



# **A Snapshot of Kansas Cow-Calf Producers:**

## **An Analysis of 2018 Kansas Farm Management Association Cow-Calf Enterprises**

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### Introduction

It can be difficult to provide detailed and useful farm management analysis for cow-calf producers due to the heterogeneous nature of production methods, including differences in management decisions concerning calving season, grazing and feeding choices, breeding selection, marketing strategies, and even regional differences. The Kansas Farm Management Association has historically collected data concerning cow-calf producers which have allowed for some analysis. These analyses typically include looking at differences between high-, medium-, and low-profit producers. A recent report covered cow-calf enterprises in the KFMA from 2013-2017 with these results shared at the Risk and Profit Conference held in Manhattan, Kansas in August 2018. Feedback at this event suggested that acquiring more detailed information from cow-calf producers could provide crucial data to help analyze which management decisions may be impacting profitability.

This led KFMA economists to create a system for collecting additional cow-calf producer data. This additional data collection included questions about pre-conditioning practices (i.e. feed bunk experience, vaccination, castration, weaning, etc.), animal identification, breeding selection, calving season, hay feeding season, and marketing. More than 300 cow-calf producers participated in this survey, which only supports the desire and need for providing better economic analysis for our cow-calf producers and their interest in being involved in the process.

After collecting this additional information, we were able to match respondents with those who appear in the KFMA database. Currently (2018) there are 174 KFMA cow-calf producers in the enterprise database. After comparing the additional data with those producers in the KFMA data set we had 89 matched sets of information on which to do further economic analysis to help determine which management decisions may be impacting profitability.

This report includes general summary data as well as an economic analysis. The report first provides a summary of the 2018 cow-calf KFMA data including a cost break down, based on profit thirds. A summary of the additional survey data is also provided and is done on a regional basis so as to provide an understanding of how management decisions may differ due to location. The final portion of this report combines the additional survey data with those in the KFMA database and analyzes how specific management decisions impacted a producer's profitability including the relationship between days on feed with acres per cow, days fed hay with non-pasture feed costs, pregnancy checking and breeding soundness on calving percentage, and more.

It is important to note this report is a snapshot. Differences in profitability in a given year are due to more than any specific management decision. Weather and general market conditions can impact the profitability of a producer in a given year in ways that they are unable to control, therefore this report "snap-shot" should be considered from the understanding that this is just a one-year summary. KFMA has revised the process and plans to continue this data collection in future years to provide timely and useful information and analysis for cow-calf producers.

## **2018 KFMA Cow-Calf Enterprise Summary**

The KFMA enterprise database for cow-calf producers is split into two main categories; those producers that sell at weaning (what we call selling calves) and those that sell after providing some backgrounding (what we call selling feeders). The database in 2018 had 94 producers that sell calves and 79 that sell feeders. For those that sell calves, the majority of respondents are from the Central region (47), with the Western and Eastern regions having 23 and 24 respondents respectively. A similar distribution is seen for producers that sell feeders, with 45 respondents from the Central region, 11 from the Western region, and 23 from the Eastern region.

Number of Producers		
	Sell Calves	Sell Feeders
East	24	23
Central	47	45
West	23	11
Total	94	79

### **Cow-Calf Production – Selling Calves**

There were 94 producers reporting they sold calves at weaning in 2018. On average, all producers identifying as those that sold calves had an average herd size of 121 head, and sold (on average) calves that weighed 578 pounds for an average price of \$156.47/cwt. The 2018 average herd size was slightly lower than the 4-year average reported for 2013-2017, of 142 head. The 2018 average weight of calves sold was also lower in comparison to that of 2013-2017 average, which was 626 pounds. A graphical comparison of profit groups and average weight of calves sold can be seen in Figure 1a.

In 2018, the high-profit group had an average herd size of 127 and the low-profit group had an average herd size of 102. The high-profit group also recorded selling higher weight calves, with an average of 582 pounds, in comparison to the low-profit group which recorded an average calf weight of 560 pounds. The low- and high-profit groups had similar average prices, \$159.11 and \$156.47 respectively. The mid-profit group reported the lowest price received of \$153.79. This information can be seen in Table 1.

This combination of higher average weight for calves sold and higher prices led the high-profit group to have an average gross income of \$848.20 per cow in comparison to the low-profit group's average gross income of \$617.48 per cow. This is a difference of \$230.72 between the high- and low- profit producers.

Feed continues to be one of the largest expenses for cow-calf producers. The high-profit group was able to keep the average total feed costs down to \$400.90 per cow, while the low profit group had an average of total feed costs of \$539.23 per cow. Total feed costs include pasture and non-pasture feed costs, both of which were lower for the high profit group, \$175.31 and \$225.59 respectively. The low profit group had an average of \$184.19 in pasture costs per cow and \$355.04 in non-pasture feed costs per cow.

A significant difference in labor costs is also seen when comparing the high- and low-profit groups. This labor cost comparison includes hired labor and unpaid operator labor. The low-profit group recorded average labor costs of \$204.34 per cow, which is \$62.81 more than the labor costs for the high-profit group, which recorded an average of \$141.53 per cow. A graphical breakdown of costs for cow-calf producers selling calves can be seen in Figure 1b.

The high-profit group recorded an average net returns to management (returns over total costs) of a negative \$55.40 per head while the low-profit group recorded an average of negative \$588.67 per head. The high-profit group recorded an average Return Above Variable Costs of \$233.96 per cow and the low-profit group recorded an average loss of \$216.32 per cow.

### **Cow-Calf Production – Selling Feeders**

There were 79 producers reporting they sold calves after providing some backgrounding in 2018. On average, producers identifying as selling feeders, had an average herd size of 156 head, and sold (on average) calves that weighed 767 pounds for an average price of \$138/cwt.

A graphical comparison of profit groups and average weight of calves sold can be seen in Figure 1b. In 2018, the high-profit group had on average a herd size of 181 head in comparison to the low-profit group that had an average herd size of 115 head. Additionally, the high-profit group averaged a calf selling weight of 798 pounds in comparison to that of 723 pounds for the low-profit group. Prices were more equal across profit groups, with the high-profit group selling at an average price of \$139.79/cwt and the low-profit group selling at \$139.62/cwt. This information can be seen in Table 2.

As with the cow-calf producers that sell calves without backgrounding, the feed costs continue to be the largest portion of expenses for our producers that sell feeders. The high-profit group was able to keep the average total feed costs down to \$494.97 per cow, while the low profit group had an average of total feed costs of \$640.74 per cow. Total feed costs include pasture and non-pasture feed costs, both of which were lower for the high profit group, \$191.91 and \$303.06 respectively. The low profit group had an average of \$204.58 in pasture costs per cow and \$436.16 in non-pasture feed costs per cow. Total difference in variable costs between the high- and low-profit groups was \$217.35, a 22% difference. A graphical breakdown of costs for cow-calf producers selling calves can be seen in Figure 1b.

The high-profit group recorded an average net returns to management (returns over total costs) of a negative \$44.62 per head while the low-profit group recorded an average of negative \$596.10 per head. The high-profit group recorded an average Return Above Variable Costs of \$274.04 per cow and the low-profit group recorded an average loss of \$206.56 per cow.

**Conclusion**

When comparing the producers that sell feeders and those that sell calves, we see expected differences in feed costs and general machinery repairs, in addition to differences in average herd size. These differences are expected as many producers who have the ability to feed calves past weaning have other farm enterprises and more acres over which to spread costs. Additionally, larger herds can spread overhead costs across more head. The averages recorded in the 2018 KFMA data follow historical trends and provide the base on which we will build our further analysis. Such as what aspects of management may be impacting feed costs? What management practices may be impacting number of calves sold and therefore producer's gross income? We will work toward identifying answers to these questions as this additional data is collected in future years.

**Table 1. Kansas Farm Management Association Enterprise Analysis  
Cow-Calf sold at weaning - 2018**

	Profit Category			Difference between High and Low	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of Farms	31	31	32		
Number of Cows in Herd	127	133	102	25.00	25 %
Number of Calves Sold	105	103	84	21.00	25 %
Average Weight	582	592	560	22.00	4 %
Price	159.11	153.79	156.47	2.64	2 %
<b>GROSS INCOME</b>	<b>848.20</b>	<b>748.56</b>	<b>617.48</b>	<b>230.72</b>	<b>37 %</b>
<b>EXPENSES</b>					
Labor Hired	18.15	19.26	38.63	-20.48	-53 %
General Mach Repairs	44.33	46.81	72.29	-27.96	-39 %
Interest Paid	22.19	43.78	38.67	-16.48	-43 %
Gas, Fuel, Oil	24.61	23.74	30.88	-6.26	-20 %
Auto Expense	1.35	0.46	1.31	0.03	3 %
Fees	7.51	7.33	8.81	-1.30	-15 %
Personal Prop Tax	6.12	3.47	3.01	3.11	103 %
Gen Farm Ins	13.95	15.27	21.07	-7.12	-34 %
Utilities	16.46	13.13	16.01	0.45	3 %
<i>Indirect Expenses</i>	154.66	173.24	230.67	-76.01	-33 %
Feed	225.59	289.92	355.04	-129.45	-36 %
Pasture	175.31	196.75	184.19	-8.88	-5 %
Machine Hire - Lease	3.30	1.23	3.25	0.06	2 %
Vet Medicine/Drugs	34.69	33.21	32.45	2.24	7 %
Misc. Livestock Exp.	19.73	25.44	27.28	-7.55	-28 %
Cash Building Rent	0.95	0.00	0.92	0.03	4 %
<i>Direct Expenses</i>	\$459.58	\$546.55	603.13	(\$143.55)	-24 %
<b>Total Variable Costs</b>	<b>614.24</b>	<b>719.80</b>	<b>833.80</b>	<b>-219.56</b>	<b>-26 %</b>
<i>Return Above Variable Costs</i>	233.96	28.76	-216.32	450.28	-208 %
Depreciation	34.89	59.68	54.42	-19.53	-36 %
Real Estate Tax	8.33	14.94	18.03	-9.69	-54 %
Unpaid Operator Labor	123.38	127.03	165.71	-42.33	-26 %
Interest	122.76	121.23	134.20	-11.44	-9.00
<b>Total Fixed Costs</b>	<b>289.36</b>	<b>322.88</b>	<b>372.35</b>	<b>-82.99</b>	<b>-22 %</b>
<b>TOTAL EXPENSES</b>	<b>903.60</b>	<b>1042.68</b>	<b>1206.15</b>	<b>-302.55</b>	<b>-25 %</b>
<b>NET RETURN TO MANAGEMENT</b>	<b>-55.40</b>	<b>-294.12</b>	<b>-588.67</b>	<b>533.27</b>	

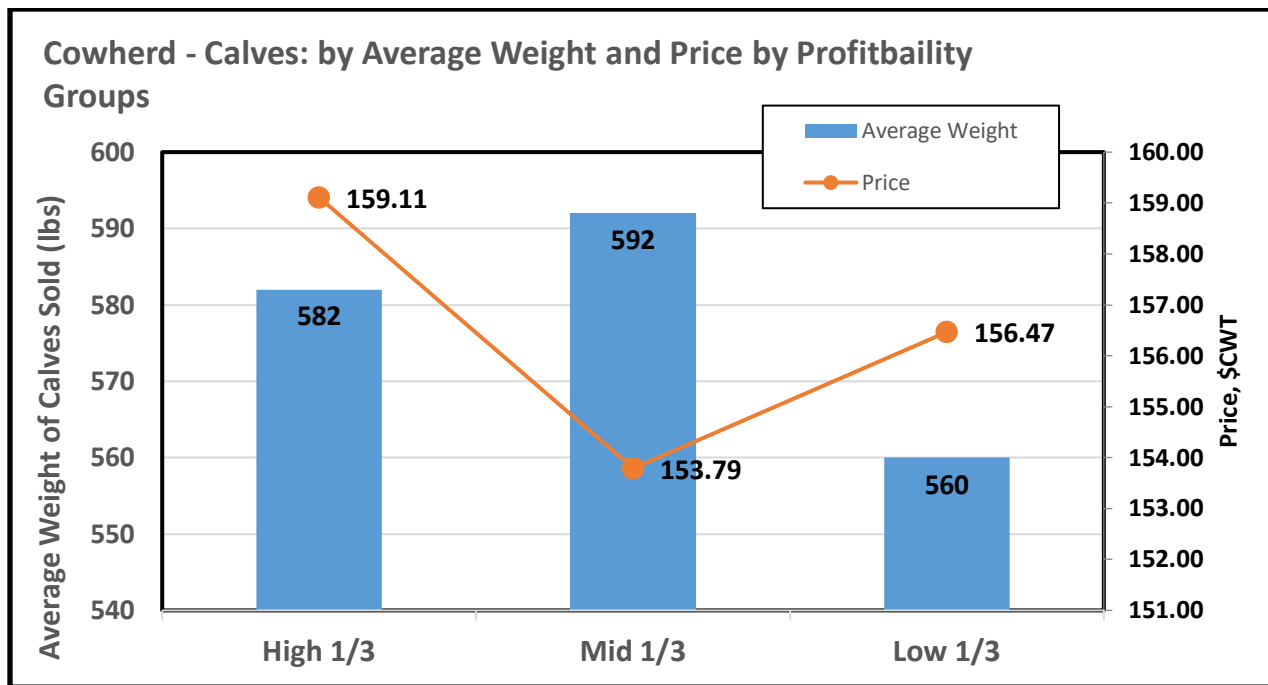


Figure 1a. Relationship between price and average calf weight for low-, medium-, and high-profit farms, Cow-Calf sold at weaning.

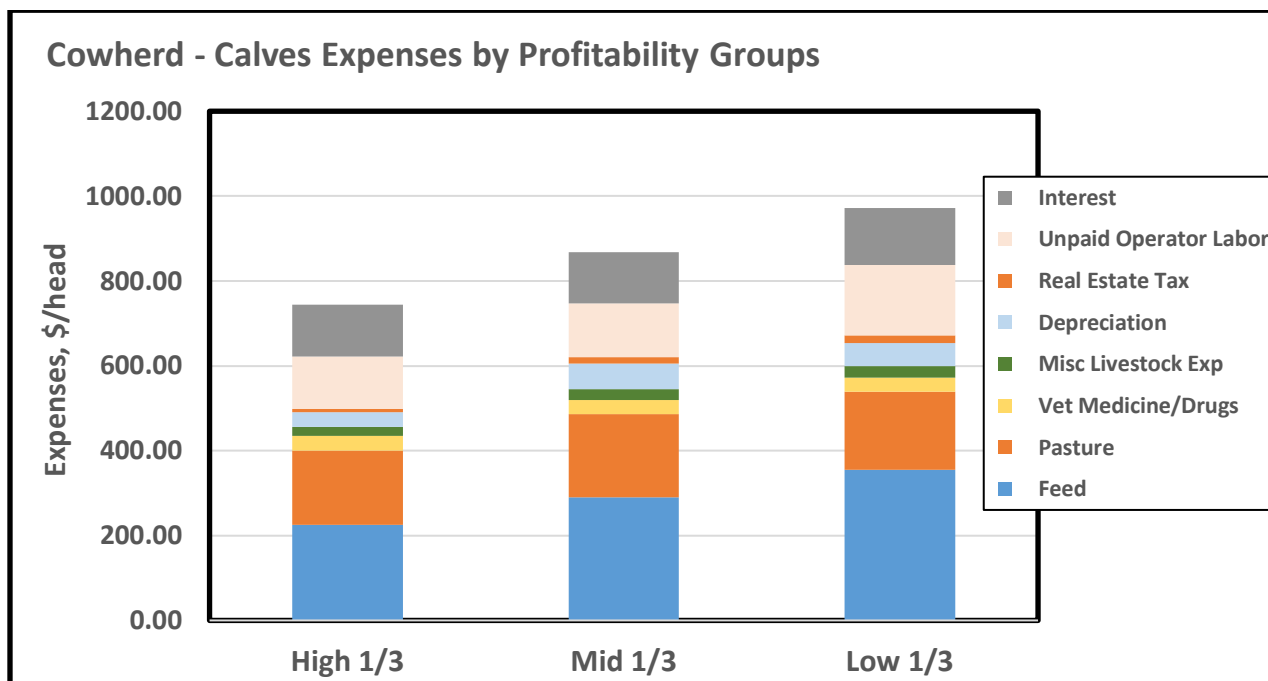


Figure 1b. Relationship of different costs between low-, medium-, and high-profit farms, Cow-Calf Feeders.

