Waterlogged Soils:

Waterlogged means saturated or nearly saturated with water. Hence, waterlogged soils may be defined as soils that are saturated with water due to a high water table for a

water depth 1.5 - 3 cm

sufficiently long time annually which is detrimental to most of the field crops. Both soils temporarily saturated with water and soils having ground water tables permanently near the soil surface are called waterlogged soils. Therefore, all forms of excess water in the root zone of soil or on the soil surface cause waterlogging. Only a few crops can survive under such conditions. Waterlogging may be natural or induced by humans. This condition imposes salinity and oxygen stress on plants under arid climates.

Sources/Causes of Waterlogging:

The main sources of waterlogging are recharge from:

1. Irrigation system including main canals, branches and distributaries link canals
2. Water courses and irrigated fields
3. Rainfall
4. Rivers
5. Subsurface flow from higher to lower areas.

Construction of irrigation networks, roads, rain links, factories and housing colonies in the path of natural drains has interrupted surface runoff at many places, resulting in the accumulation of water during the monsoon season, a part of which contributed to waterlogging through seepage.

Control Measures/Management/Remedies of Waterlogged Soils:

Important control measures are as under:

1. Seepage interceptor drains constructed to intercept seepage water from the source are called seepage interceptor drains. They are constructed parallel to the source of seepage water, their dimensions and length depending on the size and length of seepage source. Such drains were constructed along both sides of Upper Chenab Canal.
2. Tree plantation along the spoil banks.
3. Surface drains proved relatively effective in carrying away canal seepage water and rainfall runoff.
4. Lining of canals may reduce seepage by about 75 %.
5. Pumping of ground water has always been effective in lowering a shallow ground water table. Pumping not only lowers the ground water but also provides additional water for irrigation where its quality is suitable.

Hence, construction of drains and pumping of ground water by tube wells have proved to be quite effective against waterlogging.

Reference :- Soil Science, 2005. Managing Authors A. Rashid & Kazi Suleman Memon &
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