10. The Economics of Cattle Guards

Published by

Skaggs, Jimmy M. and James F. Hoy.
The Cattle Guard: Its History and Lore.

For additional information about this book
https://muse.jhu.edu/book/81026
In earlier chapters I have pointed out the role that convenience played in the invention and spread of the cattle guard, often called the lazy man’s gate. Often, especially in earlier years, a cattle guard was considered a sign of affluence, of a prosperous and progressive rancher. At a certain point, however, the cattle guard becomes no longer a luxury; the desire for ease and convenience is supplanted by hard-nosed practicality—a cattle guard saves (i.e., makes) money. In terms of the gross national product, the economic impact of the cattle guard is minuscule; but in terms of something like the “gross national agricultural, forestry, and mineral product,” its impact increases greatly. I will not attempt to present a detailed analysis of the effects of the cattle guard on the economy but will focus attention on some of the major economic aspects of the cattle guard.

Cattle guards are used primarily in three settings—on public roads in open-range country (including forested areas), on private farms and ranches, and on oil and other mineral leases. In each of these areas, cattle guards play an important economic role. In each area the main economic feature of the cattle guard coincides with its convenience feature: it eliminates the need (and thus the time required) for opening and closing a gate. Consider, for instance, the alternatives to cattle guards on open-range roads, whether township roads in the Kansas Flint Hills, interstate highways in Wyoming, or National Forest Service roads in Idaho. If there were no cattle guards, (1) all roads would have to be fenced along both sides of the right of way, (2) gates
would have to be used where a cattle guard is now placed, or (3) domestic animals would have to be kept out of pasture land through which these roads pass.

The last-mentioned possibility is absurd; were it to occur, the results would be devastating. The livestock market, for the short term, would be immediately depressed, while the long-range effect of such a massive reduction in herd size would ultimately mean much higher consumer prices.

The fencing of all right of ways is a much more reasonable solution. In fact, more and more roadways, both highway and railroad, are being fenced each year. This fencing process, however, is gradual. If all open-range roads suddenly had to be fenced, the cost of wire and of labor would create a very real hardship on ranchers and on taxpayers (much open range is on public lands). Aesthetically, the pleasures of driving through unfenced pastures are incalculable. Driving in open grassland gives one a feeling of openness, of the revitalization, even if momentary, of the frontier. Whether in the Gypsum Hills of Kansas, the Sandhills of Nebraska, the deserts of Arizona and Nevada, or the Missouri River country of the northern plains, open-range roads are a part of our heritage that should be preserved.

The other possibility—namely, gates— is the most impractical solution of all. If public roads had gates, think of the gasoline and time that would be wasted in slowing to a stop and building up speed after each gate was opened and closed, especially by freight haulers. Moreover, the expense of hiring gate openers— or fence-gap watchers— would be prohibitive. Thus, the traffic flow on open-range roads and the cash flow of open-range country are both maintained and facilitated by cattleguards.

How economical is it, however, for a small farmer or rancher to spend a thousand dollars or more to install a cattle guard on his own private road? This question has been answered forcefully by Ralph Ricketts, emeritus professor of agricultural engineering at the University of Missouri-Columbia, one of whose professional duties was farmstead planning. Professor Ricketts used to meet with farm families and help them to design the arrangement of their outbuildings, feed lots, fences, and so forth. One of his repeated contentions was that every farmstead needed at least one cattle guard to replace the gate the family used most often with its cars, pickups, and tractors. He maintained that such a cattle guard would save one week's labor per year in time spent opening and closing that gate. Ricketts once was loudly challenged on this claim, so he suggested that for one week the doubter keep track of the time he spent on one particular gate. A few weeks later the protesting farmer sent a letter saying that Ricketts was completely wrong. The farmer had counted the times he had gone through a busy gate, multiplied this number by the number of minutes it usually took to handle that gate, and determined that a cattle guard at that particular spot would save two weeks' work time in a year.
Whether that time is one's own or that of a hired hand, two weeks per year is significant to any farmer or rancher. Ricketts's conclusions are reinforced by the following anecdote told by George L. Smith, editor of *Kansas Farmer*:

"About 25 years ago, when I was running cattle in Chautauqua County, I had to go through a gate at least once a day. I figured how long it took to stop the tractor or pickup, get out, open the gate, drive through, get out, close the gate, and get back into the pickup. I timed myself and as best as I can recall, it required eight, 8-hour days a year. I put in a cattle guard."

