

Table 17.--Chemical Analyses of Selected Soils

(All analysis run in duplicate. All data reported on oven dry basis. Absence of an entry indicates that the determination was not made; 0.0=<0.05 cmol/kg. All method citations are from Soil Survey Investigation Report No. 1, 1984. The pedons are typical of the soil series in the survey area. For the location of the pedons, see the section "Soil Series and Their Morphology".)

Soil name and pedon number	Horizon	Depth (in)	pH	Total Carbon (pct)	Extractable bases 5A6				Extract-able Sum acidity	Sum bases	Sum cations	Base saturation (pct)	Na saturation (pct)	Cation exchange capacity (100 gm/ clay)
					6A2B	K	Ca	Mg						
-----cmol/kg of soil-----														
<b>Bosket</b>														
(S90AR-147-01)	Ap1	0-5	7.2	0.56	0.3	6.4	0.7	0.2	1.3	7.6	8.9	85	2	107
	Ap2	5-10	7.2	0.35	0.2	5.5	0.6	0.1	1.6	6.4	8.0	80	1	76
	BA	10-20	7.2	0.20	0.2	5.5	0.7	0.1	1.3	6.5	7.8	83	1	55
	Bt1	20-27	7.0	0.26	0.2	10.5	2.5	0.2	3.3	13.4	16.7	80	1	60
	Bt2	27-40	5.6	0.17	0.2	7.5	3.5	0.3	5.4	11.5	16.9	68	2	65
	BC	40-51	5.3	0.14	0.1	3.3	1.4	0.2	2.4	5.0	7.4	68	3	53
	C1	51-65	5.4	0.11	0.0	3.0	1.1	0.1	1.3	4.2	5.5	76	2	98
	C2	65-80	5.7	0.11	0.1	3.4	1.1	0.1	1.4	4.7	6.1	77	2	103
<b>Bulltown</b>														
(S89AR-147-01)	Ap1	0-4	4.9	0.34	0.2	1.0	0.1	0.1	2.1	1.4	3.5	40	3	83
	Ap2	4-8	5.7	0.19	0.2	1.8	0.1	0.1	1.9	2.2	4.1	54	2	65
	Bw1	8-16	5.8	0.13	0.2	2.1	0.1	0.1	1.1	2.5	3.6	69	3	53
	Bw2	16-26	5.7	0.07	0.1	1.6	0.2	0.1	1.0	2.0	3.0	67	3	55
	Bt1	26-37	5.9	0.13	0.2	5.5	0.6	0.1	2.9	6.4	9.3	69	1	65
	Bt2	37-51	5.7	0.10	0.3	7.9	1.4	0.1	4.6	9.7	14.3	68	1	69
	BC1	51-60	5.4	0.10	0.2	6.0	1.2	0.1	4.1	7.5	11.6	65	1	73
	BC2	60-69	5.4	0.08	0.2	4.4	0.9	0.1	3.4	5.6	9.0	62	1	74
	C	69-80	5.6	0.03	0.1	2.1	0.5	0.0	1.6	2.7	4.3	63	0	105
<b>Foley</b>														
(S74AR-147-01)	Ap1	0-4	5.9	1.5 <sup>1</sup>	0.3 <sup>2</sup>	2.3 <sup>3</sup>	1.4 <sup>4</sup>	0.2 <sup>5</sup>	8.1 <sup>6</sup>	4.2	12.3	34	2	94
	Ap2	4-9	5.5	1.0 <sup>1</sup>	0.1 <sup>2</sup>	2.5 <sup>3</sup>	1.2 <sup>4</sup>	0.2 <sup>5</sup>	8.3 <sup>6</sup>	4.0	12.3	33	2	92
	Eg1	9-16	5.5	0.4 <sup>1</sup>	0.1 <sup>2</sup>	2.4 <sup>3</sup>	1.4 <sup>4</sup>	0.4 <sup>5</sup>	6.9 <sup>6</sup>	4.3	11.2	38	4	79
	Eg2	16-20	5.7	0.6 <sup>1</sup>	0.1 <sup>2</sup>	2.4 <sup>3</sup>	2.1 <sup>4</sup>	0.5 <sup>5</sup>	7.7 <sup>6</sup>	5.1	12.8	40	4	79
	B/E1	20-26	6.3	0.1 <sup>1</sup>	0.2 <sup>2</sup>	3.3 <sup>3</sup>	5.2 <sup>4</sup>	1.4 <sup>5</sup>	5.1 <sup>6</sup>	10.1	15.2	66	9	67
