

# Soil Classification

# Nomenclature of soil classification

- **Order**
- The name of the order can be recognized as such because the name of each order ends at “sol”.
- Sol is a Latin word derived from solum (soil) with a connecting vowel “O” for Greeks routes and “I” for other routes e.g. Spodosol or Entisol.
- Each name of an order contains a formative element that begins with vowel e.g. in Entisol “Ent” formative element.

Order name	Formative element
Entisol	Ent
Inceptisol	Ept
Alfisols	Alf
Aridisol	Ardi
Gelisol	El
Histosol	Ist
Mollisol	Oll
Oxisol	Ox
Spodosol	Od
Ultisols	Ult
Vertisol	Ert
Andisol	

## **i. Entisol**

- Entisol derived from a Latin word “ent” means meaningless or recent and sol means soil.
- Entisols are those soils which are immature and lack of vertical development of horizons.
- These soils are oftenly associated with recently deposited sediments by the action of wind, water, ice and gravity.
- The unique feature of the soil is the dominance of the mineral soil material (sand, silt and clay) and absence of marks of any pedogenic process.
- The absence of distinct pedogenic development in entisol is due to following reasons.

## ii. Inceptisol

- The word inceptisol is derived from a Latin word “Inceptum” meaning beginning or start.
- These are weakly developed soils with ochric or umbric epipedon.
- **Ochric epipedon**
- A surface horizon too light in color, very low in organic matter and very thin in thickness is called ochric epipedon.
- **Umbric epipedon**
- Surface horizon having base saturation percentage less than 50% is called umbric epipedon.

- Profile development of inceptisol is more advanced than entisol (poorly developed) but less than all other orders.
- The lack of profile development in Inceptisol may be due to following reasons:
- Deposits may be recent, the interaction between soil forming factors such as parent material with climate and living organisms continued for short period of time that is not enough for the development of soil profile.
- Erosion may be first enough to remove the developing soil before strong horizon can be develop.
- Climatic conditions are not very conducive for the development of soil profile.
- Parent material may be inert.

- **iii. Mollisol**
- Mollisol is derived from a Latin word “Mollus” mollus mean soft. Mollisols are characterized by mollic epipedon which is thick in depth, dark in color and has more than 50% base saturation percentage, mostly Ca and have soft consistence.
- **Mollic epipedon**
- “A surface horizon having organic matter less than 1%, relatively dark in color, almost 18cm thick and does not have any hard structure. It has more than 50% base saturation percentage and less than 250mg/kg  $P_2O_5$  soluble in 1% citric acid.”