



# Cattle Producer's Handbook

Range and Pasture Section

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## Range Improvements: Ways to Increase Forage Production

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Range improvements are made by managers to purposefully change the vegetation with the intent to improve and increase forage quantity and quality. Through the range management planning process, livestock producers will have identified their problems and the opportunities for correcting them.

The producer should make a thorough economic analysis of each problem situation and its alternative solutions. Many techniques are available to do this. One that all producers can use was developed by range management staff at Utah State University and published as Utah Agricultural Experiment Station Bulletin 466. It shows, step by step, how various improvement practices can be compared.

The projected total income and the total costs over the life of the range improvement plan need to be developed. From this, the rate of return for each practice can be determined. Correct assumptions are vital to the success of this approach. Producers need to understand clearly what production and management advantages and disadvantages accrue in order to justify using specific practices.

Since there is great variability in conditions, producers are advised to obtain technical assistance for making a study of the alternatives. Some Extension agents, specialists, and Natural Resource Conservation Service technicians are trained in this field. They may know of alternatives that cattle producers hadn't considered.

### Overall Consideration

Improving ranch productivity through range improvements has four main components: (1) selecting the most appropriate practices for each site and situation; (2) managing the resource after it has been improved; (3) maintaining productivity by retreatment, if necessary; and (4) integrating and managing the improved areas with the other resources of the ranch.

Producers should consider improving the areas with highest site potential first. Often these will be some of the lowest ecological condition sites, perhaps abandoned cropland, or areas near water. They may require seeding. At the same time, depending on the practices that might be used, producers should try to improve the higher ecological condition areas before tackling the poor and fair condition areas. Good range responds to treatment more rapidly than poor and should have a greater level of biological stability. Producers need to recognize, however, that the total amount of response may not be as great as that from the lower condition sites.

Improved grazing management is a range improvement practice. Range vegetation can improve or decline depending on the kind of grazing management it receives. Consequently, producers need to keep grazing in mind as an improvement practice as well as just a way to maintain forage production and use. In years of over abundant forage production, lack of use may encourage decreased forage utilization in the following years.

Many ranges have been improved initially through brush management or seeding, but productivity hasn't been maintained. The causes of range deterioration in the first place need to be well understood. If they aren't, range improvement may not be as long-lasting as expected. After range improvement has occurred, regardless of practice, producers need to be certain to apply a grazing strategy that will maintain the productivity engendered by the improvement. Producers must recognize that grazing animals can have positive or detrimental impacts on plants.

Finally, most improvements need follow-up. A rancher's thorough understanding of the kind of sites he or she has will give large clues as to the kinds and amount of follow-up that will be needed. Often the same practices can be repeated for follow-up: An example is fire on big sagebrush, where many seedlings emerge. This strategy