

A California Cattleman's Perspective on the Oak Hardwood Issue¹

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Webster's definition of ecology is "that branch of biology that deals with the relationship between living organisms and their environment," and the definition of an ecosystem is "a community of animals and plants and the environment with which they are inter-related." We as human beings are part of these definitions, even though we are not animals of the four-legged kind. We most certainly are living organisms, and we are definitely inter-related with the environment. Like it or not, we must realize this and understand our relationships with the environments within which we live and with which we interact. The question then arises, and rightly so, "Do we as human beings truly understand this relationship?" Do ranchers truly understand the concerns of an urban society? Not really, although we are certainly trying to do so.

Most ranchers live out of town, and many of us spend every day in either the oak woodlands or conifer forests. We primarily graze cattle. We live in and work on the land that urban society is so concerned about. Such terms as ecology, ecosystem, and biodiversity are new to us. But this does not mean that these terms represent new concepts. Quite the contrary. We have been dealing with the ecology of living organisms within rangeland ecosystems and the biodiversity that this represents for generations. We live in this type of environment because that is the lifestyle we have chosen, and we are just as much a part of the range as the animals that live upon it. It is not for financial gain that we ranch in such environments as oak woodlands because not many individuals in ranching will tell you that the economics of this business are favorable. We certainly do not wish to live within a sterile environment devoid of trees and wildlife. Ranchers for generations have understood that, if they are to live life within environments such as oak woodlands, they must be conservationists.

We must protect and care for the natural resources on our ranges, where cattle have become a part of the ecology, a part of the ecosystem, along with the deer, quail, wild turkeys, squirrels, rabbits, and many other creatures. Indeed, no one is more concerned about rangeland wildlife than the typical rancher. When he builds a reservoir in a normally dry area, he gets much satisfaction from observing wildlife using his pond along with cattle. When he puts out salt or other feed supplement for his cattle and he sees wildlife using it, he does not complain. He takes pride in the fact that he is helping other animal life. For example, our eastern Tehama County ranges are deficient in selenium, an important mineral for livestock and wildlife. Ranchers in the County place selenium salt and supplement on the range, knowing full well that not only the cattle benefit but also the deer will benefit.

I know of no rancher who is not concerned with the deer herd. Quite frankly, most ranchers in our area have a great deal of difficulty understanding the public policy toward deer. We see the deer herd declining, not because the forage is unavailable but because of increased hunting pressure, the mountain lion, and the public highways that cross rangelands. Of course, how can we expect public policy to take care of the deer herd when it appears that public policy cannot take care of the people?

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Public policy has changed throughout the years with regard to conservation issues. The early conservation movement in this country was characterized by great debates between preservationists, who believed in little or no utilization of natural resources, and conservationists, who believed in a certain degree of utility. That same debate rages on today. A rancher's viewpoint of conservation, for the most part, combines a degree of preservation along with the utilization of natural resources. We look at many natural resources on our lands as renewable.

For example, consider rangeland grasses, the primary resource for sustaining our livestock. Without the grass, our enterprise cannot survive. We must return to the same range year after year. Consequently we treat it as a renewable natural resource and devise grazing programs and range improvement programs that benefit the resource. One strategy uses rotational grazing programs, within the confines of winter grazing and, in a broader sense, rotational programs from winter ranges to spring ranges to summer ranges. Our fall and winter ranges are rested in the spring to allow regrowth of grass for the next year. Spring ranges are usually grazed for a shorter time, and we then move cattle to the mountains for summer grass. This program has been successfully followed for generations.

In addition to rotating livestock, we must follow some basic concepts in range improvement. We know that a range abandoned will ultimately revert to brush and canopy cover that will choke out the grass. For years, ranchers controlled this problem through the judicious use of fire, which was always a natural part of the ecological process of rangeland ecosystems. Old-timers, every year, when moving cattle to the mountains, burned buck brush and live oak thickets behind them. Where rangeland oaks were so thick that grass would not grow, ranges were thinned. In some areas, oaks were removed entirely. The federal government got involved with brush removal programs, including the bulldozing and burning of oaks. As a matter of fact, this federal program is still available, and the government will pay more than half the cost! This program lost popularity when the value of firewood increased.

