

Weathering Tough Times

B

y now it's common knowledge that 2002 brought Colorado its most devastating drought conditions within the past 50 years. Some even report that 2002 shaped up to be the driest year since record keeping began in the State. No matter what, we can all agree that the longstanding dry spell hit hard, and the industry most severely impacted is one of the states biggest: agriculture.

Agriculture in Colorado is a \$4.4 billion industry and to date millions of dollars have been lost due to dried crops. Ranchers have reportedly sold more than 1 million cattle: that's half of the state's total including breeder stock, as indicated by the Colorado's Cattleman's Association. Rangeland remains in critical condition as the 23 million acres of Colorado's native rangeland that support livestock and livestock products, which make up more than 73% of the State's \$4.4 billion agricultural industry, remain in jeopardy. Rangeland is key to grazing in the state and also provides other valuable benefits such as erosion protection, plant diversity, wildlife habitat, and open space.

Although areas of Colorado have been in drought conditions since 1998, the past three years have proven more difficult for agricultural producers and rural communities across the state. Many in our industry are finding creative ways to adapt to changing conditions. As a result, Colorado's lead agricultural organizations and agencies are emphasizing traditional water efficiency methods as well as exploring new and innovative ways to manage water quantity.

This insert entitled "Weathering Tough Times" was developed as a guide for Colorado's landowners to help them survive through these difficult times. It outlines a bit of drought history within Colorado, as well as some background on droughts in general. It also makes available drought- and conservation-related resources for agricultural producers from Federal and state agencies.

To learn more about ways to get through these tough times together, we invite you to attend the 2003 Colorado Agricultural Outlook Forum in Denver on February 20th, 2003. You can find more details inside. Working together, we are convinced that we can position agriculture for a promising future.



Don Ament, Commissioner
Colorado Department
of Agriculture

Milan Rewerts, Director
Colorado State University
Cooperative Extension Service

Allen Green, State Conservationist
US Department of Agriculture
Natural Resources Conservation Service

Gigi Dennis, Director
US Department of Agriculture
Rural Development

Lewis Frank, Director
US Department of Agriculture
Farm Service Agency

2003 COLORADO AGRICULTURAL OUTLOOK FORUM "WEATHERING TOUGH TIMES TOGETHER"

Renaissance Denver Hotel

Wednesday, February 19

5:30 - 7:30 P.M.

Reception-Renaissance Denver Hotel-3801 Quebec Street, Denver
Sponsored by: McClure & Eggleston, LLC

Thursday, February 20

7:30 - 8:15 A.M.

Registration with coffee & rolls; exhibits begin

8:15 - 8:30

Multi-Image Presentation: Jeri Omernik, Rocky Mountain Marketing & Communications, Montrose

8:30 - 8:45

Welcome: Don Ament, Colorado Commissioner of Agriculture;
introduced by morning moderator Bob Hamblen,
Boulder County Director, CSU Cooperative Extension

8:45 - 9:00

Remarks: President Albert C. Yates, Colorado State University

9:00 - 9:30

Keynote Speaker: "Weathering Tough Times Together"
The Honorable Ken Salazar, Attorney General of Colorado

9:35 - 10:05

Statewide 2003 Moisture Outlook
Nolan Doesken, Research Associate, Colorado State University Climate Center

10:10 - 10:40

Coffee Break

10:40 - 11:50

Regional Perspectives on Working Together Toward Solutions
· Dave Little, Manager of Water Resource Planning, Denver Water
· Eric Wilkinson, General Manager, Northern Colorado Water Conservancy District
· Reeves Brown, President, Club 20

12:00 - 1:20 P.M.

Luncheon:

· Introduction of Colorado Agriculture and Rural Leadership Class members
· Leopold Conservation Award (CCA, CCALT, Sand County Foundation)

1:30 - 4:15

Two Rounds of 5 Breakout Sessions each

AG OUTLOOK FORUM CONCLUDES;
PARTICIPANTS ARE WELCOME TO ATTEND THE FOLLOWING:

4:15 - 5:30

Silent Auction and Reception (with cash bar)
sponsored by the Colorado FFA Foundation

5:30 - 8:30

Colorado Agriculture Hall of Fame Banquet

*separate tickets required via the Colorado FFA Foundation

Breakout Sessions: February 20

A (1:30-2:45 P.M.), B (3:00-4:15 P.M.)

