国際協力事業団

エティオピア国
農業省

エティオピア国南西部地域
森林保全計画調査

資　料　編

平成10年3月

財団法人　林業土木コンサルタンツ
国　際　航　業　株　式　会　社

エティオピア国南西部地域森林保全計画調査　資料編　平成10年3月

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Appendix Tab. 1　ベレテ地区調査村落の概要

調査村落名	男性	女性	総人口	戸数	女性所帯主比率	宗教比率（%）		民族構成（%）		
		(1994年センサス)				キリスト教	イスラム教	オロモ	アムハラ	その他
Atro Gafere (Sonbo)	2,046	2,074	4,120	932	4%	2	98	98.0	2.0	0.0
Atro Sufa	1,773	1,738	3,511	802	14%	5	95	95.0	3.0	2.0
Elke Togobe	3,567	3,544	7,111	1,534	8%	5	95	95.0	0.0	5.0
Kishe	2,534	2,297	4,831	1,033	2%	55	45	10.0	40.0	40.0
Komo Hari	3,104	3,044	6,148	1,352	7%	0	100	99.0	0.0	1.0
Mirgano Baso	2,770	2,776	5,546	1,223	11%	21	79	49.0	0.0	51.0
Sabaka Debiye	1,370	1,392	2,762	635	7%	10	90	60.0	0.0	40.0
Shebe Mofa	1,972	1,925	3,897	936	8%	0	100	100.0	0.0	0.0
Sonbo Daru	3,283	3,213	6,496	1,495	2%	1	99	96.0	0.0	4.0
Yanga Deo	2,191	2,159	4,350	1,070	7%	33	67	63.0	17.0	20.0
合計又は平均	24,610	24,162	48,772	11,012	6%	10	90	77.1	4.6	18.3

参考資料：
(1) 1994年人口センサス
(2) 1996年地域社会調査（JICA）

Appendix Tab. 2　ゲラ地区調査村落の概要

調査村落名	村落の現在の呼称	男性	女性	総人口	戸数	女性所帯主比率	宗教比率（%）		民族構成（%）		
							キリスト教	イスラム教	オロモ	アムハラ	その他
Gada Kashimairi	Gute Gada	701	733	1,434	373	0%	20	80	80.0	0.0	20.0
Guba Korro	Gute Gada	629	631	1,260	308	0%	15	85	85.0	0.0	15.0
Gutte	Gute Gada	358	337	695	150	11%	80	20	100.0	0.0	0.0
Dusta	Dusta	1,774	1,763	3,537	784	0%	3	97	95.5	3.0	0.5
Kombolcha	Kombolcha	1,155	1,228	2,383	572	0%	0	100	100.0	0.0	0.0
Gamina	Gamina Dacho	292	300	592	148	17%	28	72	80.0	15.0	5.0
Dacholaki	Gamina Dacho	115	111	226	56	2%	0	100	92.0	0.0	8.0
Wala	Wala	304	273	577	122	11%	75	25	12.5	75.0	12.5
Oba	Oba Toli	445	466	911	224	12%	5	95	75.0	20.0	5.0
Gura	Gura Afalo	170	153	323	80	2%	0	100	100.0	0.0	0.0
Afalo	Gura Afalo	76	65	141	38	4%	50	50	100.0	0.0	0.0
Kelaherere	Kela Kacho	613	637	1,250	260	6%	0	100	100.0	0.0	0.0
Anderacha	Kacho Anderacha	95	83	178	44	0%	75	25	95.0	5.0	0.0
Chala	Chira	415	362	777	187	0%	18	82	95.0	5.0	0.0
Selaja	Kobo Selaja	864	825	1,689	396	8%	0	100	100.0	0.0	0.0
Kobokocho	Kobo Selaja	1,093	1,134	2,227	523	6%	0	100	99.7	0.3	0.0
Kola Sulaja	Kobo Selaja	897	885	1,782	406	24%	1	99	99.0	1.0	0.0
Gera	Naso Gera	373	312	685	150	0%	3	97	100.0	0.0	0.0
Nasawabo	Naso Gera	143	155	298	72	0%	0	100	100.0	0.0	0.0
Gure Kesso	Kaso Dako	560	529	1,089	225	0%	7	93	100.0	0.0	0.0
Muje	Muje	1,790	1,714	3,504	778	4%	0	100	100.0	0.0	0.0
Sadi	Sadi Loya	1,096	1,145	2,241	475	4%	20	80	80.0	20.0	0.0
合計又は平均		13,958	13,841	27,799	6,371	5%	20	80			

参考資料：
(1) 1994年人口センサス
(2) 1996年地域社会調査（JICA）

Appendix Tab. 3 ベレテ地区女性の日常労働時間

村落名	家族コード	水汲み	家畜の世話	薪拾い	洗濯	食事の支度	掃除	粉引き	白搗き	市場	育児	計
ATRO GEFERE	03-1-1	2.0	0.0	1.0	0.5	1.0	1.0	2.0	0.5	2.0	1.0	17.0
	03-1-2	1.5	0.0	1.0	1.0	1.0	1.0	3.0	1.0	1.0	2.0	15.5
	03-1-3	2.0	1.0	1.0	1.0	4.0	1.0	0.0	1.5	2.0	2.0	15.5
	03-1-4	1.0	0.0	1.0	2.5	1.0	2.0	0.0	0.5	1.0	1.0	13.0
	03-1-5	0.5	0.0	2.0	2.0	1.0	1.0	0.0	0.0	1.0	1.0	11.5
	03-1-6	2.0	0.0	1.0	1.0	4.0	1.0	2.0	3.0	2.0	1.0	17.0
	03-1-7	1.5	1.5	1.0	0.5	1.0	1.0	3.0	2.0	3.0	0.0	17.5
SAMBO DERU	03-2-1	1.0	0.5	1.0	1.0	1.0	0.0	1.5	1.0	3.0	3.5	16.5
	03-2-2	1.0	0.5	1.0	2.0	1.0	1.5	0.0	0.5	1.0	0.0	11.5
	03-2-3	1.0	0.0	2.0	1.0	1.0	0.0	0.0	1.0	2.0	1.0	12.0
	03-2-4	1.5	0.5	2.0	1.0	1.0	0.0	0.0	0.5	2.0	0.0	11.5
	03-2-5	1.5	1.0	0.5	1.0	5.0	0.0	0.0	0.5	2.0	0.0	11.5
	03-2-6	2.0	0.0	1.5	2.0	1.0	0.0	0.0	2.0	2.0	1.0	14.5
	03-2-7	2.0	0.0	1.5	1.0	1.0	0.0	3.0	1.0	2.0	3.0	17.5
KOMO HARI	03-3-1	1.0	0.5	2.0	1.0	1.0	0.0	1.0	1.0	2.0	1.0	13.5
	03-3-2	1.0	1.0	2.5	1.0	1.0	0.0	1.0	0.5	2.0	1.0	14.0
	03-3-3	0.5	0.0	2.0	1.0	4.0	0.0	1.0	1.0	1.0	1.0	14.5
	03-3-4	2.0	1.0	5.0	1.0	4.0	0.0	0.5	0.0	1.0	2.0	19.5
	03-3-5	1.0	1.0	4.0	1.0	4.0	0.0	0.5	0.5	2.0	1.0	15.0
	03-3-6	1.0	0.5	4.0	1.0	1.0	0.0	1.0	0.5	2.0	1.0	15.0
	03-3-7	1.0	1.0	5.0	1.0	1.0	0.0	1.0	1.0	2.0	1.0	17.0
ATRO SUFA	01-2-1	1.0	0.5	4.0	1.0	4.0	1.0	2.0	2.0	3.0	1.0	19.5
	01-2-2	0.5	1.0	2.0	2.0	1.0	1.0	0.0	1.0	4.0	1.5	17.0
	01-2-3	0.5	0.5	2.0	2.0	4.0	1.0	0.0	2.0	3.0	1.0	16.0
	01-2-4	0.8	0.5	5.0	2.0	5.0	1.0	0.0	0.5	4.0	1.0	19.8
	01-2-5	0.8	0.5	0.8	1.5	4.0	1.0	0.0	1.0	3.0	1.5	14.0
	01-2-6	0.5	0.0	3.0	0.0	1.0	1.0	0.0	0.0	3.0	0.0	11.5
	01-2-7	0.5	0.5	4.0	0.5	1.0	1.0	0.0	0.0	0.0	1.0	11.5
MIRGANO BOSO	01-4-1	0.5	0.0	4.0	2.0	4.0	0.5	1.0	1.0	3.0	0.5	16.5
	01-4-2	1.0	0.5	3.0	2.0	4.0	1.0	0.0	2.0	2.0	0.0	15.5
	01-4-3	0.5	0.5	1.5	2.0	1.0	0.5	0.0	2.0	3.0	1.0	15.0
	01-4-4	0.5	0.0	4.0	2.0	1.0	1.0	0.0	2.0	3.0	1.0	17.5
	01-4-5	0.5	1.0	5.0	2.0	4.0	1.0	0.0	1.5	3.0	0.0	18.0
	01-4-6	0.5	0.5	4.0	2.0	4.0	0.5	0.5	2.0	3.0	0.0	17.0
	01-4-7	1.0	0.0	4.0	1.5	4.0	1.0	0.0	2.0	3.0	1.0	17.5
KISHE	02-1-1	3.0	0.0	3.0	1.0	1.0	1.0	3.0	1.0	2.0	3.0	18.0
	02-1-2	1.0	1.0	3.0	2.0	2.0	2.0	0.0	1.5	2.0	2.0	16.5
	02-1-3	3.0	1.0	0.5	0.5	0.5	1.0	0.5	0.5	4.0	1.0	12.5
	02-1-4	0.5	0.5	1.5	2.0	2.0	1.5	0.0	2.0	1.0	2.0	13.0
	02-1-5	1.0	0.0	1.5	1.0	3.0	1.0	0.0	0.5	3.0	2.0	13.0
	02-1-6	0.5	0.0	1.0	1.0	2.0	1.5	0.5	1.0	3.0	2.0	12.5
	02-1-7	0.5	0.0	2.0	1.5	2.0	1.0	2.0	0.5	3.0	0.5	13.0
YANGA DEAO	02-2-1	0.5	0.5	2.0	1.0	3.0	1.0	0.0	1.0	4.0	1.0	14.0
	02-2-2	0.5	0.5	1.0	1.5	3.0	1.0	1.0	1.0	3.0	1.0	13.5
	02-2-3	0.5	0.5	1.0	1.5	3.0	1.0	1.0	1.0	5.0	0.0	14.5
	02-2-4	3.0	1.0	2.0	1.0	2.0	0.5	2.0	2.0	3.0	1.0	17.5
	02-2-5	2.0	1.0	1.5	2.0	2.0	0.5	1.0	2.0	3.0	1.0	16.0
	02-2-6	0.5	0.0	1.5	1.0	4.0	0.5	2.0	2.0	3.0	1.0	15.5
	02-2-7	0.5	0.5	3.0	3.0	4.0	0.5	2.0	1.0	2.0	0.5	17.0
SEBEKA DEBIYE	02-3-1	0.5	0.0	1.0	0.5	2.0	0.5	2.0	1.0	2.0	0.0	9.5
	02-3-2	1.0	0.0	1.0	2.0	2.0	0.5	0.0	2.0	3.0	2.0	13.5
	02-3-3	0.5	0.0	1.0	1.0	3.0	1.0	0.0	1.0	3.0	2.0	12.5
	02-3-4	1.0	1.0	1.0	1.0	3.0	1.0	0.0	1.0	3.0	1.0	13.0
	02-3-5	1.0	0.0	0.5	2.0	1.0	0.5	0.0	1.0	5.0	3.0	14.0
	02-3-6	0.5	0.0	0.5	0.5	2.0	1.0	0.0	1.0	3.0	2.0	10.5
	02-3-7	1.0	0.0	1.0	0.5	1.0	1.0	0.0	0.0	4.0	2.0	10.5
SIFBE MOFFA	01-1-1	2.0	0.0	1.5	0.5	4.0	0.5	0.5	1.0	2.0	2.0	14.0
	01-1-2	2.0	1.0	1.5	0.0	4.0	0.5	2.0	1.0	2.0	2.0	16.0
	01-1-3	2.0	0.5	1.5	0.5	4.0	0.5	0.5	1.0	2.0	2.0	14.5
	01-1-4	2.0	0.0	1.5	0.0	4.0	1.0	2.0	0.5	2.0	2.0	15.0
	01-1-5	2.0	1.0	2.5	0.5	4.0	0.5	0.5	1.0	2.0	2.0	16.0
	01-1-6	2.0	0.0	1.5	0.0	1.0	0.5	1.0	2.0	2.0	2.0	15.0
	01-1-7	0.5	0.5	1.5	1.0	4.0	0.5	0.5	1.0	2.0	1.0	12.5
ELKE TOGORE	01-1-1	1.5	1.0	3.0	3.5	1.5	0.5	0.0	1.0	3.0	0.5	18.5
	01-1-2	0.8	0.5	3.0	2.0	4.0	1.0	0.0	1.0	3.0	1.0	16.3
	01-1-3	1.5	1.0	1.0	0.5	3.5	0.3	0.5	1.5	2.8	2.0	14.5
	01-1-4	0.5	0.5	4.0	2.0	3.0	0.5	1.0	2.0	3.0	1.0	17.5
	01-1-5	2.0	0.0	2.0	1.5	1.0	0.5	1.5	1.5	2.0	2.0	17.0
	01-1-6	1.0	0.0	0.8	0.0	1.0	2.0	2.0	1.5	1.0	1.0	16.3
	01-1-7	1.0	0.0	1.5	0.0	4.0	2.0	2.0	1.5	4.0	1.0	17.0
合計	70戸	80.3	29.5	145.5	86.5	211.5	52.3	55.0	80.0	183.8	92.5	1,019.8
平均		1.1	0.4	2.1	1.2	3.5	0.7	0.8	1.1	2.6	1.3	15.0
比率		7.6%	2.8%	13.9%	8.2%	23.3%	5.0%	5.2%	7.6%	17.5%	8.8%	100.0%

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 4 (1) ゲラ地区女性の日常労働時間

村落名	家族コード	水汲み	家畜の世話	薪拾い	洗濯	食事の支度	掃除	挽引き (Grinding)	臼搗き (Pounding)	市場	育児	計
1 G. KASHEMARI	10-21	2.0	1.0	1.0	2.0	4.0	1.0	0.0	3.0	0.5	2.0	16.6
2	10-22	1.0	1.0	1.0	2.0	4.0	1.0	3.0	2.0	0.5	0.0	32.0
3	10-23	1.0	0.0	2.0	1.0	5.0	0.4	2.0	1.0	0.5	3.0	31.4
4	10-24	1.0	1.0	1.0	2.0	5.0	0.0	1.0	1.0	0.5	1.0	29.4
5	10-25	1.0	1.0	1.0	2.0	5.0	1.0	1.0	2.0	0.5	2.0	30.0
6	10-26	0.5	0.3	1.5	3.0	5.0	0.3	3.0	2.0	0.5	1.0	33.6
7 GARA KORRO	10-15	1.0	1.0	2.5	2.0	5.0	1.0	2.0	1.0	1.0	0.0	33.6
8	10-16	1.0	1.0	1.0	2.0	4.0	1.0	2.0	1.0	0.5	1.0	31.0
9	10-17	1.0	1.0	1.0	2.0	5.0	0.4	2.0	1.0	0.5	2.0	30.4
10	10-18	1.0	1.0	1.0	2.0	5.0	0.3	2.0	1.0	0.5	1.0	30.7
11	10-19	1.0	1.0	1.0	2.0	4.0	0.3	1.0	1.0	0.5	1.0	27.6
12	10-20	1.0	1.0	1.0	3.0	5.0	0.2	1.0	1.0	0.5	1.0	27.5
13 GUTIE	10 09	1.0	0.0	1.0	3.0	6.0	1.0	2.0	1.0	0.5	1.0	31.2
14	10-10	1.0	1.0	1.0	2.0	5.0	1.0	0.0	2.0	0.5	2.0	32.0
15	10-11	1.0	1.0	1.0	2.0	5.0	0.3	2.0	1.0	0.5	2.0	31.3
16	10-12	2.0	1.0	1.5	3.0	5.0	0.0	2.0	1.0	0.5	1.0	32.8
17	10-13	1.0	1.0	1.5	3.0	3.0	1.0	2.0	1.0	0.5	1.0	32.0
18	10-14	1.0	1.0	1.0	3.0	5.0	1.0	1.0	1.0	0.5	1.0	30.5
19 GAMINA	08-1	1.3	1.3	1.5	3.3	1.0	0.3	0.3	0.5	0.0	1.3	26.3
20	08-2	1.0	0.0	1.0	2.0	3.3	1.0	2.0	1.0	0.5	1.0	29.6
21	08-3	1.0	0.0	0.5	3.0	6.0	0.3	1.0	1.3	0.5	1.0	27.4
22	08-4	1.0	0.0	1.5	1.0	3.0	2.0	1.0	0.3	0.5	1.0	25.9
23	08-5	1.0	0.0	1.0	2.0	3.0	2.0	4.0	2.0	0.5	2.0	28.9
24	08-6	1.0	0.0	1.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0	28.5
25 OBA	08-8	1.0	0.0	1.5	1.3	2.3	0.3	1.0	1.0	6.0	0.0	25.4
26	08-9	1.3	0.0	1.5	2.0	3.0	1.0	1.3	2.0	0.5	2.0	29.0
27	08-10	1.3	1.0	1.5	2.3	3.0	0.3	2.0	3.0	0.6	2.0	31.5
28	08-11	1.3	0.0	2.0	2.0	3.0	1.0	1.0	1.0	0.5	2.0	30.7
29	08-12	2.0	0.0	3.0	2.0	3.0	1.0	1.0	1.0	0.3	1.0	28.1
30	08-13	1.0	0.0	2.0	2.0	3.0	0.3	1.0	2.0	0.3	1.3	27.2
31 DACHOLAKI	08-21	1.0	1.0	2.0	2.0	4.0	0.3	2.0	1.0	0.5	1.0	27.8
32	08-22	1.0	0.0	2.0	1.0	3.0	0.3	2.0	2.0	0.5	0.0	26.6
33	08-23	1.0	0.0	2.0	2.0	3.0	0.3	2.0	1.0	0.5	0.0	23.6
34	08-24	0.3	0.0	1.0	2.0	3.0	0.3	3.0	1.0	7.0	0.0	29.4
35	08-25	1.3	0.0	1.0	2.0	3.0	0.3	2.3	1.0	0.5	1.3	30.3
36	08-26	0.3	0.0	1.5	2.0	3.0	1.0	3.0	1.0	0.5	2.0	27.0
37 WALLA	08-15	0.3	0.0	1.0	1.0	6.0	0.3	5.0	4.0	0.5	0.0	32.4
38	08-16	0.3	0.0	0.5	1.3	3.0	0.3	3.0	1.0	0.5	1.0	29.0
39	08-17	1.0	0.0	1.0	2.0	3.0	0.4	6.0	2.0	0.5	1.0	27.8
40	08-18	1.0	0.0	2.0	2.0	6.0	0.1	8.0	2.0	0.5	1.0	39.5
41	08-19	2.0	0.0	1.0	1.0	3.0	0.3	3.0	2.0	0.0	0.0	31.9
42	08-20	0.3	0.0	2.0	2.0	4.0	0.3	4.0	1.0	0.0	0.0	25.9
43 GURA	09-13	1.0	0.4	2.0	2.0	4.3	0.3	1.0	1.0	0.5	0.0	26.1
44	09-14	0.3	1.0	1.5	2.0	4.0	0.3	2.0	1.0	0.5	0.0	25.1
45	09-15	1.0	0.4	2.0	2.0	4.3	0.3	2.0	1.0	0.5	0.0	26.1
46	09-16	0.3	0.0	1.0	1.0	4.0	0.3	2.0	1.0	0.3	1.0	24.5
47	09-17	1.0	0.4	2.0	2.0	4.0	0.3	1.0	1.0	0.5	1.0	24.2
48	09-18	0.4	0.3	1.5	2.0	4.0	0.3	2.0	1.0	0.5	0.0	25.2
49 RELAHARERE	09-1	1.3	1.3	1.5	2.0	0.4	0.3	2.3	2.0	0.0	0.0	23.1
60	09-2	0.2	1.0	2.0	4.0	4.0	0.1	2.0	2.0	0.5	0.0	26.9
61	09-3	0.3	1.0	2.0	4.0	4.0	0.3	3.0	2.0	0.5	0.0	32.9
62	09-4	2.0	2.0	0.7	1.0	4.0	0.3	1.3	2.0	0.5	1.0	31.9
63	09-5	0.3	1.0	1.0	4.0	4.0	1.0	2.0	0.0	3.0	2.0	33.1
64	09-6	1.0	1.3	3.0	4.0	4.0	0.3	2.0	2.0	0.5	0.0	36.4
55 AFALO	09-7	1.0	0.0	1.0	1.3	4.0	0.3	2.3	1.0	0.6	0.0	29.5
56	09-8	0.5	0.4	1.0	2.0	4.0	0.2	2.0	2.0	0.5	1.0	25.0
57	09-9	1.0	1.0	1.0	4.0	4.0	1.0	2.0	2.0	0.5	0.0	30.1
58	09-10	1.0	0.3	1.0	4.0	4.0	0.3	3.0	1.3	0.5	0.0	31.9
59 CHALLA	06-11	1.0	0.0	1.0	1.5	2.0	0.0	0.0	1.0	0.5	2.0	24.4
60	06-12	0.5	0.0	1.5	3.0	4.0	0.4	3.0	3.0	0.0	0.0	24.4
61	06-13	0.5	1.0	1.0	1.3	4.3	1.0	0.0	3.0	0.3	2.0	29.7
62	06-14	0.5	0.0	1.5	1.0	3.0	0.3	0.0	1.5	1.0	0.0	23.2
63	06-15	0.3	0.5	2.0	2.0	4.3	0.3	3.0	2.3	1.0	1.0	25.5
64	06-16	0.5	0.2	1.5	1.3	3.3	0.3	0.0	2.0	0.5	0.0	26.3
小計:		59.2	32.1	89.7	136.6	247.6	31.0	126.8	94.2	45.7	56.9	932.3

(次頁へ続く)

Appendix Tab. 4 (2)　ゲラ地区女性の日常労働時間

村落名	家族コード	水汲み	家畜の世話	薪拾い	洗濯	食事の支度	掃除	粉引き	自働き	市場	育児	計
前ページより：		59.2	32.1	69.7	136.0	247.5	34.0	126.8	94.2	45.7	56.9	932.3
65 SELAJA	06-1	1.0	1.2	3.0	2.0	4.0	0.4	4.0	1.0	0.4	2.0	19.0
66	06-2	0.3	0.0	2.0	3.0	3.0	1.0	3.0	2.0	0.5	1.0	15.8
67	06-3	1.0	0.5	1.0	2.0	3.5	0.5	3.0	1.0	1.0	1.0	14.5
68	06-4	1.3	1.0	3.0	1.3	3.3	0.2	4.0	1.3	0.3	1.0	16.7
69	06-5	1.0	1.0	1.5	3.0	1.0	0.3	4.0	2.0	0.4	0.0	16.2
70	06-6	1.0	0.0	1.5	2.0	4.0	0.3	2.0	1.0	0.3	3.0	15.0
71 GERA	06-17	1.0	0.5	2.0	2.0	3.0	0.5	3.0	1.0	0.5	1.0	14.5
72	06-18	1.0	0.5	2.0	2.0	3.0	0.5	3.0	0.5	0.5	2.0	15.0
73	06-19	1.3	0.0	2.0	2.5	3.0	0.5	3.0	1.0	0.0	3.0	16.3
74	06-20	1.0	0.0	2.0	2.0	3.0	0.5	3.5	1.0	0.5	0.0	13.5
75	06-21	1.0	0.5	2.0	1.0	3.5	0.5	3.0	1.0	0.5	2.0	15.0
76	06-22	1.0	1.0	2.0	2.0	4.0	0.5	3.0	1.0	0.5	1.0	16.0
77 GUREKESSO	07-19	0.5	0.5	2.0	2.0	3.0	1.0	3.0	2.0	0.5	1.0	15.5
78	07-20	0.5	0.0	2.0	3.0	3.0	1.0	2.0	3.0	0.3	1.0	15.8
79	07-21	0.5	1.0	2.0	2.0	4.0	1.0	3.0	2.5	2.0	1.0	19.0
80	07-22	0.5	1.0	2.0	1.0	4.0	1.0	3.0	2.5	2.0	1.0	18.0
81	07-23	0.5	1.0	2.0	2.0	4.0	0.5	0.0	3.0	0.5	1.0	14.5
82	07-24	0.5	1.0	2.0	2.0	4.0	0.5	0.0	3.0	0.5	1.0	14.5
83 NASAH ABO	07-13	0.3	0.3	2.0	2.0	3.0	1.0	3.0	3.0	0.5	1.0	16.1
84	07-14	0.5	0.0	2.0	2.0	4.0	2.0	0.0	3.0	0.5	1.0	15.0
85	07-15	0.2	0.5	2.0	2.0	3.5	1.0	5.0	3.0	0.7	1.0	18.9
86	07-16	1.5	0.0	2.0	1.0	3.0	0.5	5.0	2.0	0.7	0.0	15.7
87	07-17	0.2	0.5	2.0	2.0	3.0	1.0	4.0	1.0	0.5	1.0	15.2
88	07-18	0.2	0.5	1.0	2.0	3.0	1.0	4.0	1.0	3.0	1.0	16.7
89 KOLLASULAJA	05-2-2	0.5	0.7	1.5	0.8	6.0	0.5	2.0	1.0	2.0	0.5	15.5
90	05-2-3	0.5	0.5	1.0	1.0	7.0	1.0	2.0	1.0	0.4	0.0	14.4
91	05-2-4	1.0	0.8	2.0	0.8	6.0	0.4	2.0	1.0	2.0	0.4	16.3
92	05-2-5	1.0	0.8	3.0	2.0	0.5	1.0	3.0	2.0	0.5	0.0	13.8
93	05-2-6	1.0	0.5	1.5	1.0	6.0	0.8	2.0	1.5	0.4	0.5	15.2
94	05-2-7	0.5	1.0	1.0	0.8	3.0	0.8	2.0	1.5	2.0	0.8	13.3
95 KOBOROCHO	07-01	0.5	0.5	2.0	1.0	4.0	1.0	3.0	2.0	0.3	1.0	15.3
96	07-02	0.5	1.0	2.0	1.0	3.0	1.0	4.0	2.0	0.2	2.0	16.7
97	07-03	0.5	0.0	2.0	3.0	1.0	1.0	0.0	3.0	0.5	1.0	12.0
98	07-04	0.3	0.0	2.0	2.0	3.0	1.0	0.0	3.0	0.5	1.0	12.8
99	07-05	0.3	0.8	2.0	1.0	4.0	1.0	0.0	3.0	0.5	1.0	13.5
100	07-06	0.5	0.5	2.0	1.0	4.0	0.5	3.0	2.5	0.3	1.0	15.3
101 WIJE	07-07	0.2	1.0	1.5	1.5	3.7	1.0	0.0	3.0	0.7	1.0	13.6
102	07-08	0.5	0.0	1.0	3.0	3.5	1.0	0.0	2.0	0.5	1.0	12.5
103	07-09	0.5	1.0	2.0	1.0	3.5	1.0	2.5	3.0	1.0	1.0	16.5
104	07-10	0.5	0.0	2.0	3.0	4.0	1.0	0.0	3.0	0.5	1.0	15.0
105	07-11	0.2	0.5	2.0	2.0	6.0	1.0	0.0	2.0	0.5	2.0	16.2
106	07-12	0.5	0.0	2.0	1.0	3.0	1.0	3.0	2.0	0.5	2.0	15.0
107 DUSTA	10-07-1	2.0	1.0	1.0	2.0	5.0	1.0	2.0	1.0	0.5	1.0	16.5
108	10-07-2	1.0	1.0	1.5	2.0	4.0	2.0	2.0	1.0	0.3	0.0	14.8
109	10-07-3	2.0	1.0	0.5	3.0	6.0	1.0	1.0	1.0	0.3	0.0	15.8
110	10-07-4	1.0	0.5	1.5	2.0	5.0	0.1	2.0	1.5	0.5	1.0	15.1
111	10-07-5	2.0	1.0	2.0	1.0	4.0	0.5	2.0	1.0	0.3	0.0	13.7
112	10-07-6	2.0	1.0	3.0	3.0	5.0	1.0	1.0	1.0	1.0	0.0	18.0
113 KOMBOLCHA	10-03-1	1.0	1.0	3.0	2.0	5.0	2.0	3.0	2.0	0.0	1.0	20.0
114	10-03-2	1.0	0.0	1.0	2.0	4.0	0.5	2.0	1.0	0.0	2.0	13.5
115	10-03-3	1.0	0.5	2.0	1.5	4.0	0.5	1.0	1.0	1.0	2.0	14.5
116	10-03-4	1.5	0.0	1.0	2.0	3.0	1.0	1.0	0.5	0.5	2.0	12.5
117	10-03-5	1.5	2.0	2.0	3.0	1.0	1.0	0.5	0.5	2.0	0.0	13.5
118	10-03-6	1.5	1.0	3.0	3.0	2.5	0.7	0.5	2.0	0.3	3.0	17.5
119 ANDERACHA	06-9-1	0.5	1.0	1.5	1.0	4.0	0.5	3.0	3.0	1.0	1.0	16.5
120	06-9-2	1.0	0.5	3.0	2.0	4.0	1.5	1.3	1.0	2.0	2.0	18.3
121	06-9-3	0.5	0.0	2.5	8.0	2.0	1.0	0.5	1.0	1.5	0.0	17.0
122	06-9-4	0.5	0.0	3.0	2.5	3.0	2.0	1.0	0.5	1.0	1.5	15.0
123	06-9-5	1.0	1.0	1.5	2.0	3.5	1.0	3.0	2.0	0.3	0.0	15.3
124	06-9-6	1.0	1.0	1.0	2.0	3.5	1.0	3.0	2.0	0.3	0.0	14.8
125 SADI	05-1-1	1.0	0.5	2.0	0.5	6.0	0.5	0.0	0.0	2.0	1.0	13.5
126	05-1-2	1.0	1.0	1.0	0.3	2.0	0.5	1.5	1.0	2.0	1.0	11.3
127	05-1-3	0.5	1.0	2.5	0.3	2.0	0.5	3.0	2.0	3.0	0.0	14.8
128	05-1-4	0.5	1.0	2.5	0.5	4.0	0.5	2.0	1.5	2.0	1.0	15.5
129	05-1-5	1.0	0.5	1.3	0.5	2.0	0.5	2.0	1.5	2.0	1.0	12.2
130	05-1-6	1.0	0.5	3.0	0.3	6.0	0.5	2.0	1.0	3.0	0.5	17.8
合計	130戸	113.3	72.1	215.5	257.4	491.0	88.2	288.1	205.5	102.5	123.1	1,941.1
平均		0.9	0.6	1.7	2.0	3.8	0.7	2.0	1.6	0.8	0.9	15.0
比率		5.8%	3.7%	11.1%	13.2%	25.3%	4.5%	13.7%	10.6%	5.3%	6.3%	100.0%

