

1 Beef Industry Overview for Oklahoma

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Objectives

- Review demographic statistics for beef production in Oklahoma.
- Introduce financial performance statistics for cow-calf producers.
- Describe current management practices of Oklahoma beef producers.

By the United States Department of Agriculture (USDA) definition, a farm is an operation with the potential to sell \$1,000 of agricultural products so it includes many small non-commercial operations. The Census of Agriculture provides benchmarks for production agriculture (USDA/NASS) every five years. The 2012 Census lists 85,500 farms in Oklahoma, the 4th largest in the U.S., accounting for approximately 4 percent of the U.S. total. The National Agricultural Statistics Service (NASS) conducts additional annual surveys that supplement census information.

In 2012, Oklahoma ranked 23rd in total cash receipts from farm marketing, accounting for approximately

\$7 billion of the \$395 billion in sales nationally. In 2013, Oklahoma livestock and products sales were \$4.5 billion, and crop sales were \$0.9 billion, for a total of \$6.9 billion in farm marketing (NASS). The 2013 data shows 51,043 cattle operations in Oklahoma with 44,106 beef cow operations, the 3rd largest in the nation in both categories.

Needless to say, beef production is a big business in Oklahoma. Cattle and calves are consistently the first ranked commodity within the state based on value of production, accounting for more than one-third of the state's agricultural production in recent years. Numbers for cattle and calves include cow-calf enterprises on farms, stockers on pasture and cattle in feedlots. Based on value of production, Oklahoma has ranked 4th or 5th in the nation in beef production in most years since 1986. The state has also consistently ranked in the top five (2nd or 3rd) in the nation in the number of beef cows, recently dropping to 4th, following several years of drought. Figure 1.1 shows the value of production for all cattle and calves has been more than \$2.6 billion in recent years. In 2012, Oklahoma ranked 5th in the country in value of cattle and calves produced.

The record high number of cattle and calves was 6.5 million in 1975 with the record low of 82,000 head in 1867 when the data series was first initiated. Since 1975, the

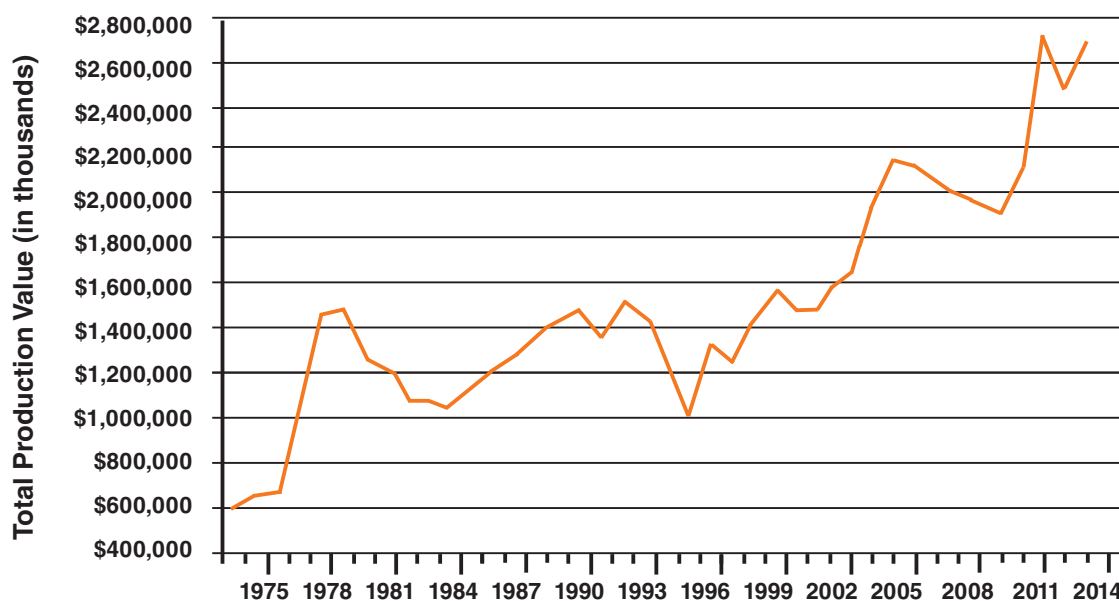


Figure 1.1. Value of production of all cattle and calves. Source: USDA, NASS.