1. IRRIGATION STRATEGIES

Session A: Limited Water Management and Irrigation Scheduling

Moderator: Frank Stonaker, Director, Specialty Crop Center, CSU
Joel Schneekloth, Reg. Water Resource Spec., CSU Coop. Ext., Akron
Dennis Alexander, Asst. State Consvrt. for Programs, USDA-NRCS

Session B: Irrigation Precision Technologies

Moderator: Hal Smedley, Colorado Corn Administrative Committee
Jack Jenkins, Industrial Programs, U.S. Department of Energy
Rick Grice, Director, Governor's Office of Energy Mgmt. and Consvrt..
Dale Heermann, Research Leader, USDA-Ag. Research Ser., Ft. Collins
James Lenz, President, Colorado Corn Growers Association
Jake LaRue, Project Manager, Irr. Div. Valmont Ind. Inc., Valley, NE

2. DRY CROPLAND AND RANGELAND STRATEGIES

Session A: Rangeland/Livestock Strategies

Moderator: Roy Roath, State Range Specialist, CSU Coop. Ext.
Randy Blach, Executive Vice-President, CattleFax, Centennial
Jeff Burwell, State Resource Conservationist, USDA-NRCS

Session B: Dryland Sustainable Agroecosystem Management

Moderator: Frank Stonaker, Director, Specialty Crop Center, CSU
G. A. Peterson and D. G. Westfall, Dept. of Soil and Crop Sciences, CSU
Jeff Burwell, State Resource Conservationist, USDA-NRCS

3. WATER SHARING STRATEGIES

Session A: The South Platte Basin

Moderator: Tim Davis, Private Lands Coord., Colorado Div. of Wildlife
Forrest Leaf, Water Resources Engineer, Central Colorado Water
Conservancy District, Greeley
J. R. Schnelzer, Town Administrator, Milliken
Bret Hall, Chief Operating Off., Hall-Irwin Construction Comp, Greeley

Session B: The Arkansas River Basin

Moderator: Eric Schuck, Dept. of Ag. and Resource Economics, CSU
Steve Witte, Div. Eng. Water Div. 2, Colo. Div. of Water Resource, Pueblo
Leroy Mauch, Prowers County Comm., L. Ark. Valley Water Con. Dist.

4. AGRICULTURE AND WILDLIFE STRATEGIES

Session A: Nature-based Tourism

Moderator: Tammy VerCauteren, Prairie Partners, Landowner
Outreach/GIS Specialist, Rocky Mtn. Bird Observatory
Remelle Farrar, Exec. Dir. Texas Prairie Rivers Reg. Inc., Canadian, TX
Jim Bill Anderson, Rancher, Canadian, TX

Session B: Habitat Conservation

Moderator: Ken Morgan, Private Lands Habitat Spec., Colo. Div. of
Wildlife
Bill Noonan, Colo. Coord. Partners for Fish and Wildlife, U.S. Fish &
Wildlife Service
Bob Sanders, Projects Coordinator, Ducks Unlimited, Monte Vista

5. MANAGING RISK, STRESS, AND CONFLICT

Session A: Financial and Risk Management

Moderator: Russ Groshans, Vice President, Centennial Bank of the West,
Eaton
Eric Schuck, Dept of Agricultural and Resource Economics, CSU
Dennis Kaan, Regional Ext. Specialist, Ag. and Business Mgmt., Akron

Session B: Mediation and Stress Management

Moderator: Jeanne Davies, Rancher, Deer Trail, and Past President,
Colorado State Grange
Gary Graalman, Coordinator, Colorado Ag. Mediation Program (CAMP)
Robert Fetsch, Dept. of Human Development and Family Studies, CSU

Web site www.coloradoagforum.com

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is known as the “Mother of Rivers”...

...because the headwaters of *five major rivers* flow from their birthplace on the Continental Divide to lower elevations.

The Colorado, which ends up in the Baja Gulf of the Pacific Ocean.

The North Platte, which flows north into Wyoming, turns east and then southeast, joining the South Platte at North Platte, Nebraska.