**Table 2. Kansas Farm Management Association Enterprise Analysis  
Cow-Calf with Backgrounding - 2018**

	Profit Category			Difference between High and Low	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of Farms	26	27	27		
Number of Cows in Herd	181	172	115	66.00	57 %
Number of Calves Sold	151	124	98	52.00	53 %
Average Weight	798	766	723	75.00	10 %
Price	139.79	133.98	139.62	0.17	0 %
<b>GROSS INCOME</b>	<b>1028.66</b>	<b>842.72</b>	<b>765.40</b>	263.26	34 %
<b>EXPENSES</b>					
Labor Hired	27.71	24.55	31.86	-4.15	-13 %
General Mach Repairs	66.53	47.48	73.48	-6.95	-9 %
Interest Paid	41.48	37.48	42.88	-1.40	-3 %
Gas, Fuel, Oil	27.26	27.16	32.31	-5.05	-16 %
Auto Expense	0.44	1.20	2.50	-2.07	-83 %
Fees	4.70	8.75	11.62	-6.92	-60 %
Personal Prop Tax	2.90	3.13	4.57	-1.67	-37 %
Gen Farm Ins	10.38	13.21	14.98	-4.59	-31 %
Utilities	12.61	14.42	18.30	-5.69	-31 %
<i>Indirect Expenses</i>	194.00	177.38	232.50	-38.50	-17 %
Feed	303.06	421.85	436.16	-133.10	-31 %
Pasture	191.91	166.24	204.58	-12.67	-6 %
Machine Hire - Lease	0.00	0.97	13.07	-13.07	-100 %
Vet Medicine/Drugs	46.30	40.99	51.29	-4.99	-10 %
Misc. Livestock Exp.	19.35	19.93	32.47	-13.12	-40 %
Cash Building Rent	0.00	0.96	1.88	-1.88	-100 %
<i>Direct Expenses</i>	\$560.62	\$650.95	739.46	(\$178.84)	-24 %
<b>Total Variable Costs</b>	754.62	828.32	971.96	-217.34	-22 %
<i>Return Above Variable Costs</i>	274.04	14.40	-206.56	480.60	-233 %
Depreciation	54.59	50.43	60.83	-6.24	-10 %
Real Estate Tax	8.67	6.75	12.72	-4.05	-32 %
Unpaid Operator Labor	115.46	135.39	166.95	-51.49	-31 %
Interest	139.94	145.77	149.04	-9.10	-6.00
<b>Total Fixed Costs</b>	<b>318.66</b>	<b>338.34</b>	<b>389.54</b>	<b>-70.87</b>	<b>-18 %</b>
<b>TOTAL EXPENSES</b>	<b>1073.28</b>	<b>1166.67</b>	<b>1361.49</b>	<b>-288.21</b>	<b>-21 %</b>
<b>NET RETURN TO MANAGEMENT</b>	<b>-44.62</b>	<b>-323.95</b>	<b>-596.10</b>	<b>551.48</b>	



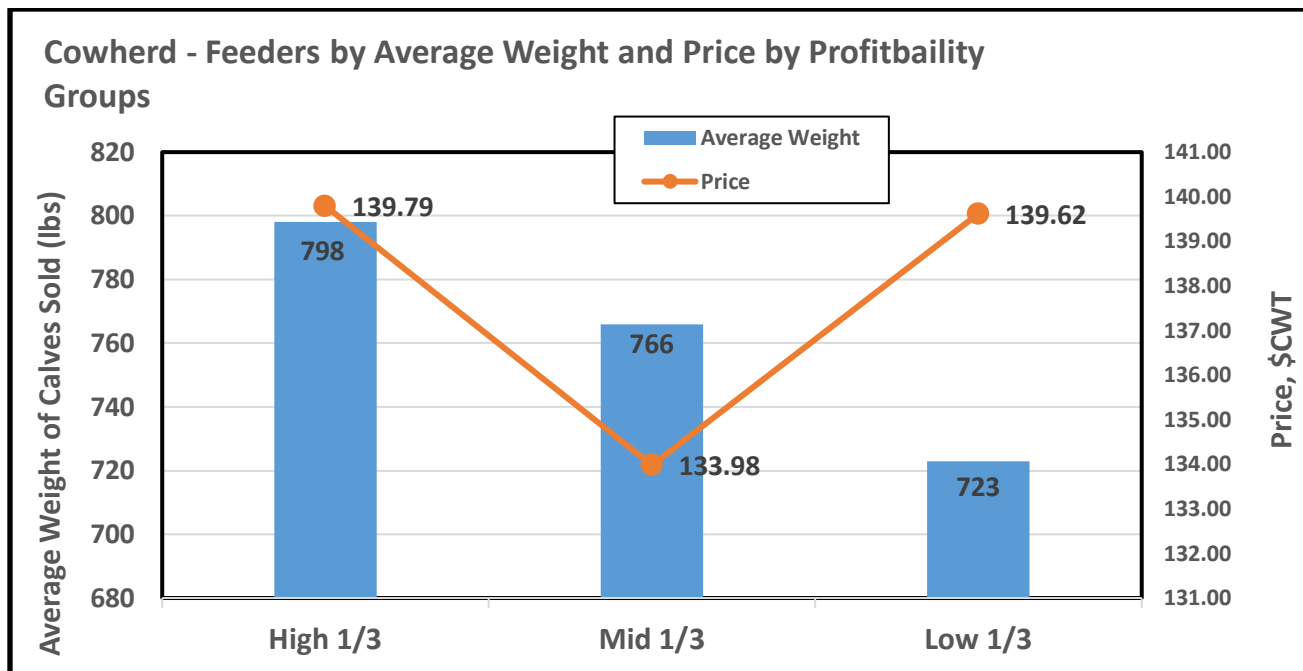


Figure 2a. Relationship between price and average calf weight for low-, medium-, and high-profit farms, Cow-Calf Feeders.

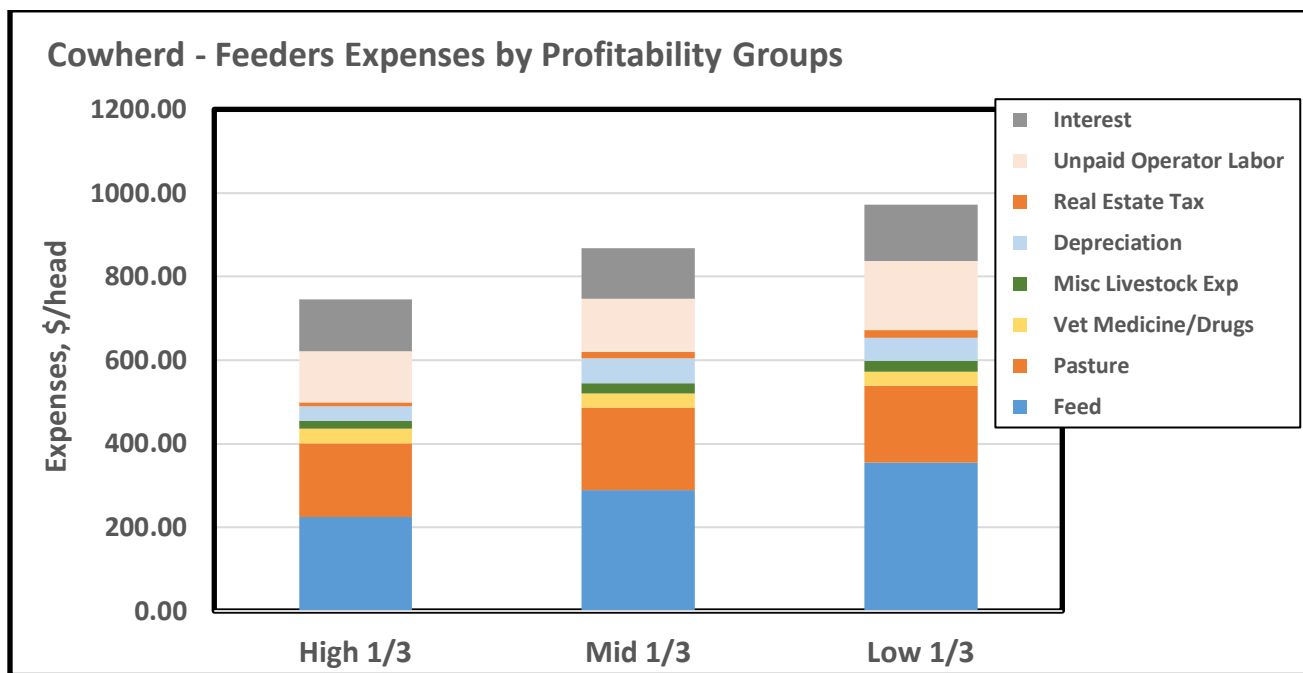


Figure 2b. Relationship of different costs between low-, medium-, and high-profit farms, Cow-Calf Feeders.

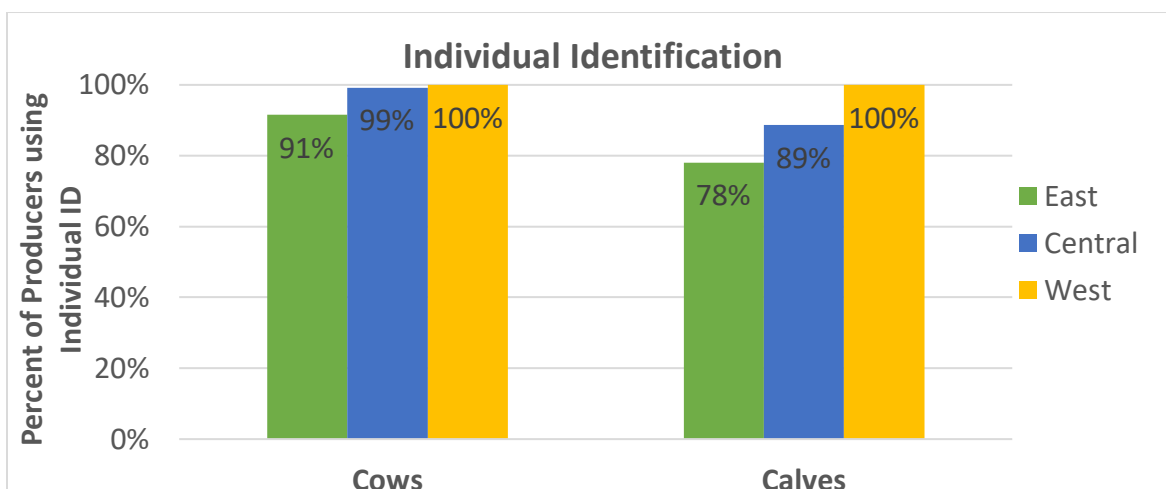
## Summary of 2018 KFMA Cow-Calf Additional Data – by Region

The instrument used for collecting the additional data compiled by KFMA economists can be seen on page 28 of this report. Included are questions concerning animal identification, breeding management (pregnancy-checks and bull soundness checks), hay feeding days, pre-conditioning management (weaning, feed bunk use, vaccinations, etc.), and marketing information. More than 300 cow-calf producers completed and returned the information. It is important to note that these responses are from KFMA members only, and therefore these results may not necessarily be reflective of cow-calf producers in general. The following summary of the additional data is provided on a regional basis, with KFMA Associations 4 (NE) and 6 (SE) classified as the East, Association 1 (NC) and 2 (SC) classified as Central, and Associations 3 (SW) and 5 (NW) classified as West. There were 141 responses from the East region, 123 from Central, and 40 from the West region. All cow-calf producers were grouped together in this portion of the summary, meaning those that sell calves and those that sell feeders are aggregated. A summary of herd size by region is seen below.

Average Herd Size by Region	
East	180.87
Central	118.69
West	154.33

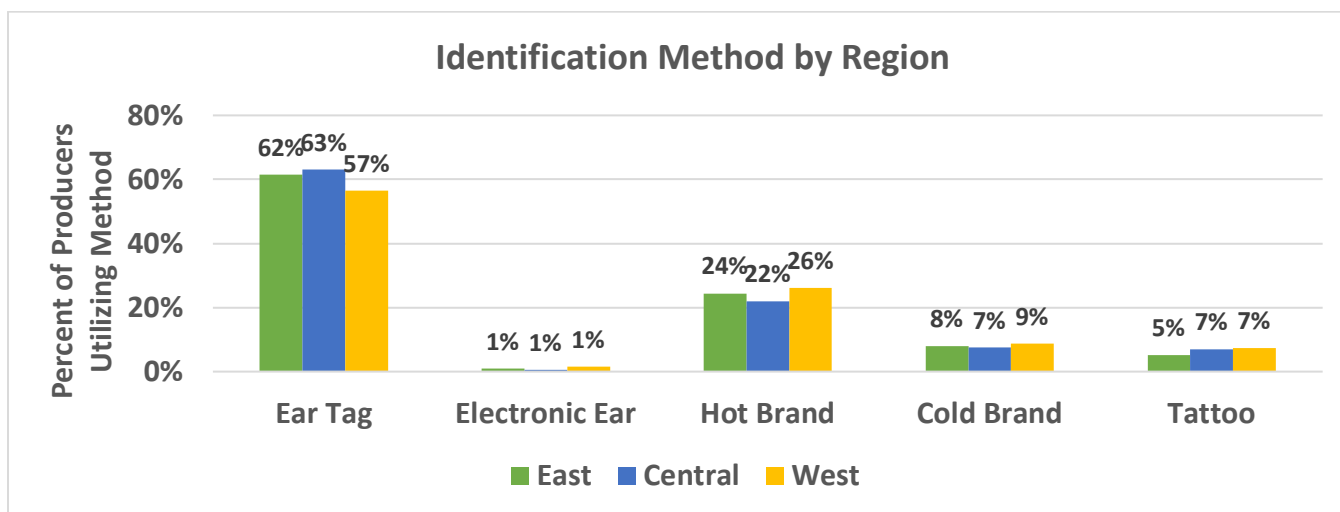
### Animal Identification

Across the regions, the majority of producers individually identify their cows. However, there was a larger disparity in the percentage that individually identify calves across the regions. The western region reported individually identifying all of their herd’s cows and calves, while the eastern region reported that only 78% of producers individually identified their calves.



