0.29	0.02		0.1

Table-9-B. Volume per hectare by species and by photo-strata. (3)

Species	Photo-stratum	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Mean
Katiguá		0.80	0.55	0.81	0.23	0.16	0.22		0.05	0.48	0.4
Kurundý		0.01			0.01		0.28				—
Mboreví ka á		0.06	0.13	0.14	0.08	0.27	0.21	0.03	0.63	0.01	0.2
Molle						0.02					—
Nandú apusa		0.03	0.02						0.02		—
Nandypá		0.05	0.03	0.06	0.03	0.02	0.01	0.01	0.02	0.04	—
Nandypá guasú			0.09		0.06						—
Ombú		1.57	0.61	0.19	0.96	2.04	1.49			0.35	0.9
Pynó guasú		0.01	0.03		0.09	0.35	0.03			0.25	0.1
Rabo itá		0.11	0.12	0.25		0.70	0.32				0.2
Rabo molle						0.35					0.1
Samu hú			3.99		2.38	1.00	1.11				1.7
Sangre de dragón		0.95	0.73	0.24		0.65					0.4
Tataré					0.04			2.30	1.17		0.2
Cocotero		0.03			0.12				0.30		—
Gallo espuela				0.03							—
Manaué									0.43		—
No identificado		0.91	0.77	4.94	0.31	0.45	1.20	0.27	1.06	0.07	1.1
Noaga		0.33	0.48	0.32	0.06	0.69	0.39		0.65		0.4
Pindó		0.64	0.23	2.23	2.80	2.20	3.17	7.10	0.05	0.71	1.6
Para todo									2.15		0.1
Yusy y		0.10	0.08		0.09	0.15				0.03	0.1
Ysy rá							0.24				—
Tacuara						0.02	0.22				—
Plomo			0.06								—
Sañal					0.04						—
Sub-total		48.00	68.58	124.15	37.06	66.73	60.25	21.71	52.75	53.11	63.21
Defective tree		1.95	1.55	1.98	1.70	2.88	1.65	0.34	1.60	4.28	1.95
Total		49.95	70.13	126.13	38.76	69.61	61.91	22.05	54.35	57.39	65.17

Table-9-C. Volume by sample plot, by diameter class,  
and by class of utility. (1)

P 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.07	0.13	0.37								0.57
B	0.73	0.89	3.12	1.13	1.97	3.30	4.22				15.35
C	0.27	0.62	0.63		1.95						3.47
D	1.74	2.83	2.64	1.86							9.06
E	1.09	1.24		0.87		1.32					4.52
Defective											0.00
Total	3.90	5.71	6.76	3.86	3.91	4.62	4.22				32.98

P 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.08										0.08
B	0.90	0.18	1.04							5.63	7.75
C	0.52	0.74	0.56	2.67	1.71	1.23					7.43
D	1.09	2.92	4.98	5.77	3.55						18.30
E	2.06	1.55	1.24	0.39		0.98					6.21
Defective				1.35	1.08	2.12					4.55
Total	4.65	5.38	7.82	10.18	6.34	4.33				5.63	44.33

P 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	1.52	2.25	1.92								5.68
B	0.14										0.14
C	3.01	4.54	3.91	1.69	0.87						14.01
D	1.63	3.52	5.69	2.54							13.38
E	2.80	5.11	2.74	1.88	1.36	1.49					15.39
Defective											
Total	9.10	15.41	14.26	6.10	2.23	1.49					48.60

P 4

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.23	0.07	1.08								1.37
B	0.95	1.23	6.39	3.35	3.55						15.48
C	2.27	4.07	7.87	3.76		1.39	6.49				25.84
D	6.51	9.27	2.74	0.66		2.56					21.74
E	6.29	6.23	2.83	0.69	2.53	1.66					20.24
Defective	0.28	0.62	0.45								1.35
Total	16.53	21.49	21.35	8.45	6.09	5.61	6.49				86.01

P 5

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.23	0.10	1.92	1.89							4.14
B	0.54	1.24	1.94	0.82	2.04	1.83		3.68		6.19	18.28
C	0.65	2.23	0.75	0.72	1.74	4.07					10.16
D	1.82	3.11	3.42	1.95							10.31
E	3.05	2.06	1.00	1.54	1.68						9.32
Defective	0.02	0.13	0.10								0.26
Total	6.31	8.87	9.14	6.92	5.46	5.90		3.68		6.19	52.47

Table-9-C. Volume by sample plot, by diameter class, and by class of utility. (2)

P 6

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.09	0.25	0.68		0.61						1.63
B	0.31	0.60	0.82		1.38	2.71					5.82
C	0.82	1.04	2.36	0.88	1.10	0.54					6.74
D	1.38	1.31	2.20	1.69							6.58
E	2.15	0.94	1.14	0.53							4.76
	0.03										0.03
Tc	4.77	4.14	7.20	3.11	3.10	3.25					25.56

P 7

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.44	0.26	0.53	1.32	1.18	2.89					6.61
B	0.52	0.53	0.50	0.80	2.14	1.50					5.99
C	1.16	2.13	2.80	1.26	1.35	0.92	2.05				11.67
D	2.44	4.00	4.05	1.52	1.46						13.46
E	1.71	1.64	4.74	7.13	8.35	1.07	4.09	1.44	5.65		35.83
Defective	0.11		0.20								0.32
Total	6.37	8.56	12.82	12.03	14.47	6.39	6.15	1.44	5.65		73.88

P 8

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.37	1.11	2.19	1.49	0.88		1.63				7.66
B	0.90	1.62	1.19	0.30	1.13	1.48	1.12				7.72
C	1.39	3.82	1.87	3.72	2.73	1.12					14.64
D	2.90	4.82	1.61	0.41	0.28	0.86					10.87
E	3.62	3.20	3.97	0.33							11.13
Defective	0.03	0.48			0.52						1.03
Total	9.22	15.04	10.82	6.24	5.54	3.45	2.74				53.06

P 9

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.13	0.27	0.58	1.64					4.08		6.71
B	1.76	3.35	6.10	2.61	7.98	6.77	5.93		3.54	7.17	45.20
C	0.59	1.09	3.05	1.39							6.12
D	5.80	7.34	6.20	1.07							20.41
E	0.85	1.39	2.29								4.52
Defective	0.05	0.24	1.18			1.07					2.54
Total	9.18	13.68	19.40	6.71	7.98	7.84	5.93		7.62	7.17	85.51

P 10

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.24	0.57	2.26	0.96		4.30	2.36				10.69
B	1.37	2.67	5.40	4.99	6.64	16.34	10.74		3.47	7.93	59.56
C	0.78	1.96	2.06	0.48		1.62		2.01			8.91
D	3.01	9.07	7.06	1.63	2.22	1.39	3.27	1.62			29.27
E	2.28	1.52	0.45	1.06	3.34						8.64
Defective										3.48	3.48
Total	7.68	15.78	17.23	9.12	12.20	23.66	16.38	3.63	3.47	11.41	120.54



Table-9-C. Volume by sample plot, by diameter class,  
and by class of utility. (3)

P 11

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.36	0.77	0.78								1.91
B	0.48	1.13	1.50	4.56	7.18	3.01			5.13		22.98
C	1.72	4.70	6.52	1.73	1.19	4.31	4.65	1.97			26.79
D	5.58	3.64	6.92	5.13	3.13	3.14	1.86				29.39
E	3.05	3.09	2.42	2.24			2.08				12.88
Defec- tive	0.26	0.19			11.						0.45
Total	11.46	13.51	18.13	13.66	11.50	10.47	8.59	1.97	5.13		94.41

P 12

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.06	0.12									0.18
B	0.02		0.24								0.26
C	3.27	5.83	5.80	4.81	0.92	2.11					22.74
D	2.32	1.47									3.79
E	6.74	0.16									6.90
Defec- tive	0.08										0.08
Total	12.48	7.59	6.05	4.81	0.92	2.11					33.95

P 13

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.86	0.84									1.70
B	1.46	0.33	0.12					2.32			4.23
C	3.48	5.71	2.88								12.07
D	1.80	1.34	0.51	0.90							4.55
E	1.45	1.65	0.72	0.18							3.99
Defec- tive	0.19	0.12	0.59								0.89
Total	9.23	10.00	4.81	1.08				2.32			27.43

P 14

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.64	1.30	2.22	6.81				1.90			12.88
B	1.20	1.93	0.85	1.77	1.74						7.50
C	0.68	0.65	0.99	0.86	2.67	2.95					8.79
D	2.94	2.54	4.78	3.13	1.54	0.71					15.63
E	11.23	2.58	2.94	3.75	0.68	2.62	1.40	5.01	2.55		32.75
Defec- tive											
Total	16.69	9.00	11.78	16.32	6.63	6.28	1.40	6.91	2.55		77.55

