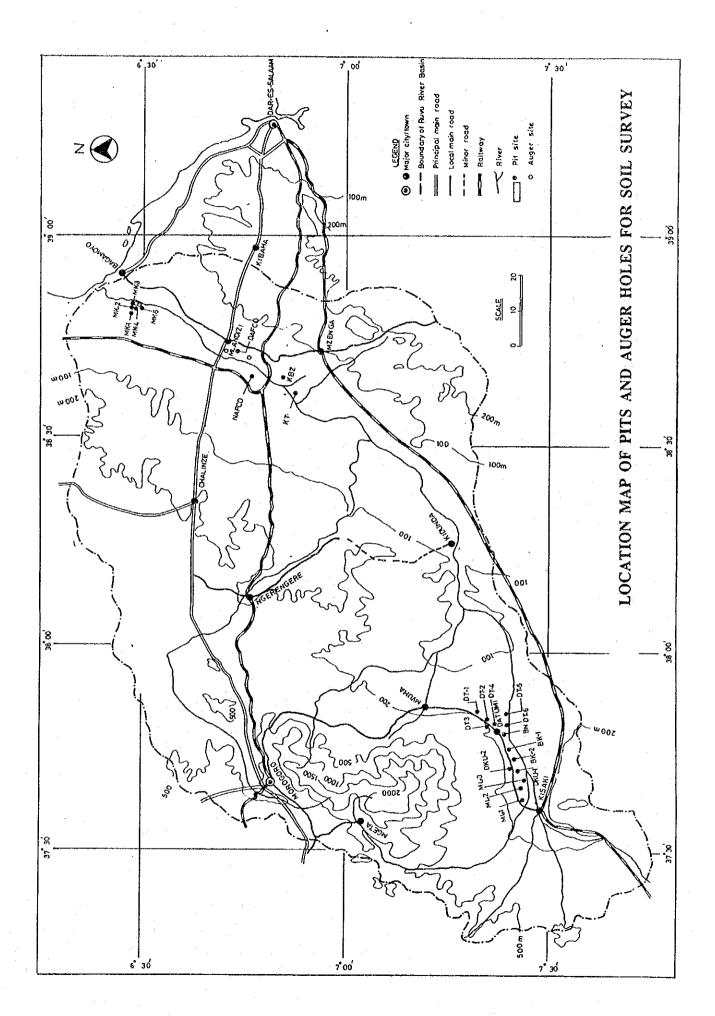
DATA ON SOIL ANALYSIS

1. SUMMARY OF SOIL ANALYSIS



Analytical data for the soil samples

Location: Makurunge Village, Bagamoyo District
Pit No. MK1

Soil depth (cm)	0-14	14-35	36-57	57-94	94-125
Texture: Clay(%) Silt(%) Sand(%)	18 14 68	31 13 56	39 11 50	39 15 47	45 21 34
Textural class*	SL	SCL	sc	SC	C .
pH 1:2.5 H ₂ O	7.4	7.2	6.3	6.9	6.7
Carbonates (CaCO ₃) (%)	trace	13.1	3.0	4.0	4.4
Electr. Conduct. (mmho/cm)	0.05	0.06	0.06	0.04	0.05
Total N (%)	0.09	0.05	0.03	0.03	0.04
Available P (mg/kg)**	1.0	1.50	3.8	3.0	3.0
CEC-NH ₄ OAc (me/100g)	13.9	19.2	35.6	19.3	43.8
Exch. Ca ²⁺ (me/100g)	8.94	10.84	16.57	12.77	24.94
Exch. Mg ²⁺ (me/100g)	3.83	5.60	9.60	4.04	10.50
Exch. K ⁺ (me/100g0	0.34	0.56	3.58	1.04	5.15
Exch. Na ⁺ (me/100g0	0.29	0.17	0.10	0.13	0.10
S.A.R.	2.5	1.6	1.0	1.4	1.0

^{*} SL = Sandy Loam, SCL = Sandy Clay Loam, SC = Sandy Clay C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Makurunge Village, Bagamoyo District Pit No. MK2

Soil depth (cm)	0-10	10-30	30-60	60-100	100+
Texture: Clay(%) Silt(%) Sand(%)	40 14 46	59 15 26	59 15 26	61 17 22	59 12 29
Textural class*	sc	C .	C	C	С
pH 1:2.5 H ₂ O	6.6	6.3	7.7	7.9	6.5
Carbonates (CaCO ₃) (%)	2.0	2.2	5.1	5.0	1.4
Electr. Conduct. (mmho/cm)	0.06	0.14	0.28	1.21	1.52
Total N (%)	0.08	0.05	0.03	0.01	0.05
Available P (mg/kg)**	1.0	1.0	3.7	2.5	2.2
CEC-NH ₄ OAc (me/100g)	20.0	25.6	32.7	40.1	39.8
Exch. Ca ²⁺ (me/100g)	6.07	12.63	12.95	21.98	15.84
Exch. Mg ²⁺ (me/100g)	4.84	0.38	14.55	7.96	9.96
Exch. K ⁺ (me/100g0	0.92	4.19	3.50	8.54	4.37
Exch. Na ⁺ (me/100g0	0.23	0.32	0.18	0.15	0.13
S.A.R.	2.4	2.5	1.25	1.2	1.2

^{*} SC = Sandy Clay, C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Makurunge Village, Village Bagamoyo District

Pit No. MK3

Soil depth (cm)	0-15	15-60	60-75	75-110		110-125	125-145	145+
Texture: Clay(%) Silt(%) Sand(%)	77 13 10	87 5 8	64 13 10	n.c. n.c. n.c.		n.c. n.c. n.c.	n.c. n.c. n.c.	n.c.*** n.c.
Textural class	С	С	C	n.c.	-	n.c.	n.c.	n.c.
pH 1:2.5 H ₂ O	7.2	5.9	5.4	4.4		4.8	4.4	5.8
Carbonates (CaCO3) (%)	0.0	0.0	0.0	n.c.		n.c.	n.c.	n.c.
Electr. Conduct. (mmho/cm)	0.08	0.06	1.56	4.27		4.30	4.47	3.35
Total N (%)	0.09	0.06	0.04	0.02		0.05	0.02	0.05
Available P (mg/kg)**	1.5	1.5	2.5	n.c.		n.c.	n.c.	n.c.
CEC-NH4OAc (me/100g)	32.1	48.2	35.0	n.c.		n.c.	n.c.	n.c.
Exch. Ca ²⁺ (me/100g)	14.68	12.15	10.8	n.c.		n.c.	n.c.	n.c.
Exch. Mg ²⁺ (me/100g)	15.20	11.10	10,10	n.c.		n.c.	n.c.	n.c.
Exch. K ⁺ (me/100g0	0.01	3.50	6.28	n.c.		n.c.	n.c.	n.c.
Г ме∦10№g02110Y	0.56	0.51	0.56	n.c.		n.c.	n.c.	n.c.
S.A.R.	n.c.	n.c.	n.c.	n.c.		n.c.	n.c.	n.c.

^{*} C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0. *** n.c. = not conclusive - soil high in gypsum content.

Analytical data for the soil samples

Location: Makurunge Village, Bagamoyo District Pit No. MK4

Soil depth (cm)	0-10	10-37	37-65	65-95	95-105
Texture: Clay(%) Silt(%) Sand(%)	63 19 18	66 10 24	73 13 14	75 10 15	71 11 18
Textural class*	С	C	c ,	С	C
рн 1:2.5 H ₂ O	6.6	6.2	6.3	6.5	6.6
Carbonates (CaCO ₃) (%)	1.2	1.1	1.3	1.7	1.7
Electr. Conduct. (mmho/cm)	0.06	0.06	0.44	0.60	1.11
Total N (%)	0.12	0.02	0.05	0.04	0.04
Available P (mg/kg)**	2.0	0.8	0.0	3.5	2.2
CEC-NH ₄ OAc (me/100g)	34.2	49.2	46.7	45.9	48.0
Exch. Ca ²⁺ (me/100g)	14.55	17.45	17.46	17.09	16.66
Exch. Mg ²⁺ (me/100g)	13.65	23.45	20.10	22.05	23.65
Exch. K ⁺ (me/100g0	1.17	3.58	1.29	1.84	6.02
Exch. Na ⁺ (me/100g0	0.72	0.54	0.44	0.35	0.48
S.A.R.	2.6	1.9	1.8	1.5	1.7

^{*} C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Makurunge Village, Bagamoyo District
Pit No. MK5

Soil depth (cm)	0-10	10-30	30-70	70-100	100-140
Texture: Clay(%) Silt(%) Sand(%)	59 20 21	77 11 12	81 10 9	81 10 9	79 15 6
Textural class*	C	C	C	C	c .
pH 1:2.5 H ₂ O	6.5	6.8	7.2	6.3	6.0
Carbonates (CaCO ₃) (%)	11.5	0.2	0.5	5.3	0.3
Electr. Conduct. (mmho/cm)	0.05	0.05	0.28	1.13	2.09
Total N (%)	0.13	0.05	0.12	0.03	0.02
Available P (mg/kg)**	2.6	1.2	1.0	2.0	2.7
CEC-NH ₄ OAc (me/100g)	29.0	35.0	44.1	55.6	48.2
Exch. Ca ²⁺ (me/100g)	16.07	17.10	18.27	19.52	28.29
Exch. Mg ²⁺ (me/100g)	7.08	14.90	20.65	22.50	7.30
Exch. K ⁺ (me/100g0	0.41	1.46	3.41	6.54	7.59
Exch. Na ⁺ (me/100g0	0.64	0.37	0.38	0.50	0.43
S.A.R.	2.7	1.7	1.6	1.7	1.7

^{*} C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Kitomondo Village, Kibaha District Pit No. KT

Soil depth (cm)	020	20-35	35-68	68-110
			22-00	
Texture: Clay(%)	67	78	55	75
Silt(%) Sand(%)	33 10	20 12	17 10	15
band(*)	10.	12	70	10
Textural class*	C	С	С	С
pH 1:2.5 H ₂ O	8.0	6.7	6.0	6.8
Carbonates		•		
(CaCO ₃) (%)	5.6	2.2	2.2	10.7
Electr. Conduct.				
(mmho/cm)	0.10	0.08	0.06	0.17
Total N (%)	0.10	0.06	0.03	0.00
10041 11 (8)	0.10	0.00	0.03	0.03
Available P				
(mg/kg) * *	6.1	2.5	2.2	2.7
CEC-NH ₄ OAc				
(me/100g)	43.8	36.9	51.6	24.0
Exch. Ca ²⁺				
(me/100g)	26.64	18.39	22.81	8.54
		10.03	22.01	0.54
Exch. Mg ²⁺				
(me/100g)	14.65	8.88	19.30	4.85
Exch. K ⁺				•
(me/100g0	0.90	0.66	1.24	0.14
Exch. Na ⁺				
(me/100g0	0.67	0.36	0.36	0.47
S.A.R.	2.0	1.9	1.4	3.4

^{*} C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

(7/23)

Analytical data for the soil samples

Location: Kimboza Village, Kibaha District Pit No. KB2

Soil depth (cm)	0-20	20-60	60-110
Texture: Clay(%) Silt(%) Sand(%)	35 21 44	43 17 40	47 15 38
Textural class*	CL	С	· c
рн 1:2.5 но	7.8	7.6	8.2
Carbonates (CaCO ₃) (%)	0.75	0.5	0.6
Electr. Conduct. (mmho/cm)	0.06	0.04	0.21
Total N (%)	0.09	0.04	0.03
Available P (mg/kg)**	0.5	3.0	1.0
CEC-NH ₄ OAc (me/100g)	25.9	32.5	29.0
Exch. Ca ²⁺ (me/100g)	13.32	16.18	16.85
Exch. Mg ²⁺ (me/100g)	9.54	12.70	7.92
Exch. K ⁺ (me/100g0	0.58	1.18	2.80
Exch. Na ⁺ (me/100g0	0.15	0.13	0.10
S.A.R.	1.3	1.2	1.1

^{*} CL = Clay Loam

C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: NAFCO-Ruvu, Kibaha District Pit No. NAFCO-2

Soil depth (cm)	0-15	15-30	30-50	50-78	78-105	105-140
Texture: Clay(%) Silt(%) Sand(%)	35 31 34	47 13 40	51 15 34	49 19 32	51 17 32	55 19 26
Textural class*	CL	С	С	С	С	С
pH 1:2.5 H ₂ O	6.3	7.5	6.5	6.2	7.8	7.3
Carbonates (CaCO ₃) (%)	0.7	12.6	2.5	2.6	2.7	7.3
Electr. Conduct. (mmho/cm)	0.09	0.06	0.26	0.05	0.86	1.07
Total N (%)	0.08	0.06	0.12	0.04	0.02	0.02
Available P (mg/kg)**	2.5	0.2	2.7	2.0	410	1.7
CEC-NH ₄ OAc (me/100g)	34.0	25.0	34.0	36.7	39.7	46.7
Exch. Ca ²⁺ (me/100g)	19.01	12.35	14.16	13.98	18.70	20.20
Exch. Mg ²⁺ (me/100g)	7.75	8.80	11.30	11.75	13.70	17.25
Exch. K ⁺ (me/100g0	1.00	1.15	1.55	2.80	4.54	6.90
Exch. Na ⁺ (me/100g0	0.26	0.26	0.22	0.13	0.33	0.21
S.A.R.	1.6	1.7	1.9	1.2	1.6	1.25

^{*} CL = Clay Loam C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

(9/23)

Analytical data for the soil samples

Location: DAFCO Ruyu, Kibaba District

Location: DAFCO Ruvu, Kibaha District Pit No. DAFCO-R

Soil depth (cm)	0-10	10-35	35-85	85-120
Texture: Clay(%)	39	65	67	69
Silt(%)	16	11	8 25	5 26
Sand(%)	45	24	25	20
Textural class*	sc	C	C	C
рН 1:2.5 H ₂ O	6.5	5.6	6.5	6.6
Carbonates	0.0		0.0	0.1
(CaCO ₃) (%)	0.2	0.1	0.9	0.1
Electr. Conduct.				
(mmho/cm)	0.09	0.82	1.89	3.04
Total N (%)	0.08	0.04	0.03	0.01
Available P				
(mg/kg)**	1.2	3.2	2.5	1.5
CEC-NH4OAC				
(me/100g)	16.0	29.8	41.2	58.1
Exch. Ca ²⁺				
(me/100g)	3.22	10.64	17.04	31.84
Exch. Mg ²⁺				
/ (100)	4.76	8.52	7.68	20.45
Exch. K ⁺		•		
(me/100g0	0.82	1.15	6.80	3.15
· · ·				
Exch. Na ⁺ (me/100g0	0.36	0.14	0.13	0.19
(may 100go	0.30		0.10	
S.A.R.	4.1	1.3	1.2	1.0