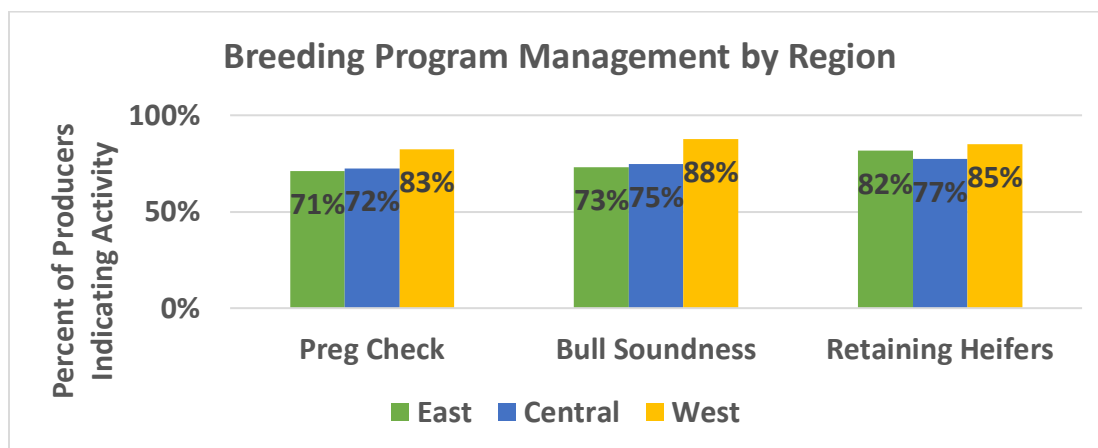
Aside from individual animal identification, producers were asked to indicate the type of methods utilized for identification. Producers could select from ear tag, electronic ear tag, hot or cold brand, and tattoo. The

primary identification method across all regions was an ear tag followed by a hot brand. Electronic ear tags were less than 1% in all regions.



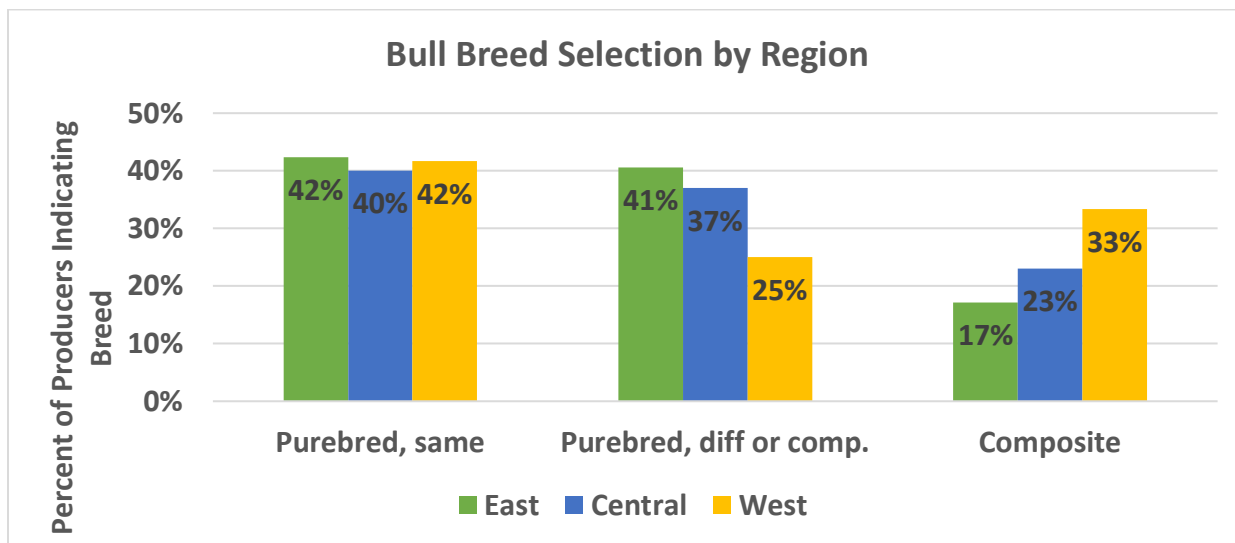
**Breeding Program**

Breeding soundness and pregnancy checks require additional labor and expertise for cow-calf producers. Just over 70% of cow-calf producers in the east and central regions indicated they conducted pregnancy checks on their cows and around 74% of cow-calf producers in the east and central region also indicated they conduct breeding soundness checks on bulls. The west region indicated higher percentages in both pregnancy-checks and bull soundness checks.

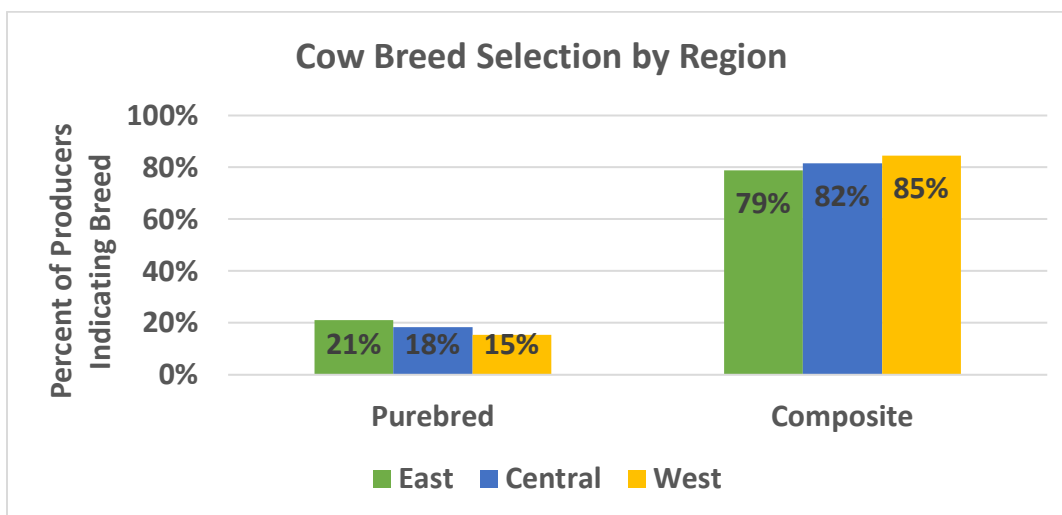


Producers were also asked to select what type of bull they used in their breeding program. Respondents were able to select more than one answer from the following choices: purebred of the same breed as the cows, a

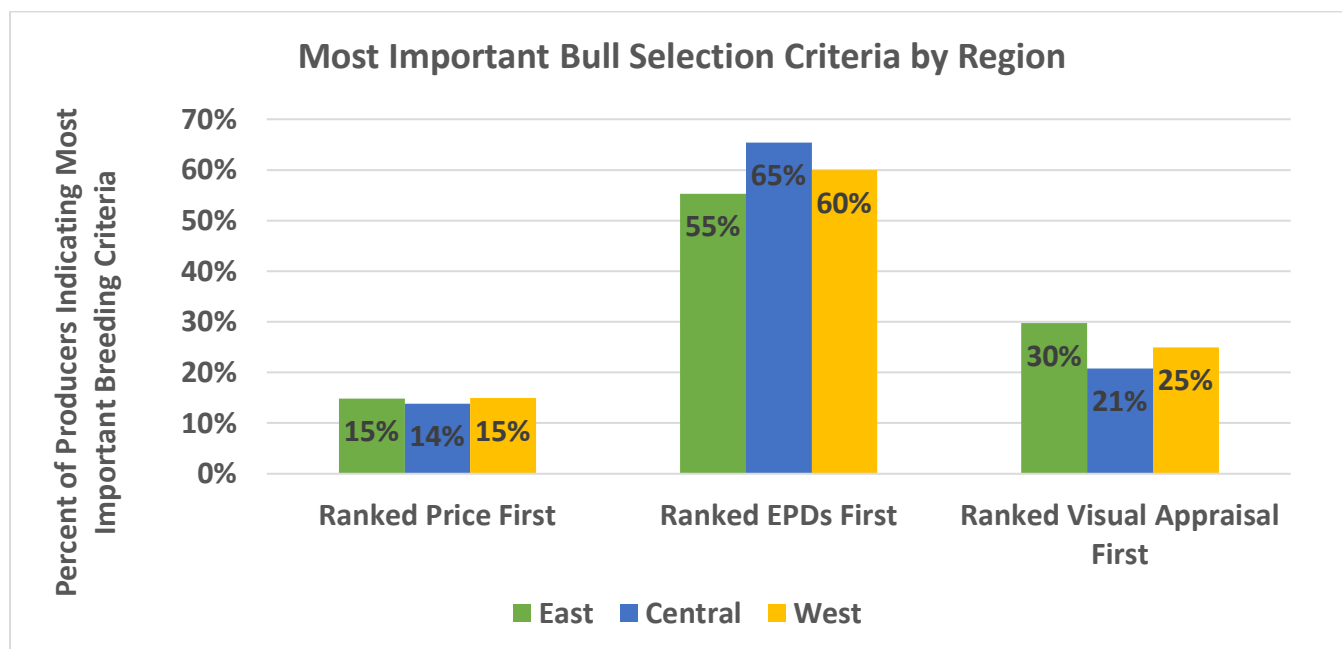
purebred bull of a different breed from the cows, or bull is a composite breed. For ease of analysis, producers who selected more than one option or none at all were excluded from the following summary information. It is important to note here that the question may have been unclear, and producers may not have accurately been able to answer this question. Modifications to the question will be made in future years.



More than 40% of producers in all regions indicated they utilize a purebred bull of the same breed as their cows. Using a bull of a different breed was the second most common choice for the eastern and central regions, where using a composite breed bull was the second most selected choice for the western region.



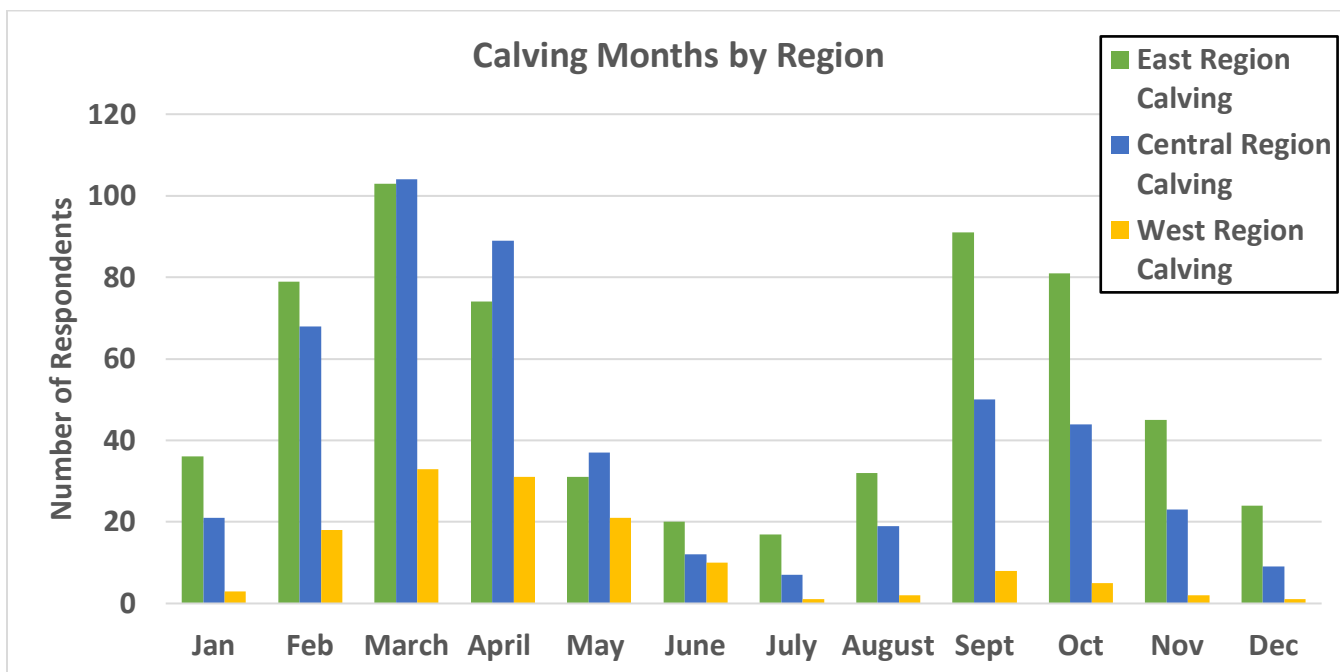
In selecting bulls, all regions had similar results in ranking selection criteria. Respondents were asked to rank price, EPDs, and visual appraisal in order of importance in their bull selection process. Utilizing EPDs was the top criteria for all regions followed by visual appraisal, with price ranked last in importance. The eastern region placed a larger emphasis on visual appraisal compared to the other regions.



### ***Calving Season Management***

The data collection process also asked producers to indicate in which months they calve. The responses follow a common fall and spring calving pattern, but slight differences between these “windows” of calving emerge between regions. This survey question will be modified moving forward to seek to provide more information regarding calving season timing and length. For example, a producer may have marked they calve in every month. This could be due to allowing a bull full access to the herd or it could be due to several breeding programs occurring at once. The results reported are based on responses given but may not be accurate due to question clarity.

The eastern region had a more even split between producers indicating fall and spring calving, while both the central region and western region favored calving in the spring months. The eastern region producers tended to indicate more calving in February-March while the central and western region tended to shift their calving towards March-April. More detailed questions about calving and breeding programs will help KFMA provide economic analysis of calving season implications as well as provide more information as to the level of management that is taking place in regard to breeding programs.

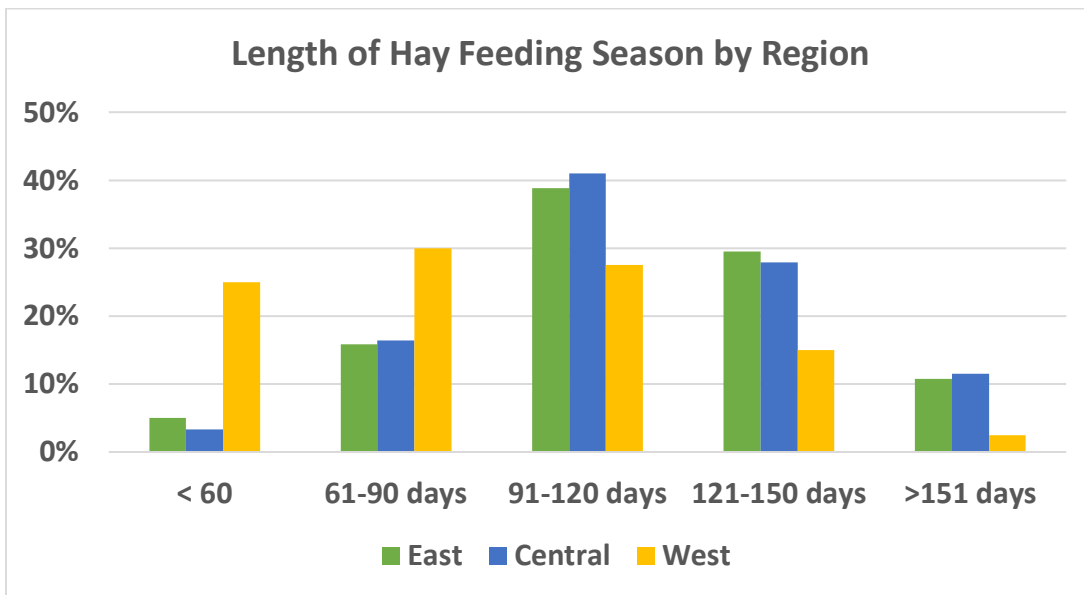


**Feed and Pasture Management**

The largest cost categories for a cow-calf producer are feed and pasture costs. The KFMA asked producers to indicate the length of their hay feeding season to aid in better understanding this important and significant input on a producer’s profit. Producers could indicate the length of their hay feeding season by choosing between less than 60 days, 61-90 days, 91-120 days, 121-150 days, and more than 151 days. It is important to remember this is a snapshot of cow-calf producers in 2018, and these results are only of 2018.

