Leaflet No. 3/1997

Government of theUnion of Myanmar
Ministry of Forestry
Forest Department

The Properties and Utilization of Soilin the Greening Project for the NineCritical Districts of the Arid Zone of Central Myanmar (Part II)

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August, 1997

Acknowledgements

Technical discussion sections were held with U Soe Myint, Director of the regreening of the nine districts in the central dryzone of Myanmar, his extensive knowledge of the dryzone together with his general support proved most useful.

At the field level, Assistant Directors (District Forest Officers) and Staff Officers (Township Forest Officers), made available all essential support and facilities. Their contributions and support are most appreciated and made it possible to complete this paper.

Thanks are due to the laboratory technicians, Forest Soil Laboratory, Forest Research Institute, for their service to finish this paper in time.

အပူပိုင်းဒေသ (၉) ခရိုင်စိုက်ခင်းမြေများ၏ဂုဏ်သတ္တိနှင့် အသုံးချမှုကို စူးစမ်းလေ့လာခြင်း (ဒုတိယပိုင်း)

ဦးစန်းလွင်၊ B.Sc.(For.) (Ygn.), M.S. (CESF, SUNY)
ဒုတိယညွှန်ကြားရေးမှူး
ဦးထင်ကျော်၊ B.Sc. (I.C.) (Ygn.)
သုတေသနလက်ထောက်
နှင့်
ဒေါ်ချိုချိုဝင်း၊ B.Sc.(Chem.) (Mdy.)
သုတေသနလက်ထောက်
သစ်တောသုတေသန၊ ရေဆင်း။

စာတမ်းအကျဉ်းချုပ်

အပူပိုင်း ဒေသ(၉)ခရိုင် စိုက်ခင်းမြေများ၏ ဓါတုနှင့်ရူပ ဂုဏ်**သတ္တိများအား စူးစမ်းလေ့လာမှု (ဒုတိယပိုင်း) ဖြစ်ပါသည်။ စိုက်ခင်းမြေများ၏** ဂုဏ်သတ္တိနှင့် ဆက်နွယ်လျက်ရှိသော အကြောင်းခြင်းရာ များအား ကွင်းဆင်း လေ့လာမှုအပေါ် အခြေခံ၍ တင်ပြထားပါသည်။ ပထမပိုင်းနှင့် ဒုတိယပိုင်း ပေါင်းစည်း၍ အပူပိုင်း ဒေသ စိုက်ခင်းများ တည်ထောင်ရာတွင် အကိုးအကားပြု အသုံးချနိုင်မည် ဖြစ်ပါသည်။ ရှေ့ဘိုခရိုင်ကိုပါ တိုးချဲ့. ထည့်သွင်း လေ့လာ ခဲ့ပါသည်။

The Properties and Utilization of Soil in the Greening Project for the Nine Critical Districts of the Arid Zone of Central Myanmar (Part II)

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Abstract

The analysis of the physical and chemical properties of plantation soils from the Greening Project for the nine Critical Districts of the Arid Zone of Central Myanmar were presented as Part II. Factors relating to soil properties were described by field observations. Part I and II would be used as a reference for dryzone area plantation establishment scheme. Shwebo District was included as an additional area in this paper.

Contents

1. Introduction

The Government has laid down the project for greening the nine arid zones in central Myanmar and concerted efforts were made by Forest Department staff, regional authorities at different levels and local populace to implement this project with might and gain. Moreover, the Ministry of Forestry has formulated to establish an independent directorate, so as to be able to handle the issue effectively through a multisectoral effort, with the willful participation of the people.

Forest Research Instituted has involved in this Project since 1994 by providing technical know how, especially in soil and its related matters. The properties and utilization of soil in Mandalay Division and parts of Sagaing Division were investigated and intimated to the Forest Department in the Forestry Research Congress on March 1996.

2. Study Area

Forest plantation from 23 Townships were selected in this study both from Magway Division and Shwebo District. Most of the plantations from Magway Division were planted in 1994, however, plantations from Shwebo District were established only in 1995. The study area is shown in table I.

3. Materials and Methods

3.1 Field Study

The selection of sites were at random in each township from 5 forest districts in collaborating with the township forest officers.

Soil Sampling was made by collecting equal size cores from 4 to 5 location within a uniform block of land at 0-10 cm, 20-40 cm, 40-60 cm, 60-80- cm, 80-100 cm depth using a spade.

3.2 Laboratory Analysis

Soil samples were air-dried, ground and sieved through a 2 mm sieve, and the physical and chemical properties were analyzed by the chemists. Particle size distribution was carried out by mechanical analysis by using the Pipette method. Organic matter was detected by using the weight loss on ignition method. Soil Reaction (pH) was determined by using JENWAY pH meter model 3020. Total Nitrogen levels were settled by Micro Kjedahl digestion and distillation units. Available phosphorus levels were resolved with double-acid extracting solution and molybdenum blue complex method by using Hach DR/ 2000 Spectrophotometer. Available potassium, sodium, calcium and magnesium were assessed with double-acid extracting solution by using Perkin Elmer, Atomic Absorption Spectrophotometer, model 2280. Electrical conductivity (E.C) and Iron concentration levels were not able to be analyzed for this study.

4. Results

Some physical and chemical properties of soil profile and soil samples from the plantation of (23) townships are presented in Appendix I and II.

Most of the plantation soils from Magway, Minbu, Pakhokku District and Thayet, Minhla & Sinpaungwei Township are associated with active alkalinity.

However, in Mindon, Kamma and Aunglan Township, soil are associated with acidity.

Expect in Bwetgyi, Kywe Thay (Aunglan Township), Salin, Road Site plantation at Shewebo, organic matter content from most of the study area varies from 1 to 7% which can produce a reasonably satisfactory growth for the tree.

Total nitrogen content in all of the areas is lower than that of the minimum requirement of 0.07%.

The minimum requirement of phosphorus content levels for normal growth is 0.005%. However, phosphorus concentration levels from most of the areas are very low.

Potassium concentration levels from most of the study areas are higher than 0.002% which is the minimum requirement for normal growth expect in Aungland (2 sites) and Kamma Township.

The secondary nutrients such as sodium, calcium and magnesium are generally normal in the study areas.

It is found that most of the areas has very limited moisture content as the dominant soil texture is sandy loam.

5. Discussion

About 75% of the project area (1994 plantation) was planted with Eucalypt (Eucalyptus camaldulensis) which is the most favorite species for the Dryzone foresters. It is hardy and has fairly good height growth within 1-2 years. In fact, it is believed the best species for the survival of Dryzone foresters. However, Eucalypt cannot survive in clay, clay loam and silty clay loam soil in the long term. It is clearly observed in Kokkogwa (Taungdwingyi) Kyaukhlayga (Yesagyo), Kywedikwin (Pwint Phu) and road-side plantation at Karma and Thayet Township. The native species like sha(Acacia catechu), Than (Terminalia Oliveri), Dahat (Tectona hamatoniana), Lein (T. pyrifolia), and Tauk kyan (T. tomentosa) survive reasonably well in such soils of the natural forest areas.

As nitrogen and phosphorous nutrient contents are not sufficient in the Dryzone soils, Nitrogen Fixation Species (NFT) like Sha (Acacia catechu), Tanaung (A. leucophloea), Kokko(Albizza labbak), Sit (A. Procera) and Subyu (Acacia arabica) should be put in consideration. These species are adaptable to such adverse sites and the fertility of soil can be improved.

Based on the field observation, it is found that the survival percentage of all of the plantation is more than 80% in the first year “December counting”. However, about three years of age, plantations in very poor soils have less 50% survival percentage (eg. Pwintphu, Myaing, salin and Yesagyo Township). In such areas, pure plantation scheme is much doubtful and intensive protection in the natural forest areas accompanied with gap planting system would be better solution. Some areas should be left as grazing lands.

6. Conclusion

(1) It is concluded that land capability classification is essential for the Greening Project of the Dryzone Area so that selection of site will be technically competent. Also soil classification programme with respect to forestation at least at the regional level is urgently needed.

(2) It is suggested that the evaluation of both tree growth and survival is necessary in rotation basic. Regarding to survival, indigenous native species can have satisfactory result compare with exotic species such as Eucalypt and Aurisha about 5 years of establishment.

(3) The protection of natural forests with close supervision, gap planting in denuded forests, establishment of plantation with agro-forestry system, and conservation of eroded soils by wind break and shelter belt in the Dryzone area should be practiced.

(4) Soil fertility should be analyzed before the establishment of plantation in the Dryzone area so that the suitability and site-species matching could be determined.

(5) Forest Department should organize to conduct a "Dryzone Forestation Seminar" as early as possible so that field foresters can share knowledge with respect to choice of species, sites, nursery practices, site preparation and so on. A resolution from that seminar can be used as an reference for the new Dryzone Greening Department.

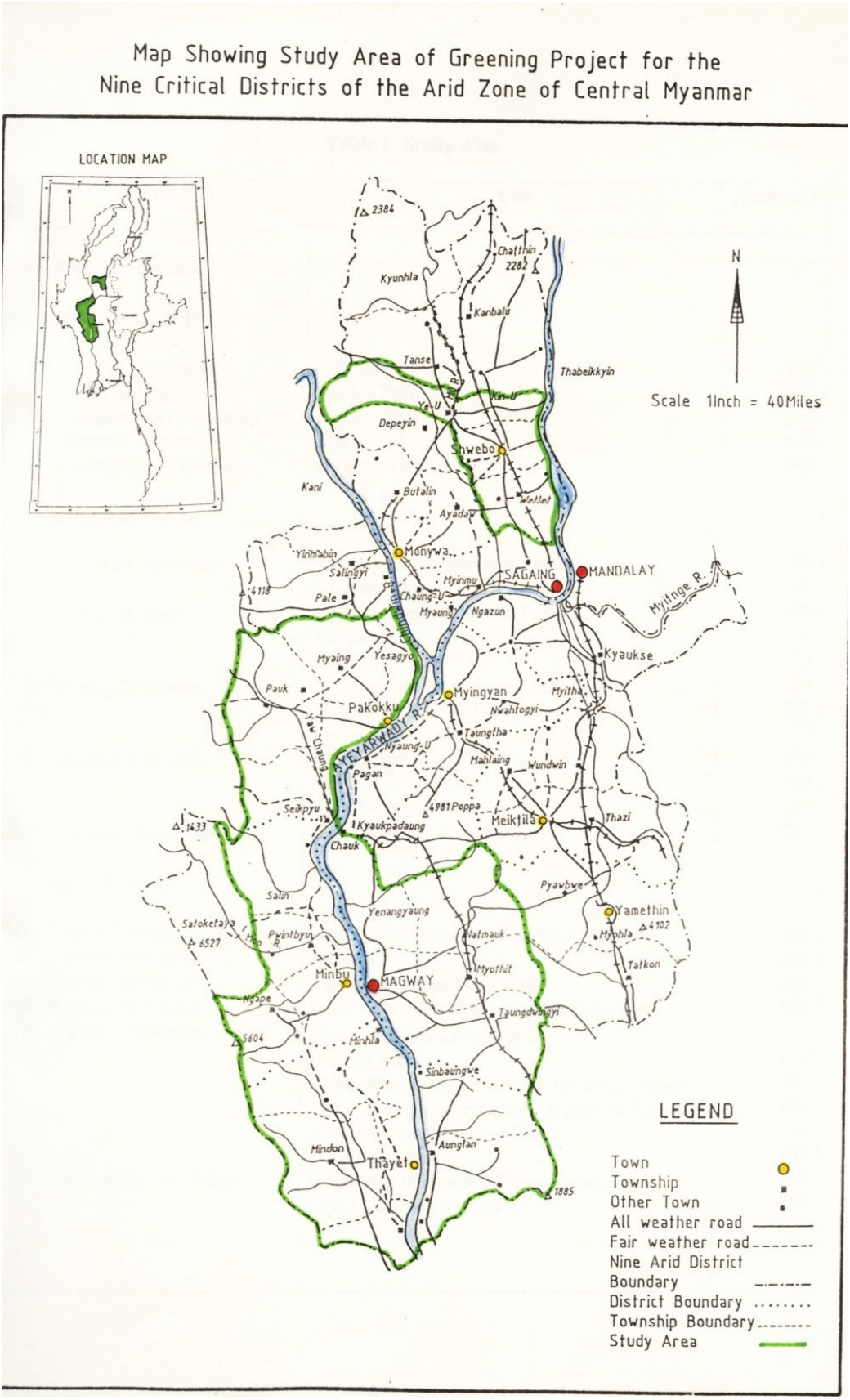
Map Showing Study Area of Greening Project for the
Nine Critical Districts of the Arid Zone of Central Myanmar
LOCATION MAP
N
Scale 1Inch = 40Miles
Monywa
SAGAING
MANDALAY
Myitnge R.
Shwebo
Kyaukse
Myingyan
PaKokku
AYEYARWADY R.
Pagan
Meiktila
Thazi
Yamethin
MAGWAY
Minbu
Thayet
Kyunhla
Kanbalu
Chatthin
Tanse
Thabeikkyin
Depeyin
Kani
Butalin
Ayadaw
Yinmabin
Salingyi
Pale
Myinmu
Chaung-U
Myaung
Ngazun
Myaing
Yesagyo
Pauk
Nwahtogyi
Taungtha
Nyaung-U
Mahlaing
Wundwin
Myitha
Seikpyu
Kyaukpadaung
Chauk
Salin
Yenangyaung
Natmauk
Myothit
Pyawbwe
Myohla
Tatkon
Ngape
Minhla
Sinbaungwe
Taungdwingyi
Aunglan
Mindon
Satoketaya
Pyintbyin
LEGEND
Town
Township
Other Town
All weather road
Fair weather road
Nine Arid District Boundary
District Boundary
Township Boundary
Study Area

Table 1. Study Area

Sr.No.	Location	Site	Area(Ac.)
	Magway Division		
	Magway District		
1	Magway Township	Yin Seik	700
2	Chauk Township	Sin Ka Protection Forest	500
3	Taungdwingyi Township	Kokko Gwa	500
4	Natmauk Township	Tha Hmya	600
5	Yenangyaung Township	Nyaung To	800
	Pakhokku District		
6	Pakhokku Township	Tetma Taung Protection Forest	80
		Khinlan Ywa	20
7	Pauk Township	Tetma Taung Protection Forest	100
		Ye Tain Ywa	75
8	Myaing Township	Lelan Ywa	25
		Myaing Taung Unclassed Forest	25
		Mingan Protection Forest	125
9	Yesagyo Township	Linkataw	50
		Kyauk Hlay Ga	100
		Ma U	65
10	Seikphyu Township	Sin Chaung Dam	35
		Koe Daunt Unclassed Forest	250
	Thayet District		
11	Thayet Township	Road Side Plantation (Thayet – Mindon)	350
12	Mindon Township	Unclass	100
13	Minhla Township	Taung Oo Protection Forest	200
14	Kamma Township	Road Side Plantation (Pathein-Monywa)	100
15	Aunglan Township	Kywe Thay Reserved Forest	200
		Sin Chi Taing	120
		1994, Plantation, Bwet Gyi Reserved Forest	150
		1995, Plantation, Bwet Gyi Reserved Forest	150
		Kan Hna Sint Reserved Forest	30
		Pway Thar Dam	100
16	Sinpaungwe Township	Road Side Plantation (Yangon – Magway)	150
		Ohn Hne Reserved Forest	350

Sr. No.	Location	Site	Area(Ac.3)
	Minbu District		
17	Minbu Township	Minbu Taung	250
		Zi-aing Protection Forest	100
18	Pwintphu Township	Kywe Di Kwin	150
		Myaung Oo Unclassed Forest	200
19	Salin Township	Salin Unclassed Forest	350
20	Ngaphe Township	Ngaphe Unclassed Forest	200
	Shwebo District		
21	Shwebo Township	66, Kongyi Reserved Forest	120
		70, Kongyi Reserved Forest	120
		Road Side Plantation	110
22	Khin U Township	Road Side Plantation	50
23	Wetlet Township	Shein Ma Ka, Ma-u-taung Protection Forest	100
		1/95, Thit Saint, Ma-u-taung Protection Forest	100
		2/95, Thit Saint, Ma-u-taung Protection Forest	150

* 2 site (Myothit and Ye-U Townships) were not able to be analysed in this study.

