



CHARACTERISTICS OF THE BEEF X DAIRY INDUSTRY IN NEW YORK STATE

A summary of survey data collected from
New York State farmers in 2020-2021

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Margaret Quaassdorff, MS
Betsy Hicks, MS

Cornell Cooperative Extension

Northwest NY Dairy, Livestock and Field Crops Program
South Central NY Dairy and Field Crops Program

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Courtesy of R. Holtz



01

ABOUT THE SURVEY

The usage of beef sires on dairy farms more than doubled from 2015 to 2019 [3]. In recent years, New York sale barns reported that beef x dairy (BxD) calves consistently brought \$50-\$150 over a standard dairy bull calf [1]. Because of the premium for black-hided calves, many dairy farmers have tried to capitalize on this novel market without fully understanding the BxD industry and the implications of an inferior calf entering the beef supply chain. Because of this discrepancy, we wanted to more fully understand the thought process behind many aspects of using beef sires on dairy cattle. It is our aim to share these findings to establish connections and improve the BxD industry as a whole.

Data presented in this white paper are from a Qualtrics survey conducted online between the months of October 2020 and June 2021. Farmers were surveyed to assess how they utilize beef sires in their dairy herds, their criteria in selecting dairy animals to breed to beef sires, and sire selection criteria. Farmers were also surveyed on their management practices of producing, raising, marketing and selling BxD cattle, as well as information needed. The survey was open to all farmers in New York State who had an interest in, or were currently producing or growing, BxD animals.

Percentages reported are based on the number of participants responding to each individual question unless otherwise indicated. Not all participants answered each question in the survey. The number of participants who responded is reported with each survey question.

DEMOGRAPHIC RESULTS

Participants were asked to identify in which county their farm is located. Thirty-three counties in New York State were represented by the 107 responses to this question, of which the most responses were recorded for Wyoming (n=14), Ontario (n=13), Livingston (n=8), and Cortland (n=6). As shown in red in Figure 1, counties from across much of the state were represented.

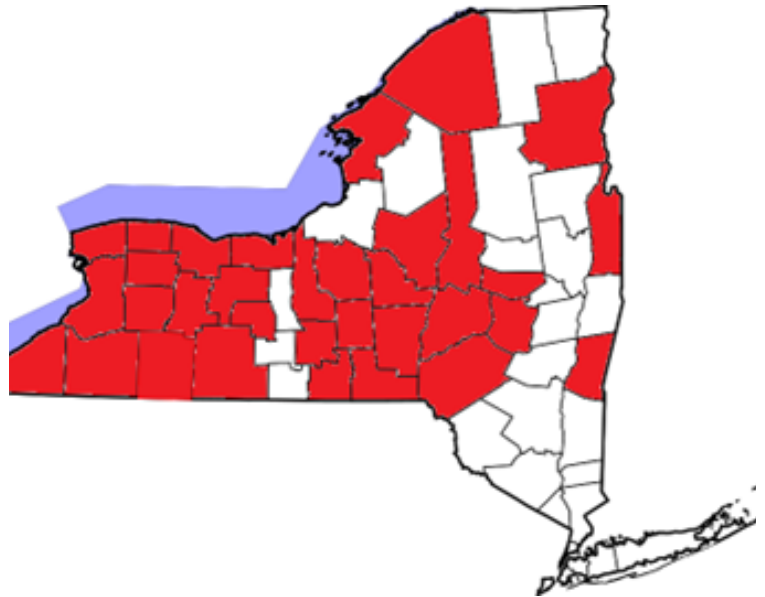


Figure 1. Map showing counties in New York State where farmers identified their farm location.

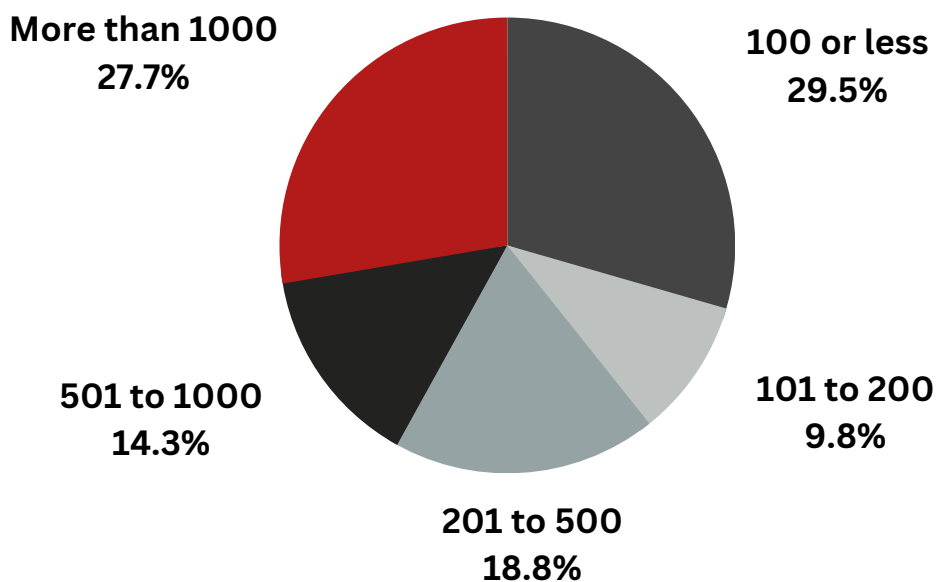


Figure 2. Herd size (milking and dry) of farms that responded to the survey.