P 15

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.20	1.06	1.00	1.53							3.79
B	0.32	0.58	1.39	3.26	2.40	1.22					9.18
C	1.79	4.73	4.83	2.96	5.23	1.15					20.69
D	7.17	9.14	3.03	0.53							19.88
E	1.50	0.41		0.56							2.48
Defec- tive	0.31	0.38	0.29	1.27	1.56						3.81
Total	11.29	16.31	10.54	10.12	9.19	2.37					59.82

Table-9-C. Volume by sample plot, by diameter class, and by class of utility. (4)

P 16

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	1.01	1.89	3.49	2.51							8.90
B	2.47	2.85	2.96	3.97	3.33			2.54			18.12
C	0.51	1.59	0.57	1.84	1.20	1.84	2.93				10.48
D	2.44	2.57	4.08	4.80	1.26						15.15
E	3.47	3.49	2.53	0.38	0.49						10.37
Defective	0.03										0.03
Total	9.95	12.39	13.63	13.50	6.27	1.84	2.93	2.54			63.05

P 17

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.60	0.68	0.97	1.50							3.74
B	0.76	0.80	0.34	1.48	4.05		1.47				8.89
C	0.95	2.49	1.64	0.54	1.43		2.05				9.11
D	3.36	4.74	3.82								11.92
E	4.37	3.15	2.48		0.81			2.02	4.30		17.13
Defective				0.72				3.40			4.12
Total	10.04	11.85	9.24	4.24	6.30		3.51	5.42	4.30		54.91

P 18

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.57	1.42	1.24	2.64		2.15	1.58				9.59
B	0.33	0.81	0.57	0.69	1.38	0.68				2.29	6.75
C	0.46	0.62	0.89	0.78							2.75
D	1.69	2.84	3.47	0.83							8.83
E	7.84	1.55	1.24	2.44	1.02		2.00				16.08
Defective						1.33					1.33
Total	10.89	7.24	7.41	7.38	2.40	4.16	3.57			2.29	45.34

P 19

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.38	0.85				1.71					2.95
B	0.50	0.57	2.64	1.81	4.12	6.04	6.43	4.14			26.25
C	0.70	1.46	0.39	1.18							3.74
D	5.96	9.64	11.56	6.80	0.99	1.92					36.86
E	1.71	1.05	2.06	0.75	1.12						6.70
Defective	0.29				1.69						1.98
Total	9.54	13.57	16.65	10.55	7.92	9.67	6.43	4.14			78.48

P 20

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.41	1.61	1.22	1.76	1.45						6.46
B	1.01	0.78	1.93	4.10	4.88	4.04	2.03	2.09	2.60		23.46
C	1.21	1.41	1.62	0.53		2.80	1.32				8.89
D	5.98	7.61	3.30	0.67							17.56
E	1.11	1.73	0.49	0.55		1.45					5.34
Defective	0.02	0.75		0.41		0.71		3.42			5.32
Total	9.75	13.90	8.56	8.02	6.33	9.01	3.35	5.51	2.60		67.03

Table-9-C. Volume by sample plot, by diameter class, and by class of utility. (5)

P 21

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.53	0.17	0.52								1.23
B	0.05	0.11									0.16
C	1.50	1.37	0.49								3.37
D	0.27										0.27
E	8.58	2.12	0.60	0.18							11.47
Defective	0.23	0.17			0.28						0.67
Total	11.16	3.95	1.61	0.18	0.28						17.17

P 22

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.28	0.74	3.83	1.73	1.02	2.53	4.14				14.27
B	0.90	0.99	0.39	0.91	4.58			3.74			11.51
C	1.87	3.59	4.60	2.86	6.54	2.01					21.47
D	11.74	11.14	4.54	1.81		1.81					31.04
E	1.75	0.66									2.41
Defective	0.16		0.85	1.88	1.36			4.26			8.52
Total	16.70	17.11	14.22	9.20	13.50	6.35	4.14	8.00			89.22

P 23

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.29	0.52	0.44								1.24
B	0.52	0.50	0.38								1.40
C	2.99	1.25	1.61	0.35							6.20
D	0.81	0.37	0.34								1.51
E	13.19	2.77	0.33	0.29							16.58
Defective											
Total	17.79	5.40	3.10	0.65							26.93

P 24

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.52	1.13	0.57	0.74	1.50			3.29			7.75
B	1.82	2.89	2.36	1.34	5.26	3.44	2.39	3.09			22.58
C	0.79	0.74									1.53
D	2.45	0.78	0.69								3.92
E	2.82	6.28	2.76	0.88							12.74
Defective	0.03	0.40									0.42
Total	8.42	12.21	6.39	2.96	6.76	3.44	2.39	6.38			48.95

P 25

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.36	0.58	0.25	1.73	2.63	1.67					7.22
B	0.49	0.84	0.87	1.40		4.68	3.19	5.38			16.85
C	0.68	2.53	1.06	2.08	0.94	2.75					10.04
D	5.80	7.28	3.89	0.76	1.09						18.82
E	3.26	0.29	0.43								3.97
Defective	0.08	0.21			1.61	1.29					3.20
Total	10.67	11.73	6.51	5.97	6.27	10.40	3.19	5.38			60.10

Table-9-C. Volume by sample plot, by diameter class, and by class of utility. (6)

P 26

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.43	0.86	1.60	2.58							5.47
B	0.12	0.78	2.67	3.52	9.82	1.14	5.77	4.01			27.83
C	0.55	1.30	1.83	3.01	0.85	3.94	1.79				13.28
D	3.47	9.61	3.74	4.18							21.01
E	3.05	2.11	2.25		0.37						7.78
Defective	0.18	0.31	0.90	0.35	1.05	2.44	7				5.22
Total	7.80	14.97	12.99	13.65	12.09	7.52	7.57	4.01			80.59

P 27

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	1.10	0.31	0.71	2.78	1.52						6.43
B	0.02			1.44	6.54	2.41					10.41
C	3.36	5.90	2.88	4.06	1.97	2.06	2.71				22.95
D	7.50	9.09	5.94	3.45		2.10					28.08
E	1.34	0.90	1.77	0.75				1.97			6.73
Defective	0.20		0.30								0.50
Total	13.52	16.20	11.60	12.49	10.03	6.58	2.71	1.97			75.10

P 28

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.23			1.57							1.80
B	0.62	1.77	1.56	3.39	4.09	1.97	0.78				14.18
C	1.04	1.77	1.98	0.71	2.71	0.59	4.74	2.19			15.74
D	3.51	3.20	3.56	0.49	0.96	2.33					14.05
E	1.81	1.11	1.17								4.09
Defective	0.29	0.89	0.54	0.62							2.33
Total	7.50	8.74	8.82	6.78	7.76	4.88	5.51	2.19			52.19

P 29

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.15	1.31	3.06	3.81	1.31	2.26			3.26		15.18
B	1.20	2.86	3.96	4.33	8.65	1.39	2.63				25.02
C	1.23	0.38	2.67	1.09	0.73			1.83			7.93
D	4.11	11.40	6.05	0.64							22.20
E	1.87	1.82	1.40	0.63							5.72
Defective	0.45	0.54	0.65	0.35				1.70			3.69
Total	9.01	18.31	17.79	10.86	10.69	3.64	2.63	3.53	3.26		79.74

P 30

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.75	0.54	0.61	0.85	1.27						4.03
B	0.71	0.87	0.38	0.62	4.63	3.94	4.78	8.82	8.59	27.89	61.23
C	0.42	0.47	0.96	0.46							2.31
D	1.51	0.69	2.72								4.91
E	1.77	2.54	3.01	1.40							8.72
Defective	0.30	0.49	0.16					4.23			5.17
Total	5.46	5.60	7.85	3.33	5.90	3.94	4.78	13.04	8.59	27.89	86.38

Table-9-C. Volume by sample plot, by diameter class,  
and by class of utility. (7)

P 31

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.94	1.10	1.37	2.71	3.90	4.29			2.76		17.07
B	0.49	1.41	1.52	4.91	4.08		3.56	3.46		4.35	23.77
C	0.83	1.93	0.55	2.47	0.67	0.80		3.44			10.68
D	1.76	3.66	0.75		1.04						7.21
E	2.10	1.62	1.64	0.68	1.41				5.93		13.39
Defec- tive	0.08										0.09
Total	6.20	9.71	5.84	10.77	11.09	5.09	3.56	6.90	8.69	4.35	72.20