Plate 1.a. 1994 Fuelwood Plantation in Sinka Protection Forest,
Chauk Township (Magway District)
Species Eucalypt *(Eucalyptus camaldulensis)*

Plate 1.b Soil profile

A_1 - Sandy Loam
Very Pale Brown

A_2 - Sandy Loam
Light Yellowish Brow

B - Loamy Sand
Pale Yellow

Plate 2.a. 1994 Fuelwood Plantation in Zeaing Protection Forest,
Minbu Township (Minbu District)
Species- Eucalypt (*Eucalyptus camaldulensis*)

Plate 2.b Soil profile

A_1 - Loamy Sand
Brownish Yellow

B_1 - Sandy Loam
Reddish Yellow

B_2 - Sandy Loam
Reddish Yellow

Plate 3.a. 1994 Fuelwood Plantation in Kywethay Reserved Forest,
Aunglan Township (Thayet District)
Species-Aurisha *(Acacia auriculiformis)*

Plate 3.b Soil profile

A_1 - Sand
Brown

A_2 - Sand
Light Brown

B_1 - Sand
Pink

Plate 3.a. 1994 Fuelwood Plantation in Kywethay Reserved Forest, Aunglan Township (Thayet District)
Species-Aurisha *(Acacia auriculiformis)*

Plate 3.b Soil profile

A_1 - Sand
Brown

A_2 - Sand
Light Brown

B_1 - Sand
Pink

Plate 5.a. 1995 Fuelwood Plantation in Kongyi Reserved Forest, Shwebo Township (Shwebo District)
Species-Eucalypt *(Eucalyptus camaldulensis)*

Plate 5.b Soil profile

A_1 - Sandy Loam
Very Dark Grayish Brown

A_2 - Sandy Loam
Light Yellowish Brown

A_3 - Sandy Clay Loam
Dark Brown

Physical and Chemical Properties of Soil Profile in Magway District.

Appendix I.

Description	Horizon	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
					K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
Yin Seik	A	9.55	0.0219	0.000009	0.0034	0.0052	0.404	0.1070	0.99	78	10	9
Magway	B	9.39	0.0205	0.000009	0.0030	0.0050	0.326	0.1500	1.49	77	12	7
	C	9.17	0.0229	0.000014	0.0037	0.0071	0.480	0.0500	2.13	20	72	5
Nyaung To	A	8.37	0.0237	0.000013	0.0031	0.0087	0.690	0.0109	3.00	82	8	9
Yenanchaung	B	8.76	0.0159	0.000015	0.0033	0.0151	0.580	0.0171	0.37	84	6	7
	C	8.84	0.0155	0.002300	0.0034	0.0147	0.386	0.0280	0.41	81	8	7
Tha Hmya	A	6.14	0.0237	0.000043	0.0062	0.0198	0.071	0.0259	2.25	69	10	17
Natmauk	B	7.54	0.0434	0.000018	0.0039	0.0063	0.121	0.0310	2.23	54	14	29
	C	9.48	0.0314	0.000037	0.0051	0.0099	0.176	0.0400	2.88	50	14	33
Kokko Gwa	A	10.15	0.0254	0.000016	0.0056	0.0940	0.440	0.0300	0.83	56	14	27
Taungdwigyi	B	10.49	0.0258	0.000014	0.0024	0.1500	0.510	0.0320	0.92	55	18	25
	C	10.74	0.0205	0.000097	0.0027	0.2000	0.372	0.0260	0.95	68	12	19
Sin Ka	A1	8.37	0.0357	0.000008	0.0058	0.0140	0.350	0.0297	3.93	65	14	19
Chauk	A2	9.10	0.0173	0.000013	0.0085	0.0073	0.550	0.0320	3.27	68	14	13
	B	10.07	0.0208	0.000011	0.0024	0.0231	0.470	0.0480	2.13	81	10	7

Physical and Chemical Properties of Soil Profile in Pakhokku District.

Description	Horizon	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
					K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
Tetma Taung	A	7.47	0.0219	0.000599	0.0144	0.0034	0.037	0.0370	0.60	83	4	9
Pakhokku	B	7.56	0.0247	0.001590	0.0143	0.0019	0.053	0.0220	0.79	84	6	7
	C	8.76	0.0169	0.002170	0.0160	0.0058	0.077	0.0330	0.74	85	4	9
Tetma Taung	A	8.94	0.0141	0.002870	0.0137	0.0018	0.250	0.0200	1.12	81	8	7
Pauk	B	9.02	0.0177	0.003640	0.0104	0.0020	0.207	0.0220	1.46	84	4	7
	C	8.98	0.0162	0.003880	0.0102	0.0012	0.186	0.0240	0.78	84	2	9
Myaing Taung	A	9.00	0.0300	0.001070	0.0039	0.0045	0.450	0.0290	1.92	64	18	12
Myaing	B	8.97	0.0296	0.003720	0.0022	0.0050	0.560	0.0280	2.14	60	20	16
	C	10.23	0.0172	0.000365	0.0013	0.0039	0.430	0.0680	1.54	41	24	32
Mingan Taung	A	9.74	0.0275	0.003240	0.0058	Trace	0.370	0.0920	2.35	21	68	4
Myaing	B	9.93	0.0332	0.000068	0.0023	Trace	0.550	0.0810	3.58	40	38	16
	C	10.11	0.0194	0.003210	0.0028	0.0004	0.114	0.0560	1.63	60	32	2
Kyauk Hlay Ga	A	8.76	0.0600	0.000095	0.0124	0.0043	0.331	0.0780	3.49	63	16	19
Yesagyo	B1	9.47	0.0254	0.000069	0.0141	0.0900	0.272	0.1030	4.64	44	36	17
	B2	10.71	0.0240	0.000090	0.0131	0.2280	0.148	0.1500	5.14	48	14	33
Shin Ma Taung	A1	9.14	0.0325	Trace	0.0016	0.0394	0.318	0.0400	2.23	69	12	17
Yesagyo	A2	9.08	0.0261	Trace	0.0014	0.0078	0.328	0.0260	2.30	74	10	13
	B	10.2	0.0211	0.000004	0.0015	0.0360	0.270	0.0410	2.48	61	20	17
Sin Chaung	A	7.73	0.0473	0.000522	0.0040	0.0032	0.309	0.0166	2.53	78	10	11
Yesagyo	B	8.10	0.0229	0.001240	0.0044	0.0029	0.400	0.0266	1.06	79	10	7
	C	8.16	0.0265	0.000053	0.0031	0.0037	0.490	0.0201	1.98	74	12	11
Koe Daunt	A1	8.93	0.0071	0.000760	0.0028	0.0042	0.257	0.0157	1.02	84	10	4
Seikphyu	B1	9.18	0.0067	0.000800	0.0021	0.0052	0.104	0.0086	0.98	90	6	2
	B2	9.29	0.0120	0.000660	0.0024	0.0053	0.125	0.0310	2.00	84	10	3

Physical and Chemical Properties of Soil Profile in Thayet District.

Description	Horizon	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
					K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
Thayet	A1	6.90	0.0804	0.000210	0.0086	0.0060	0.250	0.0560	4.21	18	24	56
	B1	8.24	0.0456	0.000026	0.0042	0.0188	0.378	0.0660	2.09	3	30	65
Mindon	A1	4.82	0.0589	0.000032	0.0019	0.0039	0.048	0.0430	4.96	34	26	37
	A2	6.22	0.0307	0.000087	0.0017	0.0144	0.037	0.0760	5.37	24	26	47
	B	9.10	0.0385	0.000040	0.0013	0.0340	0.238	0.1330	3.98	3	24	69
Minhla	A1	8.57	0.0657	0.000740	0.0047	0.0310	0.130	0.0340	0.10	39	38	18
	B1	9.73	0.0646	0.000053	0.0024	0.0450	0.193	0.0262	0.28	50	33	15
	B2	10.46	0.0230	0.000009	0.0019	0.0179	0.156	0.0274	0.87	52	32	14
Kanma	A1	4.47	0.0466	0.000016	0.0026	0.0062	0.039	0.0360	4.95	49	22	24
	A2	4.63	0.0332	0.000030	0.0022	0.0383	0.085	0.1370	5.30	24	20	42
	B	7.69	0.0268	0.000041	0.0012	0.0410	0.317	0.1410	4.81	18	22	56
Kywe Thay	A1	4.83	0.0134	0.000044	0.0010	0.0040	0.020	0.0025	0.52	89	6	3
Aunglan	A2	5.01	0.0138	0.000027	0.0007	0.0039	0.015	0.0011	1.16	89	8	1
	B	4.99	0.0141	0.000025	0.0014	0.0039	0.009	0.0011	2.16	87	8	1
Sin Chi Taing	A1	5.55	0.0501	0.000860	0.0012	0.0032	0.165	0.0410	6.34	82	14	2
Aunglan	A2	5.62	0.0155	0.001000	0.0017	0.0031	0.104	0.0390	3.73	85	10	2
	B	5.86	0.0145	0.001450	0.0018	0.0032	0.098	0.0370	3.15	34	30	32
Bwet Gyi (1994)	A1	5.60	0.0340	0.000090	0.0020	0.0137	0.010	0.0039	1.15	86	11	1
Aunglan	A2	5.98	0.0130	0.000198	0.0033	0.0071	0.051	0.0067	0.55	78	16	5
	A3	5.88	0.0164	0.000103	0.0021	0.0134	0.047	0.0053	0.81	69	17	9
Bwet Gyi (1995)	A2	7.51	0.0229	0.000107	0.0333	0.0129	0.045	0.0340	1.00	76	6	16
	B1	6.00	0.0246	0.000280	0.0034	0.0077	0.041	0.0300	0.96	87	5	5
Sinpaungwei	A3	9.03	0.0255	0.000022	0.0040	0.2580	0.277	0.0730	0.78	57	28	14
	B1	9.61	0.0195	0.000052	0.0037	0.0252	0.022	0.0440	1.13	33	30	38

Physical and Chemical Properties of Soil Profile in Minbu District.

Description	Horizon	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
					K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
Minbu Taung	A1	8.38	0.0212	0.001560	0.0040	0.0050	0.410	0.0350	2.99	89	3	4
Minbu	A2	8.07	0.0332	0.001330	0.0013	0.0050	0.210	0.0150	3.20	7	44	46
	B2	9.39	0.0254	0.000510	0.0032	0.0540	0.330	0.0680	4.72	49	29	16
Zeaing	A	5.91	0.0339	0.000187	0.0084	0.0026	0.048	0.0109	0.82	78	10	10
Minbu	B1	6.02	0.0261	0.000114	0.0044	0.0033	0.039	0.0144	0.62	69	12	16
	B2	5.61	0.0240	0.000119	0.0057	0.0027	0.074	0.0195	0.49	65	3	22
Kywe Di Kwin	A1	8.42	0.0533	0.000016	0.0029	0.0036	0.690	0.0327	5.43	17	46	32
Pwintphu	A2	8.20	0.0353	0.000015	0.0025	0.0116	0.580	0.0370	4.67	10	86	2
	B	8.30	0.0282	0.000018	0.0023	0.0550	0.470	0.0660	3.59	13	80	4
Myaung Oo	A1	8.04	0.0314	0.000046	0.0023	0.0037	0.260	0.0091	1.90	46	22	30
Pwintphu	A2	7.63	0.0374	0.000026	0.0020	0.0038	0.371	0.0189	1.97	59	20	20
	B	7.97	0.0565	0.000035	0.0012	0.0029	0.410	0.0201	1.13	53	22	22
Salin	A2	5.78	0.0141	0.001340	0.0026	0.0039	0.018	0.0057	0.77	88	10	1
	B	4.05	0.0254	0.008300	0.0037	0.0027	0.040	0.0186	2.17	65	25	7
Ngaphe	A1	7.45	0.0219	0.000086	0.0030	0.0047	0.540	0.0470	4.68	35	31	28
	A2	7.67	0.0240	0.000085	0.0020	0.0046	0.406	0.0470	3.08	41	30	28
	A3	7.63	0.0212	0.000083	0.0019	0.0050	0.397	0.0700	2.55	48	29	18

Physical and Chemical Properties of Soil Profile in Shwebo District.

Description	Horizon	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
					K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
66, Kongyi,	A1	6.92	0.0113	0.000800	0.0216	0.0052	0.056	0.0194	1.66	80	10	7
Shwebo	A2	6.85	0.0074	0l000280	0.0067	0.0203	0.091	0.0239	2.91	70	13	16
	A3	7.11	0.0131	0.000031	0.0208	0.0248	0.115	0.0313	4.06	63	13	20
70, Kongyi,	A	7.02	0.0148	0.000016	0.0021	0.0046	0.410	0.0088	1.15	77	6	11
Shwebo	B1	7.05	0.0134	0.000370	0.0018	0.0124	0.123	0.0347	1.29	79	6	13
	B2	7.40	0.0113	0.001160	0.0016	0.0043	0.130	0.0325	1.02	78	5	13
Road Site	A1	9.08	0.0145	0.000084	0.0031	0.0298	0.058	0.0052	0.56	91	1	7
Plantation	B	10.56	0.0078	0.000004	0.0014	0.3450	0.259	0.0278	0.75	60	11	28
Shwebo	B1	10.36	0.0071	0.000005	0.0013	0.1300	0.580	0.0272	0.73	68	8	22
Road Site	A1	9.04	0.0222	0.000069	0.0022	0.0510	0.043	0.0064	1.74	88	7	5
Plantation	B1	9.90	0.0219	0.000165	0.0023	0.1660	0.155	0.0357	2.29	66	3	29
Khin-U	B2	9.90	0.0120	0.000035	0.0055	0.2450	0.063	0.0339	1.95	54	14	31
Shame Ma Ka	A1	8.41	0.0445	0.000008	0.0026	0.0010	0.330	0.0300	4.02	59	14	23
Wetlet	A2	8.62	0.0297	0.000004	0.0019	0.0013	0.330	0.0310	2.61	63	14	23
	A3	8.77	0.0219	0.000005	0.0035	0.0019	0.310	0.0450	2.59	70	10	19
1/1995, Thit Saint,	A1	8.67	0.0240	0.000005	0.0024	0.0061	0.890	0.0580	4.07	63	24	12
Ma-u-taung	B1	8.84	0.0318	0.000007	0.0025	0.0026	0.750	0.0231	5.96	72	18	9
Wetlet	B2	9.21	0.0088	0.000047	0.0028	0.0028	0.700	0.0276	3.66	85	9	3
2/1995, Thit Saint,	A3	8.86	0.0191	0.000006	0.0028	0.0038	0.480	0.0102	0.64	74	5	20
Ma-u-taung	B1	8.95	0.0177	0.000005	0.0043	0.0043	0.590	0.0176	0.22	74	5	20
Wetlet	B2	9.05	0.0124	0.000008	0.0023	0.0034	0.540	0.0167	0.53	79	13	7

Physical and Chemical Properties of Soil in Yin Seik, Magway Township

Appendix II

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.17	0.0282	0.000036	0.0041	0.0078	0.294	0.098	2.41	78	10	9
20-40	8.25	0.0162	0.002160	0.0032	0.0092	0.083	0.052	1.25	90	6	1
40-60	8.46	0.0169	0.002660	0.0034	0.0149	0.116	0.087	1.38	88	6	1
60-80	8.54	0.0177	0.002680	0.0041	0.0081	0.059	0.053	4.49	91	6	1
80-100	8.78	0.0141	0.002600	0.0056	0.0126	0.075	0.063	8.67	89	8	1
0-10	8.16	0.0247	0.000052	0.0046	0.0047		0.038	6.39	71	10	17
20-40	9.13	0.0314	0.000028	0.0068	0.0062	0.333	0.113	2.23	78	14	3
40-60	9.25	0.0198	0.000026	0.0035	0.0060	0.402	0.111	2.36	75	18	3
60-80	9.18	0.0177	0.000033	0.0052	0.0087	0.271	0.152	3.05	87	10	1
80-100	9.26	0.0148	0.000037	0.0036	0.0072	0.260	0.171	2.32	83	14	1
0-10	9.95	0.0240	0.000035	0.0053	0.0610	0.269	0.048	3.34	28	56	13
20-40	10.40	0.0198	0.000043	0.0050	0.1800	0.178	0.092	2.45	37	54	7
40-60	10.42	0.0275	0.000050	0.0064	0.1930	0.146	0.109	2.40	41	54	3
60-80	10.50	0.0205	0.000025	0.0075	0.2130	0.159	0.111	2.77	41	50	5
80-100	10.55	0.0177	0.002800	0.0054	0.2190	0.094	0.051	5.45	39	56	3
0-10	8.26	0.0254	0.000023	0.0051	0.0840	0.440	0.027	2.66	73	10	13
20-40	8.40	0.0212	0.000001	0.0069	0.0880	0.490	0.033	2.40	78	8	11
40-60	8.35	0.0184	0.000025	0.0035	0.0430	0.340	0.041	2.59	72	12	13
60-80	8.59	0.0169	0.000015	0.0046	0.0640	0.370	0.044	2.61	73	14	11
80-100	8.80	0.0219	0.000016	0.0035	0.0520	0.360	0.053	2.85	71	20	5
0-10	8.48	0.0184	Trace	0.0032	0.0720	0.410	0.070	0.94	83	8	5
20-40	8.58	0.0148	Trace	0.0024	0.0670	0.317	0.089	1.14	81	8	9
40-60	8.52	0.0155	Trace	0.0040	0.0360	0.278	0.107	1.05	82	8	7
60-80	8.65	0.0184	Trace	0.0058	0.0420	0.196	0.119	1.30	83	12	3
80-100	8.85	0.0169	Trace	0.0059	0.0450	0.176	0.158	1.56	85	10	1