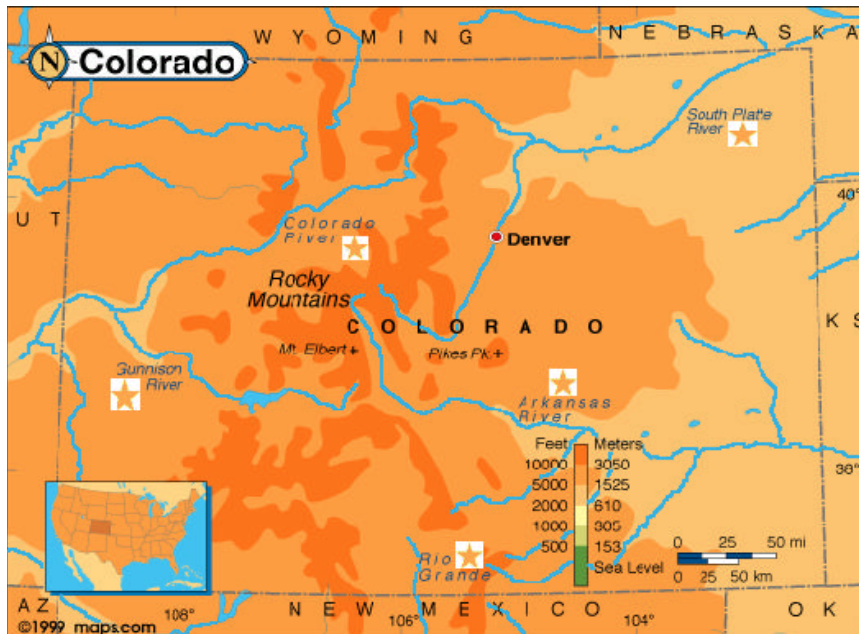
The South Platte flows north-east from the mountains of south central Colorado, flows northeast to join the North Platte and then flows into the Missouri, which flows into the Mississippi, which goes into the Gulf of Mexico to the Atlantic Ocean.

The Arkansas wanders south-east into Kansas and Oklahoma and finishes in Texas.

The Rio Grande flows south through New Mexico to El Paso, Texas, then turns southeast, forming the border between the USA and Mexico, and eventually flows into the Gulf of Mexico.

As these rivers increase in size and power, they sustain the heartbeat of Colorado's economy because water serves multiple uses throughout the state.

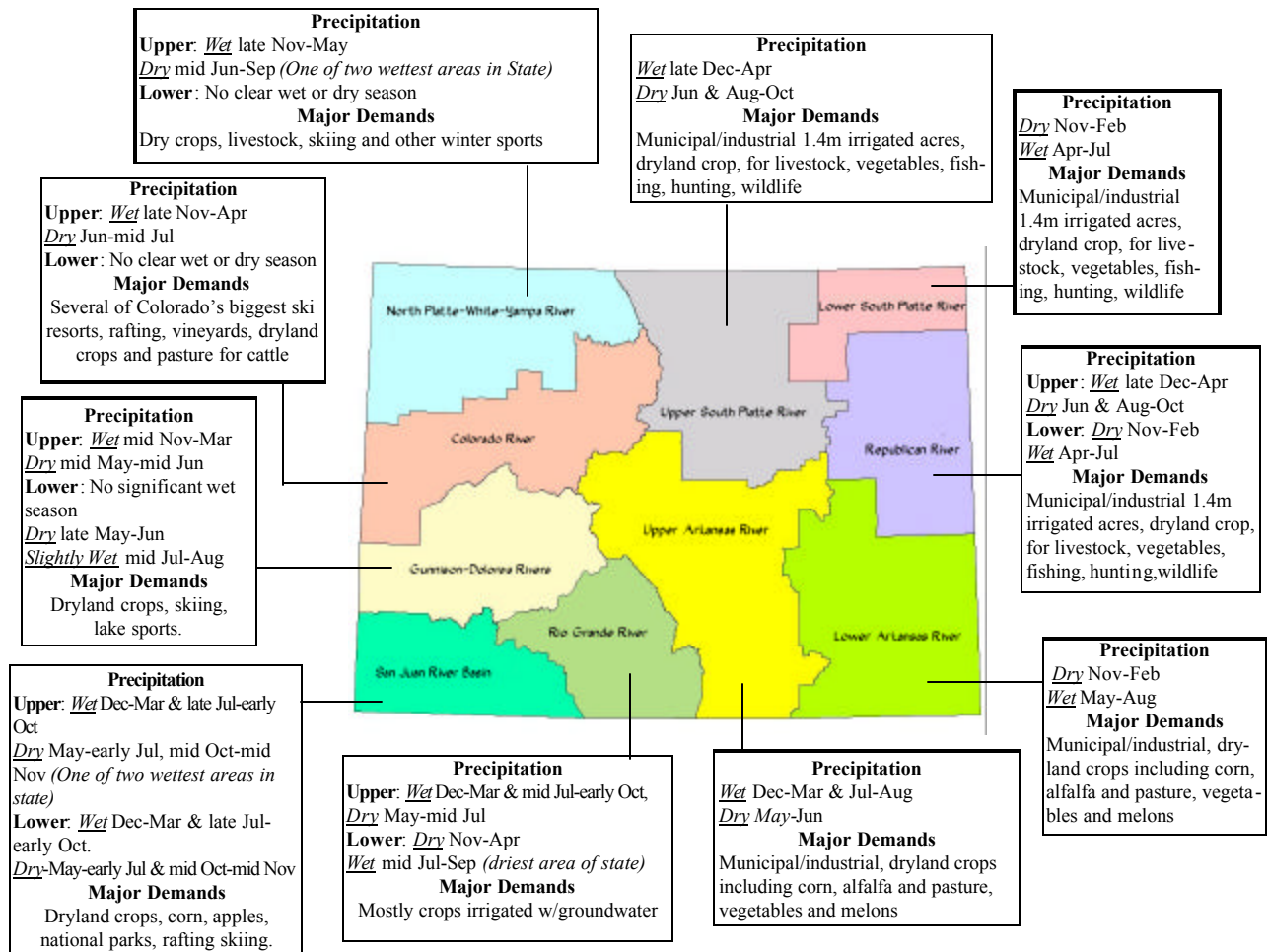
Colorado's water supply has its origins in the Rocky Mountains. During the winter season, snowfall accumu-