^{*} C = Clay SC = Sandy Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Milengwelengwe Village, Morogoro Rural District
Pit No. ML1

Soil depth (cm)	0-16	16-30	30-55	55-80	80-95	95-115	115-140
Texture: Clay(% Silt(% Sand(%))	3) 21	17 23 60	14 10 76	10 8 82	7 5 88	4 1 95	3 1 96
Textural class*	SL	SL	SL	LS	s	s	s
pH 1:2.5 H ₂ O	7.5	6.6	6.4	6.6	8.4	8.2	7-2
Carbonates (CaCO ₃) (%)	0.5	0.6	0.0	0.0	0.6	0.0	0.0
Electr. Conduct (mmho/cm)	0.07	0.08	0.05	0.03	0.02	0.03	0.02
Total N (%)	0.09	0.08	0.05	0.02	0.01	0.01	0.01
Available P (mg/kg)**	14.5	15.2	11.5	7.0	6.0	6.0	1.2
CEC-NH ₄ OAc (me/100g)	19.5	15.2	12.5	10.8	3.0	2.8	5.2
Exch. Ca ²⁺ (me/100g)	14.47	11.47	8.32	4.60	1.71	1.50	1.16
Exch. Mg ²⁺ (me/100g)	2.57	1.89	1.73	1.05	0.63	0.44	3.45
Exch. K ⁺ (me/100g0	0.52	0.03	0.33	0.20	0.09	0.03	0.11
Exch. Na ⁺ (me/100g0	0.82	0.42	0.40	0.47	0.24	0.19	0.13
S.A.R.	4.8	3.0	3.7	4.3	8.6	8.2	1.9

^{*} SL = Sandy Loam S = Sand LS = Loamy Sandy

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Soil depth (cm)	0-10	10-17	17-36	36-47	47-65	65-105	105-112	112-120
Texture: Clay(%) Silt(%) Sand(%)	43 17 40	19 45 36	27 19 54	31 19 50	25 15 60	4 6 90	13 7 80	3 2 95
Textural class*	C -	L	scr	SCL	SÇL	S	SL	S
pH 1:2.5 H ₂ O	6.5	7.2	6.5	6.8	7.5.	7.7	6.8	7.9
Carbonates (CaCO ₃) (%)	0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Electr. Conduct. (mmho/cm)	0.07	0.05	0.04	0.03	0.02	0.02	0.02	0.02
Total N (%)	0.16	0.09	0.08	0.06	0.04	0.01	0.01	0.01
Available P (mg/kg)**	14.0	21.0	13.0	11.5	6.7	0.5	3.5	2.0
CEC-NH ₄ OAc (me/100g)	28.8	21.3	24.3	21.3	15.0	4.1	14.1	4.0
Exch. Ca ²⁺ (me/100g)	16.41	13.81	13.70	12.94	9.14	2.21	4.41	2.55
Exch. Mg ²⁺ (me/100g)	5.70	4.96	5.20	4.80	3.97	0.87	1.87	1.15
Exch. K ⁺ (me/100g0	0.99	0.52	0.28	0.20	0.17	0.10	0.11	0.15
Exch. Na ⁺ (me/100g0	2.27	1.00	0.65	0.41	0.26	0.07	0.18	0.04
S.A.R.	8.7	4.6	3.3	2.5	2.3	2.5	2.8	1.7

^{*} C = Clay L= Loam SCL = Sandy Clay Loam SL = Sandy Loam S = Sand

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Soil depth (cm)	0-9	9-25	25-52	52-65	65-80	80-110	110-145
Texture: Clay(%) Silt(%) Sand(%)	25 33 42	30 26 44	33 37 30	38 12 50	24 8 68	29 33 38	38 28 34
Textural class*	L	CL	CL	sc	SCL	CL.	CL
pH 1:2.5 H ₂ O	6.3	6.1	6.6	6.9	6.2	6.9	6.6
Carbonates (CaCO ₃) (%)	2.2	1.2	3.0	2.6	2.5	3.0	2.6
Electr. Conduct. (mmho/cm)	0.04	0.03	0.03	0.02	0.03	0.07	0.02
Total N (%)	0.13	0.09	0.05	0.05	0.04	0.03	0.01
Available P (mg/kg)**	29.0	25.0	10.0	9.0	8.0	5.2	3.7
CEC-NH ₄ OAc (me/100g)	29.3	29.3	23.2	15.2	14.7	19.0	25.6
Exch. Ca ²⁺ (me/100g)	16.71	13.31	13.78	9.13	8.95	12.55	15.54
Exch. Mg ²⁺ (me/100g)	5.10	6.04	3.80	2.26	3.50	3.51	6.70
Exch. K ⁺ (me/100g0	0.67	0.07	0.15	0.39	0.19	0.54	1.32
Exch. Na ⁺ (me/100g0	1.66	0.44	0.14	0.89	0.11	0.15	0.10
S.A.R.	6.5	2.5	1.4	6.7	1.5	1.5	1.1

^{*} L = Loam Cl = Clay Loam SC = Sandy Clay SCL = Sandy Clay Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

(13/23)

Analytical data for the soil samples

Location: Gombo Village, Morogoro Rural District Pit No. DT1

Soil depth (cm)	0-15	15-45	45-100	100-115	115-155
Texture: Clay(%) Silt(%) Sand(%)	23 15 62	25 17 58	34 14 52	31 9 60	37 11 52
Textural class*	SCL	SCL	SCL	SCL	sc
pH 1:2.5 H ₂ O	7.6	6.3	6.2	6.2	6.8
Carbonates (CaCO ₃) (%)	1.2	1.0	2.3	1.2	1.0
Electr. Conduct. (mmho/cm)	0.04	0.02	0.03	0.02	0.06
Total N (%)	0.70	0.05	0.04	0.05	0.03
Available P (mg/kg)**	1.5	0.8	5.0	4.8	4.5
CEC-NH ₄ OAc (me/100g)	14.5	15.2	13.2	13.2	16.5
Exch. Ca ²⁺ (me/100g)	8.98	6.97	6.55	6.51	8.40
Exch. Mg ²⁺ (me/100g)	2.79	3.51	1.67	3.91	5.69
Exch. K ⁺ (me/100g0	0.57	0.35	0.01	0.22	0.23
Exch. Na ⁺ (me/100g0	1.71	0.70	0.38	0.31	0.29
S.A.R.	12.1	5.8	4.2	2.9	2.5

^{*} SCL = Sandy Clay Loam SC = Sandy Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Gombo Village, Morogoro Rural District Pit No. DT2

Soil depth (cm)	0-20	20-35
Texture: Clay(%) Silt(%) Sand(%)	16 12 72	16 14 70
Textural class*	SL	SL
рН 1:2.5 H ₂ O	* 6.9	6.1
Carbonates (CaCO ₃) (%)	11.7	12.0
Electr. Conduct. (mmho/cm)	0.02	0.04
Total N (%)	0.04	0.06
Available P (mg/kg)**	4.0	2.1
CEC-NH ₄ OAc (me/100g)	10.4	12.5
Exch. Ca ²⁺ (me/100g)	6.80	5.66
Exch. Mg ²⁺ (me/100g)	2.66	1.39
Exch. K ⁺ (me/100g0	0.03	0.34
Exch. Na ⁺ (me/100g0	0.18	0.96
S.A.R.	2.3	2.6

^{*} SL = Sandy Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples (15/23)

Location: Gombo Village, Morogoro Rural District
Pit No. DT3

			* * *
Soil depth (cm)	0-20	20-57	57-94
Texture: Clay(%) Silt(%) Sand(%)	23 11 66	39 11 50	39 15 47
Textural class*	SCL	sc	sc
pH 1:2.5 H ₂ O	6.2	6.3	6.9
Carbonates (CaCO ₃) (%)	0.0	3.0	4.0
Electr. Conduct. (mmho/cm)	0.04	0.06	0.04
Total N (%)	0.08	0.03	0.03
Available P (mg/kg)**	5.0	3.8	3.0
CEC-NH ₄ OAc (me/100g)	13.0	35.6	19.3
Exch. Ca ²⁺ (me/100g) Exch. Mg ²⁺	7.7	16.57	12.77
(me/100g)	2.25	9.60	4.04
Exch. K ⁺ (me/100g0	0.15	3.58	1.04
Exch. Na ⁺ (me/100g0	1.46	0.10	0.13
S.A.R.	12.3	2.0	1.4
			

^{*} SCL = Sandy Clay Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Gombo Village, Morogoro Rural District Pit No. DT4

Soil depth (cm)	0-20	20-53	53-80
Texture: Clay(%) Silt(%) Sand(%)	17 5 78	39 19 52	12 12 76
Textural class*	SL	sc	SL
pH 1:2.5 H ₂ O	6.3	6.8	6.2
Carbonates (CaCO ₃) (%)	0.0	0.0	0.2
Electr. Conduct. (mmho/cm)	0.04	0.02	0.02
Total N (%)	0.10	0.05	0.02
Available P (mg/kg)**	8.2	2.8	2.5
CEC-NH ₄ OAc (me/100g)	11.5	12.5	9.4
Exch. Ca ²⁺ (me/100g)	5.83	6.17	5.76
Exch. Mg ²⁺ (me/100g)	2.35	2.91	2.49
Exch. K ⁺ (me/100g0	0.33	0.12	0.12
Exch. Na ⁺ (me/100g0	0.96	1.41	0.09
S.A.R.	9.6	13.5	1.7

^{*} SL = Sandy Loam SC = Sandy Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

(17/23)

Analytical data for the soil samples

Location: Mbwade Village, Morogoro Rural District Pit No. DT5

Soil depth (cm)	0-17	17-50	50-85	85-112	112-150
Texture: Clay(%) Silt(%) Sand(%)	35 34 31	45 31 24	19 13 68	34 28 38	33 29 38
Textural class*	CL	С	SL	CL	CL
pH 1:2.5 H ₂ O	7.2	6.8	7.7	6.9	7.2
Carbonates (CaCO ₃) (%)	trace	trace	trace	3.2	5.4
Electr. Conduct. (mmho/cm)	0.08	0.07	0.02	0.02	0.03
Total N (%)	0.14	0.07	0.02	0.05	0.04
Available P (mg/kg)**	9.0	20.5	4.0	2.0	3.2
CEC-NH ₄ OAc (me/100g)	28.4	29.5	10.5	25.4	23.7
Exch. Ca ²⁺ (me/100g)	19.37	16.39	6.15	16.02	15.17
Exch. Mg ²⁺ (me/100g)	3.68	6.68	4.08	8.10	6.05
Exch. K ⁺ (me/100g0	0.66	0.24	0.05	0.12	0.28
Exch. Na ⁺ (me/100g0	2.73	0.44	0.13	0.16	0.22
S.A.R.	10.0	2.2	0.9	1.4	1.6

^{*} CL = Clay Loam C = Clay SL = Sandy Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Mbwade Village, Morogoro Rural District Pit No. DT6

Soil depth (cm)	0-10	10-30	30-50	50-70
M				
Texture: Clay(%) Silt(%) Sand(%)	23 44	38 18 44	36 16 48	37 13 50
Textural class*	CL	CL	SC .	sc
pH 1:2.5 H ₂ O	6.0	6.5	5.9	6.3
Carbonates (CaCO ₃) (%)	2.5	2.6	2.0	11.0
Electr. Conduct. (mmho/cm)	0.04	0.03	0.03	0.04
Total N (%)	0.18	0.02	0.04	0.03
Available P (mg/kg)**	18.2	5.5	2.5	1.5
CEC-NH ₄ OAc (me/100g)	29.0	29.5	28.0	23.0
Exch. Ca ²⁺ (me/100g)	14.76	16.25	1431	13.21
Exch. Mg ²⁺ (me/100g)	8.16	8.95	7.20	3.66
Exch. K ⁺ (me/100g0	0.58	0.14	0.45	0.30
Exch. Na ⁺ (me/100g0	0.84	0.21	0.18	0.13
S.A.R.	3.5	1.4	1.4	1.4

^{*} CL = Clay Loam SC = Sandy Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Bonye Village, Morogoro Rural District
Pit No. BN

Soil depth (cm)	0-15	15-35	35-55	55-80	80-130	130-138	138-145	145-155
Texture: Clay(%)	15	22	19	13	2	7 5	23	37
Silt(%)	20	22	16	11	2	5	18	13
Sand(%)	65	56	65	76	96	88	59	50
Textural class*	SL	SCL	SL	SL	S	S	scL	sc
рН 1:2.5 H ₂ O	6.3	7.2	7.3	7.3	7.3	7.3	7.2	7.7
Carbonates								
(CaCO ₃) (%)	0.2	0.2	1.1	1.0	0.2	0.7	0.4	0.0
Electr. Conduct.						:		
(mmho/cm)	0.05	0.04	0.02	0.02	0.01	0.01	0.02	0.02
Total N (%)	0.11	0.19	0.05	0.02	0.01	0.03	0.04	0.00
Available P								
(mg/kg) **	14.5	19.0	10.5	6.5	4.0	2.8	4.5	2.7
CEC-NH₄OAc							-	
(me/100g)	18.6	20.1	14.2	12.3	3.2	5.6	23.4	5.6
Exch. Ca ²⁺							* .	
(me/100g)	11.04	13.40	9.74	7.35	1.71	3.77	14.66	3.83
Exch. Mg ²⁺								
(me/100g)	3.86	4.48	3.77	4.12	0.68	1.58	6.46	1.48
Exch. K ⁺			·				•	
(me/100g0	0.58	0.16	0.13	0.18	0.42	0.15	0.19	0.08
Exch. Na ⁺			•		:			
(me/100g0	0.15	0.74	0.18	0.17	0.05	0.04	0.10	0.02
S.A.R.	1.6	3.8	1.6	1.9	2.4	1.4	1.2	1.8

^{*} SL = Sandy Loam SCL = Sandy Clay Loam, S = Sand SC = Sandy Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Bwakira Chini Village Morogoro Rural District Pit No. BK1