Physical and Chemical Properties of Soil in Nyaung To, Yenangyaung Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.69	0.0480	0.004370	0.0067	0.0058	0.267	0.0391	2.80	72	14	9
20-40	8.91	0.0233	0.000282	0.0056	0.0085	0.374	0.0260	2.93	76	12	9
40-60	8.21	0.0191	0.004630	0.0055	0.0034	0.580	0.0350	1.78	86	8	1
60-80	8.21	0.0247	0.000272	0.0071	0.0054	0.381	0.0380	2.49	72	18	7
80-100	9.33	0.0254	0.003310	0.0059	0.0066	0.306	0.0370	1.99	85	6	5
0-10	8.92	0.0240	0.005770	0.0053	0.0042	0.394	0.0280	1.15	78	16	5
20-40	8.83	0.0367	0.000203	0.0033	0.0032	0.416	0.0250	1.83	61	24	11
40-60	8.86	0.0205	0.000019	0.0039	0.0082	0.400	0.0160	1.18	76	14	5
60-80	8.90	0.0247	0.000065	0.0067	0.0097	0.550	0.0200	2.01	63	24	7
80-100	8.96	0.0254	0.000110	0.0097	0.0106	0.360	0.0340	2.42	51	40	5
0-10	8.68	0.0191	0.000357	0.0064	0.0114	0.360	0.0034	2.07	80	12	5
20-40	8.73	0.0254	0.000151	0.0061	0.0077	0.340	0.0033	4.85	80	10	7
40-60	8.78	0.2820	0.000177	0.0036	0.0075	0.210	0.0044	2.50	79	10	9
60-80	8.92	0.0212	0.003140	0.0039	0.0118	0.370	0.0072	2.01	86	8	3
80-100	8.82	0.0275	0.000447	0.0036	0.0051	0.410	0.0149	2.99	82	12	5
0-10	8.78	0.0317	0.000078	0.0056	0.0078	0.320	0.0391	2.22	63	26	7
20-40	10.06	0.0212	0.000090	0.0035	0.0078	0.170	0.0580	2.26	53	34	9
40-60	10.63	0.0247	0.000187	0.0059	0.0156	0.230	0.0690	1.72	36	52	9
60-80	10.66	0.0219	0.000783	0.0063	0.0372	0.140	0.0860	2.28	40	52	5
80-100	10.77	0.0191	0.009130	0.0055	0.0356	0.405	0.0610	2.14	46	42	7
0-10	8.58	0.0388	0.002300	0.0042	0.0059	0.372	0.0101	2.58	77	12	7
20-40	8.87	0.0226	0.000009	0.0046	0.0070	0.385	0.0132	2.36	81	8	7
40-60	8.88	0.0212	0.000042	0.0067	0.0085	0.404	0.0199	2.44	84	6	5
60-80	8.94	0.0177	0.003580	0.0071	0.0073		0.0290	2.89	85	6	5
80-100	9.07	0.0113	0.000121	0.0055	0.0064	0.306	0.0390	3.27	82	8	5

Physical and Chemical Properties of Soil in Tha Hmya, Natmauk Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.51	0.0311	0.000088	0.0043	0.0030	0.181	0.0210	3.27	58	16	23
20-40	6.90	0.0318	0.001340	0.0035	0.0055	0.162	0.0291	3.37	63	10	23
40-60	7.27	0.0219	0.000680	0.0045	0.0061	0.108	0.0276	1.72	78	6	13
60-80	7.56	0.0240	0.001920	0.0037	0.0048	0.100	0.0246	1.24	80	6	9
80-100	7.64	0.0212	0.001580	0.0047	0.0042	0.085	0.0198	1.30	86	4	7
0-10	9.52	0.0417	0.001940	0.0048	0.0950	0.179	0.0340	0.61	23	28	45
20-40	9.30	0.0247	0.003700	0.0045	0.2140	0.218	0.0710	0.15	37	32	27
40-60	9.62	0.0226	0.001370	0.0031	0.1060	0.224	0.0840	0.19	73	18	7
60-80	9.75	0.0254	0.000302	0.0032	0.1810	0.205	0.0990	0.87	46	40	11
80-100	9.80	0.0240	0.000352	0.0031	0.1940	0.178	0.0840	1.11	40	32	25
0-10	9.32	0.0374	0.000045	0.0031	0.0169	0.404	0.2200	1.77	30	32	35
20-40	9.93	0.0297	0.000112	0.0031	0.0387	0.377	0.0400	1.92	70	18	8
40-60	10.33	0.0304	0.000264	0.0028	0.0420	0.332	0.0630	1.65	62	26	10
60-80	10.46	0.0198	0.000095	0.0027	0.0380	0.305	0.0690	1.02	56	20	18
80-100	10.60	0.0212	0.000130	0.0340	0.0660	0.252	0.0620	1.54	75	16	6
0-10	8.33	0.0445	0.000089	0.0044	0.2730	0.129	0.0410	1.86	75	18	4
20-40	9.50	0.0417	0.000055	0.0028	0.0440	0.229	0.0480	2.65	51	30	16
40-60	9.64	0.0374	0.000017	0.0021	0.0550	0.302	0.0420	2.58	51	32	14
60-80	9.76	0.0374	0.000015	0.0023	0.0480	0.378	0.0450	3.77	60	22	12
80-100	9.72	0.0409	0.000015	0.0027	0.0310	0.346	0.0400	4.45	64	12	22
0-10	6.83	0.0212	0.000050	0.0033	0.0067	0.069	0.0100	1.43	90	2	4
20-40	8.49	0.0367	0.000021	0.0037	0.0210	0.085	0.0320	3.33	93	2	2
40-60	9.54	0.0275	0.000035	0.0041	0.0490	0.112	0.0400	2.98	30	32	34
60-80	10.00	0.0191	0.000075	0.0050	0.0290	0.118	0.0360	2.60	55	16	26
80-100	10.08	0.0205	0.000074	0.0049	0.0370	0.105	0.0340	2.58	83	6	6

Physical and Chemical Properties of Soil in Kokko Gwa, Taungdwingyi Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	5.75	0.0494	0.004460	0.0031	0.0053	0.070	0.0170	1.68	74	12	17
20-40	5.98	0.0304	0.000205	0.0040	0.0021	0.099	0.0220	2.11	68	12	17
40-60	5.80	0.0282	0.000201	0.0041	0.0032	0.110	0.0250	2.00	71	10	13
60-80	5.80	0.0247	0.000620	0.0033	0.0050	0.091	0.0270	2.14	72	12	17
80-100	5.78	0.0191	0.000420	0.0040	0.0029	0.104	0.0280	2.14	67	12	29
0-10	8.31	0.0431	0.000516	0.0059	0.0336	0.228	0.0220	4.94	39	26	33
20-40	9.50	0.0395	0.000204	0.0033	0.0490	0.224	0.0240	4.54	42	22	39
40-60	9.77	0.0431	0.000296	0.0030	0.0740	0.215	0.0270	4.28	34	24	43
60-80	9.86	0.0494	0.000468	0.0042	0.0950	0.174	0.0290	4.71	26	28	45
80-100	9.90	0.0424	0.000271	0.0025	0.0980	0.180	0.0290	5.20	19	30	45
0-10	8.97	0.0212	0.000780	0.0033	0.0086	0.355	0.0409	0.83	75	12	45
20-40	10.37	0.0289	0.000025	0.0027	0.1510	0.203	0.0210	2.17	28	24	45
40-60	10.42	0.0275	0.000029	0.0019	0.1970	0.166	0.0180	2.52	24	26	47
60-80	10.43	0.0289	0.000077	0.0026	0.2060	0.145	0.0180	3.83	14	28	50
80-100	10.65	0.0311	0.000031	0.0024	0.2210	0.155	0.0398	4.12	22	24	51
0-10	7.21	0.0381	0.000800	0.0033	0.0510	0.104	0.0240	2.95	46	28	23
20-40	9.10	0.0339	0.000376	0.0028	0.0380	0.163	0.0250	4.21	33	26	37
40-60	9.03	0.0311	0.000279	0.0026	0.0470	0.131	0.0260	3.87	34	26	37
60-80	9.01	0.0289	0.000242	0.0029	0.0400	0.128	0.0290	3.77	30	28	39
80-100	9.04	0.0275	0.000106	0.0042	0.0750	0.152	0.0350	4.19	27	28	41
0-10	8.24	0.0409	0.000197	0.0043	0.0076	0.371	0.0210	2.59	61	18	19
20-40	10.34	0.0297	0.000025	0.0020	0.0760	0.298	0.0220	1.78	56	16	23
40-60	10.58	0.0258	0.000027	0.0028	0.1490	0.251	0.0240	2.31	56	14	25
60-80	10.75	0.0169	0.000256	0.0034	0.1570	0.227	0.0150	1.93	56	14	25
80-100	10.81	0.0240	0.000075	0.0030	0.1490	0.212	0.0140	2.14	65	10	23

Physical and Chemical Properties of Soil in Sin Ka Reserved Forest, Chauk Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.49	0.0395	0.000016	0.0054	0.0029	0.349	0.034	0.68	69	14	15
20-40	8.38	0.0275	0.000008	0.0047	0.0039	0.278	0.078	1.17	49	38	9
40-60	8.53	0.0148	0.000008	0.0059	0.0038	0.233	0.096	0.46	77	16	5
60-80	8.53	0.0177	0.000560	0.0026	0.0028	0.131	0.082	0.69	81	12	3
80-100	8.84	0.0184	0.000460	0.0049	0.0133	0.113	0.083	0.92	83	10	3
0-10	8.28	0.0317	0.000015	0.0039	0.0124	0.389	0.018	1.35	75	10	13
20-40	8.52	0.0141	0.000012	0.0041	0.0124	0.367	0.029	1.08	78	8	11
40-60	8.60	0.0141	0.000022	0.0067	0.0139	0.308	0.042	1.04	79	8	9
60-80	8.84	0.0162	0.000033	0.0028	0.0130	0.316	0.059	0.78	81	6	7
80-100	8.52	0.0155	0.000018	0.0029	0.0132	0.277	0.057	0.85	85	6	7
0-10	8.44	0.0289	0.000026	0.0033	0.0020	0.390	0.013	2.37	67	12	17
20-40	8.62	0.0275	0.000014	0.0028	0.0023	0.405	0.022	2.15	65	12	17
40-60	8.88	0.0247	0.000018	0.0030	0.0013	0.410	0.023	2.20	70	14	13
60-80	8.97	0.0191	0.000020	0.0023	0.0010	0.470	0.036	2.23	71	18	9
80-100	8.96	0.0198	0.000022	0.0022	0.0028	0.414	0.040	2.18	80	8	9
0-10	8.44	0.0332	0.000014	0.0036	0.0129	0.360	0.028	3.59	77	2	17
20-40	8.75	0.0184	0.000020	0.0039	0.0132	0.392	0.031	3.65	69	14	15
40-60	8.86	0.0240	0.000012	0.0023	0.0131	0.391	0.043	3.12	71	14	11
60-80	8.84	0.0184	0.000024	0.0020	0.0133	0.412	0.053	3.84	74	14	9
80-100	8.92	0.0155	0.000008	0.0025	0.0132	0.379	0.070	3.16	78	10	7
0-10	8.77	0.0346	0.000016	0.0038	0.0144	0.370	0.018	0.91	63	14	19
20-40	8.90	0.0311	0.000014	0.0043	0.0136	0.390	0.034	1.28	58	16	21
40-60	9.15	0.0240	0.000010	0.0038	0.0169	0.500	0.041	1.20	58	20	17
60-80	10.36	0.0198	0.000016	0.0042	0.0384	0.380	0.041	1.30	69	18	9
80-100	10.47	0.0275	0.000450	0.0024	0.0347	0.284	0.038	1.24	78	14	5

Physical and Chemical Properties of Soil in Tetma Taung, Pakhokku Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.06	0.0135	0.000750	0.0060	0.0064	0.332	0.0382	0.61	89	6	3
20-40	7.80	0.0127	0.003250	0.0036	0.0030	0.141	0.0193	0.67	88	10	1
40-60	8.02	0.0198	0.002665	0.0035	0.0030	0.160	0.0133	0.27	91	2	5
60-80	8.10	0.0113	0.002340	0.0034	0.0034	0.203	0.0165	0.51	89	4	5
80-100	8.12	0.0138	0.002490	0.0036	0.0035	0.184	0.0201	0.45	89	4	5
0-10	5.83	0.0227	0.001380	0.0071	0.0029	0.051	0.0231	1.49	82	10	7
20-40	6.30	0.0152	0.000780	0.0050	0.0072	0.060	0.0271	1.68	81	4	13
40-60	6.28	0.0145	0.000440	0.0032	0.0031	0.049	0.0254	1.20	82	10	7
60-80	6.27	0.0202	0.000520	0.0042	0.0041	0.053	0.0289	1.28	82	10	7
80-100	6.32	0.0152	0.001580	0.0042	0.0026	0.058	0.0288	1.26	82	10	1
0-10	8.67	0.0149	0.000320	0.0036	0.0024	0.256	0.0660	1.29	91	4	3
20-40	9.05	0.0099	0.002160	0.0056	0.0027	0.153	0.0324	0.71	90	6	1
40-60	9.23	0.0127	0.002520	0.0036	0.0035	0.100	0.0288	0.61	92	6	1
60-80	9.20	0.0103	0.002665	0.0048	0.0024	0.141	0.0410	0.82	91	6	1
80-100	9.21	0.0124	0.002100	0.0034	0.0028	0.120	0.0348	0.89	92	6	1
0-10	8.22	0.0188	0.001100	0.0053	0.0035	0.102	0.0164	2.02	80	12	5
20-40	8.08	0.0117	0.000948	0.0032	0.0030	0.060	0.0071	0.77	90	2	7
40-60	8.86	0.0081	0.000847	0.0028	0.0027	0.078	0.0077	1.04	89	2	7
60-80	9.23	0.0089	0.000013	0.0039	0.0026	0.402	0.0067	0.94	86	4	7
80-100	9.15	0.0113	0.000004	0.0043	0.0025	0.405	0.0078	1.57	81	8	9
0-10	7.77	0.0120	0.000364	0.0086	0.0031	0.050	0.0147	0.70	85	4	7
20-40	7.76	0.0117	0.000304	0.0049	0.0032	0.050	0.0185	0.48	91	4	1
40-60	8.31	0.0074	0.000725	0.0056	0.0016	0.044	0.0178	0.46	86	10	3
60-80	7.10	0.0103	0.000822	0.0039	0.0018	0.024	0.0170	0.35	87	10	3
80-100	7.74	0.0078	0.001264	0.0055	0.0020	0.032	0.0184	0.46	81	14	3

