

SOIL CONSERVATION

to be continued

PRINCIPLES -

- (a) To slow down the water movement when it flows along the slope.
- (b) To encourage more water to enter soil.
- (c) To increase the size of soil particles.
- (d) Reduction in the wind velocity near the ground by growing vegetation.
- (e) Grow vegetation to hold the soil back.

METHODS OF SOIL CONSERVATION

(A) Conservation achieved by use of plant vegetation cover i.e. Biological method.

(B) Mechanical method,

(C) Other methods.

(1) BIOLOGICAL METHODS -

By the use of plant-vegetation cover.

(a) Agroecomic particles - Natural protection by growing vegetation in a manner that reduces soil loss.

These are -

(i) Contour farming: An oldest method, useful in low rainfall areas. Field is prepared with furrows & ridges. Ridges at some level are known as contours. In slopes this type is coupled with terracing.

(ii) mulching - Effective against wind & water.

erosion. Plants like maize stalk, Cotton stalks potato tops etc are used as mulch. Mulches reduces soil moisture evaporation. It increases the soil moisture by adding organic matter to the soil.

(iii) Crop rotation: Decreases soil loss & increases productivity.

Repetition of same crop year after year depletes the soil mineral content. This is overcome by cutting legumes. A typical rotation consists of one year fall fallow, followed by winter heat.

(iv) Strip Cropping: Involves planting of crops in strips or rows to prevent flow of water. It may be contour strip cropping, field strip or wind strip cropping.

(b) Dry Farming: It is useful in crop-land grown in low & moderate rainfall areas.

(c) Agro-ecological Method - Grasses like Cynodon dactylon are utilized as soil erosion-resisting plants. They are grown in strips bet² the crops. Such methods include -

(a) Lay Farming: aims to grow grasses with field crops which helps

in building up the structure of soil.

(b) Retiring lands to grasses: involves growing of grasses in areas where top soil is eroded.

[B] MECHANICAL METHODS - These methods are supplements to biological methods.

(a) Basin listing - to construct small basins along the contour to retain water which reduces its velocity.

(b) Contour terracing: to construct a channel along the slope to intercept & divert the water.

[C] OTHER METHODS:

(a) Gully Control - to check the formation of gullies or their widening by constructing benches, dams, drains etc.

(b) Stream bank protection: To grow vegetation alongside the river bank, built drains, for checking the cutting of banks.

(c) Afforestation - To grow trees on wind breaks.