The cutting of rangeland oaks for firewood became a matter of major concern in many northern counties, reaching its zenith about 4 years ago when the State Board of Forestry was considering regulation. Ranchers became increasingly concerned. Knowing full well that areas of range needed treatment, knowing that they could not survive if the grass were choked off, and understanding the value of oaks to the rangeland, it became clear that they needed to get involved. Involvement came through cattlemen's associations, at both State and local levels. Those of us who happened, by chance, to be on the front lines in the cattlemen's associations caught most of the pressure.

In my mind it was clear. Oaks are a natural part of the landscape. There are geographical differences throughout the State concerning oak species—how rapidly they grow, how thick they grow, and how they regenerate. For more than 100 years, ranchers have been more or less protectors of the open space. What they did on rangelands affected not only livestock grazing but also wildlife, water, air, and any other natural entity on that land. I knew that the majority of ranchers understood this and were practicing sound conservation measures that would preserve the land. They wished to pass this land down to future generations. I also understood that the vast majority of ranchers were not interested in bulldozing and burning oaks. Their thinning programs were just that—thinning. They were very concerned about erosion and understood the importance of maintaining trees along ravines and draws to control it. Oaks are a renewable resource that could, if handled properly, enhance land values. Finally, and of most importance, I understood that this was a private property rights issue.

Ranchers owned not only the land but also what the land grew. I felt that if the regulatory hand of the State fell upon ranchers, it would not improve the situation but would, instead, create an adversarial climate and drive ranchers

back to land-clearing programs. Ultimately ranchers would respond by selling more land, resulting in more subdivisions and ranchettes. The way to approach this became obvious. Somehow, individual responsibility had to surface. Because of the geographical differences between counties and because the residents within a county were more in touch with their particular local problems, it was a local issue. Because most of the rangeland within counties was owned by ranchers, they simply had to become actively involved in the process.

Tehama County became directly involved in the oak/hardwood issue when both Tehama and Shasta counties were identified by the California Department of Forestry as being significantly involved in the cutting of oaks for firewood. At a State Board of Forestry meeting, a Tehama County Supervisor and the Tehama County Cattlemen's Association took the position that State regulations were not the answer, that this was a local problem requiring a local solution.

A diverse advisory committee was formed in Tehama County, through appointments by the Board of Supervisors. The committee developed a voluntary set of oak/hardwood management guidelines to aid landowners in managing their oak/hardwood resources. This committee is still active today and has been well-accepted within the county. Later, the California Cattlemen's Association adopted an oak/hardwood policy that followed Tehama County's lead. This policy has three major points: to encourage the landowner to develop his own oak/hardwood management plan, to encourage the landowner to educate himself concerning oak/hardwoods, and to encourage the landowner to establish his own process of review. We believe in individual responsibility, and we believe the landowner has a responsibility toward the land he owns.

We understood that it would be difficult to make the educational material available to the landowner. This is where the University of California came in. The University responded positively through the Integrated Hardwood Range Management Program, as established by the State Board of Forestry. Since then, educational seminars have been directed toward landowners and woodcutters. Rick Standiford and his associates have just finished the draft text on oak woodland management guidelines. To the University's credit, comments were taken from the cattlemen's associations—specifically from ranchers who live and raise cattle within oak woodlands. These guidelines present extensive information that I know will be of great value to landowners planning their own oak/hardwood management programs.

Now it has moved even farther forward. Not only have the northern counties put forth their own criteria in their respective counties, but also a voluntary oak/hardwood plan has been filed with the Tehama County Agricultural Commissioner's Office by woodcutters operating within the county. Things are on the right track, but much work remains to be done. Much of this work is going to be related to the question: Can the rural rancher communicate with the urban city dweller? And vice versa: Can the urbanite communicate and understand the rancher's point of view? This remains to be seen. Both are property owners and both have private property rights related to what they own. Both need to understand the other's point of view.

I would not attempt to tell you here today that I understand how all ranchers look at their ranges and the natural entities upon them. I believe that the spectrum of thought ranges from a few that are preservationists, such as an individual who ranches for wildlife, to those that have a purely utilitarian concept of natural resources. Most ranchers will fall somewhere in between, in many cases having been raised for generations on the same land and having a genuine appreciation for the land and what it produces. They also understand the concept of utility when it comes to renewable natural resources. They are very independent and, in most cases, rugged individuals. They prefer to keep to themselves and not enter into anyone else's business. They believe in the free enterprise system and

the right to own private property. These beliefs run deep in this regard. When you analyze this belief, it is fundamental to the concept upon which this country was founded. The right to own private property is one of the basic rights that protects all of us from the concentration of governmental power. When it comes to productive resources that land produces, especially those resources that are renewable, the concept of conservation is based not only upon preservation but also upon the utilization of these productive resources. A resource that is renewable can be productive for generations, which is in the best interest of society and the producer.