参考資料：地域社会調査、JICA、1996

Appendix Tab. 5　ベレテ地区家計所得

単位: Birr

村落名	家族コード	食用作物 販売用	食用作物 自家用	食用作物 計	家畜 牛	家畜 乳製品	家畜 その他	家畜 計	林産物 /1	その他 /2	計
ATRO GEFERE	03-1-1	270	760	1,030	800	0	24	824	0	0	1,854
	03-1-2	0	450	450	400	0	0	400	0	0	850
	03-1-3	240	1,200	1,440	430	0	115	545	0	2,556	4,541
	03-1-4	540	900	1,440	0	0	30	30	0	0	1,470
	03-1-5	0	390	390	0	0	0	0	0	1,000	1,390
	03-1-6	200	360	560	0	0	0	0	0	0	560
	03-1-7	135	540	675	250	0	0	250	0	0	925
SAMDO DERU	03-2-1	0	360	360	0	0	0	0	0	0	360
	03-2-2	480	3,180	3,660	0	0	0	0	100	0	3,760
	03-2-3	0	600	600	0	0	0	0	0	0	600
	03-2-4	150	1,260	1,410	0	40	0	40	0	0	1,450
	03-2-5	0	540	540	0	0	0	0	0	0	540
	03-2-6	180	780	960	0	0	0	0	0	200	1,160
	03-2-7	180	1,110	1,290	300	0	0	300	0	0	1,590
KOMO HARI	03-3-1	660	1,422	2,082	400	0	0	400	0	0	2,482
	03-3-2	264	336	600	0	60	50	110	0	0	710
	03-3-3	254	252	506	0	104	80	184	0	0	690
	03-3-4	0	358	358	150	0	0	150	0	0	508
	03-3-5	600	530	1,130	0	0	35	35	0	0	1,165
	03-3-6	0	360	360	100	0	0	100	0	0	460
	03-3-7	420	580	1,000	0	0	30	30	0	0	1,030
ATRO SUFA	01-2-1	12	598	610	0	0	128	128	0	0	738
	01-2-2	410	482	892	0	0	0	0	0	300	1,192
	01-2-3	285	3,949	4,234	0	0	300	300	50	0	4,584
	01-2-4	0	650	650	0	0	950	950	0	512	2,112
	01-2-5	340	850	1,190	0	0	900	900	0	0	2,090
	01-2-6	0	338	338	0	0	0	0	0	52	390
	01-2-7	14	205	219	0	0	50	50	0	0	269
MIRGANO BOSO	01-4-1	100	1,352	1,452	0	0	807	807	0	100	2,359
	01-4-2	0	220	220	0	0	260	260	0	0	480
	01-4-3	18	696	714	24	0	187	211	0	0	925
	01-4-4	120	1,690	1,810	0	0	1,095	1,095	0	0	2,905
	01-4-5	40	350	390	0	0	0	0	0	156	546
	01-4-6	0	423	423	0	0	0	0	0	0	423
	01-4-7	70	1,892	1,962	0	0	0	0	0	0	1,962
KUSHE	02-1-1	80	2,966	3,046	0	0	0	0	0	380	3,426
	02-1-2	100	400	500	40	0	40	80	0	0	580
	02-1-3	438	1,091	1,529	0	0	700	700	0	0	2,229
	02-1-4	534	532	1,066	0	0	0	0	85	0	1,151
	02-1-5	100	840	940	0	0	0	0	0	0	940
	02-1-6	125	270	395	0	0	0	0	0	0	395
	02-1-7	320	312	632	0	0	0	0	0	0	632
YANGA DEJO	02-2-1	750	360	1,110	0	0	0	0	0	0	1,110
	02-2-2	300	264	564	0	0	0	0	0	0	564
	02-2-3	500	348	848	0	0	0	0	120	0	968
	02-2-4	200	75	275	0	0	0	0	0	0	275
	02-2-5	117	244	361	0	0	0	0	0	0	361
	02-2-6	0	164	164	0	0	27	27	0	0	191
	02-2-7	0	128	128	0	0	0	0	225	0	353
SEBEKA DERIYE	02-3-1	40	234	274	0	0	72	72	110	0	456
	02-3-2	550	240	790	0	0	0	0	0	0	790
	02-3-3	300	284	584	0	0	16	16	60	0	660
	02-3-4	480	72	552	0	0	0	0	0	0	552
	02-3-5	0	140	140	0	0	0	0	0	0	140
	02-3-6	990	326	1,316	0	0	0	0	0	0	1,316
	02-3-7	1,230	0	1,230	0	0	0	0	500	200	1,930
SHERE MOFFA	04-1-1	3,080	620	3,700	0	0	0	0	0	0	3,700
	04-1-2	5,020	580	5,600	0	0	0	0	0	0	5,600
	04-1-3	5,070	580	5,600	0	0	0	0	50	0	5,650
	04-1-4	2,330	1,200	3,530	0	0	0	0	0	0	3,530
	04-1-5	4,220	700	4,920	0	0	0	0	0	0	4,920
	04-1-6	5,020	580	5,600	0	0	0	0	0	0	5,600
	04-1-7	3,920	580	4,500	0	0	0	0	0	0	4,500
ELRE TOGORE	01-1-1	66	392	458	0	0	0	0	0	0	458
	01-1-2	560	1,313	1,873	0	0	0	0	0	0	1,873
	01-1-3	3,170	130	3,300	0	0	0	0	0	0	3,300
	01-1-4	0	218	218	0	0	290	290	0	80	588
	01-1-5	6,840	530	7,370	0	0	0	0	0	0	7,370
	01-1-6	600	420	1,020	600	0	0	600	0	0	1,620
	01-1-7	600	420	1,020	600	0	0	600	0	0	1,620
合計		53,582	47,513	101,095	4,094	204	6,186	10,484	1,300	5,536	118,415
1戸当たり平均				1,441				150	19	79	1,692
比率 (%)				85.4%				8.9%	1.1%	4.7%	100.0%

注記: 1/ 主な林産物は柱薪である　2/ その他収入の大部分は賃金労働による

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 6 (1) ゲラ地区家計所得

単位: Birr

村落名	家族コード	食用作物			家畜				林産物 /1	その他 /2	計
		販売用	自家用	計	牛	乳製品	その他	計			
G. KASHIMARI	10-21	300	880	1,180	0	0	370	370	0	0	1,550
	10-22	540	490	1,030	600	160	200	960	0	0	1,990
	10-23	1,000	1030	2,030	1,000	200	650	1,850	0	0	3,880
	10-24	0	720	720	700	55	100	855	0	0	1,575
	10-25	440	420	860	600	130	200	930	0	0	1,790
	10-26	570	865	1,435	500	150	300	950	0	0	2,385
GABA KORRO	10-15	410	990	1,400	600	0	0	600	0	0	2,000
	10-16	500	720	1,220	500	150	500	1,150	0	0	2,370
	10-17	1,090	1070	2,160	500	200	0	700	0	0	2,860
	10-18	420	620	1,040	0	0	425	425	0	0	1,465
	10-19	480	780	1,260	500	125	300	925	0	0	2,185
	10-20	800	1000	1,800	0	150	500	650	0	0	2,450
GUTIE	10-09	1,240	1040	2,280	800	250	300	1,350	0	0	3,630
	10-10	360	1020	1,380	600	100	100	800	0	0	2,180
	10-11	510	1200	1,710	800	300	150	1,250	0	0	2,960
	10-12	0	1180	1,180	600	160	635	1,395	0	0	2,575
	10-13	600	700	1,300	700	120	280	1,100	0	0	2,400
	10-14	820	820	1,640	0	0	560	560	0	0	2,200
GAMINA	08-1	670	300	970	500	0	0	500	0	0	1,470
	08-2	1,040	360	1,400	0	0	0	0	0	0	1,400
	08-3	2,850	300	3,150	0	0	70	70	100	0	3,320
	08-4	1,100	300	1,400	0	0	0	0	0	0	1,400
	08-5	1,500	480	1,980	500	0	80	580	0	0	2,560
	08-6	1,030	180	1,210	0	0	0	0	0	0	1,210
OBA	08-8	1,535	600	2,135	0	0	70	70	0	0	2,205
	08-9	2,030	830	2,860	0	0	0	0	0	0	2,860
	08-10	1,380	360	1,740	0	0	10	10	0	0	1,750
	08-11	1,296	480	1,776	500	0	0	500	0	0	2,276
	08-12	4,730	480	5,210	1,000	0	120	1,120	0	0	6,330
	08-13	1,510	660	2,170	0	0	0	0	0	600	2,770
DACHOLAKU	08-21	2,130	600	2,730	0	0	0	0	0	0	2,730
	08-22	1,660	0	1,660	0	0	0	0	0	0	1,660
	08-23	2,240	0	2,240	0	0	0	0	0	0	2,240
	08-24	1,840	320	2,160	0	0	0	0	0	0	2,160
	08-25	850	660	1,510	500	0	0	500	0	0	2,010
	08-26	1,275	490	1,765	0	0	0	0	0	0	1,765
BALLA	08-15	0	95	95	0	0	0	0	30	170	295
	08-16	900	950	1,850	0	0	0	0	0	0	1,850
	08-17	2,672	700	3,372	0	0	0	0	0	0	3,372
	08-18	2,100	1600	3,700	0	0	6	6	0	0	3,706
	08-19	510	300	810	0	0	0	0	0	0	810
	08-20	1,500	790	2,290	0	0	0	0	0	0	2,290
GERA	09-13	500	1020	1,520	0	0	0	0	102	0	1,622
	09-14	600	430	1,030	450	0	0	450	350	0	1,830
	09-15	1,530	570	2,100	0	0	0	0	204	0	2,304
	09-16	510	290	800	0	0	0	0	200	0	1,000
	09-17	1,530	1150	2,680	0	0	0	0	306	0	2,986
	09-18	540	580	1,090	0	0	0	0	400	0	1,490
KELAHARERE	09-1	192	192	384	400	0	100	500	255	0	1,139
	09-2	0	365	365	0	0	200	200	500	0	1,065
	09-3	0	264	264	0	0	150	150	470	0	884
	09-4	0	474	474	0	0	80	80	595	0	1,149
	09-5	0	638	638	300	0	110	410	306	0	1,354
	09-6	0	808	808	600	0	440	1,040	680	0	2,528
AFALO	09-7	140	370	510	0	0	0	0	1,200	0	1,710
	09-8	0	1150	1,150	0	0	230	230	1,010	0	2,390
	09-9	0	290	290	700	0	130	330	1,300	0	1,920
	09-10	0	500	500	400	0	230	630	1,000	0	2,130
CHALLA	06-11	0	672	672	0	0	0	0	600	0	1,272
	06-12	1,400	1152	2,552	0	100	30	130	750	0	3,432
	06-13	828	1,188	2,016	0	0	0	0	0	0	2,016
	06-14	420	852	1,272	0	0	0	0	0	0	1,272
	06-15	1,500	708	2,208	0	0	110	110	300	0	2,618
	06-16	830	201	1,044	0	0	0	0	100	0	1,144
小計		58,958	41,247	100,175	14,350	2,350	7,736	24,436	10,758	770	136,139

(次頁に続く)

Appendix Tab. 6 (2) ゲラ地区家計所得

Unit: Birr

村落名	家族コード	食用作物 販売用	食用作物 自家用	食用作物 計	家畜 牛	家畜 乳製品	家畜 その他	家畜 計	林産物 /1	その他 /2	計
前頁より続く：		58,958	41,217	100,175	14,350	2,350	7,736	24,436	10,758	770	136,139
SELAJA	06-1	0	708	708	0	91	30	121	0	0	829
	06-2	132	272	404	0	0	70	70	0	200	674
	06-3	0	390	390	500	80	42	622	0	0	1,012
	06-4	0	1,108	1,108	200	84	60	344	0	0	1,452
	06-5	0	618	618	0	160	240	400	0	0	1,018
	06-6	0	672	672	0	0	0	0	0	360	1,032
GERA	06-17	0	1,165	1,165	0	0	0	0	920	0	2,085
	06-18	400	752	1,152	0	0	0	0	153	0	1,305
	06-19	0	240	240	0	0	0	0	900	0	1,140
	06-20	0	272	272	0	0	0	0	850	0	1,122
	06-21	0	548	548	0	0	0	0	750	0	1,298
	06-22	0	384	384	0	0	0	0	1,000	0	1,384
GUREKESSO	07-19	166	444	610	500	30	75	605	100	0	1,315
	07-20	240	280	520	0	0	100	100	130	0	750
	07-21	881	1,010	1,891	2,000	50	70	2,120	0	0	4,011
	07-22	280	280	560	400	40	70	510	150	0	1,220
	07-23	886	844	1,730	500	70	0	570	0	0	2,300
	07-24	524	524	1,048	350	40	78	468	0	0	1,516
NASAW ABO	07-13	144	494	638	0	0	60	60	950	0	1,648
	07-14	0	688	688	0	0	0	0	1,280	0	1,968
	07-15	0	688	688	0	0	0	0	460	0	1,148
	07-16	0	808	808	460	50	0	510	550	0	1,868
	07-17	60	624	684	0	70	68	138	800	0	1,622
	07-18	0	888	888	0	50	180	230	560	0	1,678
KOLLASULAJA	05-2-2	780	1,820	2,600	350	300	0	650	300	0	3,550
	05-2-3	760	920	1,680	350	80	114	544	200	0	2,424
	05-2-4	620	1,340	1,960	350	50	35	435	90	0	2,485
	05-2-5	500	856	1,356	350	120	114	584	200	0	2,140
	05-2-6	970	1,380	2,350	350	80	110	540	250	0	3,140
	05-2-7	1,200	1,560	2,760	350	120	100	570	100	0	3,430
KOBOKOCHO	07-01	430	688	1,118	383	12	100	495	0	0	1,613
	07-02	1,118	828	1,946	0	100	70	170	0	0	2,116
	07-03	678	556	1,234	0	0	80	80	0	0	1,314
	07-04	384	554	938	0	80	15	95	0	0	1,033
	07-05	404	678	1,082	0	0	60	60	0	0	1,142
	07-06	550	700	1,250	0	0	90	90	0	0	1,340
MUJE	07-07	410	564	974	0	0	102	102	0	0	1,076
	07-08	412	778	1,190	0	60	48	108	0	0	1,298
	07-09	464	548	1,012	300	50	480	830	0	0	1,842
	07-10	684	510	1,194	550	0	0	550	200	0	1,944
	07-11	210	358	568	0	0	0	0	300	0	868
	07-12	674	628	1,302	390	40	30	460	0	0	1,762
DUSTA	10 07-1	100	800	900	500	120	100	720	0	0	1,620
	10 07-2	200	550	750	500	200	150	850	0	0	1,600
	10 07-3	740	760	1,500	0	0	600	600	500	0	2,600
	10 07-4	0	720	720	500	250	150	900	0	0	1,620
	10 07-5	0	520	520	1,000	244	100	1,344	0	0	1,864
	10 07-6	560	580	1,140	700	0	0	700	0	0	1,840
KOMBOLCHA	10-03-1	370	1,100	1,470	600	200	450	1,250	0	0	2,720
	10-03-2	340	680	1,020	700	0	150	850	0	0	1,870
	10-03-3	180	960	1,140	0	0	15	15	0	700	1,855
	10-03-4	690	430	1,120	0	0	80	80	0	0	1,200
	10-03-5	680	360	1,040	0	0	0	0	0	0	1,040
	10-03-6	180	610	790	300	0	130	430	300	0	1,520
ANDERACHA	06 9-1	180	396	576	0	0	240	240	0	0	816
	06 9-2	0	808	808	500	30	50	580	0	0	1,388
	06 9-3	344	822	1,166	0	72	0	72	0	0	1,238
	06 9 4	344	414	758	430	35	16	481	0	0	1,239
	06 9-5	1,620	1,740	3,360	350	80	70	500	0	0	3,860
	06-9 6	1,260	1,380	2,640	350	105	110	565	0	77	3,282
SADI	05-1-1	1,920	1,080	3,000	450	75	25	550	0	0	3,550
	05-1-2	1,800	1,200	3,000	350	80	95	525	0	0	3,525
	05-1-3	881	1,817	2,698	350	120	390	860	0	0	3,558
	05-1 4	1,537	1,510	3,047	350	120	80	550	0	0	3,597
	05-1-5	904	1,816	2,720	350	150	104	604	0	0	3,324
	05-1-6	1,102	1,658	2,760	350	150	150	650	0	0	3,410
Total		89,851	93,925	183,746	31,613	6,288	13,682	51,583	22,751	2,107	260,187
Average per household				1,413				397	175	16	2,001
Percentage				70.6%				19.8%	8.7%	0.8%	100%

注記: 1/ 主な林産物は蜂蜜である 2/ その他収入の大部分は賃金労働による

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 7 (1) ベレテ地区標本農家の薪採取状況

村落名	家族コード	家族数	薪採取の距離別農家数 1km未満	1-4km	5km以上	薪採取所要時間 農家別	村別	薪採取の難易度別農家数 困難	やや容易	容易	大変容易
ATRO GEFERE	03-1-1	3	1			1.0					1
	03-1-2	4	1			1.0					1
	03-1-3	4	1			1.0					1
	03-1-4	4	1			1.0					1
	03-1-5	8	1			2.0				1	
	03-1-6	9	1			1.0					1
	03-1-7	4	1			1.0	1.1				1
SAMBO DERU	03-2-1	5		1		1.0				1	
	03-2-2	3		1		1.0				1	
	03-2-3	3		1		2.0				1	
	03-2-4	3		1		2.0				1	
	03-2-5	5			1	0.5					1
	03-2-6	5		1		1.5				1	
	03-2-7	3		1		1.5	1.4			1	
KOMO HARI	03-3-1	5		1		2.0				1	
	03-3-2	5	1			2.5			1		
	03-3-3	3	1			2.0				1	
	03-3-4	8			1	5.0		1			
	03-3-5	5		1		4.0		1			
	03-3-6	6	1			4.0				1	
	03-3-7	8			1	5.0	3.5	1			
AIRO SUFA	01-2-1	5			1	4.0		1			
	01-2-2	2		1		2.0				1	
	01-2-3	5		1		2.0				1	
	01-2-4	9			1	5.0		1			
	01-2-5	4		1		0.8					1
	01-2-6	8	1			3.0			1		
	01-2-7	4			1	4.0	3.0	1			
MIRGANO BOSO	01-4-1	10			1	4.0		1			
	01-4-2	4			1	3.0			1		
	01-4-3	6	1			1.5				1	
	01-4-4	11		1		4.0		1			
	01-4-5	5		1		5.0		1			
	01-4-6	7	1			4.0		1			
	01-4-7	5	1			4.0	3.6	1			
KISHE	02-1-1	6			1	3.0			1		
	02-1-2	6		1		3.0			1		
	02-1-3	16		1		0.5					1
	02-1-4	5		1		1.5				1	
	02-1-5	6	1			1.5				1	
	02-1-6	3	1			1.0					1
	02-1-7	5	1			2.0	1.8				1
YANGA DEAO	02-2-1	6		1		2.0				1	
	02-2-2	8	1			1.0					1
	02-2-3	10	1			1.0					1
	02-2-4	10		1		2.0				1	
	02-2-5	13		1		1.5				1	
	02-2-6	7		1		1.5				1	
	02-2-7	7		1		3.0	1.7		1		
SEBEKA DEBIYE	02-3-1	4	1			1.0					1
	02-3-2	8	1			1.0					1
	02-3-3	7	1			1.0					1
	02-3-4	8	1			1.0					1
	02-3-5	5	1			0.5					1
	02-3-6	8	1			0.5					1
	02-3-7	5	1			1.0	0.9				1
SUFBE MOFFA	04-1-1	5		1		1.5				1	
	04-1-2	8		1		1.5				1	
	04-1-3	7		1		1.5					1
	04-1-4	6		1		1.5					1
	04-1-5	5			1	2.5			1		
	04-1-6	6		1		1.5					1
	04-1-7	4		1		1.5	1.6				1
ELKE TOGOBE	01-1-1	4		1		3.0		1			
	01-1-2	4	1			3.0				1	
	01-1-3	6	1			1.0				1	
	01-1-4	10			1	4.0		1			
	01-1-5	5			1	2.0			1		
	01-1-6	6	1			0.8				1	
	01-1-7	6			1	1.5	2.2	1			
合計	70戸	423	29	28	13	145.5		14	8	24	24
平均		6.0				2.1					

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 7 (2)　ゲラ地区標本農家の薪採取状況

村落名	家族コード	家族数	薪採取の距離別農家数			薪採取所要時間		薪採取の難易度別農家数			
			1km未満	1-4km	5km以上	農家別	村落別	困難	やや容易	容易	大変容易
1 G. KASHIMARI	10-21	8		1		1.0				1	
2	10-22	7		1		1.0				1	
3	10-23	14	1			2.0				1	
4	10-24	6	1			1.0				1	
5	10-25	6		1		1.0				1	
6	10-26	8	1			1.5	1.3			1	
7 GABA KORRO	10-15	4		1		2.5				1	
8	10-16	5	1			1.0				1	
9	10-17	10		1		1.0				1	
10	10-18	3	1			1.0				1	
11	10-19	4		1		1.0				1	
12	10-20	5	1			1.0	1.3			1	
13 GUTTE	10-09	10		1		1.0				1	
14	10-10	5	1			1.0				1	
15	10-11	7		1		1.0			1		
16	10-12	5		1		1.5				1	
17	10-13	4	1			1.5			1		
18	10-14	3		1		1.0	1.2			1	
19 GAMINA	08-1	6		1		1.5			1		
20	08-2	5	1			1.0			1		
21	08-3	10	1			0.5				1	
22	08-4	5	1			1.5				1	
23	08-5	8	1			1.0			1		
24	08-6	3	1			1.0	1.1			1	
25 OBA	08-8	4	1			1.5				1	
26	08-9	6	1			1.5					1
27	08-10	5	1			1.5			1		
28	08-11	4	1			2.0				1	
29	08-12	10	1			3.0				1	
30	08-13	8	1			2.0	1.9			1	
31 DACHOLAKI	08-21	7	1			2.0					1
32	08-22	2	1			2.0				1	
33	08-23	9	1			2.0				1	
34	08-24	4	1			1.0					1
35	08-25	8	1			1.0				1	
36	08-26	6	1			1.5	1.6				1
37 WALLA	08-15	5	1			1.0				1	
38	08-16	6	1			0.5				1	
39	08-17	6	1			1.0				1	
40	08-18	10	1			2.0				1	
41	08-19	8	1			1.0				1	
42	08-20	7	1			2.0	1.3			1	
43 GURA	09-13	4	1			2.0				1	
44	09-14	6	1			1.5				1	
45	09 15	6	1			2.0				1	
46	09-16	3	1			1.0				1	
47	09-17	7	1			2.0				1	
48	09-18	5	1			1.5	1.7			1	
49 KELAHARERE	09-1	3		1		1.5			1		
50	09-2	5		1		2.0			1		
51	09-3	5		1		2.0			1		
52	09-4	6		1		0.7				1	
53	09-5	5	1			1.0				1	
54	09-6	10	1			3.0	1.7			1	
55 AFALO	09-7	2	1			1.0					1
56	09-8	5	1			1.0					1
57	09-9	11	1			1.0				1	
58	09-10	5	1			1.0	1.3			1	
59 CHALLA	06-11	8		1		1.0			1		
60	06-12	14	1			1.5				1	
61	06-13	12		1		1.0			1		
62	06-14	4	1			1.5			1		
63	06-15	7		1		2.0				1	
64	06-16	9		1		1.5	1.4		1		
小計:		408	45	19	0	89.7		0	13	45	6

(次頁へ続く)

Appendix Tab. 7 (3) ゲラ地区標本農家の薪採取状況

村落名	家族コード	家族数	薪採取の距離別農家数 1km未満	1-5km	5km以上	薪採取時間 農家別	村落別	薪採取の難易度別農家数 困難	やや容易	容易	大変容易
前ページより：		108	15	19	0	89.7		0	13	15	6
65 SELAJA	06-1	7		1		3.0			1		
66	06-2	5		1		2.0				1	
67	06-3	5	1			1.0				1	
68	06-4	7		1		3.0			1		
69	06-5	7	1			1.5				1	
70	06-6	3	1			1.5	2.0			1	
71 GERA	06-17	5	1			2.0				1	
72	06-18	5		1		2.0			1		
73	06-19	6		1		2.0				1	
74	06-20	1	1			2.0				1	
75	06-21	1	1			2.0				1	
76	06-22	5	1			2.0	2.0			1	
77 GUREKESSO	07-19	5	1			2.0				1	
78	07-20	5		1		2.0				1	
79	07-21	10	1			2.0					1
80	07-22	3	1			2.0			1		
81	07-23	11		1		2.0			1		
82	07-24	7	1			2.0	2.0			1	
83 NASAW ABO	07-13	5	1			2.0					1
84	07-14	10	1			2.0					1
85	07-15	1	1			2.0					1
86	07-16	6	1			2.0				1	
87	07-17	6	1			2.0				1	
88	07-18	6	1			1.0	1.8				1
89 KOLLASULAJA	05-2-2	1	1			1.5				1	
90	05-2-3	1	1			1.0				1	
91	05-2-4	1	1			2.0				1	
92	05-2-5	1	1			3.0				1	
93	05-2-6	1	1			1.5				1	
94	05-2-7	1	1			1.0	1.7			1	
95 KOBOKOCHO	07-01	10		1		2.0				1	
96	07-02	10		1		2.0				1	
97	07-03	7		1		2.0				1	
98	07-04	6		1		2.0				1	
99	07-05	9		1		2.0				1	
100	07-06	7		1		2.0	2.0			1	
101 MUJE	07-07	7		1		1.5			1		
102	07-08	9	1			1.0				1	
103	07-09	6		1		2.0				1	
104	07-10	10	1			2.0				1	
105	07-11	4	1			2.0				1	
106	07-12	4	1			2.0	1.8			1	
107 DUSTA	10-07-1	5	1			1.0				1	
108	10-07-2	3		1		1.5				1	
109	10-07-3	5	1			0.5				1	
110	10-07-4	5		1		1.5			1		
111	10-07-5	3		1		2.0			1		
112	10-07-6	6			1	3.0	1.6	1			
113 KOMBOLCHA	10-03-1	8		1		3.0			1		
114	10-03-2	7	1			1.0				1	
115	10-03-3	9		1		2.0				1	
116	10-03-4	7	1			1.0				1	
117	10-03-5	7		1		2.0			1		
118	10-03-6	8		1		3.0	2.0			1	
119 ANDERACHA	06-9-1	4	1			1.5				1	
120	06-9-2	11	1			3.0					1
121	06-9-3	5	1			2.5				1	
122	06-9-4	6		1		3.0			1		
123	06-9-5	4		1		1.5		1			
124	06-9-6	4	1			1.0	2.1		1		
125 SADI	05-1-1	1	1			2.0			1		
126	05-1-2	1	1			1.0				1	
127	05-1-3	1		1		2.5			1		
128	05-1-4	1		1		2.5			1		
129	05-1-5	4	1			1.3			1		
130	05-1-6	4		1		3.0	2.0		1		
合計		793	83	16	1	215.5		2	30	86	12
平均		6.1				1.7					

参考資料：地域社会調査、JICA、1996

Appendix Tab. 8 (1) ベレテ地区住民の一般ニーズ

Village 名	家族コード	住宅改善	家畜給水	電化	泉へのアクセス	蜂蜜へのアクセス	森林へのアクセス	道路改善	農具購入	農地へのアクセス	農業金融へのアクセス
1 ATRO GEFERE	03-1-1	3	0	0	0	0	0	0	2	2	2
2	03-1-2	3	1	3	0	0	0	0	0	0	0
3	03-1-3	3	0	2	3	0	0	0	3	3	0
4	03-1-4	3	0	3	3	0	0	2	3	0	2
5	03-1-5	2	0	2	0	0	0	0	2	3	0
6	03-1-6	3	3	3	0	0	0	0	2	2	0
7	03-1-7	3	0	2	0	0	0	0	3	2	0
8 SAMBO DERU	03-2-1	3	0	0	0	0	1	0	0	3	3
9	03-2-2	3	3	0	3	0	0	2	2	2	1
10	03-2-3	0	3	0	3	0	0	0	3	2	2
11	03-2-4	3	3	0	3	0	0	2	2	2	1
12	03-2-5	3	3	0	3	0	0	2	2	2	1
13	03-2-6	3	2	0	3	0	0	0	3	0	2
14	03-2-7	3	0	0	3	0	0	0	2	3	2
15 KOMO HARI	03-3-1	0	3	0	0	0	0	3	0	1	6
16	03-3-2	2	3	0	2	0	0	3	1	3	0
17	03-3-3	2	3	0	2	0	0	2	0	1	1
18	03-3-4	3	3	0	2	0	0	0	0	1	6
19	03-3-5	2	3	0	3	0	0	2	2	1	3
20	03-3-6	2	2	0	3	0	0	3	2	0	1
21	03-3-7	2	2	0	2	0	0	3	0	0	1
22 ATRO SUFA	01-2-1	3	3	3	0	1	2	0	2	1	0
23	01-2-2	3	2	2	0	0	2	3	1	1	0
24	01-2-3	3	2	1	2	0	0	1	0	3	3
25	01-2-4	3	2	2	0	1	0	1	3	3	1
26	01-2-5	2	3	0	0	0	0	2	2	3	0
27	01-2-6	3	3	2	0	1	0	2	1	0	0
28	01-2-7	3	3	0	1	0	0	0	1	2	0
29 MIRGANO BOSO	01-4-1	3	1	2	0	0	0	3	1	1	0
30	01-4-2	3	2	2	0	0	1	3	3	1	0
31	01-4-3	3	3	0	0	0	0	3	1	2	1
32	01-4-4	3	1	3	0	0	1	2	0	2	0
33	01-4-5	3	3	0	1	0	0	2	2	2	0
34	01-4-6	3	1	3	0	0	0	2	2	2	0
35	01-4-7	2	1	2	0	0	0	3	0	1	0
36 KISHE	42-1-1	3	2	0	0	0	0	0	0	0	0
37	02-1-2	2	0	0	0	0	0	3	1	0	0
38	02-1-3	3	0	2	0	0	0	3	3	0	2
39	02-1-4	0	0	0	1	0	0	0	2	0	0
40	02-1-5	3	0	0	0	0	0	0	2	0	0
41	02-1-6	0	0	1	0	0	0	2	0	0	0
42	02-1-7	0	0	1	0	0	0	2	0	0	3
43 ELKE TOGOBE	01-1-1	2	2	1	0	1	0	2	0	1	0
44	01-1-2	2	2	2	1	0	0	3	3	3	0
45	01-1-3	0	1	0	0	0	0	3	2	0	2
46	01-1-4	3	3	0	1	0	0	3	0	2	0
47	01-1-5	1	0	1	0	2	0	3	0	0	3
48	01-1-6	2	3	0	2	2	0	3	0	1	0
49	01-1-7	2	3	0	2	2	0	3	0	1	0
50 YANGA DEAO	02-2-1	0	0	0	0	0	0	0	0	0	0
51	02-2-2	1	0	0	0	0	0	0	2	0	0
52	02-2-3	0	0	0	0	0	0	0	0	0	0
53	02-2-4	3	0	3	0	0	0	1	2	0	0
54	02-2-5	0	0	0	0	0	0	1	0	0	0
55	02-2-6	0	0	0	0	0	0	1	0	0	0
56	02-2-7	0	0	0	0	0	0	1	0	0	0
57 SEBEKA DEBIYE	02-3-1	0	0	0	0	0	0	2	0	0	0
58	02-3-2	0	0	0	0	0	0	1	0	3	0
59	02-3-3	2	3	2	0	0	0	1	3	0	1
60	02-3-4	3	0	2	0	0	0	1	1	0	0
61	02-3-5	0	0	1	0	0	0	0	0	0	0
62	02-3-6	3	0	0	0	0	0	0	0	0	1
63	02-3-7	0	0	1	0	2	0	0	0	3	0
64 SHEBE WOFFA	04-2-1	2	0	1	0	0	0	2	0	0	3
65	04-2-2	1	0	1	0	0	0	2	2	0	3
66	04-2-3	1	0	0	0	0	0	1	3	0	3
67	04-2-4	1	0	0	0	0	0	2	2	0	3
68	04-2-5	1	0	2	0	0	0	3	2	0	3
69	04-2-6	1	1	0	0	0	0	0	3	0	2
70	04-2-7	1	1	0	0	0	0	3	1	0	3
合計点数		134	88	58	49	12	7	103	87	71	71
RANKING		1	4	10	11	16	18	2	5	7	7

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 8 (2) ベレテ地区住民の一般ニーズ

Village 名	家族コード	学校へのアクセス	クリニックへのアクセス	農民組織編成	婦人組織編成	農業生産向上	所得向上	道路改善	通信改善	雇用機会	水産技術	農業技術改善
1 ATRO GEFERE	03-1-1	1	0	0	0	0	3	1	0	1	0	3
2	03-1-2	2	2	0	0	0	2	1	0	3	1	0
3	03-1-3	2	2	0	0	0	1	0	0	1	1	0
4	03-1-4	1	1	0	0	0	0	0	0	1	0	0
5	03-1-5	1	0	0	0	0	0	1	0	0	1	3
6	03-1-6	1	2	0	0	1	0	0	0	1	0	0
7	03-1-7	2	1	0	0	3	0	0	0	2	1	0
8 SAMBO DERU	03-2-1	2	0	0	0	2	0	2	0	1	0	1
9	03-2-2	1	1	0	0	0	0	0	0	0	0	0
10	03-2-3	0	2	0	0	1	1	0	0	1	0	0
11	03-2-4	0	1	0	0	0	1	0	0	0	0	0
12	03-2-5	0	1	0	0	0	0	0	0	0	0	1
13	03-2-6	1	2	0	0	1	0	0	0	0	0	1
14	03-2-7	0	1	0	0	1	2	0	0	1	0	0
15 KOMO HARI	03-3-1	2	0	0	0	0	1	1	0	2	2	0
16	03-3-2	2	0	0	0	1	1	0	0	0	0	0
17	03-3-3	2	0	0	0	0	0	0	0	0	0	1
18	03-3-4	3	0	3	0	1	1	0	0	1	0	0
19	03-3-5	2	0	0	0	0	0	0	0	0	0	0
20	03-3-6	2	0	0	0	0	0	0	0	0	0	0
21	03-3-7	2	0	0	0	0	1	0	0	0	0	0
22 ATRO SUFA	01-2-1	1	2	0	0	0	0	0	0	0	0	0
23	01-2-2	0	1	0	0	0	0	0	0	0	0	0
24	01-2-3	0	2	1	0	0	0	0	0	0	0	0
25	01-2-4	0	2	0	0	0	0	0	0	0	0	0
26	01-2-5	3	1	0	1	0	0	0	0	1	0	0
27	01-2-6	0	2	0	0	1	0	0	0	0	1	0
28	01-2-7	0	3	0	0	2	0	3	0	0	0	0
29 MIRGANO BOSO	01-4-1	2	3	0	0	0	0	2	0	0	0	0
30	01-4-2	1	2	0	0	0	0	0	0	0	0	0
31	01-4-3	2	2	0	0	1	0	0	0	0	0	0
32	01-4-4	3	2	0	0	0	0	0	0	0	0	0
33	01-4-5	1	3	0	0	0	0	0	0	0	0	0
34	01-4-6	1	3	0	0	0	0	1	0	0	1	0
35	01-4-7	3	3	0	0	0	0	0	0	0	0	0
36 KISHE	42-1-1	1	0	0	0	0	0	1	0	0	0	0
37	02-1-2	0	0	0	0	0	0	0	0	0	0	0
38	02-1-3	0	1	0	0	1	0	0	0	0	0	0
39	02-1-4	0	3	0	0	0	0	0	0	0	0	0
40	02-1-5	0	0	0	0	0	0	0	0	0	0	0
41	02-1-6	0	3	0	0	0	1	0	0	0	0	0
42	02-1-7	0	0	0	0	0	0	0	0	0	0	0
43 ELKE TOGOBE	01-1-1	0	0	0	0	3	0	3	0	0	0	3
44	01-1-2	0	2	0	0	1	0	0	0	0	0	1
45	01-1-3	0	2	0	0	3	1	3	0	0	0	1
46	01-1-4	0	2	0	0	2	0	1	0	0	0	1
47	01-1-5	2	3	0	0	3	1	0	0	0	0	0
48	01-1-6	1	1	0	0	0	0	0	0	0	0	0
49	01-1-7	1	1	0	0	0	0	0	0	0	0	0
50 YANGA DEAO	02-2-1	1	3	0	0	2	0	1	0	0	0	0
51	02-2-2	0	3	0	0	0	0	0	0	0	0	0
52	02-2-3	3	1	0	0	1	0	0	0	0	0	0
53	02-2-4	0	0	2	0	2	0	0	0	0	0	2
54	02-2-5	3	0	0	0	0	0	1	0	0	0	0
55	02-2-6	3	2	0	0	0	0	0	0	0	0	0
56	02-2-7	3	2	0	0	3	0	0	0	0	0	0
57 SEBEKA DEBIYE	02-3-1	0	0	0	0	3	0	0	0	0	0	0
58	02-3-2	0	0	0	0	2	0	0	0	0	0	3
59	02-3-3	0	2	0	0	3	0	0	0	0	1	0
60	02-3-4	1	0	0	0	0	0	3	0	0	1	0
61	02-3-5	0	0	0	0	2	0	0	0	0	0	0
62	02-3-6	0	0	0	0	2	0	0	0	0	0	0
63	02-3-7	0	0	0	0	0	0	0	0	0	0	0
64 SHEBE MOFFA	04-2-1	3	3	0	0	2	1	1	0	0	0	0
65	04-2-2	3	3	0	0	0	0	2	0	0	0	1
66	04-2-3	2	3	0	0	2	1	2	0	0	0	0
67	04-2-4	3	3	0	0	2	1	1	0	0	0	0
68	04-2-5	3	2	0	0	1	1	0	0	0	0	0
69	04-2-6	3	3	0	0	2	1	2	0	0	0	0
70	04-2-7	2	2	0	0	2	3	0	0	0	0	0
合計点		84	97	6	1	59	25	33	0	16	10	22
RANKING		6	3	19	20	9	13	12	21	15	17	14