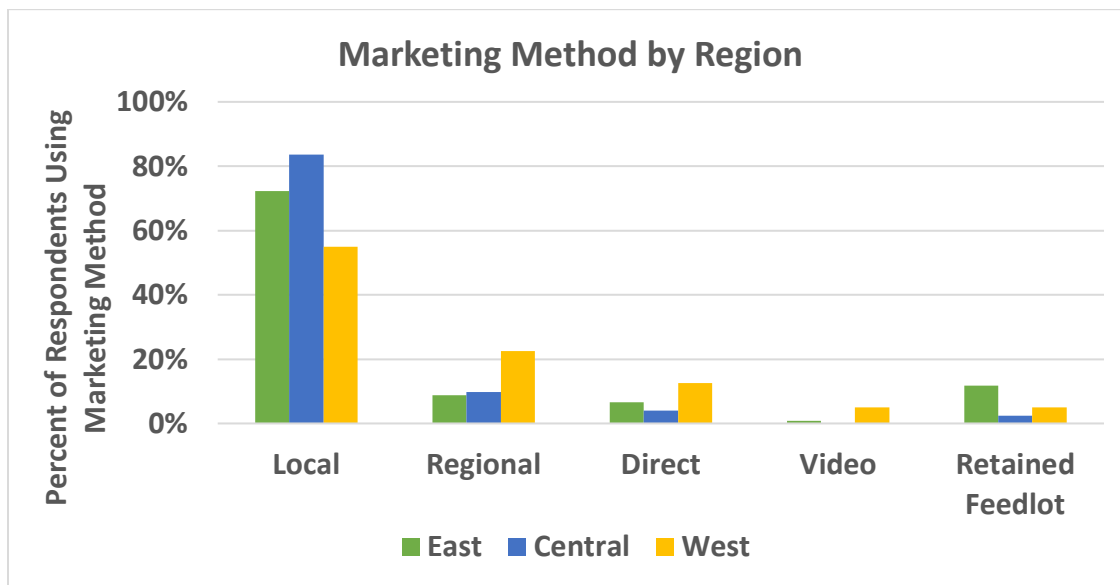
The western region indicated more diversity in length of hay feeding season with producers reporting anywhere from less than 60 days up to 120 fairly evenly. The majority of producers in the central region (41%) indicated their hay feeding season to be 91-120 days, with the longer season of 121-150 coming in second with 28% of producers. This was a similar result for the eastern region, with 39% of producers reporting a hay season of 91-120 days and 29% reporting a season length of 121-150 days.

A more detailed analysis including the impact of hay feeding season on profits and feed costs is possible by matching the additional survey data with those in the KFMA data base. This matched analysis and impact of hay feeding season length on costs can be seen in the economic analysis section. In future years, more detail will be collected related to non-pasture feed costs on these operations.



**Marketing**

The use of local livestock markets was the primary method of marketing animals across all regions, however less so for the western region. This is to be expected as livestock markets are less prevalent in the region and there are transaction costs to reaching the market, which may explain why the western region utilizes more video marketing. Additionally, 12% of producers in the eastern region indicated they retain for feedlots.



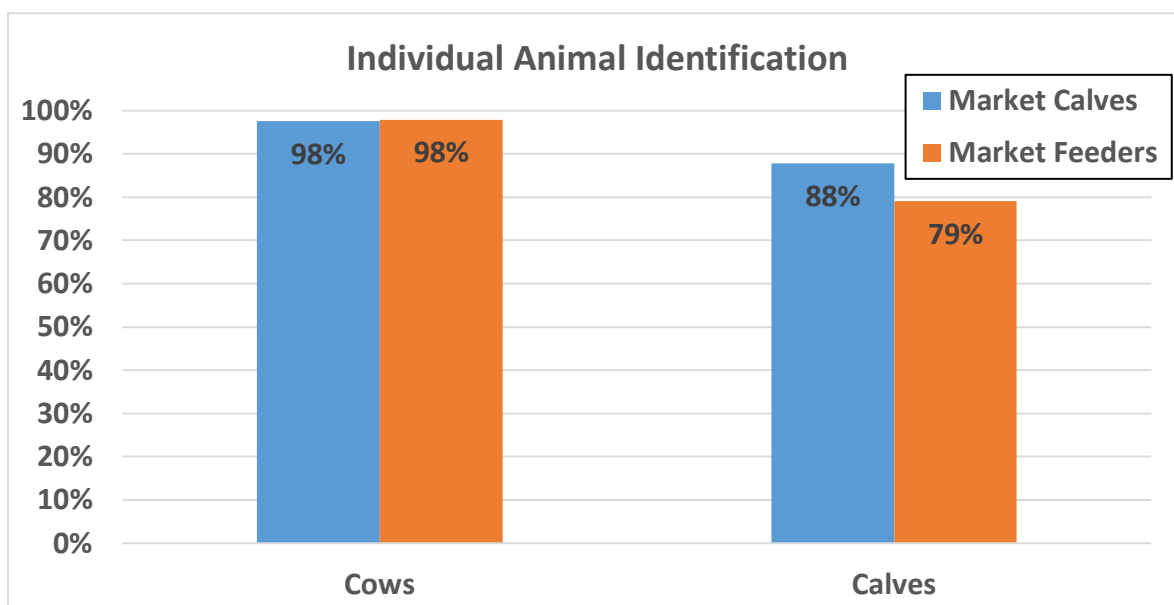
## 2018 KFMA Cow-Calf Survey Summary – by Marketing Weight

While considering management choices on a regional basis provides some insight into geographical differences, we can also gain insight by separating producers into those that sell feeders and those that sell calves. A similar statistical summary of the additional survey results is included below but are separated based by those that sell calves and those that sell feeders. The additional data collection process did not ask producers to indicate if they sold calves or feeders, therefore the following statistical summary is only of the respondents that were in the KFMA data base, as we were able to “match” respondents with their classification within the KFMA database. This matching left 41 producers that sell calves and 48 that sell feeders. The average herd size for those marketing feeders was 165 head, and 93 for those selling calves.

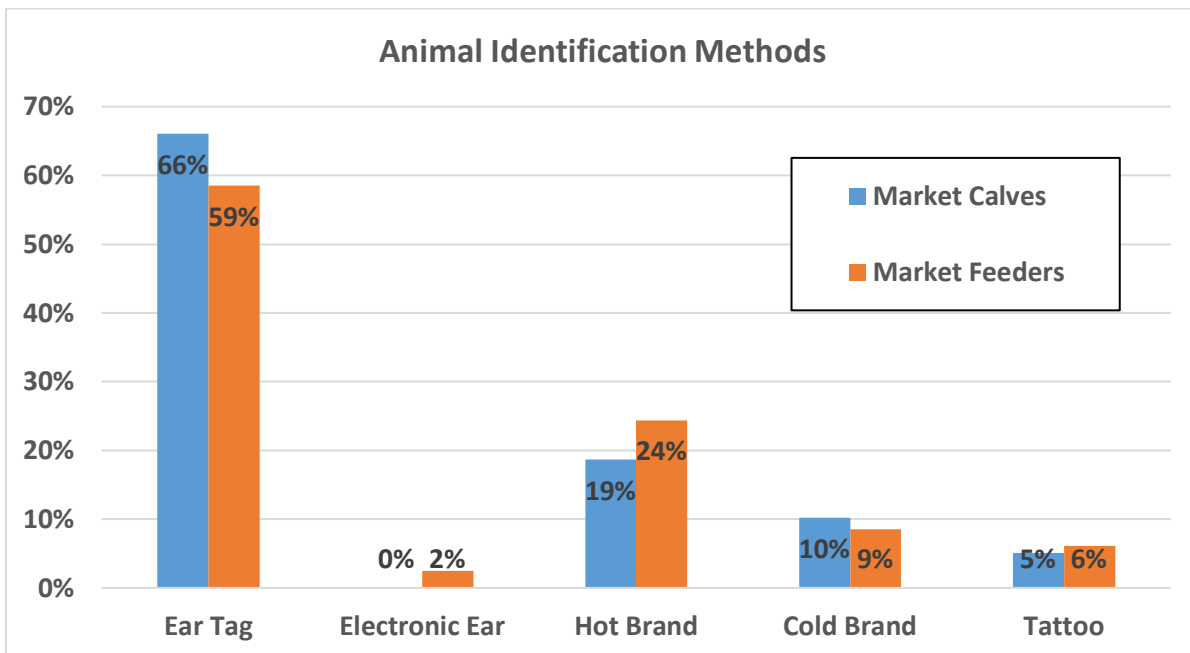
Average Herd Size by Marketing Weight	
Calves	93.70
Feeders	165.81

### **Animal Identification**

The summary statistics on animal identification follow the expected results for those that market calves compared to those that market feeders. Those that market calves reported a larger percentage of individual identification of calves, 88%, while those that market feeders were much lower, with only 79% using individual animal identification for their calves. The method of animal identification (brand, tags, etc.) followed the expected results with ear tags being the primary method of ID. Those that market feeders (24%) utilized hot brands more frequently than those that market calves (19%).

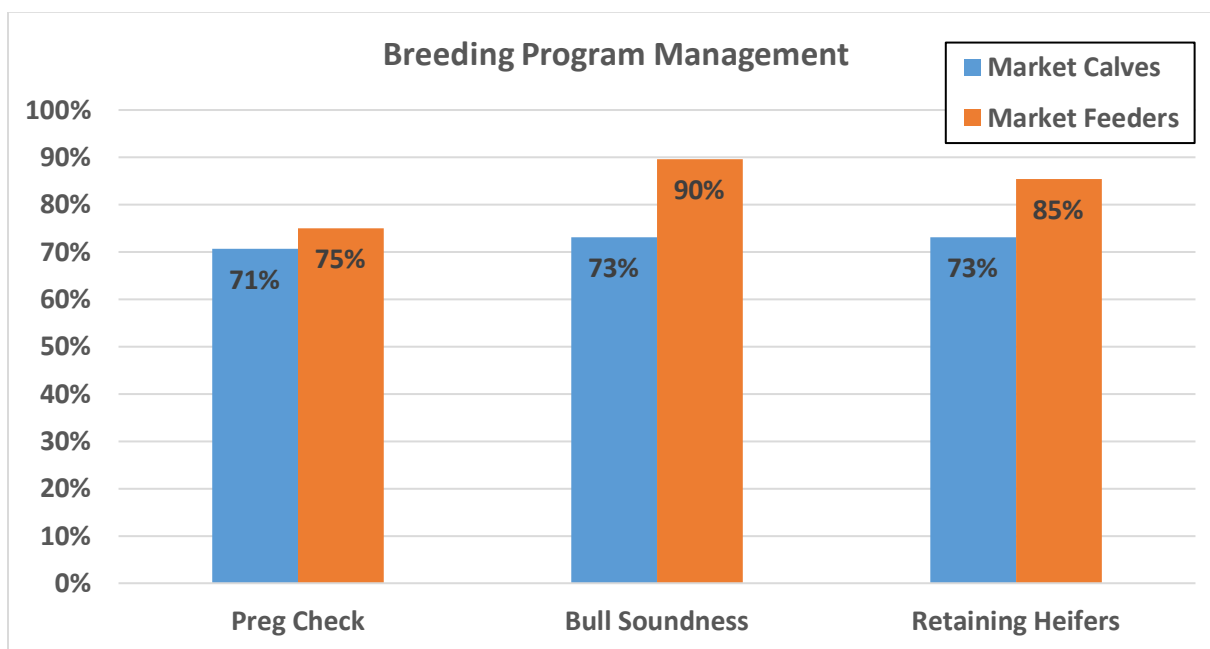




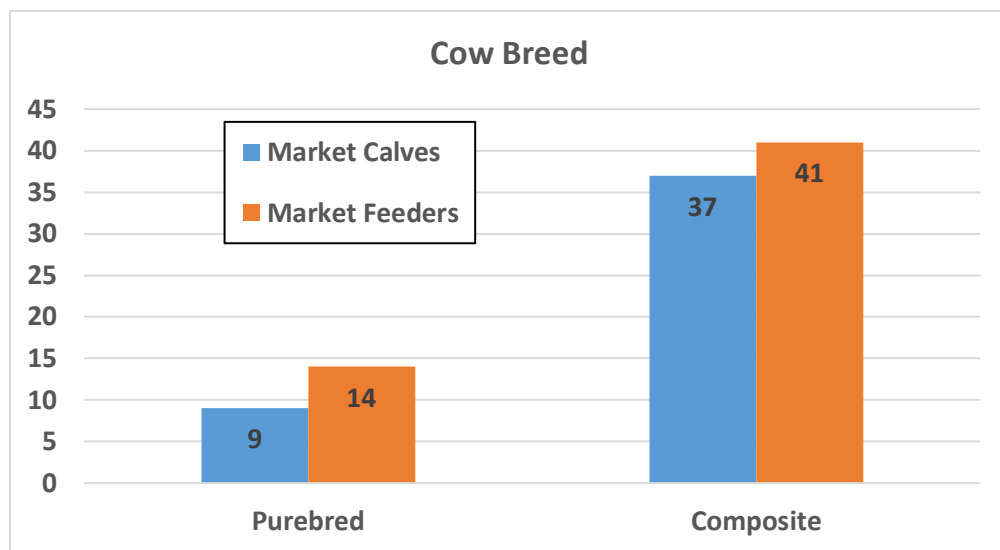
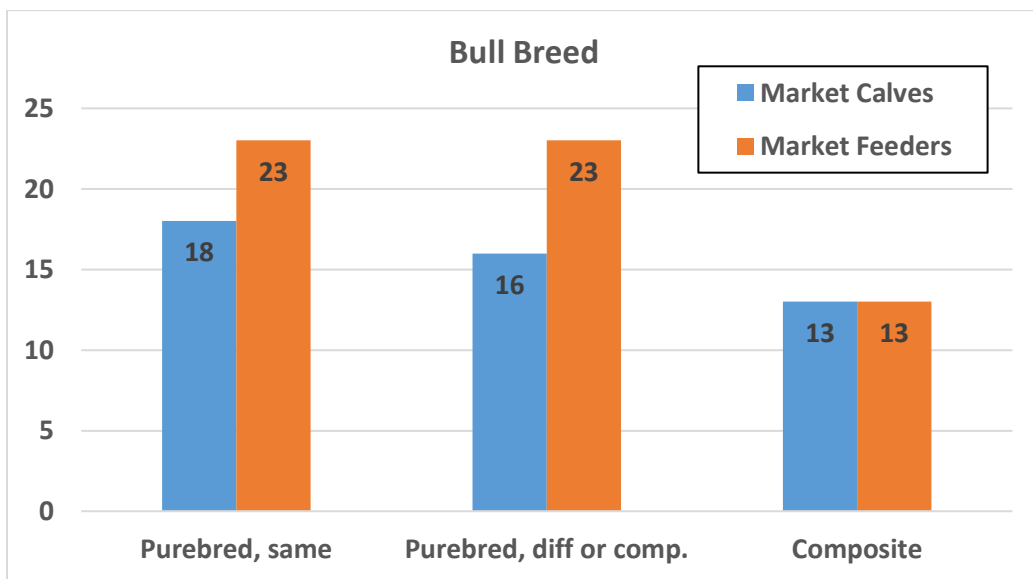


### Breeding Program

Producers that market feeders were significantly more likely to utilize bull soundness checks in the breeding management than producers that market calves, and 4% more of producers marketing feeders utilize pregnancy checks than those that market calves.

