April 3, 1973
Preliminary Copy
University of Idaho
Soil Conservation Service

Southwick
65 Ida 0508

General Site Characteristics

Location -- Benewah County, Idaho, 280 feet east of state line road, 1.5 miles north of Tilma siting, lot one, section 12, T. 45 N., R. 6 W.; described -- August 17, 1965, by ; topography -- rolling loess hills, side slope, 7 percent slope; elevation -- 2600 feet; aspect -- northeast; parent material -- loess or some influence with alluvium from loess; drainage -- moderately well; erosion -- nil; permeability -- medium; vegetation or use -- Ponderosa pine, snowberry, rose, grasses, aspen; classification -- Boralfic Argixerolls, fine-silty, mixed, mesic.

Pedon Description

01 1½-0 inches. Undecomposed leaf litter and grasses.

A11 0-3 inches. Dark grayish brown (10YR 4.2/1.6) broken, dark grayish brown (10YR 4/1.8) crushed, silt loam, very dark brown (10YR 2.1/1.6) crushed, moist; weak fine platy to weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; noncalcareous; abundant micro and very fine and few fine roots; many micro interstitial pores; common root or worm channels, some filled with worm casts; abrupt smooth boundary.

A12 3-8.5 inches. Dark grayish brown (10YR 4/1.6) broken, dark grayish brown (10YR 4.4/1.8) crushed, silt loam, very dark brown (10YR 2.4/2) crushed, moist; weak to moderate very fine to fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; noncalcareous; plentiful micro, few very fine, and very few fine roots; many micro and common very fine tubular pores; many bleached silt grains on ped surfaces; few MnO_2 and Fe_2O_3 concretions less than 1 mm; clear smooth boundary.

B21 8.5-17.5 inches. Dark grayish brown (10YR 4.2/2.2) broken, dark grayish brown (10YR 4.4/2) crushed, silt loam, very dark grayish brown (10YR 3/2) crushed, moist; weak fine to medium prismatic to weak to moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; noncalcareous; plentiful, micro and few very fine, fine and medium roots; many micro and very fine and common fine tubular pores; bleached silt grains on ped surfaces; organic stains on ped surfaces; common root or worm channels, some filled with worm casts; clear smooth boundary.

B22 17.5-22 inches. Brown (10YR 5.4/3) broken, grayish brown (10YR 5/2) spots in broken ped, brown (10YR 5.4/2.6) crushed, silt loam, dark brown (10YR 3.2/3) crushed, moist; weak medium prismatic to weak medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; noncalcareous; plentiful micro and very fine and few fine roots; many micro and very fine tubular pores; many bleached silt coatings on ped surfaces; organic stains on ped surfaces and in pores; common root or worm channels, some filled worm casts; abrupt smooth boundary.

B3 22-29 inches. Pale brown (10YR 5.8/2.6) broken, pale brown (10YR 5.6/2.6) crushed, silt loam, dark brown (10YR 3.4/3) crushed, moist; weak medium and fine prismatic to weak medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; noncalcareous; plentiful micro and very fine and few fine roots; many micro and very fine tubular pores; more bleachings on ped surfaces than above; clear wavy boundary.

A'2 29-34 inches. Light brownish gray (10YR 6.2/2) and brown (10YR 5.4/3) broken, light brownish gray (10YR 6/2.4) crushed, silt, brown to dark brown (10YR 4/3) crushed, moist; massive, tending toward weak fine to medium subangular blocky structure; friable, slightly sticky and slightly plastic; noncalcareous; few micro and very few very fine roots; many micro and very fine tubular pores; common MnO_2 and Fe_2O_3 concretions less than 2 mm; remnants of weak B material; abrupt smooth boundary.

B'21t 34-45 inches. Brown (10YR 5/3) broken, interior, light brownish gray (10YR 6.4/2) broken, specks, brown to dark brown (10YR 4/3) clay films, pale brown (10YR 6/3) crushed, silt loam, dark brown (7.5YR 3.8/4) broken, interior, moist, very pale brown (10YR 7/3) broken, specks, moist, dark brown (7.5YR 3.3/3.8) clay films, moist, brown (7.5YR 4.8/4) crushed, moist; moderate medium and coarse prismatic structure; very firm, sticky, plastic; noncalcareous; few micro and very fine roots, mostly matted on ped surfaces with a few penetrating into the tubular pores; many micro and common very fine tubular pores; medium continuous clay films on vertical and horizontal pore surfaces; interior of prisms have white speckled appearance involving some bleached material in pores; many bleached silt grains within and upon the peds; not exceeding 0.3 inches in thickness; many MnO_2 and Fe_2O_3 concretions; gradual smooth boundary.

