Managing Sheep Range During Drought in the TransPecos Region of Texas

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The last seven years have been a wonderful opportunity to find out if forage can be produced economically in a desert area. With rainfall so far below normal, it has been necessary to greatly reduce the stocking rate, attempt many methods of management, and try several schemes to aid the vegetation to recover. Although the drought has been bad from many aspects, it does have some good points. We have learned a great many things that will be of great value when the weather does change for the better.

History of the Ranch

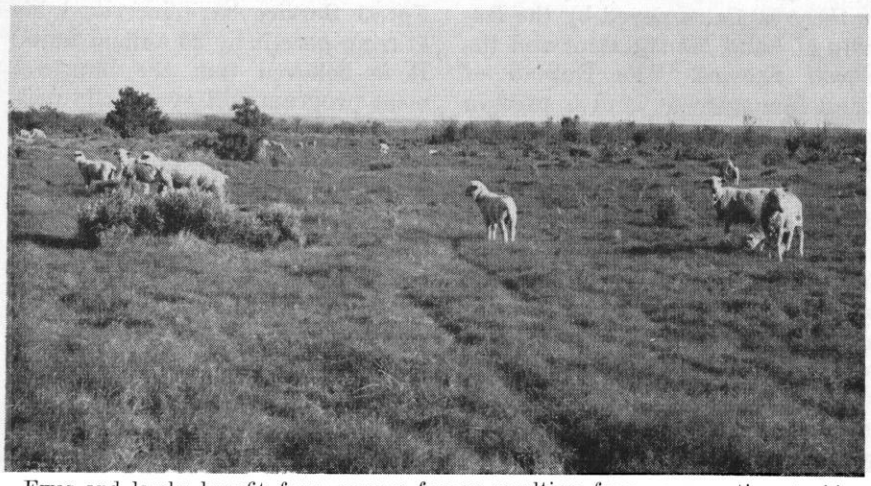
There is an old surface tank in the west side of the ranch that was built a short time before 1880, about the time the area was settled for ranching. It was open range at that time and the tank was used as a meeting place for round-ups.

Reports say that as many as 6,000 cattle were held around the water hole at times, and for as long as three months. Thus the pressure on the grass was terrific. Even though the area was put under fence in the early 1920's, the old cutting ground and herd grounds are plainly visible today. Part of the cutting ground is as hard and bare as a clay tennis court. The remainder is thickly covered with scrub mesquite and blackbrush. The herd grounds are mostly covered with blackbrush, creosotebush, and yucca.

This ranch was purchased by my father, Clayton Puckett, in 1934. It had been entirely deferred for two years since it had been for sale due to a repossession. My father began winter stocking it with lambs, and resting each summer. For the next 6 or 7 years, the ranch carried from 9,000 to 11,000 lambs every winter without any supplemental feeding. During this period, there was an increase in perennial grasses and also an increase in brush such as redberry juniper, mesquite and blackbrush.

In 1941, the ranch was stocked with 4,000 ewes and 150 cows. Only the cows were fed during the winter. The sheep rarely produced an 85 to 90 percent lamb crop. In 1945 someone convinced my father to reduce his stocking rate. The first year after cutting down in numbers about 20 percent, he actually increase production. He has been very conservative minded since.

Jerry Puckett, a graduate of Texas A. and M. College in range management, took over the management of a sheep and cattle operation in the TransPecos region of Texas from his father, Clayton Puckett. Following the lead of his father in conservative stocking and through deferred-rotation grazing and brush control, he has successfully maintained a "going concern" in spite of severe droughts.



Ewes and lambs benefit from reserve forage resulting from conservative stocking and reductions in livestock numbers during drought.

Ranching During Drought

In September 1949, my father turned the management of the ranch over to me. I inadvertently fell heir to one long dry spell. Here are the yearly rainfall records:

1949—28.84 ins.	1955—11.35 ins.
1950— 9.10 ins.	1956— 1.40 ins.
1951— 5.45 ins.	(up to July 15)
1952— 6.70 ins.	
1953— 7.70 ins.	
1954—13.90 ins.	

