

### 3.5 MAJOR GROUP : E

The main characteristic of these soils is their uniform, clay textured profiles. They are strongly structured clays with a dominantly smooth-ped fabric and they exhibit significant cracking on drying. Three soil profile classes were formed from the profile descriptions of uniform clay soils.

#### 3.5.1 Soil Profile Class : Ea

General Features: These uniform clay soils are characterized by the presence of a black clay horizon below the immediate surface. This dark clay horizon (referred to as the D.C.H.) usually grades to a grey clay, which may or may not be mottled, in the deep subsoil. Pale or bleached, subsurface horizons are absent and soils with acid, neutral and alkaline soil reaction trends all occur throughout the region, ie subclasses EaA, EaN and EaK. The alkaline subclass EaK, is the more common.

#### Soil Description:

##### Surface Soil

light or medium clay, occasionally heavy clay.

5-20cm thick.

black, dark grey or very dark greyish brown.

strong, fine to coarse blocky structure.

consistence is usually very hard dry and sticky when wet.

##### Subsoil

medium or heavy clay.

black or very dark grey, may become greyish brown with a yellow mottle in the deep subsoil.

strong, medium or coarse blocky structure.

variable amounts of hard and soft carbonate segregations may occur in the deep subsoils of the alkaline soils.

total soil depth is usually greater than 150cm.

Phases:

EaAf,EaNf,EaKf: shallow solum phases - total soil depth varies but the common range is 30-60cm where these soils occur on the slopes of rises and hills; variable amounts of surface rocks and boulders occur; carbonate segregations may occur in the subsoils of the alkaline phase.

3.5.2 Soil Profile Class : Eb

General Features: These uniform clay soils are characterized by the presence of a brown or red clay horizon below the immediate surface. These brown and red clay horizons (referred to as the B.C.H. and the R.C.H. respectively) usually grade to a greyish brown or yellowish brown clay, which may be mottled red in the deep subsoil. Pale, or bleached, subsurface horizons are absent and soils with an alkaline soil reaction trend occur, ie. subclass EbK.

Soil Description:

Surface Soil

medium clay.

20-30cm thick.

dark reddish brown to black.

strong, medium to coarse blocky structure.

may have a few hard and soft carbonate segregations where these soils are formed on limestone.

Subsoil

medium or heavy clay, may become light clay with an increase in depth.

dark reddish brown to dark brown, becoming greyish brown to yellowish brown with an increase in depth; the deep subsoil may have a red mottle.

strong coarse blocky structure where these soils occur in depressions, but on hillslopes they have a moderate to strong fine blocky structure.

common to moderate levels of hard and soft carbonate segregations occur in the deep subsoil, but are found throughout the subsoil where these soils are formed on limestone.

total soil depth is usually greater than 100cm.

Phases:

EbKf: shallow solum phase - total soil depth is about 60cm.

### 3.5.3 Soil Profile Class : Ec

General Features: These uniform clay soils are characterized by the presence of a grey clay horizon below the immediate surface. This grey clay horizon (referred to as the G.C.H.) usually grades to a paler grey clay, which may or may not be mottled. Pale, or bleached, subsurface horizons are absent and soils with acid, neutral and alkaline soil reaction trends all occur throughout the region, ie. subclasses EcA, EcN and EcK. The alkaline subclass, EcK, is by far the more common.

#### Soil Description:

##### Surface Soil

light, medium or heavy clay.

5-25cm thick, may occasionally be deeper.

dark grey, very dark greyish brown or black.

strong, coarse blocky structure, may occasionally be strong, fine blocky particularly when dry.

##### Subsoil

medium or heavy clay.

grey, dark grey or dark greyish brown; may become greyish brown, olive brown, grey or light brownish grey, with or without a yellow mottle, with an increase in depth.

moderate to strong, coarse blocky structure, which may break down to finer structural units; deep subsoil is sometimes massive.

moderate to abundant hard and soft carbonate segregations may occur in the deep subsoil of the alkaline soils; moderate to abundant levels of fine gravel may occur in the subsoils of some depression soils.

total soil depth is usually greater than 150cm.

#### Phases:

EcNf,EcKf: shallow solum phases - total soil depth may be as shallow as 55-60cm in some depressions and plains.