lates and acts as a frozen reservoir. With spring, the snow melts and provides runoff for the rivers and streams that branch out to the lower elevations. Much of the water is stored in reservoirs, awaiting use for agricultural, domestic, recreational, industrial, and other purposes. These reservoirs, totaling more than 1,900 statewide, can store 8.85 million acre-feet of water. Estimated retail value of this water is \$991 million. About 80 percent of the water used in Colorado is for agricultural purposes. Irrigation practices have turned a once semi-arid desert into a \$4.4 billion dollar industry that bolsters Colorado's economy and sustains rural lifestyles.

Major Water Demands in Seven Colorado Water Divisions

The map below shows Colorado's 10 Water Divisions, often referred to as watersheds. They are used for water right administration and management by the Colorado Division of Water Resources. These Water Divisions correspond with the major river basins in the state. (Upper and Lower indicates portions of the division)



Courtesy of Catherine Shrier, Colorado Water Resources Research Institute and Petra Barnes, Natural Resources Conservation Service

The ability of Colorado's farmers to divert water from a stream to farm miles away has become an important part of Colorado's economy. As the state grows, more and more demands are put on water use. In water-abundant years, this is not a problem. In times of drought, however, when river flow is low, problems arise and landowners must "**Weather Tough Times**" in order not to repeat history...

THE DUST BOWL



"For eight years dust blew on the southern plains. It came in a yellowish-brown haze from the South and in rolling walls of black from the North. The simplest acts of life breathing, eating a meal, taking a walk were no longer simple. Children wore dust masks to and from school, women hung wet sheets over windows in a futile attempt to stop the dirt, farmers watched helplessly as their crops blew away."

(Courtesy of Modern American Poetry)

The Dust Bowl was an ecological and human disaster that took place in the southwestern Great Plains region, including Oklahoma. Millions of hectares of farmland became useless, and hundreds of thousands of people were forced to leave their homes. As the land dried up, great clouds of dust and sand, carried by the wind, covered everything and the word "Dust Bowl" was coined.

Poor agricultural practices and years of sustained drought caused the Dust Bowl. Plains grasslands had been deeply plowed and planted to wheat. During the years when there was adequate rainfall, the land produced boun-

tiful crops. But as the droughts of the early 1930s deepened, the farmers kept plowing and planting and nothing would grow. The ground cover that held the soil in place was gone. The Plains winds whipped across the fields, raising billowing clouds of dust to

the skies. The skies could darken for days, and even the most well sealed homes could have a thick layer of dust on furniture. In some places the dust would drift like snow, covering farmsteads.

The Dust Bowl lasted about a decade. Much was learned about cultivation in dryland ecosystems. New cultivation methods, such as dry farming, have reduced the impact of subsequent droughts in this region.