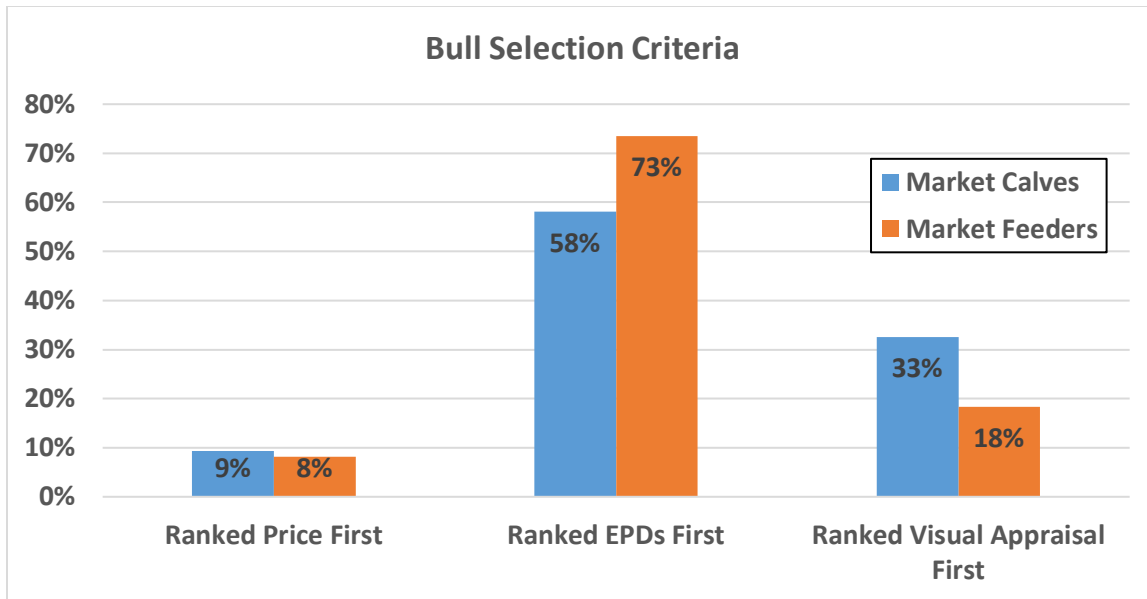


Bull breeds were fairly evenly split between purebred of the same breed as cows, purebred different than the cows, and composite for producers of both calves and feeders. A similar ratio for cow breeds was reported for both types of producers, suggesting that consistently the majority of producers across Kansas utilize composite breed cows.

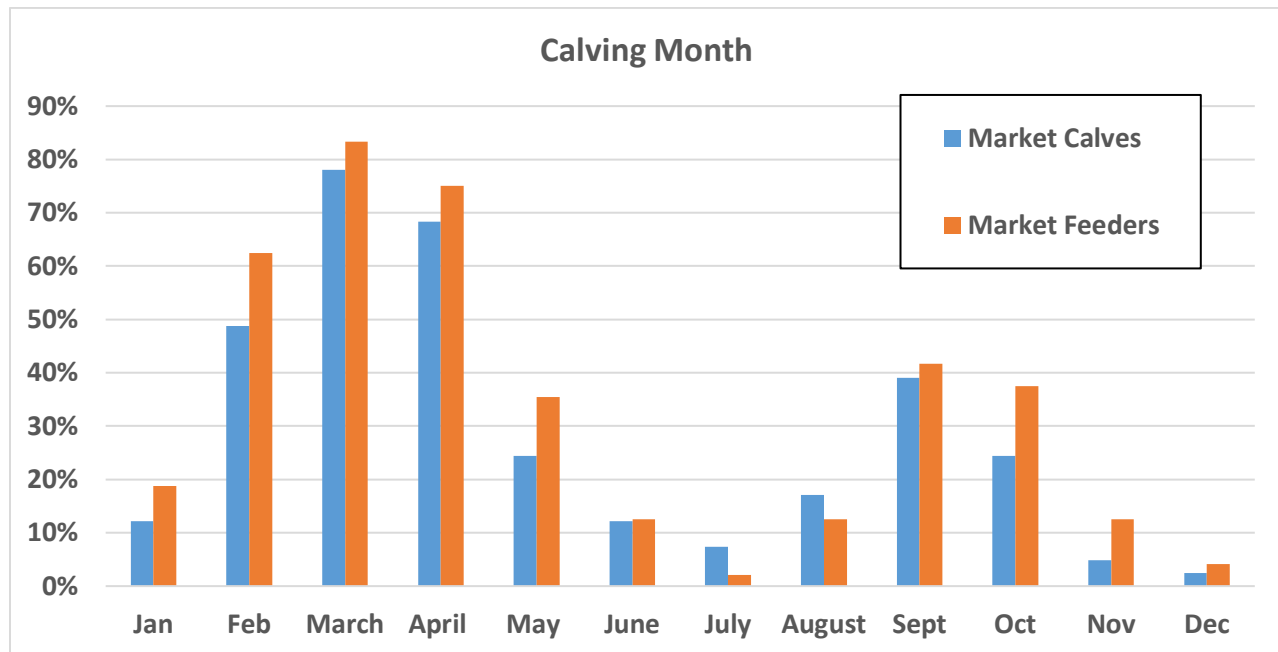


The selection criteria for bulls followed the expected ranking, with EPD's being ranked as the most important, followed by visual appraisal, and then price. Those producers that market feeders placed a higher importance on EPD's than those that market calves. Further economic analysis of this management decision is considered

in the economic analysis section in an effort to determine if those producers that identify EPDs tend to have higher calving percentages or if those that identified price as the most important factor have lower costs in general.

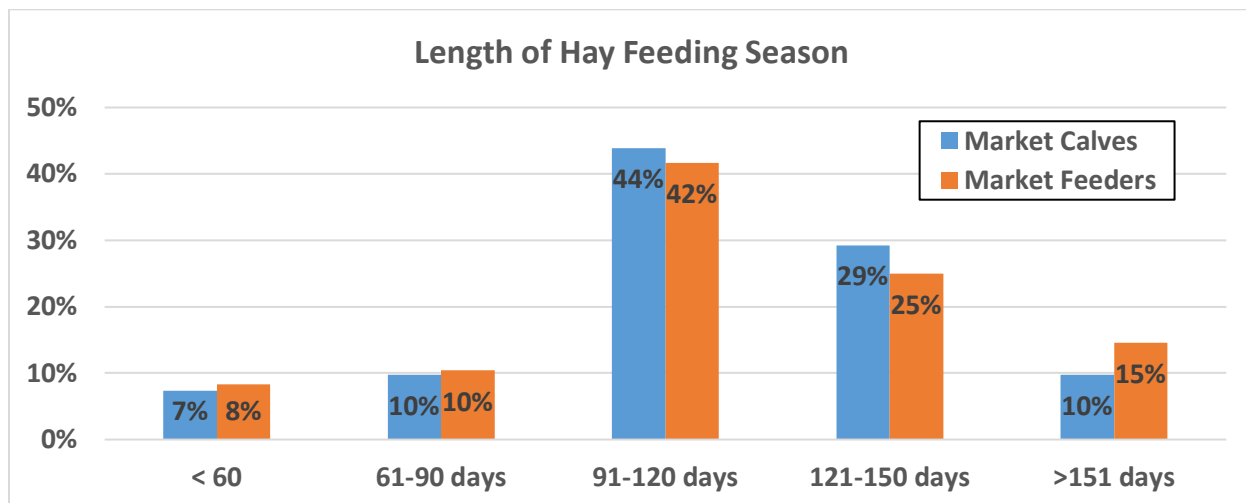


Producers of both calves and feeders followed the general fall and spring calving, with the majority of calving occurring in the spring months of March and April. Producers that market feeders tended to have extended or second calving season, with a larger percentage of calving occurring in September to December in comparison to those that market calves.



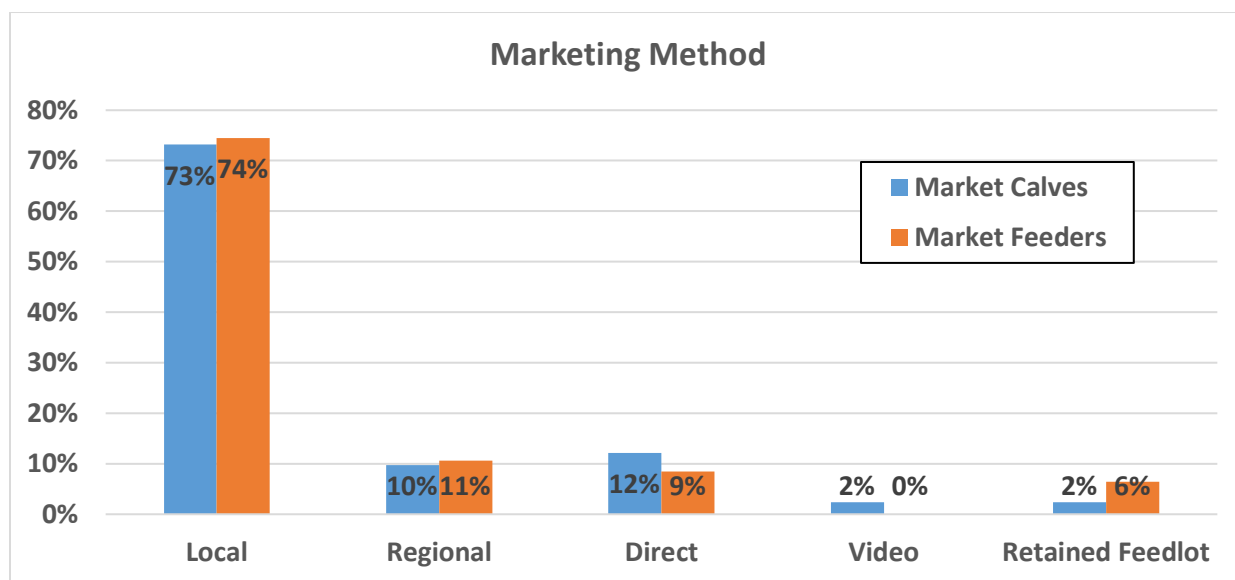
### Feed and Pasture Management

Length of hay feeding season was fairly similar between producers that sell calves and those that sell feeders. With only a 5% difference in the percentage of producers whose hay feeding season is more than 151 days.



### Marketing

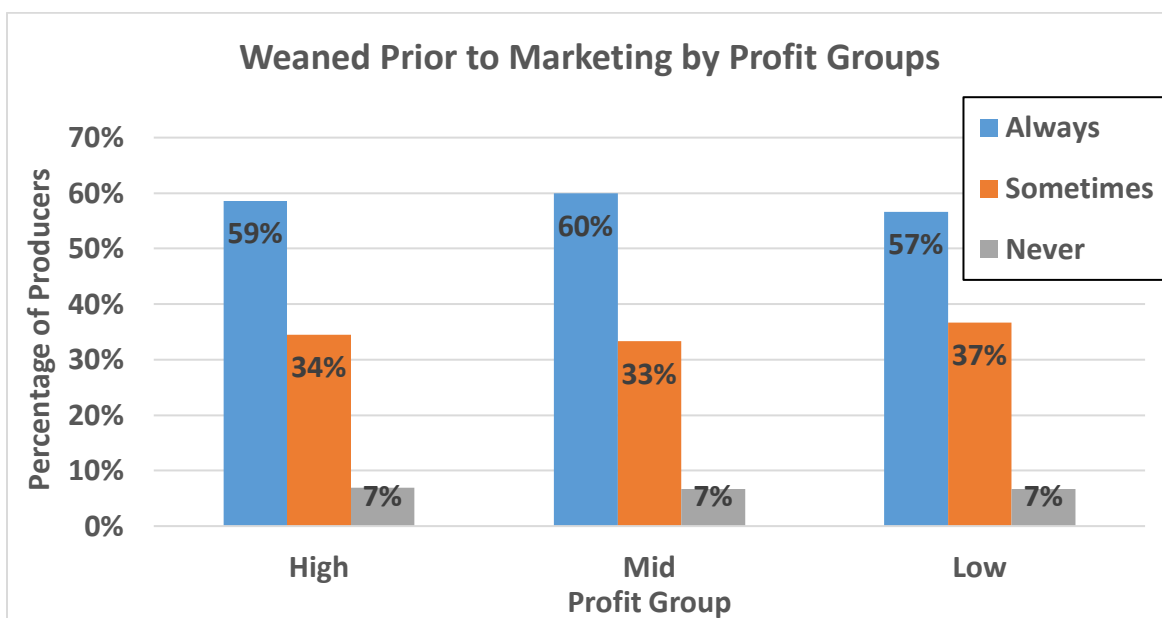
The use of local livestock markets was the primary marketing method for producers that sell calves as well as those that sell feeders. There was little difference between marketing methods between producer groups, with producers marketing calves using more direct sales and those that market feeders retaining more for feedlots.



## 2018 KFMA Cow-Calf Data Summary – Pre-Conditioning Practices

This section of the report will look at the additional collected data together with the enterprise data summary information for 2018, both by profitability and by marketing weight, beginning with an examination of pre-conditioning practices.

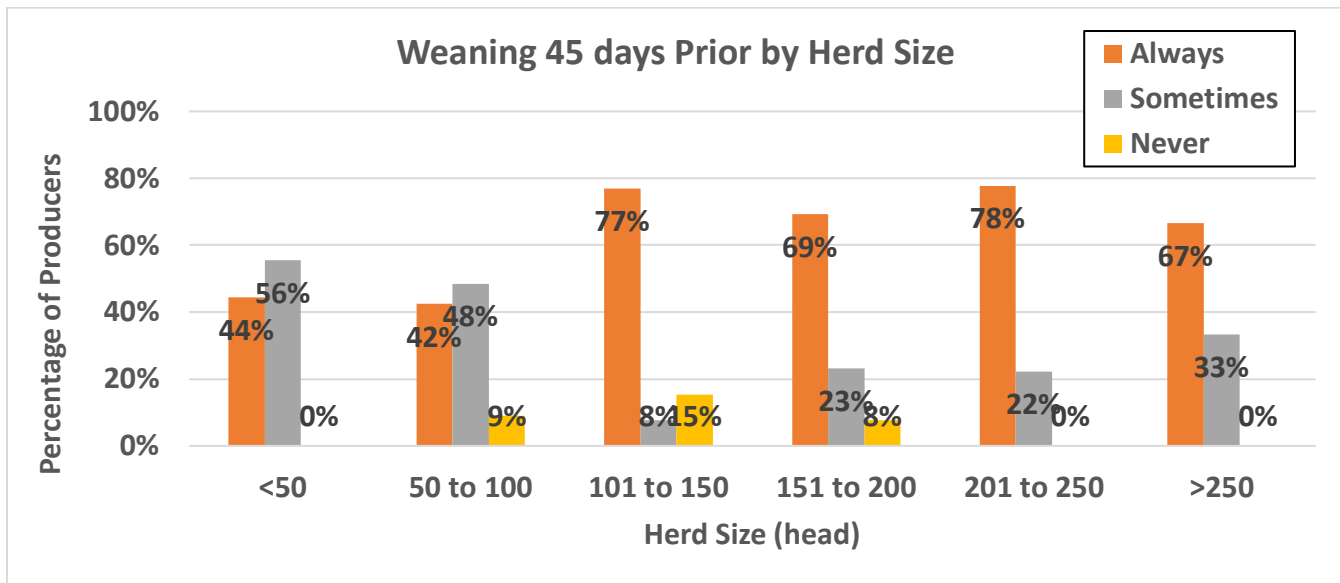
Respondents were asked to indicate which preconditioning practices they utilized. Producers could indicate if they always, most of the time, half of the time, sometimes, or never utilize certain preconditioning practices. These preconditioning practices include weaning 45 days prior to marketing, two rounds of respiratory vaccines, treatment for parasites, castration healed prior to marketing, dehorning (if applicable), and familiarity with feed bunks. For the purpose of managing and reporting of the data, the responses indicating a producer used a specific preconditioning practice most of the time, half of the time, and sometimes were condensed into one category titled sometimes. Therefore, the analysis looks at preconditioning practices as always, sometimes, or never being utilized by producers. Preconditioning practices were analyzed by looking at herd size as well as profit group.