P 32

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	0.25	0.37	2.35	4.56		0.54	4.60				12.67
B	0.78	2.80	3.18	3.99	1.97	2.12	11.69	8.38	11.25	60.85	107.01
C	1.27	2.68	2.75	2.48	5.45	1.34					15.97
D	5.20	7.15	6.22	2.32	0.86		1.55				23.29
E	2.92	2.78	3.28	0.69	0.22	1.89					11.78
Defec- tive	0.18	0.07		0.85							1.10
Total	10.61	15.84	17.78	14.89	8.50	5.89	17.84	8.38	11.25	60.58	171.83

Total of sample plots

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101~	Total
A	14.31	23.18	37.75	47.13	17.27	22.35	14.30	5.19	10.11		191.59
B	24.37	37.90	56.32	61.50	105.54	70.01	66.73	51.65	34.59	122.30	630.89
C	42.77	75.35	73.37	51.36	43.94	39.54	28.74	11.45			366.52
D	115.66	158.06	120.52	55.56	18.37	16.82	6.68	1.62			493.28
E	112.83	68.70	53.92	30.78	23.38	12.50	9.57	10.43	18.44		340.55
Defec- tive	3.90	5.97	6.21	7.80	9.15	8.96		17.01		3.48	62.47
Total	313.85	369.17	348.09	254.13	217.64	170.17	126.02	97.34	63.13	125.77	2085.30

Table-9-D. Volume per hectare by photo-strata, by diameter class, and by class of utility. (1)

A 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.22	0.40	1.37	1.13	0.29		0.54				3.96
B	0.78	1.01	1.39	0.37	1.06	1.10	0.37	1.23		3.94	11.25
C	0.85	2.26	1.06	2.37	2.06	2.14					10.75
D	1.94	3.61	3.34	2.71	1.28	0.29					13.16
E	2.71	2.27	2.07	0.75	0.56	0.33					8.89
Defective	0.02	0.20	0.03	0.45	0.53	0.71					1.95
Total	6.73	9.76	9.26	7.78	5.78	4.56	0.91	1.23	0.00	3.94	49.95

A 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.47	0.58	0.86	1.54	1.07	0.94		0.33	1.01		6.81
B	0.83	1.57	2.10	2.51	5.25	2.77	2.43	1.54	1.73	3.94	24.67
C	1.14	1.97	2.20	1.32	1.06	0.87	1.42	0.94			10.92
D	3.64	4.66	3.95	1.42	0.66	0.76	0.19				15.27
E	1.84	2.16	2.12	1.46	0.98	0.24	0.62	0.34	1.15		10.91
Defective	0.18	0.27	0.30	0.10		0.11		0.59			1.55
Total	8.10	11.22	11.54	8.35	9.01	5.69	4.65	3.74	3.90	3.94	70.13

A 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.24	0.33	1.90	1.84		1.61	2.32				8.24
B	1.03	2.23	4.99	4.11	4.05	6.15	7.48	2.79	4.91	22.94	60.68
C	1.44	2.90	4.22	2.24	1.82	1.45	2.16	0.64			16.91
D	4.90	8.50	5.34	1.54	1.03	1.32	1.61	0.54			24.77
E	3.83	3.51	2.18	0.82	2.03	1.19					13.55
Defective	0.15	0.23	0.15	0.28						1.16	1.98
Total	11.60	17.70	18.79	10.82	8.93	11.72	13.57	4.00	4.91	24.09	126.13

M

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.50	0.55	0.32	0.50							1.87
B	0.74	0.38	0.23	0.49	1.35		0.49	0.77			4.46
C	2.57	4.68	3.44	1.78	0.78	0.70	0.68				14.64
D	2.49	2.52	1.44	0.30							6.76
E	4.19	1.65	1.06	0.06	0.27			0.67	1.43		9.34
Defective	0.09	0.04	0.20	0.24				1.13			1.70
Total	10.58	9.81	6.70	3.38	2.41	0.70	1.17	2.58	1.43	0.00	38.76

M 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.54	1.35	1.91	3.04	0.29			0.38			7.50
B	1.02	1.39	1.96	3.32	4.43	1.28	1.56	1.73	0.52		17.22
C	0.95	1.94	1.97	1.84	1.99	2.53	1.21				12.43
D	4.40	6.29	3.79	2.66	0.56	0.14					17.85
E	4.07	2.06	1.64	1.05	0.31	0.82	0.28	1.00	0.51		11.74
Defective	0.11	0.29	0.24	0.41	0.52	0.63		0.68			2.88
Total	11.09	13.31	11.50	12.32	8.10	5.40	3.05	3.80	1.03	0.00	69.61

Table-9-D. Volume per hectare by photo-strata,  
by diameter class, and by class of utility. (2)

M 3

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.48	1.14	0.62	1.32		1.93	0.79				6.27
B	0.41	0.69	1.60	1.25	2.75	3.36	3.22	2.07		1.15	16.50
C	0.58	1.04	0.64	0.97							3.24
D	3.82	6.24	7.51	3.81	0.49	0.96					22.84
E	4.77	1.30	1.65	1.60	1.07		1.00				11.39
Defective	0.15				0.85	0.66					1.65
Total	10.21	10.40	12.03	8.97	5.16	6.91	5.00	2.07	0.00	1.15	61.91

B 1

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.41	0.35	0.48								1.23
B	0.28	0.31	0.19								0.78
C	2.25	1.31	1.05	0.18							4.79
D	0.54	0.18	0.17								0.89
E	10.88	2.44	0.46	0.24							14.02
Defective	0.11	0.08			0.14						0.34
Total	14.47	4.67	2.36	0.41	0.14	0.00	0.00	0.00	0.00	0.00	22.05

B 2

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.94	1.41	1.08	0.86	1.31	0.84					6.45
B	0.31	0.42	0.44	0.70		2.34	1.59	2.69			8.49
C	1.84	3.54	2.49	1.88	0.90	1.38					12.03
D	3.71	5.40	4.79	1.65	0.54						16.10
E	3.03	2.70	1.59	0.94	0.68	0.75					9.68
Defective	0.04	0.11			0.80	0.65					1.60
Total	9.89	13.57	10.38	6.03	4.25	5.95	1.59	2.69	0.00	0.00	54.35

E

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.18	0.49	2.25	0.87	0.82	1.26	2.07				7.95
B	0.61	0.79	0.61	0.46	2.98	1.36		1.87			8.67
C	1.35	2.32	3.48	1.87	3.82	1.28					14.11
D	6.55	6.23	3.37	1.75		0.91					18.81
E	1.95	0.80	0.57	0.27							3.59
Defective	0.10		0.43	0.94	0.68			2.13			4.28
Total	10.74	10.62	10.71	6.15	8.30	4.80	2.07	4.00	0.00	0.00	57.39

- Mean

	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
A	0.45	0.72	1.18	1.47	0.54	0.70	0.45	0.16	0.32		5.99
B	0.76	1.18	1.76	1.92	3.30	2.19	2.09	1.61	1.08	3.82	19.72
C	1.34	2.35	2.29	1.61	1.37	1.24	0.90	0.36			11.45
D	3.61	4.94	3.77	1.74	0.57	0.53	0.21	0.05			15.42
E	3.53	2.15	1.69	0.96	0.73	0.39	0.30	0.33	0.58		10.64
Defective	0.12	0.19	0.19	0.24	0.29	0.28		0.53		0.11	1.95
Total	9.81	11.54	10.88	7.94	6.80	5.32	3.94	3.04	1.97	3.93	65.17

Appendix-10. Total tree height in detail. (page 57)

Table-10-A. Mean height and mean diameter by sample plot.

