

Ranchers Use Salt-Feed Mix

Adding Salt to Cottonseed Meal Regulates Feed Intake

By E. B. Stanley

Common salt is now being used successfully by Arizona cattlemen to automatically limit the consumption of cottonseed meal or other supplement feeds when fed to range cattle. This mixture is one that can be provided openly in bulk quantity to range cattle, with the salt in such proportion as to limit consumption to not more than the prescribed daily allowance of the meal or other feed.

Providing supplemental feed regularly each day to needy cattle is a problem, because of the physical barriers of the range to daily feeding. So a self-feeding plan was needed that would restrict consumption to a desirable amount. Adding salt as a governor to control the feed intake was the ingenious solution accomplished through the persistent efforts of resourceful stockmen in coping with an unprecedented drought.

Early reports of stockmen feeding mixtures of salt and cottonseed composed of from twenty to fifty percent salt were generally considered incredible. The practice was believed to be contrary to the known principles of livestock feeding and received little if any sympathetic consideration.

Continued drought conditions throughout 1947 and 1948 were accompanied with a marked increase in the use of the salt-cottonseed meal mixture for range cattle. Cattlemen throughout the state were reporting satisfactory results with the mixture and in many instances gave it unqualified endorsement after several months of feeding.

Considerable speculation developed as to the amount of the different salt-meal mixes that cattle will eat under range conditions and the effect on the

animal of ingesting a large amount of salt over an extended period of time. Ranchers reported that a range cow will eat from 2 to 3 pounds of a 30:70 salt-cottonseed meal mix per day. This would amount to ingesting 0.6 to 1.0 pounds of salt.

A test was made by Dr. B. P. Cardon of our department of Animal Husbandry to determine the effect on a cow of heavy salt consumption, and specifically the influence of high salt intake on the digestion of protein and cellulose in alfalfa hay. Results indicate that the feeding of 0.16 lbs. of salt per 100 lbs. of body weight in the hay ration had no detrimental effect on the animal and in no way inhibited the digestion of protein or cellulose. In fact, during the two-month period of the experiment, the digestion of cellulose was significantly increased.

While the introduction of salt by this method is effective in holding the amount of concentrate to a fixed level, it has materially increased the amount of feed intake of our range cattle. This revolutionary improvement in feeding practices, by making highly concentrated and digestible feed available to livestock dispersed over extensive drought stricken ranges, has effected a great saving.

The unquestionable benefit from relatively small amounts of the salt and meal or other ingredients can be explained. Salt, although it is plentifully supplied on most ranches, is not always nor likely to be consumed freely from a salt block by all animals. Many presumably fail to ingest an optimum amount with a consequent deterrent to normal growth. Mixing with a palatable feed in a form

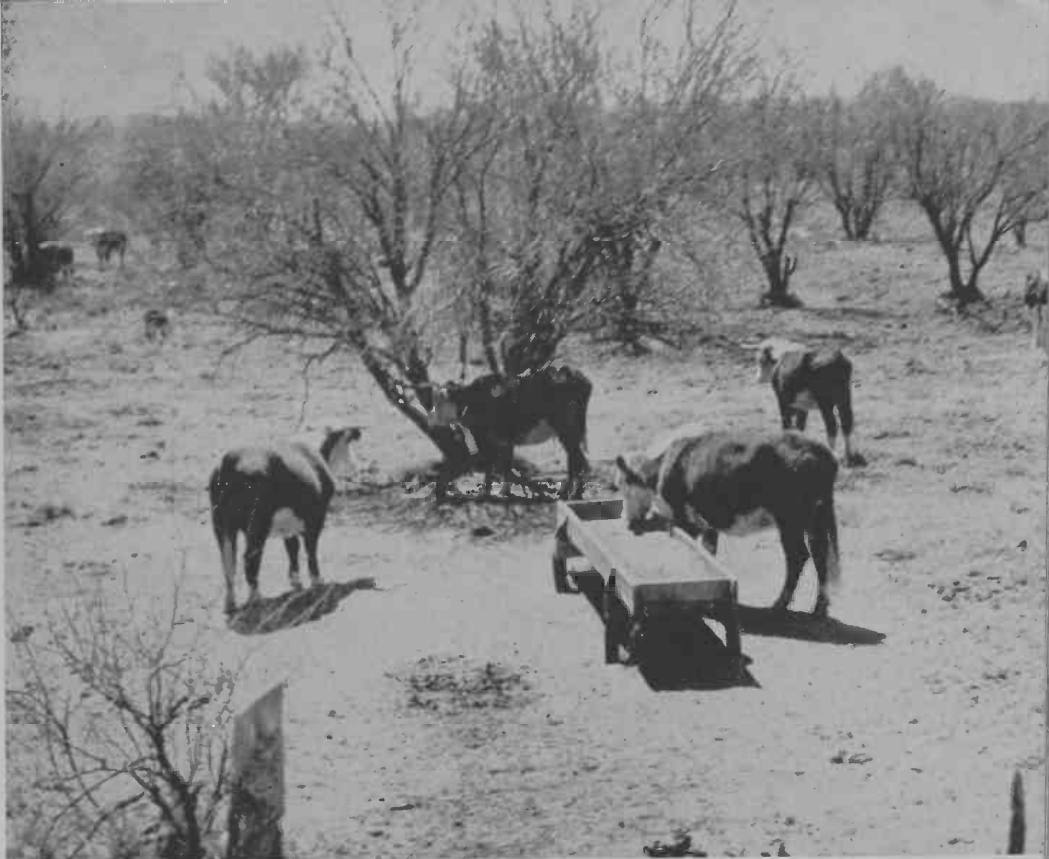
easily taken, insures an ample intake of a compound very essential to life.

Cottonseed meal is a "three in one" feed. It supplies, in addition to necessary protein, both phosphorous and readily available energy-producing nutrients. Deficiencies common among range cattle grazing on weathered mature forage include a shortage of protein, energy (digestible nutrients), phosphorous and vitamin A. Range forage with less than 6.5 percent to 8 percent total crude protein and 0.15 percent phosphorous is deficient in these important nutrients. Diminished feeding value occurs largely as a result of the great decrease in protein and phosphorous, accompanied by a marked reduction in the volume of palatable and nutritious forage.

Thus it is that cottonseed meal, because of its high protein and phosphorous content and strong energy value, has served to supplement dry, weathered grass or browse. Mixed in from two to four parts of meal to one of salt, depending upon the amount of meal needed by the stock, and made accessible for regular daily consumption, it is providing at the least sustaining nourishment.

There is no need to restrict the supplement to cottonseed meal alone. Apparently gratifying results are being obtained by mixing alfalfa meal, molasses and grain in with salt and cottonseed meal. Mixtures of these feeds compressed into pellets for range feeding are widely fed in the range country. Many are composed of approximately 30 percent salt.

—E. B. Stanley is head of the Department of Animal Husbandry.



ON THE EMPIRE RANCH NEAR SONOITA, CATTLE GET A MIX INCLUDING 30 PERCENT SALT.