Simple Soil Survey-Key

Abundance Consulting "Quick and Dirty" Soil Quality Assessment September 19, 2008

Old Poor Farm Seminar Series
Washington State University extension
1919 Ne 78th St.

INDICATOR	METHOD	QUALITY: Good	Fair	Poor
Soil Tilth Test while moist (not dry, not wet)	Dig in slightly with trowel, gather a handful of soil. If you can, its likely good or fair. If can't, its likely poor.	Friable, pliable, crumbly, easily broken by fingers, structure & texture variable, visible	Firm , effort required to break clods, structure & texture variable, some pores	Hard, dense, difficult to break, homogenous structure, lacks complex texture, no pores.
Compaction Test when moist	Poke pencil-sized stick into ground	Soil probe (pencil, etc) slides in easily to 4"+	Soil probe requires some effort to sink 2" to 4"	Soil probe requires great effort for little penetration, potential to break pencil
Water infiltration & drainage Test when wet	Observe after rain or use sprinkler, model 1/2" 'rain' in 4 hours	Drains readily, no pooling."Sheen" effect lasts 3-5 seconds	Drains well, little pooling, limited persistence (less than 1 hr). "Sheen" effect lasts 4-8 seconds	Drains poorly, pooling and ponding develops and persists. "Sheen" effect lasts 10+ seconds
Erosion Test when wet, observe anytime	Observer after rain or use sprinkler, model ½" 'rain' in 4 hours	No sheet and rill, downslope discharge clear, topsoil present, robust, high organic matter content	Minor sheet & rill, turbidity (clouds) present in discharge, topsoil present, weak, medium, low organic content	Sheet & rill & perhaps gully evidence, muddy runoff, topsoil often depleted, sibsoil visible
Ground Cover Observer anytime	Observe plant and soil matrix	Little or no bare soil, vegetation annualized, vegetative compost & humus persistent & dense but friable, giving	Soil covered patchily vegetation spotty, vegetative compost & humus variable, from poor to good	Soil bare, humus lacking or not present, no vegetative compost.
Soil Food Web Observe anytime	Observe plant and soil matrix, dig in 3-5"	Clear signs of earth-worms (holes, castings) spiders, beetles, decomposing roots, rich earthy smell	Some sign of earthworms, egg sacs, spiders, etc. Soil smell weak	Little or no sign of earthworms, beetles, or decomposing roots. Soil may have no or 'dusty' smell
Organic Content Observer anytime	Observe soil matrix dig in 3-5"	Dark soil, visible decomposing root/ leaf mulch, rich earthy smell, visibly active soil food web	Medium dark or brown soil, limited visible decomposing root/leaf mulch, weakly earthy smell, limited soil food web	Light colored soil virtually no visible mulch, dusty or dry smell no visibly active soil food web
Plant Productivity Observer during growing season	Watch through growing season	Uniform & healthy production for species morphology, good crop volume, resistant to disease & stress	Mostly uniform & healthy production for species morphology fair crop volume, somewhat resistant to disease & stress	Variable, tending to unhealthy species morphology poor crop volume, not resistan to disease and stress