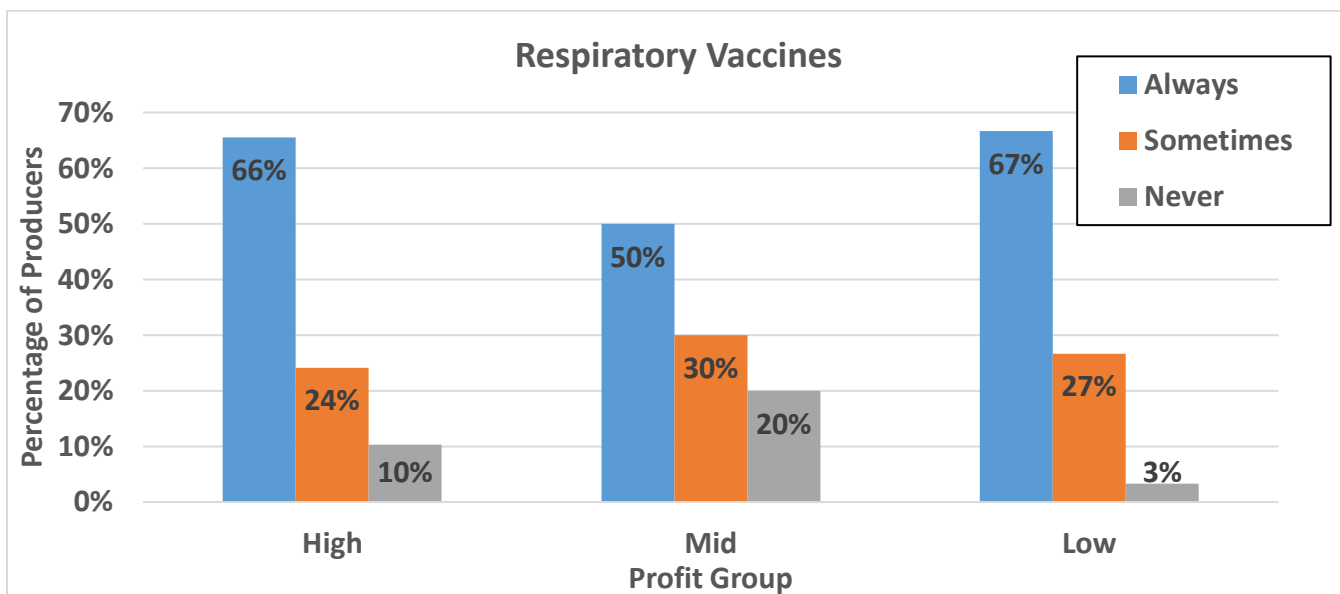
Weaning 45 days prior to marketing does not appear to impact the probability of which profit group a producer falls into, as 60% of producers in the low- mid- and high- profit groups all indicated they weaned 45 days or more prior to marketing.

When looking at weaning by herd size, the larger herds utilize weaning 45 days or more prior to marketing more frequently than the smaller producers. Nearly 70% of respondents with herds of 100 head or more

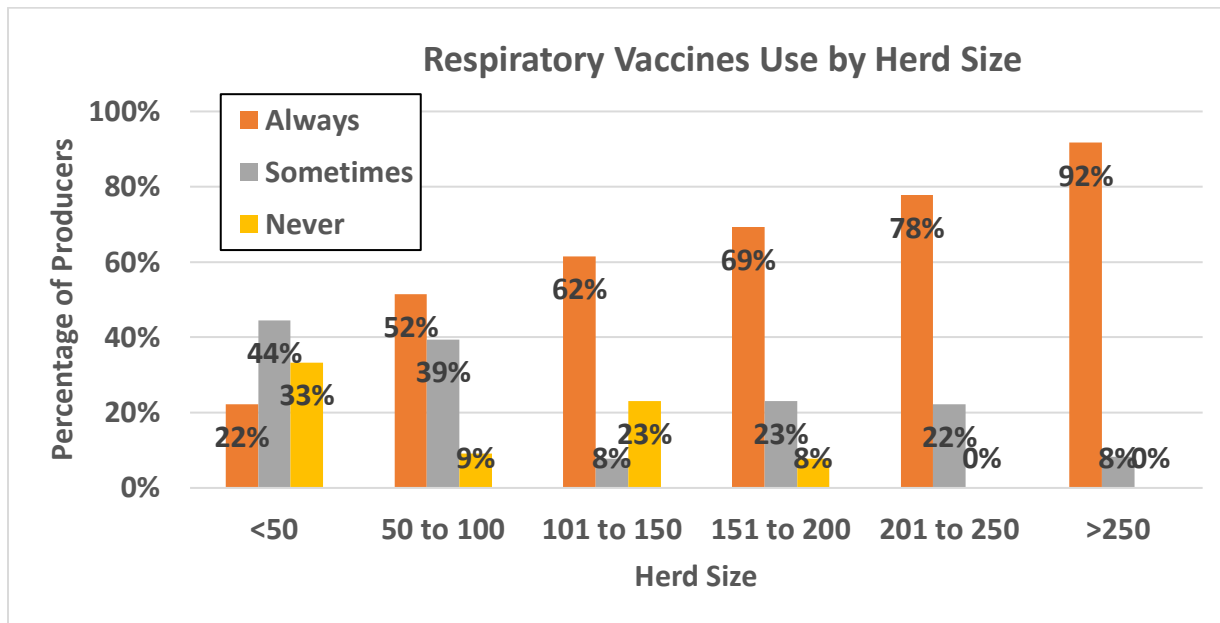
indicate they always wean at least 45 days prior to marketing, in comparison to smaller herds where only approximately 40% of producers indicate they wean 45 days prior to marketing.



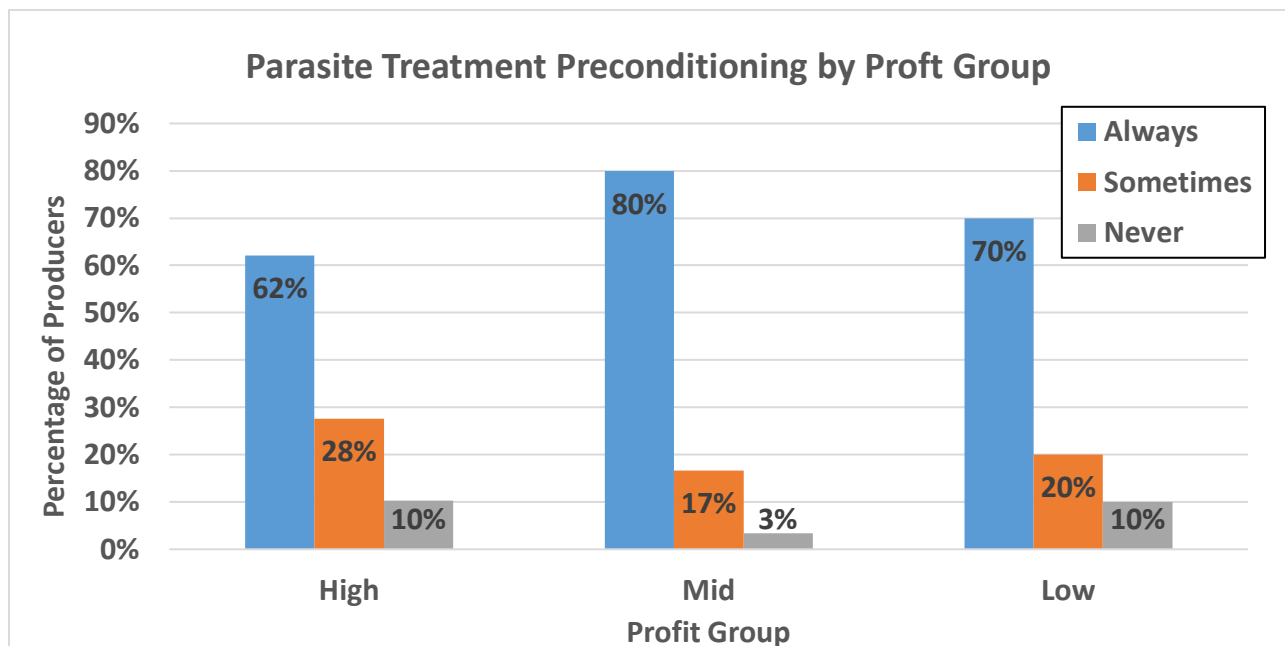
The use of two rounds of respiratory vaccines as a preconditioning practice was fairly common among all profit groups, with 66%, 50%, and 67% of producers indicating they always utilize two rounds of respiratory vaccines for our low-, mid- and high-profit groups respectively.



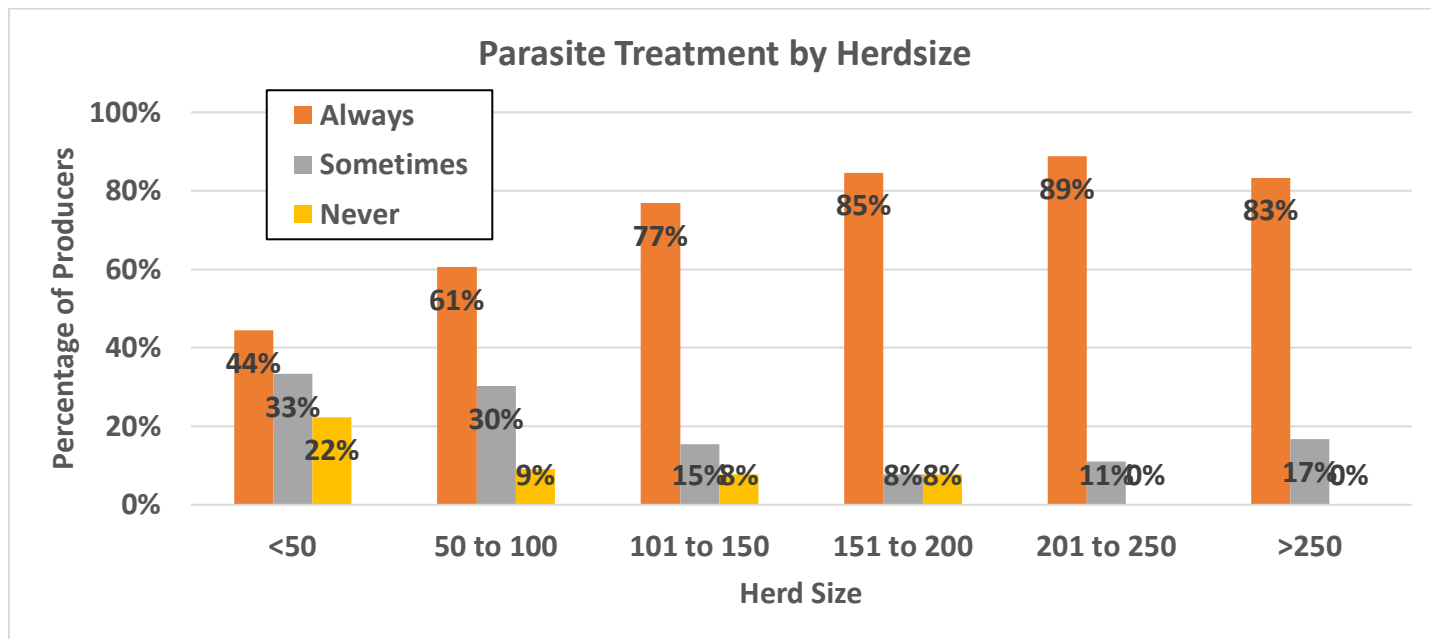
The use of two rounds of respiratory vaccines as a preconditioning practice is more common as herd size grows, with smaller producers choosing to only sometimes utilize two round of vaccines or to not utilize them at all.



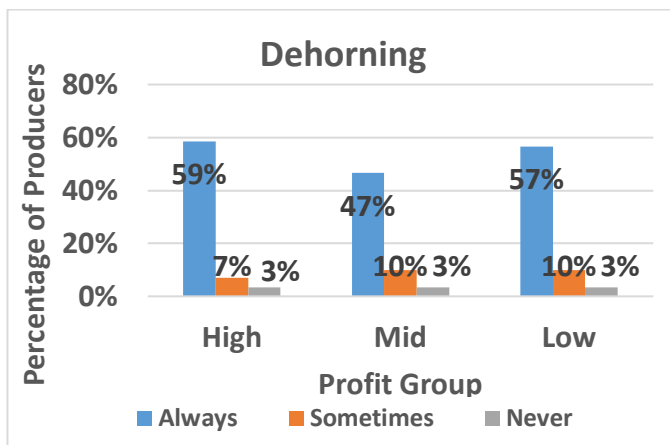
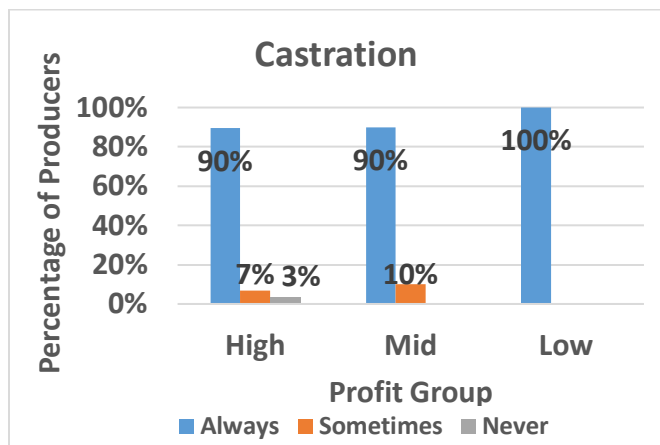
Parasite treatment was more frequently always utilized by mid- and low-profit groups.



