

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





Sub-Orders of Entisole, Inceptisole and Molisole

Orders

- The name of the orders can be recognized as such the name of each order ends at sol.
- Sol is a Latin word derived from Solum(soil) with a connecting vowel O FOR Greeks rout I for the other routes.
- Each name of an order contains a **formative Elements** that begins with Vowels, e.g., in Entisol ‘‘Ent’’ formative elements

Formative Element	Derivation	Sounds Like	Connotation
Acr	Modified from Gr. <i>Akros</i> , at the end	<u>Act</u>	Extreme weathering
Al	Modified from aluminum	<u>Algebra</u>	High aluminum, low iron
Alb	L. <i>Albus</i> , white	<u>Albino</u>	An albic horizon
Anhy	Gr. <i>anydros</i> , waterless	<u>Anhydrous</u>	Very dry
Anthr	Modified from Gr. <i>anthropos</i> , human	<u>Anthropology</u>	An anthropic epipedon
Aqu	L. <i>aqua</i> , water	<u>Aquifer</u>	Aquic conditions
Argi	Modified from argillic horizon; L. <i>argilla</i> , white clay	<u>Argillite</u>	Presence of an argillic horizon
Calci, calc	L. <i>calcis</i> , lime	<u>Calcium</u>	A calcic horizon
Cry	Gr. <i>kryos</i> , icy cold	<u>Cry</u>	Cold
Dur	L. <i>durus</i> , hard	<u>Durable</u>	A duripan
Dystr, dys	Modified from Gr. <i>dys</i> , ill; dystrophic infertile	<u>Distant</u>	Low base saturation
Endo	Gr. <i>endon</i> , <i>endo</i> , within	<u>Endothermic</u>	Implying a ground water table
Epi	Gr. <i>epi</i> , on, above	<u>Epidermis</u>	Implying a perched water table
Eutr	Modified from Gr. <i>eu</i> , good; eutrophic, fertile	You	High base saturation
Ferr	L. <i>ferrum</i> , iron	<u>Fair</u>	Presence of iron
Fibr	L. <i>fibra</i> , fiber	<u>Fibrous</u>	Least decomposed stage
Fluv	L. <i>fluvius</i> , river	<u>Fluvial</u>	Flood plain
Fol	L. <i>folia</i> , leaf	<u>Foliage</u>	Mass of leaves
Fragi	Modified from L. <i>fragilis</i> , brittle	<u>Fragile</u>	Presence of fragipan
Fragloss	Compound of fra (g) and gloss		See the formative elements "frag" and "gloss"
Fulv	L. <i>fulvus</i> , dull brownish yellow	<u>Full</u>	Dark brown color, presence of organic carbon
Glac	L. <i>glacialis</i> , icy	<u>Glacier</u>	Ice lenses or wedges
Gyps	L. <i>gypsum</i> , gypsum	<u>Gypsum</u>	Presence of gypsic horizon
Gloss	Gr. <i>glossa</i> , tongue	<u>Glossary</u>	Presence of a glossic horizon
Hal	Gr. <i>hals</i> , salt	<u>Halibut</u>	Salty
Hapl	Gr. <i>haplous</i> , simple	<u>Haploid</u>	Minimum horizon development
Hem	G. <i>hemi</i> , half	<u>Hemisphere</u>	Intermediate stage of decomposition
Hist	Gr. <i>histos</i> , tissue	<u>History</u>	Presence of organic materials
Hum	L. <i>humus</i> , earth	<u>Humus</u>	Presence of organic matter
Hydr	Gr. <i>hydo</i> , water	<u>Hydrophobia</u>	Presence of water
Kand, kan	Modified from kandite	<u>Can</u>	1:1 layer silicate clays

Entisole Sub-orders

- Aquents
- Fluvents
- Orthents
- Psamments
- Arents

Aquents (Unfavourable ecological conditions)


- Derived from a Latin word “Aqua” means saturated. This suborder include those soils that have aquic conditions (aquic soil moisture regimes) or (reducing soil conditions for sometime). These are the soils in the areas of marshes. These soils are often saturated with water and have blue or green on the surface these are called mottles (patches of different color). If more than 10% soil is colored then it is called mottled soil.

