



# Cattle Producer's Handbook

Range and Pasture Section

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## Summary of Livestock Grazing Systems Used in the Western United States

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Specialized grazing systems were first conceptualized in the United States at the turn of the 20th century and became a major focus of range researchers and managers by the 1950s. In the intermountain West, deferred-rotation received considerable attention during the 1950s, followed by rest-rotation during the 1970s. More recently, rangeland managers have used short duration grazing to more intensively control when and where domestic animals graze rangelands.

When properly applied, grazing systems are powerful tools that can help rangeland and livestock managers achieve management objectives related to rangeland and livestock production (e.g., forage production, average daily gain), as well as those related to ecosystem structure (e.g., wildlife habitat) and function (erosion control, water quantity and quality). However, selection of the proper grazing system is contingent upon the unique setting in which it is applied (e.g., topography, soils, vegetation types, climate). The objectives of this article are to provide an overview of several grazing management systems or approaches that have been used on rangelands in the western U.S. and to summarize the conditions under which they may be applicable (Table 1).

### Continuous and Season-Long Grazing

Continuous or season-long grazing is technically not a grazing system *per se* because there is no attempt to leave a portion of the range ungrazed by livestock for at least part of the growing season. With continuous grazing, stocking rate must be light during the growing season because adequate forage must be left to carry animals through the dormant season.

Under light stocking, animals are allowed maximum dietary selectivity throughout the year. For example, cattle and sheep preferentially select forbs (e.g., broad-leaved plants) during certain times of the year, which

can greatly reduce grazing pressure on perennial grasses. Rotation systems that restrict livestock from part of the range during the growing season can waste much of the forb crop because some forb species complete their life cycle quickly and become unpalatable after maturation.

Another advantage of continuous or season-long grazing over rotation systems is that livestock are not moved from one pasture to another. Moving livestock too frequently can reduce animal production (weight gains, calf crops, etc.). Some have speculated that desirable plants, particularly grasses, will be grazed excessively under continuous or season-long grazing. However, research does not support this view when proper stocking is implemented.

Continuous or season-long grazing works best on flat, well-watered areas (e.g., watering points no more than 2 miles apart) where precipitation occurs as several light rains throughout the summer, and where most plants have some grazing value (e.g., the shortgrass prairie, northern mixed prairies of the Great Plains). Continuous or season-long grazing also has worked well in the California annual grasslands where annual plants need only to set seed each year to maintain themselves, in contrast to perennial grasses that store carbohydrates for use during dormancy, and for use during the initiation of growth when dormancy breaks.

### Deferred-Rotation

Deferred-rotation grazing was first developed in 1895 and later implemented in the early 20<sup>th</sup> century by Arthur Sampson (the "father of range management") in the Blue Mountains of Oregon. Sampson's system involved dividing the range into two pastures with each pasture receiving deferment until seed set every other year. Several modifications of deferred-rotation have evolved using more than two pastures, however, its key feature is that each pasture periodically receives