Physical and Chemical Properties of Soil in Tetma Taung, Pauk Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.83	0.0074	0.000448	0.0038	0.0226	0.303	0.017	1.26	78	14	7
20-40	7.95	0.0135	0.000408	0.0017	0.0205	0.241	0.014	0.88	85	8	5
40-60	7.98	0.0103	0.000352	0.0020	0.0210	0.265	0.012	0.94	84	8	5
60-80	7.96	0.0057	0.001200	0.0007	0.0206	0.185	0.010	1.32	86	8	5
80-100	8.02	0.0116	0.001230	0.0035	0.0211	0.176	0.013	1.56	80	12	5
0-10	6.39	0.0152	0.001280	0.0035	0.0225	0.082	0.011	1.43	82	8	5
20-40	8.30	0.0131	0.000770	0.0030	0.0236	0.205	0.016	1.38	84	8	3
40-60	8.10	0.0113	0.002380	0.0015	0.0220	0.066	0.010	1.25	86	4	5
60-80	8.57	0.0085	0.001970	0.0009	0.0214	0.070	0.008	1.07	91	4	3
80-100	8.65	0.0103	0.001370	0.0010	0.0090	0.085	0.009	1.10	89	8	1
0-10	8.17	0.0166	0.000530	0.0024	0.0028	0.223	0.014	2.67	72	20	5
20-40	8.51	0.0131	0.001640	0.0015	0.0013	0.167	0.011	2.10	85	4	5
40-60	8.50	0.0096	0.001090	0.0027	0.0007	0.287	0.014	2.10	81	12	3
60-80	8.59	0.0120	Trace	0.0024	Trace	0.315	0.011	2.87	79	12	3
80-100	8.62	0.0092	Trace	0.0007	0.0005	0.304	0.011	2.66	79	14	3
0-10	8.00	0.0237	Trace	0.0024	Trace	0.312	0.009	3.07	73	20	5
20-40	8.30	0.0178	Trace	0.0015	Trace	0.190	0.008	3.94	71	18	7
40-60	8.60	0.0056	Trace	0.0025	Trace	0.323	0.009	2.68	82	10	3
60-80	8.70	0.0103	Trace	0.0008	Trace	0.298	0.010	3.26	80	14	3
80-100	8.74	0.0099	Trace	0.0036	0.0002	0.258	0.015	4.48	77	14	5
0-10	7.76	0.0053	0.002180	0.0030	0.0002	0.063	0.016	0.20	88	8	1
20-40	9.06	0.0078	0.001400	0.0036	0.0008	0.103	0.018	0.35	84	10	1
40-60	9.12	0.0071	0.001920	0.0041	Trace	0.058	0.018	0.31	88	8	1
60-80	9.23	0.0113	0.002700	0.0039	Trace	0.054	0.020	0.70	88	6	1
80-100	9.25	0.0092	0.002220	0.0036	Trace	0.114	0.036	1.14	91	6	1

Physical and Chemical Properties of Soil in Myaing Taung, Myaing Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.47	0.0434	0.000160	0.0075	0.0154	0.413	0.020	3.84	50	24	20
20-40	9.62	0.0261	0.000850	0.0050	0.0150	0.394	0.022	2.33	50	22	22
40-60	9.69	0.0317	0.000169	0.0030	0.0520	0.408	0.028	4.70	34	32	28
60-80	9.66	0.0374	0.000075	0.0029	0.1090	0.390	0.026	6.16	40	24	32
80-100	9.57	0.0434	0.000138	0.0036	0.1740	0.330	0.028	4.44	33	30	34
0-10	9.27	0.0893	0.000062	0.0031	0.0048	0.490	0.015	3.46	48	28	20
20-40	9.33	0.0328	0.000062	0.0015	0.0057	0.590	0.026	1.86	42	26	26
40-60	9.35	0.0285	0.000064	0.0018	0.0079	0.570	0.034	1.94	42	26	26
60-80	9.44	0.0549	0.000067	0.0026	0.0135	0.400	0.042	1.90	48	24	24
80-100	9.78	0.0275	0.000062	0.0017	0.0208	0.380	0.041	2.16	46	24	24
0-10	9.19	0.0398	0.002260	0.0075	0.0700	0.159	0.021	2.90	36	38	22
20-40	10.72	0.0282	0.000019	0.0036	0.0292	0.340	0.011	2.38	43	34	18
40-60	10.75	0.0338	0.000302	0.0023	0.0384	0.310	0.009	2.21	39	34	22
60-80	10.86	0.0141	0.000321	0.0028	0.6200	0.281	0.007	2.28	33	36	18
80-100	10.73	0.0353	0.002250	0.0034	0.7100	0.175	0.009	2.27	35	36	26
0-10	7.34	0.0635	0.000121	0.0078	0.0214	0.238	0.028	3.87	48	24	22
20-40	8.73	0.0356	0.000323	0.0022	0.0064	0.460	0.024	2.21	27	36	32
40-60	8.87	0.0338	0.000324	0.0037	0.0071	0.500	0.022	2.39	28	42	26
60-80	9.05	0.0300	0.000358	0.0025	0.0084	0.560	0.035	2.33	29	44	24
80-100	9.38	0.0254	0.000362	0.0025	0.0142	0.540	0.039	3.01	20	40	34
0-10	9.07	0.0240	0.001390	0.0071	0.0034	0.395	0.035	1.66	68	18	12
20-40	8.92	0.0360	0.000358	0.0023	0.0045	0.400	0.022	2.29	58	18	20
40-60	9.07	0.0211	0.000371	0.0019	0.0105	0.410	0.027	3.08	53	20	22
60-80	9.50	0.0261	0.000374	0.0025	0.0328	0.390	0.029	2.77	48	20	26
80-100	10.18	0.0183	0.000367	0.0025	0.0162	0.410	0.061	2.67	39	22	34

Physical and Chemical Properties of Soil in Mingan Taung, Myaing Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.05	0.0265	0.000373	0.0016	0.0075	0.720	0.014	1.49	62	24	10
20-40	8.20	0.0226	0.000188	0.0030	0.0068	0.730	0.023	1.93	59	26	16
40-60	8.48	0.0201	0.000036	0.0029	0.0060	0.600	0.030	1.36	62	26	9
60-80	8.70	0.0240		0.0037	0.0061	0.700	0.049	1.60	64	28	5
80-100	8.73	0.0177	0.000076	0.0024	0.0084	0.650	0.037	2.17	65	26	7
0-10	8.41	0.0240	0.000449	0.0039	0.0042	0.530	0.025	1.76	64	26	7
20-40	8.49	0.0155	0.000152	0.0030	0.0034	0.340	0.021	1.60	64	26	7
40-60	8.66	0.0113	0.000373	0.0029	0.0041	0.340	0.037	1.77	70	20	5
60-80	8.67	0.0152	0.000058	0.0026	0.0044	0.450	0.050	1.81	65	30	3
80-100	8.84	0.0162	0.000152	0.0023	0.0039	0.116	0.027	1.28	69	26	3
0-10	9.68	0.0286	0.000045	0.0049	0.0016	0.356	0.046	2.12	27	44	25
20-40	9.91	0.0261		0.0031	0.0142	0.316	0.062	2.47	41	48	7
40-60	10.00	0.0106	0.001810	0.0027	0.0196	0.279	0.063	2.59	12	74	10
60-80	9.94	0.0388	0.002280	0.0032	0.0224	0.185	0.067	3.79	24	56	14
80-100	10.15	0.0240	0.001610	0.0034	0.2460	0.197	0.061	4.12	29	46	19
0-10	8.72	0.0501	0.000084	0.0039	0.0062	0.389	0.040	4.41	26	48	20
20-40	9.65	0.0215	0.002010	0.0036	0.0082	0.180	0.066	4.71	24	66	5
40-60	9.76	0.0395	0.000072	0.0026	0.0096	0.405	0.061	4.32	46	38	12
60-80	9.92	0.0145	0.002660	0.0028	0.0073	0.143	0.047	2.44	65	28	1
80-100	10.06	0.0205	0.000098	0.0030	0.0065	0.310	0.042	2.11	66	26	3
0-10	8.75	0.0300	0.000045	0.0037	0.0014	0.520	0.009	1.88	68	22	7
20-40	8.81	0.0314	0.000043	0.0029	0.0020	0.510	0.015	1.74	69	20	9
40-60	8.91	0.0219	0.000044	0.0033	0.0043	0.600	0.015	6.76	68	22	8
60-80	9.07	0.0177	0.000037	0.0023	0.0035	0.350	0.013	2.61	69	22	6
80-100	9.19	0.0162	0.000040	0.0027	0.0029	0.580	0.016	1.63	73	20	4

Physical and Chemical Properties of Soil in Kyauk Hlay Ga, Yesagyo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Ca%	Na%	Mg%		Sand%	Silt%	Clay%
20-40	8.42	0.0099	0.000014	0.0058	0.221	0.0245	0.107	2.51	41	36	18
40-60	9.81	0.0113	0.000021	0.0049	0.161	0.1030	0.112	1.21	28	40	28
60-80	10.00	0.0109	0.000037	0.0053	0.111	0.2090	0.084	3.02	9	50	38
80-100	10.02	0.0142	0.000039	0.0050	0.130	0.2050	0.094	3.10	16	46	36
0-10	8.50	0.0159	0.000033	0.0052	0.313	0.0263	0.056	0.91	49	20	28
20-40	9.87	0.0135	0.000024	0.0031	0.232	0.1340	0.045	1.20	40	26	32
40-60	10.25	0.0106	0.000031	0.0035	0.170	0.1800	0.049	0.50	49	20	30
60-80	10.27	0.0117	0.000026	0.0037	0.148	0.2040	0.065	1.47	32	30	34
80-100	10.35	0.0089	0.000015	0.0032	0.150	0.2370	0.062	1.88	33	32	33
0-10	8.57	0.0149	0.000016	0.0065	0.272	0.0329	0.067	3.69	27	30	40
20-40	9.40	0.0099	0.000013	0.0037	0.195	0.1480	0.061	3.53	18	30	48
40-60	9.50	0.0127	0.000009	0.0044	0.192	0.1730	0.060	3.53	18	30	48
60-80	9.60	0.0156	0.000013	0.0041	0.169	0.2280	0.055	3.37	20	28	48
80-100	9.90	0.0149	0.000007	0.0055	0.170	0.2380	0.052	4.02	20	28	50
0-10	8.56	0.0494	0.000002	0.0058	0.233	0.0183	0.096	2.06	39	38	18
20-40	9.50	0.0325	0.000004	0.0028	0.152	0.0700	0.109	2.63	15	60	22
40-60	9.57	0.0360	0.000011	0.0051	0.162	0.0780	0.107	2.56	12	56	28
60-80	9.82	0.0155	Trace	0.0041	0.156	0.0127	0.106	3.71	20	56	20
80-100	9.87	0.0332	Trace	0.0046	0.217	0.0970	0.112	4.62	22	60	16
0-10	8.38	0.0339	0.000006	0.0034	0.310	0.0042	0.052	1.33	71	16	11
20-40	8.85	0.0409	0.000003	0.0059	0.308	0.0107	0.075	3.51	65	18	15
40-60	9.56	0.0311	0.000003	0.0062	0.305	0.0318	0.065	2.62	64	18	15
60-80	10.10	0.0487	Trace	0.0028	0.181	0.0480	0.095	4.26	54	22	21
80-100	10.43	0.0529	Trace	0.0035	0.113	0.1140	0.100	7.07	31	30	35

Physical and Chemical Properties of Soil in Shin Ma Taung, Yesagyo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.03	0.0181	0.000159	0.0054	0.0050	0.398	0.0072	2.14	77	20	1
20-40	8.28	0.0142	0.000049	0.0032	0.0034	0.410	0.0038	2.70	76	18	1
40-60	8.17	0.0184	0.000068	0.0040	0.0034	0.399	0.0044	2.82	72	18	7
60-80	8.46	0.0181	0.000042	0.0040	0.0041	0.402	0.0062	2.76	72	14	11
80-100	8.53	0.0173	0.000044	0.0029	0.0038	0.362	0.0067	2.82	72	16	9
0-10	9.31	0.0149	0.000070	0.0066	0.0610	0.330	0.1650	1.77	37	54	7
20-40	10.32	0.0135	0.000058	0.0053	0.0920	0.283	0.0490	1.15	30	38	29
40-60	10.44	0.0131	0.000152	0.0048	0.1280	0.267	0.0880	0.95	31	38	29
60-80	10.37	0.0131	0.000800	0.0060	0.1470	0.169	0.1010	1.49	35	32	31
80-100	10.10	0.0145	0.000719	0.0053	0.1280	0.182	0.1110	1.62	27	32	39
0-10	8.45	0.0279	0.000675	0.0063	0.0053	0.218	0.0930	3.60	59	26	13
20-40	8.78	0.0194	0.000044	0.0038	0.0620	0.363	0.0530	3.66	47	24	27
40-60	9.87	0.0138	0.000226	0.0035	0.0153	0.198	0.1320	3.14	45	48	3
60-80	9.78	0.0127	0.000220	0.0037	0.0231	0.187	0.1410	3.67	45	50	1
80-100	10.00	0.0135	0.000268	0.0049	0.0304	0.168	0.1400	3.66	49	48	1
0-10	8.96	0.0113	0.000060	0.0050	0.0028	0.354	0.0120	2.08	75	12	9
20-40	9.45	0.0089	0.000062	0.0105	0.0056	0.389	0.0319	2.03	69	14	13
40-60	10.01	0.0092	0.000066	0.0057	0.0314	0.333	0.0460	2.63	64	14	17
60-80	10.10	0.0102	0.000043	0.0040	0.1350	0.259	0.0380	2.13	55	28	13
80-100	10.44	0.0102	0.000086	0.0036	0.1800	0.195	0.0600	1.64	50	40	7

Physical and Chemical Properties of Soil in Sin Chaung, Yesagyo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Ca%	Na%	Mg%		Sand%	Silt%	Clay%
0-10	8.04	0.0339	Trace	0.0128	0.364	0.0030	0.0340	2.16	46	26	25
20-40	8.16	0.0304	0.000004	0.0038	0.310	0.0055	0.0490	2.31	44	28	25
40-60	8.42	0.0289	Trace	0.0032	0.303	0.0055	0.0610	3.3	45	24	29
60-80	8.5	0.0226	Trace	0.0030	0.302	0.0077	0.0590	3.18	41	28	27
80-100	8.58	0.0240	Trace	0.0033	0.302	0.0081	0.0660	3.52	42	28	27
0-10	8.27	0.0268	Trace	0.0029	0.393	0.0012	0.0210	2.09	71	18	7
20-40	8.36	0.0297	0.000004	0.0036	0.387	0.0019	0.0250	2.05	67	22	7
40-60	8.56	0.0275	0.007990	0.0044	0.207	0.0059	0.3170	1.45	86	6	3
60-80	9.1	0.0254	0.007340	0.0048	0.181	0.0105	0.0310	1.34	86	6	3
80-100	9.3	0.0275	0.000093	0.0036	0.342	0.0320	0.3160	0.38	61	26	7
0-10	9.46	0.0106	0.000092	0.0088				3.79			
20-40	9.9	0.0109	0.000152	0.0037	0.287	0.0870	0.0311	0.52	40	34	21
40-60	10.42	0.0074	0.000199	0.0048	0.243	0.1410	0.0264	0.44	42	34	19
60-80	10.42	0.0163	0.04050	0.0056	0.218	0.1510	0.0250	0.45	57	26	13
80-100	10.65	0.0078	0.000023	0.0054	0.112	0.2000	0.0248	0.64	51	32	13
0-10	9.56	0.0081	Trace	0.0073	0.288	0.0430	0.0460	0.89	18	46	33
20-40	10.12	0.0089	0.000005	0.0040	0.174	0.1190	0.0750	0.66	15	46	35
40-60	10.25	0.0096	0.000022	0.0033	0.124	0.2380	0.0440	0.54	8	50	39
60-80	10.25	0.0081	Trace	0.0032	0.134	0.2140	0.0580	2.4	9	42	47
80-100	10.3	0.0099	0.000640	0.0046	0.137	0.2020	0.0440	0.85	7	40	51
0-10	8.13	0.0113	Trace	0.0034	0.189	0.0044	0.2730	2.05	67	16	13
20-40	8.53	0.0145	0.000004	0.0036	0.392	0.0027	0.0205	2.1	62	18	15
40-60	8.66	0.0113	0.000004	0.0031	0.376	0.0018	0.0252	1.86	73	12	13
60-80	8.74	0.0103	Trace	0.0039	0.382	0.0028	0.0254	1.45	85	4	7
80-100	8.98	0.0089	Trace		0.369	0.0046	0.0385	2.33	74	16	9