参考資料: Local Community Survey, JICA, 1996

Appendix Tab. 8 (3)　ゲラ地区住民の一般ニーズ

	Village 名	調査コード	住宅改善	家庭給水	電化	道へのアクセス	病院へのアクセス	市場へのアクセス	通勤交通	農具購入	農地へのアクセス	農業金融へのアクセス
1	G. KASHIMARI	10-21	2	2	2	0	0	0	3	1	0	1
2		10-22	2	2	2	0	0	0	3	1	0	1
3		10-23	2	2	2	0	0	0	3	1	0	0
4		10-24	3	2	2	0	0	0	3	2	0	0
5		10-25	2	2	1	0	0	0	3	2	0	1
6		10-26	2	0	0	0	0	0	3	0	0	1
7	GABA KORRO	10-15	2	2	1	0	0	0	3	2	0	0
8		10-16	3	0	0	0	0	0	3	2	0	1
9		10-17	3	0	0	0	0	0	3	1	0	0
10		10-18	3	1	0	0	0	0	3	0	0	0
11		10-19	2	0	0	0	0	0	3	2	2	1
12		10-20	2	0	0	0	0	0	3	1	0	0
13	GUTTE	10-09	1	1	0	0	0	0	3	0	0	0
14		10-10	3	2	0	0	0	0	3	2	0	1
15		10-11	2	2	0	0	0	0	3	1	0	0
16		10-12	2	2	1	0	0	0	3	2	0	1
17		10-13	1	1	0	0	0	0	3	1	0	2
18		10-14	3	1	0	0	0	0	3	2	0	0
19	GAMINA	08-1	3	0	1	1	0	0	3	2	0	2
20		08-2	3	0	1	1	0	0	3	0	0	3
21		08-3	3	0	1	1	0	0	3	2	0	2
22		08-4	3	0	0	1	0	0	3	0	2	1
23		08-5	3	0	2	0	0	0	3	2	0	2
24		08-6	3	0	2	0	0	0	3	1	2	2
25	OBA	08-8	3	0	2	0	0	0	3	2	0	3
26		08-9	3	0	1	2	1	0	3	0	2	0
27		08-10	3	0	3	0	0	0	3	2	0	2
28		08-11	3	0	0	2	0	0	3	0	2	3
29		08-12	3	0	1	0	0	0	3	2	0	3
30		08-13	3	0	3	0	0	0	3	2	0	3
31	DACHOLAKL	08-21	2	0	2	0	0	0	3	1	0	0
32		08-22	3	0	0	0	3	0	3	0	0	2
33		08-23	3	0	0	0	0	0	3	1	2	2
34		08-24	2	0	0	0	0	0	3	1	0	1
35		08-25	3	0	0	0	0	0	3	1	1	3
36		08-26	3	0	1	0	0	0	3	0	0	2
37	WALLA	08-15	2	0	1	0	0	0	3	2	0	2
38		08-16	3	0	0	0	0	0	3	2	0	2
39		08-17	3	0	0	0	0	0	3	0	1	0
40		08-18	3	0	1	0	0	0	3	2	0	2
41		08-19	2	0	2	0	0	0	3	1	0	2
42		08-20	3	0	1	0	0	0	3	2	0	1
43	GURA	09-13	3	0	2	0	0	0	3	0	0	1
44		09-14	3	0	0	0	2	0	3	0	0	2
45		09-15	3	0	2	0	0	0	3	0	1	1
46		09-16	3	0	0	0	1	0	3	0	0	1
47		09-17	3	0	1	0	0	0	3	2	0	1
48		09-18	3	0	0	0	2	0	3	0	0	1
49	KELAHARERE	09-1	3	0	1	2	0	0	3	0	2	3
50		09-2	3	0	2	0	0	0	3	2	0	2
51		09-3	3	0	2	0	0	0	2	1	0	1
52		09-4	3	0	0	0	0	0	1	3	0	1
53		09-5	3	0	0	0	0	0	1	0	1	3
54		09-6	3	0	2	0	0	0	3	1	0	1
55	AFALO	09-7	2	0	0	0	0	0	3	1	1	1
56		09-8	3	0	0	0	0	0	1	0	1	3
57		09-9	3	0	2	0	2	0	3	1	0	3
58		09-10	3	0	1	1	0	0	3	1	0	3
59	CHALLA	09-11	2	0	2	0	2	0	0	1	0	3
60		09-12	2	1	0	0	0	0	0	2	0	1
61		09-13	0	1	1	0	0	0	2	1	0	2
62		09-14	2	1	0	0	0	0	0	3	0	3
63		09-15	1	2	0	0	0	0	0	0	0	1
64		09-16	2	1	0	0	0	0	0	3	0	3
Sub-total			164	28	54	13	13	0	169	73	20	95

(次頁へ続く)

Appendix Tab. 8 (4) ゲラ地区住民の一般ニーズ

Village 名	村落コード	学校へのアクセス	クリニックへのアクセス	識字組織	婦人組織	農業生産向上	所得向上	健康改善	通信改善	雇用機会	水produ病	農業技術改善
1 G KASHIMARO	10-21	0	0	0	0	0	1	3	0	0	0	2
2	10-22	0	0	0	0	1	0	3	0	0	0	3
3	10-23	0	0	0	0	1	1	3	0	0	0	3
4	10-24	0	0	0	0	1	1	3	0	0	0	1
5	10-25	0	0	0	0	1	0	3	0	0	0	3
6	10-26	2	2	0	0	1	1	3	0	0	0	3
7 GABA KORRO	10-15	0	0	0	0	2	1	3	0	1	0	3
8	10-16	2	2	0	0	0	1	3	0	1	0	0
9	10-17	2	2	0	0	1	1	3	0	0	0	2
10	10-18	0	0	1	1	0	2	3	0	2	0	2
11	10-19	1	1	0	0	0	0	3	0	0	0	3
12	10-20	3	1	1	0	0	2	3	0	0	0	2
13 GUTTE	10-09	3	2	0	0	1	0	3	0	0	0	2
14	10-10	0	0	0	0	1	2	3	0	0	0	1
15	10-11	1	1	0	0	2	0	3	0	0	0	0
16	10-12	0	0	0	0	0	1	3	0	0	0	3
17	10-13	0	1	0	0	2	2	3	0	0	0	3
18	10-14	2	0	0	0	1	2	3	0	0	0	3
19 GAMINA	08-1	0	3	0	0	2	0	0	0	1	0	0
20	08-2	2	2	0	0	2	1	0	0	0	0	0
21	08-3	0	3	0	0	0	2	0	0	1	0	0
22	08-4	0	2	0	0	2	1	1	0	0	0	0
23	08-5	0	3	0	0	1	1	0	1	0	0	0
24	08-6	0	3	0	0	1	1	0	0	0	0	0
25 OBA	08-8	0	0	0	0	0	2	1	0	1	0	1
26	08-9	0	0	0	0	3	2	0	0	0	0	1
27	08-10	0	0	0	0	1	2	1	0	1	1	2
28	08-11	0	0	0	0	2	1	1	0	0	1	0
29	08-12	2	2	0	0	0	2	1	0	2	0	1
30	08-13	0	0	0	0	2	3	2	0	1	0	2
31 DACHOLAKL	08-21	3	2	0	0	1	1	0	0	0	3	0
32	08-22	2	2	0	0	1	1	0	0	0	0	1
33	08-23	2	3	0	0	1	1	0	0	0	0	0
34	08-24	2	3	0	0	0	1	0	0	0	2	3
35	08-25	2	2	0	0	2	1	0	0	0	0	0
36	08-26	2	3	0	0	2	1	0	0	0	0	1
37 WALLA	08-15	3	3	0	0	1	1	0	0	1	0	2
38	08-16	1	1	0	0	3	2	0	0	0	0	1
39	08-17	2	3	0	0	2	2	1	0	0	0	1
40	08-18	3	3	0	0	2	2	0	0	1	1	2
41	08-19	3	3	0	0	1	1	2	0	0	2	3
42	08-20	2	3	0	0	2	2	0	0	1	0	2
43 GURA	09-13	2	2	0	0	1	1	0	0	0	0	3
44	09-14	2	3	0	0	1	1	0	0	0	0	1
45	09-15	2	2	0	0	3	1	0	0	0	0	0
46	09-16	3	2	0	0	2	2	0	0	0	0	1
47	09-17	2	2	0	0	3	0	0	0	0	0	1
48	09-18	2	3	0	0	1	2	0	0	0	0	1
49 KELAHARERE	09-1	0	2	0	0	1	1	0	0	0	0	0
50	09-2	1	0	0	0	0	3	1	0	1	0	0
51	09-3	3	2	0	0	3	0	0	0	0	0	1
52	09-4	2	2	0	0	3	2	0	0	0	0	1
53	09-5	1	2	0	0	3	2	0	0	0	0	2
54	09-6	3	2	0	0	1	0	0	0	0	0	0
55 AFALO	09-7	3	3	0	0	2	2	0	0	0	0	0
56	09-8	2	2	0	0	3	2	0	0	0	0	1
57	09-9	0	2	0	0	0	1	0	0	1	0	0
58	09-10	0	2	0	0	2	3	3	0	0	0	3
59 CHALLA	09-11	2	2	0	0	3	3	2	0	0	0	0
60	09-12	2	2	0	0	3	3	2	0	0	0	0
61	09-13	1	1	0	0	3	0	3	0	0	0	0
62	09-14	1	1	0	0	3	3	2	0	0	0	0
63	09-15	1	0	0	0	3	3	2	0	0	0	0
64	09-16	2	2	0	0	3	3	3	0	0	0	0
Sub-total		84	102	2	4	96	89	80	1	18	10	77

(次頁へ続く)

Appendix Tab. 8 (5) ゲラ地区住民の一般ニーズ

Village 名	家族コード	住宅改善	家庭給水	電化	町へのアクセス	病院へのアクセス	森林へのアクセス	道路改善	農具購入	農地へのアクセス	農業金融へのアクセス
From previous page		184	28	54	13	13	0	169	73	20	96
65 SELAJA	06-1	1	2	0	0	0	0	3	0	0	0
66	06-2	1	2	0	0	0	0	3	1	0	0
67	06-3	2	0	0	0	0	0	0	1	0	0
68	06-4	1	2	0	0	0	0	3	1	0	0
69	06-5	1	1	0	0	0	0	3	0	0	0
70	06-6	1	1	0	0	0	0	2	2	0	3
71 GERA	06-17	1	0	0	0	0	0	1	3	0	3
72	06-18	1	3	0	0	0	0	0	1	0	3
73	06-19	1	0	0	0	0	0	0	3	0	3
74	06-20	1	0	0	0	0	0	1	3	0	3
75	06-21	1	0	0	0	0	0	0	3	0	2
76	06-22	0	3	0	0	0	0	0	1	0	3
77 GUREKESSO	07-19	3	1	0	0	0	0	1	0	2	0
78	07-20	2	3	0	0	0	0	2	0	2	0
79	07-21	1	0	0	0	0	0	1	0	1	0
80	07-22	1	0	0	0	0	0	3	0	2	1
81	07-23	1	3	0	0	0	0	1	0	3	0
82	07-24	3	1	0	0	0	0	1	0	2	0
83 NASAWABO	07-13	3	1	0	1	0	0	1	0	0	0
84	07-14	1	0	0	0	0	3	1	0	1	0
85	07-15	1	1	0	1	0	0	0	0	3	0
86	07-16	3	2	0	0	0	0	1	0	2	0
87	07-17	2	0	0	0	0	0	0	0	2	0
88	07-18	3	1	0	1	0	0	0	0	1	0
89 KOLLASULAJA	05-2-2	1	1	0	0	0	0	1	0	3	0
90	05-2-3	1	1	0	0	0	0	1	0	3	0
91	05-2-4	2	0	0	0	0	0	3	0	0	0
92	05-2-5	3	2	0	0	0	0	3	2	0	0
93	05-2-6	1	1	1	0	0	0	3	2	0	0
94	05-2-7	3	1	2	0	0	0	3	2	0	0
95 KOBOKOCHO	07-41	3	1	0	0	0	0	1	0	2	0
96	07-42	2	3	0	0	0	0	2	0	2	0
97	07-43	1	0	0	0	0	0	1	0	1	0
98	07-44	1	0	0	0	0	0	3	0	2	1
99	07-45	1	3	0	0	0	0	1	0	3	0
100	07-46	3	1	0	0	0	0	1	0	2	0
101 MUJE	07-07	1	1	0	1	0	0	0	0	3	0
102	07-08	3	2	0	0	0	0	1	0	2	0
103	07-09	2	0	0	0	0	0	0	0	2	0
104	07-10	3	1	0	1	0	0	0	0	1	0
105	07-11	1	1	0	0	0	0	1	0	3	0
106	07-12	1	1	0	0	0	0	1	0	3	0
107 DUSTA	10-07-1	2	3	2	0	0	0	3	0	0	0
108	10-07-2	2	2	2	0	0	0	3	0	0	1
109	10-07-3	3	3	1	0	0	0	3	1	0	1
110	10-07-4	2	2	3	0	0	0	3	1	0	0
111	10-07-5	2	1	2	0	0	0	3	1	0	0
112	10-07-6	3	2	0	0	0	3	3	2	0	1
113 KOMBOLCHA	10-03-1	0	3	2	0	0	0	3	1	0	2
114	10-03-2	2	2	0	0	0	0	3	1	0	1
115	10-03-3	3	0	1	0	0	0	3	2	0	3
116	10-03-4	3	0	3	0	0	0	3	2	0	2
117	10-03-5	3	0	1	2	0	0	3	0	2	3
118	10-03-6	3	0	2	0	0	0	3	2	0	2
119 ANDERACHA	06-9-1	2	2	0	0	0	0	0	1	0	1
120	06-9-2	3	3	0	0	0	0	0	3	0	1
121	06-9-3	3	0	1	0	0	0	0	2	0	2
122	06-9-4	1	1	0	1	0	0	0	0	0	0
123	06-9-5	3	1	2	0	0	0	1	2	0	0
124	06-9-6	3	0	2	0	0	0	1	2	0	0
125 SADI	05-1-1	3	1	2	0	0	0	2	3	0	0
126	05-1-2	3	2	3	0	0	0	2	2	0	0
127	05-1-3	3	1	3	0	0	0	2	3	0	0
128	05-1-4	2	0	3	0	0	0	0	1	0	0
129	05-1-5	3	2	3	0	0	0	0	2	0	0
130	05-1-6	3	2	2	0	0	0	1	1	0	0
合計点数		293	108	97	21	13	6	268	133	75	138
RANKING		1	11	13	14	17	19	2	9	13	8

配点: priority 1 = 3, priority 2 = 2, priority 3 = 1, no priority = 0

参考資料: The Local Community Survey, JICA, 1996

Appendix Tab. 8 (6) ゲラ地区住民の一般ニーズ

Village 名	家族コード	学校へのアクセス	クリニックへのアクセス	農民組織編成	婦人組織編成	農業生産向上	所得向上	健康改善	通電事情	雇用機会	水産技術	農業技術改善
前ページから:		84	102	2	4	96	89	80	1	18	10	77
65 SELAJA	06-1	0	3	0	0	2	2	1	0	0	0	1
66	06-2	0	3	0	0	2	2	1	0	0	0	0
67	06-3	3	3	0	0	1	1	2	0	0	0	2
68	06-4	1	3	0	0	2	2	0	0	0	0	1
69	06-5	2	3	0	0	2	2	1	0	0	0	0
70	06-6	0	0	0	0	0	2	1	0	0	0	0
71 GERA	06-17	0	3	0	0	0	2	2	0	0	0	1
72	06-18	0	3	0	0	0	2	2	0	0	0	1
73	06-19	0	2	0	0	1	3	2	0	0	0	1
74	06-20	0	3	0	0	0	2	2	0	0	0	1
75	06-21	0	3	0	0	2	3	1	0	0	0	1
75	06-22	0	2	0	0	1	3	2	0	0	0	1
77 GUREKESSO	07-19	2	2	0	0	3	3	1	0	0	0	0
78	07-20	1	1	0	0	3	3	1	0	0	0	0
79	07-21	2	2	0	0	3	3	2	0	0	0	0
80	07-22	1	2	0	0	3	2	2	0	0	0	0
81	07-23	2	2	0	0	3	3	1	0	0	0	0
82	07-24	2	2	0	0	3	3	2	0	0	0	0
83 NASAWABO	07-13	2	2	0	0	3	3	2	0	0	0	0
84	07-14	2	2	0	0	3	3	2	0	0	0	0
85	07-15	2	2	0	0	3	3	2	0	0	0	0
86	07-16	1	2	0	0	3	3	1	0	0	0	0
87	07-17	1	1	0	0	3	3	3	0	0	2	0
88	07-18	2	2	0	0	3	3	2	0	0	0	0
89 KOLLASULAJA	05-2-2	2	2	0	0	3	3	2	0	0	0	0
90	05-2-3	2	2	0	0	3	3	2	0	0	0	0
91	05-2-4	1	3	0	0	1	0	2	0	0	1	2
92	05-2-5	0	1	0	0	3	0	1	0	0	0	1
93	05-2-6	0	3	0	0	2	0	2	0	0	0	3
94	05-2-7	0	1	0	0	3	0	2	0	0	0	1
95 KOBOKOCHO	07-41	2	2	0	0	3	3	1	0	0	0	0
96	07-42	1	1	0	0	3	3	1	0	0	0	0
97	07-43	2	2	0	0	3	3	2	0	0	0	0
98	07-44	1	2	0	0	3	2	2	0	0	0	0
99	07-45	2	2	0	0	3	3	1	0	0	0	0
100	07-46	2	2	0	0	3	3	2	0	0	0	0
101 MUJE	07-07	0	3	0	0	1	1	0	1	0	0	0
102	07-08	0	3	0	0	1	1	0	0	0	0	0
103	07-09	0	0	0	0	0	2	1	0	1	0	1
104	07-10	0	0	0	0	3	2	0	0	0	0	1
105	07-11	0	0	0	0	1	2	1	0	1	1	2
106	07-12	0	0	0	0	2	1	1	0	0	1	0
107 DUSTA	10-07-1	2	2	0	0	3	3	2	0	0	0	0
108	10-07-2	2	2	0	0	3	3	2	0	0	0	0
109	10-07-3	1	1	0	0	3	3	3	0	0	0	0
110	10-07-4	1	1	0	0	3	3	2	0	0	0	0
111	10-07-5	1	0	0	3	3	2	0	0	0	0	0
112	10-07-6	2	2	0	0	3	3	2	0	0	0	0
113 KOMBOLCHA	10-03-1	2	2	0	0	1	1	0	0	0	0	3
114	10-03-2	2	3	0	0	1	1	0	0	0	0	1
115	10-03-3	2	2	0	0	3	1	0	0	0	0	0
116	10-03-4	3	2	0	0	2	2	0	0	0	0	1
117	10-03-5	2	2	0	0	3	0	0	0	0	0	1
118	10-03-6	2	3	0	0	1	2	0	0	0	0	1
119 ANDERACHA	06-9-1	3	2	0	0	3	0	0	0	0	0	1
120	06-9-2	2	2	0	0	3	2	0	0	0	0	1
121	06-9-3	1	2	0	0	3	2	0	0	0	0	2
122	06-9-4	3	2	0	0	1	0	0	0	0	0	0
123	06-9-5	3	3	0	0	2	2	0	0	0	0	0
124	06-9-6	2	2	0	0	3	2	0	0	0	0	1
125 SADI	05-1-1	0	2	0	0	0	1	0	0	1	0	0
126	05-1-2	0	2	0	0	2	3	3	0	0	0	3
127	05-1-3	0	3	0	0	2	2	1	0	1	0	0
128	05-1-4	0	2	0	0	3	3	1	0	0	0	2
129	05-1-5	0	0	0	0	0	0	0	0	0	0	0
130	05-1-6	0	0	0	0	0	0	0	0	0	0	0
合計点数		161	228	2	7	237	220	157	2	20	15	115
RANKING		7	4	20	18	3	5	6	20	15	16	10

配点: priority 1 = 3, priority 2 = 2, priority 3 = 1, no priority = 0

参考資料: The Local Community Survey, JICA, 1996

Appendix Tab. 9 土壌断面記載方法

Ⅰ.General Information

Profile No., Location, Date, Weather, Surveyor, Land form, Elevation, Slope, Land use or Vegetation, Parent Material, Drainage, Moisture Condition, Groundwater table(m)

Ⅱ.Description of Individual Soil Horizons

1. Horizon symbol

Master horizons

H:An organic horizon formed or forming from accumulations of organic material deposited on the surface, that is saturated water for prolonged periods.

H(P):Peat layer・H(M) : Muck layer.

O:An organic horizon formed ・・・・, that is not saturated with water for more than a few days a year.

A:A mineral horizon formed or forming at or adjacent to the surface.

E:Eluviation layer.

B:A mineral horizon in which rock structure is obliterated or is but faintly evident, characterized by one or more of the following features:

(a)an illuvial concentration of silicate clay, iron, alluminium, or humus, alone or in combinations:

(b)a residual concentration of sesquioxides relative to source materials:

(c)an alteration of material from its original condition to the extent that silicate clays are formed, oxides are liberated, or both, or granular, blocky or prismatic structure is formed.

C:A mineral horizon (or layer) of unconsolidated material from which the solum is presumed to have formed which the does not show properties diagnostic of any other master horizons.

R:A layer of continuous indurated rock.

Letter suffixes

The suffix letters used to qualify the master horizons are follows:

b:Buried or bisequal soil horizon.

c:Accumulation in concretionary form.

g:Mottling reflecting variations in oxidation and reduction.

h:Accumulation of organic matter in mineral horizons.

k:Accumulation of calcium carbonate.

m:Strongry cemented, consolidated, indulated.

n:Accumulation of sodium.

p:Disturbed by ploughing or other tillage practices.

q:Accumulation of silica.

r:Strong reduction as a result of groundwater influence.

s:Accumulation of sesquioxides.

t:Illuvial accumulation of clay.

u:Unspecified.

w:Alteration in situ as reflected by clay content, colour, structure.

x:Occurrence of fragipan.

y:Accumulation of gypsum.

z:Accumulation of salts more soluble than gypsum.

2.Depth of top and bottom horizon (cm)

3.Boundary of horizon

a:abrupt, less than 2.5 cm · c : clear, 2.6 to 6.3 cm · g : gradual, 6.4 to 12.5 cm · d:diffuse, more than 12.6 cm

4.Form of boundary

s:smooth · w : wavy · i : irregular · b : broken

5.Colour

- wet, - dry (Munsell Soil colour charts-Hue Value/Chroma)

6.Mottling

- abundance- f : few, less than 2 % of profile · c : common, 2 to 20 % · m : many, more than 20 %
- size- f : fine, less than 5 mm wide · m : medium, 5 to 15 mm · c : coarse, more than 15 mm
- contrast- f : faint · d : distinct · p : prominent
- colour

7.Texture(Sandy, Loamy, Silty, Clay)

8.Structure

- grade- 1 : structureless · w : weak · m : moderate · s : strong
- type- p : prismatic · c : columner · b : (angular) blocky · s : sub-angular blocky · p : platy g:granular · v : non-structure
- size- f : fine • m : medium • c : coarse

9.Consistence

- wet

= stickness- nS : non-sticky · sS : slightly sticky · S : sticky · vS : very sticky

= plasticity- nP : non-plastic · sP : slightly plastic · P : plastic · vP : very plastic

- moist - lo : loose · vf : very friable · fr : friable · Fi : firm · vF : very firm · eF : extremely firm
- dry - lo : loose · S : soft · sH : slightly hard · H : hard · vH : very hard · eH : extremely hard

10.Roots

- abundance - abundant, very frequent, frequent, common, few, very few
- size - coarse, medium, fine

Appendix Tab. 10 (1) 土壌調査地点の地況・林況および土壌断面の概要

Profile No. Location	Land form	Vegetation	(Dominant tree species)	Soil properties Depth	Texture	Hardness	pH
No.1 Belete Belete	Steepy Undulating	Plantation	Eucalyptus camaldulensis Cupressus lusitanica	85 cm Deep	SiCL Stony	20～22mm	6.17～6.06 Little acidic
No.2 Belete Belete	Steepy	Natural Forest	Croton macrostachyus Aningeria adolf-friedrici Hagenia abyssinica	135 cm Deep	LiC Stony	20～25mm	6.06～5.72 LIttle acidic
No.3 Belete Meti Abaye	Steepy	Natural Forest	Ficus sur Aningeria adolf-friedrici Syzygium guineense	45 cm Shallow	SiCL Stony	16mm	7.50～6.84 Neutral
No.4 Belete Mt.Damule slope	Very Steepy	Grassland (Plantation)	Eucalyptus camaldulensis (1988 EC Planted)	85 cm Deep	LiC	20mm	7.31～6.30 Neutral
No.5 Belete Gojeb site	Hill Undulating	Grassland (Plantation)	Eucalyptus camaldulensis	200 cm Deep	SiCL	21～24mm	6.56～6.25 Neutral
No.6 Belete Kishe site	Steepy	Grassland (Plantation)	Eucalyptus camaldulensis Cupressus lusitanica	70 cm Deep	CL	22～23mm	7.66～6.21 Neutral
No.7 Belete Hane	Undulating Flat	Grassland		50 cm Shallow ～Deep	LiC	23～19mm	6.82～6.01 Neutral
No.8 Belete Yanga	Steepy	Natural Forest	Ficus sur Albizia gummifera Syzygium guineense	135 cm Deep	LiC	18～26mm	6.62～5.44 Little acidic

Appendix Tab. 10 (2) 土壌調査地点の地況・林況および土壌断面の概要

Profile No. Location	Land form	Vegetation	(Dominant tree species)	Soil properties Depth	Texture	Hardness	pH
No.9 Gera Gamino	Steepy	Natural Forest	Aningeria adolf-friedrici Vepris dainellii Croton macrostachyus	65 cm Deep	LiC	20mm	6.02～5.04 Little acidic
No.10 Gera Koka	Flat	Grassland (Marsh)		100 cm Deep G.W.T.-68cm	LiC	17mm	5.90～5.65 Little acidic
No.11 Gera Gera Afalo	Hilly Undulating	Natural Forest (Coffee)	Schefflera abyssinica Albizia gummifera Aningeria adolf-friedrici	30 cm Shallow	LiC Stony	15～19mm	5.76～5.46 Little acidic
No.12 Gera Afalo	Undulating (Steepy)	Natural Forest (Coffee)	Croton macrostachyus Albizia gummifera Syzygium guineense Cordia africana	70 cm Deep	LiC	21mm	6.13～5.31 Little acidic
No.13 Gera Afalo Hagelo	Undulating Steepy	Natural Forest (Coffee)	Croton macrostachyus Vepris dainellii Ficus sur	100 cm Deep	LiC	23mm	6.00～5.38 Little acidic
No.14 Gera Kombolcha	Undulating Steepy	Grassland	(Aningeria adolf-friedrici)	60 cm Deep	LiC Stony	27～21mm	6.18～5.86 Little acidic
No.15 Gera Gena	Steepy	Natural Forest	Aningeria adolf-friedrici Croton macrostachyus Albizia gummifera Polyscias fulva	120 cm Deep	CL～LiC Stony	17～20mm	5.77～4.64 Acidic

Appendix Tab. 10 (3) 土壌調査地点の地況・林況および土壌断面の概要

Profile No. Location	Land form	Vegetation	(Dominant tree species)	Soil properties Depth	Texture	Hardness	pH
No.16 Gera Timba	Steepy	Natural Forest (Logging)	Syzygium guineense Albizia gummifera Aningeria adolf-friedrici	80 cm Deep	LiC Stony	22～25mm	6.24～4.72 Acidic
No.17 Gera Muje	Steepy	Natural Forest (Logging)	Cordia africana Croton macrostachyus Aningeria adolf-friedrici Polyscias fulva	100 cm Deep	LiC Stony	25～26mm	6.33～5.66 Little acidic
No.18 Gera Maru	Undulating Steepy	Natural Forest	Syzygium guineense Polyscias fulva Apodytes dimidiata Aningeria adolf-friedrici	90 cm Deep	LiC Stony	17～20mm	6.63～5.52 Little acidic
No.19 Gera Andracha	Steepy	Natural Forest	Ekebergia capensis Pygeum africanum Polyscias fulva	60 cm Deep	CL～LiC Stony	19mm	6.19～5.45 Littke acidic
No.20 Gera Chara	Steepy	Natural Forest	Polyscias fulva Croton macrostachyus Albizia gummifera	35 cm Shallow	LiC Stony	16～18mm	6.59～5.47 Little acidic
No.21 Gera Sedi Chawra	Undulating	Plantation	Eucalyptus camaldulensis	60 cm Deep	LiC Stony	21mm	6.30～5.58 Little acidic
No.22 Gera Wanja Kersa	Steepy Undulating	Natural Forest (Coffee)	Croton macrostachyus Albizia gummifera Syzygium guineense	190 cm Deep	LiC	25mm	6.28～5.40 Little acidic

Appendix Tab. 10 (4) 土壌調査地点の地況・林況および土壌断面の概要

Profile No. Location	Land form	Vegetation	(Dominant tree species)	Soil properties Depth	Texture	Hardness	pH
No.23 Gera Secha	Steepy	Natural Forest (Logging)	Maytenus undata Aningeria adolf-friedrici Schefflera abyssinica Syzygium guineense	30 cm Shallow	LiC Stony	19mm	6.72～5.93 Little acidic
No.24 Gera Kolla Selaja	Undulating	Natural Forest	Aningeria adolf-friedrici Maytenus undata Polyscias fulva Hyphane thebaica	100 cm Deep	LiC	23～25mm	6.47～5.13 Little acidic
No.25 Belete Gefere	Steepy	Plantation	Cupressus lusitanica (1982 planted)	150 cm Deep	LiC	26～27mm	6.51～5.87 Little acidic
No.26 Belete Gebo Deka	Very Steepy	Natural Forest	Maytenus undata Phytolacea dodecandra Schefflera abyssinica Maesa lanceolata	35 cm Shallow	SiCL ～LiC Stony	15mm	6.55～5.75 Little acidic
No.27 Belete Tugo Milki	Steepy	Natural Forest	Maytenus undata Ficus sur Schefflera abyssinica Syzygium guineense	100 cm Deep	LiC	16～19mm	5.05～4.67 Acidic
No.28 Belete Bore	Undulating Flat	Plantation	Pinus patula	60 cm Deep	LiC	26～28mm	6.23～6.11 Little acidic

Appendix Tab. 10 (5) 土壌調査地点の地況・林況および土壌断面の概要

Profile No. Location	Land form	Vegetation	(Dominant tree species)	Soil properties Depth	Texture	Hardness	pH
No.29 Gera Maru (Belete site)	Steepy	Natural Forest	Schefflera abyssinica Syzygium guineense Pygeum africanum Aningeria adolf-friedrici	75 cm Deep	LiC Stony	24～25mm	6.91～5.44 Little acidic
No.30 Gera Wala	Undulating (Steepy)	Secondary Forest	Markhamia lutea Maesa lanceolata Rosa abyssinica Maytenus undata	80 cm Deep	LiC	25～26mm	6.46～5.93 Little acidic
No.31 Gera Gura	Undulating	Natural Forest	Maytenus undata Cordia africana Schefflera abyssinica Apodytes dimidiata	56 cm Deep	LiC	20～25mm	7.77～5.90 Little acidic
No.32 Gera Loyi	Steepy	Natural Forest	Aningeria adolf-friedrici Pygeum africanum Diospyros abyssinica Polyscias fulva	90 cm Deep	LiC	20～25mm	5.87～5.15 acidic