Soil depth (cm)	8-0	8-20	20-42	42-71	71-90	90-107	107-115	115-130	130-160
Texture: Clay(%) Silt(%) Sand(%)	15 17 68	19 23 58	21 32 57	11 8 81	17 15 68	3 1 96	15 19 66	7 1 92	3 1 96
Textural class*	SL	SL	SCL	LS	SL	s	SL	s	s
pH 1:2.5 H ₂ O	6.5	6.4	7.4	6.9	7.1	8.0	6.8	6.9	7.6
Carbonates (CaCO ₃) (%)	0.3	1.5	0.0	0.1	0.1	0.1	0.2	0.5	0.2
Electr. Conduct. (mmho/cm)	0.06	0.03	0.02	0.02	0.02	0.03	0.04	0.03	0.03
Total N (%)	0.12	0.09	0.06	0.02	0.05	0.01	0.04	0.01	0.01
Available P (mg/kg)**	2.4	12.0	5.5	2.5	4.0	4.5	3.0	4.5	2.5
CEC-NH ₄ OAc (me/100g)	16.0	19.2	18.3	10.4	17.6	2.3	16.1	5.2	2.2
Exch. Ca ²⁺ (me/100g)	9.75	12.40	12.25	6.88	11.87	1.34	8.91	2.52	1.07
Exch. Mg ²⁺ (me/100g)	4.18	3.19	4.46	2.66	4.30	0.72	4.90	1.36	0.74
Exch. K ⁺ (me/100g0	0.40	0.15	0.12	0.03	0.18	0.10	0.12	0.13	0.15
Exch. Na ⁺ (me/100g0	0.98	0.41	0.36	0.10	0.12	0.05	0.13	0.11	0.05
S.A.R.	5.9	2.7	2.4	1.6	1.3	2.5	1.5	2.7	2.6

^{*} S = Sand L = Loam C = Clay

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

(21/23)

Analytical data for the soil samples

Location: Bwakira Chini Village, Morogoro Rural District Pit No. BK2

Soil depth (cm)	8-15	15-35
Texture: Clay(%) Silt(%) Sand(%)	55 35 10	57 32 11
Textural class*	c	С
pH 1:2.5 H ₂ O	6.6	7.4
Carbonates (CaCO ₃) (%)	0.2	0.6
Electr. Conduct. (mmho/cm)	0.08	0.05
Total N (%)	0.16	0.10
Available P (mg/kg)**	28.0	8.5
CEC-NH ₄ OAc (me/100g)	44.0	40.0
Exch. Ca ²⁺ (me/100g)	22.53	24.13
Exch. Mg ²⁺ (me/100g)	15.45	14.20
Exch. K ⁺ (me/100g0	0.90	0.26
Exch. Na ⁺ (me/100g0	1.92	0.38
S.A.R.	4.5	1.6

^{*} C = Clav

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Dakawa Ukuti Village, Morogoro Rural District Pit No. DKU1

				and the second second		
Soil depth (cm)	0-12	12-25	25-50	50-70	70-90	90-115
Texture: Clay(%) Silt(%) Sand(%)	33 39 28	39 33 28	32 34 34	28 32 40	23 29 48	12 20 68
Textural class*	CL	CL	CL	CL	L	SL
pH 1:2.5 H ₂ O	6.8	6.1	6.9	6.2	6.4	6.7
Carbonates (CaCO ₃) (%)	1.2	2.7	1.4	1.4	2.1	2.2
Electr. Conduct. (mmho/cm)	0.07	0.03	0.02	0.03	0.03	0.02
Total N (%)	0.03	0.13	0.07	0.05	0.04	0.02
Available P (mg/kg)**	21.0	8.8	6.0	7.0	4.8	6.0
CEC-NH ₄ OAc (me/100g)	32.0	36.8	26.0	26.0	21.0	13.5
Exch. Ca ²⁺ (me/100g)	18.93	18.50	14.73	14.99	11.52	6.33
Exch. Mg ²⁺ (me/100g)	8.90	10.75	8.98	6.95	4.22	4.35
Exch. K ⁺ (me/100g0	0.20	0.10	0.10	0.20	0.16	0.07
Exch. Na ⁺ (me/100g0	1.82	0.14	0.14	0.18	0.07	0.04
S.A.R.	5.5	0.7	1.2	1.4	1.1	1.1

^{*} CL = Clay Loam, L = Loam, SL = Sandy Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

Analytical data for the soil samples

Location: Dakawa Ukuti Village, Morogoro Rural District Pit No. DKU2

Soil depth (cm)	0-15	15-30	30-55	55-68	68-95	95-140	140-165
Texture: Clay(%) Silt(%) Sand(%)	19 25 56	25 39 36	13 10 77	19 31 50	32 34 34	34 38 28	21 19 60
Textural class*	SL	L	SL	L	CL	CL	SCL
pH 1:2.5 H ₂ O	6.7	6.3	6.8	6.4	6.9	6.8	6.2
Carbonates (CaCO ₃) (%)	0.3	0.6	0.0	0.0	1.0	0.0	0.7
Electr. Conduct. (mmho/cm)	0.06	0.02	0.02	0.02	0.02	0.02	0.02
Total N (%)	0.11	0.65	0.03	0.04	0.06	0.05	0.04
Available P (mg/kg)**	13.0	7.8	3.5	2.2	5.2	7.8	5.5
CEC-NH ₄ OAc (me/100g)	22.0	23.0	13.0	18.0	19.0	25.0	23.0
Exch. Ca ²⁺ (me/100g)	10.55	13.18	7.01	9.50	13.81	14.31	9.50
Exch. Mg ²⁺ (me/100g)	4.95	7.05	4.73	5.15	3.82	8.05	5.30
Exch. K* (me/100g0	0.89	0.24	0.16	0.13	0.17	0.32	0.19
Exch. Na ⁺ (me/100g0	2.38	0.19	0.06	0.06	0.13	0.09	0.06
S.A.R.		•				4.	

^{*} SL = Sandy Loam, CL = Clay Loam, SCL = Sandy Clay Loam, L = Loam

^{**} Olsen method when soil pH > 7.0 and Bray I method when pH < 7.0.

DATA ON SOIL ANALYSIS

2. SOIL PROFILE DESCRIPTION FORM

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM					
PROFILE NO: MK1						
Survey area: MAKURUNGE VILLAGE	Mapping Unit					
Region : COAST						
District : BAGAMOYO						
Location: 1 km from Village Centre and 30 m N of N	Visata Road					
Map sheet no :	Airphoto no :					
Coordinates :						
Author (s) : Mirisho, Nnyiti, Nyumba, Mdamu	Date : 7-4-93					
Soil name :	Phase:					
Classification:FAO:						
Soil Taxonomy:						
Season/weather conditions:	Soil moisture regime :					
Beginning of rainy season	Soil temperature regime :					
Landform : Overflow mantle	Relief intensity: m					
Microrelief:	Elevation : m					
Macrorelief: nil						
Parent material:	Geological formation:					
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS					
Slope gradient(%) : ∠1	Sealing/crusting: no					
Type of slope : convex	thickness; mm, consist.: (d) (m)					
Length of slope(m): 30	Cracking: nil Rock out crops %					
Position on slope :	Surface stoniness % Size cm					
	Nat. drainage class: well drained					
Ground water level: actual cm Perched: yes/no heighest cm lowest cm	Run off :					
Stagnating hor : depth cm design	Infiltration :					
Modified ground water level: no	Seepage/spring levels no					
FLOODING/PONDING	Erosion : slight water/wind					
Frequency: nil times/yr. nil	type : sheet					
Duration: days Depth cm	degree: slight					
In months:	Deposition:					
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM					
Composition Cover % Dominant species	Open grassland with Scattered trees.					
trees 20 Acacia	·					
shrubs 5						
herbs 10						
grasses 65						
bare ground -						
Soil fauna:	Human influences:					
	Photograph/slide no:					
Remarks:						
Brief description:						
produkty firm i • 1 majan kalendari						

H	CHARAC	I			A PROPERTY OF THE PARTY OF THE				
O R	symbol					+			
Z	depth (cm)	0-14	14-36	36-57	57-94	94-125			
O N	o width	diffuse	Clear	diffuse	clear				
N	n topogr.	smooth	smooth	smooth	smooth				
OLOUR	dry								
	moist	10 YR 2/2	10 YR 3/3	2.5 Y 3/1	10 YR 4/1	5Y 4/2			and the second second
MOIST, C	OND.	moist	moist	moist	moist	moist			
M	abundance								
O T	size								
T		<u>.</u>			<u> </u>	.,			
L I	contrast	nil	nil .	nil	nil	nil			
N	sharpness			-					
G	colour					0 10			
EXTURI COARSE		Sand Clay Loam	Sand Clay	Sand Clay	Gravelly Sand Clay	Sand Clay	4.0		
T.	dry								
CONSIST.	moist	friable	friable	firm	firm	firm			1.5
8	wet	SI Sticky	Sticky	Sticky Plstic	Sticky SI. Plastic	Sticky Plastic			
	 	SI Plastic	Plastic			Plastic			
Ę.	grade size	weak fine	moderate very coarse	moderate Coarse	weak Coarse	Massive			:
STRUCT.	SIZC		prismatic	COMISC	Course	111111111111111111111111111111111111111			
	form	SAB	breaking into Sab	Sab	Sab				
SS.	quantity			patchy	patchy	<u> </u>			
CUTANS.	thickness	nil	nil	thin	thin		·		
5	type			clay	Clay				
ES	quantity								
PORES	size								
	quantity		 		common	few			
Ξ.	1				1				
Z.S	size				small	small			
PRIM. MIN ROCK FRAGM.	weath	nil	nil	nil	fresh	fresh			
20 20 20 20 20 20 20 20 20 20 20 20 20 2	shape			1	irregular	iregular			
7' bg	nature				gravels	gravels			·
S	quantity			few	many	few			· . · · · · · · · · · · · · · · · · · ·
Ž O	size			small	small	small			
CONCRETIONS NODULES	hardness	nil	nil	hard	soft	soft/hard			
	shape			spherical	irregular	irregular			
SS	type			Iron/Mn	Lime	Lime			
EACTIO		nil	nil	nil	+	++			
OOTS	quantity								
	size								
ALTS									
	PH 22								
THER EATURE	es .	· —			common small soft			:	
	,				spherical	<u> </u>			
AMPLE			_		iron modules	<u> </u>	:		
	depth	1	1		1	,			

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: MK2	SOIL PROFILE DESCRIPTION FORM
	That was a second of the secon
Survey area: MAKURUNGE	Mapping Unit
Region : COAST	
District : BAGAMOYO	
Location : 1.3 km from ferry along Msata Road	
Map sheet no:	Airphoto no :
Coordinates :	
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	Date : 7-4-93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy:	<u> </u>
Season/weather conditions:	Soil moisture regime :
Beginning of long rainy season	Soil temperature regime :
Landform : Alluvial Plain	Relief intensity: m
Microrelief: Plain	Elevation : m
Macrorelief: Many gilgai	
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠1	Sealing/crusting: no
Type of slope Straight	thickness: mm, consist.: (d) (m)
Length of slope(m): 300	Cracking: fine cracks
	Rock out crops %
Position on slope:	Surface stoniness % Size cm
Ground water level: actual cm	Nat. drainage class: moderate to poor
Perched: yes/no heighest cm lowest cm	Run off :
Stagnating hor: depth cm design	Infiltration :
Modified ground water level:	Seepage/spring levels no
FLOODING/PONDING	Erosion : nil water/wind
Frequency: times/yr.	type :
Duration: days Depth cm	degree:
In months:	Deposition:
Not Vocation time:	I AND DEEPODODING CVCTEM
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM
	Fallow
trees 10 Acacia	•
shrubs -	
herbs - Hypertanae ann	
grasses 90 Hyperrhenea spp	
bare ground	
Soil fauna:	Human influences :
	Photograph/slide no:
Remarks:	
Brief description:	

PROFILE	CHARAC	<u> </u>					V-00-00-00-00-00-00-00-00-00-00-00-00-00	Orange of the state of the stat	**************************************
H O	symbol							**************************************	
R	Symbol					+		, , , , , , , , , , , , , , , , , , ,	·
Z	depth (cm)	0-10	10-30	30-60	60-100	100			
O N	o width	Clear	Clear	diffuse	diffuse				
	1	smooth	smooth	smooth	smooth	 	<u> </u>		
COLOUR						<u> </u>			
	moist	10 YR 4/3	10 YR 4/2	2.5 Y 4/3	2.5 Y 4/6	2.5 Y 5/4)
MOIST, C	OND.	·	<u> </u>		moist	moist			
O	abundance	many	many	many		many	ļ · · · ·		· · · · · · · · · · · · · · · · · · ·
T T	size	fine	medium	fine		coarse			
L	contrast	faint	faint	faint	nil	faint			
I N	sharpness	diffuse	clear	diffuse		diffuse			٠
G	colour	5YR 4/8	2.5Y 5/6	10 YR 5/8		10 YR 5/8			
TEXTURE	. &	Sand	Sand Clay	Clay	Clay	clay			
COARSE	FRAG.	Clay Loam				 			·
CONSIST.	dry				ļ	<u> </u>	2 444		1
SNC	moist	firm	firm	firm	firm	firm			
Ö	wet	SI Sticky SI Plastic	Sticky Plastic	Sticky Plstic	Sticky SI. Plastic	Sticky Plastic			
_	grade	moderate	moderate	weak				1.75	- 1
STRUCT.	size	fine to med.	very coarse	Coarse	Massive	Massive			
TRI		0.1	colum nar		<u> </u>	ļ			
0,	form	Sab	breaks to coarse Sab	Sab					
Š	quantity	patchy	broken	broken	continuous	continuous			**************************************
CUTANS.	thickness	thick	thick	thick	thick	thick			
5	type	clay	clay	clay	clay	clay			
83	quantity		common	few	nil	nil			
PORES		many	1	 	102	1111			
	size	fine	fine	fine		 			
X	quantity		<u> </u>		few				
PRIM. MIN ROCK FRAGM.	size				fine	small			1
M.X	weath	nil	nil	nil	hard	nil			:
N COCIN	shape				sphencial				
P. P.	nature				Mn				
S	quantity		few	Very few	few	common	few		
NOT.	size		small	small	coarse	small	medium		
CONCRETIONS NODULES	hardness	nil	hard	hard	hard .	hard	hard		
ODC	shape	:	spherical	spherical	iregular	spherical	irregular		- ;
ÖŽ	type		Fe/Mn	Fe/Mn	lime	Мπ	lime		
REACTIO	N HCI.		nil	nil	+++	+++			
ROOTS	quantity	many, few	many	very few					
	size	fine, med	fine	very fine	nil	nil			
SALTS	EC H								
	pH ·≌			<u> </u>					
OTHER FEATURE	ç								
LATIONE			<u></u>	<u> </u>					
SAMPLE		1	2		 	 			
	أسست فينسفون	0-10	10-30	30-60	60-100	100+	<u>L</u>		
SOIL DEI REMARK		100+ cm	om 10 om to 5	5 cm 2 to 2.5 cr	n wide			•	
INTERITATION IN		CIACAS OPEN II	om to om to 3.	7 OH & 10 & J Cl					