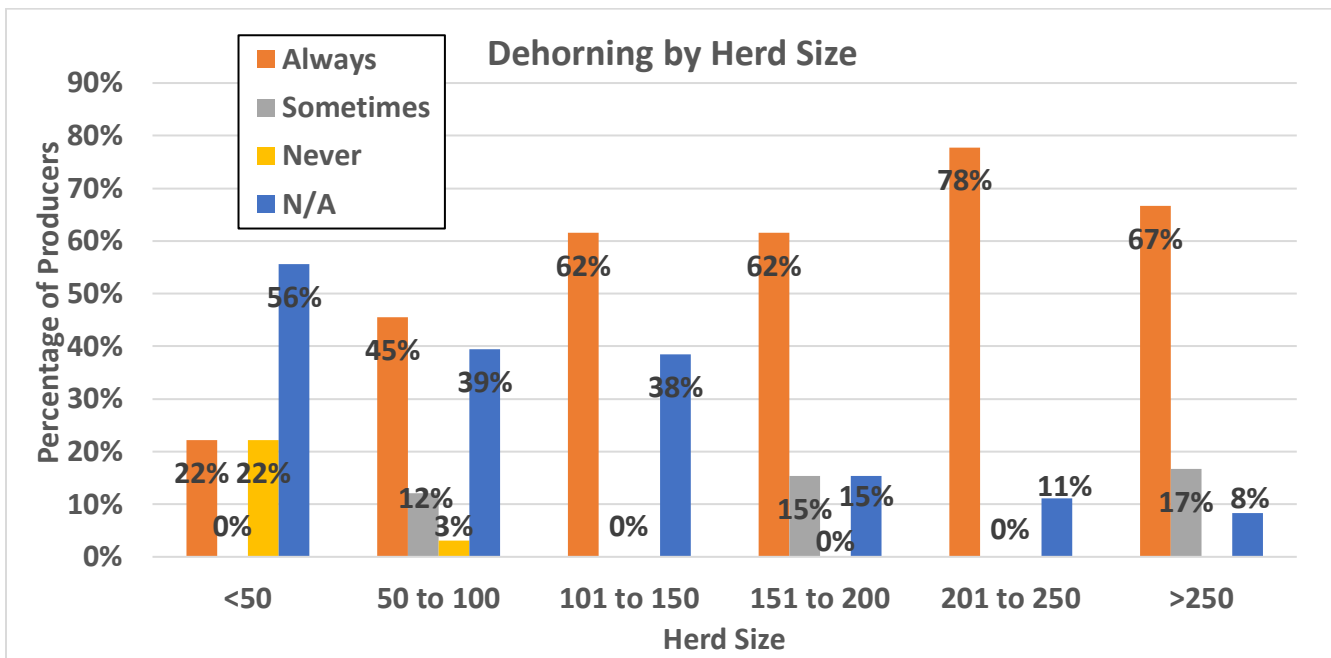
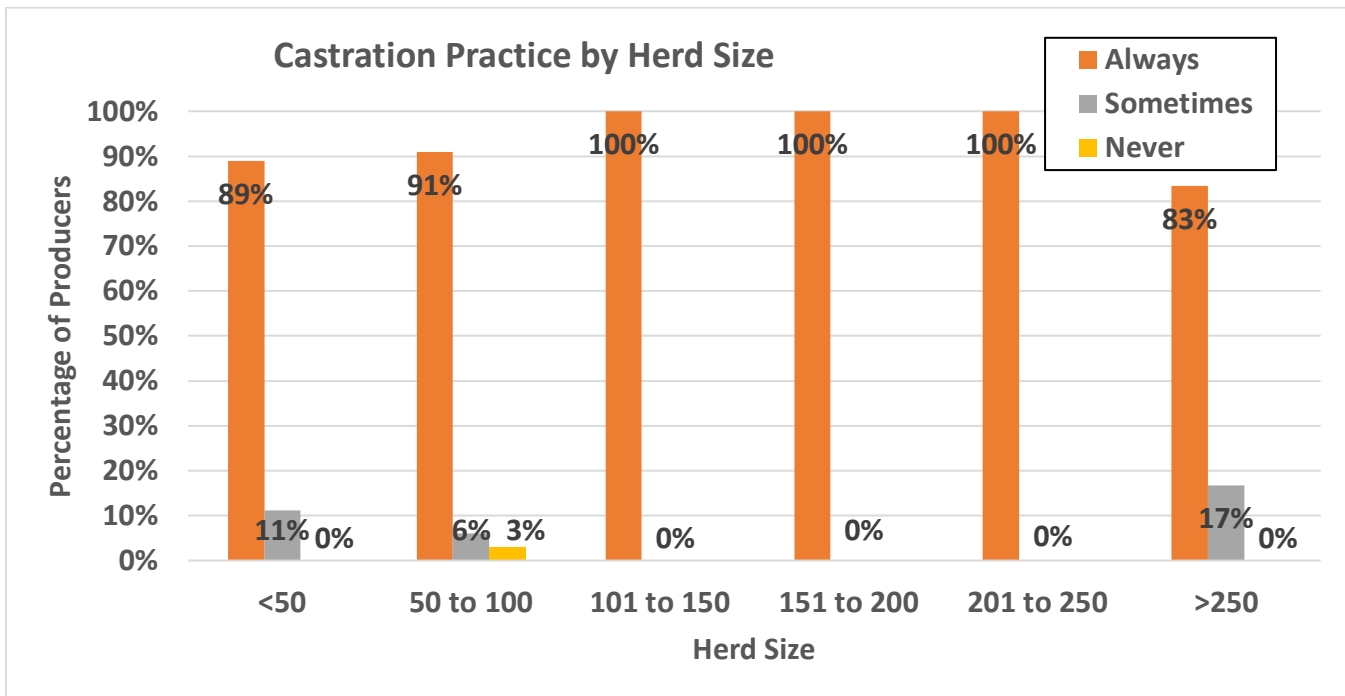
Parasite Treatment was more frequently always utilized by producers with larger herds, as well.



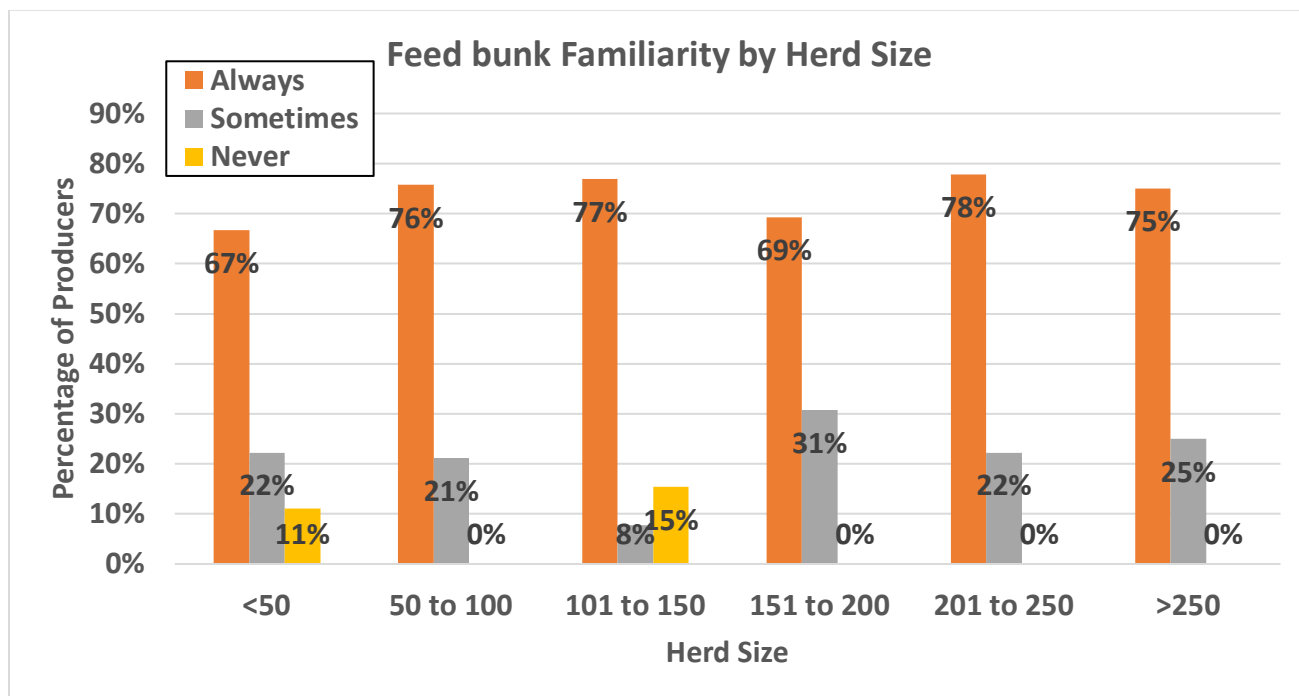
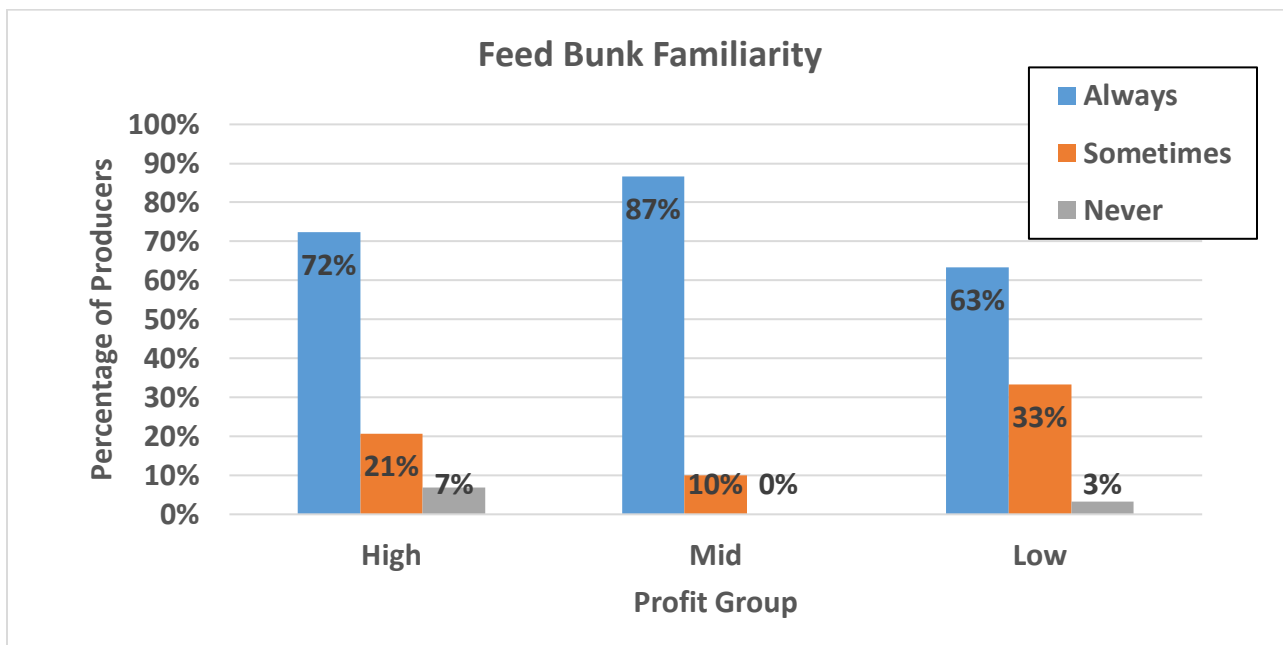
Castration and dehorning (where applicable) were almost always utilized by producers regardless of profit group or herd size. Some producers did choose not to dehorn, but castration was a common practice across all herd sizes.







Familiarity with feed bunks was similar across profit groups and herd sizes, but with a larger portion of smaller producers having never utilized feed bunks as a part of preconditioning.

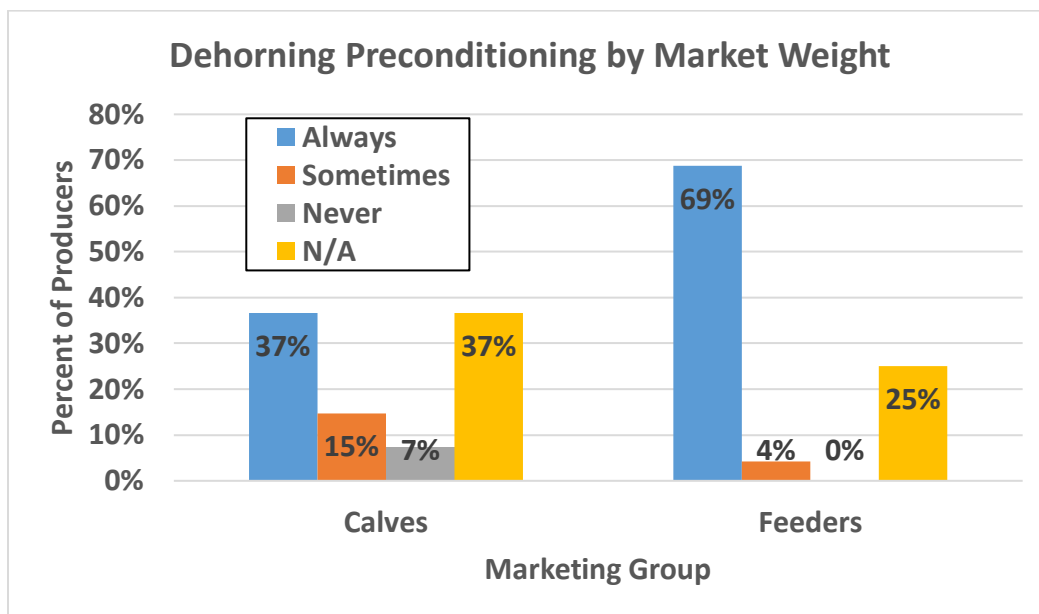


Preconditioning practices were also looked at in comparison to producer age, but with little to no difference between the use and non-use of certain preconditioning practices. Producer age and herd size was also considered with the overall average producer age of 59.7 years.

Herd Size	Average Producer Age
<50	61.8
50 to 100	58.2
101 to 150	56.9
151 to 200	60.1
201 to 250	56.2
>250	67.5
<b>Overall</b>	<b>59.69</b>

**Factors by Marketing Weight of Calves**

It was of interest to consider if certain preconditioning practices varied by marketing weight (those that sell calves compared to those that sell feeders). A comparison of dehorning, castration, and feed bunk familiarity between marketing weight groups can be seen in the graphs below. Producers that sell feeders tended to always utilize preconditioning practices more than those that sell calves.