All Web addresses given in this chapter are subject to change. The links to these websites will be updated regularly at the Master Cattleman website, http://agecon.okstate.edu/cattleman/manual_chapters.asp

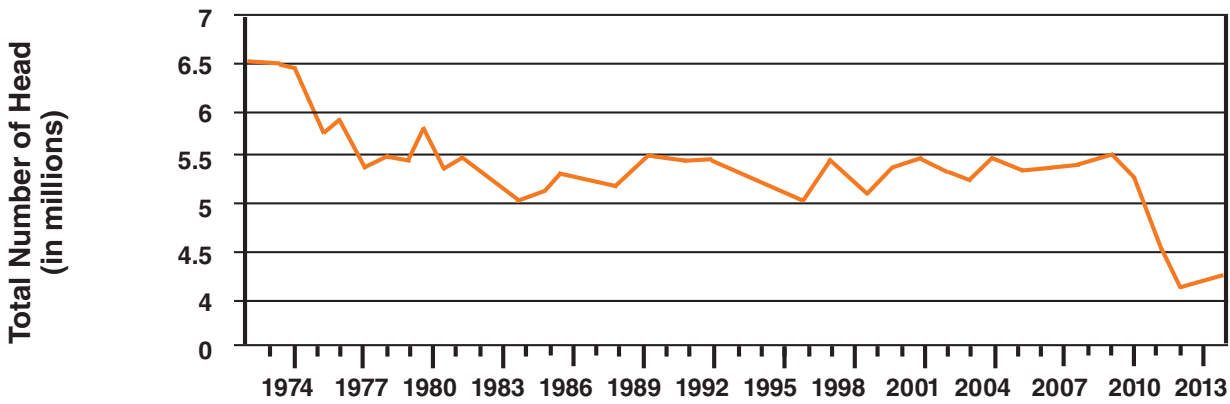


Figure 1.2. All cattle and calves on hand (January 1). Source: USDA, NASS.

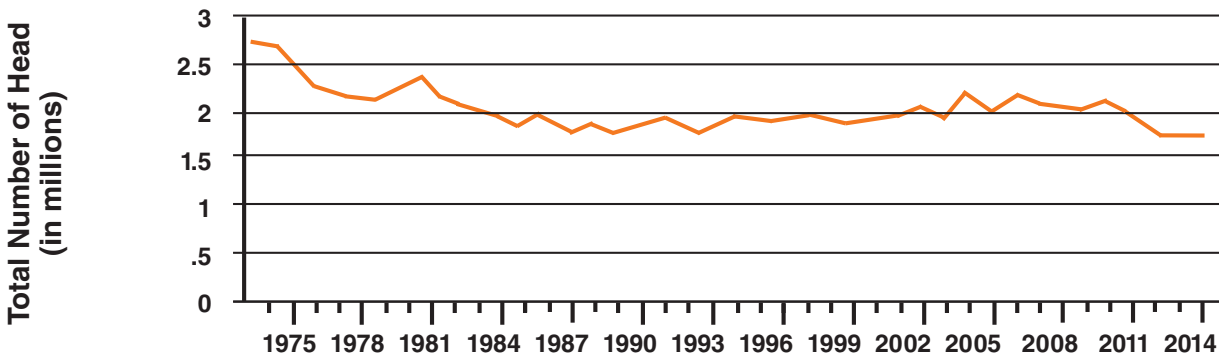


Figure 1.3. Total beef cows in Oklahoma. Source: USDA, NASS.

number of cattle and calves in Oklahoma has followed the industry trend downward (Figure 1.2).

The number of beef cows in Oklahoma follows a pattern similar to the number of cattle and calves (Figure 1.3). While numbers are down from the mid 1970s, the state averaged about 1.9 million beef cows on hand as of January 1 for the past decade, but with a drop to 1.75 million in 2013.

