

# THE LASATER RANCH: APPLIED RANGE ECOLOGY

*Keep in mind that the ranchers who use rangelands are the people who must ultimately apply ecological knowledge. Ecologists seldom operate ranches themselves.—E. J. Dyksterhuis.*

TOM LASATER of Matheson, Colorado, is a case in point. He would probably be the first to deny possessing a great fund of specific ecological knowledge, but he readily admits that he "works with nature." In fact, Lasater, speaking in what someone paradoxically described as a rapid Texas drawl, says, "I think nature is smart as hell. I help as much as I can, but I try to let her do most of the work."

Lasater, 59, is a unique person, or, to use the vernacular of the day, he marches to the beat of a different drum. Another has said he has the reputation of being a pleasant nut. Be that as it may, he has gained a certain recognition for his theory and practice of cattle breeding, which led to the development of the Beefmaster—recognized as a separate beef breed by the U.S. Department of Agriculture in 1954. Much has been written about the Beefmaster and about Lasater's method of raising and selling cattle. Less well known is his approach to managing rangeland. He calls it a "nature program," but regardless of the title the basic objective (the same objective he maintains in his cattle program) is to develop the most efficient and economical production per unit of labor and other inputs.

It was back in 1931 that Lasater got his start as both rangeman and cattleman. Following his father's death, Tom resigned from Princeton University to help manage the family operations near Falfurrias, Texas. When land values started their rapid upswing in the immediate post-World War II boom, Lasater decided to move from south Texas, and on a two-day trip to Colorado he located and purchased his present operation in Elbert County, 65 airline miles southeast of Denver. The deteriorated, dry, windy high

plains country apparently offered just what he was looking for: a challenge to both man and beast. It was something to build on!

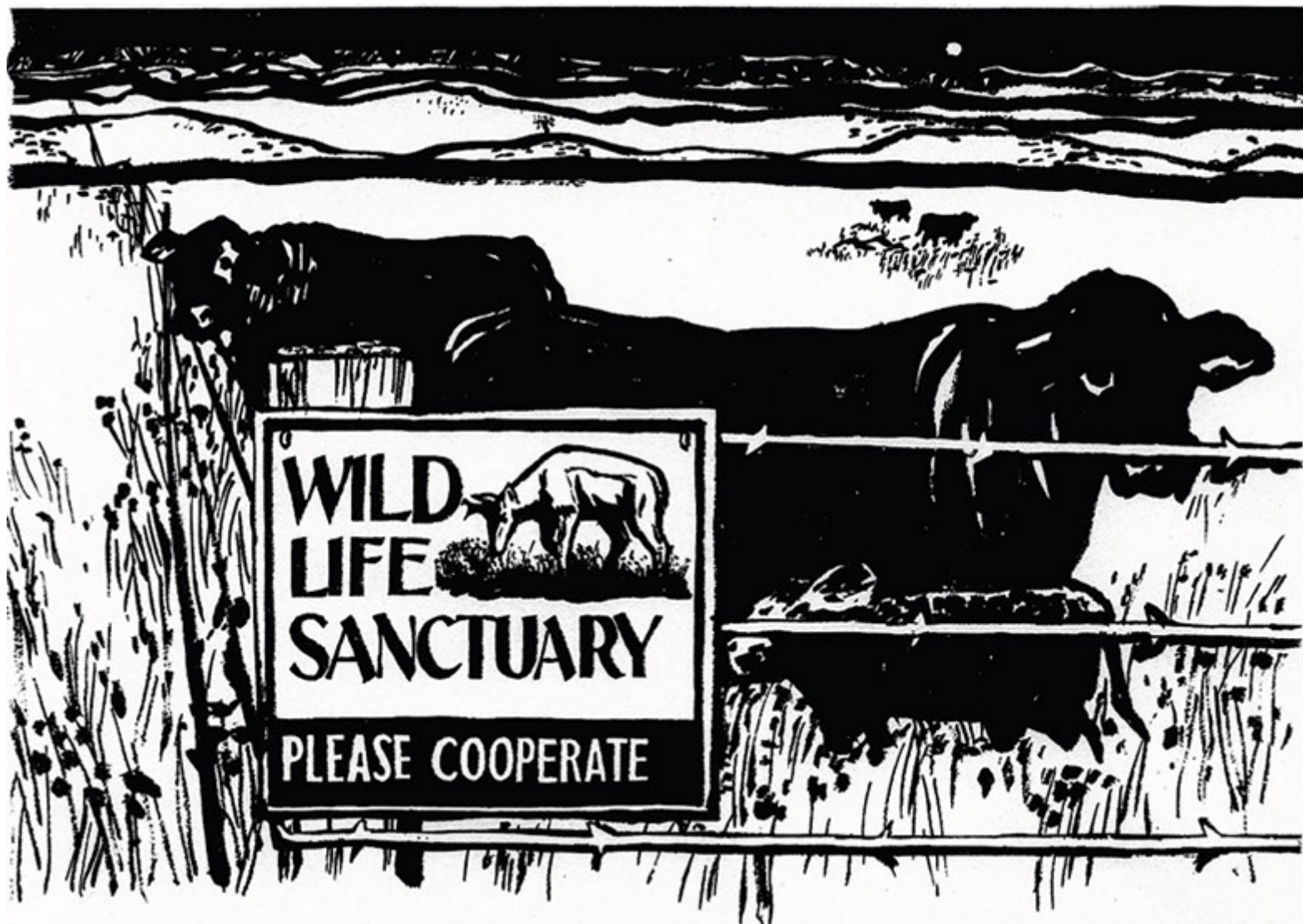
Lasater's approach to managing his rangeland, at once both philosophical and pragmatic, follows closely the observation made by James K. Lewis ("Range Management Viewed in the Ecosystem Framework," in *The Ecosystem Concept in Natural Resource Management*, Academic Press, 1969): "A high degree of human control over range ecosystems is usually either not possible or not economical. If a high degree of human control is economical, the land is usually cultivated and ceases to be range. Consequently, range must be manipulated by extensive methods which are ecological in nature rather than by intensive methods that are agronomic in nature."

