


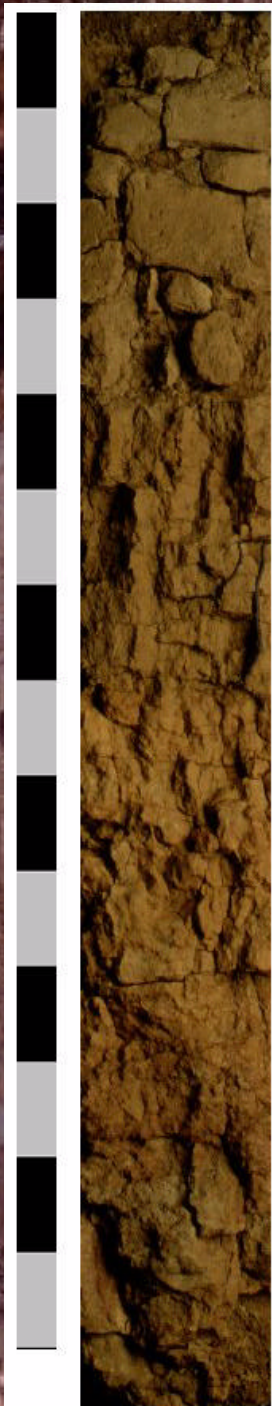
Durisol: sample profile

Profile description: Profile (US 11, United States) described by A. Yugel, W. Sheldon & G. Romito



Horizon	Depth (cm)	Description
Ap	0 - 15	Dark brown (7.5YR 3/4, moist), brown (7.5YR 5/4, dry) loam; moderate fine to medium subangular blocky; slightly sticky, slightly plastic, friable, hard; many very fine interstitial and common fine tubular pores, moderately porous; common very fine roots; very few ferruginous concretions; slightly calcareous due to disseminated lime previously applied as soil amendment; pH (field) 7.5; clear wavy boundary to
Bt1	15 - 25	Brown (7.5YR 4/4, moist), brown (7.5YR 5/4, dry) loam; moderate medium subangular blocky; slightly sticky, slightly plastic, friable, hard; patchy thin clay cutans on pedfaces and as bridges between mineral grains; many very fine tubular and common very fine interstitial and tubular pores, moderately porous; common very fine roots; very few ferruginous concretions; non calcareous; pH (field) 5.7; clear wavy boundary to
Bt2	25 - 41	Reddish brown (5YR 4/4, moist), brown (7.5YR 5/4, dry) loam; moderate medium subangular blocky; sticky, plastic, friable, very hard; patchy thin clay cutans on pedfaces, broken thin clay cutans as bridges between mineral grains and common light gray (10YR 7/2) fine sand or silt grains on ped faces and pore linings; many very fine and few fine tubular pores; common very fine roots; very few small ferruginous concretions; non calcareous; pH (field) 5.9; abrupt wavy boundary to

(remainder on the next page)



Horizon	Depth (cm)	Description
Bt3	41 - 53	Strong brown (7.5YR 4/6, moist), brown (7.5YR 5/4, dry) clay; moderate medium prismatic; sticky, very plastic, firm, extremely hard; few mottles formed by reaction of soil with root residue at upper boundary of the horizon; broken moderately thick clay cutans on pedfaces and continuous thin clay cutans as bridges between mineral grains; common non-intersecting slickensides within the matrix; common very fine tubular and few very fine interstitial pores; few very fine, fine and medium roots; very few small ferruginous concretions; non calcareous; pH (field) 7.0; gradual wavy boundary to
Bt4	53 - 66	Brown (7.5YR 4/4, moist, 7.5YR 5/4, dry) clay; moderate medium prismatic; sticky, plastic, firm, extremely hard; broken thick clay cutans on pedfaces and broken thin clay cutans as bridges between mineral grains; common very fine tubular pores and few very fine interstitial pores; few very fine, fine roots and medium roots; very few small soft ferruginous concretions; non calcareous; pH (field) 7.3; abrupt wavy boundary to
Cqm1	66 - 74	Brown (7.5YR 4/4, moist, 7.5YR 5/4, dry) and light brown (7.5YR 6/4, dry), strongly coherent massive; extremely hard, brittle when moist; common very fine discontinuous tubular pores; no roots; few small ferruginous concretions; indurated massive duripan; calcareous channels and holes; silica and sesquioxide cementation in more than 90% of the matrix pH (field) 8.0; gradual smooth boundary to

(remainder on the next page)



Horizon	Depth (cm)	Description
Cqm2	74 - 122	Dark brown (7.5YR 3/4, moist), brown (7.5YR 5/4, dry) and strong brown (7.5YR 4/6, dry); strongly coherent massive; extremely hard, brittle when moist; common very fine discontinuous tubular pores; no roots; ferrigenous concretions; indurated massive duripan; slightly calcareous channels and holes; silica and sesquioxide cementation in more than 90% of the matrix; pH (field) 8.0; clear wavy boundary to
Cq	122 - 152	Dark brown (7.5YR 3/4, moist), brown (7.5YR 5/4, dry); strongly coherent massive; extremely hard, brittle when moist; many very fine interstitial pores; no roots; ferrigenous concretions; strongly cemented massive duripan; silica and sesquioxide cementation in 70-90% of the matrix; pH (field) 8.0





Analytical data:

Horizon	Depth (cm)	Tot. sand (%)	Tot. silt (%)	Tot. clay (%)	Bulk dens. (g/cm ³)	CEC Soil (cmol(+)/kg)	Base sat. (%)
Ap	0 - 15	30	56	13	1.52	9.8	90
Bt1	15 - 25	31	56	13	1.71	9.0	78
Bt2	25 - 41	32	52	16	1.73	9.8	83
Bt3	41 - 53	28	34	38	1.86	20.7	89
Bt4	53 - 66	32	32	37	1.81	21.5	93
Cqm1	66 - 74	46	42	11	1.86	17.4	100
Cqm2	74 - 122	46	37	16	1.86	15.4	100
Cq	122 - 152	64	19	17	1.74	13.3	100



Horizon	Depth (cm)	pH H ₂ O	pH CaCl ₂	Org. matter		Exch. cations*			
				C (%)	N (%)	Ca	Mg	K	Na
Ap	0 - 15	6.4	5.7	0.8	0.09	6.7	1.7	0.2	0.2
Bt1	15 - 25	5.8	5.0	0.6	0.07	5.1	1.6	0.1	0.2
Bt2	25 - 41	5.9	5.1	0.3	0.04	5.0	2.8	0.1	0.2
Bt3	41 - 53	6.1	5.6	0.2	0.05	9.8	7.8	0.3	0.6
Bt4	53 - 66	6.6	5.7	0.2	-	10.4	8.5	0.3	0.7
Cqm1	66 - 74	7.8	7.0	0.1	-	9.2	7.3	0.2	0.8
Cqm2	74 - 122	7.7	7.4	0.1	-	8.4	6.8	0.2	0.9
Cq	122 - 152	7.8	7.3	0.0	-	7.5	6.1	0.2	1.0

* cmol(+)/kg



Futher information:

WRB classification: Luvi-Endopetric Durisol (Chromic)

Diagnostic criteria: Ochric horizon, argic horizon, petroduric horizon

Location: California, San Joaquin Co., 8 km N of Lodi

Parent material: Alluvium derived from coarse-grained acid igneous, granitic rock

Landuse: High level arable farming (grapes), seasonally irrigated

