

## For More Information

Check with your local USDA Service Center providers:

- *Natural Resources Conservation Service*
- *Conservation District office*
- *Farmers Home Administration*

Consult your local irrigation district or irrigation equipment suppliers

Contact your Cooperative Extension Service office

Check these Web sites:

- [www.nrcs.usda.gov/feature/highlights/drought.html](http://www.nrcs.usda.gov/feature/highlights/drought.html)
- <http://extension.usu.edu/drought/agriculture.cfm>—for water saving tips by county
- [www.drought.unl.edu/mitigate/ag\\_tools.htm](http://www.drought.unl.edu/mitigate/ag_tools.htm)

## Other Tip Sheets

- *Water Conservation Tips for Stretching Water on Crops & Soils*
- *Water Conservation Ideas for Dryland Farmers*
- *Water Conservation Tips for Stretching Water on Pasture & Range*
- *Crop & Irrigation Management During Drought*

To download these tip sheets go to:  
<http://www.ut.nrcs.usda.gov/farmers.html>



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# Stretch Your Irrigation Water

## A Critical Situation

The long-running drought in Utah continues to threaten agricultural production dependent on irrigation water and annual rainfall. In some cases, producers may expect little or no irrigation water. These tips can help you prepare for and deal with irrigation water shortages.

## Steps You Can Take

Soil can absorb irrigation water only at a given rate, which varies for each soil type. Water requirements vary for different crops. Make sure you apply water to your crop only when needed. Check soil moisture by spade, auger, or soil moisture meter, and make careful visual checks of your crops.

If you have a conservation plan on your farm, or if the soil in your area has been mapped, the Natural Resources Conservation Service (NRCS) can cross-check soil type and irrigation data to provide you with an estimate of the water holding capacity of your soil for a given crop.

If you are not sure your soil has been mapped, check with the local NRCS office. Even if the soil has not been mapped, they can supply you with general information.

To use your available water in the most productive way possible, here's a checklist to help you analyze your irrigation system.

## Flood Irrigation Systems

- ▶ Inspect your system before water starts to flow. Make sure ditches are clean and free from weeds, sediment, or other debris which can slow water velocity, affect delivery rate and increase evaporation.
- ▶ Consider lining ditches with concrete or plastic. This could avoid the 10-90 percent loss which often occurs in ditches.
- ▶ Make sure ditch structures—like head gates, drop structures, and pipe inlets—are strong and functional. A washed-out ditch structure could mean a lot of water lost.
- ▶ Be sure ditch banks are firm and not burrowed into by rodents. Rodent holes could cause leakage or failures.
- ▶ Make sure your pump is operating at peak efficiency. Adequate maintenance will improve efficiency, guard against water loss, and avoid shutdowns.

## Sprinkler Systems

- ▶ Make sure nozzles aren't worn and leaky. Check pipe connections and valves to prevent leaks.
- ▶ Operate sprinklers at recommended pressure. Use application rate, efficiency factor and time of application to figure how much to apply.
- ▶ Consider trickle system for orchards, vineyards, etc. Operate at recommended design values and maintain the filter system.



## Irrigation Management

- ▶ Measure the amount of water applied to the field. This can indicate when and how much to irrigate.
- ▶ Consider alternate row irrigation for crops planted in furrows. But remember to alternate to the “alternate” row in later irrigations.
- ▶ Consider shorter runs if you furrow irrigate. Match stream size and velocity to soil intake rate and capacity.
- ▶ Consider catching and re-using tail water by pumping it back to the head of the system or re-using it elsewhere.
- ▶ Irrigate most crops when soil moisture reaches about 50 percent of capacity.
- ▶ Irrigate only to the depth of the crop's root system.
- ▶ If no irrigation water is available, get advice on how to protect your soil from wind erosion.

March 2004

This publication provided as a service to Utah farmers and ranchers by the Utah state office of the Natural Resources Conservation Service  
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For further assistance contact your county NRCS field office listed below, or in the phone book under USDA.