

## Resource Concerns

# Inefficient Moisture Management

Soil

Water

Excess Water

Insufficient Water

Inefficient Moisture Management

Inefficient Use of Irrigation Water

Water Quality Degradation

Air

Plants

Animals

Energy

## Insufficient Water - Inefficient Moisture Management

Natural precipitation is not optimally managed to support desired land use goals or ecological processes.

### What is it?

In dryland conditions, management of available water is critical to production and to maintain natural systems.

### Why is it important?

Water is important to farming and natural systems. In cropland, poor yields may be related to an insufficiency of soil moisture rather than an insufficiency of rainfall. Inefficient moisture management can result in increased runoff and reduced soil moisture. In some grassland systems, available water can be tied up by brush.

### What can be done about it?

Managing residue and cover will aid in utilizing available soil moisture. Establish mulch and residue management systems to conserve soil moisture. New weed control techniques and tools, along with cover crops can help manage available water for crops. Minimize soil compaction to maintain water movement through the soil by reducing soil hydraulic properties such as infiltration. In some grassland systems, brush management can help restore a natural water regime. Using plants that are more tolerant of drought conditions is an effective measure in optimize existing soil moisture.

## Inefficient Moisture Management at a Glance

| Problems / Indicators - Dryland farming in low rainfall areas  |   |
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| Causes   | Solutions   |
| <ul style="list-style-type: none"> <li>No soil cover in the winter to prevent moisture loss</li> <li>Excess soil tillage and disturbance destroys soil organic matter and structure</li> <li>Unchecked brush growth creating potential for less available moisture for desired plants</li> </ul> | <ul style="list-style-type: none"> <li>Cover crops</li> <li>Conservation tillage</li> <li>Brush management</li> </ul> |