While beef production is big business, it also includes many small businesses, as there are many Oklahoma farms and ranches with fewer than 50 head of cattle (Table 1.1). Approximately 60 percent of the state's 85,500 farms have some cattle. Figures 1.4 and 1.5 show the number of operations with cattle by size of operation and percent of cattle inventory by size of operation, for 2012, respectively.

Statistics for farms with beef cows (as opposed to all cattle and calves) are shown in Figures 1.6 and 1.7. Most farms (69 percent) have fewer than 50 cows. Only 8 percent of farms have more than 100 cows. Cow numbers are more concentrated in the larger herds, with 73 percent of the cows in herds of more than 100 cows.

Figure 1.8 highlights the counties with the largest inventories of beef cows. Osage, Caddo, LeFlore, Grady

and Pittsburg counties had the most beef cows on January 1, 2012, followed by McCurtain, Craig, Bryan, Delaware and Mayes counties.

Financial Performance Statistics

In 2014, the Kansas Farm Management Association data listed total variable costs per cow at approximately \$819 annually, with total costs at \$1,175 per cow on average. Just as herd sizes vary widely, so do costs of production. Cost of production calculated by the Kansas Farm Management Associations data is sorted using profit categories. The difference between the high- and low-profit category producers is approximately \$252 per cow. Differences in major cost components are highlighted in Figure 1.10. Producers with above average net income spend significantly less in maintaining a cow and producing a calf crop than those with low average income (Figure 1.9). Producers with high profits tend to have larger herds and generate more gross income per cow.

Cost of production for small herds can be high on average. For example, as fixed costs for a vehicle and

Table 1.1. Cattle operations by size group.* (Source: USDA, NASS)

Year	1 - 49 Head		50 - 99 Head		100 - 499 Head		500 - 999 Head		1,000 + Head	
	# of cattle operations	% of cattle inventory	# of cattle operations	% of cattle inventory	# of cattle operations	% of cattle inventory	# of cattle operations	% of cattle inventory	# of cattle operations	% of cattle inventory
1994	39,000	16	11,000	14	10,800	41	800	10	400	19
1995	39,000	15	11,300	14	11,300	41	900	10	500	20
1996	39,000	15	11,800	14	11,900	40	850	10	450	21
1997	40,000	15	11,300	14	11,300	38	900	11	500	22
1998	38,000	14	11,200	14	11,300	37	1,000	12	500	23
1999	37,000	14	10,800	14	10,800	37	900	11	500	24
2000	37,000	14	10,800	14	10,700	37	1,000	12	500	23
2001	36,000	14	10,700	14	10,800	37	950	12	550	23
2002	37,000	14	10,600	13	10,900	38	950	12	550	23
2003	35,000	13	10,500	13	11,000	39	950	11	550	24
2004	32,000	12	10,500	13	11,800	40	1,100	12	600	23
2005	32,000	12	10,500	13	11,800	40	1,100	12	600	23
2006	32,000	12	10,000	12	11,200	39	1,200	13	600	24
2007	32,000	12	10,000	11	11,200	37	1,200	17	600	23
2012	35,200	15	7,100	12	7,400	35	1,000	16	300	22

* Beginning in 2008, data is no longer published on a yearly basis, but will be published every five years in conjunction with the Census of Agriculture.

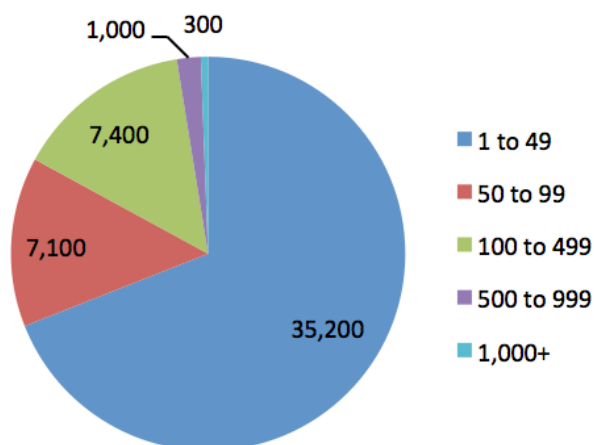


Figure 1.4. Number of Oklahoma farms and ranches with cattle by size of operation. Source: USDA, NASS.