	B/E2	26-41	7.3	0.1 <sup>1</sup>	0.3 <sup>2</sup>	4.0 <sup>3</sup>	10.9 <sup>4</sup>	2.3 <sup>5</sup>	4.5 <sup>6</sup>	17.5	22.0	80	10	77
	B/E3	41-52	7.7	0.1 <sup>1</sup>	0.4 <sup>2</sup>	5.8 <sup>3</sup>	14.3 <sup>4</sup>	3.8 <sup>5</sup>	5.3 <sup>6</sup>	24.3	29.6	82	13	79
	Btng	52-67	8.4	0.2 <sup>1</sup>	0.4 <sup>2</sup>	12.9 <sup>3</sup>	13.2 <sup>4</sup>	3.4 <sup>5</sup>	3.6 <sup>6</sup>	29.9	33.5	89	10	123
	BCng	67-80	8.4	0.1 <sup>1</sup>	0.2 <sup>2</sup>	8.2 <sup>3</sup>	6.5 <sup>4</sup>	2.0 <sup>5</sup>	2.8 <sup>6</sup>	16.9	19.7	86	10	216
<b>Grubbs</b>														
(S91AR-147-05)	Ap	0-5	6.5	1.74	0.5	12.1	4.2	0.2	2.8	17.0	19.8	86	1	138
	BA	5-12	5.6	0.52	0.3	12.1	3.9	0.4	8.6	16.7	25.3	66	2	74
	Bt1	12-20	4.8	0.31	0.3	9.0	8.3	1.0	23.8	18.6	42.4	44	2	76
	Bt2	20-26	4.8	0.21	0.4	6.3	8.6	1.2	21.5	16.5	38.0	43	3	82
	Btg1	26-40	5.1	0.15	0.4	7.1	9.0	1.5	13.8	18.0	31.8	57	5	101
	Btg2	40-52	5.4	0.12	0.3	8.5	10.3	2.0	7.5	21.1	28.6	74	7	116
	B't	52-64	6.3	0.14	0.3	8.8	8.6	1.9	2.9	19.6	22.5	87	8	106
	BC	64-76	6.9	0.14	0.2	8.4	7.0	1.7	3.0	17.3	20.3	85	8	104
<b>Hillemann</b>														
(S74AR-147-02)	Ap1	0-3	7.3	1.8 <sup>1</sup>	0.1 <sup>2</sup>	5.0 <sup>3</sup>	2.0 <sup>4</sup>	0.3 <sup>5</sup>	5.2 <sup>6</sup>	7.4	12.6	59	2	114
	Ap2	3-8	7.5	1.1 <sup>1</sup>	0.1 <sup>2</sup>	5.0 <sup>3</sup>	1.6 <sup>4</sup>	0.4 <sup>5</sup>	6.3 <sup>6</sup>	7.1	13.4	53	3	101
	Eg1	8-15	5.7	0.6 <sup>1</sup>	0.1 <sup>2</sup>	2.7 <sup>3</sup>	0.9 <sup>4</sup>	0.6 <sup>5</sup>	8.6 <sup>6</sup>	4.3	12.9	33	5	69
	Bt	15-23	5.5	1.1 <sup>1</sup>	0.2 <sup>2</sup>	2.9 <sup>3</sup>	1.4 <sup>4</sup>	2.2 <sup>5</sup>	21.3 <sup>6</sup>	6.7	28.0	24	8	70
	Btg	23-28	5.5	0.6 <sup>1</sup>	0.3 <sup>2</sup>	3.9 <sup>3</sup>	1.9 <sup>4</sup>	3.0 <sup>5</sup>	17.1 <sup>6</sup>	9.1	26.2	35	11	83
	B/E1	28-40	5.5	0.3 <sup>1</sup>	0.3 <sup>2</sup>	5.7 <sup>3</sup>	3.1 <sup>4</sup>	4.2 <sup>5</sup>	9.6 <sup>6</sup>	13.3	22.9	58	18	85
	B/E21	40-49	7.2	0.1 <sup>1</sup>	0.2 <sup>2</sup>	6.0 <sup>3</sup>	3.1 <sup>4</sup>	4.2 <sup>5</sup>	3.0 <sup>6</sup>	13.5	16.5	82	25	70
	B/E22	49-57	7.8	0.1 <sup>1</sup>	0.2 <sup>2</sup>	6.0 <sup>3</sup>	3.2 <sup>4</sup>	4.2 <sup>5</sup>	1.9 <sup>6</sup>	13.6	15.5	88	27	68
	B/E3	57-70	8.0	0.1 <sup>1</sup>	0.2 <sup>2</sup>	7.8 <sup>3</sup>	3.9 <sup>4</sup>	4.2 <sup>5</sup>	3.3 <sup>6</sup>	16.1	19.4	83	22	58
	Btng	70-80	8.0	0.1 <sup>1</sup>	0.3 <sup>2</sup>	8.5 <sup>3</sup>	4.0 <sup>4</sup>	4.4 <sup>5</sup>	3.0 <sup>6</sup>	17.2	20.2	85	22	59

