

## Pedon 5

The pedon 5 series consists of moderately deep to hardpan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources. They are on undulating low terraces with slopes of 0 to 9 percent. The mean annual precipitation is about 15 inches and the mean annual temperature is about 61 degrees F.

**TYPICAL PEDON:** Pedon 5 loam - on east facing complex slope of 1 percent in a vineyard at elevation of 40 feet. (Colors are for dry soil unless otherwise stated. When described on May 3, 1983, the soil was moist throughout).

\_\_\_\_\_ --0 to 6 inches; brown (7.5YR 5/4) loam, dark brown (7.5YR 3/4) moist; moderate medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular and interstitial and few fine tubular pores; few fine very dark gray (10YR 3/1) Fe-Mn concretions and stains; neutral (pH 7.3); clear wavy boundary. (5 to 15 inches thick)

\_\_\_\_\_ --6 to 10 inches; brown (7.5YR 5/4) loam, reddish brown (5YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular and common very fine interstitial pores; few thin clay films on ped faces and bridging mineral grains; few fine very dark gray (10YR 3/1) Fe-Mn concretions and stains; moderately acid (pH 5.7); clear wavy boundary. (0 to 8 inches thick)

\_\_\_\_\_ --10 to 16 inches; brown (7.5YR 5/4) loam, reddish brown (5YR 4/4) moist; moderate medium subangular blocky structure; very hard, friable, sticky and plastic; many very fine and few fine tubular and common very fine interstitial pores; few thin clay films on ped faces, common thin clay film bridging mineral grains; common light gray (10YR 7/2) fine sand or silt grains on ped faces and lining pores; few fine dark gray (10YR 3/1) Fe-Mn concretions; moderately acid (pH 5.9); abrupt wavy boundary. (0 to 12 inches thick)

\_\_\_\_\_ --16 to 21 inches; brown (7.5YR 5/4) clay; strong brown (7.5YR 4/6) moist; moderate medium prismatic structure; extremely hard, firm, sticky and very plastic; few very fine, fine and medium roots; common very fine tubular and few very fine interstitial pores; common moderately thick clay films on ped faces, many thin clay films bridging mineral grains; common slickensides that do not intersect; about 3 percent fine very dark gray diameter Fe-Mn concretions; neutral (pH 7.0); gradual wavy boundary. (4 to 10 inches thick)

\_\_\_\_\_ --21 to 26 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium prismatic structure; extremely hard, firm, sticky and plastic; few very fine, fine and medium roots; common very fine tubular and few very fine interstitial pores; common moderately thick clay films on ped faces and common thin clay films as bridges between mineral grains; about 3 percent very dark gray (10YR 3/1) Fe-Mn concretions and stains; neutral (pH 7.3); abrupt wavy boundary. (3 to 5 inches thick)

\_\_\_\_\_ --26 to 29 inches; variegated brown (7.5YR 5/4) and light brown (7.5YR 6/4) duripan, brown (7.5YR 4/4) moist; extremely hard and brittle; silica and sesquioxide cementation in more than 90 percent of the matrix; few fine Fe-Mn concretions; strongly effervescent with secondary lime in fractures; common very fine close tubular pores; moderately alkaline (pH 8.0); gradual smooth boundary. (1 to 10 inches thick)

\_\_\_\_\_ --29 to 48 inches; variegated brown (7.5YR 5/4) and strong brown (7.5YR 4/6) duripan, dark brown (7.5YR 3/4) moist; extremely hard and brittle; silica and sesquioxide cementation in more than 90 percent of the matrix; common fine Fe-Mn concretions and stains; strongly effervescent with segregated lime in fractures; common very fine closed tubular pores; moderately alkaline (pH 8.0); clear wavy boundary. (1 to 25 inches thick)

\_\_\_\_\_ --48 to 60 inches; brown (7.5YR 5/4) duripan, dark brown (7.5YR 3/4) moist; extremely hard and brittle; silica and sesquioxide cementation in 70 to 90 percent of matrix; common fine Fe-Mn concretions; many very fine interstitial pores; moderately alkaline (pH 8.0).

**TYPE LOCATION:** Pedon 5 County, California; about 5 miles northeast of Lodi, 3,700 feet west of intersection of Southern Pacific Railroad and Forest Lake Road; 1,100 feet south of Forest Lake Road and about 100 feet west into vineyard; 1,700 feet north and 2,600 feet east of the southwest corner of sec. 3, T. 4 N., R. 6 E., MDB&M., Lodi North quadrangle.

**GEOGRAPHIC SETTING:** Pedon 5 soils are on hummocky, nearly level to undulating terraces at elevations of about 20 to 500 feet. Some areas have been leveled. Slopes range from 0 to 9 percent. They formed in alluvium from mixed but mainly granitic rock sources. The climate is dry with hot dry summers and cool moist and foggy winters. Mean annual precipitation varies from 10 to 22 inches. Average January temperature is 45 degrees F; average July temperature is 80 degrees F; mean annual temperature is 60 to 63 degrees F. Frost-free period is 250 to 300 days.

**DRAINAGE AND PERMEABILITY:** Well and moderately well drained; very slow to medium runoff; very slow permeability. Some areas are subject to rare or occasional flooding. End of pedon 5