SCIENCE

SOIL POLLUTION (CAUSES AND HARMFUL EFFECTS) SOIL EROSION (CAUSES AND HARMFUL EFFECTS)

SOIL POLLUTION

Soil is also polluted through the polluted water and air.

- These pollutants are mixed into the soil through the rainy water. Such as H_2SO_4 acid is formed by mixing of SO_2 with rainy water in the air.
- The fertilizers are used to increase yield of the crops. Various types of pesticides and weedicides etc. are sprayed over the crops. All these mixed with soil to produce harmful effects.
- The growth of plants inhibited or reduced due to this type of pollution and sometimes death also takes place. Excluding to these soil pollution is also caused by the disposal of house hold detergents, sewage, flowing oils, radioactive substances and hot water etc.
- The main substances of pesticides in soil pollutants are D.D.T. and weedicides 2, 4 – D (2, 4 dichlorophenoxy acetic acid) 2, 4, 5 – T (2, 4, 5, trichlorophenoxy acetic acid).

OIL EROSION

It is the removal and thining of the fertile top soil from a region due to climatic and physical processes, such as high rainfall and wind etc. Soil erosion occurs easily where the soil is not covered by vegetation.

Causes of Soil Erosion:

(i) Wind causes soil erosion by carrying away the top soil particles.

(ii) Rain causes soil erosion on unprotected top soil by washing it down.

(iii) Improper farming or tilling and leaving the field fallow for long time causes soil erosion.

(iv) Frequent flooding of rivers causes soil erosion by removing the top soil of the fields near the river banks.

(v) Deforestation also leads to soil erosion.

Effects of Soil Erosion:

1. Soil erosion reduces the fertility of soil. Soil erosion exposes the lower l.ard and rocky layer. As a result, soil loses humus and becomes less fertile.
2. It leads to landsliding.
3. Soil erosion exposes the lower hard and rocky layer. As a result, the fertile land gets converted into a desert. This process is known as desertification of land.
4. It leads to flash floods. Roots of plants hold soil particles together. In the absence of plants, the seeping of water is reduced and thus the ground water does not get replenished. This could then cause floods.

Prevention of Soil Erosion:

(i) It can be prevented by intensive cropping.

(ii) It can be prevented by providing proper drainage canals around the fields.

(iii) Soil erosion in hilly areas can be prevented by practising terrace farming.

(iv) It can be prevented by planting trees and sowing grasses.

(v) It can be prevented by constructing strong embankments along the river bank.