

# Topsoil & Topsoil Mixes



Allan's Landscaping & Disposal Services Ltd.

## 1. SCOPE

- 1.1 This document describes weathering as a part of soil formation, the importance of materials that are in soil and the correct guidelines following the Saskatchewan Soil Quality Criteria. Evaluation of the soil will be drawn by referencing vegetation guidelines, soil quality criteria, weathering and soil formation, and soil forming factors.

## 2. SOIL QUALITY CRITERIA

2.1 The Soil Quality Criteria Working Group, Alberta Agriculture, March 1987 applies in Saskatchewan. The criteria for topsoil is applied as to coversoil. Coversoil is defined as being the upper soil profile. Allan's Landscaping & Disposal Services Ltd. has a suitable coversoil and subsoil as 'Fair' meaning; – Moderate soil limitations that may affect use but which can be overcome by proper planning and good management. The class of stoniness are defined as well, on the basis of the percentage of the land surface occupied by fragments coarser than 15cm in diameter. Allan's Landscaping & Disposal Services Ltd. has a stoniness classification of 'Stones 2 (moderately stony)' meaning; enough stones are present to cause interference with cultivation (0.1-3% of surface, stones 2-10m apart).

Reaction (pH)	5.5-6.4 & 7.6-8.4
Salinity (EC) (dS/m)	2-4
Sodicity (SAR)	4-8
Saturation (%)	20-30, 60-80
Stoniness Class	S2
Texture	FSL, VFSL, L, SL, SiL
Moist Consistency	Loose
Organic Matter (%)	>2
CaCO <sub>3</sub> Equivalent (%)	2-20

- 2.2 Note: We use farmer's topsoil which is then put through our 1" screener this is for all of our topsoil products to remove roots, stumps, and clay. Our topsoil does not have any chemicals or sprays or anything added to it for at least 20 years. Our soils are tested every year to make sure it has all the organic materials and humus needed.

## 3. FORMATION OF SOIL

3.1 Soil is a complicated combination of minerals (~45%), organic matter (~5%), and empty space (~50%, filled to various ranges with air and water). The mineral content material of soil varies, but is dominated by clay minerals and quartz, alongside with minor quantities of feldspar and small fragments of rock. There are several factors that affect the formation of soil including: climate, parent rock, slope of the surface accumulating and age of the soil. Soil contains small rocks which are made by wind, rain, sun and snow. When soil forms, the downward motion of clay, water and dissolved ions can lead to the improvement of chemically and texturally distinct layers (soil horizons). This leads to the importance of organisms/vegetation (ex: rocks, sand, clay) in soil. Rocks are an important part of the soil, rocks are used for the nutrition of plants (a person needs enough soil between the rocks for the sown seed to take root), they help with drainage, prevent erosion, help with evaporation of moisture, and they cool the soil's surface on a hot day. Upon absorbing some of the sun's heat, rocks also help warm the soil at night. There will be ¼-1½" rocks within the soil that we offer. Sand is added into the soil as it plays a part in aeration and drainage. Additionally, there will be small fragments of clay which determines the elasticity of the soil. Soil texture, which influences the entry of water (infiltration) into the soil and its transmission into the soil are dependant on the temperatures of the Saskatchewan climate on its current day, which varies. (ex: wet or dry).

## 4. REFERENCED DOCUMENTS

4.1 Saskatchewan Soil Standards:

- Saskatchewan Reclamation and Approvals Guidelines, EPB 343. Appendix C.
- Physical Geology, First University of Saskatchewan Edition. Chapter 8, Weathering and Soil Formation.
- Canadian System of Soil Classification (CSSC), Saskatchewan Region. Factors of Soil Formation and Their Effects, Organisms/vegetation as a soil-forming factor.

## 5. CLASSIFICATION

5.1 The classification is made by using the following documents listed in the 'Referenced Documents' section of 4.1 If more documentation is required, please contact Allan's Landscaping & Disposal Services Ltd. by email allans@sasktel.net or by phone 306-384-4763. For returns and refunds please refer to our policy.