

Next 'Dust Bowl' unpredictable, may have started

Climate scientists disagree on threat

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Along with low prices, high costs and diminished market share for red meat, Colorado cattlemen may have to deal with a drought that some climate scientists say is overdue.

Some experts have reported that the extremely dry summer of 1998 may have marked the start of another drought. Others, however, predict a serious and protracted dry spell may be decades away.

This century has seen three droughts come roughly in 20-year cycles — in the 1930s, 1950s and 1970s. If the pattern holds, the West is due, even overdue, climatologists say. But they also admit the phenomenon isn't as predictable as it looks.

In the short-term, continued dry conditions are likely for western Kansas, west Texas, New Mexico and southeast Colorado, said climate scientist Martin Hoerling, the National Oceanic and Atmospheric Administration in Boulder.

"Drought damage in Texas was \$5.8 billion last year," he said. "Rains did come late last summer, but reservoirs in the Rio Grande Valley were down to 19 percent of capacity."

No snow in southeast Colo.

Southeast Colorado has not received a single inch of snow this season, Hoerling said. Normally, the region should already have about 18 inches of snow, he said. Snowpack on the Western Slope also is down sharply.

Moreover, rainfall levels are about one-fourth of normal for the entire Southwest for the meteorological season, which runs from July 1 to June 30.

"Not only is the entire Southwest very

dry," said Hoerling, "but we have no reason to believe that it won't continue through the next several months and into next summer. The evidence of ocean currents doesn't point to much rain this spring, and it was the lack of rains last spring that caused widespread crop damage."

Those colder-than-normal ocean currents, he said, create a "La Niña" — almost the opposite of the moisture-rich "El Niño" — effect on wind patterns. The bottom line: less rain over the Great Plains.

'Dust Bowls' common

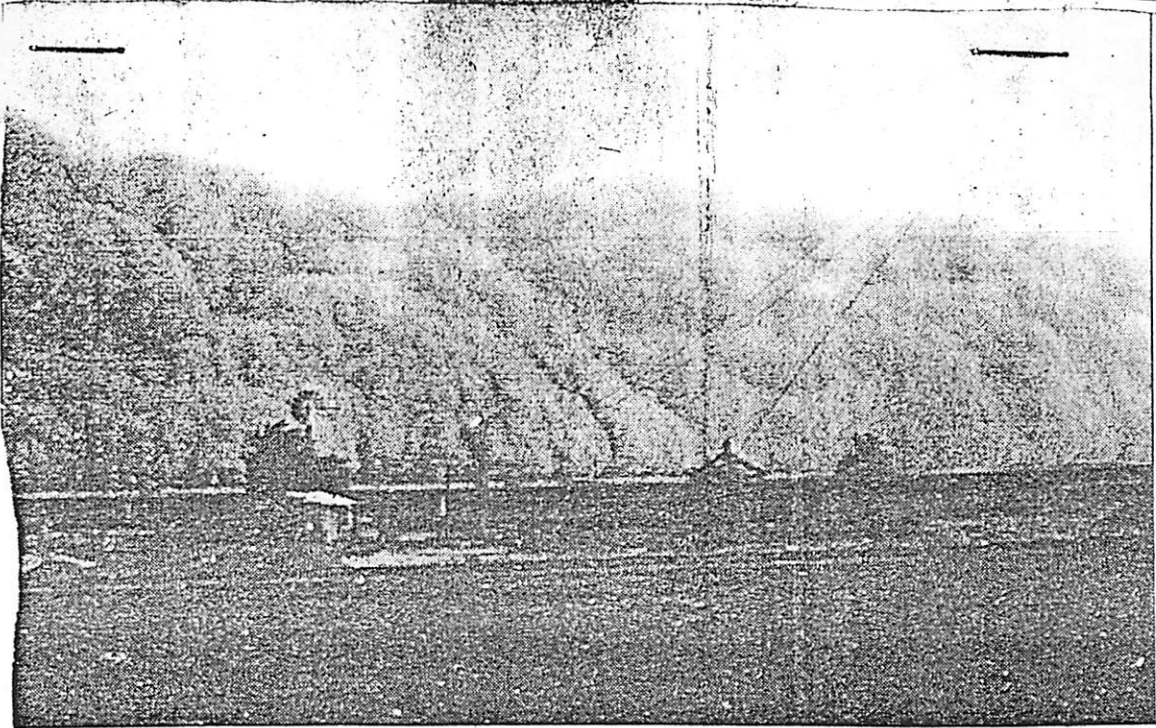
Connie Woodhouse, a University of Colorado researcher working at NOAA in dendroclimatology, the study of tree rings to trace climate cycles, takes a longer-term view.