Fluvents(insufficient time)

- This sub order includes the soils that are not wet and consist of recent illuvium which is generally stratified. This sub order contains soils that are very young and poorly developed. The poor development (poor development) in these soils is mainly due to continuous deposition of new sediments which consequently have in sufficient time for development.



Orthents


- This sub order includes soils of recently eroded slopes. The rate of erosion is greater than the rate of development. Consequently the horizon development is poor. This sub order includes those soils which are kept young due to removal of soil material at a rate that is more rapid than horizon development
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Psamments

- It is derived from Greek word "Psammos" means sand. This sub order includes sand that is too inert to develop soil horizon. Consequently these soils have poor structure development, low soil fertility, poor water holding capacity, high susceptibility to erosion and high hydraulic conductivity.




Arents

- Arents derived from a Latin word “Arare” means to plough. It includes those soils in which horizon have been mixed by deep ploughing or other human activities that have destroyed pedogenic horizon.
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Inceptisol Sub-Orders

- Anthrepts
 - Aquepts
 - Cryepts
 - Udepts
 - Ustepts
 - Xerepts
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Anthrepts

- These are more or less freely drained inceptisol that have an anthropic or plaggic epipedon. Most of these soils have been used in crop land or as sites for man occupation for many years.
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Aquepts

- These are wet inceptisols. The natural drainage is poor or very poor and if the soil has not been artificially drained ground water is at or near the soil surface for sometime during the year but not during the whole season.

Cryepts

- Cryepts are old inceptisols of high mountains or high latitude. The vegetation is mostly conifers. These soils mostly develop from loess (large deposits) and have brownish ochric epipedon.

Udepts

- Udepts have udic moisture regimes. These are formed on nearly level to steep surfaces. Most of these soils support forest vegetation and usually have ochric or umbric epipedon.

Ustepts


- These are more or less freely drained inceptisols that have an ustic moisture regime. These soils dominantly received summer precipitation and have isomesic, hyper thermal or warmer temperature regime. Most ustepts have an ochric epipedon and many have calcic horizon. The native vegetation commonly are grasses but some soils may support forest.

Xerepts

- Xerepts are inceptisols that have xeric moisture regime. These have frigid or mesic temperature regime but in some cases thermic temperature regime are also present. The native vegetation is commonly coniferous forest.



Mollisols Sub-Orders

- Albolls
 - Aquolls
 - Cryolls
 - Rendolls
 - Udolls
 - Ustolls
 - Xerolls
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Albolls


- Albolls are the Mollisols that have an Albic horizon and fluctuating ground water. Most of these soils are saturated with water to or near the soil surface, at sometime during winter season, however in summer ground water is not commonly within a depth of 200cm. below Albic horizon, there is either an Argillic or less commonly Natric horizon. These soils developed mostly on broad nearly level to sloppy ridges, on back slopes.

Aquolls

- Aquolls are the Mollisols that are wet and have reduced conditions. Aquolls have aquic soil moisture regime and need artificial drainage. These soils commonly develop in low lying areas, where water collects and stands for long time. Most of soils have grass vegetation but few soils may support forests.



Cryolls

- Cryolls are cool and more or less freely drained Mollisols. Cryolls have cryic temperature regimes and udic or ustic and xeric moisture regime.
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Rendolls

- These are the Mollisols developed in highly calcareous parent material such as limestone or chalk. These soils have mollic epipedon that rest on cambic horizon which is rich in carbonates. These are formed mostly under forest vegetation but may develop under grass and shrubs

Udolls

- Udolls are more or less freely drained Mollisols of humid climate in addition to mollic epipedon, these soils have cambic, Natric, calcic or Argillic horizon. These have udic moisture regime while temperature regime is frigid or warmer. Where slopes are not too steep, these soils are cultivated. Maize and sorghum are major crops grown on these soils.

Ustolls

- Ustolls are the Mollisols having ustic soil moisture regime. In these soils, drought is common and may be severe. During drought soil bellowing becomes a problem without irrigation the low supply of moisture usually limits crop yield.

Xerolls

- These are the Mollisols having xeric soil moisture regime. Xerolls are dry for extended periods in summer but moisture retain and move through most of soils in winter characteristically are relatively thick mollic epipedon, cambic or Argillic horizons and accumulation of carbonate in the lower part of B horizon.



thank you!