The Timeline

1931



Severe drought hits the midwestern and southern plains. As the crops die, the "black blizzards" begin. Dust from the over-plowed and over-grazed land begins to blow.

1932

The number of dust storms is increasing. Fourteen are reported this year; next year there will be 38.

1933

May: The Emergency Farm Mortgage Act allots \$200 million for refinancing mort-



gages to help farmers facing foreclosure. The Farm Credit Act of 1933 established a local bank and set up local credit associations.

October: In California's San Joaquin Valley, where many farmers fleeing the plains have gone, seeking migrant farm work, the largest agricultural strike in America's history begins.

1934

May: Great dust storms spread from the Dust Bowl area. The drought is the worst ever in U.S. history, covering more than 75 percent of the country and affecting 27 states severely.

June: The Frazier-Lemke Farm Bankruptcy Act is approved. This act restricted the ability of banks to dispossess farmers in times of distress. Originally effective until 1938, the act was renewed four times until 1947, when it expired.

December: The "Yearbook of Agriculture" for 1934 announces, "Approximately 35 million acres of formerly cultivated land have essentially been destroyed for crop production. . . . 100 million acres now in crops have lost all or most of the topsoil; 125 million acres of land now in crops are rapidly losing topsoil."

1935

January: The federal government forms a Drought Relief Service to coordinate relief activities. The DRS bought cattle in counties that were designated emergency areas, for \$14 to \$20 a head. Although it was difficult for farmers to give up their herds, the cattle slaughter program helped many of them avoid bankruptcy. "The government cattle buying program was a God-send to many farmers, as they could not afford to keep their cattle, and the government paid a better price than they could obtain in local markets."

April: FDR approves the Emergency Relief Appropriation Act, which provides \$525 million for drought relief, and authorizes creation of the Works

Progress Administration, which would employ 8.5 million people.

Congress declares soil erosion "a national menace" in an act establishing the Soil

Conservation Service in the Department of

Agriculture (formerly the Soil Erosion Service in the U.S. Department of Interior, now the Natural Resources Conservation Service). Under the direction of Hugh H. Bennett, the SCS developed extensive conservation programs that retained topsoil and prevented irreparable damage to the land. Farming techniques such as strip cropping, terracing, crop rotation, contour plowing, and cover crops were advocated. Farmers were paid to practice soil-conserving farming techniques.

December: At a meeting in Pueblo, Colorado, experts estimate that 850,000,000 tons of topsoil has blown off the Southern Plains during the course of the year, and that if the

drought continued, the total area affected would increase from 4,350,000 acres to 5,350,000 acres in the spring of 1936.

C.H. Wilson of the Resettlement Administration proposes buying up 2,250,000 acres and retiring it from cultivation.

1936

May: The SCS publishes a soil conservation district law, which, if passed by the states, allows farmers to set up their own districts to enforce soil conservation practices for five-year periods. One of the few grassroots organizations set up by the New Deal still in operation, the soil conservation district program recognized that new farming methods needed to be accepted and enforced by the farmers on the land rather than bureaucrats in Washington.



1937

March: Roosevelt addresses the nation in his second inaugural address, stating, "I see one-third of the nation ill-housed, ill-clad, ill-nourished . . . the test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little." FDR's Shelterbelt



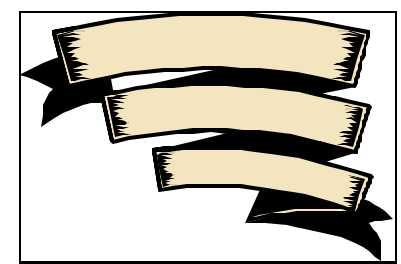
Project begins. The project called for large-scale planting of trees across the Great Plains, stretching in a 100-mile wide zone from Canada to northern Texas, to protect the land from erosion. Native trees, such as red cedar and green ash, were planted along fence rows separating properties, and farmers were paid to plant and cultivate them. The project was estimated to cost 75 million dollars over a period of 12 years. When disputes arose over funding sources (the project was considered to be a long-term strategy, and therefore ineligible for emergency relief funds), FDR transferred the program to the WPA, where the project had limited success.

1938

The extensive work re-plowing the land into furrows, planting trees in shelterbelts, and other conservation methods has resulted in a 65 percent reduction in the amount of soil blowing. However, the drought continued.