The approximately 25,000 acres that comprise the Lasater Ranch consist of sandy bottom, sandy plains upland, and clay upland range sites. Some of it had been cultivated in former years but hard experience eventually showed that such human control was sometimes not physically feasible. But Lasater's self-styled "nature program"—a common-sense application of ecological principles—has proved most feasible in all respects and has carried him a long way toward his goal of economical production per unit of input.

*Too much emphasis has been placed on gain per acre rather than net income per acre and the change in value of the range resources.—James K. Lewis.*

As long ago as 1920, the pioneer plant ecologist F. E. Clements published what he considered the essential factors of any range improvement program. From time to time other workers have reviewed and commented on Clements' seven basic practices, generally with the conclusion that they seem equally appropriate today. Let us see how Tom

francis t. colbert



DRAWING BY TOM DEVLIN

Lasater's 1970 range management compares with those tenets proposed 50 years earlier:

**1. Proper stocking**—*determined by actual trial accompanied by measurement of the result.* This has undoubtedly contributed most to the success of the Lasater operation. An initial determination of stocking rate in a new country is always something of a guess; but Tom knew what a cow required, he looked at the range, and he started with a rate he felt certain would give natural succession a good chance.

After 22 years' experience, Lasater's stocking rate is still what many people would consider light: an average of 45 acres per animal unit. And when Tom speaks of an animal unit he means exactly that; he is not referring loosely to an "ol' mother cow out in the pasture." Lasater maintains a very accurate inventory by both number of head (by age and sex) and animal units, with values for the latter ranging from 0.50 for yearling heifers to 1.25 for mature bulls. The monthly inventory sheet then indicates animal units for each pasture to two decimal places.

And what of the results? Don E. Smith, Soil Conservation Service district conservationist, points to an area where in 1952 he had difficulty clipping the equivalent of 200

pounds of forage per acre. Today the blue grama alone will yield 400 to 500 pounds, to say nothing of the heavy and vigorous population of western wheatgrass (which was totally absent in 1952), sideoats grama, plains muhly, switchgrass, little bluestem, and a wide variety of perennial forbs.

**2. Rotation or deferred grazing**—*including all methods of alternate grazing and rest, whether both occurred in one year or more.* On this point Lasater does not follow what some would consider an adequate plan. He gives as a reason his inherent suspicion of systems he feels may impose an arbitrary rigidity on his operation. But, by the same token, he does not arbitrarily stock every pasture with one animal unit on every 45 acres; rather range utilization is closely watched and, if one area appears to fall behind in maintaining a vigorous plant cover complex, the grazing load is lightened. Insofar as is possible, utilization is kept fairly even, with the real progress being judged by what is on the ground.

**3. Control of rodents, poisonous plants, weeds, etc.**—*here the importance of natural succession is stressed, along with direct measures by man.* And here is an area where Lasater's "working with nature" has paid dividends.

With one early exception he has maintained a no-shooting, no-poisoning, no-trapping policy regarding all wildlife species, which has resulted in seemingly balanced populations that present no problems to maintenance of the range. Initially Tom did mount a successful eradication program against a prairie dog town, but he wishes now he had not, because he wants to know what would have happened.