D. B. H. over 10cm.						D. B. H. over 41cm.					
Code No.	Mean D.B.H.	Mean di. at 5m	Mean di. at c.m.h.	Mean tree height	Mean commercial height	Code No.	Mean D.B.H.	Mean di. at 5m	Mean di. at c.m.h.	Mean tree height	Mean commercial height
1	21.33	18.60	18.28	9.85	3.16	1	53.29	43.21	40.36	19.14	7.21
2	22.71	19.02	18.60	9.48	3.71	2	51.97	42.72	41.24	14.24	5.24
3	21.05	18.33	18.08	11.05	3.66	3	47.33	43.73	43.73	13.20	4.53
4	21.66	19.01	18.33	12.81	5.07	4	52.77	44.77	43.15	17.35	5.94
5	23.37	20.30	19.83	11.13	3.72	5	55.33	45.04	42.83	19.71	5.90
6	21.81	18.27	17.92	9.14	3.54	6	54.31	41.38	38.62	14.69	4.85
7	25.07	21.23	20.74	10.75	3.50	7	54.87	42.35	40.44	14.25	4.95
8	21.53	18.59	18.40	10.74	3.47	8	52.52	44.16	43.00	16.72	4.64
9	23.08	19.01	17.46	11.49	5.72	9	60.73	48.14	41.82	21.50	10.64
10	25.73	21.60	20.64	12.09	4.70	10	63.02	51.06	47.32	19.72	7.72
11	23.01	19.21	18.12	11.79	5.03	11	56.61	46.00	42.02	19.29	7.17
12	18.72	16.79	16.64	9.07	3.70	12	46.80	41.60	40.50	15.40	5.30
13	17.60	15.07	14.69	8.88	3.61	13	54.75	45.50	45.50	12.75	3.63
14	21.87	18.58	17.83	11.40	5.18	14	53.81	43.29	40.48	18.88	5.95
15	20.15	17.16	16.78	10.98	4.03	15	49.04	39.62	37.19	18.73	6.38
16	22.25	18.07	17.20	11.80	4.65	16	50.03	39.97	37.06	19.06	6.85
17	20.74	16.66	15.70	10.24	4.83	17	59.53	49.27	43.13	18.67	8.67
18	20.26	17.82	17.25	10.20	4.12	18	55.75	49.90	48.35	14.50	5.20
19	22.34	18.93	17.92	10.73	4.69	19	55.06	45.42	40.97	16.61	7.58
20	22.63	19.21	18.47	10.30	4.25	20	57.20	46.73	42.53	15.97	6.53
21	15.03	13.69	13.57	8.00	2.82	21	47.50	38.50	38.50	11.50	1.75
22	20.01	16.73	15.92	11.04	4.77	22	54.90	44.67	39.23	18.67	7.87
23	15.50	14.15	14.09	8.12	3.35	23	43.00	35.00	35.00	14.00	3.00
24	20.33	17.01	16.24	11.22	4.58	24	58.13	48.47	44.20	23.33	7.93
25	19.39	16.67	16.27	9.67	3.58	25	55.04	45.13	41.26	21.87	7.87
26	24.02	21.66	21.22	10.09	3.49	26	53.75	48.53	46.52	15.68	5.50
27	20.85	18.00	17.68	11.30	4.22	27	53.35	44.76	42.88	18.82	6.03
28	21.97	19.71	19.46	11.14	3.71	28	55.58	51.35	50.08	15.23	5.71
29	22.98	19.64	18.97	12.78	5.04	29	54.57	44.71	42.32	21.29	7.55
30	25.31	23.26	22.60	11.67	4.23	30	70.48	65.90	63.00	21.43	8.05
31	24.43	20.67	19.78	12.81	4.49	31	60.44	50.12	46.12	22.41	7.21
32	26.99	22.73	21.09	13.21	5.52	32	69.87	56.98	50.94	20.74	8.57
Mean	21.47	18.43	17.82	10.79	4.21	Mean	56.25	46.68	43.60	18.16	6.65

(Diameter (cm)  
Height (m))



Table-10-B. Mean height and mean diameter by photo-strata.

, D. B. H. over 10cm.						- - D. B. H. over 41cm.					
Photo-stratum	Mean D.B.H.	Mean di. at 5m	Mean di. at c.m.h.	Mean tree height	Mean commercial height	Photo-stratum	Mean D.B.H.	Mean di. at 5m	Mean di. at c.m.h.	Mean tree height	Mean commercial height
A 1	22.37	19.21	18.87	10.54	3.61	A 1	53.18	43.90	42.29	16.72	5.25
A 2	22.72	19.46	18.75	11.50	4.42	A 2	57.14	47.48	44.48	18.95	6.88
A 3	24.52	20.92	19.87	12.69	5.08	A 3	63.48	52.02	47.83	19.61	7.67
M	18.99	16.18	15.69	9.38	4.03	M	53.30	45.17	41.73	16.50	6.72
M 2	22.13	18.91	18.28	10.92	4.31	M 2	52.78	43.90	41.11	17.51	6.16
M 3	21.35	18.40	17.60	10.47	4.42	M 3	54.81	46.81	43.56	15.63	6.55
B 1	15.28	13.94	13.84	8.06	3.10	B 1	38.60	31.60	31.60	11.60	2.30
B 2	20.17	17.45	17.12	10.32	3.62	B 2	51.56	44.21	41.92	18.15	6.46
E	20.58	17.23	16.53	10.56	4.46	E	54.42	43.56	39.09	17.20	6.87
Mean	21.47	18.43	17.82	10.79	4.21	Mean	56.25	46.68	43.60	18.16	6.65

Table-10-C. Number of trees per sample plot by height class and diameter class. (1)

P 1

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	9	2									11
5-6	21										21
7-8	59	15	1	2							77
9-10	25	12	1								38
11-12	13	11	6	1							31
13-14	4	6	6	1							17
15-16		6									6
17-18		2		1	2						5
19-20			3								3
21-			5	2	1	3	1				12
Total	131	54	22	7	3	3	1				221

P 2

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	8										8
5-6	36	1									37
7-8	42	8		1							51
9-10	36	15	4	3							58
11-12	11	12	4	4							31
13-14		3	2	8	1	1					15
15-16	1	1	4	1		3					10
17-18			2	1	3						6
19-20			2	1	1						5
21-										1	5
Total	134	40	18	19	5	4				1	221

P 3

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2	1										1
3-4	2										2
5-6	7										7
7-8	42	2	1								45
9-10	75	10		1							85
11-12	70	57	12	2							141
13-14	14	23	19	8	2	1					67
15-16	4	5	5		1						15
17-18		4	4								8
19-20											8
21-											8
Total	215	101	41	11	3	1					371

Table-10-C. Number of trees per sample plot by height class and diameter class. (2)

P 4

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											1
3-4	1										1
5-6	9										9
7-8	41	4	1								46
9-10	54	5	3	1							63
11-12	96	23	3	1							123
13-14	32	34	14	4							84
15-16	16	20	15	5	2						58
17-18	4	13	7	2	1		1				28
19-20	10	4	5	2		1					22
21-	4	6	3		2	2	2				19
Total	267	109	51	15	5	3	3				453

P 5

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2	1										1
3-4	4	1									5
5-6	8	1									9
7-8	77	10	4								91
9-10	26	8	2								36
11-12	16	25	5	1							47
13-14	4	8	4	1	1						18
15-16	4	3	4	2							13
17-18	2	1	4	3	2	1					13
19-20	3	2	4	2	2						13
21-		5	3	3	1	3		1		1	17
Total	145	64	30	12	6	4		1		1	263

P 6

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											1
3-4	1										1
5-6	38					1					39
7-8	39	7	2								48
9-10	21	8	1								30
11-12	11	15	14	3	1						44
13-14	2	1	4	1	1						9
15-16	1	1	1	1							4
17-18					2	1					3
19-20					1	1					2
21-											
Total	113	32	22	5	5	3					180

Table-10-C. Number of trees per sample plot by height class and diameter class. (3)

P 7

Height D.B.H.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	101-	Total
1-2											
3-4	1										1
5-6	24	1									25
7-8	66	7		1	1						75
9-10	60	16	5	2							83
11-12	19	18	13	4	3						57
13-14	13	14	13	12	9	2		1			64
15-16	1	5	4	4	3	1	1				19
17-18	2	1	4	1	2	1	2		1		14
19-20			3	1	1	1			1		7
21-			1								1
Total	186	62	43	25	19	5	3	1	2		346

P 8

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	8	1									9
5-6	32	3									35
7-8	58	3	2								63
9-10	74	20	4		1						99
11-12	49	34	6			1					90
13-14	11	24	10	5							50
15-16	1	15	7	4	1						28
17-18		4	5	3	2		1				15
19-20		1	4	1	3	1					10
21-		1				1	1				3
Total	233	106	38	13	7	3	2				402

P 9

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	4										4
5-6	11		1								12
7-8	78	12	1								91
9-10	33	13	5	1							52
11-12	29	14	6								49
13-14	11	13	6	1							31
15-16	6	7	8	1							23
17-18	1	4	3						1		8
19-20	1	6	8	2	1						18
21-		3	6	3	4	4	2		1	1	24
Total	174	72	44	8	5	4	2		2	1	312

Table-10-C. Number of trees per sample plot by height class and diameter class. (4)

P 10

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	2	1									3
5-6	21										21
7-8	60	11									71
9-10	44	13	3	1							61
11-12	29	27	9					1			66
13-14	17	19	8	3							47
15-16	5	8	6	3	1			1			24
17-18	3	8	10	6	3	3	2				35
19-20	2	7	4	2	2	1					19
21-	1	1	2		3	7	5		1	1	21
Total	184	95	42	15	9	11	7	2	1	2	368

P 11

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	2										2
5-6	25	2	1								28
7-8	51	4	2								57
9-10	94	13	1								108
11-12	44	17	6	5	1		1				74
13-14	6	13	9	1							29
15-16	4	4	4	1		1					14
17-18	3	10	7	3	2						25
19-20	1	4	8	5	2	1	2				23
21-		2	5	4	5	4	1	1	1		23
Total	230	69	43	19	10	6	4	1	1		383