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: MK3	
A A TOTAL DATE OF THE STATE OF	Mapping Unit
Survey area: MAKURUNGE	wapping ome
Region : COAST	
District : BAGAMOYO	· ·
Location: 300 m W of Ruvu River and 10 m S of ro	ad to Msata
Map sheet no:	Airphoto no:
Coordinates :	
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	Date : 7-4-93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy:	
Season/weather conditions:	Soil moisture regime :
	Soil temperature regime:
Landform : Flood Plain	Relief intensity: m
Microrelief: Plain	Elevation : m
Macrorelief: nil	
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠1	Sealing/crusting: no
Type of slope : Slight	thickness: mm, consist.: (d) (m)
	Cracking:
Length of slope(m): 200	Rock out crops %
Position on slope :	Surface stoniness % Size cm
Ground water level: actual cm	Nat. drainage class : poor
Perched: yes/no heighest cm lowest cm	Run off :
Stagnating hor : depth cm design	Infiltration :
Modified ground water level:	Seepage/spring levels
FLOODING/PONDING	Erosion : nil water/wind
Frequency: times/yr.	type :
Duration: days Depth cm	degree:
In months:	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees -	
shrubs -	
herbs 8	
grasses 90 Hyperheanea sp.	
bare ground 2	
Soil fauna:	Human influences : nil
	Photograph/slide no:
Remarks:	
Carrier Commence	
Brief description:	

DDATH E	CHARAC	1							
H				-	V		The state of the s		
O R	symbol							+	
I Z	depth (cm)	0-15	15-60	60-75	75-110	110-125	125-145	145	
Ŏ N	o width	clear	clear	clear	diffuse	diffuse	diffuse		
N	n topogr.	smooth	broken	wavy	Sl. wavy	smooth	smooth		
COLOUR	dry								
	moist	10 YR 2/3	10 YR 4/3	10 YR 3/1	10 YR 4/2	10 YR 4/1	10 YR 5/1	10 YR 5/1	
MOIST. C	OND.	moist	moist	moist	moist	moist	moist	moist	
M O	abundance		many	few	many	few	few		İ
T	size		med.	fine	coarse	coarse	fine		
T		nil	distinct	distinct	prominent	faint	prominent	nil	
L I	contrast	IIII.	l			<u> </u>	<u> </u>	11111	
N G	sharpness		diffuse	sharp	sharp	diffuse	sharp	 	
TEXTURE	colour	Clay	5 YR 4/4 Clay	2.5 YR 4/6 Clay	2.5 YR 4/6 Clay	5 YR 3/6 Clay	2.5 YR 3/6 Clay	Clay	
COARSE		Cray	Ciay	Clay	Clay	Ciay	Ciay	Clay	
	dry								
CONSIST.		firm	firm	firm	firm	firm	firm	firm	<u> </u>
Ó	moist wet	Stick &	Sticky	Sticky	Sticky	Sticky	Sticky	Sticky	
		Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	
⊢ i	grade	moderate	weak	weak			<u> </u>		
STRUCT.	size	coarse	coarse	coarse	massive	massive	massive	massive	
STF	form	Sab	prismatic breaking to Sa	Sab b					
ťs.	quantity		continuous	continuous	broken	continuous	continuous	patchy	
CUTANS.	thickness	nil	thick	thick	thick	thick	thick	thick	
CC	type		clay	clay	clay	clay	clay	broken	
SS			Ciay	Ciay	i cia y	City	Citay	DICACII	
PORES	quantity								
	size			[
7	quantity		ļ		 	-	frequent	very frequent	
AG.	size		***************************************	<u> </u>	 		mexium	medium	
M. F.	weath	nil	nil	nil	nil	nil	weathered	weathered	
PRIM. MIN ROCK FRAGM.	shape						iregular	iregular	1, s i
ದಷ	nature						sulphuir	sulphuir	(2.5 Y 6/)
	quantity				many	common			
NO	size				pockets	pockets			
स्य	hardness	nil	nil	nil	of gypsum	of gypsum	nil	nil	
CONCRETIONS NODULES	shape				crystals	crystals			† <u>.</u>
800	type					<u></u>			1 4 1 1
REACTIO		nil	nil	nil	nil	nil	nil	nil	
ROOTS	quantity	many	very few	very few	nil	nil	nil	nil	
	size	-	fine	very fine		 	1		
SALTS		THICANCI Y THIC	inic	very time	1	-	1		
	PH S								
OTHER FEATURE	S								
SAMPLE	B O	1	2		3	4 :	5 6	7	
	no. depth	0-15	15-60	60-75	75-110	110-125	125-145	145+	
SOIL DE		1145+ cm	120.00	<u> </u>		1110 100	1100 110	1-1-1	L
REMARK			from 5 cm to 6:	5 cm		:			

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: MK4	SOIL PROFILE DESCRIPTION FORM
Survey area: MAKURUNGE Region: COAST District: BAGAMOYO Location: 1.3 km S of road to Msata from Matsushit	Mapping Unit
Map sheet no:	Airphoto no :
Coordinates : Author (s) : Mirisho, Nnyiti, Nyumba, Mdamu	Date : 8-4-93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions:	Soil moisture regime :
Beginning of rainy season	Soil temperature regime :
Landform: Flood Plain Microrelief: Plain Macrorelief: nil	Relief intensity: m Elevation : m
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS Slope gradient(%) : ∠1 Type of slope : Length of slope(m) : Position on slope :	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: few large cracks Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level: no	Nat. drainage class: poor Run off: Infiltration: Seepage/spring levels
FLOODING/PONDING	Erosion : nil water / wind
Frequency: times/yr.	type :
Duration: days Depth cm In months:	degree: Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees - shrubs - herbs - grasses 95 Hyperrhenea sp. bare ground 5	
Soil fauna:	Human influences : burning Photograph/slide no:
Remarks: Brief description:	

PROFILI	E CHARAC	7		:	: '				
II O	symbol								
R	Symbol			- W. W W W W W W W		+			
I Z	depth (cm)	0-10	10-37	37-65	65-95	95-105			0-10
O N	width	clear	diffuse	diffuse	diffuse				
	<u> </u>	smooth	smooth	smooth	smooth		· · · · · · · · · · · · · · · · · · ·	- AFER-HANGEMAN AND AND ASSESSMENT	
COLOUR							<u> </u>	<u> </u>	
	moist	10 YR 2/1	10 YR 4/2	2.5 Y 4/1	10 YR 3/1	2.5 Y 4/1			
MOIST. C	OND.	moist	moist	moist	moist	moist			
O	abundance	ļ	many	few	few	many			· · · · · · · · · · · · · · · · · · ·
T T	size		fine	fine	fine	fine			
L	contrast	nil	faint	very faint	faint	faint			
I N	sharpness		diffuse	diffuse	diffuse	diffuse			
G	colour		10 YR 4/6	10 YR 4/6	10 YR 3/4	10 YR 4/4			
TEXTUR	E&	Silt	Clay	Clay	Clay	Clay			
COARSE	FRAG.	Clay							
IST.	dry	<u> </u>			-				
CONSIST.	moist	friable	firm	firm	firm	firm			
۲ _,	wet	Sticky Plastic	Sticky Plastic	Sticky Plastic	Sticky Plastic	Sticky Plastic			
	arada		weak	- 1					
STRUCT.	grade size	strong fine/med	coarse	massive	massive	massive			
T									
	form	Sab	Sab					e fight a fi	
NS.	quantity	:	patchy	patchy	broken	continuous			
CUTANS.	thickness	nil	thick	thick	thick	thick	-1		
ರ	type		clay	clay	clay	clay			
PORES	quantity	few	nil	nil	nil	nil			
\$	size	fine						. :	
	quantity								
X.	size							1 (4)	
PRIM. MIN ROCK FRAGM.	weath	nil	nil	nil	nil	nil	:		
M. M.	shape								
25 25 25 25 25 25 25 25 25 25 25 25 25 2		<u> </u>							
	nature								
S	quantity		 		very few		<u></u>		
S	size		: .		small				
SE CE	hardness	nil	nil	nil	hard	nil			
CONCRETIONS NODULES	shape		1	-	spherical				
·	type				Mn		<u> </u>		
REACTIO	N HCI.	nil	nil	nil	nil	nil			
ROOTS	quantity	rnany	few	very few	very few	nil			
	size	very fine	very fine	very fine	very fine				
SALTS	EC 55	<u> </u>	 		 	-	<u> </u>		
	рН ⊢	 	+	 	 		[· · · · · · · · · · · · · · · · · · ·
OTHER FEATURE	ES								
									
SAMPLE				2		4 5			
SOIL DE	depth	0-10 105 cm	10-37	37-65	65-95	95-105			
REMARI			d from 10 cm to	75 cm, 3 to 4	cm wide.				

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: MK5	
Survey area: MAKURUNGE	Mapping Unit
Region : COAST	
District : BAGAMOYO	
Location : 2.5 dm S of Msata Road from Matsushita	Camp.
Map sheet no:	Airphoto no :
Coordinates :	
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	Date : 8-4-93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy:	
Season/weather conditions:	Soil moisture regime :
Beginning of rainy season	Soil temperature regime :
Landform : Flood Plain	Relief intensity: m
Microrelief : flat	Elevation : m
Macrorelief: nil	Contoriol formation
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠1	Sealing/crusting:
Type of slope Straight	thickness: mm, consist.: (d) (m) Cracking:
Length of slope(m): 100	Rock out crops %
Position on slope :	Surface stoniness % Size cm
Ground water level: actual cm	Nat. drainage class : Poor
Perched: yes/no heighest cm lowest cm	Run off :
Stagnating hor: depth cm design	Infiltration :
Modified ground water level: no	Seepage/spring levels
FLOODING/PONDING	Erosion : nil water/wind
Frequency: times/yr.	type :
Duration: days Depth cm	degree :
In months:	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees	ranow
shrubs	
herbs -	
grasses 100 Elephant grass	
bare ground - Hyperrhenea sps.	
Soil fauna:	Human influences : nil
	Photograph/slide no:
Remarks: Pit located 150 m S of boundary with upland ar	ea.
Diof descriptions	
Brief description:	

CHARAC	} .				:	1		
					THE CONTRACTOR OF THE PARTY.			
A111001					+		*****	No. With the second sec
lepth (cm)	0-10	10-30	30-70	70-100	100-140			0-10
ğ width	clear	clear	diffuse					
	smooth	smooth	smooth	wavy				
dry				· · · · · · · · · · · · · · · · · · ·				
moist	10 YR 3/2	10 YR 3/2	10 YR 4/2	10 YR 5/2	10 YR 5/2			
ND.	moist	moist	moist	moist	moist			
abundance		many	many	many	many			
size		fine	fine	fine	fine	1.		
Contrast	nil	faint	very faint	faint	distinct			-
		i		<u></u>		1 <u></u>		
	·		1	 	·			
	Silt					<u></u>		
RAG.	Clay							
iry	4 10 10							
	friable	firm	firm	ប្រែកា	SI firm			÷1
wet	Sticky	Sticky	Sticky	Sticky	Sticky			
	Plastic			Plastic	Plastic			
	strong	 	 	manaina	marciva	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
size	med.	coarse	coarse	massive	massive			
orm	Sab	Sab	Sab					
quantity		patchy	broken	continuous				
hickness	nil	thick	thick	thick	nil			
уре		clay	clay	clay				
quantity	few	nil	nil	nil	nil			
size	fine							
nuantity								
	nil	nil	nil	nil	nil			
	1111			1111				
			<u> </u>		<u> </u>			· .
		·			<u> </u>		1,1	
			t		ļ			···
				 	nil			
nardness	nil .	nil						
shape.			spherical	spherical				<u> </u>
уре			Mn	Mn :				
HCI.	nil	nil	nil	nil	nil			
quantity	many	many	few	nil	nil			
size	fine	fine	fine					
2.5 2.5			<u> </u>					
oH ¦≓								
,								
, 								
10.	1	 	ļ <u> </u>		5		· · · · · · · · · · · · · · · · · · ·	
lepth	0-10	10-30	30-70	70-100	100-140			
TH	140 cm							
	depth (cm) by width by width by topogr. dry moist ND. abundance size contrast sharpness colour & RAG. dry moist wet grade g	lepth (cm) 0-10 b width clear b topogr. smooth dry moist 10 YR 3/2 bND. moist abundance size contrast nil charpness colour b Silt RAG. Clay dry moist friable wet Sticky Plastic grade strong size med. form Sab quantity hickness nil ype quantity few size fine quantity size sardness nil shape quantity size sardness nil shape quantity size sardness nil shape specific sardness sardness nil shape specific sardness sar	lepth (cm)	lepth (em)	lepth (cm) lepth (char smooth lepth (char) lepth (c			

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: KT	
Survey area: KITOMONDO VILLAGE	Mapping Unit
Region : COAST District : KIBAHA	
Location : 80 m S of Ruvu River Bank	
Map sheet no:	Airphoto no :
Coordinates : Author (s) : Mirisho, Nnyiti, Nyumba, Mdamu	Date : 14-4-93
Author (s) : Mirisho, Nnyiti, Nyumba, Mdamu Soil name :	Phase:
Classification:FAO:	1 11450.
Soil Taxonomy:	
Season/weather conditions:	Soil moisture regime :
Rainy Season	Soil temperature regime :
Landform : Flood Plain	Relief intensity: m
Microrelief : Plain Macrorelief : nil	Elevation : m
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠1	Sealing/crusting: no
	thickness: mm, consist.: (d) (m)
Type of slope : Straight	Cracking: nil
Length of slope(m): 100	Rock out crops %
Position on slope :	Surface stoniness % Size cm
Ground water level: actual cm	Nat. drainage class: moderate
Perched: yes/no heighest cm lowest cm	Run off :
Stagnating hor : depth cm design	Infiltration :
Modified ground water level:	Seepage/spring levels
FLOODING/PONDING	Erosion : water/wind
Frequency: once times/yr. once	type : sheet
Duration: 30 days Depth 60 cm	degree: slight
In months: April	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees - Acarcia	
shrubs 20	•
herbs 10	
grasses 70 Elephant Grass	
bare ground	
Soil fauna:	Human influences : nil
	Photograph/slide no:
Remarks:	
Brief description:	

