



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35.



Accredited by NBA – AICTE and Accredited by NAAC – UGC with
'A+' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University,
Chennai.

DEPARTMENT OF AGRICULTURAL ENGINEERING

23AGT101 – INTRODUCTION TO AGRICULTURAL ENGINEERING
I YEAR- II SEMESTER

**Soil conservation methods – Instruments used
for measuring different parameters of climate**



Soil conservation methods aim to prevent or minimize soil erosion, improve soil health, and sustainably manage land resources. These methods encompass various techniques and practices that promote soil conservation and sustainable land use. Here are some commonly used soil conservation methods:



Soil conservation methods



- **Contour Plowing:** Plowing along the contour lines of slopes helps reduce water runoff and soil erosion by slowing down the flow of water and allowing it to infiltrate into the soil.
- **Terracing:** Constructing terraces or steps on steep slopes helps reduce soil erosion by breaking the slope into smaller, more manageable levels, which reduce water runoff and soil movement downslope.
- **Cover Cropping:** Planting cover crops, such as legumes or grasses, during fallow periods or between cash crops helps protect the soil from erosion, improves soil structure, and adds organic matter.
- **Conservation Tillage:** Practices like no-till or reduced tillage minimize soil disturbance, leaving crop residues on the soil surface to protect against erosion and improve soil structure.
- **Strip Cropping:** Alternating strips of different crops or vegetation types helps reduce soil erosion by breaking up the flow of water and wind across the landscape.



Soil conservation methods



- **Windbreaks:** Planting rows of trees or shrubs along field edges helps reduce wind erosion by blocking and deflecting wind, thereby protecting soil and crops.
- **Contour Buffer Strips:** Planting strips of grass or vegetation along the contour lines of slopes helps reduce water runoff and soil erosion while providing habitat for beneficial wildlife.
- **Soil Stabilization:** Using erosion control blankets, geotextiles, or mulches helps stabilize soil and prevent erosion on construction sites, slopes, or disturbed areas.
- **Grassed Waterways:** Constructing channels planted with grass or vegetation helps convey water across fields and reduce soil erosion by controlling water flow and reducing runoff velocity.
- **Agroforestry:** Integrating trees or shrubs into agricultural landscapes helps improve soil health, provide erosion control, and diversify income sources for farmers.



Instruments used for measuring different parameters of climate



- **Thermometer:** Measures air temperature.
- **Hygrometer or Psychrometer:** Measures relative humidity or dew point.
- **Barometer:** Measures atmospheric pressure.
- **Anemometer:** Measures wind speed and direction.
- **Rain Gauge:** Measures precipitation (rainfall or snowfall).
- **Weather Station:** Typically combines several instruments to measure multiple parameters such as temperature, humidity, pressure, wind speed and direction, and precipitation.
- **Weather Radar:** Uses radio waves to detect precipitation, storm movement, and intensity.
- **Satellite Imagery:** Provides information on cloud cover, temperature patterns, vegetation indices, and other climate-related parameters from space.



THANK YOU