P 12

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4											
5-6	55	3									58
7-8	68	8	1								77
9-10	88	27	7								122
11-12	30	4	10	4							61
13-14	5	1	3								12
15-16	1		2	2							6
17-18				2	1						3
19-20											
21-						1					1
Total	247	60	23	8	1	1					340

Table-10-C. Number of trees per sample plot by height class and diameter class. (5)

P 13

Height	D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2												
3-4		6	1									7
5-6		31	2									33
7-8		131	16	8	1							156
9-10		39	7	1								47
11-12		17	8	2								27
13-14		10	4	3	2							19
15-16		6	17	3					1			27
17-18		1	3									4
19-20				1								1
21-												
Total		241	58	18	3				1			321

P 14

Height	D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2												
3-4		2										2
5-6		49	6									55
7-8		53	10	2								65
9-10		51	14	4	1							70
11-12		44	20	4	2		1					71
13-14		39	3	1	2							45
15-16		15	4	3	3	2	1					28
17-18		9	5	11	4	1						30
19-20			2	4	8	2		1		1		18
21-				1	4	3	3		3			14
Total		262	64	30	24	8	5	1	3	1		398

P 15

Height	D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2												
3-4		3										3
5-6		32	1									33
7-8		75	5	2								82
9-10		107	17	3								127
11-12		34	33	5	1	1						74
13-14		9	17	4	1							31
15-16		4	8	2	3	1						18
17-18		3	14	3	7		1					28
19-20		1	4	9	2							16
21-			1	2	3	5	1					12
Total		268	100	30	17	7	2					424

Table-10-C. Number of trees per sample plot by height class and diameter class. (6)

P 16

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2	1										1
3-4	4	1									5
5-6	25										25
7-8	62	7	1								70
9-10	45	16	1	1							63
11-12	27	12	6		1						46
13-14	28	21	2	1							52
15-16	5	9	5	1	1						21
17-18	5	8	8	9	1	1					32
19-20		6	4	1	2		2				15
21-	2	1	9	7	2			1			22
Total	204	81	36	20	7	1	2	1			352

P 17

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											4
3-4	4										4
5-6	30	2									32
7-8	94	13	1		1						109
9-10	29	14	4								47
11-12	18	7	2								27
13-14	15	16	5	1							37
15-16	3	9	3	2				1			18
17-18	3	3	2								8
19-20		3	6	3			2				14
21-	1	1	1		3			1	1		8
Total	197	68	24	6	4		2	2	1		304

P 18

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2	1										1
3-4	2										2
5-6	11					1					12
7-8	72	7	3								82
9-10	65	12	1	1							79
11-12	55	24	10	4			1				94
13-14	9	7	7	4		1					28
15-16	2	2	1				1			1	7
17-18	2	1	1								4
19-20	2	1		2	1	1					7
21-			2	1	1						4
Total	221	54	25	12	2	3	2			1	320

Table-10-C. Number of trees per sample plot by height class and diameter class. (7)

P 19

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1 - 2											
3 - 4	6	1									7
5 - 6	28	2									30
7 - 8	44										44
9 - 10	90	14	4	1		1					110
11 - 12	36	32	15	1	1						85
13 - 14	4	9	6	4	1						24
15 - 16	1	13	3	3	3						23
17 - 18		2	6	2	1	1					12
19 - 20	1	2	4	3	2	1	3	1			17
21 -						2					2
Total	210	75	38	14	8	5	3	1			354

P 20

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1 - 2											
3 - 4	3										3
5 - 6	22	1									23
7 - 8	47	7	1								55
9 - 10	96	22	4	2							124
11 - 12	30	39	12	3							84
13 - 14	5	8	1	1	1						16
15 - 16		3	7	4	1	4		1	1		21
17 - 18		1	2	1	2		1				7
19 - 20				2	1	3	1	1			8
21 -											
Total	203	81	27	13	5	7	2	2	1		341

P 21

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1 - 2											
3 - 4	7										7
5 - 6	48	3									51
7 - 8	198	24	4								226
9 - 10	63	9	1								73
11 - 12	25	7	2	1	1						36
13 - 14	1	1	1								3
15 - 16	1										1
17 - 18	1										1
19 - 20											
21 -		1									1
Total	344	45	8	1	1						399



Table-10-C. Number of trees per sample plot by height class and diameter class. (8)

P 22

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2	2	1									3
3-4	4	1									5
5-6	14										14
7-8	90	3	1	2							96
9-10	136	15	3								154
11-12	68	37	5	2							112
13-14	10	21	3								34
15-16	12	11	12	2	1		1				39
17-18	4	8	4	1	1	1					19
19-20	2	1	3	5	2		1				14
21-	1		4	2	5	2		2			16
Total	343	98	35	14	9	3	2	2			506

P 23

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											4
3-4	4										4
5-6	106	2									108
7-8	156	9									165
9-10	114	14	1								129
11-12	21	8	3								32
13-14	5	6	2	2							15
15-16		1	3								4
17-18		1	1								2
19-20											
21-											
Total	406	41	10	2							459

P 24

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											1
3-4	1										1
5-6	12										12
7-8	66	10									76
9-10	62	14									76
11-12	22	10	2								34
13-14	14	16	2								32
15-16	4	10	3								17
17-18	2	3	2	2		1					10
19-20	3	6	2	2							13
21-		2	3	1	5	1	1	2			15
Total	186	71	14	5	5	2	1	2			286

Table-10-C. Number of trees per sample plot by height class and diameter class. (9)

P 25

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4											
5-6	34										34
7-8	154	27	1								182
9-10	61	22	3								86
11-12	30	15	3	2							50
13-14	9	12	4	1							26
15-16	1	3	2	1							7
17-18	1	4	2	2	1						10
19-20	1	2	4	2	2						11
21-		1	1	2	2	6	1	1			14
Total	291	86	20	10	5	6	1	1			420

P 26

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4	1										1
5-6	38	2									40
7-8	71	12	1			1					85
9-10	59	38	10			1					108
11-12	29	44	15	8	2	1					99
13-14	1	6	4	9	2						22
15-16		2	6	2	2	1					13
17-18	1		1	1		1	1				5
19-20			1		1	1					3
21-				2	5		2	1			10
Total	200	104	38	22	12	6	3	1			386

P 27

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1-2											
3-4											
5-6	28										28
7-8	75	4									79
9-10	102	15	3								120
11-12	55	33	8	2							98
13-14	15	18	10	1	1						45
15-16	12	8	4		1						25
17-18	2	6	3	7	4	1					23
19-20		6	4	3	2	3		1			19
21-	1		1	5	2		1				10
Total	290	90	33	18	10	4	1	1			447

Table-10-C. Number of trees per sample plot by height class and diameter class. (10)

P 28

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1-2											
3-4	1										1
5-6	2										2
7-8	7	5	1								13
9-10	93	7	1	2							103
11-12	74	32	10	1							117
13-14	5	10	9	6	4	1	3				38
15-16		2	3	1		1	1	1			9
17-18		1			1						2
19-20					1						1
21-				1	1	1					3
Total	182	57	24	11	7	3	4	1			289

P 29

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1-2											
3-4	1										1
5-6	13	2	1	1							17
7-8	38	2	2	1							43
9-10	77	19		1							97
11-12	33	37	4								74
13-14	7	13	4	2							26
15-16	2	8	4		1						15
17-18	2	7	1	1							11
19-20	2	4	10		2			2			20
21-	2	9	12	9	4	2	1		1		40
Total	177	101	38	15	7	2	1	2	1		344

P 30

Height-D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101--	Total
1-2											
3-4											
5-6	8	1									9
7-8	20	3	1								24
9-10	42	8	3					1			54
11-12	26	21	6	3							56
13-14	8	6	6		1						21
15-16	5			1							6
17-18											
19-20		1	2	1				1			5
21-			2	1	3	2	2	1	1	3	15
Total	109	40	20	6	4	2	2	3	1	3	190

Table-10-C. Number of trees per sample plot by height class and diameter class. (11)

P 31

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1 - 2											
3 - 4											
5 - 6	9	1									10
7 - 8	43	1									44
9 - 10	38	6	2								46
11 - 12	31	13	4								48
13 - 14	13	10	4								27
15 - 16	4	11	2	2							19
17 - 18	3	9	6	3	1						22
19 - 20		4	1	2	2	1					10
21 -	2			6	6	3	2	2	3	1	25
Total	143	55	19	13	9	4	2	2	3	1	251