It is important that we make a clear distinction between renewable and nonrenewable resources. For example, after the northern Sacramento Valley was settled and riverboats and locomotives became the principal means of shipping goods, thousands of cords of oaks were cut to fuel these methods of transportation. I am sure that if the environmental concerns of today were present at that time, a major conflict would have developed. Here we are, 80 to 90 years later, and many of those same lands that underwent significant cutting in earlier days have been cut and recut and are still growing oaks. I am most certainly not implying by this observation that oaks can be indiscriminately cut or removed without upsetting the balance between preservation and conservation. I am simply noting that oaks do regenerate. With regard to oak regeneration, there are geographical differences throughout the State. Oaks, if looked upon as a resource, are renewable.

So how does a rancher look at rangeland oaks? We certainly cannot presume that each person looks at oak trees in the same manner, but I think it is safe to say that ranchers view oak trees in a manner similar to other people. Ranchers know that oaks most certainly have an esthetic quality to them. People enjoy seeing oaks, they are part of the landscape. We also know that oak woodlands support a wide variety of wildlife that are a natural part of the range. Oaks provide shade, a certain amount of protection for forage, and help to prevent soil erosion. Ranchers have, within the confines of range improvement, thinned oaks out to promote grass production and sold firewood from this thinning. There is a small economic benefit to ranchers, in tough times, to be able to sell firewood.

One of the most interesting concepts to surface in the past few years is that sustainable grass and forage production is stimulated through maintaining a canopy cover. This concept indicates that grass production over time on properly thinned range will exceed the grass production on clear-cut range. The idea is that if you clear cut a range, making it devoid of canopy cover, you get an initial flush of grass. After a few years this flush of grass recedes, and the longer term effect is that you get less grass over time than if you had maintained some canopy cover. It seems that many different environmental factors, including geography, annual precipitation, and locality, influence the oak canopy/grass relationship. Certainly more research is needed on this issue. Examine both the positive and negative effects of canopy cover and oak mast on grass production, with respect to both quantity and quality. Let us see what nutritive value oak mast and debris have to the soil.

We do understand one of the principal negative effects oaks have and that is the production of tannic acid. I have read a number of times that livestock producers considered acorns as a source of nutrition for cattle. I do not. As a matter of fact, acorns are toxic to cattle. The degree of toxicity depends upon the amount of acorns an animal ingests, the age of the animal, the nutritional state of the animal, and the particular stage of development that the acorn is in. Let me give you my personal experiences with acorn toxicity.

First, we all realize that the production of acorns varies from year to year. It varies to the point that it is not a reliable source of nutrition even for deer in the fall. Indians used to say that a heavy acorn year would precede a hard winter.

The one thing that I could not quite understand about the heavy acorn production and a hard winter was what they meant by "hard winter." When I thought a bit about this, I decided that every winter was a "hard winter" for the Indians. I doubt whether they ever had an easy one! What I did discover was that a heavy acorn year can be especially tough on livestock.

Yearlings seem to be most affected. They can die, full of acorns, with their kidneys destroyed. I did autopsies on several yearlings and sent their kidneys to a laboratory for analysis. The results were clear: acute renal failure caused by an accumulation of tannic acid in the kidney, which resulted in uremic poisoning and death. In adult cows, the situation was not quite so severe, although we had an occasional fatality. Cows were eating acorns in the last trimester of gestation and, when suffering from nutritive deficiencies, as they do in the fall, can produce what we call "acorn calves." Acorn calves are calves that are deformed, with shortening of the long bones, undershot jaws, and an abnormal cranium. The mortality rate is higher than normal, and calves that survive have absolutely no economic value. Another interesting observation was that, after the rains came, acorns soften and open and they did not seem to bother the cattle as much. Knowing that serious harm to the cattle can be associated with their eating large quantities of acorns, ranchers have attempted to control the problem by thinning oaks and finding alternative sources of feed during these tough times. However, it must be understood that, in many situations, ranchers are unable to significantly supplement cattle on the range. In this regard, weather and economics play a major role.

In contrast to cattle, hogs can eat acorns without adverse effects. They will actually fatten up on them. Oldtimers would sack acorns in the fall to feed their hogs during the winter, and I know ranchers today who turn hogs loose to lighten the load of acorns in heavy mast years before livestock are turned out. But whoever came up with the idea that acorns are nutritionally important to cattle obviously was not in the livestock business or, if they were, I doubt whether they were in it for long!