Physical and Chemical Properties of Soil in Koe Daunt Protection Forest, Seikphyu Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.64	0.0229	0.000145	0.0038	0.0029	0.233	0.0242	2.03	88	7	3
20-40	8.84	0.0215	0.000063	0.0035	0.0036	0.540	0.0360	1.13	86	9	3
40-60	8.85	0.0247	0.000011	0.0046	0.0040	0.410	0.0383	2.18	82	11	5
60-80	9.08	0.0074	0.000101	0.0034	0.0033	0.216	0.0409	0.91	91	5	2
80-100	8.93	0.0282	0.000036	0.0040	0.0058	0.400	0.0880	2.61	77	17	8
0-10	8.91	0.0272	0.000120	0.0030	0.0037	0.255	0.0180	1.53	89	5	3
20-40	9.28	0.0198	0.000120	0.0023	0.0039	0.146	0.0106	0.57	91	4	2
40-60	9.28	0.0395	0.000108	0.0028	0.0046	0.194	0.0100	0.73	89	4	2
60-80	9.21	0.0226	0.000102	0.0030	0.0030	0.143	0.0093	0.64	92	4	1
80-100	9.19	0.0240	0.000101	0.0031	0.0034	0.191	0.0116	0.46	91	4	2
0-10	8.97	0.0254	0.000036	0.0036	0.0038	0.480	0.0369	1.50	91	3	5
20-40	9.02	0.0253	0.000070	0.0034	0.0042	0.360	0.0440	0.54	87	3	8
40-60	9.15	0.0272	0.000090	0.0044	0.0033	0.372	0.0410	0.40	89	3	3
60-80	9.13	0.0282	0.000127	0.0028	0.0040	0.228	0.0351	0.51	89	1	6
80-100	8.86	0.0275	0.000031	0.0040	0.0053	0.131	0.0860	1.94	60	26	10
0-10	9.07	0.0226	0.000119	0.0031	0.0036	0.211	0.0460	0.44	78	7	12
20-40	9.13	0.0124	0.000150	0.0026	0.0040	0.122	0.0360	0.77	87	4	5
40-60	9.12	0.0134	0.001750	0.0033	0.0037	0.147	0.0460	0.59	88	2	6
60-80	9.18	0.0155	0.001400	0.0030	0.0040	0.152	0.700	0.93	88	2	6
80-100	9.34	0.0166	0.001350	0.0040	0.0038	0.166	0.0680	0.92	90	2	7
0-10	8.90	0.0187	0.000011	0.0040	0.0054	0.650	0.0262	1.13	83	13	1
20-40	8.79	0.0159	0.000320	0.0016	0.0059	0.560	0.0440	1.66	83	11	1
40-60	8.89	0.0212	0.000044	0.0019	0.0042	0.480	0.540	1.53	83	7	8
60-80	8.90	0.0166	0.000620	0.0022	0.0044	0.410	0.0600	1.38	83	9	6
80-100	8.94	0.0078	0.000120	0.0034	0.0046	0.236	0.0530	1.68	91	5	4

Physical and Chemical Properties of Soil in Thayet Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.26	0.0321	0.000099	0.0094	0.0138	0.220	0.0540	2.24	60	18	19
20-40	5.91	0.0212	0.000062	0.0052	0.0087	0.145	0.0500	2.57	54	14	29
40-60	5.84	0.0226	0.000048	0.0052	0.0048	0.128	0.0520	2.53	55	16	27
60-80	6.11	0.0191	0.000081	0.0073	0.0030	0.158	0.0560	2.61	62	18	17
80-100	6.08	0.0173	0.000168	0.0060	0.0024	0.182	0.0560	2.00	77	12	7
0-10	6.85	0.0395	0.000234	0.0106	0.0031	0.214	0.0530	3.10	24	32	43
20-40	7.34	0.0314	0.000038	0.0041	0.0032	0.320	0.0540	4.00	20	38	37
40-60	7.42	0.0254	0.000037	0.0049	0.0079	0.258	0.0900	3.46	20	38	37
60-80	7.58	0.0222	0.000022	0.0041	0.0096	0.234	0.1130	3.46	23	38	35
80-100	7.77	0.0180	0.000012	0.0053	0.0183	0.209	0.1470	3.67	17	42	37
0-10	6.55	0.0473	0.000096	0.0180	0.0024	0.178	0.0510	3.25	55	18	23
20-40	6.72	0.0251	0.000272	0.0099	0.0016	0.245	0.0540	3.33	50	20	27
40-60	7.18	0.0208	0.000028	0.0064	0.0032	0.329	0.0430	2.53	57	16	25
60-80	7.34	0.0184	0.000010	0.0049	0.0050	0.344	0.0430	2.49	65	14	17
80-100	7.47	0.0159	0.000017	0.0045	0.0061	0.363	0.0500	3.04	63	18	17
0-10	6.79	0.0169	0.000017	0.0209	0.0107	0.228	0.0880	6.76	9	30	57
20-40	7.14	0.0268	0.000226	0.0082	0.0148	0.208	0.0950	5.76	10	28	59
40-60	7.94	0.0162	0.000019	0.0047	0.0116	0.325	0.0850	7.43	3	28	67
60-80	8.07	0.0148	0.000035	0.0048	0.0151	0.324	0.0940	4.19	1	28	69
80-100	7.68	0.0191	0.000018	0.0054	0.0358	0.279	0.0920	4.22	1	92	3

Physical and Chemical Properties of Soil in Road Site Plantation, Mindon Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	4.80	0.0777	0.000031	0.0040	0.0102	0.092	0.0550	4.60	51	22	24
20-40	4.36	0.0352	0.000004	0.0032	0.0162	0.102	0.1050	4.31	31	20	44
40-60	4.29	0.0424	0.000007	0.0033	0.0209	0.089	0.1110	3.39	31	18	48
60-80	7.52	0.0194	9.000030	0.0039	0.0331	0.076	0.1280	3.17			
80-100	4.45	0.0212	0.000002	0.0056	0.0376	0.076	0.1380	3.94	44	18	24
0-10	4.77	0.0752	0.000002	0.0064	0.0086	0.078	0.0770	5.30	49	24	24
20-40	5.04	0.0431	0.000007	0.0041	0.0218	0.089	0.1040	5.59	17	26	56
40-60	5.89	0.0300	0.000049	0.0048	0.0284	0.085	0.1120	4.53	2	28	68
60-80	4.27	0.0272	0.000025	0.0029	0.0190	0.066	0.0850	4.90	38	18	42
80-100	8.21	0.0219	0.000028	0.0028	0.0188	0.058	0.0760	4.03	1	28	70
0-10	5.47	0.0766	0.000079	0.0038	0.0030	0.040	0.0400	4.57	27	36	33
20-40	4.88	0.0385	0.000055	0.0020	0.0042	0.030	0.0560	4.32	25	30	43
40-60	4.79	0.0388	0.000040	0.0026	0.0246	0.033	0.1360	4.36	27	30	41
60-80	4.78	0.0272	0.000049	0.0018	0.0320	0.068	0.1500	4.72	28	32	37
80-100	4.86	0.0268	0.00041	0.0019	0.0360	0.392	0.1370	5.18	29	28	41
0-10	4.58	0.0762	0.000055	0.0037	0.0036	0.088	0.1380	5.94	38	30	27
20-40	4.41	0.0279	0.000043	0.0033		0.089	0.0420	6.43	29	22	47
40-60	4.56	0.0427	0.000042	0.0029	0.0058	0.104	0.0520	5.76	24	20	53
60-80	4.78	0.0385	0.000043	0.0035	0.0064	0.072	0.0260	5.68	26	18	53
80-100	4.88	0.0289	0.000048	0.0022	0.0069	0.066	0.0550	5.72	25	22	51
0-10	5.35	0.0607	0.000038	0.0032	0.0035	0.058	0.0120	6.00	13	34	49
20-40	4.99	0.0371	0.000028	0.0016	0.0100	0.068	0.0160	4.83	12	26	61
40-60	4.94	0.0247	0.000035	0.0017	0.0102	0.071	0.0510	3.98	11	24	61
60-80	5.05	0.0282	0.000041	0.0015	0.0124	0.045	0.0480	4.82	9	26	63
80-100	5.19	0.0162	0.000028	0.0018	0.0183	0.047	0.0620	5.00	9	26	63

Physical and Chemical Properties of Soil in Taung Oo, Minhla Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.85	0.0487	0.000007	0.0057	0.0144	0.236	0.0059	0.34	50	29	16
20-40	8.23	0.0233	0.000003	0.0039	0.0163	0.239	0.0051	0.93	70	18	9
40-60	8.27	0.0247	0.000004	0.0058				0.93	60	18	19
60-80	8.99	0.0166	0.000003	0.0044	0.0320	0.195	0.0247	0.97	58	27	14
80-100	9.54	0.0222	0.000033	0.0030	0.0560	0.135	0.0322	1.47	58	27	13
0-10	8.13	0.0568	0.000002	0.0042	0.0241	0.213	0.0143	0.25	41	36	27
20-40	9.39	0.0700	0.000005	0.0016	0.0760	0.132	0.0181	1.32	26	30	44
40-60	9.67	0.0230	0.000012	0.0023	0.0810	0.127	0.0207	1.32	28	34	42
60-80	9.81	0.0152	0.000005	0.0034	0.0900	0.119	0.0164	1.37	25	46	28
80-100	9.80	0.0226	0.000002	0.0012	0.0980	0.104	0.0146	1.24	24	38	37
0-10	7.82	0.0145	0.000004	0.0034	0.0104	0.211	0.0125	2.56	35	41	21
20-40	8.85	0.0219	0.000003	0.0027	0.0313	0.190	0.0193	1.35	32	34	33
40-60	9.68	0.0381	0.000004	0.0021	0.0460	0.151	0.0213	1.24	28	34	34
60-80	9.83	0.0212	0.000003	0.0041	0.0470	0.140	0.0278	1.78	25	39	33
80-100	9.87	0.0159	0.000004	0.0030		0.108	0.0220	2.75	28	38	36
0-10	8.14	0.0568	0.001350	0.0103	0.0052	0.114	0.0162	3.46	47	32	19
20-40	8.56	0.0385	0.000012	0.0023	0.0077	0.205	0.0103	3.64	36	40	21
40-60	8.68	0.0229	0.000004	0.0017	0.0076	0.207	0.0184	2.73	36	43	24
60-80	8.79	0.0166	0.000045	0.0030	0.0081	0.204	0.0235	2.85	38	40	21
80-100	8.67	0.0240	0.000007	0.0027	0.0077	0.196	0.0261	3.27	32	47	25
0-10	7.61	0.0575	0.000330	0.0042	0.0078	0.104	0.0255	0.63	45	28	28
20-40	7.96		0.000220	0.0039	0.0088	0.107	0.0320	0.82	30	38	23
40-60	7.78	0.0219	0.001700	0.0027	0.0085	0.079	0.0357	0.40	45	30	21
60-80	8.40	0.0166	0.000029	0.0019	0.0085	0.162	0.0310	0.51	59	26	14
80-100	8.80	0.0212	0.000012	0.0016	0.0089	0.191	0.0255	0.74	40	40	18

Physical and Chemical Properties of Soil in Road Site Plantation, Kamma Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	4.94	0.0826	0.000056	0.0030	0.0029	0.055	0.0490	5.85	51	24	22
20-40	4.92	0.0371	0.000029	0.0013	0.0033	0.049	0.0540	6.12	18	18	62
40-60	4.93	0.0258	0.000034	0.0013	0.0046	0.050	0.0670	4.67	18	14	64
60-80	4.82	0.0226	0.000042	0.0012	0.0074	0.162	0.1040	5.34	13	18	66
80-100	4.81	0.0268	0.000040	0.0013	0.0042	0.041	0.0660	5.33	11	20	66
0-10	4.66	0.8410	0.000094	0.0027	0.0034	0.102	0.0510	7.99	39	24	32
20-40	4.66	0.0374	0.000070	0.0028	0.0707	0.074	0.0880	6.82	20	14	64
40-60	4.70	0.0304	0.000045	0.0019	0.0132	0.076	0.1060	6.19	21	14	62
60-80	4.64	0.0222	0.000042	0.0012	0.0041	0.057	0.0660	1.99	37	16	42
80-100	4.64	0.0254	0.000050	0.0011	0.0248	0.226	0.1100	8.50	43	18	34
0-10	4.41	0.0727	0.000077	0.0023	0.0035	0.231	0.0330	9.95	51	30	14
20-40	4.53	0.0318	0.000046	0.0016	0.0027	0.208	0.0280	4.64	42	24	30
40-60	4.86	0.0254	0.000082	0.0013	0.0030	0.196	0.0300	1.55	20	24	54
60-80	7.32	0.0251	0.000160	0.0019	0.0035	0.194	0.0290	3.14	10	22	66
80-100	7.98	0.0229	0.000044	0.0016	0.0039	0.199	0.0310	2.81	11	18	66
0-10	4.85	0.0702	0.000050	0.0018	0.0035	0.082	0.0440	2.16	51	20	18
20-40	4.96	0.0388	0.000022	0.0011	0.0050	0.082	0.0500	5.35	46	26	26
40-60	4.96	0.0526	0.000018	0.0011	0.0076	0.080	0.0580	5.20	39	26	32
60-80	4.62	0.0392	0.000001	0.0009	0.0104	0.080	0.0670	6.01	45	18	34
80-100	4.55	0.0445	0.000014	0.0012	0.0124	0.075	0.0670	5.68	33	28	36
0-10	4.27	0.0971	0.000007	0.0027	0.0044	0.194	0.0840	7.31	49	32	14
20-40	4.58	0.0667	0.000031	0.0017	0.0251	0.167	0.0970	5.64	46	26	26
40-60	4.53	0.0586	0.000007	0.0014	0.0090	0.143	0.0750	4.84	34	26	38
60-80	4.62	0.0515	0.000008	0.0015	0.0102	0.136	0.0490	5.10	29	26	42
80-100	4.90	0.0321	0.000003	0.0015	0.0135	0.144	0.1100	4.79	26	26	46

Physical and Chemical Properties of Soil in Kywe Thay, Aunglan Township

Depth(cm)	PH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	5.16	0.0219	0.000078	0.0021	0.0043	0.049	0.0158	2.09	79	10	8
20-40	5.23	0.0184	0.000078	0.0015	0.0015	0.067	0.0076	0.75	83	10	2
40-60	5.50	0.0109	0.000080	0.0012	0.0018	0.036	0.0050	0.61	76	16	6
60-80	5.22	0.0191	0.000084	0.0013	0.0019	0.054	0.0081	1.69	79	14	6
80-100	5.54	0.0177	0.000098	0.0011	0.0016	0.036	0.0082	0.30	75	16	6
0-10	5.42	0.0194	0.000112	0.0025	0.0050	0.035	0.0052	0.78	76	8	4
20-40	5.11	0.0113	0.000088	0.0018	0.0018	0.038	0.0060	0.05	78	10	8
40-60	4.86	0.0102	0.000107	0.0017		0.024	0.0063	0.20	78	10	8
60-80	4.53	0.0098	0.000091	0.0017	0.0022	0.024	0.0063	0.30	78	8	10
80-100	4.35	0.0120	0.000143	0.0015	0.0021	0.047	0.0069	0.22	77	8	10
0-10	5.30	0.0251	0.000086	0.0017	0.0036	0.029	0.0030	0.42	91	6	1
20-40	4.72	0.0162	0.000114	0.0011	0.0032	0.012	0.0012	0.57	91	6	1
40-60	5.08	0.0148	0.000094	0.0009	0.0032	0.015	0.0017	0.98	80	10	4
60-80	4.71	0.0169	0.000104	0.0006	0.0030	0.013	0.0014	1.07	85	10	1
80-100	4.85	0.0141	0.000132	0.0010	0.0031	0.024	0.0013	0.44	87	10	1
0-10	4.70	0.0251	0.000099	0.0020	0.0029	0.025	0.0036	0.45	91	2	4
20-40	4.94	0.0162	0.000104	0.0015	0.0037	0.015	0.0016	0.32	87	10	1
40-60	4.92	0.0131	0.000082	0.0007	0.0025	0.017	0.0008	0.11	86	4	4
60-80	4.94	0.0159	0.000027	0.0011	0.0024	0.018	0.0006	1.79	82	14	1
80-100	4.92	0.0297	0.000038	0.0008	0.0024	0.024	0.0009	0.15	86	4	4
0-10	6.06	0.0261	0.000064	0.0028	0.0058	0.012	0.0012	0.39	96	0	1
20-40	4.04	0.0240	0.000086	0.0016	0.0041	0.022	0.0016	0.64	93	3	1
40-60	4.76	0.0307	0.000056	0.0015	0.0037	0.027	0.0030	0.83	77	18	3
60-80	4.94	0.0177	0.000039	0.0015	0.0050	0.027	0.0038	0.65	74	18	5
80-100	4.74	0.0155	0.000034	0.0023	0.0031	0.026	0.0044	0.37	73	18	5