P 32

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1 - 2											
3 - 4											
5 - 6	3										3
7 - 8	39	5									44
9 - 10	63	12		1							76
11 - 12	43	19	1	2							65
13 - 14	24	26	7	4	1		1				63
15 - 16	4	7	8	1							20
17 - 18	3	7	4	2	1	1	1				19
19 - 20		4	6	3	1			1			15
21 -	3	2	11	5	5	3	4	1	3	6	43
Total	182	82	37	18	8	4	6	2	3	6	348

Total of sample plots

Height D.B.H.	10-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-	Total
1 - 2	6	1									7
3 - 4	91	9									100
5 - 6	830	36	3	1		2					872
7 - 8	2,216	261	44	8	2	1					2,532
9 - 10	2,062	455	85	19	1	2		1			2,625
11 - 12	1,135	721	213	57	11	3	2	1			2,143
13 - 14	350	392	183	86	25	6	4	1			1,047
15 - 16	125	204	134	50	21	12	4	5	2	1	558
17 - 18	57	130	103	64	34	14	9		1		412
19 - 20	29	70	102	55	34	16	12	7	2	2	329
21 -	17	36	74	61	68	51	26	17	12	13	375
Total	6,918	2,315	941	401	196	107	57	32	17	16	11,000

Table-10-D. Number of trees per main species by total tree height and commercial height. (1)

		Peroba (B)																													Total height (m)				
Commercial height (m)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total			
20																																	1		
19																																		2	
18																																		11	
17																																		24	
16																																		11	
15																																		31	
14																																		19	
13																																		38	
12																																		48	
11																																		85	
10																																		59	
9																																		35	
8																																		159	
7																																		58	
6																																		53	
5																																		15	
4																																		1	
3																																			
2																																			
1																																			

		Cedro (A)																													Total height (m)				
Commercial height (m)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total			
20																																			
19																																			
18																																			
17																																			
16																																			
15																																			
14																																			
13																																			
12																																			
11																																			
10																																			
9																																			
8																																			
7																																			
6																																			
5																																			
4																																			
3																																			
2																																			
1																																			









Appendix-11. Volume of estimation for the stock in detail. (page 67)

Table-11-A. Volume of estimation by block division and by photo-strata. (m<sup>3</sup>)

Photo-stratum Block	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Total
1	9,207	97,873	5,745	803	40,833		311	41,985		196,757
2	46,123	198,861	50,782	13,060	31,207		135	8,424	10,851	359,443
3	28,182	107,106	4,289	5,809	21,171		99	2,573	2,028	171,257
4	1,373			5,500				152		7,025
5	428	34,355	10,187	752	26,393		64	38,288		110,467
6	24,040	199,631	73,300	14,059	49,798		206	20,087		381,121
7	68,340	157,119	257,662	6,283	3,209		10	1,734	26,729	521,086
8	71,964	152,618	59,590	7,323			95	5,451	15,230	312,271
9	20,777	28,392		16,829			72	4,669	2,049	72,788
10				62				76		138
11	5,988	44,435	3,140	8,209	21,832	5,633		3,392		92,629
12	18,571	198,591	20,144	11,947	72,008	24,974	22	10,387	6,537	363,181
13	27,079	261,147	110,218	20,444	52,661	27,859	9	23,365	1,143	523,925
14	5,065	174,624	85,096	11,937	42,500	5,272	28	10,006	7,011	341,539
15	450	7,387		5,685			8	14,008		27,538
16				1,452			3	1,620		3,075
17	248			6,128	15,477	18,286	33	5,336		45,508
18	720			27,839	150,874	111,077	36	11,340	13,461	315,347
19	158			21,794	164,872	10,850	35	24,566	11,563	233,838
20			21,599	24,492	227,442	860	197	11,111	9,622	295,323
21	878			22,566	126,147		185	18,791	9,600	178,167
22	113			20,115	13,590		62	10,501	324	44,705
23										
24				2,297	4,907					7,204
25		4,617		18,014	127,154	67,817	64	2,630	3,236	223,532
26	3,579	113,992		19,878	148,200	118,264	10	20,430	14,691	439,044
27		5,732		12,833	171,447		490	4,269	37,192	231,963
28				12,823	177,676		511	6,613	9,751	207,374
29				10,856	136,403	1,110	171	9,453	15,683	173,676
30		2,924		17,725	70,215		139	4,136	7,572	102,711
31		4,040	9,651	21	6,134		-			19,846
32	6,235	113,146	32,629	9,548	105,700		102	8,290		275,650
33	14,474	80,599	23,744	15,398	127,846	8,741	21	14,141	3,560	288,524
34	14,947	101,566	10,417	16,716	131,432	4,856	289	31,275	27,419	338,917
35	4,412	136,152	9,421	14,409	40,990		523	10,768	22,975	239,650
36	6,033	96,064	65,411	24,152	162,733		317	5,679	20,796	381,185
37	3,309	123,649	23,208	17,056	79,621	1,249	200	22,165	23,946	294,403
38	180	30,585		20,691	21,203		93	10,692	1,402	84,846
39		1,116	1,072	154						2,342
40	22,217	295,426		11,834	7,393		17	6,632		343,519
41	16,162	113,338	4,825	14,687	15,100	3,163		17,457		184,732
42	14,249	113,261	54,918	12,133	22,021	22,476	176	36,611	9,125	284,970
43	76,511	266,302	22,519	16,119	22,744	11,516	24	13,627	3,063	432,425
44	19,764	287,424	32,706	16,242	72,008		15	10,177	16,309	454,645
45	34,688	153,118	21,599	15,387	95,255		5	11,797	8,413	340,262
46	48,419	111,068		11,731	21,423		43	9,815	4,681	207,180
47		192								192
48										
49	5,380	215,904		16,407	32,874		9	3,602	367	274,543
50	9,859	93,371	10,876	19,548	136,340	4,051	70	18,620	4,142	296,877
51	20,754	149,386	34,161	17,911	66,251	63,128	43	25,805	5,825	383,264
52	2,093	107,952	23,591	16,840	79,998	277	17	4,955	7,033	242,756
53		70,904	18,919	23,740	47,439	2,164	30	11,873	39,263	214,332
54	495	64,864		19,177	86,636			7,052		178,224
55	17,310	281,383		13,194	25,701		44	4,441	5,652	347,725
56				6,674				12,960		19,634
Total	670,774	4800,214	1101,419	697,283	3302,858	513,623	5,033	613,827	408,244	12113,275

Table-11-B. Volume of estimation by local division and by photo-strata. (m<sup>3</sup>)

Phot- stratum Local dv.	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Total
1	9,207	80,753		5,150	54,014		416	74,079		223,619
2	232,910	1145,384	534,701	83,281	279,789	132,554	464	79,186	54,536	2542,805
3	86,213	436,040	161,537	59,077	84,780	7,492	258	47,360	18,790	901,547
4	158			14,357	7,739	9,129	48	14,904		46,335
5	11,232	116,993	6,970	64,455	596,353	161,773	543	53,668	87,349	1099,336
6	878		5,438	58,830	445,385	860	756	31,313	16,913	560,373
7	113	13,196		51,003	333,834	2,331	579	33,295	42,757	477,108
8	6,911	182,088	73,684	31,156	172,611		679	18,201	38,119	523,449
9	47,586	394,337	62,960	55,843	187,145		441	40,118	32,295	820,725
10	93,011	666,832	38,527	50,622	133,886	53,304	61	39,870	27,937	1104,050
11		171,623	61,275	25,306	120,988	8,935	54	20,068	42,972	451,221
12	70,163	432,386		45,843	99,722		72	30,264	10,333	688,783
13		20,506		18,045	73,864			3,735		116,150
14	18,706	251,452	43,888	45,812	338,679	80,804	185	23,594	3,258	806,378
15	70,996	599,353	68,398	48,912	180,444	13,847	397	52,848	27,872	1063,067
16	22,690	287,270	44,041	39,313	181,388	42,594	80	51,324	5,113	673,813
17		2,001		278	12,237					14,516
Total	670,774	4800,214	1101,419	697,283	3302,858	513,623	5,033	613,827	408,244	12,113,275

Table-11-C. Ratio(%) of photo-strata to volume of block division.