1939

In the fall, the rain comes, finally bringing an end to the drought. During the next few years, with the coming of World War II, the country is pulled out of the Depression and the plains once again become golden with wheat.



Our conditions are not as bad as the "Dust Bowl" years, however, we are in a drought and have been for some time. As a result you may ask yourself, What does drought really mean? How long have we been in a drought and more importantly, how can I survive these conditions? The answers are forthcoming, simply read on...

Dry conditions are not unusual for Colorado. However, 2002 was undeniably different and the conditions have affected more people than ever before. Unfortunately, the trend does not seem to be subsiding. According to the *Natural Resources Conservation Service's (NRCS) Snow Survey and Water Forecasting Division*, we need some 200 percent of the normal precipitation during this season to have decent runoff, but that would still only partially restore our basins. So what can farmers and ranchers do? Where can they go to get assistance?

DURING TIMES LIKE THESE FARMERS AND RANCHERS SHOULD BE EVALUATING THE FOLLOWING:

1. *Irrigation Water Management*
2. *Dryland Treatment*
3. *Range and Pastureland Management*

Irrigation Water Management simply means effectively using irrigation water to meet crop and/or rangeland needs to reduce leaching and runoff.



To Make Every Count, You Should:

- 💧 Consider your irrigation delivery system
- 💧 Know your soils (water-holding capacity, intake rate)
- 💧 Know your crop water needs
- 💧 Monitor your technique

Consider Your Delivery System



It is vital that you have an adequate irrigation water delivery system to the field. Typically drip and sprinkler irrigation systems have proven to be the most efficient forms for irrigating cropland. However, numerous landowners use flood irrigation systems. Therefore, it is highly recommended that those systems, including ditch-lined, gated pipe, and underground pipelines, be monitored regularly and updated to improve efficiency levels, if conversions from flood to drip or sprinklers is not possible.

Know Your Soils



Using a county soil survey (obtained through the NRCS local field offices) will provide you with:

- Texture and water-holding capacity, which helps to determine when to irrigate and how much water the soil can hold.
- Potential salinity, which has a bearing on when to irrigate (frequency and amount of water) and crop selection
- Soil depth, which refers to crop water-holding capacity, root zone capacity, and rooting depth
- Crop selection and potential yields

Know your crop needs

How much water does the crop require? For example, grain corn requires 25 inches, while dry edible beans require 19 inches.

Monitoring techniques

You must know how much water you are applying. There are ways to measure the water you are applying including well test, flumes, weirs, and flow meters.

Water management techniques, from application to monitoring devices, will vary as agricultural operations are unique. Each producer will need to evaluate his/her own situation and irrigation system to determine the best management practice. Whatever you do, review your irrigation water management plan and if you don't have one, develop one. It will increase the efficiency and uniformity of irrigation water application and reduce potential contamination of water sources.

Dryland Treatment



Conservation Tillage and Residue Management

The goal when working with limited water is to capture every possible source of water in the production system. These sources include rainfall, snowfall, and irrigation water. Residue management can have a significant impact upon increasing the availability of water. Producers in the Central Plains have long advocated no-till for dryland production. No-till increases the amount of water stored in the soil due to reduced evaporation from tillage operations and runoff and increased snow catch during winter snowstorms. Changes in tillage management have allowed producers to change rotations from the conventional wheat-fallow rotation to more intensive rotations such as wheat-corn-fallow. The changes in tillage management can be successfully used in irrigated production for moisture conservation.



Surface residue during the growing season can also have important impact upon water conservation. The reduction in evaporation amounted to nearly 2.5 inches for the growing season.

After harvest, leaving the residue standing can have a major impact upon snow catch. In most years, standing residue accounted for nearly 2 inches in increased soil moisture over flat residue. In one year, standing residue accounted for nearly 4 more inches of stored soil moisture.

Runoff from precipitation is also reduced when surface residue is present. Residue acts as small dams that slow water movement and allow for more time for the water to infiltrate the soil. Residue also reduces the impact of rainfall and irrigation upon surface sealing which increases infiltration rates. Residue protects the soil surface from the impact of rain droplets.

Pasture and Rangeland Management

The main need of native rangeland during drought conditions is for extended rest periods from grazing to allow forage time to recover. This practice is called rotational grazing.