I think it would be worthwhile for the scientific community to study the differences in tannic acid concentration in acorns on the tree, after they fall to the ground, and after they have softened and opened up. A better understanding of this question would certainly help the livestock owner to manage his oak woodlands for grazing. A related question, and a more basic one, is: Why do the oaks produce tannic acid in the first place? For example, what effect does tannic acid have on inhibiting competitive plant growth?

I would not want to leave this subject of toxicity without mentioning oak bud poisoning. About 9 years ago in the northern Sacramento Valley, approximately 800 hundred head of cattle died from this condition, and in the following years the deer count declined. Oak bud poisoning is a peculiar and uncommon event related to oak buds, full of tannic acid, being knocked off trees by late snow and hail storms and being ingested by herbivorous animals. When this happens, it can be devastating.

Nothing is more beautiful in our country than the oak woodlands in the springtime. It is ironic that the very beauty of these woodlands, and the rural setting in which they exist, are the most significant factors that threaten their destruction. People are attracted to these areas and wish to get out of the towns and cities into the open space. But they cannot live without the amenities that they leave behind. We see it happening all the time. Large tracts of land are cleared, pavement is laid down, concrete sidewalks are put in, and the land is changed forever. Fast-food establishments and shopping centers are built and, before you know it, they have brought the city with them. Often these are the same people who have been pointing fingers at the rancher, criticizing range practices that have been going on for more than 100 years. Ranchers find a great

deal of hypocrisy in this. The open space exists today in rural agricultural counties because of the enterprises that operate within it. Ranching is the primary agricultural enterprise.

Ranchers at times must sell land. The livestock business is extremely volatile and cyclical. Caught in economic downturns, ranchers many times must sell some land to survive. When ranches are sold for development, it is a land use change, and counties should have policies in place to deal with this. There certainly is no reason that these policies cannot deal with open space and oak trees. Counties need to plan communities and not allow developers to simply roll over them. The biggest challenge facing rural counties is how to deal with the urban/rural interface issue and control urban expansion. Only by answering this challenge will the natural beauty of the land be preserved. And only by answering this challenge in rural California will the rancher be able to survive with his urban neighbor.

Ranchers are also finding other sources of income related to oak woodlands. For example, many ranchers are involved in controlled hunting programs. When game is properly managed and improvements are made on ranches that encourage game production and conservation, it can become a worthwhile endeavor. Recreation and tourism are other activities that can economically benefit ranchers in the oak woodlands. Currently we are investigating the feasibility of taking interested people with us to gather and move cattle on the range. This could provide some additional income for us and a fine recreational experience for others.

Survival: that is what it is all about. Survival for us, for the wildlife, and for the oak trees. Those of us who live in these oak woodlands wish to preserve our way of life. We continue to do this despite adverse economic conditions in the cattle business. We consider ourselves to be environmentalists and conservationists and do not understand how the misconception of environmental issues can drive policy. We believe policy formulated in this manner will simply not work. We question people who are non-ranchers when they tell us how much residual dry matter to leave on a particular range and how many acres it takes to graze a cow and calf. We question this because, too many times in the past, well-meaning, highly educated specialists have given advice that led to economic disaster. We must come back to the same ranges year after year. We must conserve grass to make this work; we must get rid of excessive brush and canopy cover; and we must address toxic material on these ranges. We must do all of this and still make everything work. We cannot gamble on new, untried, and unproven ideas.

When you get into the genuine rural areas of California, conditions have not changed much. Do not make the mistake of comparing a rancher with a land speculator who wears a hat and cowboy boots. We do not wish to be included in the category of individuals who do not really care about the land but simply want to make a dollar. Where is the pride of some county supervisors in those counties that are showing complete disregard for oaks in allowing land conversions to take place? Is the almighty dollar so important that they would sell out their principles? Well, maybe they did not have many principles to begin with!

The genuine ranchers in my acquaintance do have principles. We will continue to practice sound conservation measures when it comes to the range and preserve oak trees along with forage and wildlife. We care about the open space, and we have no intention of selling out, either our principles or our land. We support educational efforts concerning oaks and oak woodlands, we encourage individual responsibility, and we favor open communication between ranchers and urban society. Most of all, we will preserve and protect the land that we steward and the private property rights that we hold so dear.