PROFILI	E CHARAC)							
H O	symbol								·
R I Z	depth (cm)	0-20	20-35	35-68	68-110				0-10
O N	o width							·	:
COLOUR	dry								
	moist	10 YR 3/2	10 YR 3/3	10 YR 2/3				 	
MOIST. C	OND.								
M O	abundance		few						
T	size		fine					·	
T L	contrast	nil	faint	nil	nil				
I N	sharpness		diffuse						
Ĝ	colour								
TEXTURI COARSE	3.&	clay	clay	clay	clay				
	дгу							· .	
CONSIST.	moist			<u> </u>	<u> </u>				*.
ช 	wet							% [*]	
	grade		weak			1			
STRUCT.	size	·	medium	massive	massive		1		
ST	form		sab					74.4.	
NS.	quantity		patchy	continuous	continuous				
CUTANS.	thickness	nil	thick	thick	thick		·		
	type	ļ	clay	clay	clay		·		
PORES	quantity				-				
×	size				<u> </u>		:.		· · · · ·
ك	quantity								
ŽŠ.	size								
E S	weath				<u> </u>		<u> </u>	· · · · · · · · · · · · · · · · · · ·	
PRIM. MIN ROCK FRAGM.	shape								<u> </u>
ጆጁ	nature		ļ						:
Ø	quantity			1			-		
Ž O	size								
TES TES	hardness				<u> </u>				4
CONCRETIONS NODULES	shape	·					:		
0z	type		ļ		<u> </u>				
REACTIO		<u> </u>	<u> </u>						
ROOTS	quantity	<u> </u>	<u> </u>	-		<u> </u>			***
CATEC	size		-						
SALTS	EC 5		 	 			:		:
OTHER FEATURE									
CALMIT	T								
SAMPLE	no. depth				-				
SOIL DE REMARI	PTH								
					737 06				

	(7/23)
NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: KB2	SOIL PROFILE DESCRIPTION FORM
Survey area: KIMBOZA Region: COAST District: KIBAHA Location: 4 km W of Ruvu Station and 1 km E of Re	Mapping Unit
Map sheet no: Coordinates: Author (s): Nnyiti, Mirisho, Nyumba, Mdamu Soil name:	Airphoto no : Date : 16-4-93 Phase:
Classification:FAO : Soil Taxonomy :	
Season/weather conditions: Rainy Season	Soil moisture regime : Soil temperature regime :
Landform: Flood Plain Microrelief: Slightly Sloping to Ruvu River Macrorelief: nil	Relief intensity: m Elevation: m
Parent material: Alluvial / Collavial	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): \(\angle 2 \) Type of slope: Concave Length of slope(m): 50 Position on slope:	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: moderate Run off: Infiltration: Seepage/spring levels: no
FLOODING/PONDING Frequency: once times/yr. once Duration: 15 days Depth 5-10 cm In months: April	Erosion : nil water / wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees shrubs herbs grasses 95 Cynodon sps. bare ground 5	
Soil fauna:	Human influences : Burning Photograph/slide no:
Remarks:	
Brief description:	

H	CHARAC	} 	1		1	ĺ			
Ö R	symbol			+				-	
I Z	depth (cm)	0-20	20-60	60-110		· .			0-10
0	o width	clear	clcar						
N	b topogr.	smooth	smooth						
COLOUR	dry								
	moist			ļ					
MOIST. C	OND.	moist	moist	moist					
M O	abundance								
T	size								
T L	contrast	nil	nil	nil					
I N	sharpness						·		
G	colour								
TEXTURE	3.&	sandy	sandy	sandy					
COARSE		clay	clay	clay				<u> </u>	
CONSIST.	dry				-			6.52	* .
SNO.	moist	friable sticky	firm sticky	firm sticky					
U .	wet	plastic	plastic	plastic					
ப	grade	weak	moderate	weak				14 (1	-
	size	coarse	very coarse	coarse					
STR	form	sab	prismatic Breaking	sab		· ·	1 · · · · · · · · · · · · · · · · · · ·		
			to coarse sab		·				
žs.	quantity		continuous	weak					
CUTANS.	thickness	nil	thick	coarse				· · · · · · · · · · · · · · · · · · ·	
	type	n	clay	sab					
PORES	quantity								
፟ 2	size					1.			
	quantity								
GM.	size								20.5
Z.¥		nil	nil	nil					
PRIM. MIN ROCK FRAGM.	shape								
88	nature				. :				
	quantity	· · · · · · · · · · · · · · · · · · ·		many					
SNS	size			small					
CONCRETIONS NODULES		nil	nil	very hard					
252 222	shape	iiii	1111	spherical				1 1	
ÖÖ ÖZ				Fe & Fe/Mn					314 × 1
REACTIO	type N HCI			LOCK CHAIL					
ROOTS	quantity								
	size					<u> </u>			
		.*		<u> </u>					
	PH 2:1								
OTHER									. *
EATURE	S	,							
SAMPLE	no.	1	2	3					
		·		60-110					
OIL DE		0-20	20-60	00-110	<u> </u>				

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: RUVU-NAFCO	SOIL PROFILE DESCRIPTION FORM
Survey area: RUVU RICE FARM (NAFCO) Region: COAST District: BAGAMOYO Location: 1.5 km W of Farm Piggery Unit	Mapping Unit
Map sheet no : Coordinates :	Airphoto no :
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	Date : 16-4-94
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions: Rainy Season	Soil moisture regime : Soil temperature regime :
Landform: Flood Plain Microrelief: Flat Macrorelief: Nil	Relief intensity: m Elevation : m
Parent material:	Geological formation:
SITE CHARACTERISTICS Slope gradient(%) : ∠1 Type of slope : Concave Length of slope(m) : 50 Position on slope :	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: moderate Run off: Infiltration: Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Formerly Duration: days Depth cm In months: before flood, control ridge was constructed	Erosion : nil water/wind type : degree: Deposition: sand
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Grazing
trees - shrubs 20 Acacia herbs 15	Cultivation of rice nearby
grasses 60 H. ruja, cynodon bare ground 5	
Soil fauna:	Human influences: grazing Photograph/slide no:
Remarks: Brief description:	

H	E CHARAC	İ	******************************	1				Walter Street	
Ö R	symbol			-			+		-
I Z	depth (cm)_	0-15	15-30	30-50	50-78	78-105	105-140		0-10
O N	o width	clear	clear	diffuse	diffuse	diffuse			
	1	smooth	smooth	smooth	smooth	smooth			
COLOUR	dry						<u> </u>		
	moist	10 YR 3/1	10 YR 3/2	10 YR 2/2	5 Y 3/1	2.5 Y 4/1	10 YR 4/2		
MOIST. C	OND.	moist	moist	moist	moist	moist	moist		
M O	abundance		common	_		·			
T	size		coarse						
T L	contrast	nil	faint	nil	nil	nil	nil		
Ī N	sharpness		diffuse						
G	colour		10 YR 3/4	 			1		
EXTURI		sandy	clay	clay	clay	clay	sandy		
COARSE	FRAG.	clay					clay		
IST.	dry			<u> </u>	1			. :	<u> </u>
CONSIST.	moist	friable	friable	firm	firm	firm	firm		
8	wet	Sticky Plastic	Sticky Plastic	Sticky Plastic	Sticky Plastic	Sticky Plastic	Sticky Plastic		
	 			1 lastic	1 Justic	Tiustic	T MONO		
ĊŢ.	grade size	weak coarse	weak coarse	massive	massive	massive	massive		· · · · · · · · · · · · · · · · · · ·
STRUCT.		. ! :	:						
κ	form	sab	sab						
CUTANS.	quantity			patchy	continuous	patchy	1.		
Z.	thickness	nil	nil	thick	thick	thick	nil		
	type	***************************************	:	clay	clay	clay			
PORES	quantity								
8	size							11	<u> </u>
	quantity				:				*:
PRIM. MIN ROCK FRAGM.	size								
Z.Ž.	weath	nil	nil	nil	nil	nil	nil		
CKE	shape								
2 8	nature			†	1				
	quantity					few	few		
SZ	<u> </u>				 	small	small		
0113 SS	size	•1	-11	<u> </u>	<u> </u>	 			<u>- </u>
CONCRETIONS NODULES	hardness	nil	nil	nil	nil	hard/soft	hard		
S S S S S S	shape			 		spherical	spherical		
	type	` `		 	<u> </u>	Mn	Mn		<u> </u>
EACTIO	T			1.	1		 		
ROOTS	quantity	common, few		few	very few	nil	nil		7 .
AT TO	size EC 'n	very fine, med	very fine	very fine	very fine				
ALTS	PH 25								
THER									
EATURE	ES								1, 1, 1, 1
AMPLE	no.	1		2	3	4	5 6		
	depth	0-15	15-30	30-50	50-78	78-105	105-140+		
	РГН	140 cm							

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: DAFCO-RUVU	
Survey area: DAFCO-RUVU	Mapping Unit
Region : COAST District : KIBAHA	
Map sheet no:	Airphoto no :
Coordinates :	Date : 17-4-93
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy :	Soil moisture regime :
Season/weather conditions:	Soil temperature regime :
Rainy Season	
Landform : Flood Plain	Relief intensity: m
Microrelief: Plain	Elevation : m
Macrorelief: nil	
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠1	Sealing/crusting: no
Type of slope : Straight	thickness: mm, consist.: (d) (m)
Length of slope(m): 150	Cracking: nil Rock out crops %
Position on slope :	Surface stoniness nil % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm	Nat. drainage class: imperfect
Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design	Run off : nil Infiltration :
Modified ground water level:	Seepage/spring levels no
FLOODING/PONDING	Erosion : nil water/wind
Frequency: once times/yr. once	type :
Duration: 45 days Depth 10 cm	degree :
In months: April/May-By rain water	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	
	Grazing
trees	
shrubs herbs	·
grasses 98 Hyperrhevea ruja & clon's bare ground 2 Gayana	
	Human influences · Crazing
Soil fauna:	Human influences : Grazing
	Photograph/slide no:
Remarks:	
Brief description:	
Miles accomplision	

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depth (cm)	0-10	10-35	35-85	85-120				0-10
g width	clear smooth	diffuse smooth	diffuse smooth					
	10 VD 40	25 7 40	25 V 2D	25 V 412				
	moist	·		moist				
abundance	common	many	common					
size	small	small	small					
contrast	faint	faint	faint	nil		ļ		
sharpness	diffuse	diffuse	diffuse					
	7.5 YR 4/4	2.5 Y 4/6	10 YR 5/6				:	
&	clay	clay	clay	sandy clav				
	0.11	ļ		6				
moist wet			sticky	sticky		<u> </u>		
	plastic	plastic	plastic	plastic				
grade	moderate	weak	1 2					<u> </u>
size	coarse	coarse	massive	massive				
form	sab	sab						
quantity		patchy	broken	patchy				
thickness	nil	thick	thick	thick				
туре		clay	clay	clay				
quantity			ı			<u> </u>		
size						.:		•
quantity								
	nil	lnii	nii	nil				
	HIT)ht	11111					
nature								
quantity			: .			1 1 1	ta v	
	nil	nil	nil	nil				
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EC S	very fine	very fine	very fine	very fine				
рн '∸	**************************************	<u> </u>		 	·			:
S							:	i
	•			2				
	0-10	10-35	35-85	85-120+			:	
depth	IGE 133		111-01					
	depth (cm) a width b topogr. dry mioist OND. abundance size contrast sharpness colour a & FRAG. dry moist wet grade size form quantity thickness type quantity size quantity size hardness shape type N HCI. quantity size EC	depth (cm) 0-10 width clear topogr. moist 10 YR 4/2 OND. moist abundance common size small contrast faint sharpness diffuse colour 7.5 YR 4/4 3 & clay FRAG. dry moist friable wet sticky plastic grade moderate size coarse form sab quantity thickness nil type quantity size quantity size quantity size hardness nil shape type N HCI. quantity many size very fine EC 10 FRAG. clay faint many size very fine EC 10 FRAG. clay faint many size very fine EC 10 FRAG. clay faint many size very fine EC 10 FRAG. clay faint many faint	depth (cm) 0-10 10-35 The width of the clear of the common of the com	depth (cm)	depth (cm)	depth (erm)	depth (cm)	depth (cm)

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: DAFCO-A01	
Survey area: RUVU DAFCO	Mapping Unit
Region : COAST	
District : KIBAHA	
Location : 300 m NE of DIP site, near the boundary	betn basin & ridge
Map sheet no:	Airphoto no :
Coordinates :	65.02
Author (s) : Nnyiti, Mirisho,	Date : 6-5-93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy : Season/weather conditions:	Soil moisture regime :
Rainy Season	Soil temperature regime :
Landform : Ridge / basin	Relief intensity: m
Microrelief: Slightly sloping to the natural drainage nea	
Macrorelief: nil	
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%):	Sealing/crusting: no
	thickness: mm, consist.: (d) (m)
Type of slope : Length of slope(m):	Cracking: nil
	Rock out crops % Surface stoniness % Size cm
Position on slope:	
Ground water level: actual cm	Nat. drainage class: poor
Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design	Run off Infiltration
Modified ground water level:	Seepage/spring levels
FLOODING/PONDING	Erosion : nil water/wind
Frequency: once times/yr. once	type :
Duration: 45 days Depth 30 cm	degree :
In months:	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Grazing
trees 5	
shrubs -	
herbs - 95	
grasses 95 bare ground -	
	Human influences:
Soil fauna:	Photograph/slide no:
Demostry The bosin is 100 with	i nowgrapiyonuv no.
Remarks: The basin is 100 m wide	
Brief description:	