Appendix Tab. 11 (1) 蚕食地一覧（ベレテフォレスト）

Belete Forest											面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜				(ha)	(ha)
1	1	1	1		M	OT	4				6	6
2	1	1	2		M	OT	2				4	4
3	1	1	3		M	OT	3				2	2
4	1	2	1		S	F3	4				1	1
5	1	2	2		S	F3	4				5	5
6	1	2	3		S	F3	4				1	1
7	1	2	4		M	F3	4				3	3
8	1	2	5		S	F3	3				1	1
9	1	2	6		S	F3	3				3	3
10	1	7	1		M	OT	3	4			22	22
11	1	7	2		M	OT	3				6	6
12	1	7	3		M	OT	6				4	4
13	1	6	1	a	M	OT	3	4			13	18
14	1	5	1	b	M	F1	4				2	15
15	1	5	2	c	M	F1	4	5			10	258
16	1	5	3	d	M	F1	4				7	13
	1	3	1	c	M	OT	4				131	
	2	3	1	a	M	F2	3				5	
17	2	4	1		M	OT	4				15	15
	2	4	2	b	M	OT	3	5			13	
	2	4	3	d	M	OT	5				6	
18	2	4	4		M	OT	4				4	4
19	2	4	5		M	OT	3				16	16
20	2	4	6		M	OT	5				6	6
	2	7	1	c	M	OT	4				117	
21	2	7	2	e	M	OT	3				69	214
22	2	7	3		M	OT	6				15	15
23	2	7	4		M	OT	4				24	24
	2	6	1	e	M	F2	3	4	5		145	
24	3	2	1		M	OT	3				3	3
25	3	1	1		S	F3	3				7	7
26	3	5	1		M	OT	4				18	18
27	4	8	1		M	OT	6				36	36
28	4	8	2		M	OT	6				34	34
29	4	8	3		M	OT	5				95	95
30	4	8	4		M	OT	6				24	24
31	4	8	5		M	OT	6				146	146
32	4	8	6		M	OT	6				118	118
33	4	17	1		M	OT	6				136	136
34	4	14	1		S	F4	6				36	36
35	4	15	1		S	OT	5				78	78
36	4	11	1		S	OT	6				36	36
37	4	12	1		S	OT	6				41	41
38	4	1	1		M	OT	6				1099	1099
39	4	1	2		M	OT	6				61	61
40	4	2	1		S	F3	6				24	24
41	4	2	2		S	F3	6				4	4
42	5	7	1		M	OT	5				34	34
43	5	10	1		M	F4	6				75	75

Appendix Tab. 11 (2)　蚕食地一覧（ベレテフォレスト）

Belete Forest												面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜					(ha)	(ha)
44	5	8	1		M	OT	6					89	89
45	5	8	2		M	OT	5					10	10
46	5	2	1		M	OT	6					127	127
47	5	2	2		M	OT	5					116	116
48	5	2	3		M	OT	5					33	33
49	5	2	4	g	M	OT	5					17	32
50	5	3	1		S	F3	5					23	23
51	5	3	2		S	F3	5					11	11
	5	3	3	g	M	F3	5					15	
52	5	4	1		M	OT	5					88	88
53	5	4	2		M	OT	5					26	26
54	5	4	3		M	OT	5					6	6
					斜面数	2	1	0	0	0	総面積	3322
						3	13	0	0	0	箇所数	54
						4	14	3	0	0	最大	1099
						5	15	2	1	0	最小	1
						6	18	0	0	0		

Appendix Tab. 12 (1) 蚕食地一覧（ゲラフォレスト）

Gera Forest											面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜				(ha)	(ha)
1	1	1	1		M	OT	3				12	12
2	1	2	1	DD	M	OT	3				39	43
3	1	3	1		S	F3	4				7	7
	1	3	2	DD	M	F3	3				4	
4	1	4	1		M	OT	3				129	129
5	1	4	2		M	OT	4				94	94
6	1	4	3		M	OT	3				42	42
7	1	4	4		M	OT	3				16	16
8	1	4	5		M	OT	3	4			388	388
9	1	4	6		M	OT	3				17	17
10	1	4	7		M	OT	2	3	4	5	246	246
11	1	5	1		S	F3	3				15	15
12	1	5	2		S	F3	2	3			41	41
13	1	5	3		S	F3	3	4			19	19
14	1	5	4	A	S	F3	3				2	7
15	1	5	5	B	S	F3	5				2	7
16	1	5	6	C	S	F3	3				30	43
17	1	6	1		M	OT	3				18	18
18	1	6	2		M	OT	3	4			156	156
19	1	7	1		M	OT	2	3	4		152	152
20	1	9	1		S	OT	2	3	4		337	337
	2	1	1	C	S	F3	2				13	
	2	1	2	B	S	F3	4				5	
	2	1	3	A	S	F3	3				5	
21	2	3	1		S	F4	2	3	4		98	98
22	2	6	1		S	F1	3				8	8
23	2	6	2		S	F1	3				10	10
24	2	6	3		S	F1	2	3	4		23	23
25	2	6	4		S	F1	3				3	3
26	2	6	5	HH	S	F1	4				3	7
27	2	8	1		M	OT	2	3			18	18
28	2	9	1		S	OT	2	3			47	47
29	2	10	1		S	F2	5				6	6
	3	1	1	HH	S	F1	3				4	
30	3	1	2		S	F1	4	5			7	7
31	3	1	3		S	F1	4	5			16	16
32	3	1	4		S	F1	2				3	3
33	4	2	1		S	F1	4	5			7	7
34	5	1	1		S	F3	4				7	7
35	5	1	2		S	F3	5	6			8	8
36	5	4	1	D	M	OT	2				9	17
37	5	4	2	E	M	OT	4				2	7
38	5	5	1	F	M	BT	3	4			7	24
39	5	7	1		S	F2	4				7	7
40	5	7	2	G	S	F2	3				5	7
41	5	9	1		S	F2	2				7	7
42	5	11	1		S	F2	3	4	5		14	14
43	5	11	2		S	F2	4	4			8	8
44	5	11	3		S	F2	3	4	5		10	10

Appendix Tab. 12 (2) 蚕食地一覧（ゲラフォレスト）

Gera Forest											面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜				(ha)	(ha)
	6	3	1	D	M	OT	2				8	
	6	3	2	E	M	OT	3				5	
	6	3	3	F	M	OT	3				17	
45	6	3	4		M	OT	4				38	38
46	7	1	1	H	M	OT	2	3	4		36	95
	7	2	1	H	M	F2	3				47	
47	7	2	2		S	F2	2				3	3
48	7	5	1	I	S	F1	2				4	8
49	7	6	1		M	F2	3				9	9
50	7	6	2		M	F2	4				17	17
	7	6	3	I	S	F2	5				4	
51	7	6	4		S	F2	3				12	12
52	7	6	5		M	F2	3				5	5
53	8	4	1		M	OT	4	5			10	10
54	8	2	1		S	F2	4				10	10
55	8	2	2		S	F2	2				2	2
56	8	3	1		S	OT	3				46	46
57	8	4	2		M	OT	5				10	10
58	8	4	3		M	OT	3	5			23	23
59	8	5	1		S	F3	2				11	11
60	8	5	2		M	F3	2				9	9
61	8	6	1		S	F1	4				5	5
62	8	6	2		S	F1	4				6	6
63	8	6	3		M	F1	2				3	3
64	8	6	4		M	F1	3				3	3
65	8	6	5		S	F1	2	3			7	7
66	8	8	1		S	F2	2				5	5
	8	8	2	G	S	F2	3				2	
67	8	8	3		S	F2	4				6	6
	8	8	4	H	M	F2	4				12	
68	8	8	5		S	F2	3				12	12
69	8	9	1		M	OT	2				8	8
70	8	11	1		M	OT	5				22	22
71	8	15	1		M	F3	2				7	7
72	8	15	2		M	F3	2				4	4
73	8	16	1		S	F4	3				5	5
74	8	16	2		S	F4	3				22	22
75	8	19	1		S	F3	3				1	1
76	8	19	2		S	F3	2	3			7	7
77	8	22	1	J	M	OT	2	4			9	11
78	8	22	2		M	OT	3	4	5		17	17
79	8	22	3		M	OT	3	4			6	6
80	8	22	4		M	OT	3	4			5	5
81	8	23	1		S	F4	5				7	7
82	8	24	1		S	F2	3				4	4
83	8	24	2		S	F2	3				2	2
84	8	24	3		S	F2	2				4	4
85	8	24	4		S	F2	2				4	4
86	8	25	1		S	F1	3				2	2

Appendix Tab. 12 (3) 蚕食地一覧（ゲラフォレスト）

Gera Forest												面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜					(ha)	(ha)
87	8	25	2		S	F1	3					7	7
88	8	25	3		S	F1	4					1	1
89	8	26	1		S	F2	2					2	2
90	8	29	1		S	F3	3					3	3
91	9	14	1		M	OT	4	5				12	12
92	9	16	1		M	F2	3					10	10
93	9	16	2		S	F2	3	4				10	10
94	9	17	1		S	F3	3	4				3	3
95	9	17	2		S	F3	3					3	3
96	9	17	3		S	F3	2	3				3	3
97	9	18	1		S	F2	3					2	2
98	9	18	2		S	F2	3	4				5	5
99	9	21	1	K	S	F4	3					4	10
100	9	23	1		M	OT	2	3				39	39
101	9	23	2		M	OT	3	4				21	21
102	9	23	3		M	OT	3					21	21
103	10	1	1	L	S	F2	4					1	5
	10	2	1	J	M	F1	3	4				1	
104	10	3	1		M	OT	2	3				33	33
105	10	4	1		S	F2	3					15	15
106	10	5	1		M	OT	2					10	10
107	10	5	2		M	OT	2	3				25	25
108	10	5	3		M	OT	3					14	14
109	10	6	1		M	OT	2					27	27
110	10	7	1		S	F2	3					3	3
	10	7	2	K	S	F2	3					6	
111	11	1	1		S	F1	3					8	8
112	11	1	2		S	F1	3					3	3
113	11	1	3		S	F1	4					2	2
114	11	1	4		S	F1	2					3	3
115	11	1	5		S	F1	3					4	4
116	11	1	6		S	F1	4					1	1
117	11	4	1		S	F2	3					13	13
	11	4	2	L	S	F2	4					4	
118	11	1	7		S	F1	4					2	2
	11	1	8	J	M	F1	3					1	
119	13	3	1	M	M	OT	3					2	7
120	13	4	1	N	M	OT	2	3				44	70
121	13	4	2		M	OT	3					2	2
122	13	4	3		M	OT	3					4	4
123	13	4	4		M	OT	3					6	6
124	13	5	1	O	S	F3	3					6	13
125	13	9	1		S	BT	4					4	4
126	13	9	2		S	BT	2					5	5
127	13	9	3		S	BT	3					13	13
128	13	10	1	CC	S	F4	3					2	33
129	14	2	1		M	OT	2	3	4			130	130
130	14	2	2		M	OT	3	4				54	54
	14	5	1	O	S	F3	3	4				5	

Appendix Tab. 12 (4) 蚕食地一覧（ゲラフォレスト）

Gera Forest											面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜				(ha)	(ha)
131	14	6	1		M	OT	4				36	36
	14	7	1	M	M	OT	3				5	
132	14	7	2		M	OT	3				10	10
133	14	7	3		M	OT	2	3			7	7
134	14	9	1		M	OT	2	3	4		25	25
135	14	9	2		M	OT	3				4	4
136	14	10	1		S	F2	4				3	3
137	14	10	2		M	F2	3				7	7
138	14	12	1		S	F3	3				2	2
139	14	12	2		S	F3	3				4	4
140	14	13	1		M	OT	3				19	19
141	14	15	1		S	F2	4				5	5
142	14	16	1		S	F3	3				4	4
143	14	17	1		M	OT	2	3	4		7	7
144	14	17	2		M	OT	3				18	18
145	14	17	3		M	OT	4				3	3
146	12	9	1	P	S	F4	3				9	106
	12	10	1	P	S	F4	5				20	
147	15	5	1		S	F3	3				6	6
	15	2	1	P	S	F4	3	4	5		77	
148	15	6	1		S	F4	2	3	4		75	75
149	15	7	1		S	F2	3				4	4
	15	12	1	CC	S	F4	3	4			31	
150	15	11	1		S	F1	2				3	3
151	15	11	2		S	F1	4				4	4
152	15	11	3		S	F1	2				4	4
	15	13	1	N	M	OT	4	5			26	
	15	14	1	O	S	BT	2				2	
153	15	17	1		S	OT	4				20	20
154	15	18	1		S	OT	4				10	10
155	15	19	1		M	F4	4				15	15
156	15	22	1		S	F4	2	3	4	5	547	547
157	16	2	1	Q	M	F3	2	3	4		8	36
158	16	2	2		S	F3	4				12	12
159	16	3	1		M	OT	3	4			37	37
	16	3	2	Q	M	OT	2	3	4		28	
160	16	4	1		M	F2	3				11	11
161	16	4	2		M	F2	3				6	6
162	16	4	3	R	S	F2	2				10	17
163	16	4	4	S	S	F2	3	3			3	7
164	16	4	5	T	S	F2	2				2	3
165	16	4	6	II	S	F2	4				2	4
166	16	6	1		S	F1	2				3	3
167	16	9	1		S	F1	3				3	3
168	16	9	2		S	F1	2				3	3
169	16	9	3		S	F1	2	4	5		7	7
170	16	9	4		S	F1	2				3	3
171	16	9	5	U	M	F1	3				2	4
172	16	10	1		S	F2	3				2	2

Appendix Tab. 12 (5) 蚕食地一覧（ゲラフォレスト）

Gera Forest											面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜				(ha)	(ha)
173	16	10	2		S	F2	3				2	2
174	16	13	1		M	OT	4				11	11
175	16	13	2		M	OT	3				10	10
176	16	18	1		S	F2	3				4	4
177	16	18	2		M	F2	3				1	1
178	16	18	3		M	F2	3				2	2
179	16	18	4		M	F2	3				1	1
180	16	18	5		M	F2	3				1	1
181	16	18	6		M	F2	3				1	1
182	16	18	7		M	F2	3				1	1
183	16	18	8		S	F2	2				1	1
184	16	18	9		S	F2	4				1	1
185	16	18	10		S	F2	2	4			3	3
186	16	18	11		S	F2	3				5	5
187	16	19	1		M	OT	3				1	1
188	16	19	2		M	OT	3				1	1
189	16	19	3		M	OT	3				3	3
190	16	21	1		M	OT	3				40	40
191	16	23	1		M	OT	3				46	46
192	16	23	2		M	OT	3				6	6
193	16	23	3		M	OT	3				11	11
194	16	23	4		M	OT	4				5	5
195	16	23	5		M	OT	3				6	6
196	16	23	6		M	OT	3				3	3
197	16	23	7		M	OT	3				3	3
198	16	23	8		M	OT	3				3	3
199	16	23	9		M	OT	2	3			23	23
200	17	1	1	V	M	OT	3				5	8
201	17	1	2	W	M	OT	3				17	29
202	17	2	1		S	F3	4				6	6
203	17	2	2		S	F3	3				5	5
	17	2	3	V	M	F3	3				3	
204	17	2	4		M	F3	3				13	13
205	17	2	5		M	F3	3				9	9
206	17	2	6		M	F3	4				5	5
207	17	2	7	GG	S	F3	3				4	8
208	17	2	8		S	F3	3				3	3
	17	2	9	W	M	F3	3				12	
209	17	2	10		S	F3	4				8	8
	17	3	1	GG	S	OT	3				4	
210	18	1	1		S	F1	3	4	5		12	12
211	18	1	2		S	F1	4				3	3
212	18	1	3		S	F1	2				6	6
213	18	1	4	X	M	F1	3				11	217
214	18	1	5	EE	M	F1	3	5			3	27
	18	4	1	X	M	OT	3				13	
215	18	6	1		S	F1	3				3	3
216	18	6	2	Y	M	F1	3				3	4
217	18	6	3	Z	M	F1	2				7	11

Appendix Tab. 12 (6) 蚕食地一覧（ゲラフォレスト）

Gera Forest												面積	面積計
	林班	小班	蚕食		蚕食形態	植生	傾斜					(ha)	(ha)
218	18	6	4	FF	M	F1	2					2	4
219	18	7	1		M	OT	3					9	9
	18	7	2	FF	M	OT	3					2	
220	18	9	1		M	OT	3	4				19	19
221	18	9	2		M	OT	3					55	55
222	18	9	3	AA	M	OT	3	4				52	57
	18	9	4	EE	M	OT	3	5				24	
223	18	16	1	BB	S	F1	3					3	6
224	18	16	2		S	F1	2					4	4
225	18	18	1		S	F4	3	4				15	15
226	18	18	2		M	F4	2					5	5
	18	19	1	AA	M	F3	4					5	
227	18	22	1		S	F3	3					4	4
	18	22	2	BB	S	F3	3					3	
228	18	23	1		S	F4	3					10	10
	18	24	1	U	M	OT	3					2	
229	18	24	2		M	OT	3					4	4
230	18	24	3		M	OT	3					9	9
231	18	25	1		S	F3	4					15	15
	18	26	1	II	S	F2	2					2	
	18	26	2	R	S	F2	2					7	
	18	26	3	S	S	F2	2					4	
	18	26	4	T	S	F2	2					1	
232	18	28	1		S	F3	3					33	33
233	18	28	2		S	F3	3					6	6
234	18	28	3		S	F3	2					4	4
	19	1	1	Z	M	OT	2					4	
	19	1	2	Y	M	OT	3					1	
	19	1	3	X	M	OT	2	3				166	
235	19	2	1		S	F3	3	4				28	28
236	19	2	2		S	F3	4					3	3
237	19	3	1		S	F2	4					13	13
	19	4	1	X	M	F1	2	3				27	
					斜面数	2	72	0	0	0	総面積	5293	
						3	149	28	0	0	箇所数	237	
						4	49	28	13	0	最大	547	
						5	8	9	6	2	最小	1	
						6	0	1	0	0			

Appendix Tab. 13 (1) コーヒー林内生産箇所の調査結果

樹種		コーヒー豆採取のみ					コーヒー植栽	
	人為的補正	なし	なし	僅か	僅か	僅か	1年目	4年目
地方呼称	ラテン名	plot 1	plot 2	plot 3	plot 4	plot 7	plot 5	plot 6
U-do	*leave looks like palm	2						
saho	*tree				4			
Amrnabeyya	?	1						
babessa	?				1			
Halele	*Albizia grandibracteata*	1			3			
Ambabbessa	*Albizia gummifera*	2	2	4		1		6
Sehoo	*Allophylus abyssinicus*	6	3	1	1	4		
chalalaka	*Apodytes dimidiata*		2				1	
Lolchisa	*Bersama abyssinica*	1			1	4		
loko	*Cassiporea ruwensorensis*			1				1
ulumay	*Clausena anisata*					13		
wadesa	*Cordia africana*			4			11	1
bakkannisa	*Croton macrostachyus*			8			4	
Ulaga	*Ehlitia cymosa*	1		1				
adamy	*Euphorbia candelabrum*				1			1
harbu	*Ficus sur*					1		
simarraru	*Galiniera coffeoides / G. saxifraga*			1		1		
warangoo	*Macaranga lophostigma*	2	10					
kombolcha	*Maytenus senegalensis*				1	2		
askra	*Milletia ferruginea*				5			2
gagama	*Olea hochstetteri*		6	8	1	11		
bayaa	*Olea welwitschii*			3	9		1	
birango	*Oxyanthus speciosus*				3			
Podocarpus	*Podocarpus gracilior*	2	1					
kaariyoo	*Polyscias ferruginea / P. fluva*		4				1	
korasuma	*Premna schimperi*			1				
homi	*Pygeum africana*					1	1	
bosoka	*Sapium ellipticum*			1	1			
buto	*Schefflera abyssinica*	2	4			3		
badesa	*Syzygium guineense*			15	3		1	1
Hadessa	*Teclea nobilis*	18	13	2	9	10		
	樹種総数	11	9	13	14	11	7	6
	上層	6	5	7	6	2	3	3
	中層	4	2	5	4	4	4	4
	下層	5	8	9	9	7	2	1
	立木本数	38	45	50	43	51	20	12
	上層	8	10	17	12	2	4	5
	中層	7	3	12	7	7	7	6
	下層	23	32	20	24	42	9	1

Appendix Tab. 13 (2)　コーヒー林内生産箇所の調査結果

樹種		コーヒー豆採取のみ					コーヒー植栽	
	人為的補正	なし	なし	僅か	僅か	僅か	1年目	4年目
地方呼称	ラテン名	plot 1	plot 2	plot 3	plot 4	plot 7	plot 5	plot 6
coffee (natural)	*Coffea arabica*	28	47	241	224	62	26	
coffee (planted)	*Coffea arabica*						35	28
sehoo	*Allophylus abyssinicus*			1		1		
chalalaga	*Apodytes dimidiata*					1		
lolchisa	*Bersama abyssinica*		1				1	
Ulumay	*Clausena anisata*	1	1	1		1		
cordia sp.	*Cordia africana*	1						
dambi	*Ficus spp.*	1				1		
simararu	*Galiniera coffeoides / G. saxifraga*	1	1	1		1		
kombolcha	*Maytenus senegalensis*		1		1		1	
askra	*Milletia ferruginea*						1	
Gaja	*Mimusops kummel*						1	
gagama	*Olea hochstetteri*			1	1	1		
bayaa	*Olea welwitschii*		1	1	1			
birango	*Oxyanthus speciosus*	1	1		1			
podo	*Podocarpus gracilior*	1	1					
hadessa	*Teclea nobilis*		1		1	1		
ebicha	*Verninia amygdalina*	1						
	樹種総数	7	8	5	5	7	4	0
Stumps							直径	
?	?						4,4	
lolchisa	*Bersama abyssinica*						2	
Loko	*Cassiporea ruwensorensis*						22	
askra	*Milletia ferruginea*						8	
Gaja	*Mimusops kummel*						5,6,6,6,6,12	
badessa	*Syzygium guineense*						8	
hadessa	*Teclea nobilis*						4,10,20	

Appendix Tab. 14　コーヒー植栽箇所と林内にコーヒーが自生するF1森林の比較（ベレテ フォレスト）

コーヒーが自生するプロット

Belete Forest

頻度	頻度		コーヒーがカウントされたF1プロット（番号）				コーヒー植栽箇所	
(計2)	(計4)	樹種名	56	57	62	68	1st yr	4th yr
	2	*Albizia grandibracteata*	1	7				
1	2	*Albizia gummifera*		6	1			6
	1	*Allophylus abyssinicus*	2					
	1	*Aningeria adolfi-friederici*	1					
1	3	*Apodytes dimidiata*	2			1	1	
	3	*Bersama abyssinica*	2	3	2			
1	3	*Cassiporea ruwensorensis*	4		7	4		1
	3	*Celtis africana*		1	2	1		
2	2	*Cordia africana*				7	11	1
1	4	*Croton macrostachyus*	7	6	2	1		4
		Cupressus lucitanica						
		Dracaena steudneri						
		Ehlitia cymosa						
1		*Euphorbia candelabrum*						1
	1	*Ficus spp.*				10		
	2	*Ficus sur*		1	1			
	2	*Galiniera coffeoides/ G. saxifrage*	6			1		
		Maesa lanceolata						
	2	*Maytenus senegalensis*	2		1			
1	2	*Milletia ferruginea*	2	8				2
	4	*Mimusops kummel*	10	1	5	9		
1	5	*Olea welwitschii*	2	5	16	9	1	
	1	*Podocarpus gracilior*	1					
1	3	*Polyscias ferruginea/P. fluva*	3	3			1	
		Premna schimperi						
1	3	*Pygeum africana*	1		1		1	
	2	*Rothmannia urcelliformis*	3			2		
	1	*Sapium ellipticum*	2					
	1	*Schefflera abyssinica*	1					
2	4	*Syzygium guieense*	5	11	1		1	1
	3	*Teclea nobilis*	8		4	15		
		Vernonia amygdalina						
				1				
		樹種総数	20	12	12	11	7	6
		上層	2	9	7	4	3	3
		中層	9	8	5	3	4	4
		下層	17	5	6	10	2	1
		立木本数	65	53	43	60	20	12
		上層	6	18	17	6	4	5
		中層	16	23	11	10	7	6
		下層	43	12	15	44	9	1

Appendix Tab. 15　コーヒー植栽箇所と林内にコーヒーが自生するF1森林の比較（ゲラ フォレスト）

コーヒーが自生するプロット

Gera Forest

頻度	頻度		コーヒーがカウントされたF1プロット（番号）													コーヒー採取箇所				
(計5)	(計13)	樹種名	5	9	11	12	13	39	47	48	49	50	52	53	54	c1	c2	m1	m2	m3
2		*Albizia grandibracteata*														1			3	
4	7	*Albizia gummifera*	1	5	2		1	25	5		4					2	2	4		1
5	7	*Allophylus abyssinicus*	2	8		1	2	19	1			1				6	3	1	1	4
	1	*Aningeria adolfi-friederici*												2						
1	5	*Apodytes dimidiata*	1				4			2		2		1			2			
3	1	*Bersama abyssinica*				1										1			1	4
1	8	*Cassiporea ruwensorensis*		1	2	6			14	4	10	8	13					1		
	7	*Celtis africana*		3	14	10			2	6		12			11					13
1		*Clausena anisata*																		
1	7	*Cordia africana*				1	2		1	1			1	3	2			4		
1	6	*Croton macrostachyus*					4	7	3		1			1	3			8		
		Cupressus lucitanica																		
		Discopodium penninevium																		
	2	*Dracaena steudneri*				1								3						
2	3	*Ehlitia cymosa*	1	2											1	1		1		
	1	*Ekebergia capensis*													1					
	2	*Elaeodendron buchananii*												81	8					
		Eleusine jaegeri																		
		Euclea schimperi																	1	
1	1	*Euphorbia candelabrum*				1														
		Ficus spp.																		1
1	5	*Ficus sur*		4		3					2	1	1							
2		*Galiniera coffeoides / G. saxifrage*																1		1
	1	*Grewia bicolor*		1																
	1	*Ilex mitis*		1																
	1	*Landolphia owarensis*												1						
2	2	*Macaranga lophostigma*		1				2								2	10			
		Maesa lanceolata																		
	2	*Manilkara butugi*		1											1					
2	3	*Maytenus senegalensis*							1		3	7							1	2
1	4	*Milletia ferruginea*			8	13								2	12				5	
		Mimusops kummel																		
4	8	*Olea hochstetteri*		9	5			2	2		1	6	1	5			6	8	1	11
2	12	*Olea welwitschii*	6	11	7	10	16		8	24	16	39	19	20	14			3	9	
1	3	*Oxyanthus speciosus*		2				7		1									3	
	1	*Pittosporum abyssinicum*	1																	
2	1	*Podocarpus gracilior*							6							2	1			
1	5	*Polyscias ferruginea / P. fluva*			1			2	4			1	1				4			
1	2	*Premna schimperi*									1	7						1		
		Pterocephalus frutescens																		
1	4	*Pygeum africana*	12	1					1	1										1
		Rapanea simensis																		
	2	*Rothmannia urcelliformis*								3		3								
	2	*Rytigynia neglecta*		1								2								
2	4	*Sapium ellipticum*								3	1		1		1			1	1	
3	9	*Schefflera abyssinica*	2	2	4	1	1			3	6	2	1			2	4			3
2	10	*Syzygium guineense*	3	5	11	1	3		12	4	1	3	15					15	3	
5	10	*Teclea nobilis*	26	3	19	3		8		9		5	2	21	2	18	13	2	9	10
		Terminalia glancescens / T. brownii																		
		Vernonia amygdalina																		
	2	*?*			1									1						
	1	*?*											1							
1		*U-do (local name only)*														2				
1		*saho (local name only)*																		4
1		*ammabeyya (local name only)*														1				
1		*babessa (local name only)*																		1
		樹種総数	10	18	11	13	8	8	13	12	11	15	11	12	11	11	9	13	14	11
		上層	3	7	7	4	2	2	4	4	7	4	6	3	4	6	5	7	6	2
		中層	6	5	4	8	7	3	8	7	5	8	3	9	9	4	2	5	4	4
		下層	6	12	7	8	6	7	10	10	7	11	7	7	7	5	8	9	9	7
		立木本数	55	61	74	52	33	72	60	61	46	99	56	141	56	38	45	50	43	51
		上層	12	20	15	14	11	19	8	18	18	21	23	21	16	8	10	17	12	2
		中層	13	11	12	17	13	7	25	17	13	23	23	47	26	7	3	12	7	7
		下層	30	30	47	21	9	46	27	26	15	55	10	73	14	23	32	20	24	42

Appendix Tab. 16 (1) 出現樹種リスト

Local name	Botanical name	tree, shrub	Type for Volume fomulas
Dumuga	*Adhatoda schimperana*	shrub	2
Ulumay	*Clausena anisata*	shrub	2
Buna	*Coffea arabica*	shrub	2
Meraro	*Discopodium penninevium*	shrub	2
Ulaga	*Ehlitia cymosa*	shrub	2
Akuku	*Eleusine jaegeri*	shrub	2
Mi'esa	*Euclea schimperi*	shrub	2
Mito(;small tree) / Simaraaruu	*Galiniera coffeoides / G. saxifraga*	shrub	2
Balansofi	*Grewia bicolor*	shrub	2
Abayii	*Maesa lanceolata*	shrub	2
Kombolcha	*Maytenus senegalensis*	shrub	2
Birango	*Oxyanthus speciosus*	shrub	2
Cheka / Sole	*Pittosporum abyssinicum*	shrub	2
Chocho / Korasuma / Urgessa	*Premna schimperi*	shrub	2
Gutondango	*Pterocephalus frutescens*	shrub	2
Alge	*Rapanea simensis*	shrub	2
Gesho	*Rhamnus prinoides*	shrub	2
Diboo / Mitosare / Sigiluu	*Rothmannia urcelliformis*	shrub	2
Barsadi	*Rytigynia neglecta*	shrub	2
Hadessa / Mitiri	*Teclea nobilis*	shrub	2
Aballo	*Terminalia glancescens / T. brownii*	shrub	2
Addessa	*Vepris dainellii*	shrub	2
Ebicha	*Vernonia amygdalina*	shrub	2
Rejii	*Vernonia auriculifera*	shrub	2

Appendix Tab. 16 (2) 出現樹種リスト

Local name	Botanical name	tree, shrub	Type for Volume fomulas
Agamuso	?	shrub	2
Sokaru	?	shrub	2
Sokolu	?	shrub	2
Halele	*Albizia grandibracteata*	tree	3
Ambabbessa	*Albizia gummifera*	tree	2
Schoo	*Allophylus abyssinicus*	tree	2
K'araru	*Aningeria adolfi-friederici*	tree	1
Chalalaqa / 'Wendabiyo	*Apodytes dimidiata*	tree	2
Boko / Lolchisa	*Bersama abyssinica*	tree	2
Loko	*Cassiporea ruwensorensis*	tree	2
Ka'e	*Celtis africana*	tree	2
Wadesa	*Cordia africana*	tree	3
Bakkannisa	*Croton macrostachyus*	tree	3
Cupressus	*Cupressus lucitanica*	tree	2
Danissa	*Dombeya goetzenii / D.schimperiana / D.torrida*	tree	3
Somboo	*Ekebergia capensis*	tree	2
Loko guracha / gachain fulasa	*Elacodendron buchananii / Diospyros abyssinica*	tree	1
Welensu /Belo	*Erythrina brucei*	tree	2
Dambi	*Ficus* spp	tree	2
Harbuu	*Ficus sur*	tree	3
Ufo	*Grewia mollis*	tree	2
Hetoo	*Hagenia abyssinica*	tree	2
Keto / Kett	*Ilex mitis*	tree	2
Gebo	*Landolphia owarensis*	tree	2

Appendix Tab. 16 (3) 出現樹種リスト

Local name	Botanical name	tree, shrub	Type for Volume fomulas
Warangoo	*Macaranga lophostigma*	tree	2
Butuji / Gayo	*Manilkara butugi*	tree	3
Askra	*Milletia ferruginea*	tree	2
Gayu / Gaja / Gajo / Mito(;big tree)	*Mimusops kummel*	tree	2
Gagama	*Olea hochstetteri*	tree	2
Bayaa	*Olea welwitschii*	tree	2
Birbirsa	*Podocarpus gracilior*	tree	0
Kaariyoo	*Polyscias ferruginea / P. fluva*	tree	3
Homi / Omo	*Pygeum africana*	tree	2
Bosoka / Sedoo	*Sapium ellipticum*	tree	2
Buto	*Schefflera abyssinica*	tree	3
Badesa	*Syzygium guineense*	tree	2
Meddesa	*Vepris dainellii*	tree	2
Dido	?	tree	2
Getemi	?	tree	2
Nunu	?	tree	2
Selti	?	tree	2
Solee	?	tree	2

