


Solonetz: sample profile

Profile description:

Profile (BW 5, Botswana) described by W. Siderius



Horizon	Depth (cm)	Description
Ah1	0 - 2	black (10YR 2/1, moist), greyish brown (10YR 5/2, dry) clay loam; weak medium platy; slightly sticky, plastic, firm; common medium distinct brown (7.5YR 4/4) mottles; common very fine pores; abrupt wavy boundary to
Ah2	2 - 43	7.5YR 3/1, moist, dark greyish brown (10YR 4/2, dry) soil; massive; slightly sticky, plastic, friable, hard; common medium pores; common fine roots and few coarse roots; few fine gravel fragments; clear wavy boundary to
Btn1	43 - 69	very dark grey (10YR 3/1, moist), greyish brown (10YR 5/2, dry) soil; moderate coarse; slightly sticky, plastic, friable, hard; many fine prominent dark red (2.5YR 3/6) and few fine faint brown (10YR 5/3) mottles; commonly abundant thin cutans; few fine pores; common fine roots and few medium roots; clear wavy boundary to
Btn2	69 - 91	dark grey (10YR 4/1, moist), dark grey (10YR 4/1, dry) slightly gravelly; massive; slightly sticky, plastic, friable, hard; common fine distinct dark red (2.5YR 3/6) and common fine distinct strong brown (7.5YR 5/6) mottles; commonly abundant thick cutans; few fine roots and few medium roots; gradual wavy boundary to

(remainder on the next page)



Horizon	Depth (cm)	Description
Btn3	91 - 127	grey (10YR 5/1, moist), grey (10YR 6/1, dry) slightly gravelly; slightly sticky, plastic, firm; few medium prominent brownish yellow (10YR 6/6) and few coarse prominent brownish yellow (10YR 6/6) mottles; commonly abundant moderately thick cutans;
BC	127 - 158	greyish brown (10YR 5/2, moist), brown (10YR 5/3, dry) slightly gravelly; massive; few mottles; commonly abundant thin cutans; few fine roots; gradual wavy boundary to
C	158 - 180	greyish brown (10YR 5/2, moist) soil; common prominent mottles;



Analytical data:

Horizon	Depth (cm)	Tot. sand (%)	Tot. silt (%)	Tot. clay (%)
Ah1	0 - 2	39	31	29
Ah2	2 - 43	70	13	16
Btn1	43 - 69	69	9	22
Btn2	69 - 91	56	8	35
Btn3	91 - 127	55	9	36
BC	127 - 158	56	9	34
C	158 - 180	50	9	39

Horizon	pH H ₂ O	pH KCl	Org. matter		Exch. cations*				CEC Soil*	ESP (%)
			C (%)	N (%)	Ca	Mg	K	Na		
Ah1	6.5	5.2	1.8	0.17	7.7	2.4	1.3	0.2	15.7	1
Ah2	6.2	4.6	0.8	0.05	2.8	1.0	0.4	0.2	7.2	3
Btn1	7.2	5.3	0.4	-	3.8	2.2	0.2	0.7	9.0	8
Btn2	8.5	6.6	0.2	-	7.0	4.6	0.4	3.1	15.3	21
Btn3	8.8	6.8	0.2	-	7.3	4.2	0.5	3.7	15.8	23
BC	8.7	6.8	0.1	-	7.3	4.8	0.5	4.2	16.1	25
C	8.8	6.6	0.2	-	7.0	5.8	0.6	5.2	18.8	28

* cmol(+)/kg



Futher information:

WRB classification: Gleyic Solonetz

Location: 22 km NE of Mahalpye, Botswana

Landuse: Semi deciduous woodland

Vegetation: Savanna, Acacia Mixed Woodland