Most grazing systems are designed to give plants a rest from grazing. Because plants are under stress during drought,

they need a longer period of rest to recover from grazing. In a rotation system, increase the number of pastures within a system or increase the time animals stay in a single pasture to facilitate longer periods of rest. Even with the most sophisticated system, reductions in the number of animals may be necessary to prevent overgrazing during drought.

Plant Growth

In normal years, initial grass growth relies on food reserves stored in the roots and crowns. Most grass will begin to restore food reserves for next year's growth.

However, during drought conditions, plants oftentimes lie dormant before the end of the normal growing season. Thus, they enter a longer than normal dormant period and become dependent on food reserves earlier in the year.

Adequate food reserves also help plants tolerate extreme temperatures that often accompany drought.

Drought conditions increase the rate of natural die-off of plant roots. Range plants that have lost root biomass during drought are less able to obtain nutrients and water from the soil. **Therefore, drought-stricken ranges and pastures should be managed to promote root replacement.** Growth is initiated early in spring, deferment from grazing during this period is important for re-establishing vigorous root systems.

Water

Water shortages usually mean water hauling if a good quality water supply is not available in all pastures. A well-designed pipeline system with a reliable source of clean water is the easiest method to ensure adequate water. Drought, coupled with hot weather, may cause livestock distribution problems. Livestock may concentrate near water and shade, causing local overgrazing and non-use away from water.



DROUGHT SURVIVAL TIPS

- Improve existing irrigation systems to increase application efficiency
- Change to a more efficient irrigation system
- Improve water conveyance structures to reduce evaporative and seepage losses
- Perform required maintenance on facilities (fix leaks & keep machinery working properly)
- Utilize conservation tillage & related practices to reduce soil moisture losses (reduces irrigation demand)
- Plant crops with lower water requirements
- Prioritize use of irrigation water to higher value crops (maximize return from a limited supply)
- Convert from irrigated to dryland farming
- Plan for extended rest period after haying/grazing
- Improve water delivery system including locations to enhance livestock distribution
- Increase cross fencing to enhance management of grazing and proper livestock distribution
- Reduce numbers of livestock

What if Disaster gets the best of your operation...

The first thing you need to know is that you have options.

The bank loan officer may have discussed a voluntary sale of your real estate, machinery, equipment and cattle. There are even officers who will tell you that you and the bank can work something out and you do not need an attorney. Do not be misled, if there ever is a time when you need legal representation this is it. It wouldn't hurt to contact your accountant either.

After the contact from your bank, your first step should be to contact your accountant and determine the tax liability of selling your assets to pay the bank. After that meeting you need to meet with an attorney that has the knowledge and experience in working through farm debt.

Option # 1 - Arranging an agreement with the bank

In certain situations, by working with your accountant and your attorney, you may be able to arrange an agreement with the bank, outside of bankruptcy. In this case, it is important that you have your representative or legal counsel negotiate the terms of the agreement.

...and the Bank loan officer has discussed liquidation with you, the Bank has mailed a demand letter to you and creditors are calling and demanding payment. What do you do?

Option # 2 - Filing Chapter 7

If the tax liability of selling your assets is more than you can reasonably pay, even over a period of time, the best option may be a Chapter 7 bankruptcy. From the day that you file your petition for relief under Chapter 7, all creditors are automatically stopped or stayed from pursuing any further collection efforts. In a Chapter 7 bankruptcy, which is a liquidation bankruptcy, all of your assets and all of your debts, including the tax liability for assets sold after the filing of the bankruptcy petition, become part of your bankruptcy estate.

Option #3 - Filing Chapter 12

Congress enacted a bankruptcy just for farmers, known as Chapter 12. This bankruptcy allows you to reorganize a farming operation. To qualify as a family farmer for a Chapter 12 bankruptcy, your debts cannot exceed \$1,500,000 (this limit may soon be changed by Congress to \$3,000,000). Eighty percent of your debts must arise out of the farming operation and more than fifty percent of your income in the proceeding taxable year must be from the farming operation.

In a Chapter 12, you are a debtor in possession and remain in control of your assets. The filing of a Chapter 12 bankruptcy petition stops collection efforts by both secured and unsecured creditors. You have relief from creditors and time to review your operation to determine the feasibility of restructuring your debt to continue your farming operation.