As a consequence of his no-shooting program, there followed a fairly rapid build-up of coyotes and other predators and a corollary decline in an initial overabundance of jack-rabbits and cottontails. It was an effective and economical means of control.

Poisonous plants and weeds are controlled entirely by the succession process. This does not mean that all such plants have been entirely eradicated. Locoweed and Lambert's crazyweed are in evidence, but with the excellent "cafeteria" of forage plants available there is no indication that these species are grazed at all. Lasater reports that he has lost only one heifer to locoweed poisoning—back in 1949.

**4. Manipulation of the range**—including use of fire, irrigation, fertilization, cultivation, cutting, sowing, and planting. Some parts of the Lasater Ranch that had been cultivated or allowed to deteriorate badly under previous owners have been seeded. An adjoining abandoned farm Lasater recently acquired was planted last year to blue grama, intermediate and crested wheatgrass, and alfalfa. But no effort is made to maintain such introduced species; rather, the primary purpose is to establish ground cover, after which natural succession is allowed to run its course.

He has also built flood control levees and water spreaders, but after this initial practice he lets nature finish the job of filling in the potholes and healing the head cuts. No doubt with some justification, Lasater believes that many range manipulation practices are often used as a substitute cure for overstocking.

**5. Development of feed and forage for droughts and winter**—to permit better utilization of the range and against the chance that weather may be abnormal. Tom Lasater does not think he is in the best farming country in the world, so he has not put time or money into developing supplemental feed supplies. He is aware that abnormal conditions may necessitate feeding hay, but so far he has not had to. Hence, he reasons, he really cannot afford to put up hay every year, but probably could afford to buy hay in an emergency.

Tom does supplement all his cattle from November through March, using a range cube formulated to his own specifications. ("I always use several grains from different areas," Lasater says. "By doing this I minimize the risk of getting a poor grain from poor soil in a poor year, which would result in a pretty low-value supplement.")

During the 5-month feeding period the cattle receive an average of 2 pounds of cubes per head per day, regardless of age or sex. But Lasater emphasizes that this is an average, and notes that the amount is varied from pasture to pasture depending on the condition of the cattle and the range. The supplement is fed on the ground every third day, minimizing labor and trucking expense.

**6. Development of water**—to permit more even utilization of the range. This is a principle that Lasater has practiced with a passion. Previously, the only permanent

source of water was Big Sandy Creek, which flows through the ranch for 9 miles. But during the past 22 years 37 permanent waters—windmill wells and springs—have been developed, plus quite a few ponds that provide additional stock water seasonally. "In no instance," Tom states, "does an animal have to go more than a half mile to water, and usually no more than a third of a mile."

**7. Herd management**—including all features which relate to the handling of livestock such as fencing . . . that can contribute to the improvement or prevent deterioration of the range. There are approximately 100 miles of fence on the Lasater Ranch, enclosing 22 pastures and traps ranging in size from 30 acres to 5,860 acres.

Surprisingly, perhaps, this is less fencing and fewer pastures than when Tom took over the property. He explains it this way: "I've put my conservation money in light stocking, water development, and larger pastures. Again, I'm working with nature by letting the cattle pick and choose where they want to go and what they want to eat. In this way the livestock becomes an integral part of the ecosystem, replacing, at least to some extent, the original buffalo."

As pointed out previously, Lasater's approach to herd management (and grazing systems as well) is not what might be advocated by some knowledgeable people. On the other hand, neither is it an operation by default; he is following a definite plan, which is to restore as nearly as possible a natural complex that is beneficial to both the land and the man who derives his living from it—a management equilibrium.

*Range research has not been able to adequately study range ecosystems because of their complexity. The range has been approached from the standpoint of vegetation, or livestock, or soil, and almost never from the standpoint of the entire ecosystem.*—James K. Lewis.

Tom Lasater is always looking for more information, and he actively solicits opinions from others regarding what he has done and the way he has done it. He is acutely aware of the lack of complete knowledge regarding rangeland and the possible consequences of management programs. Since before leaving Texas he has worked with the Soil Conservation Service, and he has been a continuous active cooperator of the Big Sandy Soil Conservation District since he moved to Colorado. Tom is also a member of the American Society of Range Management and in June 1968 hosted the Colorado Section field tour.

A popular magazine feature writer, attempting to convey the essence of the Lasater cattle breeding and selection program, once said, "Lasater requires them [the Beefmasters] to survive incredible range conditions." What Tom really requires is that his cattle live and do well in a natural environment—along with deer, antelope, rabbits, coyotes, mice, gophers, hawks, porcupines, and other fauna all supported by a complex vegetative cover on a stable soil. In its own way it is somewhat incredible. ■

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