Appendix Tab. 17 (1) 立木材積表（天然林；タイプ0）

Type-0; Natural tree

Formula V=0.000129＊DBH^1.7861＊H^0.9946

DBH:cm H(merchantable height):m V:m^3

Height (m)	DBH(cm)																													
	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70
5	0.0713	0.0905	0.1116	0.1348																									
6	0.0854	0.1084	0.1338	0.1616	0.1915	0.2237																							
7	0.0996	0.1264	0.1560	0.1883	0.2233	0.2608	0.3009	0.3435																					
8	0.1137	0.1444	0.1782	0.2151	0.2550	0.2979	0.3436	0.3923	0.4437	0.4979																			
9	0.1279	0.1623	0.2003	0.2418	0.2867	0.3349	0.3863	0.4410	0.4988	0.5598	0.6238																		
10	0.1420	0.1802	0.2224	0.2685	0.3183	0.3719	0.4290	0.4897	0.5540	0.6216	0.6927	0.7672	0.8450																
11	0.1561	0.1982	0.2446	0.2952	0.3500	0.4088	0.4717	0.5384	0.6090	0.6835	0.7616	0.8435	0.9290	1.2071	1.1106	1.2071													
12	0.1702	0.2161	0.2667	0.3219	0.3816	0.4458	0.5143	0.5871	0.6641	0.7452	0.8305	0.9197	1.0130	1.3162	1.2112	1.3162	1.4249	1.5375											
13	0.1843	0.2340	0.2888	0.3486	0.4133	0.4827	0.5569	0.6358	0.7191	0.8070	0.8993	0.9959	1.0969	1.4252	1.3116	1.4252	1.5430	1.6649	1.7908										
14	0.1984	0.2519	0.3109	0.3752	0.4449	0.5197	0.5995	0.6844	0.7741	0.8687	0.9681	1.0721	1.1808	1.5343	1.4119	1.5343	1.6610	1.7922	1.9278	2.0677	2.2119								
15		0.2698	0.3329	0.4019	0.4765	0.5568	0.6421	0.7330	0.8291	0.9304	1.0368	1.1483	1.2647	1.6432	1.5122	1.6432	1.7790	1.9195	2.0647	2.2145	2.3690	2.5280	2.6915						
16		0.2877	0.3550	0.4285	0.5081	0.5935	0.6847	0.7816	0.8841	0.9921	1.1056	1.2244	1.3485	1.7522	1.6125	1.7522	1.8970	2.0468	2.2016	2.3614	2.5260	2.6955	2.8699	3.0490					
17			0.3771	0.4552	0.5396	0.6304	0.7272	0.8302	0.9390	1.0538	1.1743	1.3005	1.4323	1.8611	1.7127	1.8611	2.0149	2.1740	2.3384	2.5081	2.6830	2.8631	3.0483	3.2385	3.4339					
18			0.3991	0.4816	0.5712	0.6672	0.7696	0.8787	0.9940	1.1154	1.2430	1.3766	1.5161	1.9699	1.8129	1.9699	2.1327	2.3012	2.4752	2.6548	2.8400	3.0306	3.2266	3.4280	3.6347	3.8468				
19				0.5084	0.6028	0.7041	0.8123	0.9273	1.0489	1.1770	1.3116	1.4526	1.5999	2.0788	1.9130	2.0788	2.2506	2.4283	2.6120	2.8015	2.9969	3.1980	3.4048	3.6174	3.8356	4.0593	4.2887			
20				0.5350	0.6343	0.7410	0.8548	0.9758	1.1036	1.2386	1.3803	1.5286	1.6836	2.1876	2.0132	2.1876	2.3684	2.5554	2.7487	2.9481	3.1537	3.3654	3.5831	3.8067	4.0363	4.2718	4.5132	4.7603		
21					0.6658	0.7776	0.8973	1.0243	1.1587	1.3002	1.4489	1.6047	1.7673	2.2964	2.1133	2.2964	2.4861	2.6825	2.8854	3.0947	3.3105	3.5327	3.7612	3.9960	4.2370	4.4842	4.7376	4.9970	5.2626	
22						0.8146	0.9398	1.0728	1.2135	1.3618	1.5175	1.6806	1.8510	2.4051	2.2133	2.4051	2.6038	2.8095	3.0220	3.2413	3.4673	3.7000	3.9393	4.1852	4.4377	4.6966	4.9619	5.2337	5.5118
23							0.9823	1.1213	1.2684	1.4234	1.5861	1.7566	1.9347	2.5138	2.3134	2.5138	2.7215	2.9365	3.1586	3.3878	3.6240	3.8673	4.1174	4.3744	4.6383	4.9089	5.1862	5.4703	5.7609
24								1.1698	1.3232	1.4849	1.6547	1.8326	2.0184	2.6225	2.4134	2.6225	2.8392	3.0635	3.2952	3.5343	3.7807	4.0345	4.2954	4.5636	4.8388	5.1211	5.4105	5.7068	6.0100
25								1.2163	1.3781	1.5464	1.7233	1.9085	2.1020	2.7312	2.5134	2.7312	2.9569	3.1904	3.4317	3.6807	3.9374	4.2016	4.4734	4.7527	5.0393	5.3333	5.6347	5.9433	6.2591
26										1.6079	1.7918	1.9844	2.1856	2.8396	2.6134	2.8396	3.0745	3.3173	3.5682	3.8272	4.0940	4.3688	4.6514	4.9417	5.2398	5.5455	5.8588	6.1797	6.5081
27										1.6694	1.8604	2.0603	2.2692	2.9485	2.7134	2.9485	3.1921	3.4442	3.7047	3.9735	4.2506	4.5359	4.8293	5.1307	5.4402	5.7576	6.0829	6.4161	6.7570
28											1.9289	2.1362	2.3528	3.0571	2.8133	3.0571	3.3097	3.5711	3.8412	4.1199	4.4072	4.7030	5.0072	5.3197	5.6406	5.9697	6.3070	6.6524	7.0059
29												2.2121	2.4364	3.1656	2.9132	3.1656	3.4272	3.6979	3.9776	4.2662	4.5637	4.8700	5.1850	5.5087	5.8409	6.1817	6.5310	6.8887	7.2547
30														3.2742	3.0131	3.2742	3.5448	3.8247	4.1140	4.4125	4.7202	5.0370	5.3628	5.6976	6.0412	6.3937	6.7549	7.1249	7.5035
31															3.1130	3.3827	3.6623	3.9515	4.2504	4.5588	4.8767	5.2040	5.5406	5.8865	6.2415	6.6057	6.9789	7.3611	7.7522
32															3.2129	3.4913	3.7798	4.0783	4.3867	4.7051	5.0332	5.3709	5.7183	6.0753	6.4417	6.8176	7.2028	7.5972	8.0009
33																3.5998	3.8972	4.2050	4.5231	4.8513	5.1896	5.5379	5.8961	6.2641	6.6419	7.0295	7.4266	7.8334	8.2496
34																	4.0147	4.3318	4.6584	4.9975	5.3460	5.7048	6.0738	6.4529	6.8421	7.2413	7.6504	8.0694	8.4982
35																		4.4585	4.7957	5.1437	5.5024	5.8716	6.2514	6.6416	7.0422	7.4531	7.8742	8.3055	8.7468
36																				5.2898	5.6587	6.0385	6.4291	6.8304	7.2423	7.6649	8.0980	8.5415	8.9955
37																					5.8150	6.2053	6.6067	7.0191	7.4424	7.8766	8.3217	8.7774	9.2438
38																						6.3721	6.7842	7.2077	7.6425	8.0884	8.5454	9.0134	9.4923
39																							6.9618	7.3964	7.8425	8.3000	8.7690	9.2493	9.7407
40																								7.5850	8.0425	8.5117	8.9926	9.4851	9.9891

Appendix Tab. 17 (2) 立木材積表（天然林；タイプ1）

Type-1: Natural tree

Formula V=0.000205＊DBH^1.3595＊H^1.4270

DBH:cm H(merchantable height):m V:m^3

Height (m)	DBH(cm) 10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	70	80
5	0.0466	0.0597																										
6	0.0605	0.0775	0.0956																									
7	0.0754	0.0966	0.1191	0.1428																								
8	0.0912	0.1168	0.1441	0.1728	0.2028	0.2340	0.2664	0.2998																				
9	0.1079	0.1382	0.1705	0.2044	0.2399	0.2768	0.3151	0.3547	0.3955																			
10	0.1254	0.1607	0.1981	0.2375	0.2788	0.3217	0.3662	0.4122	0.4596	0.5084																		
11	0.1437	0.1841	0.2270	0.2722	0.3194	0.3686	0.4196	0.4723	0.5266	0.5824	0.6397	0.6983																
12	0.1626	0.2084	0.2570	0.3081	0.3617	0.4173	0.4751	0.5347	0.5962	0.6594	0.7243	0.7907	0.8586	0.9280														
13	0.1823	0.2336	0.2881	0.3454	0.4054	0.4678	0.5326	0.5994	0.6684	0.7392	0.8119	0.8863	0.9625	1.0403	1.1196	1.2005	1.2828											
14	0.2027	0.2597	0.3202	0.3840	0.4506	0.5200	0.5920	0.6663	0.7429	0.8217	0.9025	0.9852	1.0699	1.1563	1.2445	1.3344	1.4259	1.5190										
15	0.2236	0.2865	0.3533	0.4237	0.4973	0.5738	0.6532	0.7352	0.8198	0.9067	0.9958	1.0871	1.1805	1.2759	1.3733	1.4724	1.5734	1.6761	1.7806									
16		0.3142	0.3874	0.4645	0.5452	0.6292	0.7162	0.8062	0.8989	0.9941	1.0919	1.1920	1.2944	1.3990	1.5057	1.6145	1.7252	1.8378	1.9523	2.0686	2.1867	2.3064						
17			0.4224	0.5065	0.5945	0.6860	0.7810	0.8790	0.9801	1.0840	1.1906	1.2997	1.4114	1.5254	1.6418	1.7604	1.8811	2.0039	2.1287	2.2555	2.3843	2.5148	2.6472	2.7814					
18				0.5496	0.6450	0.7444	0.8473	0.9537	1.0634	1.1761	1.2917	1.4102	1.5313	1.6551	1.7813	1.9100	2.0410	2.1742	2.3097	2.4472	2.5869	2.7286	2.8722	3.0178	3.1653				
19					0.6968	0.8041	0.9153	1.0302	1.1487	1.2704	1.3953	1.5233	1.6542	1.7878	1.9242	2.0632	2.2047	2.3486	2.4949	2.6435	2.7944	2.9474	3.1026	3.2598	3.4191	3.5804			
20							0.9848	1.1085	1.2359	1.3669	1.5013	1.6390	1.7798	1.9236	2.0705	2.2199	2.3721	2.5270	2.6844	2.8443	3.0066	3.1712	3.3382	3.5074	3.6788	3.8523	4.7504	
21								1.1884	1.3250	1.4653	1.6095	1.7572	1.9081	2.0623	2.2196	2.3799	2.5431	2.7092	2.8779	3.0494	3.2234	3.3999	3.5789	3.7603	3.9440	4.1301	5.0930	6.1068
22								1.2700	1.4159	1.5660	1.7200	1.8778	2.0391	2.2039	2.3720	2.5433	2.7177	2.8951	3.0755	3.2587	3.4446	3.6333	3.8246	4.0184	4.2147	4.4135	5.4425	6.5259
23									1.5087	1.6686	1.8327	2.0007	2.1726	2.3482	2.5273	2.7098	2.8957	3.0847	3.2769	3.4721	3.6702	3.8712	4.0750	4.2816	4.4908	4.7026	5.7990	6.9533
24										1.7731	1.9474	2.1260	2.3087	2.4952	2.6855	2.8795	3.0770	3.2779	3.4820	3.6895	3.9000	4.1136	4.3302	4.5496	4.7719	4.9970	6.1621	7.3887
25											2.0642	2.2535	2.4471	2.6449	2.8466	3.0522	3.2615	3.4745	3.6909	3.9108	4.1339	4.3603	4.5899	4.8225	5.0582	5.2968	6.5317	7.8319
26												2.3833	2.5880	2.7971	3.0105	3.2279	3.4493	3.6745	3.9034	4.1359	4.3719	4.6113	4.8541	5.1001	5.3494	5.6017	6.9077	8.2827
27													2.7312	2.9519	3.1771	3.4065	3.6401	3.8778	4.1194	4.3647	4.6138	4.8666	5.1227	5.3823	5.6453	5.9116	7.2899	8.7410
28														3.1091	3.3463	3.5880	3.8340	4.0843	4.3388	4.5972	4.8596	5.1257	5.3956	5.6690	5.9461	6.2266	7.6782	9.2066
29														3.2688	3.5181	3.7722	4.0309	4.2941	4.5616	4.8333	5.1091	5.3889	5.6726	5.9602	6.2514	6.5462	8.0725	9.6794
30															3.6925	3.9592	4.2307	4.5089	4.7877	5.0729	5.3624	5.6560	5.9538	6.2556	6.5612	6.8707	8.4726	10.1591
31																	4.4334	4.7226	5.0170	5.3159	5.6198	5.9270	6.2390	6.5552	6.8755	7.1999	8.8785	10.6458
32																		4.9417	5.2496	5.5622	5.8797	6.2017	6.5282	6.8591	7.1942	7.5335	9.2900	11.1392
33																		5.1635	5.4852	5.8119	6.1436	6.4801	6.8212	7.1670	7.5172	7.8717	9.7070	11.6392
34																			5.7239	6.0649	6.4110	6.7621	7.1181	7.4789	7.8443	8.2143	10.1294	12.1458
35																			5.9657	6.3210	6.6817	7.0477	7.4187	7.7947	8.1756	8.5612	10.5572	12.6587
36																				6.5803	6.9556	7.3366	7.7230	8.1145	8.5109	8.9124	10.9903	13.1780
37																				6.8427	7.2331	7.6293	8.0310	8.4380	8.8503	9.2678	11.4285	13.7034
38																					7.5137	7.9252	8.3425	8.7653	9.1936	9.6272	11.8718	14.2349
39																					7.7975	8.2245	8.6575	9.0963	9.5408	9.9908	12.3201	14.7725
40																						8.5271	8.9760	9.4309	9.8918	10.3583	12.7733	15.3160

Appendix Tab. 17 (3) 立木材積表（天然林；タイプ2）

Type-2; Natural tree

Formula V=0.000132＊DBH^1.8730＊H^0.8421

DBH:cm H(merchantable height):m V:m^3

Height (m)	DBH(cm)																																		
	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	70	80	90	100	110	120
5	0.0382	0.0538	0.0718	0.0921	0.1149	0.1400	0.1673	0.1969	0.2288	0.2628	0.2991	0.3375	0.3781	0.4209	0.4657	0.5127	0.5617	0.6129	0.6661	0.7213	0.7787													
6	0.0446	0.0627	0.0837	0.1074	0.1340	0.1632	0.1951	0.2296	0.2667	0.3065	0.3487	0.3936	0.4409	0.4907	0.5430	0.5977	0.6549	0.7146	0.7766	0.8410	0.9079	0.9771												
7	0.0507	0.0714	0.0953	0.1223	0.1525	0.1858	0.2221	0.2614	0.3037	0.3489	0.3971	0.4481	0.5020	0.5587	0.6183	0.6806	0.7457	0.8136	0.8843	0.9576	1.0337	1.1125	1.1940											
8	0.0568	0.0799	0.1066	0.1369	0.1707	0.2079	0.2486	0.2926	0.3399	0.3905	0.4443	0.5014	0.5617	0.6252	0.6918	0.7616	0.8345	0.9104	0.9895	1.0718	1.1567	1.2449	1.3361	1.4303										
9	0.0627	0.0882	0.1177	0.1512	0.1885	0.2296	0.2745	0.3231	0.3753	0.4312	0.4907	0.5537	0.6203	0.6904	0.7640	0.8410	0.9215	1.0054	1.0927	1.1833	1.2774	1.3747	1.4754	1.5794	1.6867									
10	0.0685	0.0964	0.1286	0.1652	0.2060	0.2509	0.2999	0.3530	0.4101	0.4712	0.5362	0.6051	0.6779	0.7544	0.8349	0.9190	1.0070	1.0987	1.1940	1.2931	1.3959	1.5023	1.6123	1.7260	1.8432	1.9640								
11	0.0742	0.1044	0.1394	0.1790	0.2232	0.2719	0.3250	0.3825	0.4444	0.5106	0.5810	0.6557	0.7345	0.8175	0.9046	0.9958	1.0911	1.1905	1.2938	1.4012	1.5125	1.6278	1.7470	1.8702	1.9972	2.1282	2.8405							
12	0.0799	0.1124	0.1500	0.1926	0.2401	0.2925	0.3497	0.4116	0.4782	0.5494	0.6252	0.7055	0.7903	0.8796	0.9734	1.0715	1.1741	1.2810	1.3922	1.5077	1.6275	1.7516	1.8799	2.0124	2.1491	2.2900	3.0565	3.9250						
13	0.0854	0.1202	0.1604	0.2060	0.2569	0.3129	0.3741	0.4403	0.5115	0.5877	0.6688	0.7547	0.8454	0.9410	1.0413	1.1463	1.2559	1.3703	1.4893	1.6128	1.7410	1.8737	2.0109	2.1527	2.2989	2.4496	3.2696	4.1987	5.2351					
14	0.0909	0.1279	0.1708	0.2193	0.2734	0.3331	0.3982	0.4687	0.5445	0.6255	0.7118	0.8033	0.8999	1.0016	1.1083	1.2201	1.3368	1.4585	1.5852	1.7167	1.8531	1.9944	2.1404	2.2913	2.4470	2.6074	3.4801	4.4691	5.5722	6.7878				
15	0.0964	0.1356	0.1810	0.2324	0.2898	0.3530	0.4220	0.4967	0.5770	0.6630	0.7544	0.8513	0.9537	1.0615	1.1748	1.2931	1.4168	1.5458	1.6800	1.8194	1.9640	2.1137	2.2685	2.4284	2.5933	2.7634	3.6883	4.7364	5.9055	7.1938	8.5996			
16	0.1018	0.1432	0.1911	0.2454	0.3060	0.3727	0.4456	0.5244	0.6093	0.7000	0.7965	0.8989	1.0070	1.1208	1.2402	1.3653	1.4959	1.6321	1.7738	1.9210	2.0736	2.2317	2.3952	2.5640	2.7382	2.9177	3.8943	5.0009	6.2353	7.5956	9.0801	10.6873
17	0.1071	0.1507	0.2011	0.2583	0.3220	0.3923	0.4689	0.5519	0.6412	0.7367	0.8383	0.9460	1.0597	1.1795	1.3052	1.4368	1.5743	1.7176	1.8667	2.0216	2.1823	2.3486	2.5206	2.6983	2.8816	3.0705	4.0983	5.2629	6.5619	7.9935	9.5557	11.2471
18	0.1124	0.1581	0.2110	0.2710	0.3379	0.4116	0.4920	0.5791	0.6728	0.7730	0.8796	0.9926	1.1120	1.2376	1.3695	1.5076	1.6519	1.8023	1.9588	2.1213	2.2899	2.4644	2.6449	2.8314	3.0237	3.2219	4.3004	5.5224	6.8855	8.3876	10.0269	11.8017
19	0.1176	0.1655	0.2209	0.2836	0.3536	0.4308	0.5150	0.6061	0.7041	0.8090	0.9206	1.0389	1.1638	1.2953	1.4333	1.5779	1.7289	1.8862	2.0500	2.2201	2.3965	2.5792	2.7681	2.9633	3.1646	3.3720	4.5007	5.7796	7.2062	8.7783	10.4940	12.3515
20	0.1228	0.1728	0.2306	0.2961	0.3692	0.4498	0.5377	0.6329	0.7352	0.8447	0.9612	1.0847	1.2152	1.3525	1.4966	1.6475	1.8052	1.9695	2.1405	2.3181	2.5023	2.6931	2.8903	3.0941	3.3042	3.5209	4.6994	6.0347	7.5243	9.1668	10.9572	12.8967
21			0.2403	0.3086	0.3847	0.4686	0.5602	0.6594	0.7661	0.8801	1.0015	1.1302	1.2661	1.4092	1.5594	1.7168	1.8809	2.0521	2.2303	2.4153	2.6073	2.8060	3.0115	3.2238	3.4428	3.6685	4.8965	6.2879	7.8399	9.5503	11.4168	13.4376
22				0.3209	0.4001	0.4874	0.5826	0.6857	0.7967	0.9153	1.0415	1.1754	1.3167	1.4655	1.6217	1.7852	1.9560	2.1341	2.3194	2.5118	2.7114	2.9181	3.1319	3.3526	3.5804	3.8151	5.0921	6.5391	8.1531	9.9316	11.8729	13.9744
23				0.3331	0.4153	0.5060	0.6048	0.7119	0.8270	0.9502	1.0813	1.2202	1.3669	1.5214	1.6835	1.8533	2.0306	2.2155	2.4079	2.6077	2.8149	3.0294	3.2513	3.4805	3.7169	3.9606	5.2863	6.7685	8.4641	10.3106	12.3258	14.5075
24					0.4305	0.5244	0.6269	0.7379	0.8572	0.9849	1.1207	1.2647	1.4168	1.5769	1.7450	1.9209	2.1047	2.2963	2.4957	2.7028	2.9176	3.1400	3.3699	3.6075	3.8526	4.1051	5.4792	7.0062	8.7730	10.6869	12.7755	15.0368
25						0.5428	0.6488	0.7637	0.8872	1.0193	1.1599	1.3090	1.4664	1.6321	1.8060	1.9881	2.1783	2.3767	2.5830	2.7973	3.0196	3.2498	3.4878	3.7337	3.9873	4.2487	5.6708	7.2623	9.0798	11.0606	13.2223	15.5627
26							0.6706	0.7893	0.9170	1.0535	1.1989	1.3529	1.5158	1.6869	1.8666	2.0549	2.2515	2.4565	2.6697	2.8913	3.1210	3.3589	3.6049	3.8588	4.1212	4.3914	5.8613	7.5268	9.3847	11.4320	13.6663	16.0853
27										1.0876	1.2376	1.3966	1.5645	1.7413	1.9269	2.1212	2.3242	2.5358	2.7559	2.9846	3.2218	3.4674	3.7213	3.9837	4.2543	4.5332	6.0505	7.7699	9.6877	11.8012	14.1076	16.6047
28													1.6132	1.7955	1.9868	2.1872	2.3965	2.6146	2.8417	3.0774	3.3220	3.5752	3.8371	4.1075	4.3866	4.6742	6.2387	8.0115	9.9890	12.1682	14.5454	17.1211
29														1.8493	2.0464	2.2528	2.4683	2.6931	2.9269	3.1697	3.4216	3.6824	3.9521	4.2307	4.5181	4.8143	6.4258	8.2518	10.2886	12.5331	14.9826	17.6346
30															2.1057	2.3180	2.5398	2.7711	3.0116	3.2615	3.5207	3.7891	4.0666	4.3533	4.6490	4.9538	6.6119	8.4907	10.5865	12.8961	15.4165	18.1453
31																						3.8951	4.1805	4.4751	4.7791	5.0925	6.7970	8.7285	10.8829	13.2571	15.8481	18.6533
32																						4.0007	4.2937	4.5964	4.9086	5.2304	6.9812	8.9650	11.1776	13.6164	16.2776	19.1588
33																							4.4064	4.7171	5.0375	5.3677	7.1645	9.2003	11.4712	13.9738	16.7049	19.6617
34																							4.5186	4.8371	5.1657	5.5044	7.3488	9.4345	11.7633	14.3295	17.1301	20.1622
35																								4.9567	5.2934	5.6404	7.5284	9.6677	12.0540	14.6836	17.5534	20.6605
36																								5.0757	5.4205	5.7758	7.7091	9.8997	12.3433	15.0361	17.9748	21.1564
37																								5.1941	5.5470	5.9106	7.8891	10.1306	12.6314	15.3871	18.3944	21.6503
38																									5.6730	6.0449	8.0682	10.3609	12.9183	15.7366	18.8121	22.1420
39																									5.7984	6.1786	8.2467	10.5900	13.2040	16.0846	19.2282	22.6316
40																										6.3117	8.4244	10.8182	13.4885	16.4312	19.6425	23.1193

Appendix Tab. 17 (4) 立木材積表（天然林；タイプ3）

Type-3; Natural tree

Formula V=0.000153＊DBH^1.8160＊H^0.8723

DBH:cm H(merchantable height):m V:m^3

Height (m)	DBH(cm)																																		
	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	70	80	90	100	110	120			
5	0.0408	0.0568	0.0751	0.0957	0.1186	0.1438	0.1707	0.1999	0.2312	0.2645	0.2998	0.3371	0.3763	0.4175																						
6	0.0478	0.0666	0.0881	0.1122	0.1390	0.1683	0.2001	0.2344	0.2711	0.3101	0.3515	0.3952	0.4412	0.4895	0.5400	0.5927	0.6476	0.7047																		
7	0.0547	0.0761	0.1007	0.1284	0.1590	0.1925	0.2289	0.2681	0.3101	0.3547	0.4021	0.4521	0.5047	0.5599	0.6177	0.6780	0.7408	0.8061	0.8739	0.9441																
8	0.0614	0.0856	0.1132	0.1443	0.1787	0.2163	0.2572	0.3012	0.3484	0.3986	0.4518	0.5079	0.5671	0.6291	0.6940	0.7617	0.8323	0.9057	0.9818	1.0607	1.1423	1.2266	1.3137													
9	0.0681	0.0948	0.1254	0.1599	0.1980	0.2397	0.2850	0.3338	0.3861	0.4417	0.5006	0.5629	0.6284	0.6971	0.7691	0.8441	0.9224	1.0037	1.0880	1.1755	1.2659	1.3594	1.4558	1.5552	1.6575	1.7628	2.3323	2.9723							
10	0.0746	0.1039	0.1375	0.1753	0.2171	0.2628	0.3125	0.3660	0.4232	0.4842	0.5488	0.6171	0.6889	0.7643	0.8431	0.9254	1.0111	1.1003	1.1928	1.2886	1.3878	1.4902	1.5959	1.7049	1.8171	1.9325	2.5568	3.2584	4.0355						
11	0.0811	0.1130	0.1494	0.1904	0.2359	0.2856	0.3396	0.3977	0.4599	0.5262	0.5964	0.6706	0.7486	0.8305	0.9162	1.0058	1.0988	1.1957	1.2962	1.4003	1.5081	1.6194	1.7343	1.8527	1.9746	2.1000	2.7784	3.5409	4.3853	5.3100					
12	0.0875	0.1219	0.1612	0.2055	0.2545	0.3081	0.3664	0.4291	0.4962	0.5677	0.6434	0.7235	0.8077	0.8960	0.9884	1.0849	1.1854	1.2899	1.3984	1.5108	1.6270	1.7471	1.8711	1.9988	2.1303	2.2656	2.9975	3.8201	4.7311	5.7288	6.8113				
13	0.0938	0.1307	0.1729	0.2203	0.2729	0.3304	0.3928	0.4601	0.5321	0.6087	0.6900	0.7758	0.8661	0.9608	1.0599	1.1634	1.2712	1.3832	1.4995	1.6200	1.7447	1.8735	2.0064	2.1434	2.2844	2.4294	3.2143	4.0963	5.0733	6.1431	7.3039	8.5542			
14	0.1001	0.1394	0.1844	0.2350	0.2911	0.3525	0.4191	0.4908	0.5676	0.6494	0.7361	0.8276	0.9239	1.0250	1.1307	1.2411	1.3561	1.4756	1.5997	1.7282	1.8612	1.9986	2.1404	2.2865	2.4369	2.5917	3.4289	4.3699	5.4121	6.5533	7.7916	9.1254			
15	0.1063	0.1480	0.1959	0.2496	0.3092	0.3743	0.4451	0.5213	0.6028	0.6897	0.7817	0.8789	0.9812	1.0885	1.2008	1.3181	1.4402	1.5671	1.6989	1.8354	1.9766	2.1225	2.2731	2.4283	2.5881	2.7524	3.6416	4.6410	5.7478	6.9598	8.2749	9.6915			
16	0.1566	0.2072	0.2641	0.3271	0.3960	0.4709	0.5515	0.6377	0.7296	0.8270	0.9296	1.0380	1.1516	1.2704	1.3944	1.5236	1.6579	1.7973	1.9417	2.0911	2.2455	2.4048	2.5689	2.7380	2.9118	3.0905	4.0997	6.0606	7.3628	8.7542	10.2527				
17		0.2185	0.2784	0.3448	0.4175	0.4964	0.5814	0.6724	0.7692	0.8719	0.9803	1.0944	1.2141	1.3394	1.4701	1.6063	1.7479	1.8949	2.0471	2.2047	2.3674	2.5354	2.7085	2.8867	3.0700	4.0617	5.1763	6.4109	7.7627	9.2296	10.8095				
18			0.2926	0.3624	0.4389	0.5218	0.6111	0.7067	0.8085	0.9165	1.0304	1.1504	1.2762	1.4078	1.5453	1.6884	1.8373	1.9917	2.1518	2.3174	2.4884	2.6650	2.8469	3.0342	3.2269	4.2694	5.4410	6.7386	8.1595	9.7014	11.3621				
19			0.3068	0.3799	0.4601	0.5470	0.6406	0.7409	0.8476	0.9607	1.0802	1.2059	1.3378	1.4758	1.6199	1.7700	1.9260	2.0879	2.2557	2.4293	2.6086	2.7937	2.9844	3.1808	3.3828	4.4755	5.7037	7.0640	8.5536	10.1699	11.9108				
20				0.3973	0.4811	0.5720	0.6700	0.7748	0.8864	1.0047	1.1296	1.2611	1.3990	1.5434	1.6940	1.8510	2.0141	2.1835	2.3589	2.5404	2.7280	2.9215	3.1210	3.3263	3.5375	4.6803	5.9647	7.3873	8.9450	10.6353	12.4558				
21					0.5969	0.6991	0.8085	0.9249	1.0484	1.1787	1.3158	1.4599	1.6105	1.7677	1.9315	2.1017	2.2784	2.4615	2.6509	2.8466	3.0485	3.2567	3.4710	3.6914	4.8838	6.2241	7.7085	9.3339	11.0977	12.9974				
22							0.8419	0.9632	1.0918	1.2275	1.3704	1.5203	1.6772	1.8409	2.0114	2.1888	2.3728	2.5634	2.7607	2.9645	3.1748	3.3915	3.6147	3.8442	5.0861	6.4818	8.0277	9.7205	11.5573	13.5357				
23										1.2761	1.4246	1.5804	1.7435	1.9137	2.0910	2.2753	2.4666	2.6648	2.8698	3.0817	3.3003	3.5256	3.7576	3.9962	5.2872	6.7381	8.3451	10.1048	12.0142	14.0706				
24													1.8094	1.9861	2.1701	2.3613	2.5599	2.7656	2.9784	3.1982	3.4251	3.6590	3.8997	4.1474	5.4872	6.9930	8.6607	10.4870	12.4686	14.6030				
25															2.2487	2.4469	2.6527	2.8658	3.0863	3.3142	3.5493	3.7916	4.0411	4.2977	5.6861	7.2465	8.9747	10.8671	12.9206	15.1324				
26																			2.7450	2.9656	3.1938	3.4295	3.6728	3.9236	4.1817	4.4473	5.8840	7.4967	9.2870	11.2533	13.3703	15.6591				
27																			2.8369	3.0648	3.3007	3.5443	3.7957	4.0549	4.3217	4.5961	6.0809	7.7496	9.5979	11.6217	13.8178	16.1832				
28																					3.4070	3.6586	3.9181	4.1856	4.4610	4.7443	6.2769	7.9994	9.9072	11.9963	14.2632	16.7048				
29																						3.7723	4.0399	4.3157	4.5997	4.8917	6.4720	8.2481	10.2152	12.3692	14.7065	17.2240				
30																							4.1611	4.4452	4.7377	5.0386	6.6663	8.4956	10.5218	12.7404	15.1479	17.7410				
31																								4.5742	4.8752	5.1846	6.8597	8.7421	10.8271	13.1101	15.5875	18.2557				
32																								4.7027	5.0121	5.3304	7.0523	8.9876	11.1311	13.4783	16.0252	18.7684				
33																									5.1484	5.4754	7.2442	9.2321	11.4339	13.8449	16.4612	19.2790				
34																									5.2843	5.6198	7.4353	9.4757	11.7356	14.2102	16.8954	19.7876				
35																										5.7637	7.6257	9.7184	12.0361	14.5741	17.3281	20.2943				
36																										5.9071	7.8154	9.9601	12.3355	14.9367	17.7592	20.7992				
37																											8.0045	10.2011	12.6339	15.2980	18.1888	21.3023				
38																											8.1928	10.4411	12.9313	15.6580	18.6166	21.8037				
39																												10.6804	13.2276	16.0168	19.0435	22.3034				
40																													13.5230	16.3745	19.4687	22.8014				

Appendix Tab. 17 (5) 立木材積表 (*Cupressus lusitanica*)