Courtesy of:

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PROGRAM	PRACTICES	BENEFITS	REQUIREMENTS	CONTACT
Environmental Quality Incentives Program	Any natural resource concerns including: <ul style="list-style-type: none"> ● Water storage structures ● Livestock tank ● Pipelines ● Cross fence ● Deferred grazing ● Crop rotation system ● Water measuring devices ● Sprinkler and surface irrigation systems 	Provides cost-share assistance to help defray the cost of conservation practices. These practices allow the applicant to better mitigate the impacts of drought (i.e., prove more dependable water for livestock use) while adequately protecting the resource base.	<ul style="list-style-type: none"> ● Must be an agricultural producer ● Land must be used to produce an agricultural commodity or livestock ● Must provide proof of ownership or control of land for the contract period ● Must address an identified resource concern ● Must achieve at least the minimum ranking score for participation 	Local Natural Resource Conservation Service Field Office (listed in phone book) or www.co.nrcs.usda.gov <i>NRCS provides technical and financial assistance through numerous programs that help private landowners achieve desired natural resource goals. Ask your NRCS representative for additional information.</i>
504 Home Repair Loan and Grant Disaster Fund	Well replacement or repair	Low income individuals in rural Colorado adversely affected by drought and other disasters	Low interest loan funds and grants are available to individuals based on specific county income eligibility requirements.	Local Rural Development Field Offices (listed in phone book) or www.rurdev.usda.gov/rhs/sfh/sfhdirect_loan_income_limits.htm
502 Direct Home Loan Disaster Fund	Well replacement or repair	Funds can be used to replace or rehabilitate permanent residence as well as to replace or repair wells damaged by drought and other disasters.		Local Rural Development Field Offices (same as above)
Colorado State Conservation Board Matching Grants Program	Conservation practices that conserve and protect Colorado's natural resources including, but not limited to, drought mitigation practices surrounding irrigation water management, rangeland management.		The intent of these funds is to get conservation on the ground. Applications for grants must provide a minimum of fifty-percent cost sharing. The match can be from any source except state funds and/or in-kind staff support and services.	Colo. State Con. Board 1313 Sherman Street, Room 219 Denver, Colorado 80203 (303) 866-3351 or www.ag.state.co.us/soils/forms/grant_guide
Conservation Reserve Program	Emergency Haying and Grazing	Allows grazing and haying on CRP acreages which is typically prohibited from any haying or grazing	This program must be authorized by the Secretary of Agriculture.	Local Farm Service Agency Field Offices (listed in phone book) www.fsa.usda.gov
Emergency Conservation Program	<ul style="list-style-type: none"> ● Hauling water ● Constructing and deepening wells for livestock ● Wind erosion control measure through chisel or deep plowing 	Permit grazing by livestock as well as supply emergency water for irrigation system for orchards or vineyards. It also supplies water for confined livestock operations.		Local Farm Service Agency Field Offices (same as above)
Farm Service Agency Loan Programs		<ul style="list-style-type: none"> ● Farmers and ranchers who own or operate land in a county designated as disaster area may be eligible for emergency loan assistance ● Up to \$500,000 in assistance ● 3.25% interest rate 	<ul style="list-style-type: none"> ● Must have a 30% loss ● Applications must be filed within 8 months of the county's disaster ● Loans are for 100% of actual production or physical losses 	Local Farm Service Agency Field Offices (same as above)
Colorado Agricultural Mediation Program	This is a voluntary, confidential process that helps Colorado farmers and ranchers who are dealing with contentious issues.	<ul style="list-style-type: none"> ● Provides alternative dispute resolution opportunities for Colorado ag borrowers and creditors ● Provides dispute resolution for farmers with non-credit issues such as crop insurance, wetlands, grazing, water rights and land ● Revitalizes economic base for rural communities. ● Helps Colorado farmers and ranchers facing financial adversity. 	Mediation usually begins after contact between ag producers and other parties have failed. Mediation may be initiated by either party and may include counseling and financial analysis. The topics that can be mediated include: <ul style="list-style-type: none"> ● Ag Credit Mediation ● USDA Adverse Actions The fees begin at \$50 per party for the first hour and \$25 per party for each hour thereafter.	Colorado Agriculture Mediation Program Colorado Department of Agriculture 2331 W. 31st Avenue Denver, CO 80211-3859 Phone (303) 477-0054 Fax (303) 480-9236 or www.ag.state.co.us

For additional about educational programs and research at Colorado State University, please contact Cooperative Extension Service at www.ext.colostate.edu or call (970) 491-6281.