"The data we have from tree rings and lake sediments shows that, during the past 400 years in this part of the world, each century has had two droughts of 'Dust Bowl' magnitude," she said. "There were serious droughts in the 1860s, 1820s, 1750s and 1660s."

"Drought in the 1930s lasted seven years and was over by 1938. That in the '50s ran five years, until 1956. Although people feared another Dust Bowl in the late '70s, that drought wasn't as severe. But, based on the historical record, we can expect a 1930s-magnitude drought sometime in the coming century," she said.

Other researchers speculate the next century could also see a "megadrought" of two to four decades rather than several years. Tree rings, lake sediments, sand dunes and archaeological evidence indicate that two of these hit this region, in-

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Denver Post file photo

A giant dust storm approaches Dodge City, Kan., during the 1930s drought.

Scientists differ on next drought

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cluding the Midwest "bread basket," during the last 700 years.

The first of those megadroughts, in the 1200s, is widely believed to have wiped out the Anasazi culture around Mesa Verde and elsewhere in the Four Corners region.

Both Woodhouse and Hoerling said recent years have seen revived scientific interest in a formerly discredited "sunspot theory" that linked sunspot activity, and changes in solar radiation, to weather and agricultural cycles. Those, in turn, were tied to economic cycles of boom and bust when agriculture played a bigger role in world economies.

Vivid memories

For some people, Dust Bowl memories remain vivid more than 60 years later.

Seventy-year-old Kansas rancher Bill Young, in Denver for the National Western Stock Show and Rodeo, remembers Dust Bowl times in Kansas in 1936.

"It was terrible," he said. "I remember people lined up to get emergency food from the federal government.

"My family lived in a house with a dirt floor and no electricity. We had no gas for the car. People weren't eating and out-of-work men were riding the rails in box cars. But there was no work anywhere in a part of the country that could feed half the world.

"Not many people today can even imagine what it was like in 1936," said Young, whose Broken Lance cattle operation today spans 500 acres in south Kansas and Missouri. "But you couldn't blame farmers and ranchers then. They were uneducated and had no idea what was going to happen. Today, we know better. We know how to hold the soil down with contour plowing and shelter belts.

"But if we have just two consecutive years of drought, a lot of ranchers won't make it. Old-timers, who got their land years ago, can survive. But those who came in later and have big bank notes to pay off have no chance. Today, the banks can't even carry them if they wanted to; new regulations have eliminated that."

In Colorado in the 1930s, "ranchers went broke and some committed suicide," recalled Greeley rancher W.D. Farr, 88, who was

presented the National Western's 1999 "Citizen of the West" award last week.

"During dust storms, cars had their headlights on in the middle of the day. Kansas and Oklahoma were worse, but it was pretty terrible in Colorado with no water. That's why we needed the Big Thompson project," added Farr, who was a prime mover behind the tunnel project that in the late 1930s began diverting water from the Western Slope to the Front Range.

Question of survival

During those Dust Bowl years, "it wasn't a question of making any money, but of simply surviving," said Stock Show President Pat Grant, whose father ran a ranch near Roggen in northeast Colorado. Weld County rancher and Stock Show official Ben Houston was just a boy back then, but "I often wonder how we survived it at all."

"They'd have to trail cattle 50 miles to find some grass, and I remember dust caked on cattle so that they could barely breathe."