Another aspect of the economics of cattle guards is reflected in their manufacture. More than a dozen agricultural manufacturing firms make thousands of cattle guards annually, in addition to the hundreds of welders and blacksmiths throughout the country who make thousands more each year. The labor and materials involved in cattle-guard manufacturing, along with the transportation and labor involved in installing them, represent a sizable sum.

Still another economic factor concerning cattle guards deals with their role in preventing accidents. Gates are sometimes left open so that livestock get onto busy roads, resulting in accidents that cause damage to motorists, vehicles, and animals alike. Cattle guards help to prevent this type of accident and the concomitant legal actions. These legal actions were especially troublesome to railroad companies during the nineteenth century; in the twentieth century the petroleum companies have incurred some of that same trouble. The prevention of lawsuits, however, is only one part of the diversified role that cattle guards play in the production of oil.

Wages in the oil fields have always been good, so the time spent in opening and closing gates on leases translates into higher operating expenses very quickly. In fact, while no particular oil explorer or producer appears actually to have invented the cattle guard, the industry was very quick to adopt it. As early as 1912 the oil fields between Independence, Kansas, and Copan, Oklahoma, were using cattle guards. Oil producers, too, helped to spread the use of cattle guards; many rural areas got their first cattle guards in the 1920s, or even in the 1930s and 1940s, only when oil exploration and production came into the region. One advantage of the early cattle guards used by the petroleum industry was that they were usually made of used pipe or tubing rather than of wood. Thus, they were much stronger (and usually more effective) than were the wooden poles or boards used in many early cattle guards on ranches. Today many lease agreements specify the responsibility of the oil company to place cattle guards in the gateways of property containing producing oil wells, which probably explains why occasionally an unfenced wheat field will have cattle guards on the oil-well service roads running into it.

Perhaps the economic importance of cattle guards to the petroleum industry can be epitomized most effectively by taking a close look at the Bur-
bank Oil Field near Shidler, Oklahoma. In the summer of 1978 I visited Burbank and was given a tour by Floyd D. Culver, a long-time employee of Phillips Petroleum. Culver had first drawn my attention to Burbank in a letter in which he claimed that it probably contained the heaviest concentration of cattle guards in the world.

Scholars are skeptical by nature, but I came away from Shidler convinced that indeed the thirty-six-section North Burbank Unit may well have had more cattle guards per square mile than any other area of the same size. Culver had estimated that the North Unit contained at least 400 guards. I counted twelve cattle guards per square mile on the sections we drove around and through, and if that number represents an accurate average, then there would be about 438 cattle guards in the North Unit alone, which constitutes just over half of the total field. W. F. Root, manager of Special Projects Engineering for Phillips, told me that at 1980 prices, the replacement cost for each cattle guard now in use would be $3,500, including labor—a total of over $1.5 million for the North Unit alone. A former vice-president of Phillips, now retired, L. E. Fitzjarrald of Bartlesville, estimated that each opening and closing of a gate would take five to ten minutes, and wasted gasoline would be extra. Given the fact that many employees must pass in and out of dozens of gates a day, the cattle guard means a savings of hundreds of thousands of dollars in operating costs to Phillips in all its operations. In addition, the aforementioned possibility of legal actions for damages is lessened by cattle guards; if a Phillips employee should fail to shut a gate and thus let cattle get onto the road, both motorists and livestock owners might sue the company.

How does the above example compare to usage on other oil leases? Some other leases, such as Amoco’s Salt Creek Field at Midwest, Wyoming, are as saturated with cattle guards as is Burbank, while some leases have no cattle guards whatsoever. Fitzjarrald, however, estimates conservatively that at least 75 percent of the producing leases in this country have cattle guards. The American Petroleum Institute was not able to report the total number of oil leases in the United States; however, Phillips alone operates more than four hundred domestic leases, including those in Alaska.

Thus, the economic impact of the cattle guard has two edges. In terms of capital outlay and installation expense, cattle guards have cost (and continue to cost) the petroleum industry, highway departments, and private owners millions of dollars. In terms of savings in labor and operational expenses, savings in livestock protected from damage and destruction, and savings in the prevention of lawsuits, however, cattle guards are an indispensable investment—a dividend rather than a liability.