

## ROBERT SERIES

The Robert series consists of very shallow and shallow, well drained soils formed in thin, noncalcareous, very gravelly or channery materials weathered residually from granite, sandstone, gneiss or in places from tuff. Robert soils are on mountain slopes and ridges. Slopes are 3 to about 100 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 34 degrees F.

**TAXONOMIC CLASS:** Loamy-skeletal, mixed, superactive Lithic Haplocryolls

**TYPICAL PEDON:** Robert very gravelly sandy loam - grassland. (Colors are for dry soil unless otherwise noted.)

**A1**--0 to 4 inches (0 - 10 cm); dark gray (7.5YR 4/1) very gravelly sandy loam (6% clay), very dark gray (7.5YR 3/1) moist; strong fine crumb structure; soft, very friable, nonsticky and nonplastic; 40 percent gravel, mostly fine and very fine angular granite gravel; neutral (pH 6.6); clear smooth boundary. (3 to 6 inches thick)

**A2**--4 to 14 inches (10 - 35 cm); brown (7.5YR 4/2) very gravelly coarse sandy loam (8 % clay), dark brown (7.5YR 3/2) moist; moderate fine granular structure; hard, very friable, nonsticky and nonplastic; 50 percent gravel, mostly fine and very fine angular granite fragments; neutral (pH 6.8); abrupt wavy boundary. (4 to 17 inches thick)

**R**--14 inches (35 cm); granite.

**TYPE LOCATION:** Jackson County, Colorado; 750 feet south and 900 feet west of the east 1/4 corner of Sec. 8, T. 10 N., R. 78 W.

### RANGE IN CHARACTERISTICS:

Soil moisture: typic ustic.

Mean annual soil temperature: 36 to 44 degrees F

Mean summer soil temperature: 43 to 58 degrees F

Depth to lithic contact: 8 to 20 inches

Thickness of the mollic epipedon: 5 to 20 inches often extends to the lithic contact

Particle-size control section (weighted average):

Clay content: 5 to 18 percent

Sand content: 45 to 82 percent with more than 35 percent fine or coarser

Rock fragments: 35 to 80 percent and range from 1/8 to 24 inches in diameter, but most are smaller than 1 inch

A horizon:

Hue: 2.5Y through 7.5YR

Value: 3 through 5 dry, 2 or 3 moist

Chroma: 1 through 4

Reaction: slightly acid through slightly alkaline

C horizon (if present):

Hue: 2.5Y through 7.5YR

Texture: sandy loam or coarse sandy loam modified by rock fragments

Reaction: slightly acid to slightly alkaline

### COMPETING SERIES:

[Arrowpeak](#) (MT), [Dollarhide](#) (ID), [Labshaft](#) (NV), [Milling](#) (WA), [Poin](#) (MT)- continuous Bw horizons  
[Cheadle](#) (MT), [Starley](#) (WY) - calcareous in some part above the bedrock

[Chokecherry](#) (ID) Xeric moisture regime

[Clamp](#) (OR), [Irigul](#) (WY), [Irrson](#) (WY), [Jonlake](#)(NV), [Schwacheim](#) (CO) - greater than 18 percent clay in the fine earth fraction of the particle-size control section

[Dalys](#) (MT) elevation lower than 8,000 feet

[Eyre](#) (CO), [Topeki](#) (NV) - coarse fragments consisting mainly of stones more than 10 inches in diameter

[Udel](#) (NV) has a xeric moisture distribution pattern and pinyon pine

**GEOGRAPHIC SETTING:**

Parent material: derived from thin, noncalcareous, very gravelly or channery materials weathered residually from granite, sandstone, gneiss or in places from tuff

Landform: mountain slopes and ridges

Slopes: 3 to 100 percent

Elevation: 7,600 to 10,900 feet

Mean annual temperature: 32 to 43 degrees; southern Colorado 40 to 44 degrees F

Mean annual precipitation: 14 to 25 inches at type location; Utah, 25 to 30 inches at elevations of 9,500 to 11,500 feet, Utah, north mean annual precipitation 12 to 19 inches with elevations of 7,500 to 8,600 feet

Precipitation pattern: in the mountainous area Colorado: peak periods of precipitation in the spring and early summer

Frost-free period: 20 to 30 days, but ranges to 90 days with elevations down to 7,500 feet; Utah: 50 to 80 days in the north, at elevations of 7,500 to 8,600 feet and mean annual precipitation of 12 to 19 inches

**GEOGRAPHICALLY ASSOCIATED SOILS:**These are the [Juget](#) and [Supervisor](#) soils. Juget soils have mean summer soil temperature warmer than 59 degrees F. and are coarse textured. Supervisor soils have bedrock at a depth of more than 20 inches.

**DRAINAGE AND PERMEABILITY:** Well drained; low to very high runoff; moderately rapid to rapid permeability.

**USE AND VEGETATION:** These soils are used for native pastureland. Native vegetation consists of scattered ponderosa pine, Arizona fescue, mountain muhly, fringed sagebrush, slimstem muhly, blue grama, pine dropseed, sagebrush, junegrass, needleandthread, and wheatgrass.

**DISTRIBUTION AND EXTENT:** Mountainous areas of Colorado and central and northeastern parts of Utah. The series is of moderate extent.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Bozeman, Montana

**SERIES ESTABLISHED:** Jackson County, Colorado; 1973.

**REMARKS:** Diagnostic features include:  
Mollic epipedon - the zone from 0 to 14 inches  
Lithic contact is at 14 inches.

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