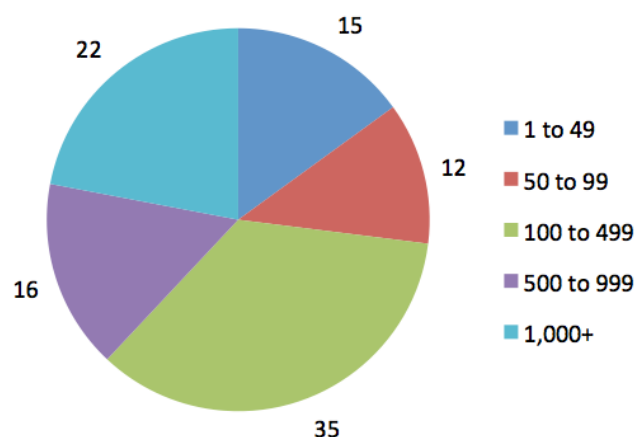


Figure 1.5. Percent of cattle inventory by size of operation. Source: USDA, NASS.

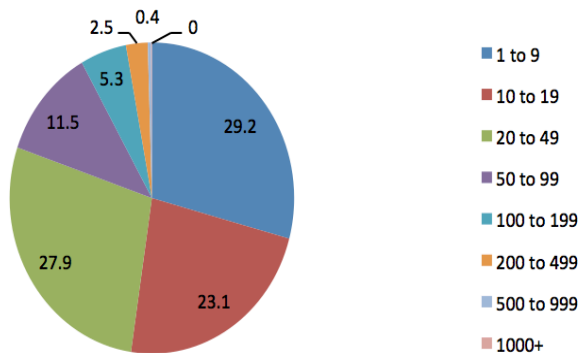


Figure 1.6. Percent of Oklahoma farms with beef cows by size of herd. Source: Census of Agriculture.

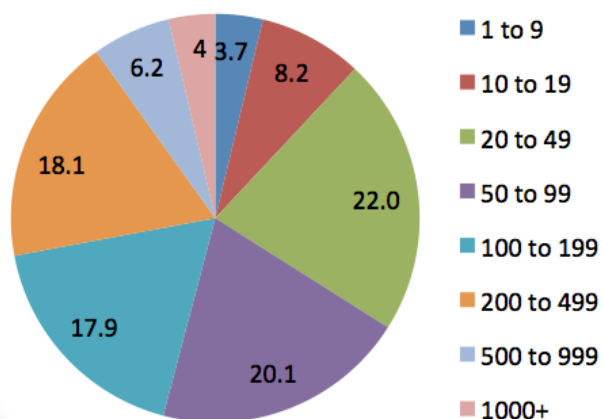


Figure 1.7. Beef cow inventory (percent) by size of herd. Source: Census of Agriculture