Figure 2 shows the dairy herd size distribution of farmers who responded to the survey. Almost 60% of herds were either more than 1,000 cows, or 100 cows or less.

Seventy-nine percent of farmers reported **Holstein** as the predominant breed of dairy cows in their herd, with 13% reporting **Jersey**, and 8% reporting “other”, which included crossbreeds, Brown Swiss, and Milking Shorthorn.

Are you using beef sires/semen in your dairy herd?

When asked if farmers were using beef sires/semen in their dairy herd, 80% (n=90) responded that they were **currently using** beef sires on dairy cows and 6% (n=7) said they **weren't currently, but had used beef sires in the last twelve months**. Twelve percent (n=13) responded that **no, they never had**, and 2% (n=2) responded it had been **more than twelve months** since they had used them in their herd.

For those who had used beef sires/semen, we asked how many years they have incorporated it into their breeding program. **Figure 3** shows the most common response was two to three years (38%, n=36), followed by one to two years (27%, n=25), three to five years (16%, n=15), greater than five years (12%, n=11), and less than 12 months (7%, n=7).

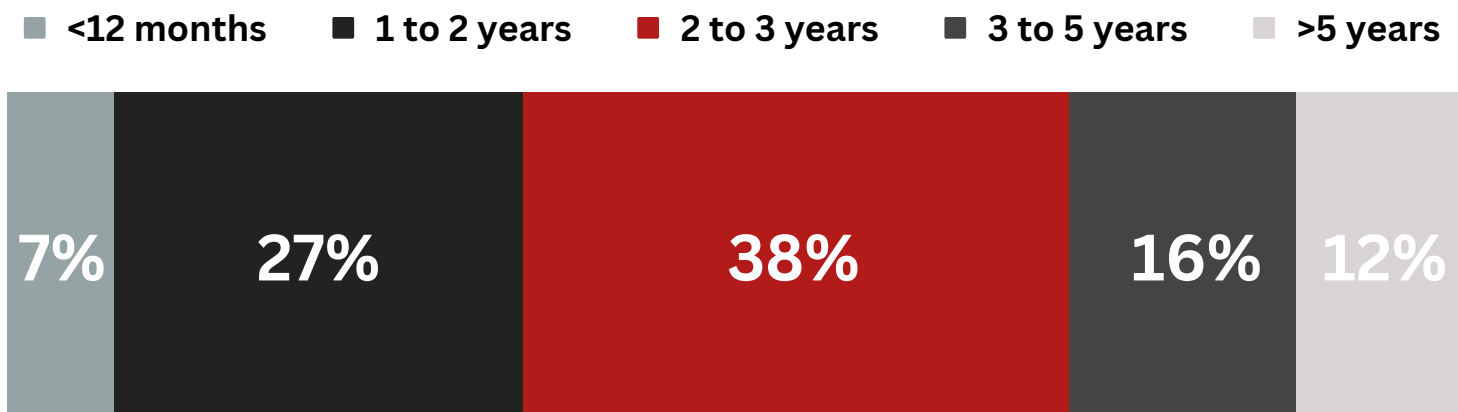


Figure 3. Length of time farmers have been using beef sires in their dairy herds.

For those who responded that they were not currently using beef in their breeding program, we asked “why not?” Of the 15 recorded responses, eight included “don’t want to”, four included “have been growing the herd”, two included “not enough information on the topic”, and one person stated it would involve owning another bull or starting to use artificial insemination.

70% of respondents stated that usage of beef sires has increased. Common answers to “why” included genetic advancement, reproductive goals, replacement needs, and more usage of sexed semen.

22% stated that it has stayed the same, and only 5% stated that usage has decreased. Two people chose *other*, one stating that it was their first year so they had no opinion yet.



How are you using beef genetics?

For those who responded they were using beef sires/semen in their dairy herd, 81 respondents stated they were using **artificial insemination**, seven were using a **live bull**, and six respondents stated they were using **both** artificial insemination and live bull.



How do you incorporate beef genetics in your dairy herd?

When asked how they decided to incorporate beef sires/semen into their herd, responses included (grouped by common theme, where one response could fit more than one theme):

- **Genetic advancement/Reproductive Goals (41 responses)** – including basing decisions on net merit or genomic groupings of cows; genetic improvement or progress; and using beef in repeat breeders, in cows over a certain number of breedings, or in hard breeders
- **Prices (29 responses)** – including low prices for dairy calves, better prices for beef x dairy calves, changes in beef and dairy markets, and price of beef semen
- **Replacement needs (23 responses)** – including balancing replacement inventory with needs, not needing all dairy heifers, and being overstocked on heifers
- **Herd health reasons (4 responses)** – including smaller calves for first calf heifers, and high probability for being culled for health reasons
- **Other (9 responses)** – including diversification, added farm income, restrictions on income from milk sales

What percent of lactating cows/heifers are bred to beef sires?