See footnotes at end of table.

Table 17.--Chemical Analyses of Selected Soils--Continued

Soil name and pedon number	Horizon	Depth (in)	pH	Total Carbon (pct)	Extractable bases 5A6				Extract-able acidity	Sum bases	Sum cations	Base saturation (pct)	Na saturation (pct)	Cation exchange capacity 100 gm/ clay
					6A2B	K 6Q2B	Ca 6N2E	Mg 6O2D						
-----cmol/kg of soil-----														
Overcup (S89AR-147-08)	Ap	0-4	5.5	0.90	0.2	6.0	2.3	0.5	10.3	9.0	19.3	47	3	88
	Eg	4-8	5.3	0.23	0.1	2.1	1.8	0.6	7.4	4.6	12.0	38	5	65
	Btg1	8-22	4.6	0.29	0.2	2.2	6.0	2.8	23.0	11.2	34.2	33	8	67
	Btg21	22-33	4.6	0.31	0.2	2.8	7.7	3.9	21.1	14.6	35.7	41	11	69
	Btg22	33-44	4.6	0.25	0.3	4.0	8.9	4.3	18.8	17.5	36.3	48	12	74
	Btg31	44-52	4.5	0.21	0.3	4.8	9.8	4.4	15.4	19.3	34.7	56	13	77
	Btg32	52-61	4.7	0.17	0.2	5.3	9.9	4.4	11.8	19.8	31.6	63	14	78
	BC	61-72	5.2	0.14	0.2	6.5	10.6	4.6	7.7	21.9	29.6	74	16	84
Patterson (S91AR-147-01)	Ap1	0-6	5.1	0.55	0.0	1.7	0.1	0.1	3.3	1.9	5.2	37	2	81
	Ap2	6-10	4.8	0.46	0.1	1.2	0.2	0.2	3.5	1.7	5.2	33	4	111
	Eg1	10-16	5.1	0.38	0.1	4.3	0.2	0.1	3.4	4.7	8.1	58	1	87
	Eg21	16-24	5.2	0.29	0.1	4.1	0.2	0.2	2.5	4.5	7.0	65	3	92
	Eg22	24-33	5.3	0.22	0.1	2.0	0.1	0.3	1.9	2.5	4.4	57	7	56
	Btg1	33-43	5.2	0.26	0.2	9.8	0.1	0.3	6.6	10.4	17.0	61	2	63
	Btg2	43-53	5.2	0.18	0.2	11.3	1.0	0.4	4.8	12.9	17.7	73	2	78
	BCg	53-67	5.3	0.12	0.2	7.8	1.7	0.1	2.7	9.8	12.5	78	1	96
	Cg1	67-80	5.6	0.06	0.1	5.2	1.0	0.1	1.1	6.4	7.5	85	1	99
Cg2	80-90	6.3	0.05	0.1	3.0	1.1	0.1	0.1	4.3	4.4	98	2	77	
Tipp (S91AR-147-07)	Ap1	0-5	6.2	1.89	0.2	16.3	4.1	0.1	5.6	20.9	26.5	79	0	92
	Ap2	5-10	6.8	1.64	0.1	18.4	4.1	0.1	4.2	22.7	26.9	84	0	85
	Bw1	10-21	6.8	1.64	0.1	20.6	6.8	0.1	6.1	27.6	33.7	82	0	84
	Bw2	21-34	6.7	0.96	0.1	17.5	5.8	0.2	5.8	23.6	29.4	80	1	71
	Bw3	34-47	6.6	1.05	0.5	17.7	6.8	0.1	7.2	25.1	32.3	78	0	71
	Bw4	47-60	6.5	0.49	0.1	13.9	6.9	0.1	3.9	21.0	24.9	84	0	59
	Bw5	60-77	6.5	0.41	0.2	14.0	8.3	0.2	6.0	22.7	28.7	79	1	75
Tuckerman (S91AR-147-03)	Ap	0-7	5.6	0.46	0.2	2.9	1.0	0.1	1.7	4.2	5.9	71	2	63
	Eg1	7-12	5.9	0.16	0.1	2.7	0.8	0.1	0.6	3.7	4.3	86	2	62
	Eg2	12-18	5.6	0.17	0.1	2.8	0.7	0.1	1.1	3.7	4.8	77	2	53
	Btg1	18-25	5.0	0.19	0.2	2.7	2.1	0.1	8.0	5.1	13.1	39	1	75
	Btg2	25-36	5.0	0.15	0.3	6.5	9.0	0.1	4.5	15.9	20.4	78	0	72
	Btg3	36-48	5.5	0.14	0.4	10.8	14.6	0.1	5.4	25.9	31.3	83	0	116
	BCg	48-57	6.0	0.06	0.2	6.9	6.7	0.1	0.1	13.9	14.0	99	1	109
	Cg1	57-68	6.2	0.04	0.1	4.2	2.3	0.1	0.0	6.7	6.7	100	1	126
	Cg2	68-77	7.8	7	7	7	7	7	7	7	7	---	---	---
Cg3	77-86	8.1	7	7	7	7	7	7	7	7	---	---	---	
Wiville (S89AR-147-02)	Ap1	0-5	5.7	0.64	0.2	2.0	0.4	0.0	3.2	2.6	5.8	45	0	94
	Ap2	5-11	5.8	0.35	0.3	1.9	0.1	0.0	2.7	2.3	5.0	46	0	78
	BA	11-18	6.1	0.26	0.3	3.8	0.2	0.0	2.6	4.3	6.9	62	0	60
	Bt1	18-27	6.0	0.21	0.3	4.4	0.3	0.1	2.9	5.1	8.0	64	1	58
	Bt21	27-37	6.0	0.24	0.4	7.9	1.1	0.1	4.5	9.5	14.0	68	1	57
	Bt22	37-47	5.9	0.19	0.4	7.5	2.0	0.1	4.5	10.0	14.5	69	1	62
	Bt23	47-56	5.6	0.14	0.2	4.7	2.1	0.1	4.6	7.1	11.7	61	1	63
	BC	56-64	5.2	0.09	0.2	1.8	1.5	0.1	3.5	3.6	7.1	51	1	63
	C	64-78	5.3	0.06	0.1	1.2	0.9	0.1	1.6	2.3	3.9	59	3	95