Physical and Chemical Properties of Soil in Sin Chi Taing, Aunglan Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.13	0.0434	0.001080	0.0031	0.0204	0.294	0.0330	3.67	71	18	7
20-40	5.93	0.0318	0.001080	0.0024	0.0177	0.230	0.0632	2.33	71	18	7
40-60	6.00	0.0162	0.001330	0.0014	0.0175	0.162	0.0293	2.04	70	18	7
60-80	5.97	0.0191	0.001380	0.0019	0.0059	0.161	0.0288	2.04	71	22	5
80-100	6.00	0.0169	0.001150	0.0018	0.0053	0.174	0.0308	2.01	70	18	9
0-10	7.22	0.0713	0.001030	0.0031	0.0051	0.341	0.0306	4.21	58	22	15
20-40	6.88	0.0399	0.001320	0.0017	0.0058	0.198	0.0158	1.95	70	20	7
40-60	6.98	0.0402	0.001660	0.0018	0.0053	0.178	0.0165	2.06	75	20	3
60-80	6.62	0.0237	0.001820	0.0017	0.0051	0.139	0.0155	1.23	77	20	1
80-100	6.50	0.0254	0.001680	0.0014	0.0054	0.130	0.0192	1.30	76	28	2
0-10	5.48	0.0364	0.001220	0.0022	0.0052	0.157	0.0440	4.27	71	20	6
20-40	5.38	0.0685	0.001220	0.0001	0.0048	0.117	0.0430	2.22	77	16	2
40-60	5.28	0.0233	0.001210	0.0004	0.0054	0.099	0.0370	2.06	83	10	2
60-80	5.43	0.0148	0.001230	0.0008	0.0055	0.132	0.0500	1.70	80	16	1
80-100	5.45	0.0180	0.001470	0.0013	0.0061	0.129	0.0470	2.17	80	14	2
0-10	5.61	0.0508	0.001550	0.0025	0.0065	0.147	0.0340	3.49	71	16	10
20-40	6.08	0.0325	0.001580	0.0006	0.0049	0.161	0.0300	3.38	70	18	6
40-60	6.15	0.0166	0.002760	0.0009	0.0059	0.146	0.0260	2.79	83	8	4
60-80	6.99	0.0113	0.002910	0.0007	0.0058	0.133	0.0266	2.40	80	14	2
80-100	7.53	0.0215	0.001860	0.0012	0.0050	0.412	0.0340	3.22	70	16	6
0-10	5.85	0.0438	0.000910	0.0017	0.0047	0.178	0.0390	6.02	78	10	8
20-40	6.07	0.0177	0.001130	0.0169	0.0040	0.136	0.0410	4.20	79	12	4
40-60	6.05	0.0185	0.001100	0.0174	0.0019	0.132	0.0420	4.24	82	14	2
60-80	6.07	0.0159	0.001550	0.0112	0.0031	0.096	0.0400	3.56	79	14	4
80-100	6.07	0.0155	0.001440	0.0008	0.0043	0.119	0.0500	3.98	69	18	8

Physical and Chemical Properties of Soil in 1994, Bwet Gyi, Aunglan Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.57	0.0391	0.000037	0.0086	0.0073	0.063	0.0212	1.13	82	14	1
20-40	6.60	0.0300	0.000240	0.0084	0.0077	0.079	0.0097	1.22	80	12	2
40-60	6.40	0.0119	0.000117	0.0071	0.0059	0.077	0.0076	0.78	88	10	1
60-80	6.72	0.0232	0.000074	0.0062	0.0034	0.058	0.0053	0.54	90	10	1
80-100	6.59	0.0238	0.000073	0.0058	0.0053	0.038	0.0042	1.20	73	9	14
0-10	7.24	0.0285	0.000049	0.0080	0.0240	0.061	0.0216	1.26	93	8	2
20-40	6.55	0.0255	0.000840	0.0093	0.0046	0.066	0.0100	1.48	83	9	4
40-60	6.23	0.0187	0.000012	0.0049	0.0059	0.072	0.0096	1.31	82	13	2
60-80	5.62	0.0175	0.000083	0.0066	0.0208	0.075	0.0121	0.98	86	9	4
80-100	6.52	0.0198	0.000084	0.0072	0.0073	0.058	0.0099	0.95	87	10	2
0-10	6.92	0.0164	0.000145	0.0082	0.0136	0.051	0.0080	1.64	79	14	6
20-40	6.92	0.0374	0.000117	0.0123	0.0144	0.056	0.0129	1.96	68	19	13
40-60	6.20	0.0300	0.000044	0.0083	0.0059	0.054	0.0140	1.72	69	13	14
60-80	6.09	0.0272	0.000036	0.0067	0.0029	0.062	0.0171	1.61	70	12	17
80-100	6.19	0.0289	0.000064	0.0051	0.0057	0.065	0.0194	1.69	74	12	15
0-10	6.73	0.0461	0.000029	0.0025	0.0056	0.036	0.0172	1.28	78	20	1
20-40	5.93	0.0243	0.000850	0.0040	0.0053	0.043	0.0090	0.59	77	14	5
40-60	5.79	0.0085	0.000115	0.0042	0.0030	0.033	0.0076	0.49	79	8	8
60-80	5.55	0.0175	0.000043	0.0029	0.0052	0.045	0.0102	0.04	82	10	9
80-100	5.59	0.0187	0.000065	0.0069	0.0092	0.068	0.0222	0.50	80	10	10
0-10	5.98	0.0272	0.000044	0.0037	0.0041	0.034	0.0081	0.62	90	8	2
20-40	5.88	0.0215	0.000240	0.0029	0.0040	0.037	0.0057	0.38	88	1	8
40-60	6.37	0.0181	0.000108	0.0030	0.0043	0.031	0.0048	0.16	87	10	2
60-80	5.69	0.0181	0.000082	0.0029	0.0107	0.010	0.0042	0.23	84	10	2
80-100	5.78	0.0147	0.000091	0.0019	0.0086	0.010	0.0041	0.26	85	10	6

Physical and Chemical Properties of Soil in 1995, Bwet Gyi, Aunglan Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.24	0.0492	0.001100	0.0550	0.0083	0.059	0.0340	1.68	74	14	14
20-40	7.33	0.0243	0.000140	0.0243	0.0102	0.071	0.0430	1.58	56	21	19
40-60	6.79	0.0181	0.000103	0.0043	0.0086	0.060	0.0400	1.54	54	18	24
60-80	6.28	0.0147	0.000073	0.0019	0.0083	0.064	0.3780	1.62	84	4	10
80-100	6.42	0.0085	0.000600	0.0018	0.0081	0.051	0.0322	1.10	63	32	3
0-10	7.03	0.0345	0.000310	0.0041	0.0159	0.040	0.0112	1.91	84	11	4
20-40	6.29	0.0091	0.000265	0.0023	0.0122	0.023	0.0126	2.03	76	16	6
40-60	6.47	0.0243	0.000290	0.0019	0.0051	0.027	0.0156	0.58	62	26	6
60-80	6.28	0.0147	0.000460	0.0015	0.0049	0.032	0.0181	0.56	78	4	16
80-100	6.31	0.0093	0.000490	0.0035	0.0034	0.035	0.0184	3.02	76	4	18
0-10	6.51	0.0164	0.000750	0.0030	0.0043	0.029	0.0081	0.24	78	18	3
20-40	6.62	0.0192	0.000580	0.0022	0.0066	0.049	0.0106	0.33	80	10	8
40-60	6.60	0.0167	0.000370	0.0024	0.0068	0.030	0.0206	0.51	77	12	10
60-80	6.49	0.0188	0.000650	0.0023	0.0112	0.036	0.0272	0.51	70	24	4
80-100	6.38	0.0184	0.000500	0.0017	0.0193	0.040	0.0299	1.20	82	1	14
0-10	5.98	0.0184	0.000490	0.0016	0.0104	0.033	0.0071	0.56	82	11	6
20-40	5.92	0.0178	0.000500	0.0014	0.0062	0.018	0.0113	0.29	82	10	6
40-60	5.84	0.0170	0.000540	0.0012	0.0063	0.016	0.0111	0.43	88	7	3
60-80	5.76	0.0201	0.000530	0.0013	0.0044	0.016	0.0106	0.36	90	3	6
80-100	5.80	0.0190	0.000570	0.0011	0.0054	0.018	0.0107	0.24	92	1	5
0-10	5.56	0.0212	0.000390	0.0028	0.0116	0.032	0.0070	0.48	86	8	4
20-40	5.45	0.0187	0.000310	0.0017	0.0060	0.022	0.0071	0.39	87	4	4
40-60	5.33	0.0173	0.000410	0.0019	0.0151	0.023	0.0116	0.38	88	5	6
60-80	5.22	0.0246	0.000570	0.0019	0.0105	0.024	0.0144	0.44	88	2	8
80-100	5.39	0.0226	0.000560	0.0017	0.0090	0.024	0.0170	0.78	90	1	8

Physical and Chemical Properties of Soil in Road Site Plantation, Sinpaungwei Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.41	0.0458	0.000016	0.0170	0.0051	0.393	0.0700	2.01	58	38	2
20-40	7.40	0.0190	0.001620	0.0122	0.0080	0.129	0.0490	2.87	52	36	12
40-60	8.43	0.0436	0.000027	0.0043	0.0067	0.400	0.0560	2.31	55	43	3
60-80	8.59	0.0306	0.000017	0.0043	0.0062	0.401	0.0650	2.39	63	37	1
80-100	7.93	0.0538	0.000042	0.0071	0.0041	0.312	0.0920	3.37	54	39	10
0-10	5.93	0.0490	0.000109	0.0087	0.0086	0.046	0.0206	1.88	77	20	6
20-40	6.06	0.0400	0.000068	0.0051	0.0053	0.520	0.0262	2.89	67	19	15
40-60	6.24	0.0385	0.000026	0.0053	0.0057	0.045	0.0368	2.34	60	20	21
60-80	6.16	0.0342	0.000065	0.0053	0.0076	0.048	0.0392	3.78	57	20	24
80-100	6.28	0.0357	0.000025	0.0055	0.0073	0.050	0.0710	2.31	52	22	26
0-10	7.77	0.0337	0.000132	0.0059	0.0048	0.168	0.0630	3.88	57	16	23
20-40	7.57	0.0314	0.000820	0.0044	0.0102	0.139	0.0680	4.52	54	14	26
40-60	7.46	0.0331	0.000025	0.0043	0.0133	0.157	0.0700	4.86	53	13	31
60-80	7.22	0.0297	0.000074	0.0048	0.0149	0.173	0.0700	5.07	47	18	29
80-100	7.22	0.0263	0.000370	0.0028	0.0149	0.205	0.0305	5.63	40	25	28
0-10	7.13	0.0495	0.000360	0.0091	0.0030	0.094	0.0322	2.44	71	8	15
20-40	7.59	0.0441	0.000312	0.0061	0.0024	0.073	0.0420	3.05	68	13	18
40-60	8.04	0.0708	0.000027	0.0185	0.0033	0.063	0.0430	3.32	60	9	26
60-80	7.57	0.0430	0.000026	0.0213	0.0031	0.060	0.0470	2.86	58	12	26
80-100	7.63	0.0416	0.000025	0.0193	0.0042	0.058	0.0710	3.19	55	14	26
0-10	8.87	0.0229	0.000019	0.0061	0.0091	0.270	0.0470	5.94	57	30	15
20-40	10.09	0.0156	0.000028	0.0044	0.1430	0.048	0.0470	1.53	33	30	35
40-60	9.57	0.0190	0.000058	0.0036	0.1790	0.015	0.0430	1.71	34	26	36
60-80	9.59	0.0153	0.000058	0.0054	0.1910	0.015	0.0390	1.37	35	27	37
80-100	9.63	0.0167	0.000048	0.0045	0.2310	0.023	0.0410	1.12	33	34	33

Physical and Chemical Properties of Soil in Minbu Taung, Minbu Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.89	0.0522	0.001580	0.0032	0.0043	0.297	0.0213	1.91	66	20	12
20-40	7.56	0.0487	0.001470	0.0027	0.0061	0.199	0.0260	2.97	53	24	18
40-60	8.73	0.0371	0.001780	0.0028	0.0300	0.170	0.0420	3.62	23	40	40
60-80	9.30	0.0325	0.000143	0.0037	0.0430	0.284	0.0670	3.13	13	42	46
80-100	9.42	0.0297	0.000193	0.0040	0.0630	0.302	0.0690	3.21	13	51	37
0-10	8.15	0.0349	0.002730	0.0043	0.0085	0.132	0.0146	1.13	80	14	2
20-40	8.34	0.0282	0.002990	0.0027	0.0053	0.111	0.0100	0.92	81	13	1
40-60	8.30	0.0367	0.000129	0.0023	0.0057	0.340	0.0405	2.52	60	24	16
60-80	8.74	0.0275	0.001360	0.0023	0.0041	0.260	0.0342	0.78	77	18	4
80-100	8.89	0.0254	0.002130	0.0022	0.0055	0.289	0.0338	0.79	86	8	5
0-10	8.43	0.0424	0.001490	0.0057	0.0112	0.399	0.0490	2.10	50	23	25
20-40	7.81	0.0314	0.002540	0.0052	0.0140	0.383	0.0386	2.76	18	46	36
40-60	7.84	0.0282	0.002370	0.0058	0.0199	0.312	0.0440	2.68	10	47	45
60-80	8.00	0.0272	0.002620	0.0068	0.0240	0.211	0.0710	2.48	9	39	51
80-100	8.09	0.0286	0.002760	0.0074	0.0310	0.153	0.0082	3.70	5	45	53
0-10	8.64	0.0244	0.001360	0.0027	0.0084	0.330	0.0232	1.49	75	12	10
20-40	8.82	0.0340	0.000153	0.0019	0.0049	0.400	0.0470	1.19	75	16	8
40-60	8.95	0.0219	0.000138	0.0019	0.0061	0.406	0.0590	1.84	79	11	8
60-80	8.09	0.0318	0.000084	0.0037	0.0128	0.386	0.0670	1.80		23	24
80-100	9.01	0.0251	0.000085	0.0026	0.0084	0.380	0.0650	1.69	80	10	10
0-10	8.52	0.0367	0.001580	0.0045	0.0067	0.322	0.0380	2.91	56	26	16
20-40	8.56	0.0314	0.000065	0.0024	0.0067	0.320	0.0480	4.22	37	34	30
40-60	8.54	0.0286	0.000078	0.0022	0.0086	0.360	0.0600	4.11	40	35	26
60-80	8.56	0.0367	0.000055	0.0020	0.0128	0.340	0.0720	3.92	31	38	30
80-100	8.04	0.0282	0.001300	0.0019	0.0163	0.210	0.0790	4.90	29	42	35

Physical and Chemical Properties of Soil in Zeaing, Minbu Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.07	0.0127	0.000318	0.0480		0.411	0.0580	1.29	77	14	6
20-40	5.87	0.0120	0.000609	0.0089	0.0029	0.040	0.0099	1.27	72	12	14
40-60	5.61	0.0141	0.000091	0.0048	0.0340	0.048	0.0132	1.65	61	16	18
60-80	5.92	0.0219	0.000089	0.0053	0.0034	0.053	0.0161	2.12	61	18	18
80-100	5.92	0.0314	0.000090	0.0074	0.0031	0.059	0.0254	2.66	66	22	16
0-10	8.01	0.0261	0.001000	0.0076	0.0044	0.069	0.0245	3.69	52	28	18
20-40	7.79	0.0254	0.001350	0.0094	0.0039	0.258	0.0246	3.00	50	30	14
40-60	7.48	0.0134	0.001020	0.0074	0.0027	0.209	0.0099	1.08	83	6	6
60-80	7.38	0.0124	0.000190	0.0041	0.0022	0.071	0.0041	1.26	89	6	2
80-100	7.63	0.0085	0.000322	0.0042	0.0016	0.059	0.0031	1.35	90	1	4
0-10	6.39	0.0445	0.000496	0.0108	0.0010	0.146	0.0285	4.01	47	26	24
20-40	6.63	0.0332	0.000224	0.0056	0.0011	0.152	0.0259	4.48	47	20	28
40-60	7.85	0.0424	0.000245	0.0065	0.0028	0.223	0.0319	4.59	45	22	30
60-80	8.12	0.0360	0.000440	0.0088	0.0024	0.117	0.0354	5.47	40	28	30
80-100	8.23	0.0427	0.000151	0.0080	0.0043	0.199	0.0400	5.91	30	34	32
0-10	8.34	0.0572	0.000530		0.0037	0.100	0.0187	2.43	73	10	14
20-40	7.97	0.0282	0.000134	0.0054	0.0068	0.105	0.0219	4.05	73	6	18
40-60	7.68	0.0226	0.000118	0.0043	0.0071	0.068	0.0180	2.35	79	4	14
60-80	7.34	0.0300	0.000138	0.0039	0.0075	0.088	0.0236	2.90	75	6	16
80-100	7.19	0.0275	0.000235	0.0035	0.0068	0.075	0.0242	3.09	73	6	18
0-10	5.76	0.0431	0.000338	0.0063	0.0030	0.050	0.0104	0.69	70	18	8
20-40	6.00	0.0282	0.000102	0.0034	0.0048	0.053	0.0113	0.50	70	16	12
40-60	5.84	0.0229	0.000095	0.0076	0.0029	0.047	0.0127	0.50	65	18	12
60-80	5.86	0.0254	0.000123	0.0039	0.0039	0.073	0.0169	0.78	61	20	14
80-100	5.64	0.0219	0.000179	0.0041	0.0037	0.076	0.0223	1.04	51	26	20

