

Grass—The West's Greatest Commodity

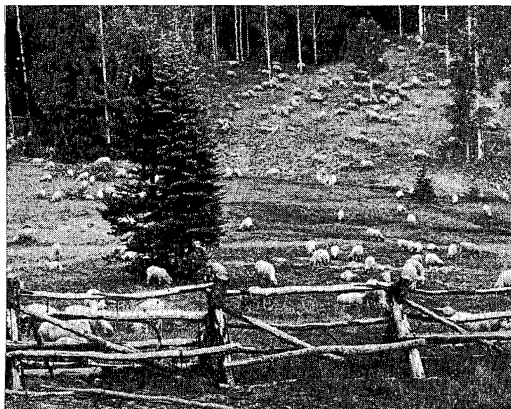
By W. M. JOHNSON, Rocky Mountain Forest and Range Experiment Station



TO THE STOCKMAN there is no sight more beautiful than a range producing an abundant growth of good forage on which good livestock is making him a living. The above scene illustrates the luxuriant forage which can and should be obtained on most of our mountain ranges. Forage species vary from place to place, but any range considered excellent is one producing the maximum amount of palatable forage, including both grasses and weeds and perhaps palatable shrubs. Range lands are our heritage and it is our responsibility to maintain them in the best of condition so that they will produce maximum weight gains on the maximum number of livestock. Proper management is the key to efficient use.



UNFORTUNATELY we have failed, in a great many instances, to maintain our ranges in the most desirable condition. Areas which at one time supported dense stands of palatable forage, as shown in the first picture, have, as a result of too heavy use, been invaded by unpalatable, obnoxious and poisonous weeds, as shown in this picture. In many areas orange sneezeweed has supplanted such desirable forage species as thurber-fescue and others. In Colorado alone, it is estimated, woolgrowers suffer an annual loss of \$150,000 and nearly 8,000 ewes die each year from sneezeweed poisoning. Proper management and constructive work prevent this type of range deterioration and the resultant losses to stockmen.



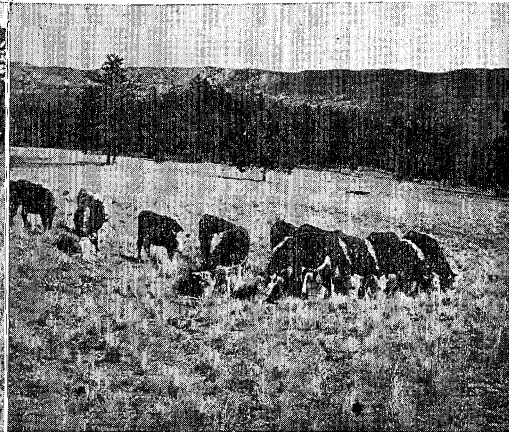
PROPER MANAGEMENT of sheep ranges includes open, quiet methods of herding that allow the sheep to spread out, graze leisurely and make proper use of palatable forage without excessive use of poisonous species. The use of bed grounds for only one night will eliminate many losses due to poisoning and prevent the development of bedground sore spots. Ranges should not be grazed too early in the spring; excessive damage from too close use of the inadequate forage and from trampling are most apt to occur at that time. Avoid repeated use of the same area. On properly managed areas the range resource can be maintained in thrifty condition and death losses materially reduced.



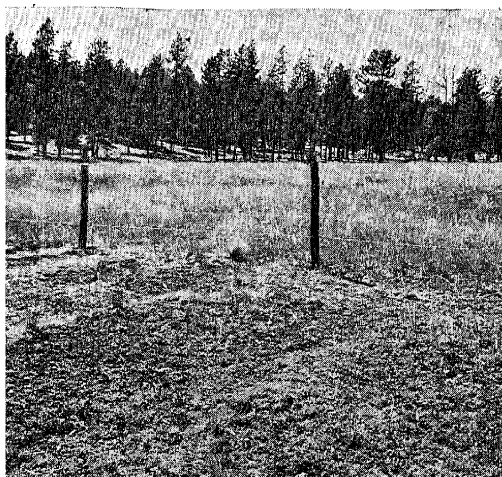
FORAGE DEPLETION began on some of our ranges in the days of the Texas trail herds. By the time the concept of range management was developed this depletion had, in some instances, progressed so that original conditions were unrecognizable. In 1936 the forage on the area above consisted of blue gramma, stunted mountain muhly, silver sage. It was only after several years of controlled use that it was realized that the present cover of Arizona fescue, mountain muhly and little bluestem represented the condition that should and could be obtained through proper management. This and other facts important to stockmen are the results of studies underway at the Manitou Experimental Forest in Colorado.