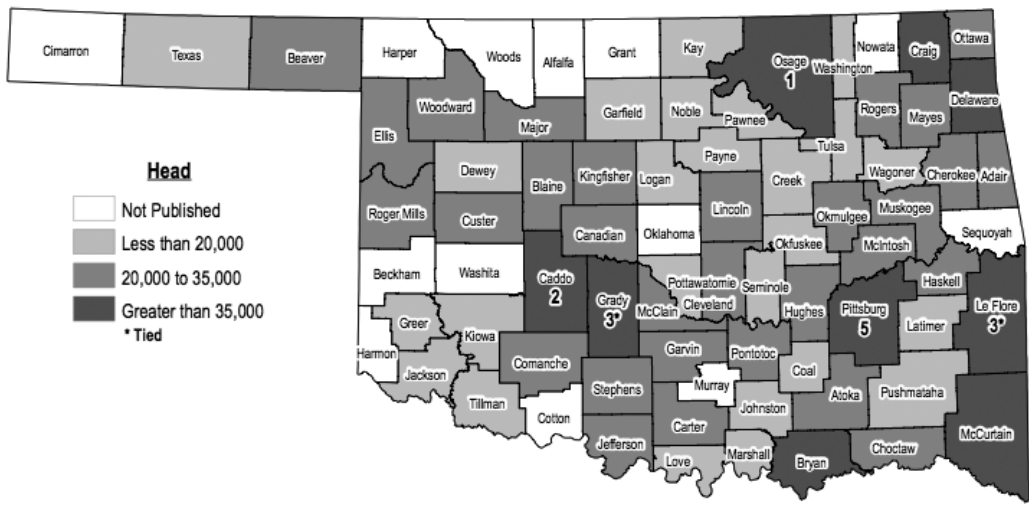


Figure 1.8. Beef cows, Oklahoma, January 2013. Source: Oklahoma Agricultural Statistics.

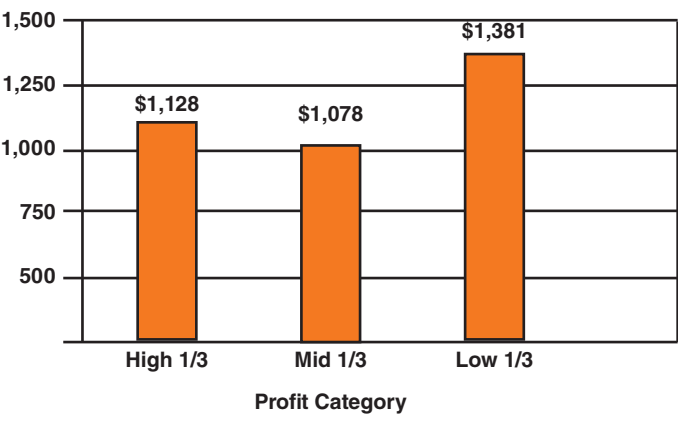


Figure 1.9. Cost of production (\$/cow), 2014, Kansas Enterprise Summary. Source: Kansas Farm Management Association, 2014.

other machinery and equipment are borne by a few cows, the cost is high. However, there are many profitable herds in this group. Thus, while it may be more difficult to be profitable with a small herd, it is not impossible. Production must be monitored closely, costs must be controlled carefully, and smart choices must be made with respect to investments in capital assets.

Management Practices

The beef cattle industry in Oklahoma is an important part of the state's economy. In fact, beef production is the largest agricultural income generator. Beef production operations vary considerably in size, available resources, profitability, and use of technology.

Strategies to increase profitability of small and medium-sized beef cow enterprises like those most prevalent in Oklahoma are crucial to increasing the overall profitability of the industry. Following recommended best management practices as encouraged by research-based extension educational programming can help producers