Physical and Chemical Properties of Soil in Kywe Di Kwin, Pwintphu Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	9.30	0.0459	0.000070	0.0036	0.0330	0.470	0.0311	2.81	20	34	42
20-40	9.70	0.0289	0.000075	0.0028	0.0960	0.364	0.0289	2.77	18	32	46
40-60	10.11	0.0297	0.000077	0.0021	0.1610	0.278	0.0285	2.40	15	32	50
60-80	8.66	0.0254	0.000079	0.0017	0.2060	0.361	0.0385	2.93	21	72	6
80-100	8.42	0.0258	0.000075	0.0016	0.2340	0.275	0.0394	3.21	17	70	10
0-10	8.30	0.0544	0.000063	0.0028	0.0057	0.610	0.0242	4.28	14	46	38
20-40	8.69	0.0388	0.000062	0.0026	0.0112	0.480	0.0216	4.47	11	46	38
40-60	8.88	0.0311	0.000068	0.0022	0.0266	0.510	0.0215	4.02	21	36	38
60-80	9.09	0.0304	0.000019	0.0018	0.0180	0.510	0.0202	3.84	20	40	28
80-100	8.49	0.0300	0.000021	0.0019	0.0240	0.470	0.0187	4.30	32	60	4
0-10	9.46	0.0575	0.000041	0.0036	0.0160	0.460	0.0247	3.25	21	44	30
20-40	10.29	0.0346	0.000034	0.0021	0.0980	0.430	0.0290	3.24	33	30	34
40-60	10.33	0.0293	0.000023	0.0020	0.0950	0.354	0.0222	3.30	17	36	44
60-80	10.21	0.0275	0.000020	0.0024	0.1620	0.333	0.0240	2.42	17	32	48
80-100	10.13	0.0367	0.000023	0.0028	0.1800	0.293	0.0234	2.23	12	36	48
0-10	7.88	0.0618	0.000039	0.0048	0.0072	0.440	0.0335	4.52	20	38	40
20-40	8.54	0.0364	0.000022	0.0026	0.0390	0.440	0.0287	2.90	19	38	40
40-60	8.90	0.0332	0.000028	0.0018	0.0630	0.367	0.0272	3.58	17	36	44
60-80	8.86	0.0247	0.000023	0.0022	0.0790	0.371	0.0281	4.32	17	32	46
80-100	8.89	0.0268	0.000021	0.0019	0.1060	0.326	0.0262	3.29	16	30	48
0-10	7.74	0.0494	0.000026	0.0023	0.0051	0.440	0.0374	4.92	23	40	34
20-40	7.88	0.0272	0.000024	0.0021	0.0650	0.560	0.0408	3.90	16	40	38
40-60	7.94	0.0342	0.000016	0.0014	0.0056	0.620	0.0408	2.96	13	62	20
60-80	8.02	0.0219	0.000021	0.0025	0.0370	0.410	0.0600	4.08	17	72	6
80-100	7.89	0.0226	0.000017	0.0020	0.0152	0.530	0.0390	3.17	16	76	4

Physical and Chemical Properties of Soil in Myaung Oo, Pwintphu Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.78	0.0286	0.000011	0.0040	0.0037	0.520	0.0195	1.31	61	26	10
20-40	7.79	0.0360	0.000015	0.0019	0.0075	0.630	0.0128	3.28	60	24	10
40-60	7.89	0.0388	0.000018	0.0021	0.0041	0.290	0.0099	1.01	57	24	16
60-80	8.10	0.0268	0.000017	0.0020	0.0068	0.520	0.0143	1.11	45	36	16
80-100	8.15	0.0233	0.000019	0.0020	0.0049	0.350	0.0340	1.13	46	30	20
0-10	8.85	0.0494	0.000081	0.0048	0.0043	0.112	0.0286	1.55	66	18	14
20-40	6.03	0.0374	0.000053	0.0071	0.0073	0.113	0.0242	2.05	50	30	16
40-60	6.59	0.0374	0.000054	0.0056	0.0060	0.110	0.0249	2.06	51	32	14
60-80	6.24	0.0551	0.000088	0.0046	0.0048	0.134	0.0248	2.19	51	30	14
80-100	6.16	0.0325	0.000042	0.0051	0.0052	0.118	0.0217	2.24	50	30	14
0-10	8.12	0.0409	0.000025	0.0020	0.0038	0.370	0.0258	1.55	71	16	10
20-40	8.25	0.0282	0.000032	0.0011	0.0056	0.400		1.56	52	24	20
40-60	8.77	0.0360	0.000033	0.0028	0.0214	0.320	0.0402	1.23	65	16	16
60-80	8.93	0.0198	0.000025	0.0018	0.0138	0.290	0.0387	1.43	51	22	22
80-100	9.11	0.0618	0.000081	0.0026	0.0080	0.370	0.0420	1.70	54	20	22
0-10	5.44	0.0357	0.000099	0.0050	0.0041	0.057	0.0097	1.81	68	16	16
20-40	4.87	0.0370	0.000074	0.0045	0.0049	0.044	0.0105	1.39	65	10	22
40-60	5.94	0.0480	0.000067	0.0053	0.0053	0.052	0.0127	1.45	55	20	22
60-80	4.13	0.0551	0.000051	0.0022	0.0044	0.045	0.0117	1.57	61	14	22
80-100	4.47	0.0614	0.000082	0.0033	0.0048	0.058	0.0108	1.74	60	12	24
0-10	5.84	0.0402	0.000072	0.0036	0.0096	0.048	0.0093	0.54	56	26	16
20-40	7.32	0.0572	0.000056	0.0014	0.0164	0.065	0.0187	0.82	65	12	20
40-60	7.72	0.0293	0.000037	0.0025	0.0230	0.068	0.0232	0.46	67	8	20
60-80	7.24	0.0229	0.000040	0.0039	0.0260	0.053	0.0319	1.14	60	10	28
80-100	7.82	0.0576	0.000029	0.0023	0.0059	0.058	0.0351	1.37	55	30	12

Physical and Chemical Properties of Soil in Salin Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	5.43	0.0282	0.000140	0.0040	0.0063	0.039	0.0056	0.13	76	9	14
20-40	5.16	0.0222	0.000061	0.0034	0.0052	0.027	0.0041	1.90	74	10	14
40-60	4.12	0.0282	0.000059	0.0021	0.0068	0.037	0.0090	0.39	68	10	20
60-80	3.87	0.0289	0.000069	0.0034	0.0146	0.032	0.0157	0.56	56	14	29
80-100	3.97	0.0237	0.000063	0.0033	0.0145	0.031	0.0141	0.77	59	17	26
0-10	8.26	0.0162	0.000009	0.0021	0.1670	0.313	0.0083	1.61	50	23	31
20-40	9.24	0.0237	0.000008	0.0021	0.2530	0.202	0.0084	1.83	62	3	29
40-60	9.30	0.0244	0.000009	0.0017	0.2190	0.169	0.0780	1.01	44	20	32
60-80	9.39	0.0229	0.000011	0.0020	0.2230	0.168	0.0770	1.54	46	16	31
80-100	9.41	0.0241	0.000013	0.0020	0.2170	0.156	0.0750	1.05	58	14	29
0-10	8.32	0.0222	0.000008	0.0033	0.0101	0.480	0.0420	1.11	69	18	12
20-40	8.20	0.0233	0.000013	0.0017	0.0063	0.355	0.0910	0.86	74	6	18
40-60	8.15	0.0173	0.000014	0.0020	0.0068	0.384	0.0800	0.73	71	11	15
60-80	8.03	0.0247	0.000022	0.0028	0.0055	0.413	0.0440	0.28	73	6	17
80-100	7.96	0.0261	0.000011	0.0014	0.0046	0.530	0.0380	0.26	72	7	20
0-10	5.72	0.0275	0.000016	0.0044	0.0107	0.039	0.0097	3.38	70	16	13
20-40	7.20	0.0201	0.000094	0.0028	0.0040	0.080	0.0278	0.57	70	16	16
40-60	5.72	0.0205	0.000061	0.0044	0.0053	0.045	0.0270	0.84	61	17	17
60-80	5.99	0.0219	0.000052	0.0044	0.0061	0.042	0.0276	0.26	63	22	16
80-100	7.95	0.0205	0.000127	0.0043	0.0126	0.070	0.0350	0.35	61	23	17
0-10	7.70	0.0226	0.001350	0.0025	0.0035	0.193	0.0311	0.48	88	10	1
20-40	8.51	0.0166	0.001350	0.0025	0.0145	0.158	0.0387	0.31	97	1	1
40-60	8.85	0.0166	0.001300	0.0022	0.0262	0.099	0.0274	0.18	97	1	1
60-80	8.92	0.0198	0.001450	0.0025	0.0386	0.081	0.0277	0.25	98	0	1
80-100	9.10	0.0155	0.000840	0.0023	0.0610	0.098	0.0380	0.44	91	3	2

Physical and Chemical Properties of Soil in Ngaphe Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.79	0.0558	0.000017	0.0061	0.0029	0.310	0.060	4.54	17	48	32
20-40	7.81	0.0541	0.000008	0.0016	0.0029	0.340	0.073	3.09	21	46	30
40-60	7.88	0.0381	0.000019	0.0013	0.0032	0.280	0.088	2.71	17	53	30
60-80	8.09	0.0487	0.000081	0.0019	0.0034	0.039	0.096	4.04	37	34	26
80-100	8.12	0.0339	0.000046	0.0014	0.0022	0.387	0.075	1.75	37	34	26
0-10	7.82	0.0720	0.000059	0.0040	0.0039	0.340	0.050	4.76	39	30	28
20-40	8.16	0.0240	0.000069	0.0016	0.0041	0.290	0.069	2.49			
40-60	8.55	0.0261	0.000077	0.0018	0.0129	0.373	0.085	2.76	16	39	52
60-80	9.12	0.0353	0.000087	0.0020	0.0410	0.282	0.108	3.07	7	48	47
80-100	9.30	0.0346	0.000093	0.0077	0.0470	0.224	0.099	2.31	17	40	44
0-10	7.96	0.0628	0.000117	0.0178	0.0033	0.340	0.040	5.83	21	29	51
20-40	8.20	0.0551	0.000107	0.0117	0.0028	0.370	0.048	4.08	10	35	47
40-60	8.26	0.0409	0.000108	0.0122	0.0046	0.381	0.070	3.91	12	29	47
60-80	8.57	0.0427	0.000111	0.0117	0.0089	0.326	0.078	4.59	11	36	48
80-100	9.02	0.0392	0.000115	0.0046	0.0220	0.327	0.084	2.84	8	40	53
0-10	7.90	0.0434	0.000117	0.0040	0.0040	0.410	0.068	5.46	11	26	62
20-40	8.34	0.0268	0.000102	0.0026	0.0158	0.298	0.095	4.12	6	32	62
40-60	9.07	0.0229	0.000079	0.0016	0.0390	0.229	0.118	4.64	14	19	66
60-80	9.27	0.0222	0.000077	0.0018	0.0470	0.205	0.123	5.18	3	36	58
80-100	9.58	0.0148	0.000075	0.0016	0.0650	0.178	0.129	4.28	5	38	59
0-10	6.46	0.0325	0.000089	0.0043	0.0207	0.134	0.088	6.33	40	24	32
20-40	6.82	0.0233	0.000076	0.0028	0.0330	0.120	0.095	6.02	20	42	40
40-60	7.13	0.0226	0.000091	0.0028	0.0330	0.127	0.094	6.42	37	4	53
60-80	7.67	0.0275	0.000093	0.0038	0.0400	0.113	0.103	6.22	27	22	51
80-100	8.21	0.0251	0.000096	0.0030	0.0460	0.101	0.104	4.19	17	22	55

Physical and Chemical Properties of Soil in 66, Kongyi, Shwebo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	6.61	0.0226	0.000850	0.0248	0.0028	0.068	0.0198	1.18	61	11	25
20-40	6.20	0.0141	0.000270	0.0198	0.0024	0.077	0.0261	1.44	74	8	15
40-60	6.26	0.0177	0.000072	0.0195	0.0025	0.085	0.0357	2.31	80	9	10
60-80	6.38	0.0148	0.000032	0.0197	0.0047	0.109	0.0366	2.53	59	16	26
80-100	6.56	0.0155	0.000061	0.0205	0.0053	0.114	0.0314	2.16	62	14	24
0-10	6.92	0.0215	0.001020	0.0373	0.0037	0.054	0.0194	1.15	77	11	11
20-40	6.61	0.0177	0.000057	0.0250	0.0050	0.038	0.0377	2.50	72	9	18
40-60	6.66	0.0177	0.000048	0.0257	0.0058	0.072	0.0247	2.08	74	9	16
60-80	7.02	0.0145	0.000036	0.0258	0.0066	0.095	0.0319	2.27	74	9	16
80-100	7.09	0.0148	0.000038	0.0290	0.0060	0.084	0.0277	2.20	70	9	14
0-10	7.96	0.0169	0.001170	0.0303	0.0051	0.094	0.0131	1.05	80	8	7
20-40	8.17	0.0134	0.000027	0.0282	0.0088	0.790	0.0440	1.53	85	6	6
40-60	8.03	0.0124	0.000970	0.0257	0.0032	0.109	0.0130	1.31	85	6	4
60-80	7.83	0.0113	0.001030	0.0277	0.0032	0.108	0.0107	1.14	85	6	4
80-100	8.26	0.0113	0.000920	0.0257	0.0050	0.120	0.0720	1.26	83	7	4
0-10	7.29	0.0289	0.000430	0.0296	0.0038	0.129	0.0186	2.26	71	11	12
20-40	7.96	0.0254	0.000560	0.0299	0.0042	0.206	0.0179	2.35	66	14	15
40-60	8.00	0.0104	0.000720	0.0273	0.0037	0.181	0.0140	3.35	66	14	16
60-80	8.49	0.0198	0.000630	0.0272	0.0043	0.206	0.0116	3.42	64	13	17
80-100	8.63	0.0191	0.000320	0.0221	0.0036	0.249	0.0112	3.44	64	15	18
0-10	7.02	0.0205	0.000300	0.0256	0.0018	0.093	0.0279	2.88	74	11	14
20-40	7.27	0.0229	0.000083	0.0227	0.0031	0.104	0.0336	4.11	65	13	20
40-60	7.46	0.0124	0.000075	0.0211	0.0033	0.124	0.0274	3.40	64	11	17
60-80	7.40	0.0141	0.000315	0.0399	0.0046	0.286	0.0400	3.46	69	12	17
80-100	7.47	0.0127	0.000240	0.0216	0.0041	0.121	0.0246	2.33	69	11	16