The 80-year average in the area is 14.7 inches. But the above figures show that the average for the last 7½ years has been just less than 10 inches, and for the last 6½ years about 7 inches. That is why I have said that it has given us an excellent opportunity (if you want to call it that) to find out if it is possible to ranch under desert conditions.

Other interesting points about the rainfall for the period show that only in 15 of the last 79 months has more than one inch of rain fallen. For one period of 11 months, June 1952 through August 1953, we had not a single month with more than one inch of rain. But that is exceeded by our present period as we have had no month with more than one inch since June 1955, a period now much too long with 14 months.

In 1950, following the good year of 1949, we bred 2,000 ewes and lambed 113 percent over the ranch without having to feed a bit. The 51 cows were fed cottonseed cake for three months and calved about 90 percent. That was about the time the rains slowed down. As a comparison, after 6 years of low rainfall, 1,000 ewes in 1956 lambed 101 percent after being fed grain cubes for 90 days at a cost of $2.95 per head. They sheared an average of 8.6 pounds of wool, compared to a 9.8-pound ten-year average. No cattle remain on the ranch today since they were sold in 1953 because of lack of forage.

With all the reduction of livestock, the ranch has failed to show a profit in only one year, 1952. While it hasn't made much money during the drought, it hasn't lost any. The ground cover and percent of desirable grasses in the composition has definitely increased. Grass on the ground is almost the same as money in the bank.

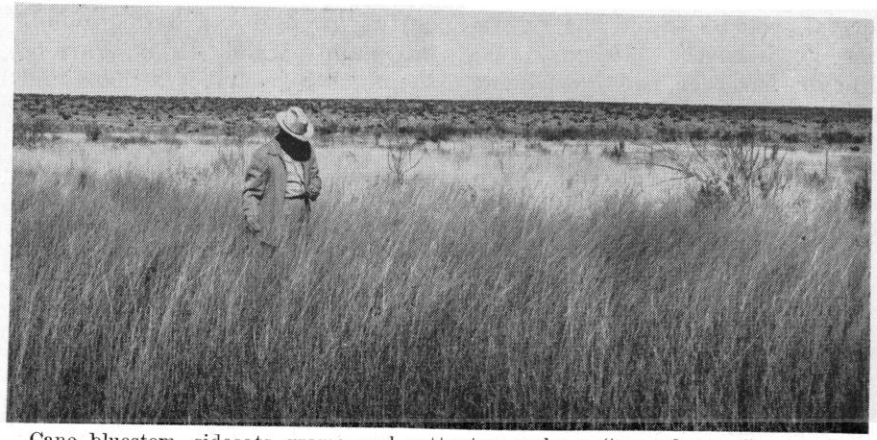
At the current prices in the Pecos area, and the average stocking rate (it is high) $390 worth of land is required to run one $12 ewe. On a lease basis it will cost $8.50 per year to lease the land to run the same ewe. These figures are obtained by evaluating land at $30 per acre, or leases at 65c per acre, and using a stocking rate of 1 animal unit per 64 acres, and few acres will carry that now! This emphasizes the necessity of having grass on which to ranch.

Management Practices

The practices that we have used to get satisfactory yield of livestock products, and yet build up our grass, in spite of drouth, have been deferred-rotation grazing, brush control, supplementary feeding, fencing and adjustments in class of livestock.

Deferred-Rotation Grazing

There is no tool available to the ranch manager that gets the same results as deferring and rotation grazing in pastures. The methods or systems we are using are the result of several years of trial and error and experiment, and keeping records of the production of lambs and wool. The present procedure is to stock a pasture moderately heavy (80 to 100 sheep per section) for about 60 days, or less depending on the amount of moisture received and forage produced in the pasture. Then the ewes with lambs are moved to a deferred pasture and the dry ewes (yearlings) are put on the best pasture just va-



Cane bluestem, sideoats grama and cottontop make a "sea of grass" on a deep upland site. This brush-cleared pasture has been conservatively stocked.

cated. In the event of a good rain, the 60-day period may be extended in order for the deferred pasture to set seed. Should a spotty shower hit on the stocked pastures, making them better grazing than the deferred ones, the sheep would be merely rotated around in the already stocked pastures. This helps some because of the habit of sheep to roam in a particular part of a pasture. With a little observation it can be soon determined just what area of which pasture any particular flock will graze. When the sheep quit roaming together and begin scattering, it is past time to vacate the pasture as the flock is short of feed and having to search for it.