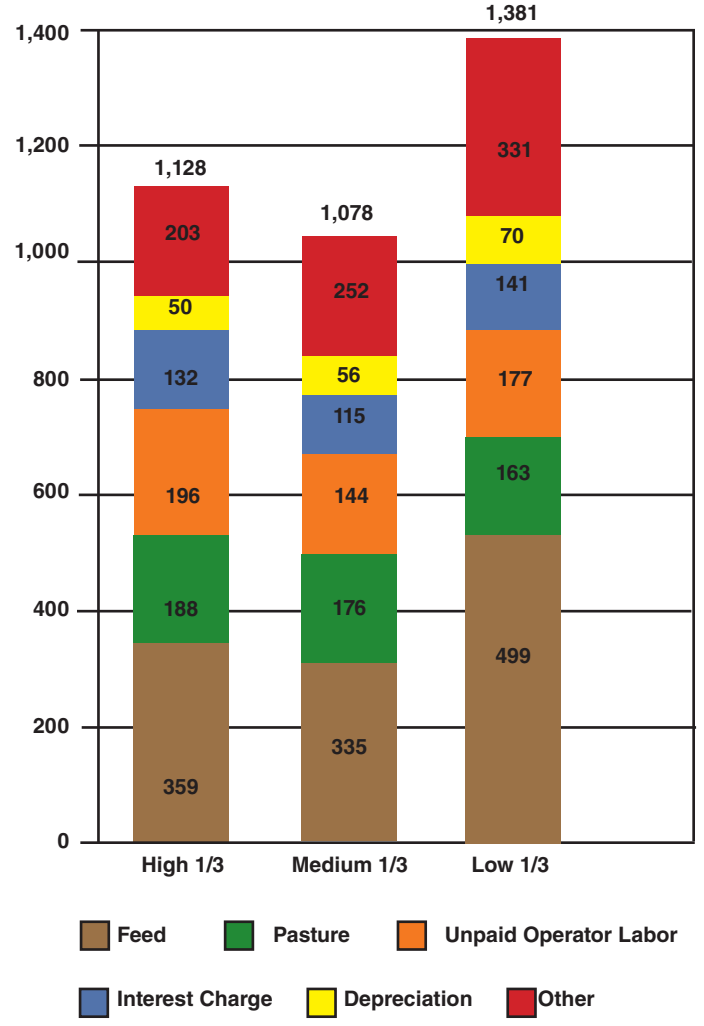


Figure 1.10. Cost of production by profit category. Source: Kansas Farm Management Association, 2014.

both manage costs and generate more gross income per cow. Recommended management practices are based on scientific analysis. According to Ward et al. (2008), cow herd management practices such as a limited period breeding season and limited use of harvested forages are generally more cost-effective than alternative strategies and enhance profitability, but adoption among Oklahoma cow-calf producers is inconsistent at best. Examples of recommended management practices for calves include retention of calves on the ranch for a significant period after weaning and respiratory and other vaccinations with ample on-farm time post-vaccination prior to marketing – practices that when bundled together are known as preconditioning. Science indicates that calf health and calf performance is improved by these practices as calves move through the supply chain.

Economic studies have shown that buyers value these practices enough to pay higher market prices for such calves, relative to similar calves without these backgrounds (Williams et al., 2012). However, producers do not always adopt recommended management practices. Figure 1.11 indicates that non-adoption among Oklahoma producers is high across many recommended practices for calf health management and marketing (Williams et al., 2013). On a positive note, the percentage of Oklahoma's calf crop marketed as value-added increased from 3.06 percent in 2007 to 6.43 percent in 2012, but there is much room to improve in this area.

Schumacher, Peel and Raper (2013) reported that producer-identified constraints to adoption often

includes a lack of technical knowledge or doubt in the returns for practice adoption. For example, producers with herds of 50 to 99 head are more likely to doubt returns from a 45-day weaning period than other herd sizes. Recently, survey and marketing data has identified that adoption of castration and implantation, two very specific management practices proven to add value and increase efficiency in cow/calf operations, have been on the decline. Raper (2015) reports 44 percent of respondents who did not castrate bull calves prior to marketing indicated a lack of technical education was a constraint to castration in their cow-calf operation (Figure 1.12). For producers who do not dehorn calves prior to marketing, 52 percent indicated technical education was a constraint.

Increasing adoption rates of basic recommended management practices in beef production increases market access for small and medium-sized farmers, particularly as producers begin to bundle various management practices together, such as the bundle of on-farm calf health management practices known as preconditioning. The implications for future calf health and quality make those calves more attractive to buyers and increase the probability of premiums (Williams et al., 2014). Adoption of basic recommended production and management practices for cow herds can decrease input costs and increase the economic viability of Oklahoma's beef industry.