B'22t 45-56 inches. Brown (10YR 5/3) broken, interior, light brownish gray (10YR 6.2/2) silt coat, brown to dark brown (7.5YR 4/3) clay films, pale brown (10YR 5.8/3.4) crushed, silty clay loam, brown to dark brown (7.5YR 4/4) broken, moist, very pale brown (10YR 7/2.8) silt coat, moist, dark yellowish brown (10YR 3/3.8) clay films, moist, dark brown (7.5YR 3.8/4) crushed, moist; moderate medium to coarse prismatic structure; very firm, sticky and plastic; noncalcareous; few micro and very fine roots, mostly matted on peds with a few penetrating into the tubular pores; many micro and common very fine tubular pores; [redacted]; medium continuous clay films on vertical and horizontal pore surfaces; few bleached silt grains within and many upon the peds; many MnO_2 and Fe_2O_3 concretions; gradual smooth boundary.

B'23t 56-65+ inches. Yellowish brown (10YR 5/3.8) broken, interior, pale brown (10YR 6/3.4) crushed, silt loam, brown to dark brown (7.5YR 4/3) broken, interior, moist, light gray (10YR 7/2) silt coat, moist, dark brown (10YR 3/3) clay film, moist, brown to dark brown (7.5YR 4/4.4) crushed, moist; moderate coarse prismatic structure; firm, sticky and plastic; noncalcareous; few micro

and very fine roots, mostly matted on ped surfaces with a few penetrating into the tubular pores; common micro and very fine tubular pores; thick continuous clay films on vertical and horizontal pore surfaces; very few bleached silt grains within and common upon peds; many MnO_2 and Fe_2O_3 concretions.

Chemical characterization and physical analysis of profile

65 Ida 0508
Southwick Silt Loam

No.	Horizon	Depth in.	pH Paste	pH 1:5	ECx10^3	Saturation extract me/1000 gms soil Ca	Mg	Na	K	CO_3	HCO_3	Cl	SO_4
1	A11	0-3	5.65	6.05	.35								
2	A12	3-8½	5.75	6.15	.30								
3	B21	8½-17½	6.05	6.45	.25								
4	B22	17½-22	5.95	6.40	.20								
5	B3	22-29	5.95	6.45	.20								
6	A'2	29-34	5.90	6.40	.20								
7	B'21t	34-45	5.70	6.45	.24								
8	B'22t	45-56	5.95	6.55	.24								
9	B'23t	56-65	6.15	6.25	.22								

Exchangeable ions me/100 gms Ca	Mg	Na	K	H	C.E.C. meq/100	Base Sat.%	Gyp.	$CaCO_3$	E.S.P.	O.M. %	N %	C:N	Soil:Rx ratio
9.5	2.5	.1	.7	10.2	20.5	55.4				3.98	.156	14.2	
9.2	1.7	.1	.6	7.8	19.4	59.7				2.62	.123	12.4	
8.2	2.0	.1	.7	5.8	16.5	65.6				1.20	.080	8.8	
7.8	2.0	.1	.5	5.6	14.2	64.8				.97	.066	8.5	
6.7	2.0	.1	.4	4.3	12.7	68.1				.75	.050	8.8	
6.7	2.4	.2	.2	4.0	12.5	70.2				.46	.037	7.3	
11.5	4.6	.3	.3	5.0	23.0	76.9				.41	.035	6.6	
11.9	4.9	.3	.3	5.5	22.9	76.1				.48	.040	7.0	
11.7	4.9	.3	.3	5.6	22.0	75.3				.37	.039	5.6	

$$\%C = \frac{\%OM}{1.72}$$

Profile Southwick 65 Ida 0508

No.	VCS 2-1.0	CS 1-0.5	MS 0.5-0.25	FS 0.25-0.1	VFS 0.1-0.05	TS 2.05	TSi 0.05-0.002	TC <0.002	Gravel & Stone, etc. >2mm.	Texture Class	Bulk Density
1	.23	.37	.29	1.44	5.02	7.35	71.45	21.20	-	Silt loam	1.41
2	.14	.34	.29	1.23	6.21	8.21	71.54	20.25	-	Silt loam	1.37
3	.04	.22	.26	1.25	5.69	7.46	72.99	19.55	-	Silt loam	[redacted]
4	.09	.40	.33	1.41	5.72	7.95	75.57	16.48	-	Silt loam	1.50
5	.10	.28	.32	1.22	4.29	6.21	78.68	15.11	-	Silt loam	1.50
6	.12	.24	.33	1.21	3.51	5.41	81.34	13.25	-	Silt	1.66
7	.05	.19	.22	.68	4.27	5.41	70.19	24.40	-	Silt loam	1.76
8	.13	.38	.21	.66	4.51	5.89	66.73	27.38	-	Silty clay loam	1.75
9	.06	.26	.27	.71	4.84	6.14	67.98	25.88	-	Silt loam	1.72