

Minimize the Effects of Drought on Your Irrigated Cropland



The most commonly prescribed practices for protecting irrigated cropland from drought:



Irrigation System Improvement

Evaluating irrigation systems, improving management of existing systems, replacing poorly performing components or converting to pressurized irrigation systems will improve the uniformity of water application. It takes less water to irrigate when the irrigation is uniform.



Vegetative Practices & Mulching

Growing certain crops, either interplanted in or in sequence with production crops can increase infiltration and retention of valuable rainfall and reduce evaporation loss from the soil surface. Mulching by covering the soil surface with wood chips, straw or other plant materials can also reduce water loss to evaporation.



Irrigation Scheduling

Irrigating at the optimum time and applying the amount the soil can hold minimizes undesirable water loss below the root zone of the crop. Good scheduling or “Irrigation Water Management” will help stretch limited water supplies.



Residue & Tillage Management

Modifying tillage to retain residues from a previous crop left on the soil surface can help reduce water loss to evaporation.

USDA-NRCS Drought Assistance

Drought 2014

Conservation Assistance to California Farmers & Ranchers

Introduction

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Financial & Technical Assistance

\$30 million is being made available through USDA's Natural Resources Conservation Service (NRCS) to help drought-impacted farmers and ranchers. NRCS can help with conservation practices that have proven helpful in past droughts, such as 2009.

NRCS conservationists can help farmers and ranchers understand what options exist for their particular water situation, soil type and production goals and develop a plan to get through the drought. There is \$25 million available to help farmers and ranchers pay for many of these practices through the Environmental Quality Incentives Program (EQIP). Reimbursement rates typically cover about half the cost of the practice. Additionally \$5 million will be made available for erosion control through the Emergency Watershed Protection (EWP) Program.

Three Priorities

1. Protecting soils made vulnerable due to water cut backs.
2. Protecting drought-impacted rangeland.
3. Stretching every drop of irrigation water using improved hardware and management.

Save the Soil

Farmers without access to adequate water to produce a crop may find themselves thrust from a water crisis to a dust crisis. Options for protecting fields vulnerable to wind erosion include cover crops, surface roughening, residue management, converting to crops that use less water, mulching, or other practices.

Some of this critical erosion protection work will also be done through the Emergency Watershed Protection (EWP) program. Working with a local sponsor, the EWP program will facilitate many of the same soil protection practices accomplished through EQIP, but using the accelerated procedures available through EWP's disaster provisions.

Conserving Rangeland

Ranching without rain is really tough. For some ranchers managing the livestock to take advantage of available grass while protecting areas from overuse, may be made easier with tools such as livestock watering systems, piping, troughs, and fencing. NRCS and the rancher develop grazing management plans to document the decisions needed to make the best use of what forage remains on the ranch.

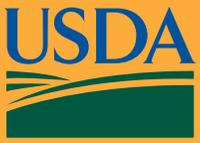
Stretching Every Drop

Farmers who have access to water and want to make every drop count, should develop irrigation water management plans with their NRCS conservationists or other consultants. Assistance to improve irrigation systems is available to help farmers working to produce a crop with a smaller allocation of water. These projects will be medium or low priority after approving projects needed to protect bare soil.

Finding a Conservationist

NRCS has offices in 55 of California's counties. All are taking drought applications. Locate your office at <http://offices.sc.egov.usda.gov/locator/app?state=CA>.

Updated: Feb. 14, 2014



Minimize the Effects of Drought on Your Fallowed Land



The most commonly prescribed practices for protecting vulnerable farmland followed by the drought:



Tillage & Residue Management
Leaving residues from a previous crop on the soil surface can help reduce wind erosion.



Herbaceous Wind Barriers & Cross Wind Trap Strips
Using rows of plants spaced appropriately throughout a field can intercept and slow surface wind speed.



Cover Crops
Planting or maintaining vegetation, living or dead, will slow wind velocity near the soil surface. Low-water using plants like barley are typically used during droughts.



Mulching
Covering bare soil with wood chips, straw or other plants material can help to hold the soil in place when erosive winds blow.



Surface Roughening & Cross Wind Ridges
By disking heavier soils into a rough, cloddy surface the soil can be protected from wind erosion.



Conservation Crop Rotation
Switching to crops that require less water can allow a field to remain productive and provide erosion protection.

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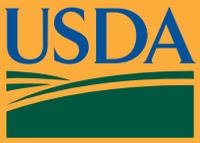
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Minimize the Effects of Drought on Your Rangeland



Protecting rangeland during a drought means balancing the needs of livestock with the capacity of natural resources that have been made more fragile by lack of water. Following are some of the conservation practices recommended by NRCS:



Access Control

Limiting livestock access to sensitive areas helps protect rangeland soils, streams and other natural resources.



Grazing Management Plans

Developing a drought management plan helps protect the long-term condition of the ranch by balancing the needs of the livestock with the capacity of the soil and plants.



Livestock Water Systems

Providing water across the ranch using existing or new sources (livestock wells/springs) makes it possible to distribute livestock according to the capacity of the soils and plants.



Cross Fencing

Controlling where and how long livestock are permitted to graze, allows ranchers to protect their soil and plants and make use of their remaining forage.

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