Species; Cupressus lusitanica

Formula1 V=0.000230＊DBH^2.3254

Formula2 V=0.000054＊DBH^1.6986＊H^1.1895

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm)																										
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56
Form.f	0.0148	0.029	0.0487	0.0743	0.1064	0.1451	0.1909	0.2439	0.3044	0.3726	0.4489	0.5333	0.6261	0.7275	0.8376	0.9567	1.0848	1.2222	1.3691	1.5255	1.6916	1.8676	2.0536	2.2497	2.456	2.6728
5	0.0077	0.0125	0.0183																							
6	0.0095	0.0156	0.0227	0.0310																						
7	0.0115	0.0187	0.0273	0.0372	0.0484																					
8	0.0134	0.0219	0.0320	0.0436	0.0567	0.0711																				
9	0.0155	0.0252	0.0368	0.0502	0.0652	0.0818	0.0999																			
10	0.0175	0.0286	0.0417	0.0569	0.0739	0.0927	0.1133	0.1355																		
11	0.0196	0.0320	0.0467	0.0637	0.0828	0.1039	0.1269	0.1517	0.1784																	
12	0.0218	0.0355	0.0518	0.0707	0.0918	0.1152	0.1407	0.1683	0.1978	0.2294																
13	0.0239	0.0390	0.0570	0.0777	0.1010	0.1267	0.1548	0.1851	0.2176	0.2523	0.2890															
14	0.0262	0.0426	0.0623	0.0849	0.1103	0.1384	0.1690	0.2021	0.2377	0.2755	0.3156	0.3580														
15	0.0284	0.0463	0.0676	0.0921	0.1197	0.1502	0.1835	0.2194	0.2580	0.2991	0.3426	0.3886	0.4369													
16		0.0500	0.0730	0.0995	0.1293	0.1622	0.1981	0.2369	0.2786	0.3229	0.3700	0.4196	0.4718	0.5264												
17		0.0537	0.0785	0.1069	0.1389	0.1743	0.2129	0.2546	0.2994	0.3471	0.3976	0.4510	0.5071	0.5658	0.6272											
18			0.0840	0.1145	0.1487	0.1866	0.2279	0.2726	0.3205	0.3715	0.4256	0.4827	0.5427	0.6056	0.6713	0.7397										
19			0.0896	0.1221	0.1586	0.1990	0.2430	0.2907	0.3418	0.3962	0.4539	0.5148	0.5788	0.6458	0.7159	0.7889	0.8648									
20				0.1297	0.1686	0.2115	0.2583	0.3090	0.3633	0.4211	0.4824	0.5472	0.6152	0.6865	0.7609	0.8385	0.9192	1.0028	1.0895							
21				0.1375	0.1786	0.2241	0.2738	0.3274	0.3850	0.4463	0.5113	0.5799	0.6519	0.7275	0.8064	0.8886	0.9741	1.0628	1.1546	1.2495	1.3475	1.4485	1.5525			
22					0.1888	0.2369	0.2893	0.3460	0.4069	0.4717	0.5404	0.6128	0.6890	0.7689	0.8523	0.9392	1.0295	1.1232	1.2203	1.3206	1.4242	1.5310	1.6409	1.7539	1.8700	1.9892
23					0.1991	0.2497	0.3051	0.3646	0.4290	0.4973	0.5697	0.6461	0.7265	0.8106	0.8985	0.9902	1.0854	1.1842	1.2865	1.3923	1.5015	1.6141	1.7300	1.8492	1.9716	2.0972
24						0.2627	0.3209	0.3838	0.4512	0.5231	0.5993	0.6797	0.7642	0.8527	0.9452	1.0416	1.1418	1.2457	1.3533	1.4646	1.5795	1.6979	1.8198	1.9452	2.0740	2.2061
25							0.3369	0.4029	0.4737	0.5491	0.6291	0.7135	0.8022	0.8951	0.9922	1.0934	1.1986	1.3077	1.4207	1.5375	1.6581	1.7824	1.9104	2.0420	2.1771	2.3159
26								0.4221	0.4963	0.5753	0.6591	0.7476	0.8405	0.9379	1.0396	1.1456	1.2558	1.3701	1.4885	1.6109	1.7373	1.8675	2.0016	2.1395	2.2811	2.4265
27									0.5191	0.6018	0.6894	0.7819	0.8791	0.9810	1.0874	1.1982	1.3135	1.4330	1.5569	1.6849	1.8170	1.9532	2.0935	2.2377	2.3859	2.5379
28										0.6284	0.7199	0.8165	0.9180	1.0243	1.1354	1.2512	1.3715	1.4964	1.6257	1.7594	1.8974	2.0396	2.1860	2.3366	2.4913	2.6501
29											0.7506	0.8513	0.9571	1.0680	1.1838	1.3045	1.4300	1.5602	1.6950	1.8344	1.9782	2.1265	2.2792	2.4362	2.5975	2.7630
30												0.8863	0.9965	1.1119	1.2325	1.3582	1.4888	1.6244	1.7647	1.9098	2.0596	2.2140	2.3730	2.5365	2.7044	2.8767
31												0.9215	1.0361	1.1582	1.2816	1.4122	1.5481	1.6890	1.8349	1.9858	2.1416	2.3021	2.4674	2.6374	2.8120	2.9912
32													1.0760	1.2007	1.3309	1.4666	1.6076	1.7540	1.9056	2.0622	2.2240	2.3907	2.5624	2.7389	2.9202	3.1063
33													1.1161	1.2454	1.3805	1.5213	1.6676	1.8194	1.9766	2.1391	2.3069	2.4798	2.6579	2.8410	3.0291	3.2221
34														1.2904	1.4304	1.5762	1.7279	1.8852	2.0480	2.2164	2.3903	2.5695	2.7540	2.9437	3.1386	3.3386
35															1.4806	1.6315	1.7885	1.9513	2.1199	2.2942	2.4741	2.6596	2.8506	3.0470	3.2487	3.4557
36																1.6871	1.8494	2.0178	2.1921	2.3724	2.5584	2.7502	2.9477	3.1508	3.3594	3.5735
37																		2.0846	2.2648	2.4510	2.6432	2.8414	3.0454	3.2552	3.4707	3.6918
38																				2.5300	2.7284	2.9329	3.1435	3.3601	3.5825	3.8108
39																					2.8140	3.0250	3.2422	3.4655	3.6950	3.9304
40																						3.1175	3.3413	3.5715	3.8079	4.0506

Appendix Tab. 17 (6) 立木材積表 (*Pinus patula*)

Species: Pinus patula

Formula1 V=0.000052＊DBH^2.8058

Formula2 V=0.000053＊DBH^1.8579＊H^1.0279

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm)																													
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60		
Form 1	0.008	0.018	0.033	0.056	0.086	0.124	0.173	0.233	0.304	0.388	0.485	0.598	0.725	0.869	1.03	1.21	1.408	1.626	1.864	2.124	2.406	2.712	3.041	3.394	3.774	4.179	4.611	5.072		
5	0.0077	0.0132	0.0200																											
6	0.0093	0.0159	0.0241	0.0338																										
7	0.0109	0.0187	0.0282	0.0396	0.0528																									
8	0.0125	0.0214	0.0324	0.0455	0.0605	0.0776																								
9	0.0142	0.0242	0.0366	0.0513	0.0683	0.0876	0.1090																							
10	0.0158	0.0269	0.0407	0.0572	0.0761	0.0976	0.1214	0.1477																						
11	0.0174	0.0297	0.0449	0.0631	0.0840	0.1076	0.1339	0.1629	0.1945																					
12	0.0190	0.0325	0.0491	0.0690	0.0918	0.1177	0.1465	0.1781	0.2126	0.2500																				
13	0.0207	0.0352	0.0534	0.0749	0.0997	0.1278	0.1590	0.1934	0.2309	0.2714	0.3149																			
14	0.0223	0.0380	0.0576	0.0808	0.1076	0.1379	0.1716	0.2087	0.2492	0.2929	0.3398																			
15		0.0408	0.0618	0.0867	0.1155	0.1480	0.1842	0.2241	0.2675	0.3144	0.3648	0.4187																		
16			0.0661	0.0927	0.1234	0.1582	0.1969	0.2394	0.2858	0.3360	0.3898	0.4474																		
17				0.0986	0.1314	0.1683	0.2095	0.2548	0.3042	0.3576	0.4149	0.4761	0.5412																	
18				0.1046	0.1393	0.1785	0.2222	0.2702	0.3226	0.3792	0.4400	0.5049	0.5740	0.6471																
19					0.1473	0.1887	0.2349	0.2857	0.3410	0.4009	0.4651	0.5338	0.6068	0.6841	0.7657																
20					0.1552	0.1989	0.2476	0.3012	0.3595	0.4226	0.4903	0.5627	0.6397	0.7211	0.8071	0.8976														
21						0.2092	0.2603	0.3166	0.3780	0.4443	0.5155	0.5916	0.6726	0.7582	0.8486	0.9437	1.0434	1.1478												
22						0.2194	0.2731	0.3322	0.3965	0.4661	0.5408	0.6206	0.7055	0.7954	0.8902	0.9899	1.0945	1.2040	1.3182	1.4372										
23							0.2859	0.3477	0.4150	0.4879	0.5661	0.6496	0.7385	0.8326	0.9318	1.0362	1.1457	1.2603	1.3798	1.5044	1.6339	1.7684								
24							0.2987	0.3632	0.4336	0.5097	0.5914	0.6787	0.7715	0.8698	0.9735	1.0826	1.1969	1.3166	1.4416	1.5717	1.7070	1.8475	1.9930	2.1437	2.2994	2.4601	2.6258	2.7965		
25								0.3788	0.4522	0.5315	0.6167	0.7078	0.8046	0.9071	1.0152	1.1289	1.2482	1.3730	1.5033	1.6390	1.7801	1.9266	2.0784	2.2355	2.3979	2.5655	2.7384	2.9164		
26								0.3944	0.4708	0.5534	0.6421	0.7369	0.8377	0.9444	1.0570	1.1754	1.2996	1.4296	1.5652	1.7065	1.8534	2.0059	2.1639	2.3275	2.4966	2.6711	2.8510	3.0364		
27									0.4894	0.5753	0.6675	0.7660	0.8708	0.9817	1.0988	1.2219	1.3510	1.4861	1.6271	1.7740	1.9267	2.0852	2.2495	2.4196	2.5953	2.7767	2.9638	3.1565		
28									0.5080	0.5972	0.6929	0.7952	0.9040	1.0191	1.1406	1.2684	1.4025	1.5427	1.6891	1.8415	2.0001	2.1647	2.3352	2.5117	2.6942	2.8826	3.0767	3.2767		
29										0.6191	0.7184	0.8244	0.9372	1.0566	1.1825	1.3150	1.4540	1.5993	1.7511	1.9092	2.0735	2.2442	2.4210	2.6040	2.7931	2.9884	3.1897	3.3971		
30										0.6411	0.7439	0.8537	0.9704	1.0940	1.2245	1.3616	1.5055	1.6561	1.8132	1.9769	2.1471	2.3237	2.5068	2.6963	2.8922	3.0943	3.3028	3.5175		
31											0.7694	0.8829	1.0037	1.1315	1.2664	1.4083	1.5571	1.7128	1.8753	2.0446	2.2207	2.4034	2.5928	2.7887	2.9913	3.2004	3.4160	3.6381		
32											0.7949	0.9122	1.0370	1.1691	1.3084	1.4550	1.6088	1.7696	1.9376	2.1125	2.2943	2.4831	2.6788	2.8813	3.0905	3.3066	3.5293	3.7588		
33												0.9415	1.0703	1.2066	1.3505	1.5018	1.6605	1.8265	1.9998	2.1804	2.3681	2.5629	2.7649	2.9738	3.1899	3.4128	3.6427	3.8796		
34												0.9709	1.1036	1.2442	1.3926	1.5486	1.7122	1.8834	2.0621	2.2483	2.4419	2.6428	2.8510	3.0665	3.2893	3.5192	3.7563	4.0005		
35													1.1370	1.2819	1.4347	1.5954	1.7640	1.9404	2.1245	2.3163	2.5157	2.7227	2.9372	3.1593	3.3887	3.6256	3.8699	4.1215		
36															1.477	1.642	1.816	1.997	2.187	2.384	2.59	2.803	3.024	3.252	3.488	3.732	3.984	4.243		
37																	1.668	2.055	2.249	2.453	2.664	2.883	3.11	3.345	3.588	3.839	4.097	4.364		
38																			2.312	2.521	2.738	2.963	3.196	3.438	3.688	3.945	4.211	4.485		
39																				2.589	2.812	3.043	3.283	3.531	3.787	4.052	4.325	4.606		
40																				2.657	2.886	3.123	3.369	3.624	3.887	4.159	4.439	4.728		
41																				2.725	2.96	3.204	3.456	3.717	3.987	4.266	4.553	4.849		
42																							3.543	3.811	4.087	4.373	4.668	4.971		

Appendix Tab. 17 (7) 立木材積表 (*Eucalyptus saligna*)

Species: Eucalyptus saligna

Formula1 V=0.000130＊DBH^2.4967

Formula2 V=0.000039＊DBH^1.7978＊H^1.1430

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm) 6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56
Form 1	0.0114	0.0234	0.0408	0.0643	0.0945	0.1319	0.177	0.2303	0.2921	0.363	0.4433	0.5334	0.6337	0.7445	0.8661	0.999	1.1434	1.2996	1.4679	1.6487	1.8423	2.0488	2.2686	2.502	2.7492	3.0105
5	0.0062	0.0103	0.0154	0.0214	0.0282																					
6	0.0076	0.0127	0.0190	0.0263	0.0348																					
7	0.0090	0.0152	0.0226	0.0314	0.0414	0.0527																				
8	0.0105	0.0177	0.0264	0.0366	0.0483	0.0614	0.0759																			
9	0.0120	0.0202	0.0302	0.0419	0.0552	0.0702	0.0868	0.1049																		
10	0.0136	0.0228	0.0340	0.0472	0.0623	0.0792	0.0979	0.1183	0.1404																	
11	0.0151	0.0254	0.0379	0.0527	0.0695	0.0883	0.1092	0.1319	0.1566	0.1831																
12	0.0167	0.0281	0.0419	0.0582	0.0767	0.0976	0.1206	0.1457	0.1730	0.2023	0.2336															
13	0.0183	0.0308	0.0459	0.0637	0.0841	0.1069	0.1321	0.1597	0.1895	0.2216	0.2559	0.2924														
14	0.0200	0.0335	0.0500	0.0694	0.0915	0.1164	0.1438	0.1738	0.2063	0.2412	0.2786	0.3183	0.3603													
15	0.0216	0.0362	0.0541	0.0751	0.0990	0.1259	0.1556	0.1881	0.2232	0.2610	0.3014	0.3444	0.3899	0.4378												
16	0.0232	0.0390	0.0582	0.0808	0.1066	0.1356	0.1675	0.2025	0.2403	0.2810	0.3245	0.3707	0.4197	0.4713	0.5256											
17	0.0249	0.0418	0.0624	0.0866	0.1143	0.1453	0.1796	0.2170	0.2576	0.3012	0.3478	0.3973	0.4498	0.5052	0.5633	0.6243										
18		0.0446	0.0666	0.0925	0.1220	0.1551	0.1917	0.2317	0.2749	0.3215	0.3713	0.4242	0.4802	0.5393	0.6014	0.6664	0.7345									
19			0.0709	0.0984	0.1298	0.1650	0.2039	0.2464	0.2925	0.3420	0.3949	0.4512	0.5108	0.5736	0.6397	0.7089	0.7813	0.8566								
20				0.1043	0.1376	0.1749	0.2162	0.2613	0.3101	0.3626	0.4188	0.4785	0.5416	0.6083	0.6783	0.7517	0.8285	0.9085	0.9918							
21					0.1455	0.1850	0.2286	0.2763	0.3279	0.3834	0.4426	0.5059	0.5727	0.6432	0.7172	0.7948	0.8760	0.9606	1.0487	1.1401						
22						0.1951	0.2411	0.2914	0.3458	0.4044	0.4670	0.5335	0.6040	0.6783	0.7564	0.8383	0.9238	1.0131	1.1059	1.2024	1.3024					
23						0.2053	0.2537	0.3066	0.3639	0.4255	0.4913	0.5613	0.6355	0.7136	0.7958	0.8819	0.9720	1.0659	1.1636	1.2651	1.3703	1.4793				
24							0.2663	0.3218	0.3820	0.4467	0.5158	0.5893	0.6671	0.7492	0.8355	0.9259	1.0204	1.1190	1.2216	1.3281	1.4386	1.5530	1.6713	1.7934		
25							0.2790	0.3372	0.4002	0.4680	0.5404	0.6175	0.6990	0.7850	0.8754	0.9701	1.0692	1.1724	1.2799	1.3916	1.5074	1.6272	1.7511	1.8791	2.0110	2.1469
26								0.3527	0.4186	0.4895	0.5652	0.6458	0.7311	0.8210	0.9155	1.0146	1.1182	1.2262	1.3386	1.4554	1.5765	1.7018	1.8314	1.9652	2.1032	2.2453
27								0.3682	0.4370	0.5110	0.5901	0.6742	0.7633	0.8572	0.9559	1.0593	1.1675	1.2803	1.3976	1.5195	1.6460	1.7768	1.9121	2.0518	2.1959	2.3443
28									0.4556	0.5327	0.6152	0.7029	0.7957	0.8936	0.9965	1.1043	1.2170	1.3346	1.4569	1.5840	1.7158	1.8523	1.9933	2.1389	2.2891	2.4438
29									0.4742	0.5545	0.6404	0.7316	0.8282	0.9301	1.0372	1.1495	1.2668	1.3892	1.5166	1.6489	1.7860	1.9281	2.0749	2.2265	2.3826	2.5436
30										0.5764	0.6657	0.7605	0.8610	0.9669	1.0782	1.1949	1.3169	1.4441	1.5765	1.7140	1.8566	2.0042	2.1569	2.3144	2.4769	2.6443
31										0.5985	0.6911	0.7896	0.8938	1.0038	1.1194	1.2405	1.3672	1.4993	1.6367	1.7795	1.9275	2.0808	2.2392	2.4028	2.5715	2.7453
32											0.7166	0.8188	0.9269	1.0409	1.1608	1.2864	1.4177	1.5547	1.6972	1.8452	1.9987	2.1577	2.3220	2.4916	2.6665	2.8467
33											0.7423	0.8481	0.9601	1.0782	1.2023	1.3324	1.4685	1.6103	1.7579	1.9113	2.0703	2.2349	2.4051	2.5808	2.7620	2.9486
34												0.8775	0.9934	1.1156	1.2440	1.3787	1.5194	1.6662	1.8190	1.9776	2.1422	2.3125	2.4886	2.6704	2.8579	3.0510
35													1.0268	1.1532	1.2860	1.4251	1.5706	1.7223	1.8802	2.0442	2.2143	2.3904	2.5724	2.7604	2.9541	3.1537
36														1.1909	1.3280	1.4718	1.6220	1.7787	1.9418	2.1111	2.2866	2.4686	2.6566	2.8507	3.0508	3.2569
37															1.3703	1.5186	1.6736	1.8353	2.0035	2.1783	2.3595	2.5472	2.7411	2.9414	3.1479	3.3606
38																1.5656	1.7252	1.8921	2.0655	2.2457	2.4326	2.6260	2.8260	3.0324	3.2453	3.4646
39																	1.7774	1.9491	2.1278	2.3134	2.5059	2.7051	2.9111	3.1238	3.3431	3.5690
40																		2.0063	2.1903	2.3813	2.5794	2.7845	2.9966	3.2155	3.4413	3.6738
41																			2.2530	2.4495	2.6533	2.8643	3.0824	3.3076	3.5398	3.7789
42																				2.5179	2.7274	2.9442	3.1684	3.3999	3.6386	3.8845
43																				2.5865	2.8017	3.0245	3.2548	3.4926	3.7378	3.9904
44																					2.8763	3.1050	3.3415	3.5856	3.8373	4.0966
45																					2.9512	3.1858	3.4284	3.6789	3.9372	4.2032
46																						3.2669	3.5156	3.7725	4.0373	4.3101
47																						3.3482	3.6031	3.8664	4.1378	4.4174
48																							3.6909	3.9605	4.2386	4.5250
49																								4.0550	4.3397	4.6329
50																									4.4410	4.7411

Appendix Tab.17 (8) 立木材積表 (*Eucalyptus camaldulensis*)

Species: Eucalyptus camaldulensis

Formula1 V=0.000740＊DBH^1.9630

Formula2 V=0.000100＊DBH^1.5953＊H^1.0698

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm)																									
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54
Form.1	0.0249	0.0439	0.068	0.0972	0.1315	0.171	0.2154	0.2649	0.3195	0.379	0.4434	0.5129	0.5872	0.6666	0.7508	0.84	0.934	1.0329	1.1368	1.2455	1.359	1.4774	1.6007	1.7288	1.8617
5	0.0098	0.0154	0.0220	0.0295																					
6	0.0119	0.0188	0.0268	0.0358	0.0458																				
7	0.0140	0.0221	0.0316	0.0422	0.0540	0.0666																			
8	0.0161	0.0255	0.0364	0.0487	0.0623	0.0771	0.0930																		
9	0.0183	0.0289	0.0413	0.0553	0.0707	0.0875	0.1055	0.1248																	
10	0.0205	0.0324	0.0462	0.0619	0.0791	0.0979	0.1181	0.1397	0.1627																
11	0.0227	0.0359	0.0512	0.0685	0.0876	0.1084	0.1308	0.1547	0.1802	0.2070															
12	0.0249	0.0394	0.0562	0.0752	0.0961	0.1190	0.1436	0.1698	0.1977	0.2272	0.2581														
13	0.0271	0.0429	0.0612	0.0819	0.1047	0.1296	0.1564	0.1850	0.2154	0.2475	0.2812	0.3165													
14		0.0464	0.0663	0.0887	0.1134	0.1403	0.1693	0.2003	0.2332	0.2679	0.3044	0.3426	0.3825												
15		0.0500	0.0714	0.0955	0.1221	0.1510	0.1823	0.2156	0.2510	0.2884	0.3277	0.3688	0.4118	0.4564											
16			0.0765	0.1023	0.1308	0.1618	0.1953	0.2310	0.2690	0.3090	0.3511	0.3952	0.4412	0.4890	0.5387										
17				0.1091	0.1396	0.1727	0.2084	0.2465	0.2870	0.3298	0.3747	0.4217	0.4707	0.5218	0.5748	0.6297									
18				0.1160	0.1484	0.1836	0.2215	0.2621	0.3051	0.3505	0.3983	0.4483	0.5004	0.5547	0.6110	0.6694	0.7297	0.7919							
19					0.1572	0.1945	0.2347	0.2777	0.3233	0.3714	0.4220	0.4750	0.5302	0.5877	0.6474	0.7092	0.7731	0.8390	0.9069	0.9768					
20					0.1661	0.2055	0.2480	0.2933	0.3415	0.3924	0.4458	0.5018	0.5601	0.6209	0.6839	0.7492	0.8167	0.8864	0.9581	1.0319	1.1077	1.1856	1.2653	1.3470	1.4306
21						0.2165	0.2612	0.3091	0.3598	0.4134	0.4697	0.5286	0.5901	0.6541	0.7206	0.7894	0.8605	0.9338	1.0094	1.0872	1.1671	1.2491	1.3331	1.4192	1.5073
22						0.2275	0.2746	0.3248	0.3782	0.4345	0.4937	0.5556	0.6203	0.6875	0.7573	0.8296	0.9044	0.9815	1.0609	1.1427	1.2267	1.3128	1.4012	1.4916	1.5842
23							0.2879	0.3407	0.3966	0.4556	0.5177	0.5827	0.6505	0.7210	0.7942	0.8701	0.9484	1.0293	1.1126	1.1983	1.2864	1.3768	1.4694	1.5643	1.6614
24							0.3014	0.3565	0.4151	0.4769	0.5418	0.6098	0.6808	0.7546	0.8312	0.9106	0.9926	1.0772	1.1644	1.2542	1.3463	1.4409	1.5379	1.6372	1.7388
25								0.3724	0.4336	0.4982	0.5660	0.6370	0.7112	0.7883	0.8683	0.9512	1.0369	1.1253	1.2164	1.3101	1.4064	1.5052	1.6065	1.7102	1.8164
26									0.4522	0.5195	0.5903	0.6643	0.7416	0.8221	0.9055	0.9920	1.0814	1.1736	1.2686	1.3663	1.4667	1.5697	1.6753	1.7835	1.8942
27										0.5409	0.6146	0.6917	0.7722	0.8559	0.9428	1.0329	1.1259	1.2219	1.3208	1.4226	1.5271	1.6344	1.7444	1.8570	1.9722
28											0.6390	0.7192	0.8028	0.8899	0.9803	1.0738	1.1706	1.2704	1.3732	1.4790	1.5877	1.6992	1.8136	1.9307	2.0505
29												0.7467	0.8335	0.9239	1.0178	1.1149	1.2154	1.3190	1.4257	1.5356	1.6484	1.7642	1.8830	2.0045	2.1289
30													0.8643	0.9581	1.0553	1.1561	1.2602	1.3677	1.4784	1.5923	1.7093	1.8294	1.9525	2.0786	2.2076
31														0.9923	1.0930	1.1974	1.3052	1.4165	1.5312	1.6491	1.7703	1.8947	2.0222	2.1528	2.2864
32															1.1308	1.2387	1.3503	1.4655	1.5841	1.7061	1.8315	1.9602	2.0921	2.2272	2.3654
33																1.2802	1.3955	1.5145	1.6371	1.7632	1.8928	2.0258	2.1621	2.3017	2.4445
34																	1.4408	1.5637	1.6902	1.8204	1.9542	2.0915	2.2323	2.3764	2.5239
35																		1.6129	1.7435	1.8778	2.0158	2.1574	2.3026	2.4512	2.6033

Appendix Tab. 17 (9) 立木材積表 (*Eucalyptus grandis*)

Species: Eucalyptus grandis

Formula1 V=0.000060＊DBH^2.8323

Formula2 V=0.000052＊DBH^1.7939＊H^1.0738

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm) 6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Form.1	0.0096	0.0217	0.0408	0.0683	0.1058	0.1544	0.2155	0.2904	0.3804	0.4868	0.6106	0.7532	0.9158	1.0995	1.3054	1.5349	1.7888	2.0685	2.3751	2.7096	3.0731	3.4668	3.8917	4.349	4.8396	5.3647	5.9253	6.5224
5	0.0073	0.0122	0.0182	0.0253	0.0333																							
6	0.0089	0.0148	0.0222	0.0307	0.0405	0.0515																						
7	0.0105	0.0175	0.0261	0.0363	0.0478	0.0607	0.0750																					
8	0.0121	0.0202	0.0302	0.0418	0.0552	0.0701	0.0866	0.1046																				
9	0.0137	0.0229	0.0342	0.0475	0.0626	0.0796	0.0983	0.1187	0.1409																			
10	0.0153	0.0257	0.0383	0.0532	0.0701	0.0891	0.1101	0.1330	0.1578																			
11	0.0170	0.0285	0.0425	0.0589	0.0777	0.0987	0.1219	0.1473	0.1746	0.2043																		
12	0.0187	0.0313	0.0466	0.0647	0.0853	0.1084	0.1339	0.1617	0.1919	0.2243	0.2589																	
13	0.0203	0.0341	0.0508	0.0705	0.0929	0.1181	0.1459	0.1762	0.2091	0.2444	0.2821	0.3223																
14	0.0220	0.0369	0.0550	0.0763	0.1006	0.1279	0.1580	0.1908	0.2264	0.2647	0.3055	0.3490	0.3949															
15	0.0237	0.0397	0.0593	0.0822	0.1084	0.1377	0.1701	0.2055	0.2438	0.2850	0.3290	0.3758	0.4253	0.4775														
16	0.0254	0.0426	0.0635	0.0881	0.1162	0.1476	0.1823	0.2202	0.2613	0.3055	0.3526	0.4028	0.4558	0.5118														
17	0.0271	0.0454	0.0678	0.0940	0.1240	0.1575	0.1946	0.2351	0.2789	0.3260	0.3763	0.4298	0.4865	0.5462	0.6089													
18	0.0288	0.0483	0.0721	0.1000	0.1318	0.1675	0.2069	0.2499	0.2965	0.3466	0.4002	0.4571	0.5173	0.5808	0.6475													
19	0.0306	0.0512	0.0764	0.1059	0.1397	0.1775	0.2193	0.2649	0.3143	0.3674	0.4241	0.4844	0.5482	0.6155	0.6862	0.7603												
20		0.0541	0.0807	0.1119	0.1476	0.1876	0.2317	0.2799	0.3321	0.3882	0.4481	0.5118	0.5792	0.6503	0.7251	0.8033	0.8852											
21		0.0570	0.0851	0.1180	0.1555	0.1976	0.2441	0.2949	0.3499	0.4090	0.4722	0.5395	0.6104	0.6853	0.7641	0.8466	0.9328											
22			0.0894	0.1240	0.1635	0.2078	0.2566	0.3100	0.3678	0.4300	0.4964	0.5670	0.6417	0.7204	0.8032	0.8899	0.9806	1.0751										
23				0.1301	0.1715	0.2179	0.2692	0.3252	0.3858	0.4510	0.5207	0.5947	0.6730	0.7556	0.8425	0.9334	1.0285	1.1276										
24					0.1795	0.2281	0.2818	0.3404	0.4039	0.4721	0.5450	0.6225	0.7045	0.7910	0.8818	0.9771	1.0766	1.1803	1.2883										
25					0.1876	0.2383	0.2944	0.3557	0.4220	0.4933	0.5694	0.6504	0.7361	0.8264	0.9214	1.0209	1.1248	1.2332	1.3460										
26						0.2486	0.3071	0.3710	0.4401	0.5145	0.5939	0.6784	0.7677	0.8620	0.9610	1.0648	1.1732	1.2863	1.4039	1.5261										
27						0.2589	0.3198	0.3860	0.4583	0.5358	0.6185	0.7064	0.7995	0.8976	1.0007	1.1088	1.2217	1.3395	1.4620	1.5892										
28							0.3325	0.4017	0.4766	0.5571	0.6431	0.7345	0.8313	0.9334	1.0406	1.1530	1.2704	1.3928	1.5202	1.6525	1.7897									
29							0.3453	0.4171	0.4949	0.5785	0.6678	0.7628	0.8632	0.9692	1.0806	1.1972	1.3192	1.4463	1.5786	1.7160	1.8584									
30								0.4326	0.5132	0.5999	0.6926	0.7910	0.8952	1.0051	1.1206	1.2416	1.3681	1.4999	1.6371	1.7796	1.9273	2.0802								
31								0.4481	0.5316	0.6214	0.7174	0.8194	0.9273	1.0412	1.1608	1.2861	1.4171	1.5537	1.6958	1.8434	1.9964	2.1548								
32									0.5501	0.6430	0.7423	0.8478	0.9595	1.0773	1.2010	1.3307	1.4662	1.6076	1.7546	1.9073	2.0656	2.2295	2.3989							
33									0.5685	0.6646	0.7672	0.8763	0.9917	1.1135	1.2414	1.3754	1.5155	1.6616	1.8136	1.9714	2.1350	2.3044	2.4795	2.6602						
34										0.6862	0.7922	0.9043	1.0240	1.1497	1.2818	1.4202	1.5649	1.7157	1.8726	2.0356	2.2046	2.3795	2.5603	2.7469	2.9393					
35											0.8177	0.9334	1.0564	1.1861	1.3223	1.4651	1.6143	1.7699	1.9318	2.1000	2.2743	2.4547	2.6412	2.8338	3.0322	3.2367	3.4470	3.6631
36											0.8423	0.9621	1.0889	1.2225	1.3630	1.5101	1.6639	1.8243	1.9912	2.1643	2.3441	2.5301	2.7223	2.9208	3.1254	3.3361	3.5528	3.7756
37												0.9908	1.1214	1.2590	1.4036	1.5552	1.7136	1.8788	2.0506	2.2291	2.4141	2.6057	2.8036	3.0080	3.2187	3.4357	3.6589	3.8883
38												1.0196	1.1539	1.2956	1.4444	1.6004	1.7634	1.9333	2.1102	2.2938	2.4843	2.6814	2.8851	3.0954	3.3122	3.5355	3.7652	4.0013
39													1.1856	1.3322	1.4853	1.6457	1.8133	1.9880	2.1699	2.3587	2.5545	2.7572	2.9667	3.1829	3.4059	3.6355	3.8717	4.1145
40													1.2193	1.3689	1.5262	1.6910	1.8632	2.0428	2.2297	2.4237	2.6249	2.8332	3.0484	3.2706	3.4997	3.7357	3.9784	4.2279
41														1.4057	1.5672	1.7364	1.9133	2.0977	2.2898	2.4889	2.6955	2.9093	3.1304	3.3586	3.5938	3.8361	4.0853	4.3415
42														1.4426	1.6083	1.7820	1.9635	2.1527	2.3496	2.5541	2.7661	2.9856	3.2124	3.4466	3.6880	3.9366	4.1924	4.4553
43															1.6496	1.8276	2.0137	2.2078	2.4097	2.6195	2.8369	3.0620	3.2946	3.5348	3.7824	4.0373	4.2997	4.5693
44															1.6907	1.8732	2.0640	2.2630	2.4700	2.6849	2.9078	3.1385	3.3770	3.6231	3.8769	4.1383	4.4071	4.6835
45																1.9190	2.1144	2.3182	2.5303	2.7506	2.9788	3.2152	3.4594	3.7116	3.9716	4.2393	4.5148	4.7979
46																1.9648	2.1649	2.3736	2.5907	2.8162	3.0500	3.2919	3.5421	3.8002	4.0664	4.3406	4.6226	4.9125
47																	2.2155	2.4291	2.6512	2.8820	3.1212	3.3688	3.6248	3.8890	4.1614	4.4420	4.7306	5.0272
48																	2.2662	2.4846	2.7119	2.9479	3.1926	3.4459	3.7077	3.9779	4.2566	4.5435	4.8388	5.1422
49																		2.5402	2.7726	3.0139	3.2641	3.5230	3.7907	4.0670	4.3519	4.6453	4.9471	5.2573
50																		2.5959	2.8334	3.0800	3.3356	3.6003	3.8738	4.1562	4.4473	4.7471	5.0556	5.3726
51																			2.8943	3.1462	3.4073	3.6777	3.9571	4.2455	4.5429	4.8492	5.1642	5.4880
52																			2.9553	3.2125	3.4791	3.7551	4.0405	4.3350	4.6386	4.9513	5.2730	5.6037
53																				3.2788	3.5510	3.8327	4.1239	4.4246	4.7345	5.0537	5.3820	5.7195
54																				3.3453	3.623	3.9104	4.2076	4.5143	4.8305	5.1561	5.4911	5.8354
55																					3.6951	3.9883	4.2913	4.6041	4.9266	5.2587	5.6004	5.9616

Appendix Tab. 17 (10) 立木材積表 (*Eucalyptus globulus*)