Photo-stratum Block	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Total
1	4.68	49.74	2.92	0 41	20.75		0.16	21.34		100.00
2	12.83	55.32	14.13	3.63	8 68		0.04	2.34	3.02	"
3	16.46	62.54	2.50	3.39	12.36		0.06	1.50	1.18	"
4	19.54			78 29				2.16		"
5	0.39	31.10	9 22	0 68	23.89		0.06	34.66		"
6	6.31	52.38	19.23	3.69	13.07		0 05	5.27		"
7	13.11	30.15	49.45	1.21	0.62		-	0.33	5.13	"
8	23.05	48 87	19.08	2.35			0.03	1.75	4 88	"
9	28.54	39 01		23 12			0.10	6 41	2 82	"
10				44.93				55 07		"
11	6 46	47.97	3 39	8 86	23 57	6.08		3.66		"
12	5.11	54 68	5.55	3.29	19.83	6 88	0 01	2.86	1.80	"
13	5.17	49.84	21.04	3 90	10.05	5.32	-	4.46	0.22	"
14	1.48	51.13	24.92	3 50	12.44	1.54	0.01	2 93	2 05	"
15	1.63	26 82		20 64			0 03	50.87		"
16				47.22			0 10	52 68		"
17	0 54			13.47	34 01	40 18	0.07	11.73		"
18	0.23			8 83	47.84	35.22	0.01	3 60	4.27	"
19	0 07			9.32	70 51	4 64	0 01	10 51	4 94	"
20			7.31	8 29	77.01	0 29	0 07	3.76	3 26	"
21	0 49			12.67	70.80		0 10	10.55	5 39	"
22	0 25			44 99	30.40		0 14	23 50	0 72	"
23										-
24				31.89	68 11					100.00
25		2.07		8 06	56.88	30 34	0 03	1.18	1 45	"
26	0 82	25.96		4 53	33 76	26 94	-	4.65	3 35	"
27		2 47		5.53	73.91		0.21	1.84	16.03	"
28				6 18	85 68		0 25	3 19	4 70	"
29				6.25	78 54	0 64	0 10	5.44	9.03	"
30		2.85		17.26	68 36		0.14	4 03	7 37	"
31		20.36	48 63	0 11	30 91					"
32	2.26	41.05	11.84	3 46	38 35		0.04	3.01		"
33	5.02	27.93	8 23	5.34	44.31	3.03	0 01	4.90	1.23	"
34	4.41	29.97	3.07	4 93	38.78	1.43	0 09	9.23	8.09	"
35	1.84	56.81	3 93	6 01	17.10		0.22	4.49	9.59	"
36	1.58	25.20	17.16	6.34	42 69		0 08	1.49	5.46	"
37	1.12	42 00	7.88	5 79	27.04	0 42	0.07	7.53	8.13	"
38	0.21	36.05		24 39	24 99		0 11	12.60	1.65	"
39		47.65	45 77	6 58						"
40	6.47	86.00		3 44	2.15		-	1.93		"
41	8 75	61 35	2.61	7.95	8 17	1.71		9 45		"
42	5 00	39 74	19.27	4 26	7.73	7.89	0 06	12 85	3.20	"
43	17.69	61.58	5.21	3 73	5.26	2.66	0 01	3.15	0.71	"
44	4.35	63 22	7.19	3 57	15.84		-	2.24	3.59	"
45	10 19	45.00	6.35	4 52	27.99		-	3.47	2.47	"
46	23.37	53.61		5.66	10 34		0 02	4.74	2.26	"
47		100.00								"
48										-
49	1.96	78 64		5.98	11.97		-	1.31	0.13	100.00
50	3.32	31.45	3.66	6 58	45.92	1.36	0 02	6.27	1.40	"
51	5 42	38.98	8 91	4 67	17.29	16 47	0 01	6.73	1.52	"
52	0.86	44.47	9.72	6 94	32 95	0.11	0 01	2 04	2 90	"
53		33.08	8.83	11.08	22.13	1.01	0.01	5 54	18.32	"
54	0.28	36.39		10.76	48 61			3 96		"
55	4.98	80.92		3.79	7.39		0 01	1.28	1 63	"
56				33 99				66.01		"
Total	5.55	39.63	9.09	5.76	27.27	4.24	-	5.07	3.37	100 00

Table-11-D. Ratio(%) of photo-strata to volume of local division and ratio of local division to total volume in the study area.

Photo-stratum Local dv.	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Ratio to total volume
1	4.12	36.11		2.30	24.15		0.19	33.13		1.85
2	9.16	45.04	21.03	3.28	11.00	5.21	0.02	3.11	2.14	20.99
3	9.56	48.37	17.92	6.55	9.40	0.83	0.03	5.25	2.08	7.44
4	0.34			30.99	16.70	19.70	0.10	32.17		0.38
5	1.02	10.64	0.63	5.86	54.25	14.72	0.05	4.88	7.95	9.08
6	0.16		0.97	10.50	79.48	0.15	0.13	5.59	3.02	4.63
7	0.02	2.77		10.69	69.97	0.49	0.12	6.98	8.96	3.94
8	1.32	34.79	14.08	5.95	32.98		0.13	3.48	7.28	4.32
9	5.80	48.05	7.67	6.80	22.80		0.05	4.89	3.93	6.78
10	8.42	60.40	3.49	4.59	12.13	4.83	0.01	3.61	2.53	9.11
11		38.04	13.58	5.61	26.81	1.98	0.01	4.45	9.52	3.73
12	10.19	62.78		6.66	14.48		0.01	4.39	1.50	5.69
13		17.65		15.54	63.59			3.22		0.96
14	2.32	31.18	5.44	5.68	42.00	10.02	0.02	2.93	0.40	6.66
15	6.68	56.38	6.43	4.60	16.97	1.30	0.04	4.97	2.62	8.78
16	3.37	42.63	6.54	5.83	26.92	6.32	0.01	7.62	0.76	5.56
17		13.78		1.92	84.30					0.12
Total	5.54	39.63	9.09	5.76	27.27	4.24	0.04	5.07	3.37	100.00

Table-11-E. Area (ha) of photo-strata and land use by block division.

Classification Block	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	A g	H	G	O	P	Forest land	
1	409	2,544	75	78	1,298		754	2,203			83	6,611	27		14,082	7,361
2	2,049	5,169	663	1,268	992		326	442	503	22	95	2,161	686		14,376	11,412
3	1,252	2,784	56	564	673		239	135	94	1,892		4,148	3,776		15,613	5,797
4	61			534				8				4,394			5,010	603
5	19	893	133	73	839		154	2,009				2,151	97		6,368	4,120
6	1,068	5,189	957	1,365	1,583		500	1,054			22	5,517	497		17,752	11,716
7	3,036	4,084	3,364	610	102		24	91	1,239	68		2,231	2,900		17,749	12,550
8	3,197	3,967	778	711			231	286	706	2,567		4,082	1,388		17,913	9,876
9	923	738		1,634			174	245	95	381	261	12,037	1,014		17,502	3,809
10				6				4				10	414		434	10
11	266	1,155	41	797	694	203		178			97	17	2,163	889	6,500	3,334
12	825	5,162	263	1,160	2,289	900	53	545	303		334	4,688	1,081		17,603	11,500
13	1,203	6,788	1,439	1,985	1,674	1,004	23	1,226	53	101	113	1,479	330		17,418	15,395
14	225	4,539	1,111	1,159	1,351	190	69	525	325	1,837		4,888	1,403		17,622	9,494
15	20	192		552			20	735		7,050		8,225	283	219	17,296	1,519
16				141			7	85		2,523		2,694	34	1,369	6,853	233
17	11			595	492	659	81	280		22	129	3,395	179		5,843	2,118
18	32			2,703	4,796	4,003	87	595	624	901	10	3,138	801		17,690	12,840
19	7			2,116	5,241	391	84	1,289	536	1,362	188	3,882	2,426		17,522	9,664
20			282	2,378	7,230	31	477	583	446	2,368	53	3,085	1,007		17,940	11,427
21	39			2,191	4,010		449	986	445	4,408	429	3,267	1,448		17,672	8,120
22	5			1,953	432		149	551	15	6,062	126	6,723	1,680	147	17,843	3,105
23										1	13	355			369	0
24				223	156					246	7	969			1,601	379
25		120		1,749	4,042	2,444	156	138	150	653	304	4,703	471		14,930	8,799
26	159	2,963		1,930	4,711	4,262	25	1,072	681	52	80	1,166	700		17,801	15,803
27		149		1,246	5,450		1,188	224	1,724	187	123	5,974	1,075		17,340	9,981
28				1,245	5,648		1,239	347	452	639	150	4,764	3,158		17,642	8,931
29				1,054	4,336	40	414	496	727	88	354	6,683	3,379		17,571	7,067
30		76		1,721	2,232		337	217	351	2,370	86	3,847	1,020		12,257	4,934
31		105	126	2	195		1			190	6	414	16		1,055	429
32	277	2,941	426	927	3,360		248	435		3,728	44	2,191	1,265		15,842	8,614
33	643	2,095	310	1,495	4,064	315	52	742	165	1,305	84	4,930	1,454		17,654	9,881
34	664	2,640	136	1,623	4,178	175	701	1,641	1,271	50	28	3,236	1,731		18,074	13,029
35	196	3,539	123	1,399	1,303		1,268	565	1,065	474	92	6,153	1,319		17,496	9,458
36	268	2,497	854	2,345	5,173		768	298	964	38	162	3,324	919		17,610	13,167
37	147	3,214	303	1,656	2,531	45	485	1,163	1,110	238	485	4,672	1,733		17,782	10,654
38	8	795		2,009	674		226	561	65	1,567	212	4,976	1,670		12,763	4,338
39		29	14	15						322		210	70		660	58
40	987	7,679		1,149	235		42	348		1,816	131	4,305	1,125		17,817	10,440
41	718	2,946	63	1,426	480	114		916		120	620	9,315	1,172		17,890	6,663
42	633	2,944	717	1,178	700	810	426	1,921	423	614	847	5,672	1,104		17,989	9,752
43	3,399	6,922	294	1,565	723	415	57	715	142	294	427	1,955	468		17,376	14,232
44	878	7,471	427	1,577	2,289		36	534	756	97	43	1,653	1,804		17,565	13,968
45	1,541	3,980	282	1,494	3,028		13	619	390	118	72	4,084	1,836		17,457	11,347
46	2,151	2,887		1,139	681		105	515	217	742	56	3,093	4,473		16,059	7,695
47		5								254		112	146		517	5
48																0
49	239	5,612		1,593	1,045		23	189	17	1,505	56	5,270	888		16,437	8,718
50	438	2,427	142	1,898	4,334	146	169	977	192	421	124	4,810	1,717		17,795	10,723
51	922	3,883	446	1,739	2,106	2,275	103	1,354	270		136	2,767	1,758		17,759	13,098
52	93	2,806	308	1,635	2,543	10	41	260	326	33	219	6,618	2,637		17,529	8,022
53		1,843	247	2,305	1,508	78	73	623	1,820	166	361	4,438	4,595		18,057	8,497
54	22	1,686		1,862	2,754			370		436	160	9,506	879		17,675	6,694
55	769	7,314		1,281	817		107	233	262	3,961		1,452	2,360		18,556	10,783
56				648				680		5,450		2,642	58		9,478	1,328
Total	29,799	124,772	14,380	67,701	104,992	18,510	12,204	32,208	18,924	59,849	7,352	217,632	68,946	1,735	779,004	423,490

