

A prolonged drought can have a serious impact on crops. Decreased precipitation reduces crop and forage growth and can ultimately result in crop loss. Weakened plants are also more susceptible to disease and insects. Drought conditions can increase the level of wind erosion of top soil and the risk of fires. Planning ahead can help protect your crops during drought situations.

# **Before a Drought**

### Crop management ideas.

- Plant crops that withstand dryness, hold water, and reduce the need for irrigation.
- Rotate crops in ways that increase the amount of water that enters the soil.
- □ Shift to cropping systems that are less water dependent than your current system.

### · Land management ideas.

- Good land management before a drought provides greater flexibility when droughts occur.
  - . Maintain healthy soils.
  - . Balance stocking rates on pasture areas; do not allow overgrazing.
- Try to use minimum tillage techniques.
  - . Leaving crop residue from the previous year on the surface can help to minimize evaporation of moisture from the soil.
- Use conservation practices to reduce runoff, erosion, soil degradation and encourage infiltration of water into the soil.
  - . Establish riparian buffers, filter strips, grassed waterways, and other types of conservation buffers near streams and other sources of water.
  - . Use conservation practices such as crop rotation, contoured row crops, terracing, windbreaks, etc.

## If irrigation systems are currently used,

- Select irrigation systems that will minimize loss of water by evaporation, percolation, and runoff.
- Make your existing irrigation system more efficient and easier to maintain.
- Build a water storage system that holds water for use during irrigation season.
- Install measuring devices that keep track of water use.
- Identify alternate water sources (e.g., springs, deep wells).

### • Weed management and control.

- Weeds, like other plants, consume large quantities of water.
  Competition for water can lead to reduced crop production.
- Lack of water can lead to reduced herbicide effectiveness as the efficacy of most herbicides depends on water.
- Mechanical weed control measures may be needed.

- The Drought Management Calculator (DMC).
  - Developed by the USDA Natural Resources Conservation Service (NRCS).
  - Tool to help ranchers and farmers assess the impacts of drought on forage production, enabling them to make better informed decisions as to alternative drought strategies. http://www.nd.nrcs.usda.gov/technical/Drought\_Manage ment\_Calculator.html

## After a Drought

- · Have your soil tested.
  - Herbicide and fertilizer carry over may occur, so soil testing is very important following a drought year.
- If you plan to feed drought damaged crops (e.g., feed, forages) to livestock, be aware of these issues:
  - Drought conditions can reduce the nutritional quality of forages and lower forage succulence (and protein content).
  - Dry forages are harder to digest.
  - Drought conditions increases plant toxicities (e.g., nitrates, mycotoxins).
  - Test harvested feed and forages for nutrient content and potential toxins prior to feeding.
- See your county Extension office about drought assistance programs and the enrollment process.

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