Species: Eucalyptus globulus

Formula1 V=0.000016＊DBH^2.4293

Formula2 V=0.000035＊DBH^1.9070＊H^1.0720

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm) 6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
Form.1	0.0124	0.025	0.043	0.067	0.0974	0.1347	0.1793	0.2316	0.2919	0.3606	0.438	0.5244	0.6201	0.7254	0.8405	0.9657	1.1013	1.2474	1.4044	1.5724	1.7517	1.9425	2.145
5	0.0060	0.0104	0.0159	0.0225																			
6	0.0073	0.0126	0.0193	0.0273	0.0366																		
7	0.0086	0.0149	0.0228	0.0322	0.0432																		
8	0.0099	0.0172	0.0263	0.0372	0.0499	0.0643																	
9	0.0112	0.0195	0.0298	0.0422	0.0566	0.0730																	
10	0.0126	0.0218	0.0333	0.0472	0.0633	0.0817	0.1023																
11	0.0139	0.0241	0.0369	0.0523	0.0702	0.0905	0.1133	0.1385															
12	0.0153	0.0265	0.0405	0.0574	0.0770	0.0994	0.1244	0.1521	0.1824														
13	0.0167	0.0289	0.0442	0.0625	0.0839	0.1083	0.1355	0.1657	0.1987	0.2346													
14	0.0181	0.0313	0.0478	0.0677	0.0909	0.1172	0.1467	0.1794	0.2151	0.2540	0.2958												
15	0.0194	0.0337	0.0515	0.0729	0.0978	0.1262	0.1580	0.1932	0.2317	0.2735	0.3186	0.3669											
16	0.0208	0.0361	0.0552	0.0781	0.1048	0.1353	0.1693	0.2070	0.2482	0.2931	0.3414	0.3932	0.4485										
17	0.0222	0.0385	0.0589	0.0834	0.1119	0.1443	0.1807	0.2209	0.2649	0.3127	0.3643	0.4196	0.4786	0.5413									
18		0.0409	0.0626	0.0887	0.1190	0.1535	0.1921	0.2348	0.2817	0.3325	0.3873	0.4461	0.5089	0.5755	0.6460								
19			0.0664	0.0939	0.1261	0.1626	0.2036	0.2489	0.2985	0.3523	0.4104	0.4727	0.5392	0.6098	0.6846	0.7634							
20				0.0993	0.1332	0.1718	0.2151	0.2629	0.3153	0.3723	0.4338	0.4995	0.5697	0.6443	0.7233	0.8066	0.8942						
21				0.1046	0.1403	0.1810	0.2266	0.2770	0.3323	0.3922	0.4569	0.5263	0.6003	0.6789	0.7621	0.8499	0.9422	1.0390					
22					0.1475	0.1903	0.2382	0.2912	0.3493	0.4123	0.4803	0.5532	0.6310	0.7136	0.8011	0.8933	0.9904	1.0921	1.1986				
23					0.1547	0.1996	0.2498	0.3054	0.3663	0.4324	0.5037	0.5802	0.6618	0.7484	0.8402	0.9369	1.0387	1.1454	1.2571	1.3737			
24						0.2089	0.2615	0.3197	0.3834	0.4526	0.5272	0.6073	0.6927	0.7834	0.8794	0.9807	1.0872	1.1989	1.3158	1.4379	1.5651		
25						0.2182	0.2732	0.3340	0.4006	0.4728	0.5508	0.6344	0.7237	0.8184	0.9187	1.0245	1.1358	1.2525	1.3747	1.5022	1.6351	1.7733	
26							0.2849	0.3483	0.4178	0.4932	0.5745	0.6617	0.7547	0.8536	0.9582	1.0685	1.1846	1.3063	1.4337	1.5667	1.7053	1.8495	1.9992
27							0.2967	0.3627	0.4350	0.5135	0.5982	0.6890	0.7859	0.8888	0.9977	1.1127	1.2335	1.3602	1.4929	1.6314	1.7757	1.9258	2.0817
28								0.3771	0.4523	0.5339	0.6220	0.7164	0.8171	0.9241	1.0374	1.1569	1.2825	1.4143	1.5522	1.6962	1.8463	2.0024	2.1645
29									0.4696	0.5544	0.6458	0.7439	0.8485	0.9596	1.0772	1.2012	1.3317	1.4685	1.6117	1.7613	1.9171	2.0791	2.2475
30									0.4870	0.5749	0.6697	0.7714	0.8799	0.9951	1.1170	1.2457	1.3810	1.5229	1.6714	1.8264	1.9880	2.1561	2.3307
31										0.5955	0.6937	0.7990	0.9113	1.0307	1.1570	1.2903	1.4304	1.5774	1.7312	1.8918	2.0591	2.2332	2.4140
32										0.6161	0.7177	0.8266	0.9429	1.0664	1.1971	1.3349	1.4799	1.6320	1.7911	1.9573	2.1304	2.3106	2.4976
33											0.7418	0.8544	0.9745	1.1021	1.2372	1.3797	1.5295	1.6867	1.8512	2.0229	2.2019	2.3880	2.5814
34												0.8822	1.0062	1.1380	1.2774	1.4246	1.5793	1.7416	1.9114	2.0887	2.2735	2.4657	2.6653
35													1.0380	1.1739	1.3178	1.4695	1.6291	1.7965	1.9717	2.1546	2.3452	2.5435	2.7494
36														1.2099	1.3582	1.5146	1.6791	1.8516	2.0322	2.2207	2.4171	2.6215	2.8337
37															1.3987	1.5597	1.7291	1.9068	2.0927	2.2869	2.4892	2.6996	2.9182
38																1.6050	1.7793	1.9621	2.1534	2.3532	2.5614	2.7779	3.0028
39																	1.8295	2.0175	2.2142	2.4197	2.6337	2.8564	3.0876
40																		2.0730	2.2752	2.4862	2.7062	2.9350	3.1726
41																			2.3362	2.5529	2.7786	3.0137	3.2577
42																				2.6197	2.8515	3.0926	3.3429
43																					2.9243	3.1716	3.4283
44																						3.2507	3.5139
45																							3.5995

Appendix Tab.17 (11) 立木材積表 (*Eucalyptus citriodora*)

Species: Eucalyptus citriodora

Formula1 V=0.000360＊DBH^2.1871

Formula2 V=0.000093＊DBH^1.9585＊H^0.7124

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm) 6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42
Form.1	0.0181	0.034	0.055	0.083	0.116	0.155	0.2	0.252	0.311	0.376	0.448	0.527	0.6122	0.705	0.805	0.9122	1.0267	1.1486	1.2779
5	0.0098	0.0172	0.0266	0.0380															
6	0.0111	0.0196	0.0303	0.0433	0.0586														
7	0.0124	0.0218	0.0338	0.0483	0.0653														
8	0.0137	0.0240	0.0372	0.0531	0.0719	0.0933													
9	0.0149	0.0261	0.0404	0.0578	0.0782	0.1015	0.1279												
10	0.0160	0.0282	0.0436	0.0623	0.0843	0.1094	0.1378	0.1694											
11	0.0172	0.0301	0.0467	0.0667	0.0902	0.1171	0.1475	0.1813	0.2185										
12	0.0183	0.0321	0.0496	0.0709	0.0959	0.1246	0.1569	0.1929	0.2325	0.2757									
13	0.0193	0.0339	0.0525	0.0751	0.1016	0.1319	0.1662	0.2042	0.2461	0.2919	0.3414								
14	0.0204	0.0358	0.0554	0.0792	0.1071	0.1391	0.1752	0.2153	0.2595	0.3077	0.3599	0.4161							
15		0.0376	0.0582	0.0832	0.1125	0.1461	0.1840	0.2262	0.2726	0.3232	0.3781	0.4371	0.5003						
16		0.0394	0.0609	0.0871	0.1178	0.1530	0.1926	0.2368	0.2854	0.3384	0.3958	0.4577	0.5239	0.5945					
17			0.0636	0.0909	0.1230	0.1597	0.2011	0.2472	0.2980	0.3533	0.4133	0.4779	0.5470	0.6207	0.6990				
18			0.0663	0.0947	0.1281	0.1663	0.2095	0.2575	0.3104	0.3680	0.4305	0.4977	0.5697	0.6465	0.7280	0.8142			
19				0.0984	0.1331	0.1729	0.2177	0.2676	0.3226	0.3825	0.4474	0.5173	0.5921	0.6719	0.7566	0.8462	0.9407		
20				0.1021	0.1380	0.1793	0.2258	0.2776	0.3346	0.3967	0.4640	0.5365	0.6142	0.6969	0.7848	0.8777	0.9758	1.0789	
21					0.1429	0.1857	0.2338	0.2874	0.3464	0.4107	0.4805	0.5555	0.6359	0.7216	0.8125	0.9088	1.0103	1.1170	1.2290
22						0.1919	0.2417	0.2971	0.3581	0.4246	0.4966	0.5742	0.6573	0.7459	0.8399	0.9394	1.0443	1.1547	1.2705
23							0.2495	0.3067	0.3696	0.4382	0.5126	0.5927	0.6785	0.7699	0.8669	0.9696	1.0779	1.1918	1.3113
24								0.3161	0.3810	0.4517	0.5284	0.6109	0.6993	0.7936	0.8936	0.9995	1.1111	1.2285	1.3517
25									0.3922	0.4651	0.5440	0.6290	0.7200	0.8170	0.9200	1.0289	1.1439	1.2648	1.3916
26										0.4782	0.5594	0.6468	0.7404	0.8401	0.9460	1.0581	1.1763	1.3006	1.4310
27											0.5747	0.6644	0.7606	0.8630	0.9718	1.0869	1.2083	1.3360	1.4700
28												0.6819	0.7805	0.8857	0.9973	1.1155	1.2401	1.3711	1.5086
29													0.8003	0.9081	1.0226	1.1437	1.2715	1.4058	1.5468
30														0.9303	1.0476	1.1717	1.3025	1.4402	1.5846
31															1.0723	1.1994	1.3333	1.4742	1.6220
32																1.2268	1.3638	1.5079	1.6591
33																	1.3941	1.5414	1.6959
34																		1.5745	1.7324
35																			1.7685

Appendix Tab. 17 (12) 立木材積表 (*Casuarina equistfalia*)

Species: Casuarina equistfalia

Formula1 V=0.003000＊DBH^2.0861

Formula2 V=0.000134＊DBH^2.0362＊H^0.3783

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm)																	
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Form.1	0.0126	0.023	0.0366	0.0535	0.0738	0.0975	0.1247	0.1553	0.1895	0.2272	0.2685	0.3134	0.3619	0.414	0.4698	0.5293	0.5925	0.6594
5	0.0095	0.0170	0.0268	0.0388	0.0531													
6	0.0101	0.0182	0.0287	0.0416	0.0569													
7	0.0107	0.0193	0.0304	0.0441	0.0603													
8	0.0113	0.0203	0.0320	0.0464	0.0635	0.0833												
9	0.0118	0.0212	0.0334	0.0485	0.0663	0.0871	0.1107											
10	0.0123	0.0221	0.0348	0.0504	0.0690	0.0906	0.1152	0.1427										
11	0.0128	0.0229	0.0361	0.0523	0.0716	0.0939	0.1194	0.1480	0.1797									
12	0.0132	0.0237	0.0373	0.0540	0.0740	0.0971	0.1234	0.1529	0.1857	0.2217								
13	0.0136	0.0244	0.0384	0.0557	0.0763	0.1001	0.1272	0.1576	0.1914	0.2285	0.2690							
14		0.0251	0.0395	0.0573	0.0784	0.1029	0.1308	0.1621	0.1968	0.2350	0.2766	0.3217						
15			0.0406	0.0588	0.0805	0.1056	0.1343	0.1664	0.2021	0.2412	0.2839	0.3302	0.3800					
16			0.0416	0.0603	0.0825	0.1083	0.1376	0.1705	0.2070	0.2472	0.2909	0.3383	0.3893	0.4440				
17				0.0617	0.0844	0.1108	0.1408	0.1745	0.2118	0.2529	0.2977	0.3462	0.3984	0.4543	0.5140			
18				0.0630	0.0862	0.1132	0.1439	0.1783	0.2165	0.2584	0.3042	0.3537	0.4071	0.4643	0.5253	0.5901	0.6588	0.7313
19					0.0880	0.1155	0.1468	0.1820	0.2210	0.2638	0.3105	0.3610	0.4155	0.4739	0.5361	0.6023	0.6724	0.7464
20					0.0897	0.1178	0.1497	0.1855	0.2253	0.2689	0.3166	0.3681	0.4236	0.4831	0.5466	0.6141	0.6856	0.7610
21						0.1200	0.1525	0.1890	0.2295	0.2740	0.3225	0.3750	0.4315	0.4921	0.5568	0.6255	0.6983	0.7752
22						0.1221	0.1552	0.1924	0.2336	0.2788	0.3282	0.3816	0.4392	0.5009	0.5667	0.6366	0.7107	0.7890
23							0.1578	0.1956	0.2375	0.2836	0.3337	0.3881	0.4466	0.5094	0.5763	0.6474	0.7228	0.8023
24							0.1604	0.1988	0.2414	0.2882	0.3392	0.3944	0.4539	0.5176	0.5856	0.6579	0.7345	0.8154
25								0.2019	0.2451	0.2926	0.3444	0.4005	0.4610	0.5257	0.5948	0.6682	0.7459	0.8281
26								0.2049	0.2488	0.2970	0.3496	0.4065	0.4678	0.5336	0.6037	0.6782	0.7571	0.8404
27									0.2524	0.3013	0.3546	0.4124	0.4746	0.5412	0.6123	0.6879	0.7680	0.8525
28									0.2559	0.3055	0.3595	0.4181	0.4811	0.5487	0.6208	0.6974	0.7786	0.8643
29										0.3095	0.3643	0.4237	0.4876	0.5561	0.6291	0.7068	0.7890	0.8759
30										0.3135	0.3690	0.4291	0.4939	0.5632	0.6372	0.7159	0.7992	0.8872
31											0.3736	0.4345	0.5000	0.5703	0.6452	0.7248	0.8092	0.8983
32												0.4398	0.5061	0.5772	0.6530	0.7336	0.8190	0.9091
33													0.5120	0.5839	0.6606	0.7422	0.8285	0.9198
34															0.6681	0.7506	0.8380	0.9302
35																0.7589	0.8472	0.9405

Appendix Tab. 17 (13) 立木材積表 (*Hagenia abyssinica*)

Species: Hagenia abyssinica

Formula1 V=0.000280＊DBH^2.0628

Formula2 V=0.000117＊DBH^1.7681＊H^0.7820

DBH:cm H(total height):m V:m^3

Figures refer to stem volume(m^3) on bark between stump and top

Height (m)	DBH(cm)																	
	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Form.1	0.0113	0.02	0.032	0.047	0.065	0.085	0.109	0.135	0.165	0.197	0.232	0.271	0.312	0.3564	0.4039	0.4545	0.5081	0.5648
5	0.0098	0.0163	0.0241	0.0333	0.0438													
6	0.0113	0.0188	0.0278	0.0384	0.0505	0.0639												
7	0.0127	0.0212	0.0314	0.0434	0.0570	0.0721	0.0888											
8	0.0141	0.0235	0.0349	0.0481	0.0632	0.0801	0.0986	0.1188	0.1406	0.1640	0.1889	0.2153						
9	0.0155	0.0258	0.0382	0.0528	0.0693	0.0878	0.1081	0.1302	0.1541	0.1798	0.2071	0.2361	0.2667	0.2990	0.3328	0.3682		
10	0.0168	0.0280	0.0415	0.0573	0.0753	0.0953	0.1174	0.1414	0.1674	0.1952	0.2249	0.2564	0.2897	0.3247	0.3614	0.3998	0.4399	0.4817
11	0.0181	0.0302	0.0447	0.0618	0.0811	0.1027	0.1265	0.1524	0.1803	0.2103	0.2423	0.2762	0.3121	0.3498	0.3894	0.4308	0.4740	0.5190
12	0.0194	0.0323	0.0479	0.0661	0.0868	0.1099	0.1354	0.1631	0.1930	0.2251	0.2594	0.2957	0.3340	0.3744	0.4168	0.4611	0.5074	0.5555
13		0.0344	0.0510	0.0704	0.0924	0.1170	0.1441	0.1736	0.2055	0.2397	0.2761	0.3148	0.3556	0.3986	0.4437	0.4909	0.5401	0.5914
14				0.0746	0.0979	0.1240	0.1527	0.1840	0.2178	0.2540	0.2926	0.3336	0.3768	0.4224	0.4702	0.5202	0.5724	0.6267
15						0.1309	0.1612	0.1942	0.2298	0.2681	0.3088	0.3521	0.3977	0.4458	0.4962	0.5490	0.6041	0.6614
16								0.2042	0.2417	0.2819	0.3248	0.3703	0.4183	0.4689	0.5219	0.5774	0.6354	0.6957
17										0.2956	0.3406	0.3883	0.4386	0.4916	0.5473	0.6055	0.6662	0.7295
18													0.4587	0.5141	0.5723	0.6332	0.6967	0.7628
19													0.4785	0.5363	0.5970	0.6605	0.7268	0.7957
20																0.6875	0.7565	0.8283
21																0.7143	0.7859	0.8605
22																	0.8150	0.8924

Appendix Tab. 18 天然林における主要商業樹種
(Ethiopian Forestry Action Program, Annex 2.2)

Botanical name
Albizia schimperiana / gummifera
Aningeria adolfi-friederici
Apodytes dimidiata
Blighia unijugara
Bosqueia phoberos
Celtis africana / ktaussiana
Chlorphora excelsa
Cordia abyssinica / africana
Croton machrostachyus
Dalbergia melanoxylon
Dispyrus abyssinica
Ekebergia capensis / rueppeliana
Hagenia abyssinica
Linociera giordanii
Juniperus procera
Manilkara butugi
Ocotea kenyaensis
Olea africana
Olea hochsterreri
Olea welwitschii
Podocarpus gracilior
Polyscias fulva / ferruguinea
Pygeum africanum
Prunus africana
Syzygium guineense

Appendix Tab. 19 人工林林齢ごと面積集計表（単位 ha）

	Planted year	1975	1976	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1993	1994	1995	
Forest	Species/age	(22)	(21)	(19)	(18)	(17)	(16)	(15)	(14)	(13)	(12)	(11)	(10)	(9)	(8)	(7)	(6)	(4)	(3)	(2)	Total
Belete	Belete trial plot	28.0																			28.0
	Casuarina equisetifolia		16.2																		16.2
	Cupressus lusitanica	17.0	44.9	9.6		7.8	21.2	42.6		128.3	13.5	94.8	31.0			9.2	21.0				440.9
	E.grandis & camaldlensis.							30.7													30.7
	Eucalyptus camaldulensis		6.4			2.1												3.7	4.2		16.4
	Eucalyptus citriodora										30.3	12.7									43.0
	Eucalyptus globulus							4.4													4.4
	Eucalyptus grandis							25.0		27.3				20.4							72.7
	Eucalyptus saligna				12.4		15.2	8.4	3.7	75.0		13.8			19.6					2.6	150.7
	Hagenia abyssinica									12.3						0.6					12.9
	Juniperus procera.	1.3																			1.3
	mixed											1.1									1.1
	Mixed Eucalyptus		2.9								27.5										30.4
	Pinus patula	1.9				1.0	19.3				12.7	3.2	15.1	16.8							70.0
Belete Total		48.2	70.4	9.6	12.4	10.9	55.7	111.1	3.7	242.9	84.0	125.6	46.1	37.2	19.6	9.8	21.0	3.7	4.2	2.6	918.7
Gera	*Cupressus lusitanica*								18.1	8.8	10.9			64.2		56.6			8.8		167.4
	Eucalyptus globulus											5.6									5.6
	Eucalyptus grandis										1.2										1.2
	Eucalyptus saligna											10.6									10.6
Gera Total									18.1	8.8	12.1	16.2		64.2		56.6			8.8		184.8
Total		48.2	70.4	9.6	12.4	10.9	55.7	111.1	21.8	251.7	96.1	141.8	46.1	101.4	19.6	66.4	21.0	3.7	13.0	2.6	1103.5

Appendix Tab. 20 (1) 人工林調査林小班別集計表

Forest	Site	New Comp. No.	New Sub Comp. No.	Old comp. No.	Species	area (ha)	planted year	age	Stems/ha	Ave.DBH (cm)	Ave.TH (m)	volume / ha (m^3/ha)	Total volume (m^3)	M.A.I. (m^3/ ha / yr)
Belete	Sebeka Gurati	2	12	1	*Eucalyptus saligna*	2.5	1986	11	1,017	14.7	21	153.0	383	13.91
Belete	Sebeka Gurati	2	13	1	*Eucalyptus saligna*	1.9	1986	11	370	21	25	193.3	367	17.57
Belete	Mologo	2	14		*Cupressus lusitanica*	5.0	1990	7	1,560	12	10	96.0	480	13.71
Belete	Mologo	2	15		*Hagenia abyssinica*	0.6	1990	7	1,360	12	9	77.3	46	11.04
Belete	Mologo	2	16		*Cupressus lusitanica*	4.2	1990	7	1,560	12	10	95.9	403	13.70
Belete	Belete trial prot	2	17		-	28.0	1975	22					0	
Belete	Belete	2	18	6	*Pinus patula*	1.0	1980	17	640	25	26	472.5	473	27.79
Belete	Belete	2	19	5	*Cupressus lusitanica*	4.0	1980	17	640	23	18	245.4	982	14.44
Belete	Belete	2	20	2	*Cupressus lusitanica*	8.3	1975	22	700	31	30	757.1	6,284	34.41
Belete	Belete	2	21	3	*Pinus patula*	1.9	1975	22	670	34	36	1,162.4	2,209	52.84
Belete	Belete	2	22	4	*Juniperus procera.*	1.3	1975	22	967	23.7	18.4	295.0	384	13.41
Belete	Belete	2	23	1	*Cupressus lusitanica*	8.7	1975	22	587	29	26	487.4	4,240	22.15
Belete	Atero Tiritra	2	24	10	*Cupressus lusitanica*	21.2	1981	16	790	26	18	340.6	7,221	21.29
Belete	Atero Tiritra	2	25	9	*Euc.gra.& cam.*	9.2	1982	15	617	16.5	21.8	137.0	1,260	9.13
Belete	Atero Tiritra	2	26	7	*Eucalyptus saligna*	15.2	1981	16	880	15	18	205.3	3,121	12.83
Belete	Atero Tiritra	2	27	8	*Pinus patula*	19.3	1981	16	790	21	25	367.9	7,100	22.99
Belete	Atero Tiritra	2	28	5	*Pinus patula*	3.7	1985	12	1,240	16.5	14.5	204.0	755	17.00
Belete	Atero Tiritra	2	29	1	*Cupressus lusitanica*	27.3	1984	13	1,000	20	15	219.3	5,987	16.87
Belete	Atero Tiritra	2	30	2	*Cupressus lusitanica*	9.6	1987	10	1,380	15	12	156.4	1,501	15.64
Belete	Atero Tiritra	2	31	3	*Eucalyptus citriodora*	7.6	1986	11	745	7	7	18.3	139	1.66
Belete	Atero Tiritra	2	32	3	*Eucalyptus citriodora*	5.1	1986	11	745	7	7	18.0	92	1.64
Belete	Atero Tiritra	2	33	4	*Pinus patula*	12.8	1988	9	1,993	8	8	54.3	695	6.03
Belete	Atero Tiritra	2	34	4	*Pinus patula*	4.0	1988	9	2,520	10	9	121.5	486	13.50
Belete	Yanga	3	14	6	*Cupressus lusitanica*	3.4	1986	11	1,460	14	11	142.8	486	12.98
Belete	Yanga	3	15	5	*Cupressus lusitanica*	4.1	1986	11	1,520	13	11	132.3	542	12.03
Belete	Sebeka Gurati	3	16	5	*Cupressus lusitanica*	40.7	1986	11	1,640	17	17	348.9	14,200	31.72
Belete	Sebeka Gurati	3	17	4	*Cupressus lusitanica*	4.1	1986	11	1,367	11.5	8.2	113.0	463	10.27
Belete	Sebeka Gurati	3	18	3	*Cupressus lusitanica*	2.7	1986	11	700	15.2	13.5	102.0	275	9.27

Appendix Tab. 20 (2) 人工林調査林小班別集計表

Forest	Site	New Comp. No.	New Sub Comp. No.	Old comp. No.	Species	area (ha)	planted year	age	Stems/ha	Ave.DBH (cm)	Ave.TH (m)	volume / ha (m^3/ha)	Total volume (m^3)	M.A.I. (m^3/ ha / yr)
Belete	Sebeka Gurati	3	19	3	*Cupressus lusitanica*	7.6	1986	11	1,600	16	12	184.0	1,398	16.73
Belete	Sebeka Gurati	3	20	2	*Pinus patula*	1.0	1986	11	1,467	14.6	16.6	171.0	171	15.55
Belete	Mologo	3	21		*Pinus patula*	2.2	1986	11	1,467	14.6	16.6	171.0	376	15.55
Belete	Mologo	3	22		*mixed*	1.1	1986	11	1,300	11.3	9.4	104.0	114	9.45
Belete	Mologo	3	23	3	*Eucalyptus saligna*	2.5	1989	8	1,100	15	20	287.0	718	35.88
Belete	Mologo	3	24	3	*Eucalyptus saligna*	6.0	1989	8	933	13.6	18.9	114.0	684	14.25
Belete	Mologo	3	25	3	*Eucalyptus saligna*	0.8	1989	8	1,100	15	20	287.2	230	35.90
Belete	Mologo	3	26	3	*Eucalyptus saligna*	1.4	1989	8	1,100	15	20	287.2	402	35.90
Belete	Mologo	3	27	3	*Eucalyptus saligna*	5.4	1989	8	1,210	15	22	303.1	1,637	37.89
Belete	Mologo	3	28	3	*Eucalyptus saligna*	3.5	1989	8	940	12	14	101.4	355	12.68
Belete	Mologo	3	29	6	*Cupressus lusitanica*	7.6	1984	13	1,340	15	10	121.2	921	9.32
Belete	Mologo	3	30	5	*Cupressus lusitanica*	36.0	1984	13	1,600	16	12	214.6	7,726	16.51
Belete	Mologo	3	31	4	*Cupressus lusitanica*	13.3	1984	13	2,080	14	12	219.7	2,922	16.90
Belete	Mologo	3	32	2	*Eucalyptus grandis*	27.3	1984	13	1,070	16	22	340.2	9,287	26.17
Belete	Mologo	3	33	1	*Cupressus lusitanica*	13.5	1985	12	1,840	16	14	267.1	3,606	22.26
Belete	Belete	3	34	7	*Cupressus lusitanica*	9.6	1978	19	667	26	20.1	350.0	3,360	18.42
Belete	Gefere	3	35	1	*Pinus patula*	15.1	1987	10	1,620	10	10	76.7	1,158	7.67
Belete	Gefere	3	36	2	*Pinus patula*	9.0	1985	12	1,225	19	24	443.1	3,988	36.93
Belete	Gefere	3	37	3	*Eucalyptus citriodora*	18.8	1985	12	1,045	13	15	130.7	2,457	10.89
Belete	Gefere	3	38	4	*Eucalyptus citriodora*	11.5	1985	12	1,160	13	14	135.0	1,553	11.25
Belete	Gefere	3	39	5	*Eucalyptus camaldulensis*	2.1	1980	17	980	16	18	221.9	466	13.05
Belete	Gefere	3	40	6	*Cupressus lusitanica*	3.8	1980	17	800	17.8	13.5	191.0	726	11.24
Belete	Gefere	3	41	7	*Eucalyptus grandis*	11.4	1982	15	600	21.3	24.6	320.0	3,648	21.33
Belete	Gefere	3	42	8	*Cupressus lusitanica*	8.5	1986	11	1,300	11.3	9.4	135.1	1,148	12.28
Belete	Gefere	3	43	9	*Eucalyptus grandis*	20.4	1988	9	1,140	11	12	95.2	1,942	10.58
Belete	Gefere	3	44	11	*Cupressus lusitanica*	6.8	1982	15	1,080	16.9	13.7	199.0	1,353	13.27
Belete	Gefere	3	45	12	*Hagenia abyssinica*	12.3	1984	13	1,300	14	10	105.2	1,294	8.09
Belete	Gefere	3	46	13	*Cupressus lusitanica*	1.9	1982	15	1,080	16.9	13.7	199.0	378	13.27

Appendix Tab. 20 (3) 人工林調査林小班別集計表

Forest	Site	New Comp. No.	New Sub Comp. No.	Old comp. No.	Species	area (ha)	planted year	age	Stems/ha	Ave.DBH (cm)	Ave.TH (m)	volume / ha (m^3/ha)	Total volume (m^3)	M.A.I. (m^3/ ha / yr)
Belete	Daru	3	47	1	*Cupressus lusitanica*	44.1	1984	13	1,000	14	11	94.0	4,145	7.23
Belete	Daru	3	48	2	*Euc.gra.& cam.*	21.5	1982	15	650	20.2	22.3	177.0	3,806	11.80
Belete	Daru	3	49	3	*Cupressus lusitanica*	3.2	1982	15	1,000	16.2	17	224.0	717	14.93
Belete	Daru	3	50	4	*Cupressus lusitanica*	12.5	1982	15	733	19.5	14.8	199.0	2,488	13.27
Belete	Komo	3	51	1	*Eucalyptus grandis*	13.6	1982	15	550	20.6	22.5	232.0	3,155	15.47
Belete	Komo	3	52	2	*Cupressus lusitanica*	17.6	1982	15	1,133	18.6	15.4	258.0	4,541	17.20
Belete	Gojeb	5	12	1	*Eucalyptus saligna*	9.4	1986	11	555	16	21	101.0	949	9.18
Belete	Gojeb	5	13	2	*Mixed Eucalyptus*	27.5	1985	12	678	12	11.1	80.0	2,200	6.67
Belete	Gojeb	6	7	1	*Eucalyptus saligna*	23.8	1984	13	1,057	12	17	159.5	3,796	12.27
Belete	Gojeb	6	8	1	*Eucalyptus globulus*	4.4	1982	15	1,800	6	9	42.6	187	2.84
Belete	Gojeb	6	9	1	*Eucalyptus saligna*	8.4	1982	15	1,090	11	15	154.6	1,299	10.31
Belete	Gojeb	6	10	3	*Cupressus lusitanica*	0.6	1982	15	1,780	15	16	299.5	180	19.97
Belete	Gojeb Kishe	6	11	1	*Cupressus lusitanica*	2.7	1976	21	620	23	17	224.6	606	10.70
Belete	Gojeb Kishe	6	12	2	*Casuarina equisetifolia*	16.2	1976	21	445	13	12	32.1	520	1.53
Belete	Gojeb Kishe	6	13	3	*Cupressus lusitanica*	6.7	1976	21	680	23	19	258.5	1,732	12.31
Belete	Gojeb Kishe	6	14	4	*Eucalyptus camaldulensis*	4.2	1994	3	1,360	5	10	31.1	131	10.37
Belete	Gojeb Kishe	6	15	5	*Eucalyptus saligna*	12.4	1979	18	460	19	19	189.4	2,349	10.52
Belete	Gojeb Kishe	6	16	6	*Cupressus lusitanica*	34.2	1976	21	620	25	22	323.1	11,050	15.39
Belete	Gojeb Kishe	6	17	7	*Eucalyptus camaldulensis*	6.4	1976	21	183	31	26.8	162.0	1,037	7.71
Belete	Gojeb Kishe	6	18	8	*Mixed Eucalyptus*	0.9	1976	21	200	31	18.5	207.0	186	9.86
Belete	Gojeb Kishe	6	19	9	*Mixed Eucalyptus*	2.0	1976	21	440	23	20.8	212.0	424	10.10
Belete	Gojeb Kishe	6	20	10	*Eucalyptus camaldulensis*	3.7	1993	4	830	7	10	41.8	155	10.45
Belete	Gojeb Kishe	6	21	11	*Cupressus lusitanica*	1.3	1976	21	800	23	16.4	293.0	381	13.95
Belete	Gojeb Kishe	6	22	13	*Eucalyptus saligna*	2.6	1995	2	2,500	-	-	-	0	
Belete	Gojeb Kishe	6	23	14	*Eucalyptus saligna*	1.3	1984	13	300	28	27.4	173.0	225	13.31
Belete	Gojeb Kishe	6	24	15	*Eucalyptus saligna*	3.7	1983	14	1,080	8	10	47.7	176	3.41
Belete	Gojeb Kishe	6	25	15	*Eucalyptus saligna*	36.2	1984	13	1,270	8	11	108.5	3,928	8.35
Belete	Gojeb Kishe	6	26	15	*Eucalyptus saligna*	13.7	1984	13	1,640	9	13	179.3	2,456	13.79

