



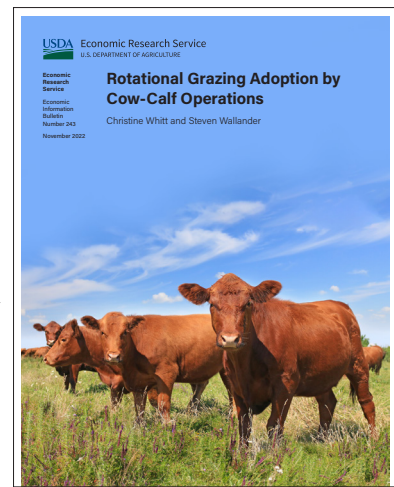
Rotational Grazing Adoption by Cow-Calf Operations

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What Is the Issue?

Rotational grazing (in which grazing animals are cycled through multiple fenced grazing areas or paddocks) is frequently discussed as a livestock management practice with the potential to provide a range of public benefits or private gains. Private gains include improved animal health, forage productivity, and more drought resilient grazing livestock systems. Public benefits include improved soil health and increased soil carbon sequestration. The prescribed grazing conservation practice incentivized by USDA's Environmental Quality Incentives Program (EQIP) commonly involves rotational grazing. However, little information has been available about the extent of rotational grazing adoption, the characteristics of operations using the practice, and variations in how the practice is implemented. This report examines detailed information on the use of rotational grazing by U.S. cow-calf operations, an important subset of all cattle operations.

Details on how operations implement the practice, particularly variations in rotational grazing management, can provide a basis for tracking changes in one key aspect of grazing lands management.



What Did the Study Find?

Cow-calf operations vary in overall adoption of rotational grazing and conservation program participation.

- While 40 percent of cow-calf operations report using rotational grazing, only 40 percent of rotational grazing operations use intensive rotational grazing.
- Retained stockers, operations that retain the majority of their calves through the initial feeder stage for later sale to feedlots, are the most likely to adopt intensive rotational grazing.
- Intensive rotational grazing operations have a significantly higher average stocking density (beef cattle per total operation grazing acres) than basic rotational grazing operations. Basic rotational grazing operations tend to have larger herds and more grazing land on average than either intensive rotational grazing operations or continuous grazing operations.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- Rotational grazing operations are more likely than continuous grazing operations to participate in Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).

Rotational grazing adoption, seasonal use, and stocking density vary by region. Rotational grazing is more common in Northern Plains/Western Corn Belt and Appalachian regions (about one-half of operations).

- The Appalachian region, with the smallest average grazing land acreage per operation, is the only area in which intensive rotational grazing is more common than basic rotational grazing.
- In the Delta States and Southeast region, a greater share of rotational grazing operations practice year-round rotational grazing.
- In each region, the stocking density (beef cattle per total operation grazing acres) for intensive rotational grazing operations is higher than that for basic rotational grazing operations. The Delta States and Southeast region had the most densely stocked grazing land.

Rotational grazing systems differ in complexity and intensity. Most basic rotational grazing systems are relatively simple, with five or fewer paddocks, an average paddock size of 40 acres or more and use permanent fencing.

- Intensive rotational grazing systems tend to have more paddocks and smaller average paddock size than basic rotational grazing systems.

Many factors influence the average hours a week spent moving cattle.

- About 46 percent of intensive rotational grazing operations only spend 1 hour a week (on average) moving their cattle, compared to about 36 percent of basic rotational grazing operations.
- Rotational grazing operations using four or more rotations per paddock per year are more likely to spend 3 or more hours a week moving cattle, compared with rotational grazing operations using fewer rotations.

How Was the Study Conducted?

This study is based on farm-level data from a 2018 survey of U.S. beef cow-calf producers included as part of USDA's annual Agricultural Resource Management Survey (ARMS), which is jointly administered every 10 years by USDA, Economic Research Service (ERS) and USDA, National Agricultural Statistics Service (NASS). The population for the survey consists of cattle operations, with cows, heifers, and calves in the 23 largest cattle-producing States. Since the survey targets cow-calf operations, the sample list frame used by USDA, NASS typically excludes animal feeding/finishing operations that do not breed cows/heifers. Farm-level data from the survey (with operations that have at least 20 cattle) are used to characterize rotational grazing adoption rates by operation type (calving, calving/retained stocker, and calving/finisher). The survey asked respondents who used rotational grazing in 2018 to report on key characteristics of their grazing systems.