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O R	symbol							
I Z O N	depth (cm) b width topogr.	0-25	25-45	45-85	85-95	95-110	110-125	0-10
COLOUR			AND THE RESIDENCE OF STREET, SALES AND SHAPE OF SALES					
	moist	10 YR 2/1	2.5 Y 4/2	2.5 Y 4/2	2.5 Y 4/2	2.5 Y 4/2	2.5 Y 4/2	
MOIST, CO	OND.	moist	moist	moist	moist	moist	moist	
M O	abundance		Common					
	size		fine					
L	contrast		faint			·		
I N	sharpness	<u> </u>	diffuse					
C I	colour		10 YR 4/4		·			<u> </u>
TEXTURE COARSE F		SCL	SC	SC	Gravelly SIC	Gravelly SC	С	
ST.	dry							
CONSIST.	moist							
੪	wet	Sticky SI Plastic	Sticky Plastic	Sticky Plastic	Sticky SI Plastic	Sticky SI Plastic	Sticky Plastic	
r.	grade							1.
E [size							·
S	form							
CUTANS.	quantity		-		-			
715	thickness		<u> </u>		<u> </u>	 	ļ ·	
ŀ	type				<u> </u>		<u> </u>	
7 7	quantity		 	· ·	<u> </u>	 		
	size			 	<u> </u>	 		
<u> </u>	quantity		 		common	many	common	
₹ 5 2.5	size	<u>.</u> !			small	small	small	
E E	weath				weathered	fresh	weathered	
¥S T	shape		-		sphenrical	spherical	spherical	
	nature				lime			
SN	quantity		few	common	many	many	common	
	size		small	small	small	small	small	
65	hardness shape	nil	soft spherical	soft/hard spherical	hard spherical	hard spherical	hard spherical	
	type		Mn	Mn	Mn	Mn	Mn	
REACTION					1	1		
T	quantity			1		 		
Ī	size						:	<i>i</i> .
ALTS	Hq. 12.5							
THER EATURES								
AMPLE								
	depth	1	1	1		l		

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION F				
PROFILE NO: DAFCO-A02					
Survey area: DAFCO-RUVU	Mapping Unit				
Region : COAST					
District : KIBAHA					
Location : 0.5 km E of Ruvu Sec. Sch junction & 30	m S of road to Morogoro				
Map sheet no:	Airphoto no :				
Coordinates :					
Author (s) : Nnyiti, Mirisho	Date : 6-5-93				
Soil name :	Phase:				
Classification:FAO:					
Soil Taxonomy:					
Season/weather conditions:	Soil moisture regime :				
Rainy Season	Soil temperature regime:				
Landform : Basin	Relief intensity:				
Microrelief: Flat	Elevation :				
Macrorelief: Nil					
Parent material: Alluvium / Colluvium	Geological formation:				
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS				
Slope gradient(%) : ∠1	Sealing/crusting: no				
Type of slope : Straight	thickness: mm, consist.: (d) (n Cracking: Rock out crops %				
Length of slope(m): 300					
	Rock out crops % Surface stoniness % Size				
Position on slope :					
Ground water level: actual 50 cm	Nat. drainage class : poor				
Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design	Run off : nil Infiltration :				
Modified ground water level: no	Seepage/spring levels				
FLOODING/PONDING Frequency: once times/yr. once					
Frequency: once times/yr. once Duration: 30 days Depth 10 cm	type : degree :				
In months: April	Deposition: nil				
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM				
Composition Cover % Dominant species	Fallow				
trees 5	- rice fields nearby				
shrubs -					
herbs -					
grasses 95					
bare ground -					
Soil fauna:	Human influences:				
	Photograph/slide no:				
Remarks:					

	CHARAC	1							
H O	symbol								
R I									0-10
Z O : N	depth (cm) o width topogr.								0.10
COLOUR	l	0-55	55-80	80-120+					
	moist	5 Y 4/2	2.5 Y 4/2	2.5 Y 4/2					
MOIST. C	OND.	moist							,
M O	abundance		common	many					· .
T T L	size		small	small	<u></u>				
	contrast	nil	faint	faint			 		
I N	sharpness		diffuse	diffuse					
G TEXTURE	colour	11	2.5 Y 4/3	10 YR 4/4					
COARSE		gravelly clay	clay	heavy clay					
ST.	dry								
CONSIST.	moist	71 (117							
Ö	wet								
r.	grade								
STRUCT.	size					e i e e e	1. 0.		
ST	form								
.S.	quantity			1					
CUTANS.	thickness								
	type								
PORES	quantity			-					
	size						·		
' '	quantity	common	<u> </u>	few					
ZZ ZZ	size	small	<u> </u>	small					
77 I	weath	fresh spherical	nil	fresh spherical	. <u> </u>	. <u>-</u>			
RZE SEE	shape nature	gravels		gravels					
	quantity	few		few					
SNC	size	small		small					
ES CELL	hardness	hard	nil	soft					
CONCRETIONS NODULES	shape	spherical	<u> </u>	spherical		<u> </u>			
ŎŽ	type	Mn	ļ	Mn	#			<u>.</u>	
REACTIO	N HCI.								
	quantity							+ 1	
	size EC 'va								
	EC 52								
THER EATURE	S								
SAMPLE	no. depth								
SOIL DEF REMARK	TН		L						

NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM				
PROFILE NO: ML1					
Survey area: MILENAWELENGWE VILLAGE	Mapping Unit				
Region : MOROGORO					
District : MOROGORO RURAL					
Location : 400 mE of Road of Kisaki & 1 km from N	foeta Road				
	Airphoto no :				
Map sheet no : Coordinates :	Auphoto no .				
Author (s) : Nnyiti, Mirisho, Nyumba, Mdamu	Date : 21-4-93				
Soil name :	Phase:				
Classification:FAO:					
Soil Taxonomy :					
Season/weather conditions:	Soil moisture regime :				
Rainy Season	Soil temperature regime:				
Landform : Alluvial Plain	Relief intensity: m				
Microrelief : plain	Elevation : m				
Macrorelief:					
Parent material:	Geological formation:				
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS				
Slope gradient(%):	Sealing/crusting: no				
Type of slope : Concave	thickness: mm, consist.: (d) (m)				
Length of slope(m): 50	Cracking: nil Rock out crops %				
Position on slope:	Rock out crops % Surface stoniness % Size cm				
Ground water level: actual cm	Nat. drainage class: well drained				
Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design	Run off : Infiltration :				
Modified ground water level: no	Seepage/spring levels				
FLOODING/PONDING	Erosion : water / wind				
Frequency: times/yr.	type :				
Duration: days Depth cm	degree:				
In months:	Deposition:				
as months,	•				
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM				
Composition Cover % Dominant species	Fallow				
trees -					
shrubs 10					
herbs 20					
grasses 70					
bare ground nil					
Soil fauna:	Human influences :				
	Photograph/slide no:				
Remarks:					
Brief description:					

H O	symbol	· ·		-		· [1	1	
R 1 Z	deoth (cm)	0-16	16-30	30-55	55-80	80-95	95-115	115-140	0-10
O N	B width								
COLOUR	dry moist			-			10 YR 4/6	10 YR 4/4	
MOIST. C			***		***************************************				
M	abundance								
O T									
T	size					<u> </u>			
L I	contrast					<u> </u>			
N G	sharpness	<u> </u>		<u> </u>			 	<u> </u>	
EXTURE	colour	<u> </u>		-	·		sand	sand	
COARSE			: :				Salid	Saliu	
	dry								
CONSIST.	moist						<u> </u>		
8	wet	 		Ì					
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F.	grade size		<u> </u>		<u> </u>		 	ļ	
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NS.	quantity								
CUTANS.	thickness			1.2.			ļ.		
i	type								
PORES	quantity					1	-		
<u>.</u>	size					:			
	quantity								-1
Σ	size								
. K§	weath						 		
35. I	shape						 		
ZŠ	nature		1						
	quantity		<u> </u>				 		
SZ	size								
EIR	hardness						<u> </u>		
55 l	shape						10.0		
JÖ								<u> </u>	
EACTIOI	type						 		
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· •	quantity							:	
	size EC 1/2			:			 		ÇO
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THER EATURE	S								
AMPLE	.			3				7	
		0-16	2 16-30		55-80	80-95	95-115	115-140	
		~~ X.V	10-00	100-00			175-115	1 T T D - T T T U	l

	(11/23)
NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: ML2	SOIL PROFILE DESCRIPTION FORM
Survey area: MILENGWELENGWE VILLAGE Region: MOROGORO District: MOROGORO RURAL Location: 2 km from Mgeta Road and 300 m E of Ki	Mapping Unit
Map sheet no: Coordinates: Author (s): Mirisho, Nnyiti, Nyumba, Mdamu Soil name: Classification:FAO:	Airphoto no : Date : 21-4-93 Phase:
Soil Taxonomy: Season/weather conditions: Rainy Season Landform: Alluvial Plain Microrelief: plain	Soil moisture regime : Soil temperature regime : Relief intensity : m Elevation : m
Macrorelief: nil Parent material:	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): C1 Type of slope: concave Length of slope(m): 50 Position on slope:	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: nil Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level: no	Nat. drainage class: well drained Run off: Infiltration: Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion : nil water / wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees - shrubs 10 herbs 15 grasses 75 bare ground -	
Soil fauna:	Human influences: A Secondary School being Photograph/slide no: Constructed nearby
Remarks: Brief description:	

PROFILE	CHARAC	}	The states on residence to separate		to describe to the second sec		_	*****	
H O	symbol								
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Z	depth (cm)	0-10	10-17	17-36	36-47	47-65	65-105	105-112	112-1020
O N	width b topogr.		<u> </u>						
COLOUR									
	moist			!					
MOIST. C	OND.	moist	moist	moist	moist	moist	moist	moist	moist
M O	abundance					:			
T	size							. 1	
T	contrast								
I	sharpness								
c	colour								
TEXTURE	&	clay	clay	clay	sandy clay	loamy	fine	loamy	sand
COARSE I	FRAG.	loam	loam	loam	loam	sand	sand	sand	
CONSIST	dry					<u> </u>		:	<u>:</u>
ONS	moist	1 1 1			ļ				
ပ	wet								
	grade							:	
	size								
STS	form								
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7 1	thickness								
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	quantity								
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	hardness								
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SOIL DE	depth YFH	cm	<u> </u>	l	1	1	<u> </u>	1	<u></u>
REMARK									• •

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: ML3	SOIL PROFILE DESCRIPTION FORM					
Survey area: MILENGWELENGWE VILLAGE	Mapping Unit					
Region : MOROGORO						
District : MOROGORO RURAL						
Location : 3.8 km from Mgeta Riverand 1.5 km E of	Kisaki Road					
Map sheet no:	Airphoto no :					
Coordinates :						
Author (s)	Date :					
Soil name :	Phase:					
Classification:FAO:						
Soil Taxonomy:						
Season/weather conditions:	Soil moisture regime :					
Rainy Season	Soil temperature regime:					
Landform : Alluvial Plain	Relief intensity: m					
Microrelief: Levee	Elevation : m					
Macrorelief: nil						
Parent material:	Geological formation:					
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS					
Slope gradient(%) : ∠2	Sealing/crusting: no					
Type of slope : Concave	thickness: mm, consist.: (d) (m)					
	Cracking:					
Length of slope(m): 100	Rock out crops %					
Position on slope :	Surface stoniness % Size cm					
Ground water level: actual cm	Nat. drainage class: well drained					
Perched: yes/no heighest cm lowest cm	Run off : nil					
Stagnating hor : depth cm design	Infiltration :					
Modified ground water level:	Seepage/spring levels					
FLOODING/PONDING	Erosion : nil water/wind					
Frequency: once times/yr. once	type :					
Duration: 15 days Depth variable cm	degree:					
In months: rain water in April	Deposition:					
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM					
Composition Cover % Dominant species	Fallow					
trees -	Rice farms around					
shrubs -						
herbs 2						
grasses 98						
bare ground -						
Soil fauna:	Human influences :					
	Photograph/slide no:					
Remarks: farms (rice/maize) not levelled						
Pain 6 descriptions						
Brief description:						

CHARAC		1	<u> </u>					
symbol					<u> </u>	<u> </u>	+	
denth (cm)	0-9	9-25	25-52	52-65	65-80	80-110		0-10
e width		clear	clear	clear	clear	clear		
b topogr.	smootn	smootn	smootn	smootn	smootn	smootn	~~~	
dry		<u> </u>						
moist	10 YR 2/1	10 YR 1.7/1	7.5 YR 3/3	7.5 YR 3/2	10 YR 2/2	7.5 YR 3/3	7.5 YR 3/2	
							11	
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			:	1 - 1- 1				1:
contrast	nil	nil	nil	nil	nil	nil	nil	
sharpness		·	ļ <u></u>					
colour								
&		clay	clay					
	loam			IOani	Ioam		IUam	
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moist		<u> </u>	ļ	ļ	<u> </u>		:	
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depth								1
	depth (cm) Bo width Dopogr. dry moist DND. abundance size contrast sharpness colour & FRAG. dry moist wet grade size form quantity thickness type quantity size weath shape nature quantity size weath shape nature quantity size hardness shape type VHCI. quantity size EC	depth (cm) 0-9 B width clear b topogr. smooth dry moist 10 YR 2/1 DND. abundance size contrast nil sharpness colour & clay RAG. loam dry moist wet grade size form quantity thickness type quantity size weath shape nature quantity size weath shape nature quantity size hardness shape type VHCI. quantity size EC	depth (cm) 0.9 9.25 B width clear clear propers smooth smooth smooth smooth clear smooth smooth smooth clear smooth dry moist 10 YR 2/1 10 YR 1.7/1 DND. abundance size contrast nil nil sharpness colour & clay loam dry moist wet grade size form quantity thickness type quantity size weath shape nature quantity size hardness shape type type type type type type type ty	depth (cm) 0-9 9-25 25-52 vidth clear clear clear smooth	depth (cm)	depth (cm)	depth (cm) 0.9 9.25 25.52 52.65 65.80 80.110	depth (cm) 0.9 9.25 25.52 52.65 65.80 80.110 110.145

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: DT1	SOIL PROFILE DESCRIPTION FORM
	Mapping Unit
Survey area: GOMBO VILLAGE	Mapping Omi
Region : MOROGORO	
District : MOROGORO RURAL	
Location : 3.6 km N of Dutumi and 200 m E of Moro	
Map sheet no:	Airphoto no :
Coordinates :	Date : 28-4-93
Author (s) : Mirisho, Nyumba, Mdamu	
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy:	Soil moisture regime :
Season/weather conditions: Rainy Season	Soil temperature regime:
Landform : Lower Slopes of Alluvial/Colluvial Plain	Relief intensity: m
Microrelief: Gentle sloping towards east	
Macrorelief: nil	Elevation m
Parent material: Colluvium/Alluvium	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : 2	Sealing/crusting: no
Type of slope : Straight	thickness: mm, consist.: (d) (m)
Length of slope(m): 500 m	Cracking: nil
	Rock out crops % Surface stoniness % Size cm
Position on slope:	
Ground water level: actual cm	Nat. drainage class: poor
Perched: yes/no heighest cm lowest cm	Run off : nil
Stagnating hor : depth cm design Modified ground water level:	Infiltration Seepage/spring levels
FLOODING/PONDING	
Frequency: times/yr. Duration: days Depth cm	type : degree :
Duration: days Depth cm In months:	Deposition:
III IIIOIIUIS.	
Nat. Vegetation type: short grass & scattered scrubs	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Grazing
trees -	
shrubs 5	
herbs -	
grasses 95	
bare ground -	
Soil fauna:	Human influences :
	Photograph/slide no:
Remarks:	
Brief description:	
Direct description.	