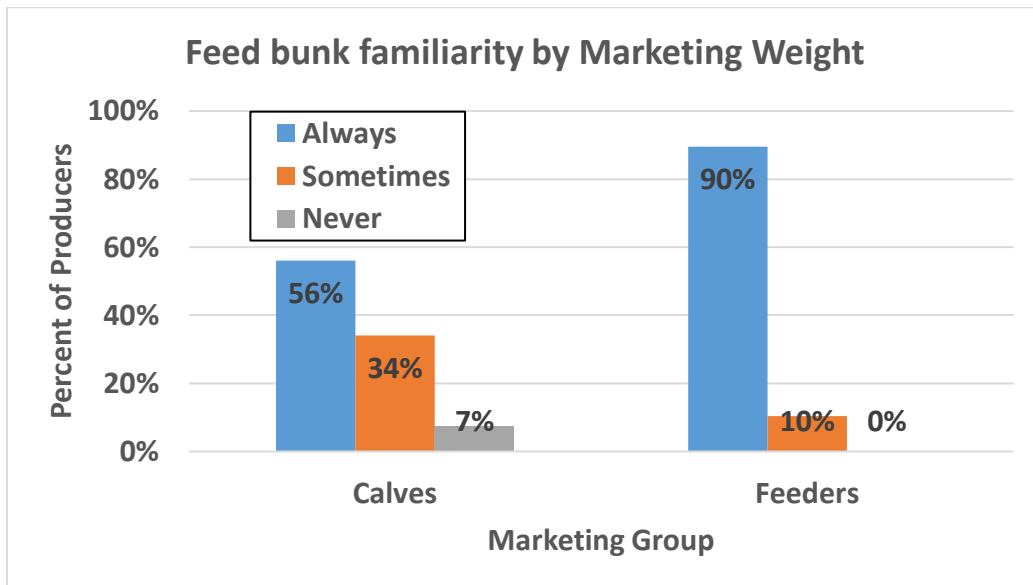
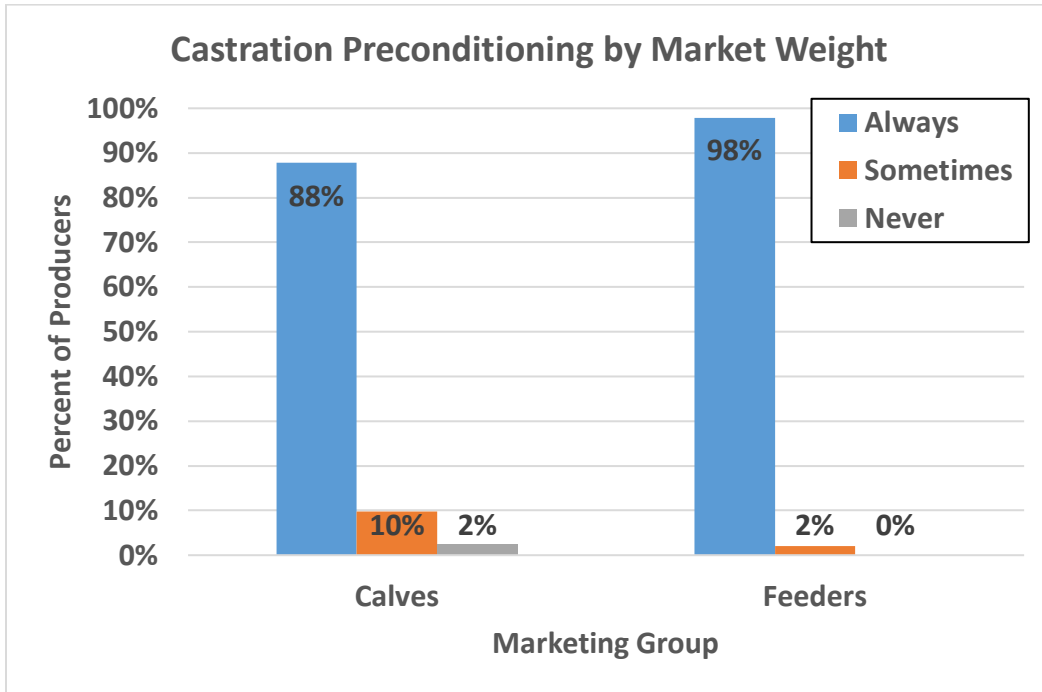


Figure 3. KFMA Additional Data Collection – 2018 Cow-Calf Producers

Farm Number \_\_\_\_\_ Name \_\_\_\_\_ Ag Economist \_\_\_\_\_

**KFMA Cow-Calf Management Data Collection, 2018**

1. Which of the following practices do you include as part of preconditioning?

	Always	Most of the Time	Half of the Time	Sometimes	Never	Not Applicable
a. Weaned at least 45 days prior to marketing						
b. Two rounds of respiratory vaccinations						
c. Treatment for parasites (internal and external)						
d. Castration (healed prior to marketing)						
e. Dehorning						
f. Familiar with feed bunks						

2. Do you individually identify cows? Yes / No Calves? Yes / No  
Please circle all method(s) ear tag electronic ear tag hot brand cold brand tattoo

3. Do you have pregnancy examinations performed on cattle? Yes / No  
Do you have Breeding Soundness Examinations performed on herd sires? Yes / No

4. What breeding programs do you implement within your herd. Please circle all that apply.  
BULLS *Purebred, same breed as cows* *Purebred, separate breed or cows are composite* *Composite*  
COWS *Purebred* *Composite*  
DO YOU KEEP HEIFER CALVES FOR REPLACEMENTS? Yes / No


5. Rank your bull selection criteria 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> on order of importance: \_\_\_\_\_ Bull Price  
\_\_\_\_\_ EPD's  
\_\_\_\_\_ Visual Appraisal

6. What months do you calve in? Please circle all that apply.  
*Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec.*

7. Circle your past year's hay-feeding season. (mark only one)  
*Less than 60 days 61-90 days 91-120 days 121-150 days More than 151 days*

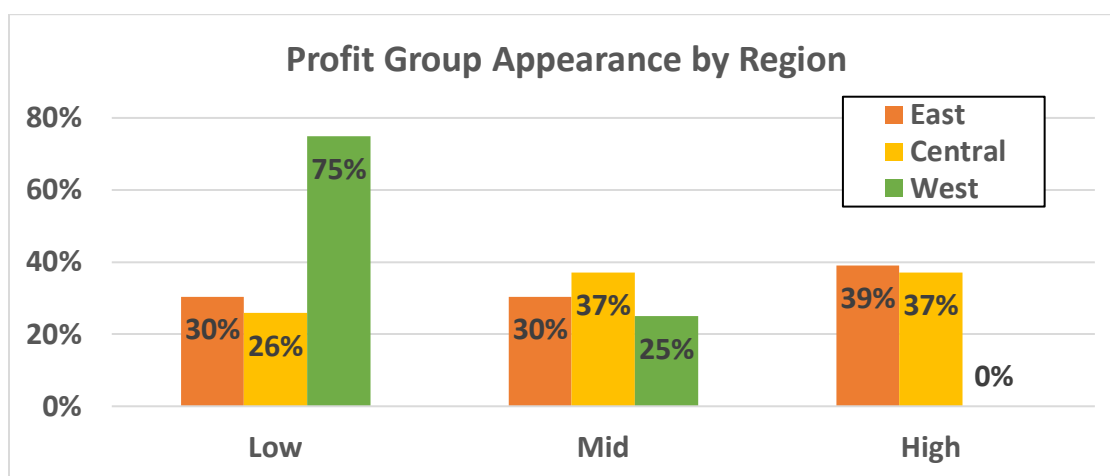
8. Place an X in front of the primary marketing method used for a **majority** of your cows and calves.

	<u>COWS</u>	<u>CALVES</u>
Sold through a local or regional livestock market (within 50 miles)	_____	_____
Sold through regional livestock markets (more than 50 miles away)	_____	_____
Sold direct from ranch	_____	_____
Sold through video / satellite auction	_____	_____
Retained through feedlot stage	_____	_____

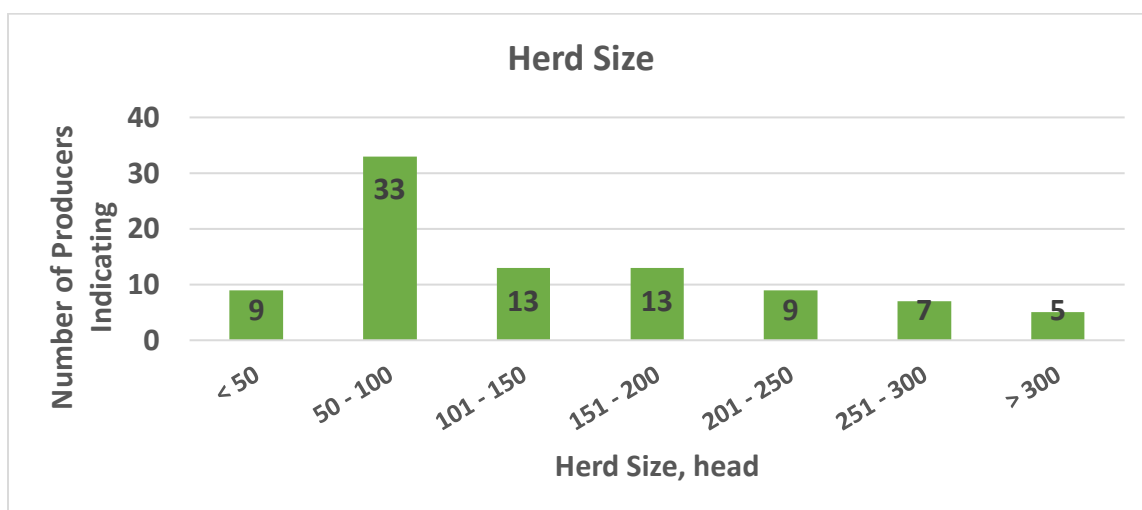


### Economic Analysis using KFMA 2018 Enterprise Data and Additional Survey Results

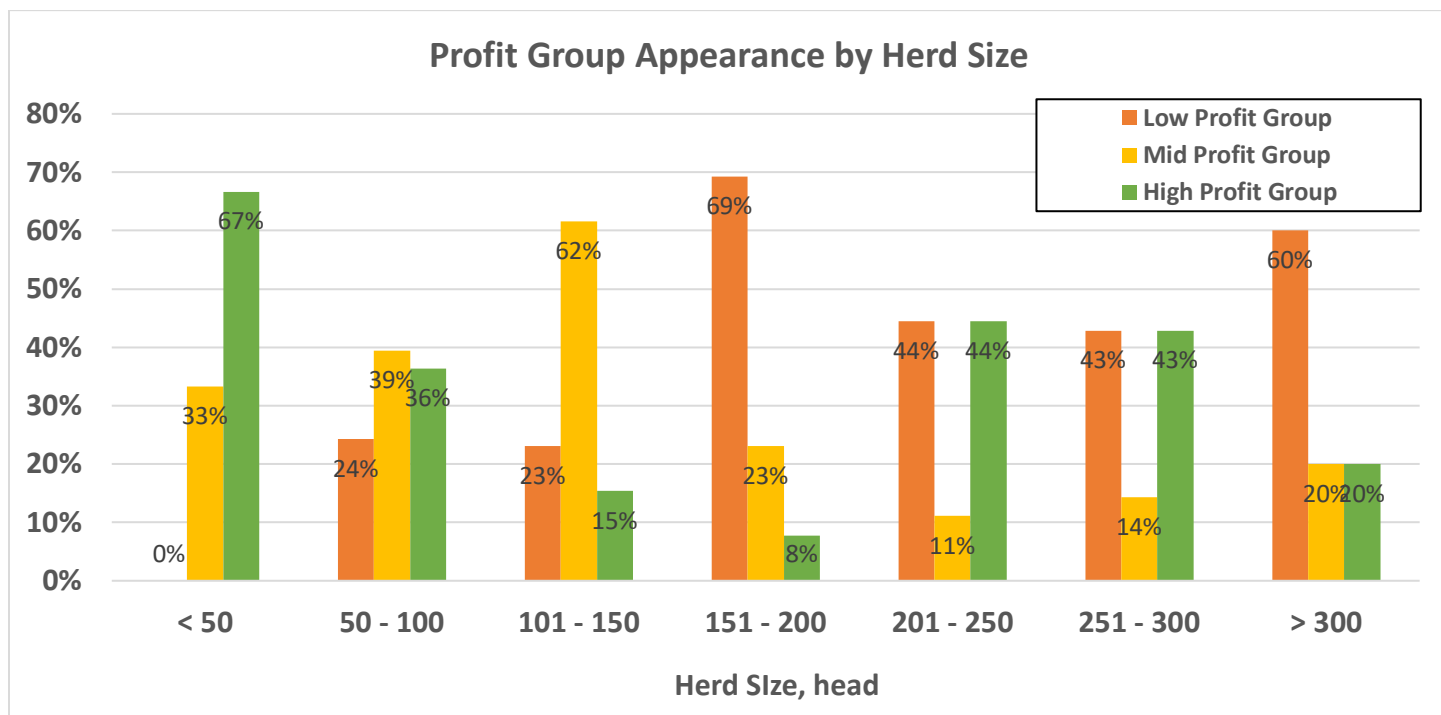
When matching the KFMA data with the additionally survey responses there are a total of 89 “matched pairs”. Forty-one of these were producers that sell calves and forty-eight were produces that sold feeders, we felt this was an even representation on which to move forward with our analysis. Within the producer group selling calves, 11 of the matched pairs were those that fell in the high-profit group, 16 in the mid-profit group, and 14 in the low-profit group. For the producers that sold feeders, 18 fell in the high-profit group, 14 in the mid-profit group, and 16 in the low-profit group. When combining producers that sold calves with those that sold feeders, we had 29 producers in the high-profit group, and 30 in both the mid- and low-profit groups. We believe this nearly even profit-third appearance allows for an adequate comparison when combining producers that market calves with those that market feeders.



Within the matched pairs, the average herd size was 140 head. Thirty-three of the eighty-nine matched pairs had a herd size between 50 and 100 head.



There was a large disparity and inconsistency in profit group appearance by herd size. For producers with less than 50 head, 67% of the producers appeared in the high profit group, with none appearing in the low profit group. However, 60% of producers with over 300 head were classified as the low-profit group. Additionally, appearance in the high- and low-profit groups was even for those producers with head between 200 and 300 head. This suggests that management decisions in areas other than herd size are directly impacting profitability.



The average herd size for each profit group can be seen in the table below.

Average Herd Size by Profit Group	
High-Profit Group	126
Mid-Profit Group	111
Low-Profit Group	181

To better understand how pasture and feeding costs were related we looked at the relationship between days of hay feeding and pasture acres per cow. The following table provides the average pasture acres per cow for

each segment of the hay feeding season in which producers could select (less than 60 days of hay feeding, 60-90 days, etc.). The table also provides the minimum and maximum of pasture acres per cow for each segment of the hay feeding season.

		Pasture Acres per Cow		
		Average	Min	Max
Length of hay Feeding Season (days)	<60	12.52	7.34	23.40
	90	10.99	3.15	21.48
	120	8.57	1.99	16.07
	150	8.20	0.54	12.52
	>150	7.82	0.90	13.77

For those producers that indicated longer hay feeding seasons, we see a decrease in average pasture acres per cow, as was expected. A correlation between these two factors is seen below.

	<i>Pasture Acres per cow</i>	<i>Feeding Days</i>
Pasture Acres per cow	1	
Feeding Days	-0.13369267	1

A similar relationship was analyzed comparing non-pasture feed costs with the length of hay feeding season.

		Non-Pasture Feed Costs per cow		
		Average	Min	Max
Length of hay Feeding Season (days)	<60	\$298	\$114	\$537
	90	\$341	\$100	\$538
	120	\$334	\$124	\$634
	150	\$344	\$156	\$675
	>150	\$466	\$206	\$590

	<i>Feeding Days</i>	<i>Non-Pasture Feed Costs per cow</i>
Feeding Days	1	
Non-Pasture Feed Costs	0.31960	1



This report is only a snapshot of cow-calf producers in the KFMA database for 2018. The results can be highly variable due to the singularity of analysis or due to human error regarding the data collection questions and responses. KFMA will be seeking to improve the process for this additional collection, as well as, increasing the number of years of data. Our desire is to garner better data from cow-calf producers so that we can provide useful analysis on management practices that are impacting profitability as well as provide benchmarking information for producers.

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