If no rain has fallen in a part of the ranch meanwhile, or in a deferred pasture, the stocking rate will be reduced and an extra pasture will then be deferred. During an exceptionally dry season, we will stock the pasture at the same rate but have fewer pastures stocked. This has the dual advantage of keeping a maximum area vacated and cutting operational costs, but actually operating less range. It costs just as much to round up a 6-section pasture with 50 sheep in it, as it does with 600 sheep in it. The cost of maintaining a windmill is the same regardless of the number of stock drinking at it.

Brush Control

Since 1949, about 4,100 acres of juniper have been bulldozed on the ranch. The results have been fair, but short of expectations. Apparently the soil left in the holes where the roots are pulled out is sterile for a short time. By letting the brush lay where it falls, it offers good protection for grasses and a nice seed source after the first year.

The procedure for dozing juniper is to start in the best corner of the pasture with the best upland cover, as the junipers generally grow thickest on the hills. This pasture will be deferred the summer before the dozing and the summer after, giving the grasses two years to recover. The cost of this operation runs from $1.50 to $5 per acre depending on the density of the juniper and the amount of rocks in the ground.

Slightly over 1,200 acres of mesquite have been sprayed with 2,4-D and 2,4,5-T hormone sprays. There was a near 100 percent topkill and the grass made remarkable recovery the first year, but now, after 3 to 5 years, there is only a 10-15 percent kill. The results have not been satisfactory, but something must be done because the mesquite grows on the most productive soils and they seem to be getting thicker every year.

Six hundred acres have been pitted and brush rolled. Our pitter is built on a brush roller. The pitting is showing excellent results on some of the old cattle holding grounds, but only fair results on many other areas. It is worth the cost, though, approximately $1 per acre. The brush roller scatters pricklypear and tasajillo, and causes the mesquite to sucker. However, the cut brush washing against standing brush in the draws has a wonderful slowing-down and spreading effect on the water.

Supplemental Feeding

This should not be confused with subsistence feeding. There is no future for the operator, his banker, nor his range when he has to feed his stock every bite of feed that they get. If he is a rancher and out of grass, he is out of business.

Ten years ago, a rancher in this area would never consider feeding his sheep during lambing because of the disturbance. The drought has taught us that the right kind of feed, administered correctly, will increase lamb crops, increase wool weights, and reduce sickness in our livestock. Also, we can more easily watch the stock and control their grazing. By deferring and feeding heavily for the first few days that grass starts growing in the spring, the condition of the entire pasture will be improved all during the summer.

Fencing

This is very important in the management of a ranch, and particularly during a period of scattered showers. For some reason sheep will badly abuse uplands immediately after a rain, and will not graze in the more lush bottomland unless forced to do so. While it isn't economically feasible to separate each different grazing site with a fence, by separating the major sites and using a system of salting and water distribution with rotation grazing, the grazing can be evenly distributed and excessive use of parts of the ranch can be avoided. Smaller pastures can be managed easier than large ones, but most of the pastures should be as nearly as possible of uniform size so that rotation of stock can be accomplished with better efficiency.

Class of Livestock

Most ranchers in this area will argue as to the merits of different breeds of livestock, but many of them will not discuss or recognize the vegetation growing on their ranches. It is my firm belief and conviction that the breed or class of livestock owned by a rancher is just as important a consideration as the make or model of a harvesting machine owned by a farmer and not one bit more! Likewise, the care of the livestock can be compared to the care and lubrication given a harvester by the farmer.

The class of livestock is of minor importance, as long as the operator has sufficient percentage of dry animals that can be increased or sold quickly at any time. The operator who concentrates on growing grass and stocks his land only when there is sufficient forage to be harvested will be ahead of the operator who holds on to a group of breeding animals and feeds them constantly.

Almost any class of livestock will thrive if given plenty of feed. Feed is the important item and a ranch manager is poorly equipped to compete with a feed lot operator. Only by growing grass on his ranch can he expect to come out on the big end.