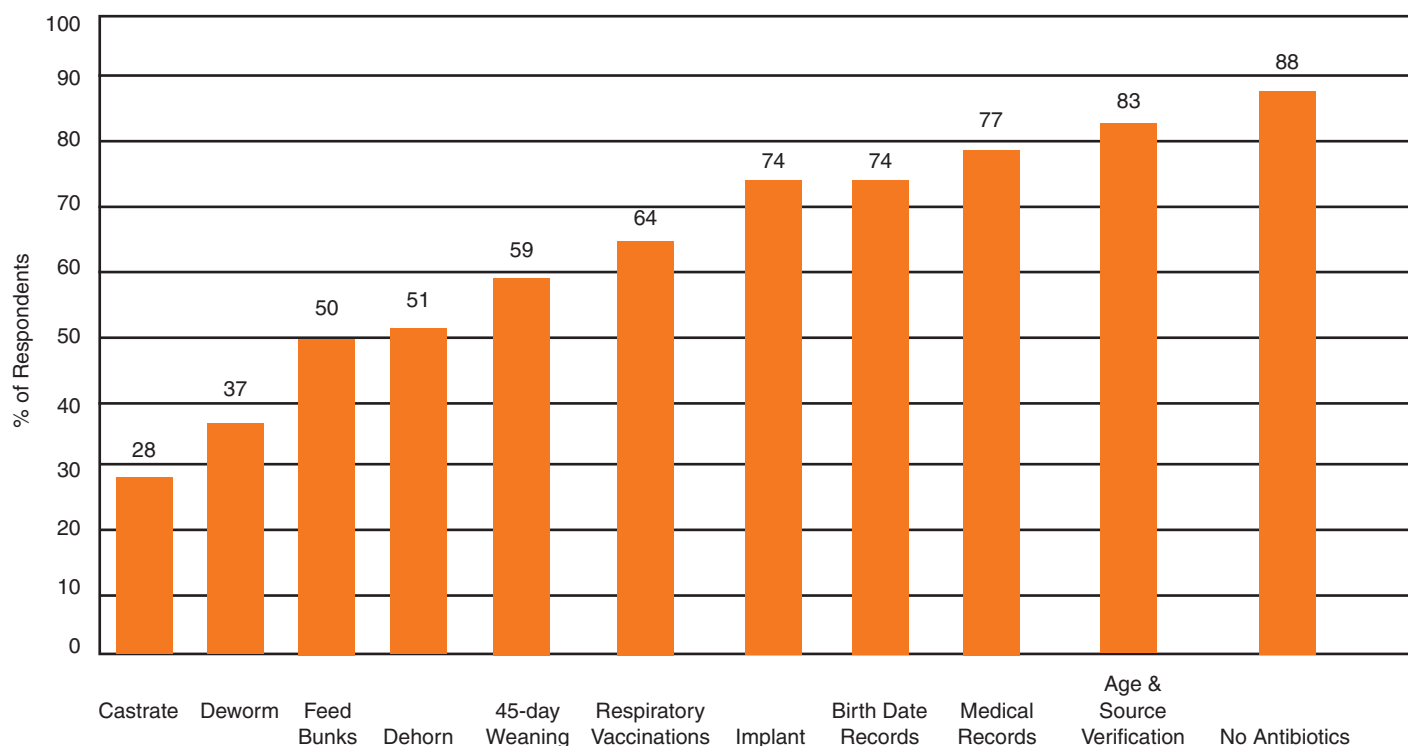


Figure 1.11. Rate of Non-Adoption by Management Practice. Source: Raper (2015).

