

Irrigation systems

Basic Types of Irrigation Systems

- Surface irrigation
- Subsurface irrigation
- Sprinkler irrigation
- Drip/trickle irrigation

Subsurface Irrigation

- Also call subirrigation
- Artificial regulation of groundwater table elevation
- Can be used where water table is naturally shallow or where impermeable layer is overlaid by highly permeable soil
- Very uncommon irrigation technique

Surface Irrigation

- Furrow irrigation:

Surface Irrigation

- Water flows across the soil surface to the point of infiltration
- Oldest irrigation method and most widely used world-wide (90%) and in U.S. (60%)
- Used primarily on agricultural or orchard crops

Types of Systems

- **Water Spreading or Wild Flooding**
 - Relatively flat fields -- allow water to find its own way across the surface
 - Minimal preparation and investment
 - Rather inefficient
- **Basin**
 - Dikes used to surround an area and allow for water ponding (no runoff)
 - Basins are usually level

Types of Systems, Contd...

- **Border**

- Strips of land with dikes on the sides
- Usually graded but with no cross slope
- Downstream end may be diked

- **Furrow**

- Small channels carry the water (entire surface is not wet)
- Commonly used on row crops
- Lateral as well as vertical infiltration
- Furrows are usually graded

