

A Simple Soil Classification System

Collection and Testing Procedure

- a) Clear the surface of the sample location of leaves and twigs and take two samples, one of the top soil (0-5 cm) and one of the sub-soil (30 cm). Classify the soil type for each sample using the steps below.
- b) Identify the colour group of both samples using a moistened sample:

Colour (Moist)	Description
Red	rich or bright red, red brown, brown
Yellow	light brown, yellow, pale yellow
Yellow + Grey	yellow, as above, with grey colours
Grey	dull, white, pale grey, grey soil, +/- blue
Black	dull, black, dark grey.

- c) For each sample identify the texture class:
- take a small handful of soil, remove stones or roots, moisten and roll in the palm of the hand to create a bolus. Adjust moisture content until it is possible to create and press out a ribbon between the thumb and forefingers;
 - note the feel and coherence of the sample as it is worked;
 - press out a ribbon and measure the length of ribbon that can be pressed out before it fractures;
 - reform the bolus and repeat this procedure to confirm the initial observation; and
 - consult the table and use all information to get the best estimate of texture class.

Ribbon length mm	Feel	Coherence	Texture class
0-15	gritty, not sticky	none	sand
15-25	gritty, slightly sticky	slight	sandy Loam
25-40	spongy	good	loam
40-50	smooth	good	clay loam
50-75	light plasticine	plastic	light clay
75+	strong plasticine	plastic	medium or heavy clay

Erodibility rating assessment procedure

- a) Calculate the **base score** using the matrix of surface and subsoil texture classes:
 b)

Subsoil Texture	Surface Texture			
	Sand or Sandy loam	Loam or Clay Loam	Light Clay	Medium or Heavy Clay
Sand or Sandy loam	2	1	1	2
Loam or Clay Loam	2	1	1	1
Light Clay	3	2	1	1
Medium or Heavy Clay	4	3	2	2

(eg: a loam or clay loam surface texture overlying a medium or heavy clay subsoil texture gets a base score of 3)

- b) To the **base score** determined above add points for estimated depth to bedrock, surface soil colour and surface characteristics to produce the **final score** which can be linked to the erodibility class:

Base Score	Depth	Add Score	Colour	Add Score	Surface Characteristics ¹	Add Score	Final Score	Erosion rating
	deep >0.5m (estimated)	0	Red	0	Not hard setting or loose	0	1-2	Low
	shallow <0.5m (estimated)	3	Colour Yellow or Yellow + Grey	1	Hard setting ²	1	3-4	Moderate
			Colour Grey or Black	2	Loose ³	1	5-7	High

1. Effort should be made to assess this characteristic when the surface soil is dry.
2. Hard setting soils are those which form a compact hard mass on drying out.
3. Loose soils are made up of an incoherent mass of individual particles or aggregates. This may include small peds (commonly less than 5mm) as seen in self mulching soils.

(Eg Final Score = Base Score determined from the surface and subsurface soil texture plus points added for Depth, Colour and Surface characteristics).

Recording results

The results of the soil erodibility assessment area should be incorporated into the management plan. It is recommended that this information be retained as a record of the erodibility class for the area for ongoing use.