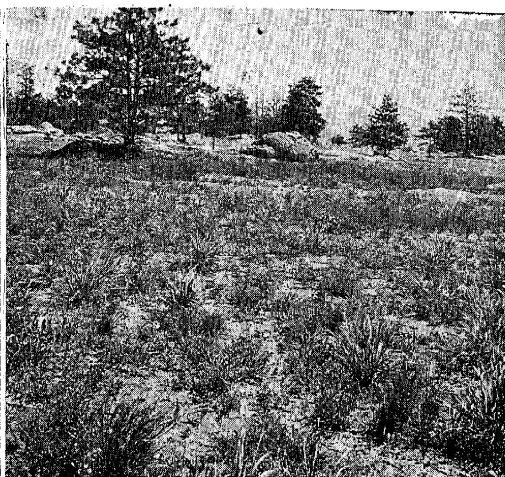
THE RANGE ABOVE has the same potentiality as that shown in the preceding picture, but it is hard to realize that this depleted range should and could contain the same highly productive and palatable forage species that are present in abundance on the good range. In spite of the apparently dense vegetation shown above, very little forage is produced. The desirable grasses are gone, and the cattle are forced to subsist on plants of lower quality. This depleted range can be brought back to good condition by proper management—a cooperative effort by stockmen and the administering U. S. Forest Service together. On this plot cattle gains are low, death losses are high, and weight losses resulting from early fall storms are excessive.



CATTLE ON THE RANGE above are in a much better position to make money for their owner. On heavily stocked pastures yearling Herefords gained only 181 pounds per head, June 1-Oct. 31. Similar cattle on moderately stocked pastures gained 239 pounds; on lightly stocked, 230 pounds. The pastures were stocked at the rate of 56 head per section for heavy, 43 head for moderate, and 24 head for light use. Experiments have demonstrated that under heavy rates of stocking ranges will deteriorate, under moderate stocking they will maintain their present condition, and under light stocking they will improve. Furthermore, both moderate and light stocking will, in normal years, return higher cash incomes than heavy stocking.



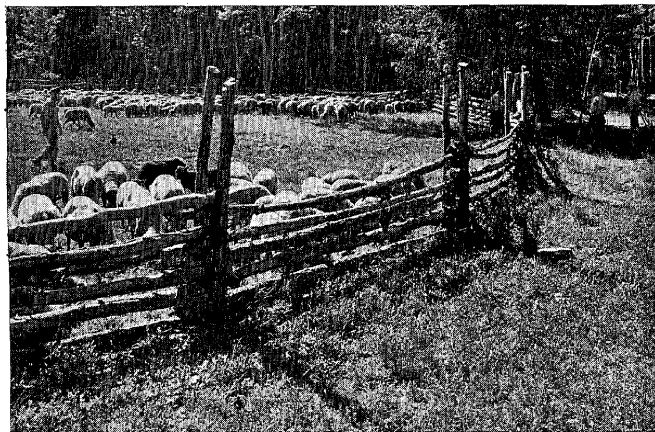
TOO MANY OF US have a tendency to blame our mistakes in management on the weather. "It doesn't rain any more" is a common phrase. It is true that the weather, especially rainfall, is a most important factor in determining the amount of forage produced on a range. However, in this picture, taken at the Manjitou Experimental Forest, the weeds and low value grass on one side of the fence and the good native bunchgrass on the other represent more than differences in rainfall. Since 1940 the range in the foreground has been too heavily stocked during the summer while the range in the background has been properly used during the same period. The difference in the amount of forage produced is readily apparent even in a photograph.



TOO MUCH AND TOO OFTEN is a good caption for this picture of a depleted sheep bedground. It represents a stage of range depletion which is not confined to sheep bedgrounds, but which may occur on any cattle or sheep range. All the native forage plants have been completely eliminated by too heavy use. On such areas recovery by management alone would be a long, slow process. There are no plants to furnish seed for natural revegetation. The soil, in many cases, has lost its fertility either by wind or water erosion or both. Gullies that drain off the soil moisture form readily and increase the hazard of floods and contribute to the silting of downstream reservoirs.



ARTIFICIAL RESEEDING to desirable forage species is a promising method for obtaining quick recovery of seriously depleted ranges. The 4-year-old stand of crested wheatgrass shown above is typical of which might be expected on areas where this species is adapted. In some areas there is an increasing custom of planting this species as a hay crop to take the place of cultivated oats. Crested wheatgrass is particularly desirable because it furnishes early spring forage at a time when it is most needed. Smooth brome is another species adapted to range reseeding in mountain areas.



• **THE PRODUCTION OF LIVESTOCK** is the leading industry of the Rocky Mountain region. The income from these animals amounts to millions of dollars every year. Any industry of this magnitude demands as much careful thought and attention to detail as is given to other important business operations. The Rocky Mountain region's range lands are the backbone of the livestock industry; without them it would fail.