Appendix Tab. 20 (4) 人工林調査林小班別集計表

Forest	Site	New Comp. No.	New Sub Comp. No.	Old comp. No.	Species	area (ha)	planted year	age	Stems/ha	Ave.DBH (cm)	Ave.TH (m)	volume / ha (m^3/ha)	Total volume (m^3)	M.A.I. (m^3 / ha / yr)
Belete	Yanga	6	27		*Cupressus lusitanica*	2.1	1987	10	1,520	13	11	132.0	277	13.20
Belete	Yanga	6	28	4	*Cupressus lusitanica*	23.7	1986	11	1,260	15	12	170.7	4,046	15.52
Belete	Yanga	6	29	1	*Cupressus lusitanica*	8.0	1987	10	700	14	4.8	80.0	640	8.00
Belete	Yanga	6	30	2	*Cupressus lusitanica*	6.9	1987	10	583	15	6.1	81.0	559	8.10
Belete	Yanga	6	31	2	*Cupressus lusitanica*	4.4	1987	10	583	15	6.1	81.0	356	8.10
Belete	Yanga	6	32		*Cupressus lusitanica*	21.0	1991	6	1,400	7	5	29.9	628	4.98
Belete forest total						918.7							173,917	
Gera	Sedi	16	24	TC1	*Cupressus lusitanica*	18.1	1983	14	1,300	19	20	366.6	6,635	26.19
Gera	Sedi	16	25	TC2	*Eucalyptus grandis*	1.2	1985	12	880	25	34	689.2	827	57.43
Gera	Sedi	16	26	TC3	*Cupressus lusitanica*	10.9	1985	12	1,440	14	12	165.5	1,804	13.79
Gera	Sedi	16	27	TC4	*Cupressus lusitanica*	8.8	1984	13	960	18	19	279.4	2,459	21.49
Gera	Sedi	16	28	TC5	*Eucalyptus saligna*	10.6	1986	11	770	19	22	260.5	2,761	23.68
Gera	Sedi	16	29	TC6	*Cupressus lusitanica*	15.7	1988	9	640	17	10	74.2	1,165	8.24
Gera	Sedi	16	30	TC7	*Cupressus lusitanica*	48.5	1988	9	640	17	10	74.2	3,599	8.24
Gera	Sedi	16	31	TC8	*Eucalyptus globulus*	5.6	1986	11	630	22	25	293.6	1,644	26.69
Gera	Sedi	16	32	TC9	*Cupressus lusitanica*	48.6	1990	7	1,575	10	9	71.0	3,451	10.14
Gera	Sedi	16	33	TC10	*Cupressus lusitanica*	8.8	1994	3					0	0.00
Gera	Sedi	16	34	TC11	*Cupressus lusitanica*	8.0	1990	7	1,575	10	9	71.0	568	10.14
Gera forest total						184.8							24,913	
Grand total						1103.5							198,830	
Belete Trial prot														
Belete	Trial prot	2	17	3	*Eucalyptus saligna*	6.3	1975	22	670	31	39	1,061.8	6,689	48.26
				10	*Eucalyptus grandis*	0.9	1975	22	810	30	40	1,189.3	1,070	54.06
				11	*Eucalyptus camaldulensis*	1.3	1975	22	450	29	25	365.4	475	16.61
				12	*Pinus patula*	2.8	1975	22	560	35	33	879.6	2,463	39.98
				13	*Podocarpus gracilior*	1.1	1975	22	1,050	18	17	409.6	451	18.62

Appendix Tab. 21 ベレテ フォレストにおける人工林施業に関する実績 (1994/95～1996/97)

	Activity	unit	1994/95 performed	1994/95 cost (Birr)	1994/95 cost/ unit	1995/96 performed	1995/96 cost (Birr)	1995/96 cost/ unit	1996/97 performed	1996/97 cost (Birr)	1996/97 cost/ unit	remark
Nursery work	Seed collection	kg	70.0	4,200	60.0	15.0	420	28.0	60.0	1,680	28.0	
	Seedling raising	No	150,000	30,000	0.2	358,325	71,665	0.2	236,200	25,600	0.11	includes soil preparation, seed sowing, watering, raising the seedling up to the planting size and all its management
Planting work	Site preparation	ha	15.0	4,500	300.0	28.1	3,271	116.4	93.3	4,664	50.0	
	Linning out	ha							93.3	2,996	32.0	
	Transporting seedlings	No							236,200	1,178	0.005	
	Wartering at flying nursery									448		
	Pitting planting holes	ha	50.0	7,500	150.0	143.3	9,686	67.6	93.3	4,664	50.0	
	Planting	ha	50.0	9,800	196.0	143.3	12,516	87.3	93.3	6,794	73.0	
	Sub total	ha	50.0	21,800	436.0	143.3	25,473	177.8	93.3	20,744	222.0	
Tending work	Weeding	ha				143.3	7,167	50.0				
	Prunning	ha	130.0	14,900	114.6	55.1	6,366	115.5				
	Thinning	ha	70.0	27,700	395.7	17.0	1,702	100.1	48.2	9,632	200.0	
Other	Fire break	Km	19.0	19,995	1,050.7							
	total			118,595			112,793			57,656		

Appendix Tab. 22 ゴジェブ苗畑における育苗実績の詳細 (1996/97)

	Activity	unit	performed	cost (Birr)	cost/ unit	remarks
	Seed collection	kg	60.00	1,680	28	
	Clearing nursery site	ha	0.50	540	1,080	
	Plouphing nursery site	ha	1.00	679	679	
	Soil preparation	m^3	120.00	480	4	
	Sand soil preparation	m^3	30.42	9,125	300	
	Loading Forest soil	m^3	132.00	376	3	
Nursery	Nursery bed preparation	No.	108.00	440	4	
work	Sowing seed	Kg	52.00	128	2	
	Collecting material for shade			720		
	Guarding					
	Cutting shade material	No.	108.00	1,580	15	
	Making shade	No.	108.00	432	4	
	Moving sand & soil	m^3	172.00	1,004	6	
	Making shade for potting	No.	1.00	120	120	
	Potting	No.	236,200.00	2,502	0.01	
	Laying pots on bed	No.	236,200.00	1,106	0.01	
	Watering		108.00	4,342	40	
	Root prunning	No.	302,500.00	750	0.002	
	Sanitation of nursery site	ha				
	Weeding seedlings on seed bed and keeping the site clean	ha	108.00	422	4	Total
	Transplanting	No.	236,200.00	854	0.004	27,280
	Clearing plantation site	ha	93.28	4,664	50	
	Linning out of planting locations	No.	93.28	2,996	32	
planting	Transporting seedlings	No.	236,200.00	1,178	0.005	
work	Pitting hole for planting	ha	93.28	4,664	50	
	Loading & unloading seedlings					
	Watering at flying nursery			448		
	Planting	ha	94.48	6,794	72	
	Total			48,024		

Appendix Tab. 23 ゲラ フォレストにおけるエンリッチメントに関する実績 (1994/95～1996/97)

Type of work	Activity	unit	1995/96(1994/95) performed	cost (Birr)	cost (Birr)/ unit	1996/97 performed	cost (Birr)	cost (Birr)/ unit
Nursery work	Seed collection	kg	108	760	7	30	880	29
	Guards house construction	No.	1	720				
	Clearing nursery site	ha	0.05	156	3,120	0.06	220	3,667
	Ploughing nursery site	ha	0.05	280	5,600	0.06	240	4,000
	Seed bed preparation	No.	86	286	3	63	292	5
	Sowing seed	Kg				30	36	1
	Cutting grass for guarding					188	468	2
	Guarding					188	2,108	11
	Cutting material for shade and making shade	No.		1,940		40	618	
	Watering			2,064			1,532	
	Sanitation of nursery site	ha				0.06	144	2,400
	Weeding seedlings on seed bed and keeping the site clean	ha	86	784	9	63	296	5
	Transplanting	No.				87,000	592	0.01
	Total		67,500	6,990	0.1	87,000	7,426	0.09
Planting work	Transporting seedlings	No.	67,500	1,068	0.02	87,000	856	0.01
	Clearing plantation site	ha	27	2,696	100	34.8	1,114	32
	Linning out of planting locations	ha	27	928	34	34.8	1,112	32
	Hoeing		27	1,780	66			
	Pitting holes for planting	ha	27	1,056	39	34.8	1,740	50
	planting	ha	27	1,080	40	34.8	1,160	33
	Total		27	8,608	319	35	5,982	172
Tending work	Weeding(1994/95 & 19954/96)	ha	10	428	43			
	Climber cutting (1994/95 & 19954/96)	ha	10	2,212	221			
Planting work	Transporting seedlings site clearing, pitting hole, lightning up, planting 1994/95			10,002				
	Total			28,240			13,408	

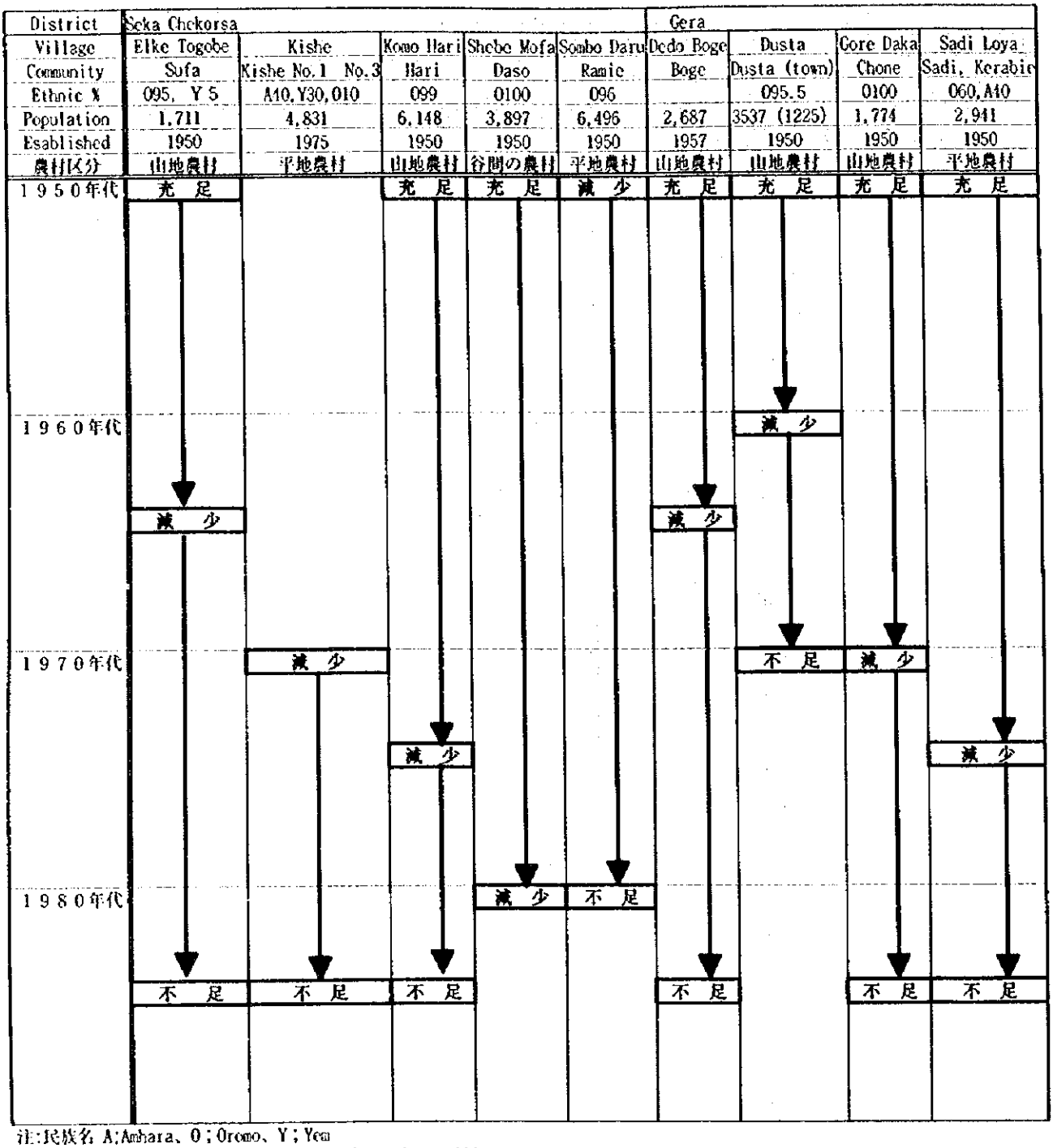
Appendix Tab. 24 ゲラ フォレストにおけるエンリッチメント面積 (1994/95～1996/97)

species	1994/95		1995/96		1996/97		total	
	No. of seedlings	Area planted (ha)	No. of seedlings	Area planted (ha)	No. of seedlings	Area planted (ha)	No. of seedlings	Area planted (ha)
Hagenia abyssinica	43,500	17.4	15,460	6.2	82,400	33.0	141,360	56.6
Ekebergia capensis	2,500	1.0	43,000	17.2	2,537	1.0	48,037	19.2
Pygeum africanum			8,000	3.2	2,398	1.0	10,398	4.2
Cordia africana					188	0.1	188	0.1
Podocarpus gracilior			1,249	0.5			1,249	0.5
Total	46,000	18.4	67,709	27.1	87,523	35.1	201,232	80.6

Appendix Tab. 25　天然林に近接した集落における森林からの便益調査結果

地区		Belete		Gera	
District		Seka Chekorsa		Gera	
Village		Elke Togobe	Yanga Deo	Gura Naso	Gura Afalo
Community		Sufa	Waresa, Beja, Buyo	Haro	Afalo
回答者数		4	3	6	7
薬草	1	Alaalule	Akaraqaraha	Acho	Annunu
	2	Ammamo	Anunu	Annunn	babarda
	3	Annunn	Arahamandawa	Barbadar	Baruda
	4	Asangra	Asabuda	Barut	Cheke
	5	Askra	Atochi	Damakasie	Demakesie
	6	Dechemarchie	Bakkanisa	Dawo	Hanku
	7	Fitii	Bokkonisa	Dewo	Sigluu
	8	Gura-antudo	Borcha-chafe	Haggo	Surwma
	9	Hancabii	Damakase	Handode	Tojo
	10	Handode	Dikicha	Hanku	
	11	Hankuu	Hadadagu	Hinayie	
	12	Haramandawer	Hidopogasato	Huda	
	13	Hiddiguraati	Home	Kabarcho	
	14	Ijeersa	Jijmble	Komenyo	
	15	Jirma-jalesa	Komenyo	Mukafoni	
	16	Komenyo	Korasoma	Sariti	
	17	Landubee	Korca	Suruma	
	18	Rejjii	Lemmon		
	19	Sarii	Matanifra		
	20	Sayidasajor	Monohada		
	21	Togoo	Sarida-sajar		
	22	Turuijee	Sogidarait		
	23		Suruba		
	24		Turujjii		
	25		Wachino		
木の実	1	Beddesa	Agamusa	Baddesa	Beddesa
	2		Amburuji	Ficussur	
	3		Beddesa	Mito	
	4		Gore	Tojo	
	5		Mete	Uimayi	
	6		Safafa		
	7		Yebo		
スパイス	1	Mooomoko	Ogio	Moomoko	Ogio
	2	Segluu	Segluu	Ogio	Tunjo
	3		Tunjo	Segluu	
	4			Tunjo	
天然コーヒー		No collect	No collect	Collect	Collect
蜂蜜		Collect	No collect	Collect	Collect

Appendix Tab. 26　調査集落における薪採取量の減少パターン



注:民族名 A;Amhara、O;Oromo、Y;Yem
資料:The 1994 Census of Population and Housing, 1996

Appendix Tab. 27　採取されている薪の樹種

District	Village	Community	第一位		第二位		第三位	
			scientific name	common name	scientific name	common name	scientific name	common name
Seka	Kishe	No. 1, No. 3		Hada		Soyaama		Turcujjee
Chekorsa	Komo Hari	Hari	*Erytrina Brucei*	Waleenso	*Myrica salicifolia*	Rejjii	bamboo	Leommon
	Sombo Daru	Ramie	*Celtis africana*	Cheke	*Myrica salicifolia*	Rejjii	*Maytenus senegalensisi*	Komboolca
	Yanga Deo	Deo	*Prunus africanus*	Homi	*Maesa lanceolata*	Abayi	*Diospyros abyssinica*	Lokko
	Elke Togobe	Busasie	*Myrica salicifolia*	Rejjii	*Maesa lanceolata*	Abayi		Kussayie
Gera	Dedo Boge	Boge	*Pysium africana*	Owoo	*Bersama abyssinicus*	Lolchiisa	*Ekebergia capensis*	Sombo
	Dusta	Dusta Town	*Macaranga lophostigna*	Wangoo	*Allophlus abysinicus*	Sehor	*Sygysium guinegnse*	Baddessae
	Gore Daka	Chone	*Macaranga lophostigna*	Wangoo	*Millettia ferruginea*	Askra	*Maesa lanceolata*	Abayi
	Sadi Lova	Sadi, Rova	*Olea welwitschii*	Gagama	*Macaranga lophostigna*	Wangoo	*Allophylus abyssinicus*	Sehoo

Appendix Tab. 28 DADO 直営苗畑の苗木生産本数（1996 年）

区分	種名	Seka Chekorsa					Gera				合計
		Kachama	Gibe	Dato	Sombo	小計	Kola Bucha	Wanja Kersa	Gure Genji	小計	
Tree	*Acacia decurrens*	450	2,916	1,231	2,000	6,597	0	0	0	0	6,597
Tree	*Acacia saligna*	300	1,450	2,316	2,000	6,066	0	0	0	0	6,066
Tree	*Albizia* spp	195	313	0	0	508	0	0	0	0	508
Tree	*Cordia africana*	0	100	0	0	100	0	0	0	0	100
Tree	*Cupressus lusitanica*	0	3,483	10,205	8,400	22,088	0	0	0	0	22,088
Tree	*Eucalyptus* spp	36,090	54,380	45,971	77,050	213,491	75,000	100,000	48,000	223,000	436,491
Tree	*Grevillea robusta*	0	1,157	0	0	1,157	0	0	0	0	1,157
Tree	*Hagenia abyssinica*	245	400	1,405	1,280	3,330	0	0	0	0	3,330
Tree	*Leucaena leucocephala*	0	1,149	723	1,000	2,872	0	0	0	0	2,872
Tree	*Milletia ferruginea*	0	50	0	1,200	1,250	0	0	0	0	1,250
Tree	*Susbania saspensis*	0	1,162	0	0	1,162	0	0	0	0	1,162
小計		37,280	66,560	61,851	92,930	258,621	75,000	100,000	48,000	223,000	481,621
Fruit	*Annona muricata*	0	450	698	0	1,148	0	0	0	0	1,148
Fruit	Avocado	0	137	0	0	137	0	0	0	0	137
Fruit	Papaya	0	150	1,200	400	1,750	0	0	0	0	1,750
小計		0	737	1,898	400	3,035	0	0	0	0	3,035
Coffee	Coffee arabico 7440	170,242	0	0	272,252	442,494	0	—	0	0	442,494
合計		207,522	67,297	63,749	365,562	704,150	75,000	100,000	48,000	223,000	927,150

Appendix Tab. 29 DADO直営苗畑の村別一世帯当たり平均苗木配布本数

District	Village	Community	Seka Chekorsa				Gera			Community 平均
			Kachama	Gibe	Dato	Sombo	Kola Bucha	Wanja Kersa	Gure Genji	
Seka Chekorsa	Atro Sufa	Atro Sufa				167				167
	Beke	Beke				407				407
	Bidaru Tuli	Bidaru Tuli			191					191
	Boba Roge	Boba Roge			364					364
	Buyo Kofe	Buyo Kofe	322	224						301
	Deto Kersu	Deto Kersu			385					385
	Elke Tonjo	Elke Tonjo		131						131
	Gibe Baso	Gibe Baso		808						808
	Kusaro Gibe	Kusaro Gibe	194							194
	Liluchaha	Liluchaha				100				100
	Meti	Meti		216	637					362
	Sebeka Debiye	Sebeka Debiye				397				397
	Sekala Geenefo	Sekala Geenefo		224						224
	Shashamanee	Shashamanee				183				183
	Sonbo	Sonbo				261				261
	Sonbo Daru	Sonbo Daru				211				211
	Wushanea Koche	Wushanea Koche		348	359					356
Seka Chekorsa District平均										317
Gera	Chira	Chira town							600	600
	Chira	Gure Kaso							480	480
	Chira	Gure Genji							545	545
	Chira	Werware							800	800
	Kacha Handaracha	Kachotula						1,000		1,000
	Kacho Handaracha	Anderacha						1,667		1,667
	Kola	Kola Bulcha					3,500			3,500
	Kola	Kenbibit					1,667			1,667
	Sedi Loya	Loya yukro						1,000		1,000
	Wanja Sulaja	Kola Sulaja					1,333			1,333
	Wanja Sulaja	Wanja Kersa						833		833
Gera District平均										1,042
nursery別平均			308	413	375	251	2,027	1,053	585	466

Appendix Tab. 30 DADO直営苗畑 の村別苗木配布世帯数割合 (1996年)

District	Village	世帯数	配布世帯数	配布世帯数割合
Seka Chekorsa	Atro Sufa	802	23	2.9
	Beke	923	43	4.7
	Bidaru Tuli	976	10	1.0
	Boba Roge	1,367	21	1.5
	Buyo Kofe	1,523	138	9.1
	Deto Kersu	1,552	58	3.7
	Elke Tonjo	681	20	2.9
	Gibe Baso	610	50	8.2
	Kusaro Gibe	806	13	1.6
	Liluchaba	1,108	21	1.9
	Meti	888	29	3.3
	Sebeka Debiye	635	15	2.4
	Sekala Geenefo	1,166	15	1.3
	Shashamanee	1,150	20	1.7
	Sonbo	932	150	16.1
	Sonbo Daru	1,495	100	6.7
	Wushanea Koche	962	100	10.4
	小　計	17,576	826	4.7
Gera	Chira	1,162	82	7.1
	Kacho Handaracha	250	40	16.0
	Kola	1,057	22	2.1
	Sedi Loya	626	25	4.0
	Wanja Sulaja	938	45	4.8
	小　計	4,033	214	5.3
	合　計	21,609	1,040	4.8

Appendix Tab. 31　農家植林調査結果の概要

地区	District	Village	Community	調査	民族	植栽年		植栽参加者						種子と苗木の入手方法					樹種			植栽目的の順位				入手の選択	
				番号	グループ	最古	最新	F	H.H	W	C	E	DA	所有木	近隣	購入	D/N	その他	Ca	S	Ci	薪	建築用	販売	その他	種子	苗木
Belete	Seka C.	Kishe	Kishe No. 1	1	Yem	1988	?	◎	◎								◎		◎	◎		2	1	3			◎
			Kishe No. 1	2	Yem	1988	?		◎		◎						◎		◎	◎		3	2		1		◎
			Kishe No. 1	3	Yem	1988	1991		◎								◎		◎			2	1				◎
			Kishe No. 1	4	Yem	1977	?		◎	◎								◎				2	1	3			◎
		Sebe Mofa	Daso	5	Oromo	1987	1995		◎						◎				◎				1	2			◎
			Daso	6	Oromo	1991	1996												◎				1	2		◎	
			Daso	7	Oromo	1947	?		◎						◎				◎				1				◎
			Daso	8	Oromo	1994	1996		◎							◎			◎	◎			1	2			◎
Gera	Gera	Chira	Chira town	9	Oromo	1990	1995		◎	◎	◎				◎					◎			1	2		◎	
			Dagoie	10	Oromo	1996	1996					◎				◎			?					1			◎
			Boncha	11	Amhara	1995	1995			◎	◎					◎					◎		1	2			◎
			Ata	12	Amhara	1995	1995		◎		◎		◎			◎	◎				◎		1	2			◎
		Wegecha	Sato	13	Oromo	1971	1994		◎		◎			◎					?			2	1	3			◎
			Kere	14	Oromo	1984	1996				◎			◎					◎			2	1				◎
			Siso	15	Oromo	1972	1996		◎	◎	◎			◎					◎			2	1	3			◎
			Siso	16	Oromo	1967	1996		◎	◎	◎			◎					◎			2	1	4	3		◎

注:植栽参加者 F; 父, H.H;本人, W;妻, C;子供, E;雇用者, DA;development agent

樹種 Ca;E. camaidulensis, S;E. saligna, Ci;E. citriodra

Appendix Tab. 32　薪用材として植林したい樹種

District	Village	Community	第1位	第2位	第3位
Seka Chekorsa	Kishe	No.1, No.3	*Cupressus lusitanica*	*Eucalyptus spp.*	*Millettia ferruginea*
	Komo Hari	Hari	*Eucalyptus spp.*	*Cupressus lusitanica*	*Hagenia abyssinica*
	Sombo Daeu	Ramie	*Eucalyptus spp.*	*Cupressus lusitanica*	*Millettia ferruginea*
	Elke Togobe	Busasie	*Eucalyptus spp.*	*Maesa lanceolata*	*Cupressus lusitanica*
Gera	Dedo Boge	Boge	*Eucalyptus spp.*	*Cupressus lusitanica*	indigenous spp.
	Dusta	Dusta town	*Eucalyptus spp.*	—	—
	Gore Daka	Chone	*Eucalyptus spp.*	—	—
	Sadi Loya	Loya, Sadi	—	—	—

注；Sadi Loyaは、土地が狭くて樹木を植える場所がないので、植えたい木はないとの回答。

Appendix Tab. 33 (1) 収穫表 (Production models), 一般用材・トランスミッションポール生産

1) Transmission pole/Timber
Species:Group 2, *Eucalyptus grandis/Eucalyptus saligna*
Plants/ha: 1,600
Site class: 24 m^3/ha
Production model No: 7

Age	Tree height (m)	DBH (cm)	Stems/ha					Volume, m^3/ha				Increment			Thinned/Removed, m^3/ha				Tons/ha	
			Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	volume/ tree (m^3)	Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Increment (m^3)	Annual increment (m^3)	Annual growth rate(%)	Sawlogs	Trans. pole	Small poles	Fuel-wood	Branches and tops	Twigs
0	0		1600																	
1			1440																	
4	13.8	12.4	1350	550	41	800	0.0400	54.0	14.0	26	40	54.0	13.5				6.0	8.0	0.7	1.2
6	18.2	16.8	800	400	50	400	0.1325	106.0	33.0	31	73	66.0	33.0	82.5	4.5		16.5	12.0	1.1	1.7
9	23.1	23.9	400	150	38	250	0.4103	164.1	55.1	34	109	91.1	30.4	41.6	7.7		25.4	22.0	1.5	1.8
13	27.0	32.5	250	100	40	150	0.7992	199.8	59.8	30	140	90.8	22.7	20.8	15.0	6	23.8	15.0	1.5	1.9
18	30.1	38.5	150	150	100	0	1.4100	211.5	211.5	100	0	71.5	14.3	10.2	74.0	74	32.5	41.5	3.1	3.3

2) Timber
Species:Group 3, *Cupressus lusitanica/Grevillea robusta/Pinus patula*
Plants/ha: 1,600
Site class: 24 m^3/ha
Production model No.9

Age	Tree height (m)	DBH (cm)	Stems/ha					Volume, m^3/ha				Increment			Thinned/Removed, m^3/ha				Tons/ha	
			Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	volume/ tree (m^3)	Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Increment (m^3)	Annual increment (m^3)	Annual growth rate(%)	Sawlogs	Trans. pole	Small poles	Fuel-wood	Branches and tops	Twigs
0	0.0	0.0	1600																	
1			1440																	
5	7.1	11.2	1310		0	1310	0.0458	60			60	60	12.0							
8	12.6	17.8	1310	570	44	740	0.1031	135	48	36	87	75	25.0	41.7	3		8	37	15.2	0.8
10	15.9	21.1	740		0	740	0.2014	149												
12	17.7	24.4	740	240	32	500	0.2851	211	54	26	157	124	31.0	35.6	27		5	22	17.9	4.1
14	19.8	26.9	500		0	500	0.4120	206												
16	21.0	29.2	500		0	500	0.5260	263												
18	22.5	32.2	500	150	30	350	0.6380	319	88	28	231	162	27.0	17.2	65		5	18	20.8	4
20	23.2	34.0	350		0	350	0.7686	269												
22	24.3	35.8	350		0	350	0.8971	314												
24	24.9	37.1	350			350	1.0057	352												
26	25.5	38.3	350				1.1029	386	386	100		155	19.4	8.4	328		8	50	54.7	13.4

Source: The Orgut-Swedforest Consortium, Forest Products Pricing and Marketing Study Vol.2, Ministry of Agriculture, 1990

Appendix Tab. 33 (2) 収穫表(Production model), *Eucalyptus globulus* Special

1) Fuelwood regime
Species: *Eucalyptus globulus*
Plants/ha: 4,444 (1.5 by 1.5)
Site class: 18 m^3/ha
Propduction Model Special

			Stems/ha					Volume, m^3/ha				Thinned/Removed, m^3/ha				Tons/ha	
Age	Tree height (m)	DBH (cm)	Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Volume/ tree (m^3)	Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Sawlogs	Trans. pole	Small poles	Fuel-wood	Branches and tops	Twigs
0			4444					0									
1			4000					0									
2	5.0	3.2	3900					27									
3	7.0	4.9	3800					53									
4	8.7	6.0	3700					75									
5	10.2	7.0	3600					97									
6	11.7	8.0	3500					123						23	100	4.6	5.3
7	13.1	9.0	3500					150						40	110	5.2	5.8
8	14.5	10.0	3500					177						60	117	5.7	6.3
9	15.8	10.9	3400					205						70	135	6.2	6.8
10	17.1	11.7	3400					235						80	155	6.7	7.2
11	18.3	12.5	3300					260						90	170	7.3	7.6
12	19.4	13.3	3300					286						100	186	6.2	8.0
	Coppice stand Fuelwood regime																
0																	
1			11000														
2	5.0	3.2	10500	5500		5000		31	15		16			5	0	2.8	5.5
3	7.0	4.9	5000					50									
4	8.7	6.0	4800					86									
5	10.2	7.0	4800					112									
6	11.7	8.0	4600					141						26	115	5.3	6.0
7	13.1	9.0	4600					173						46	127	6.0	6.6
8	14.5	10.0	4600					204						69	135	6.5	7.2
9	15.8	10.9	4400					235						81	154	7.0	7.8
10	17.1	11.7	4400					270						92	178	7.4	8.3
11	18.3	12.5	4200					299						104	195	7.8	8.8
12	19.4	13.3	4200					329						115	214	8.2	9.2

Source: The Orgut-Swedforest Consortium, Forest Products Pricing and Marketing Study Vol.2, Ministry of Agriculture. 1990

Appendix Tab. 33 (3) 収穫表(Production models),在来樹種

Production model No.13
Species:Group 4_*Juniperus procera/Podocurpus gracior*
Plants/ha: 2,500
Site class: 12 m³/ha For Timber

Age	Tree height (m)	DBH (cm)	Stems/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	volume/ tree (m³)	Volume, m³/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Increment Increment (m³)	Annual increment (m³)	Annual growth rate(%)	Thinned/Removed, m³/ha Sawlogs	Trans. pole	Small poles	Fuel-wood	Tons/ha Branches and tops	Twigs
			2500																	
5	3.2		2000			2000													3.0	5.5
8	5.5		1800			1800														
10	7.8	12.5	1700	700	41	1000	0.0706	120	25	21	95	120	12.0				5	20	1.5	2.8
12	9.2	15.0	1000	50	5	950			Select pruning									30		
18	16.5	20.7	950	350	37	600	0.2158	205	50	24	155	110	13.8	1.80	10		10	35	1.0	1.5
25	20.5	28.0	600	200	33	400	0.4417	265	65	25	200	110	15.7	1.40	20		10	30	0.9	1.1
35	25.0	34.0	400	150	38	250	0.8000	320	90	28	230	120	12.0	0.60	45		15	50	0.7	1.0
50	27.5	36.0	250	250	100		1.3200	330	330	100		100	6.7	0.20	230		50		0.8	1.1

Production model No.15
Species:Group 5_*Aningeria adolfi-friderici/Cordia africana/Croton macrostachyus/Ekebergia rueppeliana*
Plants/ha: 2,500
Site class: 12 m³/ha For Timber

Age	Tree height (m)	DBH (cm)	Stems/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	volume/ tree (m³)	Volume, m³/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Increment Increment (m³)	Annual increment (m³)	Annual growth rate(%)	Thinned/Removed, m³/ha Sawlogs	Trans. pole	Small poles	Fuel-wood	Tons/ha Branches and tops	Twigs
			2500																	
10	6.8	8.0	2250	450	20	1800			Cleaning										2.1	0.2
20	14.8	18.0	1800	800	44	1000	0.1167	210	60	29	150	210	10.5					60	3.5	0.5
30	20.3	26.3	1000	350	35	650	0.2850	285	80	28	205	135	13.5	0.90				80	1.7	0.2
40	23.5	34.9	650	250	38	400	0.5308	345	90	26	255	140	14.0	0.70	10			80	1.5	0.1
50	25.1	41.6	400	200	50	200	0.9250	370	90	24	280	115	11.5	0.50	30			60	1.4	0.1
60	27.5	50.0	200	200	100		1.9000	380	380	100		100	10.0	0.40	250			130	3.0	0.3

Production model No.16
Species:Group 6_*Hagenia abyssinica/ Olea welwitschii/ Pygeum africana/ suzygium guineense*
Plants/ha: 2,500
Site class: 6 m³/ha For Timber

Age	Tree height (m)	DBH (cm)	Stems/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	volume/ tree (m³)	Volume, m³/ha Before thinn.	Thinn.	Thinn. rate (%)	After thinn.	Increment Increment (m³)	Annual increment (m³)	Annual growth rate(%)	Thinned/Removed, m³/ha Sawlogs	Trans. pole	Small poles	Fuel-wood	Tons/ha Branches and tops	Twigs
			2500																	
10	8.5	6.5	2250	550	24	1700			Cleaning										2.7	0.5
20	12.0	14.5	1700	700	41	1000	0.0735	125	35	28	90	125	6.3					35	1.5	0.2
30	14.4	19.5	1000	400	40	600	0.1600	160	40	25	120	70	7.0	0.80			5	40	1.2	0.1
40	16.6	24.5	600	200	33	400	0.2917	175	45	26	130	55	5.5	0.50				45	1.0	0.1
50	18.4	29.1	400	150	38	250	0.4500	180	50	28	130	50	5.0	0.40	10		10	40	1.0	0.1
60	19.7	33.1	250	250	100		0.7200	180	180	100		50	5.0	0.40	125		10	55	2	0.2

Source: The Orgut-Swedforest Consortium, Forest Products Pricing and Marketing Study Vol.2, Ministry of Agriculture.1990