Physical and Chemical Properties of Soil in 70, Kongyi, Shwebo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	7.22	0.0205	0.000005	0.0021	0.0014	0.340	0.0200	1.21	83	5	10
20-40	6.68	0.0191	0.000006	0.0035	0.0014	0.360	0.0200	0.76	80	7	12
40-60	6.94	0.0184	0.000021	0.0023	0.0020	0.410	0.0220	1.37	80	9	10
60-80	6.81	0.0162	0.000005	0.0018	0.0018	0.440	0.0230	1.54	80	7	13
80-100	6.94	0.0155	0.000005	0.0023	0.0023	0.360	0.0260	1.71	80	6	12
0-10	6.83	0.0162	0.000410	0.0088	0.0016	0.399	0.0510	1.61	77	6	12
20-40	7.03	0.0191	0.000400	0.0025	0.0017	0.339	0.0370	1.55	79	7	11
40-60	6.94	0.0290	0.000143	0.0024	0.0018	0.330	0.0540	2.42	59	13	23
60-80	6.93	0.0155	0.000390	0.0016	0.0018	0.303	0.0390	2.08	70	9	21
80-100	7.05	0.0297	0.000440	0.0021	0.0019	0.252	0.0270	2.58	64	13	19
0-10	7.86	0.0184	0.000010	0.0050	0.0016	0.400	0.0100	1.25	86	4	9
20-40	7.53	0.0148	0.000010	0.0031	0.0014	0.860	0.0100	1.52	82	6	12
40-60	6.92	0.0134	0.000021	0.0025	0.0020	0.410	0.0108	1.54	83	6	12
60-80	7.11	0.0113	0.000009	0.0012	0.0020	0.370	0.0116	1.94	86	5	9
80-100	7.07	0.0120	0.000009	0.0025	0.0033	0.380	0.0131	1.54	89	3	7
0-10	8.75	0.0325	0.000215	0.0080	0.0029	0.290	0.0240	1.56	84	7	7
20-40	8.63	0.0318	0.000112	0.0030	0.0020	0.211	0.0144	1.77	81	6	9
40-60	8.58	0.0325	0.000075	0.0024	0.0017	0.247	0.0120	2.08	78	8	10
60-80	8.65	0.0254	0.000010	0.0021	0.0018	0.770	0.0115	2.09	75	9	11
80-100	8.57	0.0268	0.000024	0.0019	0.0019	0.340	0.0137	2.01	78	8	9
0-10	7.37	0.0155	0.000014	0.0055	0.0071	0.400	0.0600	1.48	86	3	7
20-40	7.12	0.0205	0.000720	0.0029	0.0260	0.313	0.0640	1.81	86	1	7
40-60	6.95	0.0134	0.000080	0.0027	0.0510	0.325	0.0660	1.35	83	3	10
60-80	7.26	0.0148	0.000490	0.0016	0.0780	0.261	0.0670	1.90	84	5	11
80-100	7.03	0.0106	0.001200	0.0014	0.1170	0.266	0.0800	1.92	83	5	12

Physical and Chemical Properties of Soil in Road Site Plantation, Shwebo Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	9.77	0.0205	0.000180	0.0043	0.0050	0.054	0.0131	1.30	84	10	4
20-40	10.02	0.0194	0.000021	0.0033	0.3360	0.330	0.0300	0.50	71	13	13
40-60	9.63	0.0141	0.000038	0.0032	0.4010	0.281	0.0290	0.45	71	12	14
60-80	10.07	0.0148	0.000006	0.0029	0.3840	0.338	0.0306	0.49	62	16	19
80-100	10.34	0.0159	0.000005	0.0014	0.3640	0.334	0.0294	0.50	62	18	20
0-10	9.48	0.0233	0.000141	0.0037	0.0230	0.094	0.0111	0.78	90	4	5
20-40	9.98	0.0240	0.000010	0.0033	0.1560	0.413	0.0190	0.67	69	28	2
40-60	10.36	0.0130	0.000009	0.0030	0.1330	0.570	0.0192	0.46	72	16	10
60-80	10.33	0.0162	0.000080	0.0044	0.1960	0.372	0.0260	0.28	64	21	14
80-100	10.43	0.0148	0.000006	0.0051	0.1920	0.342	0.0286	0.45	68	16	14
0-10	9.33	0.0148	0.000091	0.0028	0.0180	0.100	0.0148	0.80	72	9	18
20-40	9.14	0.0194	0.000090	0.0025	0.0910	0.203	0.0227	1.36	65	10	22
40-60	10.13	0.0180	0.000165	0.0017	0.1090	0.314	0.0340	1.81	55	9	35
60-80	10.19	0.0169	0.000007	0.0018	0.1160	0.412	0.0300	0.99	60	15	23
80-100	10.37	0.0155	0.000006	0.0061	0.1150	0.406	0.0286	0.85	55	16	28
0-10	8.44	0.0134	0.000051	0.0052	0.1000	0.095	0.0147	1.07	75	6	17
20-40	10.30	0.0177	0.000014	0.0042	0.0900	0.360	0.0277	0.75	65	8	26
40-60	10.41	0.0148	0.000005	0.0041	0.0920	0.540	0.0268	1.03	61	13	22
60-80	10.31	0.0155	0.000006	0.0056	0.1200	0.560	0.0300	0.69	55	16	25
80-100	9.99	0.0141	0.000005	0.0016	0.1120	0.640	0.0307	0.37	64	12	20
0-10	8.80	0.0205	0.000084	0.0026	0.0280	0.056	0.0088	0.60	89	2	8
20-40	8.93	0.0169	0.000006	0.0043	0.1360	0.550	0.0183	0.52	68	8	22
40-60	10.44	0.0113	0.000007	0.0033	0.1710	0.408	0.0352	0.45	64	9	26
60-80	10.43	0.0106	0.000009	0.0036	0.3230	0.032	0.0412	0.70	62	8	28
80-100	10.31	0.0106	0.000005	0.0028	0.2810	0.033	0.0367	0.57	67	4	26

Physical and Chemical Properties of Soil in Road Site Plantation, Khin-U Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	9.80	0.0109	0.000225	0.0027	0.0324	0.376	0.0285	4.35	86	8	3
20-40	10.22	0.0085	0.000007	0.0014	0.0172	0.450	0.0300	1.02	74	11	12
40-60	10.28	0.0134	0.000003	0.0018	0.0380	0.365	0.0380	3.35	67	16	11
60-80	10.31	0.0205	0.000003	0.0030	0.0800	0.283	0.0530	4.21	72	17	7
80-100	10.18	0.0211	0.000003	0.0068	0.1340	0.302	0.0460	1.09	63	1	30
0-10	10.43	0.0219	0.000007	0.0076	0.1270	0.383	0.0130	1.02	65	20	3
20-40	11.05	0.0148	0.000004	0.0070	0.0092	0.205	0.0080	1.23	78	2	35
40-60	11.06	0.0254	0.000004	0.0057	0.0410	0.179	0.0040	0.71	52	6	37
60-80	10.96	0.0148	0.000003	0.0043		0.221	0.0060	0.52	56	16	23
80-100	10.96	0.0106	0.000004	0.0013	0.0365	0.248	0.0040	0.63	56	2	38
0-10	9.54	0.0120	0.000092	0.0027	0.2800	0.061	0.0060	0.72	86	5	7
20-40	9.89	0.0127	0.000055	0.0043	0.0251	0.071	0.0110	1.03	75	10	12
40-60	9.84	0.0141	0.000101	0.0051	0.0640	0.060	0.0120	1.17	84	5	10
60-80	10.35	0.0101	0.000165	0.0060	0.1040	0.207	0.0200	1.01	66	18	14
80-100	10.42	0.0106	0.000010	0.0045	0.0990	0.348	0.0232	1.16	64	14	20
0-10	10.15	0.0127	0.000077	0.0049	0.0310	0.167	0.0107	1.08	80	8	10
20-40	10.24	0.0145	0.000108	0.0029	0.0420	0.128	0.0066	0.82	78	11	6
40-60	10.20	0.0141	0.000035	0.0043	0.0670	0.155	0.0062	1.10	78	8	13
60-80	10.15	0.0120	0.000062	0.0059	0.1710	0.094	0.0072	1.39	63	14	18
80-100	10.04	0.0106	0.000041	0.0050	0.2410	0.041	0.0040	1.35	58	14	26
0-10	8.45	0.0096	0.000058	0.0059	0.0061	0.036	0.0029	0.63	94	5	1
20-40	9.61	0.0184	0.000001	0.0009	0.1400	0.346	0.0232	1.94	65	25	8
40-60	9.99	0.0245	0.000121	0.0026	0.2080	0.165	0.0359	2.40	56	13	30
60-80	9.93	0.0099	0.000032	0.0047	0.2160	0.067	0.0200	2.64	56	11	30
80-100	9.93	0.0099	0.000035	0.0033	0.2380	0.049	0.0181	2.05	54	14	31

Physical and Chemical Properties of Soil in Shein Ma Ka, Wetlet Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.61	0.0254	0.000007	0.0025	0.0025	0.440	0.0360	2.74	61	13	24
20-40	8.84	0.0177	0.000007	0.0032	0.0025	0.510	0.0380	1.90	63	11	24
40-60	8.96	0.0169	0.000008	0.0033	0.0030	0.520	0.0500	1.00	69	9	20
60-80	9.21	0.0106	0.000011	0.0041	0.0027	0.510	0.0540	2.10	74	9	16
80-100	9.28	0.0129	0.000013	0.0024	0.0020	0.410	0.0720	0.59	78	7	12
0-10	8.67	0.0459	0.000008	0.0048	0.0014	0.580	0.0200	3.87	69	13	16
20-40	8.58	0.0346	0.000008	0.0019	0.0016	0.530	0.0230	2.76	68	13	17
40-60	8.69	0.2820	0.000008	0.0016	0.0019	0.500	0.0250	3.01	68	14	17
60-80	8.89	0.0212	0.000008	0.0015	0.0017	0.530	0.0260	2.67	72	11	15
80-100	8.95	0.0155	0.000010	0.0020	0.0023	0.430	0.0280	2.48	75	10	12
0-10	8.94	0.0127	0.000260	0.0031	0.0013	0.330	0.1010	1.21	88	5	5
20-40	8.97	0.0127	0.001080	0.0014	0.0016	0.088	0.0290	1.50	90	3	3
40-60	9.11	0.0099	0.000760	0.0029	0.0019	0.075	0.0160	0.50	90	3	3
60-80	9.08	0.0085	0.000980	0.0030	0.0019	0.041	0.0130	0.36	92	3	2
80-100	9.11	0.0085	0.000085	0.0020	0.0014	0.042	0.0140	2.71	92	3	2
0-10	8.50	0.0431	0.000078	0.0072	0.0010	0.248	0.0160	1.79	57	17	22
20-40	8.68	0.0360	0.000025	0.0061	0.0014	0.290	0.0180	1.90	55	16	26
40-60	8.73	0.0212	0.000010	0.0025	0.0015	0.360	0.0160	2.96	53	18	26
60-80	8.81	0.0191	0.000003	0.0021	0.0018	0.350	0.0170	1.05	60	16	21
80-100	8.63	0.0226	0.000002	0.0022	0.0018	0.390	0.0180	4.09	68	14	17
0-10	8.85	0.0346	0.000014	0.0057	0.0010	0.390	0.0250	1.82	68	15	15
20-40	8.72	0.0424	0.000007	0.0033	0.0016	0.330	0.0200	3.20	56	23	21
40-60	8.60	0.0353	0.000003	0.0022	0.0020	0.370	0.0200	1.53	62	17	20
60-80	8.56	0.0318	0.000004	0.0034	0.0016	0.390	0.0260	1.50	60	16	24
80-100	8.55	0.0290	0.000009	0.0030	0.0012	0.450	0.0300	1.36	64	13	19

Physical and Chemical Properties of Soil in 1/95, Thit Saint,Ma-u-taung, Wetlet Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.90	0.0219	0.000005	0.0034	0.0035	0.460	0.0257	2.09	80	6	12
20-40	8.71	0.0141	0.000005	0.0032	0.0034	0.470	0.0215	0.85	84	8	7
40-60	8.70	0.0131	0.000028	0.0037	0.0043	0.410	0.0215	1.09	88	7	3
60-80	8.85	0.0205	0.000140	0.0036	0.0048	0.390	0.0244	1.71	80	10	9
80-100	9.03	0.0116	0.000006	0.0028	0.0066	0.390	0.0299	1.47	83	10	7
0-10	8.90	0.0145	0.000540	0.0081	0.0045	0.388	0.0460	1.66	82	8	10
20-40	8.66	0.0233	0.000760	0.0037	0.0061	0.340	0.0350	2.10	79	9	12
40-60	8.65	0.0635	0.000740	0.0031	0.0056	0.328	0.0370	2.73	77	9	13
60-80	8.57	0.0247	0.000620	0.0025	0.0044	0.303	0.0320	2.24	76	11	13
80-100	8.78	0.0240	0.000760	0.0093	0.0032	0.258	0.0341	2.39	76	11	13
0-10	8.54	0.0459	0.000026	0.0032	0.0026	0.500	0.0910	3.47	62	17	14
20-40	8.44	0.0417	0.000024	0.0027	0.0031	0.580	0.0870	3.26	61	20	16
40-60	8.52	0.0282	0.000026	0.0025	0.0042	0.610	0.0900	3.88	65	21	14
60-80	8.48	0.0289	0.000024	0.0029	0.0041	0.530	0.0102	2.60	65	19	13
80-100	8.76	0.0215	0.000021	0.0032	0.0045	0.550	0.0108	2.02	69	19	12
0-10	8.33	0.0498	0.000192	0.0059	0.0031	0.399	0.0198	2.64	71	14	17
20-40	8.69	0.0289	0.000098	0.0043	0.0025	0.286	0.0115	2.38	73	11	15
40-60	8.73	0.0071	0.000075	0.0039	0.0030	0.330	0.0950	3.93	71	10	18
60-80	8.79	0.0332	0.000004	0.0037	0.0029	0.430	0.0980	3.76	57	24	18
80-100	8.72	0.0329	Trace	0.0028	0.0024	0.540	0.0116	4.64	50	27	22
0-10	8.97	0.0346	0.000015	0.0034	0.0081	0.530	0.0540	3.30	33	35	29
20-40	9.59	0.0194	0.000720	0.0022	0.0500	0.358	0.0520	3.83	40	35	23
40-60	9.91	0.0113	0.000145	0.0034	0.0920	0.349	0.0580	2.76	44	25	24
60-80	10.04	0.0109	0.000610	0.0038	0.1400	0.284	0.0560	3.57	39	32	25
80-100	10.09	0.0074	0.000640	0.0030	0.1840	0.227	0.0590	3.61	26	39	30

Physical and Chemical Properties of Soil in 2/95, Thit Saint,Ma-u-taung, Wetlet Township

Depth(cm)	pH	Total N%	Ava.P%	Extractable Nutrients				O.M%	Texture		
				K%	Na%	Ca%	Mg%		Sand%	Silt%	Clay%
0-10	8.43	0.0462	0.000003	0.0047	0.0023	0.510	0.0640	4.09	60	25	13
20-40	8.70	0.0180	0.000005	0.0030	0.0025	0.490	0.0350	3.53	75	18	7
40-60	9.19	0.0177	0.000025	0.0071	0.0024	0.500	0.0510	2.60	84	12	3
60-80	9.29	0.0134	0.000720	0.0044	0.0040	0.308	0.0550	1.19	83	13	2
80-100	9.09	0.0148	0.000005	0.0047	0.0062	0.460	0.0416	0.30	73	19	7
0-10	8.51	0.0582	0.000007	0.0059	0.0036	0.480	0.0103	3.46	64	21	14
20-40	8.84	0.0212	0.000007	0.0029	0.0051	0.470	0.0840	2.97	77	14	7
40-60	9.17	0.0201	0.000008	0.0042	0.0046	0.560	0.0750	2.00	82	13	5
60-80	9.22	0.0212	0.000012	0.0033	0.0030	0.500	0.0780	1.59	82	12	5
80-100	9.21	0.0198	0.000008	0.0030	0.0022	0.560	0.0840	0.36	82	13	4
0-10	8.27	0.0529	0.000620	0.0052	0.0026	0.480	0.0112	0.88	54	22	20
20-40	8.25	0.0544	0.000690	0.0039	0.0022	0.450	0.0860	1.03	53	25	20
40-60	8.44	0.0551	0.000270	0.0030	0.0045	0.660	0.0940	0.27	53	25	19
60-80	8.54	0.0459	0.000015	0.0029	0.0042	0.730	0.0112	0.14	56	24	19
80-100	8.61	0.0491	0.000012	0.0046	0.0046	0.530	0.0123	4.10	61	22	12
0-10	8.49	0.0494	0.000017	0.0049	0.0047	0.540	0.0120	4.30	68	18	10
20-40	8.60	0.0424	0.000009	0.0024	0.0043	0.580	0.0750	3.92	68	18	11
40-60	8.73	0.0512	0.000005	0.0027	0.0029	0.530	0.0660	3.24	64	19	11
60-80	8.73	0.0395	0.000006	0.0050	0.0024	0.610	0.0680	1.88	64	21	11
80-100	8.81	0.0395	0.000005	0.0053	0.0029	0.670	0.0790	1.58	74	13	7
0-10	8.70	0.0318	0.000006	0.0032	0.0026	0.750	0.0265	1.99	81	16	2
20-40	8.85	0.0353	0.000160	0.0025	0.0029	0.610	0.0720	1.56	65	17	16
40-60	8.88	0.0318	0.000006	0.0024	0.0048	0.680	0.0252	2.46	76	7	12
60-80	9.04	0.0282	0.000006	0.0029	0.0056	0.540	0.0294	0.46	79	11	5
80-100	9.04	0.0191	0.000005	0.0037	0.0043	0.550	0.0330	0.88	84	7	7

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