PROFILE									
H O	symbol								
R		0-15	15-45	45-100	100-115	115-155			0-10
Z O N	depth (cm) B width V topogr.					A CONTRACTOR OF THE CONTRACTOR			
COLOUR								:	
_	moist	5 YR 3/1	5 YR 3/2	5 YR 3/3	5 YR 3/4	5 YR 4/3			
MOIST. C	OND.					- Address Standard Stade to - State Office			
M O	abundance								
T	size								
T L	contrast					}			
ĭ	sharpness								: .
C	colour								
TEXTURE	&	sandy	sandy	sandy	gravelly	sandy clay			
COARSE		clay	clay	clay	sand clay	loam			
27	dry	<u> </u>		 	·				
Ž	moist wet	:	ļ						
			<u> </u>			<u> </u>			
i.	grade								
E	size			. 10					
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NS.	quantity								
ಕ	thickness			·	·				
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~ I	quantity					 			
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75	quantity			ļ		<u>. </u>			
N. S.G.	size			 					
K.F.	weath				-				
% ₩	shape	·		<u> </u>	 				
	nature					<u> </u>		·	
S _S	quantity	·				<u> </u>			
SS	size		_	 	-				
片ち 	hardness			 	 	 			
S S S S	shape		<u> </u>	 	1			·	
	type		ļ				: .	<u> </u>	
REACTIO			<u> </u>	<u> </u>	 				
,		many	many	few					
	size EC ' '\?	very fine	very fine	fine					
	PH 21								
OTHER EATURE	s						:		
				<u> </u>	<u> </u>				
SAMPLE	no. depth								
SOIL DEI REMARK	TH								

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: DT2	SOIL PROFILE DESCRIPTION FORM
Survey area: GOMBO Region: MOROGORO District: MOROGORO RURAL Location: 2.6 km N of Dutumi Village & 100 m E o	Mapping Unit f Morogoro Road
Map sheet no: Coordinates: Author (s): Mirisho, Nyumba, Mdamu	Airphoto no : Date : 28-4-93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions: Rainy Season	Soil moisture regime : Soil temperature regime :
Landform : Upper slopes of alluvial plain Microrelief : Macrorelief :	Relief intensity: m Elevation: m
Parent material: Colluvium/Alluvium	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): 2 Type of slope: straight Length of slope(m): 50 Position on slope:	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: Rock out crops % Surface stoniness % Size cm
Ground water level: actual 35 cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: well drained Run off: Infiltration: Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion : water / wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees shrubs herbs grasses bare ground	
Soil fauna:	Human influences : Photograph/slide no:
Remarks: Brief description:	

DROEHT	E CHARAC		A-114-A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		رود در در در در در در در در در در در در در				ad (1.201.16.), de publica engre, p iène pub re
H O	1]	T		1				<u> </u>
R	symbol								
I Z	depth (cm)	0-20	20-35			:			0-10
O N	width topogr.			:					
COLOUR	dry							<u> </u>	
	moist	5 YR 2/2	5 YR 3/3						
MOIST. C	OND.					<u></u>			
0	abundance								· · · · · · · · · · · · · · · · · · ·
T T	size	<u> </u>							
L I	contrast							1	
N G	sharpness				<u> </u>				
EXTUR	colour E &	sandy	sandy				<u> </u>		
COARSE		clay loam	clay	:					
IST.	dry						<u> </u>		
CONSIST.	moist wet		<u> </u>	•					
H	grade								
STRUCT.	size								
Ø	form						-		
NS.	quantity								
CUTANS.	thickness				<u></u>				·· ·
	type					:			
PORES	quantity								
<u> </u>	size		<u> </u>						
Ä.	quantity		:						1
₩	size weath				·		.:	:	
PRIM. MIN ROCK FRAGM.	shape		<u> </u>						
25 25	nature								
	quantity								
SNO O	size								
LES	hardness				<u> </u>		-		
CONCRETIONS NODULES	shape								
	туре								-
EACTIO					<u> </u>			 	
COOTS	quantity								
ALTS	size EC 🕠								
	PH 25			,					
THER EATURE	es :							·	
SAMPLE	no.								
	depth								3-
SOIL DE REMARI		100 cm At 35 drainage	water table Wa	iter sample was	collected for la	b. analysis.			ia i

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: DT3	SOIL PROFILE DESCRIPTION FORM
Survey area: GOMBO VILLAGE Region: MOROGORO District: MOROGORO RURAL Location: 2.6 km N of Dutumi & 200 m E of Morogoro	Mapping Unit
Map sheet no:	Airphoto no :
Coordinates :	
Author (s) : Mirisho, Nyumba, Mdamu	Date : 28/4/93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions:	Soil moisture regime :
Rainy Season	Soil temperature regime:
Landform : Alluvial Plain (flat)	Relief intensity: m
Microrelief : Macrorelief :	Elevation : m
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : ∠2 Type of slope : Very gentle sloping Length of slope(m) : 50 Position on slope :	Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: nil Rock out crops % Surface stoniness % Size cm
Ground water level: actual 20 cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: poor Run off: nil Infiltration: Seepage/spring levels
FLOODING/PONDING	Erosion : nil water/wind
Frequency: times/yr.	type :
Duration: days Depth cm	degree :
In months:	Deposition:
Nat. Vegetation type: grass	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees shrubs	
herbs	
grasses 100	
bare ground	
Soil fauna:	Human influences : Photograph/slide no:
Remarks:	
Brief description:	

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H O R	symbol		+		-				
I	depth (cm)	0-20	20			٠			0-10
Z O N	o width							**************************************	-
COLOID									
COLOUR									
	moist							:	
MOIST. C									
O	abundance								
T T	size								
Ĺ	contrast								
I N	sharpness								
G	colour								
TEXTURE COARSE	£ &	sandy clay							
.;	dry						* .		,
CONSIST.	moist								:
8	wet					·			
	grade								
STRUCT.	size								
	form								
NS.	quantity								
ಕ 1	thickness					· · · · · · · · · · · · · · · · · · ·			***
	type			:					
PORES	quantity				 				
	size								
5	quantity							1.4	
z Z	size							· · · · · · · · · · · · · · · · · · ·	
Z.E.	weath								·
~ :	shape			· ·					·
	nature					············			
82	quantity	:		·					
S	size								
25	hardness				<u> </u>		1		1
ŽÓ QO	shape								
	type							···········	
REACTIO	N HCI.			·····					
ROOTS	quantity		ļ						
	size								
SALTS	H CH								÷
OTHER EATURE									
SAMPLE	no.								
	depth								
SOIL DE		cm				-			

NATIONAL S		ICE, TANZANIA OFILE NO: DT4		SOIL PROFILE DESCRIPTION FOI	RM
Survey area:	GOMBO)		Mapping Unit	
Region :	MORO				
District :		GORO RURAL			
Location :		N of Durumi & 50 m W	of Morog	oro Road	
Map sheet no:	·			Airphoto no :	····
Coordinates :			•		
Author (s) :	Mirisho	Nyumba, Mdamu		Date : 28-4-93	
Soil name	:			Phase:	: -
Classification:I	*				
Soil Taxono			 		
Season/weather				Soil moisture regime :	į
Rainy Season			1	Soil temperature regime:	<u> </u>
Landform:	Upper are	a of alluvial plain		Relief intensity:	1
Microrelief:				Elevation : n	1
Macrorelief:					
Parent material:				Geological formation:	
S	ITE CHAR	ACTERISTICS	İ	SURFACE CHARACTERISTICS	
Slope gradient(%) : 2		, ,	Sealing/crusting: no	
Type of slope	str	aight		thickness: mm, consist.: (d) (i	n)
Length of slope				Cracking: nil Rock out crops %	
Position on slo				Note out trops	m
Ground water I Perched: yes/no Stagnating hor Modified groun	heighest : depth	cm lowest cm design	cm	Nat. drainage class: Moderate Run off: Infiltration: Seepage/spring levels	
		NG/PONDING		Erosion : nil water/wir	nd
Frequency:	I LOOD.	times/yr.		type :	
Duration:		days Depth	cm	degree:	
In months:				Deposition:	
Nat. Vegetation				LAND USE/CROPPING SYSTEM	
Composition	Cover %	Dominant species		Fallow	
trees	-				
shrubs	- سر				
herbs	5 95				
grasses bare ground	<i>9</i> J				
	_			Human influences	
Soil fauna:				Human influences : Photograph/slide no:	. :
Damester 1	faire fo	round the cite	· · · · · · · · · · · · · · · · · · ·	r notographysnuc no.	·
Remarks: M	ине тапп а	round the site			
Brief description	n:	ing distribution of the second second second second second second second second second second second second se			
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I Z	depth (cm)	0-20	20-53	53-80	<u>: </u>				0-10
O N	B width	clear smooth	diffuse smooth						
COLOUR									
	moist	10 YR 2/2	5 YR 3/4	5 YR 3/4					
MOIST. C	OND.								
M O	abundance	·						!	
T T	size							······································	
L I	contrast			<u> </u>					
N G	sharpness								
EXTURE	colour &	sandy	sandy	sandy			:		
COARSE		loam	clay	clay					
IST.	dry								
CONSIST.	moist		<u> </u>	ļ			•		
<u> </u>	wet								
i.	grade	moderate	moderate	weak					· .
STRUCT.	size	coarse	coarse	coarse				·	:
	form	sab	sab	sab					
7 5	quantity								
	thickness								
	type								
PORES	quantity								
& .	size		ļ						·
.	quantity	· · · · · · · · · · · · · · · · · · ·	 		ļ				
AGN	size		<u> </u>	· · · · · · · · · · · · · · · · · · ·					
Y. MI K FR	weath		 						
PRIM. MIN ROCK FRAGM.	shape			:	<u> </u>				
	nature quantity			1		·			
SNS	size								
ES	hardness								
CONCRETIONS NODULES	shape								
ON ON	type								
EACTIO									
COOTS	quantity	few	very few	very few				:	
		coarse	coarse	coarse					
	EC S		<u> </u>	 	 	· 			
THER EATURE									
			<u> </u>		<u> </u>	:)			<u></u>
	depth								
OIL DE	TH	cm							

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: DT5	SOIL PROFILE DESCRIPTION FO
Survey area: MBWADE VILLAGE	Mapping Unit
Region : MOROGORO	
District : MOROGORO RURAL	
Location : 800 m N of Dutumi and 100 m E of Mo	orogoro Road
Map sheet no:	Airphoto no :
Coordinates:	
Author (s) : Mirisho, Nyumba, Mdamu	Date : 28/4/93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy :	
Season/weather conditions:	Soil moisture regime : Soil temperature regime :
Rainy Season Landform : Flat-Alluvial Plain	Relief intensity:
Landform : Flat-Alluvial Plain Microrelief :	
Macrorelief:	Elevation :
Parent material:	Geological formation:
	SURFACE CHARACTERISTICS
SITE CHARACTERISTICS Slone gradient(%) : 0	Sealing/crusting: no
Stope Branton (19)	thickness: mm, consist.: (d)
Type of slope : flat	Cracking:
Length of slope(m):	Rock out crops %
Position on slope :	Surface stoniness % Size
Ground water level: actual cm	Nat. drainage class : moderate
Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design	Run off
Stagnating hor : depth cm design Modified ground water level:	Infiltration : Seepage/spring levels
FLOODING/PONDING	Erosion : nil water/w
Frequency: times/yr.	type:
Duration: days Depth cm	
In months:	Deposition:
Nat. Vegetation type:	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees -	
shrubs - herbs -	
grasses 100	
bare ground -	
Soil fauna:	Human influences :
	Photograph/slide no:

PROFILE	CHARAC	7		<u> </u>	والمراكبة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة	-			
H O	symbol								
R						+			
Z	depth (cm)	0-17	17-50 clear	50-85 diffuse	85-112 diffuse	112-150	an a mainte ann a ann duanant an ann da dh' Airle.		0-10
O N	o width	clear smooth	smooth	smooth	smooth	ļ.			
COLOUR	dry								
	moist	7.5 YR 3/1	10 YR 2/2	7.5 YR 3/4	7.5 YR 3/2	7.5 YR 3/3			
MOIST. C									
M .	abundance								
O T			· · · · · · · · · · · · · · · · · · ·		 				
T	size				· · · · · · · · · · · · · · · · · · ·	<u> </u>			
L I	contrast								
N	sharpness		<u> </u>	ļ,	ļ	ļ			
G	colour								
TEXTURI COARSE		clay	clay	loamy sand	clay loam	clay loam			
			 	- Curiu	ZOATH.				
CONSIST	dry	 	 	-		1.			
NO.	moist wet		<u> </u>						
ت	grade	weak	weak	weak	weak .	weak			
IRUC	size	coarse	coarse	fine	coarse	coarse			
	form	sab	sab	sab	sab	sab			
CUTA	quantity		continous						
	thickness		thick						
	type		clay						
PORES	quantity	many			many				
POF	size	macro	1		macro				
	quantity								
X.	size		† -				N	:	
ZY VEN	weath		<u> </u>					<u>`</u>	
AX EE			<u> </u>						11
PRIM. MIN ROCK FRAGM.	shape		 			<u> </u>			
	nature		<u> </u>						
S	quantity		<u> </u>		·				
S	size		<u> </u>						
O'LE	hardness		 	<u></u>		ļ	* p +		1
CONCRETIONS NODULES	shape						·		
υz	type	······································							
REACTIO	N HCI.								
ROOTS	quantity	many	many	few	very few				
	size	very fine	very fine	very fine	very fine			· · · · · · · · · · · · · · · · · · ·	
	EC 52:1								
OTHER	рН 🏻				<u></u>				
EATURE	s								
SAMPLE	no.				<u> </u>				
	depth						4,1		
SOIL DEI REMARK		150 cm							
SCIVIARK	u3i								٠

	(18/23)
NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: DT6	SOIL PROFILE DESCRIPTION FORM
Survey area: MBWADE VILLAGE Region: MOROGORO District: MOROGORO RURAL Location: 3 km East of Dutumi	Mapping Unit
Map sheet no: Coordinates: Author (s): Mirisho, Nyumba, Mdamu	Airphoto no : Date : 29-4-93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions: Rainy Season	Soil moisture regime : Soil temperature regime :
Landform : Flat Alluvial Plan Microrelief : Macrorelief :	Relief intensity: m Elevation m
Parent material:	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): 0 Type of slope: Straight Length of slope(m): 100 Position on slope:	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.; (d) (m) Cracking: Rock out crops Nil % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class : Poor Run off : Nil Infiltration : Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion : Nil water / wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Parthy fallow land; rest of the area is well covered by
trees 20 shrubs - herbs 5 grasses 75 bare ground -	thick grass & big fall trees (acacia).
Soil fauna:	Human influences : Photograph/slide no:
Remarks:	
Brief description: Rain water found on the surface in some pa	arts of the plain.