Table-11-F. Area(ha) of photo-strata and land use by local division.

Classification Local dv.	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Ag	H	G	C	P	Total
1	409	2,099		500	1,717		1,008	3,887			91	8,200	44		17,955
2	10,347	29,772	6,981	8,086	8,894	4,777	1,123	4,155	2,528	3,042	609	27,222	11,158		118,694
3	3,830	11,334	2,109	5,736	2,695	270	625	2,485	871	10,959	380	35,297	3,820	1,145	81,556
4	7			1,394	246	329	116	782		17	154	2,394	36		5,475
5	499	3,041	91	6,258	18,957	5,830	1,319	2,816	4,049	1,520	308	12,051	6,135		62,874
6	39		71	5,712	14,158	31	1,833	1,643	784	11,769	336	12,220	2,462	380	51,438
7	5	343		4,952	10,612	84	1,406	1,747	1,982	7,351	994	19,756	8,546	210	57,988
8	307	4,733	962	3,025	5,487		1,648	955	1,767	672	154	6,992	1,673		28,375
9	2,114	10,250	822	5,422	5,949		1,068	2,105	1,497	2,701	772	13,018	6,375		52,093
10	4,132	17,333	503	4,915	4,256	1,921	148	2,092	1,295	291	593	5,231	2,694		45,404
11		4,461	800	2,457	3,846	322	130	1,053	1,992	191	323	8,784	7,087		31,446
12	3,117	11,239		4,451	3,170		175	1,588	479	10,351	131	13,404	7,586		55,691
13		533		1,752	2,348			196			343	6,490	259		11,921
14	831	6,536	573	4,448	10,766	2,912	449	1,238	151	7,597	533	13,311	2,594		51,939
15	3,154	15,579	893	4,749	5,736	499	961	2,773	1,292	2,367	897	20,616	4,618		64,134
16	1,008	7,467	575	3,817	5,766	1,535	195	2,693	237	998	734	12,646	3,711		41,382
17		52		27	389					23			148		639
Total	29,799	124,772	14,380	67,701	104,992	18,510	12,204	32,208	18,924	59,849	7,352	217,632	68,946	1,735	779,004

Table-11-G. Ratio(%) of photo-strata in the forest land by block division.

Classification Block	A 1	A 2	A 3	M	M 2	M 3	B 1	B 2	E	Total
1	5.56	34.56	1.02	1.06	17.63		10.24	29.93		100.00
2	17.95	45.29	5.81	11.11	8.69		2.86	3.87	4.41	"
3	21.60	48.02	0.97	9.73	11.61		4.12	2.33	1.62	"
4	10.12			88.56				1.33		"
5	0.46	21.67	3.23	1.77	20.36		3.74	48.76		"
6	9.12	44.29	8.17	11.65	13.51		4.27	9.00		"
7	24.19	32.54	26.80	4.86	0.81		0.19	0.73	9.87	"
8	32.37	40.17	7.88	7.20			2.34	2.90	7.15	"
9	24.23	19.38		42.90			4.57	6.43	2.49	"
10				60.00				40.00		"
11	7.98	34.64	1.23	23.91	20.82	6.09		5.34		"
12	7.17	44.89	2.29	10.09	19.90	7.83	0.46	4.74	2.63	"
13	7.81	44.09	9.35	12.89	10.87	6.52	0.15	7.96	0.34	"
14	2.37	47.81	11.70	12.21	14.23	2.00	0.73	5.53	3.42	"
15	1.32	12.64		36.34			1.32	48.39		"
16				60.52			3.00	36.48		"
17	0.52			28.09	23.23	31.11	3.82	13.22		"
18	0.25			21.05	37.35	31.18	0.68	4.63	4.86	"
19	0.07			21.90	54.23	4.05	0.87	13.34	5.55	"
20			2.47	20.81	63.27	0.27	4.17	5.10	3.90	"
21	0.48			26.98	49.38		5.53	12.14	5.48	"
22	0.16			62.90	13.91		4.80	17.75	0.48	"
23										—
24				58.84	41.16					100.00
25		1.36		19.88	45.94	27.78	1.77	1.57	1.70	"
26	1.01	18.75		12.21	29.81	26.97	0.16	6.78	4.31	"
27		1.49		12.48	54.60		11.90	2.24	17.27	"
28				13.94	63.24		13.87	3.89	5.06	"
29				14.91	61.36	0.57	5.86	7.02	10.29	"
30		1.54		34.88	45.24		6.83	4.40	7.11	"
31		24.48	29.37	0.47	45.45		0.23			"
32	3.22	34.14	4.95	10.76	39.01		2.88	5.05		"
33	6.51	21.20	3.14	15.13	41.13	3.19	0.53	7.51	1.67	"
34	5.10	20.26	1.04	12.46	32.07	1.34	5.38	12.59	9.76	"
35	2.07	37.42	1.30	14.79	13.78		13.41	5.97	11.26	"
36	2.04	18.96	6.49	17.81	39.29		5.83	2.26	7.32	"
37	1.38	30.17	2.84	15.54	23.76	0.42	4.55	10.92	10.42	"
38	0.18	18.33		46.31	15.54		5.21	12.93	1.50	"
39		50.00	24.14	25.86						"
40	9.45	73.55		11.01	2.25		0.40	3.33		"
41	10.78	44.21	0.95	21.40	7.20	1.71		13.75		"
42	6.49	30.19	7.35	12.08	7.18	8.31	4.37	19.70	4.34	"
43	23.88	48.64	2.07	11.00	5.08	2.92	0.40	5.02	1.00	"
44	6.29	53.49	3.06	11.29	16.39		0.26	3.82	5.41	"
45	13.58	35.08	2.49	13.17	26.69		0.11	5.46	3.44	"
46	27.95	37.52		14.80	8.85		1.36	6.69	2.82	"
47		100.00								—
48										100.00
49	2.74	64.37		18.27	11.99		0.26	2.17	0.19	"
50	4.08	22.63	1.32	17.70	40.42	1.36	1.58	9.11	1.79	"
51	7.04	29.65	3.41	13.28	16.08	17.37	0.79	10.34	2.06	"
52	1.16	34.98	3.84	20.38	31.70	0.12	0.51	3.24	4.06	"
53		21.69	2.91	27.13	17.75	0.92	0.86	7.33	21.42	"
54	0.33	25.19		27.82	41.14			5.53		"
55	7.13	67.83		11.88	7.58		0.99	2.16	2.43	"
56				48.80				51.20		"
Total	7.04	29.46	3.40	15.99	24.79	4.37	2.88	7.61	4.47	100.00

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