



By Thad Box

Learning From the Dust Bowl

Sixty-five years ago a group of people working on land that was too cold, too dry, too hot, or too high for crops or intensive forestry came together in Salt Lake City. They formed the American Society of Range Management (now SRM) to focus the emerging science of land management on rangelands. They recognized that rangelands had deteriorated when even the best known agricultural practices of the time were applied. The emerging science of ecology became the cornerstone of the new profession. And managing change was their long suit.

Last November Jenny and I watched Ken Burn's television program *The Dust Bowl* with long-time friends Don and Marie Dwyer in Las Cruces, New Mexico. It wasn't just old codgers watching television. It was an emotional experience including reliving childhood experiences, remembering how we ended up in range management, and thinking about our profession's role in making the world better.

Our reaction to *The Dust Bowl* was not that of academics or of farmers put off their land. The program echoed our very lives. Don was born in southwest Kansas during the Great Depression. His early years were spent just a few miles from the epicenter of the Dust Bowl. My childhood was on a Texas tenant farm some 500 miles south. Don saw, smelled, and felt their farm blow away. My mother put towels under the door to keep northern dust from choking us.

Don and I first met at the 1957 annual meeting of ASRM in Great Falls, Montana. He was a student of Jerry Tomanek and F. W. Albertson at Fort Hays State. I was Vernon Young's graduate student at Texas A&M. The next few years we were together as doctoral students at A&M. Later Don headed the Range Management department at Utah State University while I was Dean of Natural Resources.

As children of the Great Depression, we never dreamed that human-caused changes of the American Great Plains would be instrumental in creating the land care profession in which we would spend most of our lives. Or that our profession would develop scientific information that would apply to arid and semiarid lands throughout the world. We were just happy to have a job.

In 1806, Captain Zebulon Pike explored the southern portion of the Louisiana Purchase. He found vast grasslands filled with bison, pronghorn, and horses. Nomadic Native Americans led a good life, moving with rains, following herds of abundant game animals. They had good years when it rained, barely survived during periodic droughts.

After the Civil War, railroads were built across the plains, the buffalo extirpated, and Native Americans driven to reservations. Within two decades millions of cattle were trailed from Texas and Mexico. Ranges were overgrazed. Drought and blizzards killed cattle by the thousands. The cattle bubble burst like overbuilt housing of our 21st century. When the rains came, with most of the cattle gone, the plains healed. But they would never be the same again.

Homesteaders replaced cattle barons. The first Homestead Act gave settlers 160 acres. As machines replaced draft animals, homesteads were increased to 320 acres, then to a full section

of 640 acres. Promoters argued that “rain follows the plow,” that cultivation would lead to a more moderate climate. With high grain prices in World War I and a run of good years, farm towns prospered as the plains were plowed. But plowed land did not bring the promised rain.

“The drought” hit. It was not the first drought, nor would it be the last. Periodic droughts are part of the plains. With ground plowed bare, winds rearranged the landscape and turned farmers into starving vagrants. Some congressmen advocated allowing the area to “revert to desert like the Sahara.” President Franklin Roosevelt used government programs to put money in the pockets and hope in the hearts of folks who would stay on the land. He, and Congress, also created institutions to care for the land in the future.

The Soil Erosion Service, now the Natural Resources Conservation Service, came into being. The Taylor Grazing Act was passed and that led to the formation of the Bureau of Land Management. The USDA Forest Service was expanded and the research branch strengthened. The Agricultural Research Service was formed and land research expanded in the Experiment Stations of land grant universities. Universities developed specialized curricula and graduate degrees to meet the needs.

Land care workers were trained in many fields. Their challenge was to meld information from the earth sciences, the biological sciences, and economics into professions that would allow us to understand how to apply science to land sustainability. In 1948 the forerunner to SRM was formed to unite those people who used ecological principles to manage rangeland. Range managers were among the first to use science to manage change.

The people and the land survived the Dust Bowl. Today the southern plains are productive again. The new prosperity comes from using fossil energy to pump fast-disappearing fossil water from the Ogallala Aquifer. We know that change is coming again on the plains, but we don’t know when it will occur or what the trigger will be.

The Dust Bowl and current local land use problems are nested in a much larger global environmental problem. Changes locally or worldwide are caused or exacerbated by human action. How SRM and other land care organizations react to the role of rangelands in a global setting will determine their value in the 21st century.

We can, and should, “fix” land use problems as they arise. Each fix brings major restrictions on how we live our lives such as limiting burning fossil fuels, changing diets to include less meat, and rationing recreational use of public lands. New technology alters the time and impact of catastrophic events caused by our action. Although we range managers use sci-

ence to direct change, we have been slow to accept that *Homo sapiens* are responsible for most catastrophes.

The fact that we use fossil water to irrigate natural rangelands to produce ethanol to drive cars indicates many people who make policy do not believe that human use causes the earth to warm and our climate to change. A letter to the editor in the *Western Farmer-Stockman* writes about “your scientists” being wrong about climate change, while “our scientists” say global warming peaked 16 years ago. Science is not yours or mine. It is not a competitive sport. It is a search for truth.

Social psychologist Jonathan Haidt, in his book *The Righteous Mind*, argues that decisions are made on emotion, not scientific facts. True believers search for “facts” that support what they already believe. In most areas, especially one as complex as climate change, one can almost always find a scientist who disagrees with the majority. And that one scientist, not a preponderance of evidence, is then used to justify what a dissenter wants to believe.

Our profession of range management has come a long ways from the cows and grass problems that dominated our early years. It took a great leap forward when we finally accepted that humans were part of the land, not some god-like being sitting outside the system. As part of the land, we are part of the problem. But as the thinking, altruistic part of the land, it is our role to correct the problem.

As such, we must have education that produces people who understand what science is and how it can be used. Poorly funded schools training people for jobs rather than educating them make the future bleak. By forbidding teaching of scientifically backed things such as evolution, ways to limit human reproduction, and the geologic age of the earth, what people want to believe will continue to trump reality.

Being right becomes a matter of finding a quote to support a preconceived belief. In such a world, our lives and the land that supports us are in danger. We can do better than that. And that is our role as land use professionals.

Suggested Reading

HAIDT, J. 2012. *The righteous mind: why good people are divided by politics and religion*. New York, NY, USA: Pantheon Books. 419 p.

Thad Box, thadbox@comcast.net.

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