The textural classes defined by this method are:

**Sand** - no coherence when moist or dry. Individual particles easily seen.

**Loamy sand** - slight coherence when moist. Can be squeezed into a ribbon about 5mm long.

**Sandy loam** - moist soil just coherent, very sandy to touch, will form a ribbon 15 - 25mm long, sand grains are readily seen

**Loam** - moist soil coherent and rather spongy, some plasticity, smooth feel with no obvious sandiness. Will form a ribbon about 25mm long

**Silty Loam** - moist soil quite coherent, feels very smooth to silky. Forms a ribbon 25mm long.

**Sandy clay loam** - strongly coherent, sandy to touch, with sand grains visible in fine matrix. Will form a ribbon 25 - 40mm long.

**Clay loam** - moist soil coherent and plastic, smooth to manipulate. Will form a ribbon 40 - 50mm long.

**Silty clay loam** - coherent smooth, plastic and silky to touch. Will form a ribbon 40-50mm long.

**Sandy clay** - plastic, sands seen and felt in clayey matrix. Will form a ribbon 50-75mm long.

**Silty Clay** - very plastic, smooth and silky to manipulate. Will form a ribbon 50 - 70mm long.

**Clay** - very smooth to touch, highly plastic. Will form a ribbon 60 - 75mm long.

**Other properties affecting texture**

Although texture is strongly influenced by clay content, other properties can affect soil texture:

• Type of clay mineral - Montmorillonite makes the soil resist deformation, so is stiffer to squeeze into a ribbon. Therefore a longer ribbon may be produced indication more clay than is present. Kaolinite makes the soil appear less clayey, and easily squeezed into shorter ribbons.

• Silt Particles - Silt particles give the soil a silky smoothness, typical of the many pallid zone materials in the south-west of Western Australia.

• Organic matter - Organic matter confers cohesion to sandy soils and a greasiness to clayey soils. Therefore soils that have a high clay content and enough organic matter may texture as clay loams instead of clays.

• Iron and aluminium oxides - Iron and aluminium oxides, present in pink and red soils, may need more water to form a plastic soil ball. When squeezed, the ball only produces a short ribbon, indicating a less clayey texture. This is because the iron and aluminium oxides cement clay particles together.

• Calcium and magnesium carbonates - If calcium and magnesium carbonates are present, moist soil feels spongy. For sandy and loamy textures, carbonates make the soil appear more clayey. However the carbonates may make clay textures appear less clayey because they cement clay particles together.

• Cation capacity and exchangeable cations - Calcium saturated clays are usually easier to wet and knead and give a smooth texture. Sodium and magnesium saturated clays are more difficult to wet. They produce a soil that sticks to the fingers and is stiff and hard to ribbon, thus appearing more clayey than they are.

• Strong structural aggregation - Clay content will be under-estimated if the soil is strongly aggregated. Usually prolonged and vigorous kneading will break down the aggregates and texture will be closer to true clay content.

Since the above properties vary in the soils, specific allowance cannot be made for them and hand texturing must remain a subjective measure of the properties of sand , silt and clay in a soil.

However, despite limitations, soil texturing is a useful field guide to a soil's water holding characteristics and clay content and indicates how well water may move through it. Soil texture probably provides the most complete assessment of the overall behaviour of soil and its agricultural usefulness.