See footnotes at end of table.

Table 17.--Chemical Analyses of Selected Soils--Continued

Soil name and pedon number	Horizon	Depth (in)	pH	Total Carbon (pct)	Extractable bases 5A6				Extract-able acidity	Sum bases	Sum cations	Base saturation (pct)	Na saturation (pct)	Cation exchange capacity 100 gm/ clay
					6A2B	K 6Q2B	Ca 6N2E	Mg 6O2D						
-----cmol/kg of soil-----														
Yancopin (S91AR-147-06)	Ap	0-4	6.2	1.69	0.1	13.7	4.6	0.1	5.9	18.5	24.4	76	0	83
	Bg11	4-16	6.5	1.10	0.0	14.9	5.6	0.1	5.2	20.6	25.8	80	0	76
	Bg12	16-28	6.6	0.99	0.2	15.1	6.1	0.1	4.5	21.5	26.0	83	0	82
	Bg13	28-40	6.5	0.77	0.2	14.1	5.1	0.1	4.7	19.5	24.2	81	0	82
	Bg21	40-48	6.7	0.68	0.1	17.1	6.5	0.1	4.4	23.8	28.2	84	0	80
	Bg22	48-56	6.7	0.67	0.1	15.1	6.5	0.2	4.4	21.9	26.3	83	1	72
	BC11	56-66	6.8	0.45	0.1	14.0	6.5	0.1	3.5	20.7	24.2	86	0	68
	BC12	66-76	6.7	0.37	0.1	13.3	5.4	0.1	3.8	18.9	22.7	83	0	65

- 1 Reported as percent organic matter, method 6A1A.
- 2 Determined by method 6Q2A.
- 3 Determined by method 6N2.
- 4 Determined by method 6O2.
- 5 Determined by method 6P2A.
- 6 Determined by method 6H1.
- 7 Carbon and cations not determined due to presence of carbonates.