

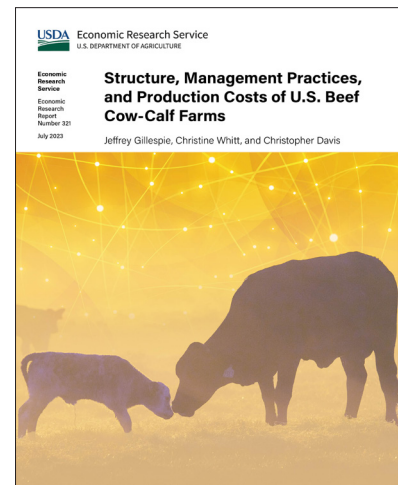


# Structure, Management Practices, and Production Costs of U.S. Beef Cow-Calf Farms

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## What Is the Issue?

The U.S. beef cow-calf industry comprises many relatively small operations and some large operations that specialize in producing calves for beef production. Some cow-calf operations sell calves at weaning while others keep them for further weight gain on pasture to be sold as stockers to feedlots at higher weights. Other operations raise animals through the finishing stage to slaughter weight. The U.S. cow-calf industry is present in every State. This report examines the enterprise costs, farm financial measures, and use of advanced technologies, management practices, and production systems across the diversity of size, location, and involvement in various cattle production stages in the cow-calf industry to provide insights into the structure and changes in the industry over the last two decades.



## What Did the Study Find?

Using data from the USDA, National Agricultural Statistics Service's (NASS) Census of Agriculture, the Economic Research Service found that from 1997 to 2017 there was a modest decline in the number of U.S. cow-calf operations and some shifts from smaller to larger scale operations. USDA, Agricultural Resource Management Survey (ARMS) data from 1996, 2008, and 2018 showed the following trends among U.S. cow-calf operations:

- Cow-calf production became more specialized from 1996 to 2018.
- Operations increased their use of advanced record-keeping systems during 2008–18, but their use of advanced breeding technologies, production systems, and specialized services such as forage quality testing or regular veterinary services changed little.

In 2018, structural characteristics of U.S. cow-calf operations varied by region:

- The Southeast and Southern Plains regions had higher numbers of cow-calf operations than other regions included in the study.
- Producers in the Northern Plains and West regions tended to operate larger scale operations, use fewer total labor hours per cow, and adopt technology and intensive management practices at greater rates.

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.

Cow-calf operations involved in either or both of the stocker and finishing segments generally had different structural characteristics than operations specializing only in the cow-calf segment.

- Cow-calf/stocker and cow-calf/finisher operations were more likely than cow-calf only operations to adopt advanced technologies, management practices, and production systems such as artificial insemination, forage quality testing, and utilization of one or more breeding seasons.
- Principal operators of cow-calf only farms worked more hours per cow in the enterprise than operators of cow-calf/finishing or cow-calf/stocker operations.
- Cow-calf only operations tended to be smaller than cow-calf/finishing or cow-calf/stocker operations, measured in terms of cow inventory and farm income.

Farm acreage and percentage of farm production value from cattle increased with larger beef cow inventories. Furthermore:

- Adoption rates of advanced technologies, management practices, and production systems were higher among farms with larger beef cow inventories.
- Total economic cost per cow declined with increased cow inventory.

Cow-calf operations differed by farm typology. Commercial farms (those earning at least \$350,000 in gross cash farm income per year and/or the majority of the farm business is not owned by an operator or individuals related to them) tended to be more diversified across other farm enterprises. Commercial farms were greater adopters of most advanced technologies, management practices, and production systems than rural residence farms (where the operator was retired, or the primary occupation was off-farm employment and gross cash farm income was less than \$350,000) or intermediate farms (where the operator's primary occupation was farming, and the gross cash farm income was less than \$350,000 per year).

## **How Was the Study Conducted?**

This report presents data from 1996, 2008, and 2018 surveys of U.S. beef cow-calf producers. The producers were surveyed as part of USDA's Agricultural Resource Management Survey, which is jointly administered by USDA, Economic Research Service (ERS) and USDA, NASS. For each survey year, each farm was assigned a weight that indicated the unique number of similar farms the farm represents. Therefore, estimates derived from the data were representative of the largest cow-calf producing States, comprising 90 percent of cow-calf production on operations with at least 20 cows. Since the survey targeted cow-calf operations, the sample list frame excluded animal feeding operations that do not breed cows and/or heifers. Surveyed producers were divided into groups by type of operation (i.e., cow-calf only, cow-calf/stocker, or cow-calf/feedlot), region, farm size, and farm typology, which is based on farm sales and the operator's primary occupation. Structural and economic differences among producers in each group were statistically evaluated. This report also uses data from USDA, NASS, including—but not limited to—Census of Agriculture data.