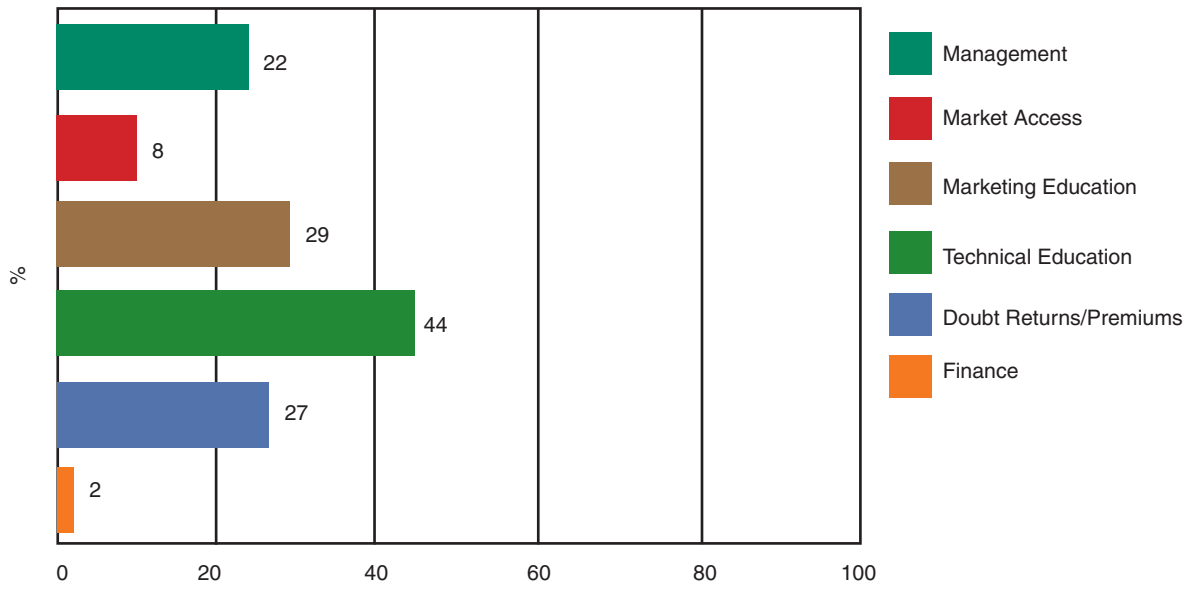


Figure 1.12. Constraints to Castration (%) as Identified by Non-Adopters, 2009-2010. Source: Raper (2015).

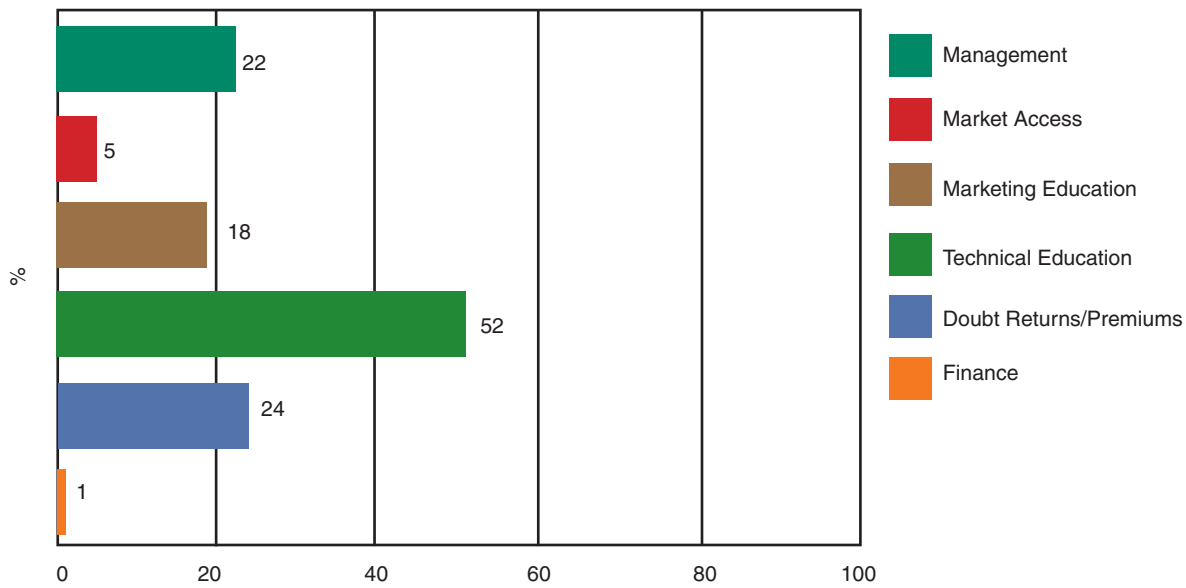


Figure 1.13. Constraints to Dehorning (%) as Identified by Non-Adopters, 2009-2010. Source: Raper (2015).

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