H	CHARAC					T			T
O R	symbol				+				
I Z	depth (cm)	0-10	10-30	30-50	50-70				0-10
O N	B width	clear	diffuse smooth	diffuse smooth					
COLOUR	i	511.0041	·	51.,0001.				····	
COLOUR		10.300.041	10 YR 3/1	10 VD 2/1	10 10 20				
***************************************	moist	10 YR 2/1	10 YK 3/1	10 YR 3/1	10 YR 3/2	1-04-4			
MOIST. C			ļ	<u></u>				i	
O	abundance			<u> </u>		ļ			ļ
T T	size								
Ĺ	contrast								
I N	sharpness								
Ĝ	colour								
TEXTURE		clay	sand	sand	sandy				
COARSE	FRAG.	loam	clay loam	clay loam	clay				
ST.	dry	1, 1, 1							
CONSIST.	moist	:	:						
8	wet								
					-				
H	grade	weak	moderate	moderate	moderate				
STRUCT.	size	medium	coarse	very coarse	coarse			· ·	
ST	form	sab	sab	sab	sab				
CUTA	quantity								
	thickness	 -							
				1	 				
S	type								
PORES	quantity			·					
	size			 					
ų.	quantity	·········							
PRIM. MIN ROCK FRAGM.	size								· · · · · · · · · · · · · · · · · · ·
	weath	<u>-</u>					:		
Ğ≅	shape								
照 %	nature			<u> </u>			1.1		
	quantity						***		
SNC	size			1					·.
EE EE	hardness			 	<u> </u>				
ŠŽ Ž					 				
었으니	shape			 				<u> </u>	
	type								···
REACTIO				 	1				
j		many, few	many	many	few				
		fine, med &	very fine	very fine	very fine			·	<u> </u>
	EC 5	coars			<u> </u>				cos
THER EATURE									
TALLUKE			L	<u> </u>					
AMPLE	no.								
	depth	*>							
OIL DEF		120 cm Rain/drainage							

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: BN1	SOIL PROFILE DESCRIPTION FORM
Survey area: BONYE VILLAGE Region: MOROGORO District: MOROGORO RURAL Location: Bwakira Chivi 1 km S of Autum & 150 r	Mapping Unit m Dutumi & 150 m E of Dutumi to Kisaki Road
Map sheet no: Coordinates: Author (s): Mirisho, Nyumba, Mdamu	Airphoto no : Date : 28/04/93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions: Rainy Season	Soil moisture regime : Soil temperature regime :
Landform : Almost flat - Alluvial Plain Microrelief : Macrorelief :	Relief intensity: m Elevation : m
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): 0 Type of slope : flat Length of slope(m): 100 Position on slope :	SURFACE CHARACTERISTICS Sealing/crusting: thickness: mm, consist.: (d) (m) Cracking: Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level: no	Nat. drainage class: Moderate Run off: nil Infiltration: Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion : nil water / wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees - shrubs - herbs - grasses 100 bare ground -	
Soil fauna:	Human influences : Photograph/slide no:
Remarks: Maize farm around the site. Brief description:	

H		1		ĺ		1.			i
O R	symbol	ļ				<u> </u>			
I Z	depth (cm)	0-15	15-35	35-55	55-80	80-130	130-138	138-145	145 1055
0		diffuse	clear	clear	clear	clear	clear	clear	
N	o width	smooth	smoth	smoth	smoth	smoth	smoth	smoth	
COLOUR	dry								
	moist	10 YR 1.7/1	10 YR 1.7/1	10 YR 2/3	10 YR 3/2	10 YR 4/6	10 YR 3/2	10 YR 2/2	7.5 YR 4/6
MOIST, C	· O (1977)								
M M			<u> </u>						1.
O	abundance		<u> </u>						
T T	size		<u> </u>		<u> </u>				<u> </u>
L	contrast								ļ
I N	sharpness						<u> </u>		<u> </u>
G	colour								
EXTURI	3 &c	sandy	clay	sand	sandy	gravelly	loamy	sandy	coarse
COARSE	FRAG.	clay loam	loam	sandy	loam	sand	sand	loam	sand
CONSIST.	dry		<u> </u>		<u> </u>			1	<u> </u>
SNS	moist	friable	friable	very friable	very friable	loose	loose	very friable	loose
ರ	wet					1			
								<u> </u>	1
ਰੰ	grade size		<u> </u>	-	 				
IR.									
	form				1				
a 1	quantity		1						
	thickness		· · · · · · · · · · · · · · · · · · ·						
ਰ	type		†			1			
83					 	1			
PORES	quantity								
	size		<u> </u>	 		<u> </u>			
٨.	quantity		ļ				 		
AG.	size					<u> </u>			
PRIM. MIN ROCK FRAGM.	weath		ļ	_		ļ			
S S S	shape		ļ			1			
Z &	nature								
	quantity				:		<u> </u>	47.	
SNO	size								
CONCRETIONS NODULES	hardness						T		
	shape							,	
	type				1		· ·		
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2TOO	quantity			-	1				
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THER EATURE									
				<u> </u>	ļ	<u> </u>	<u> </u>	<u> </u>	<u> </u>
AMPLE					<u> </u>		1		
	depth	i	t .	E		1	1		

NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: BK1	SOIL PROFILE DESCRIPTION FORM
Survey area: BWAKIRA VILLAGE Region: MOROGORO District: MOROGORO RURAL	Mapping Unit
Location : 8 km from Dutumi and 150 m E of Kisaki	
Map sheet no: Coordinates:	Airphoto no :
Author (s) : Mirisho, Nyumba, Mdamu	Date : 29/4/93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions:	Soil moisture regime :
Rainy Season	Soil temperature regime :
Landform : Flat Alluvial Plain (Levee) Microrelief : Levee Macrorelief :	Relief intensity: m Elevation: m
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): 0 Type of slope : flat Length of slope(m): 50	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: Nil Rock out crops %
Position on slope :	Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: Moderate Run off: Nil Infiltration: Scepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion : Nil water/wind type : degree : Deposition :
Nat. Vegetation type: Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees 1 shrubs 4 herbs - grasses 95 Hyperrhenea	Tanow
bare ground Soil fauna:	Human influences : Photograph/slide no:
Remarks: The pit is approximately 100 m away from Bw Brief description:	

-del-	CHARAC	}							
H O	symbol								
R		0.0	0.00		40.71	71.00	00.107	107.116	1105-1030
Z O	depth (cm)	0-8 diffuse	8-20 diffuse	20-42 clear	42-71 clear	71-90 clear	90-107 clear	107-115 clear	110-1100
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COLOUR		onword.					1		
		10 VD 20	10 YR 2/2	10 YR 2/2	10 YR 3/3	10 YR 3/2	10 YR 4/3	10 YR 2/2	10 YR 4/4
	moist	10 YR 2/1	10 1K 2/2	10 1K 2/2	10 1 K 3/3	10 1K 3/2	10 11 4/3	10 11 2/2	10 110 4/4
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	moist	1 10			<u> </u>	1	<u> </u>		
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Ę	size	med.	med.	coarse	fine	fine	single	fine	single
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	quantity	many	many	common	common	very few	very few	very few	
	size	very fine	very fine	very fine	very fine	very fine	very fine	very fine	
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NATIONAL SOIL SERVICE, TANZANIA PROFILE NO: BK2	SOIL PROFILE DESCRIPTION FORM
Survey area: BWAKIRA VILLAGE	Mapping Unit
Region : MOROGORO District : MOROGORO RURAL	
Location : 8.5 km S of Dutumi & 40 m E of Bwakirs	a / Kisaki Road
Map sheet no:	Airphoto no :
Coordinates :	
Author (s) : Mirisho, Nyumba, Mdamu	Date : 29/4/93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy : Season/weather conditions:	Soil moisture regime :
Rainy Season	Soil temperature regime :
Landform : Flat Alluvial Plain	Relief intensity: m
Microrelief:	Elevation : m
Macrorelief:	
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : 0	Sealing/crusting: no
Type of slope : flat	thickness: mm, consist.: (d) (m) Cracking: nil
Length of slope(m): 50	Rock out crops %
Position on slope:	Surface stoniness % Size cm
Ground water level: actual 35 cm	Nat. drainage class: poor
Perched: yes/no heighest cm lowest cm	Run off :
Stagnating hor : depth cm design Modified ground water level:	Infiltration : Seepage/spring levels
FLOODING/PONDING	
Frequency: times/yr.	Erosion : Nil water/wind type :
Duration : days Depth cm	degree :
In months:	Deposition:
Nat. Vegetation type: Tall thick grass	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees -	ranow
shrubs -	
herbs -	
grasses 100	
bare ground -	
Soil fauna:	Human influences : Photograph/slide no:
Remarks:	
Brief description:	

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NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: DKUI	
Survey area: DAKANA UKUTU VILLAGE Region: MOROGORO District: MOROGORO RURAL Location: 9.0 km South of Dutumi & 200 m West o	Mapping Unit f Dakawa Ukutu Village
Map sheet no:	Airphoto no :
Coordinates : Author (s) : Mirisho, Nyumba, Mdamu	Date : 29/4/93
Soil name : Classification:FAO : Soil Taxonomy :	Phase:
Season/weather conditions: Rain Season	Soil moisture regime : Soil temperature regime :
Landform : Flat Alluvial Plain Microrelief : Macrorelief :	Relief intensity: m Elevation : m
Parent material: Alluvium	Geological formation:
SITE CHARACTERISTICS Slope gradient(%): 0 Type of slope: flat Length of slope(m): 100 Position on slope:	SURFACE CHARACTERISTICS Sealing/crusting: no thickness: mm, consist.: (d) (m) Cracking: no Rock out crops % Surface stoniness % Size cm
Ground water level: actual cm Perched: yes/no heighest cm lowest cm Stagnating hor : depth cm design Modified ground water level:	Nat. drainage class: Moderate Run off: Nil Infiltration: Seepage/spring levels
FLOODING/PONDING Frequency: times/yr. Duration: days Depth cm In months:	Erosion: Nil water/wind type: degree: Deposition:
Nat. Vegetation type: Thick tall grass Composition Cover % Dominant species	LAND USE/CROPPING SYSTEM Fallow
trees shrubs herbs grasses 100 bare ground	
Soil fauna: active	Human influences : Caltivation, mai Photograph/slide no:
Remarks: Currently maize farming is carried on around th Brief description:	e area.

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TEXTURE	&	clay	sandy	sandy	clay	clay	clay		
COARSE		loam	loam	loam	loam	loam	loam		
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NATIONAL SOIL SERVICE, TANZANIA	SOIL PROFILE DESCRIPTION FORM
PROFILE NO: DKU2	
Survey area: DAKANA UKUTU VILLAGE	Mapping Unit
Region : MOROGORO	
District : MOROGORO RURAL	
Location : 12 km South of Dutumi &300 m East of	Dakawa
Map sheet no:	Airphoto no: Primary School
Coordinates:	
Author (s) : Mirisho, Nyumba, Mdamu	Date : 29/4/93
Soil name :	Phase:
Classification:FAO:	
Soil Taxonomy:	
Season/weather conditions:	Soil moisture regime :
Rain Season	Soil temperature regime:
Landform : Flat Alluvial Plain	Relief intensity: m
Microrelief:	Elevation : m
Macrorelief:	
Parent material:	Geological formation:
SITE CHARACTERISTICS	SURFACE CHARACTERISTICS
Slope gradient(%) : 0	Sealing/crusting: no
Type of slope : flat	thickness: mm, consist.: (d) (m)
Length of slope(m): 50	Cracking: No
	Rock out crops %
Position on slope :	Surface stoniness Nil % Size cm
Ground water level: actual cm	Nat. drainage class : Moderate
Perched: yes/no heighest cm lowest cm	Run off : Nil
Stagnating hor : depth cm design	Infiltration
Modified ground water level:	Scepage/spring levels
FLOODING/PONDING	Erosion : Nil water/wind
Frequency: times/yr.	type :
Duration: days Depth cm	degree:
In months:	Deposition:
N. V. Marine Anna Marine II	LAND MEDIODODDANG GWOGON
Nat. Vegetation type: Thick tall grass	LAND USE/CROPPING SYSTEM
Composition Cover % Dominant species	Fallow
trees 10	
shrubs 5	
herbs	
grasses 85 bare ground	
Soil fauna: active	Human influences : Caltivation
	Photograph/slide no:
Remarks: School farms with maize, millet, sesame crops	s growing well.
Brief description:	
erana monerapisani	

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G	colour								
TEXTURE	&	clay	sand clay	sandy	clay	sand clay	clay	sand clay	
COARSE	FRAG.	loam	loam	loam	loam	loam	loam	loam	
ST.	dry			<u> </u>					
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