	Lactating Cows		Heifers	
<u>Percent of animals bred to beef</u>	<u>Farms (%)</u>	<u>n</u>	<u>Farms (%)</u>	<u>n</u>
Zero	2.3	2	35.1	33
Less than 10%	15.7	14	45.7	43
11 to 25%	28.1	25	7.5	7
26 to 35%	9.0	8	3.2	3
36 to 50%	14.6	13	2.1	2
More than 50%	30.3	27	6.4	6
Total	100	89	100	94

Table 1. Percent of lactating cows and heifers in the herd bred to beef sires.

Eighty-nine and ninety-four farmers reported the percent of lactating cows and heifers, respectively, bred to beef sires on their farms. Farmers were breeding different amounts of their lactating herds to beef sires. Over 30% were using beef sires on more than half of their mature cows (n=27), with another 43.8% of farmers (n=39) breeding a quarter or less of their mature cows to beef. Most farmers (n=43) were only using beef sires on less than 10% of their replacements, or not at all (n=33) (Table 1).



Courtesy of B. Hicks

What are the primary ways you determine the percentage of your dairy herd to breed to beef sires?

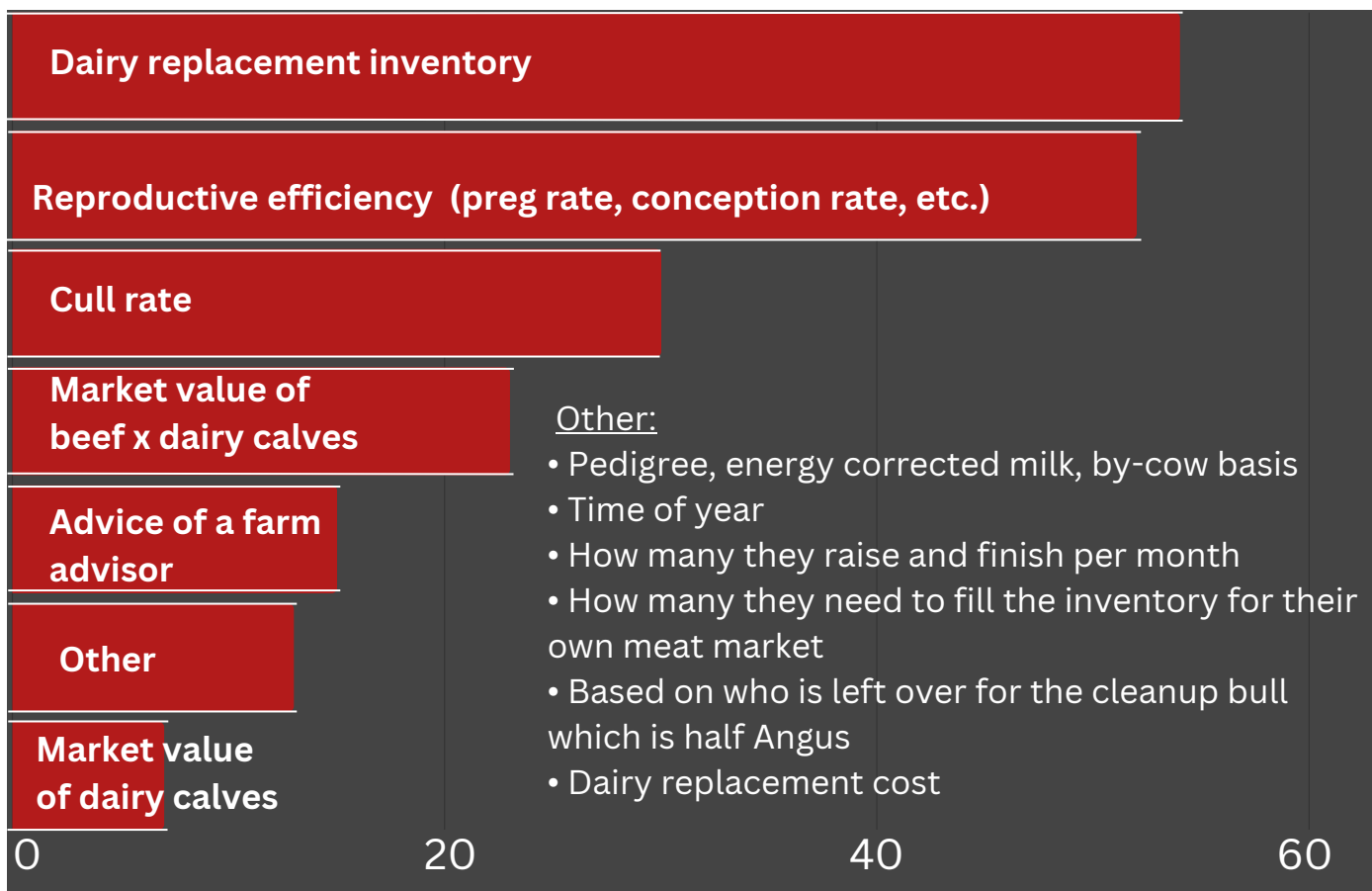
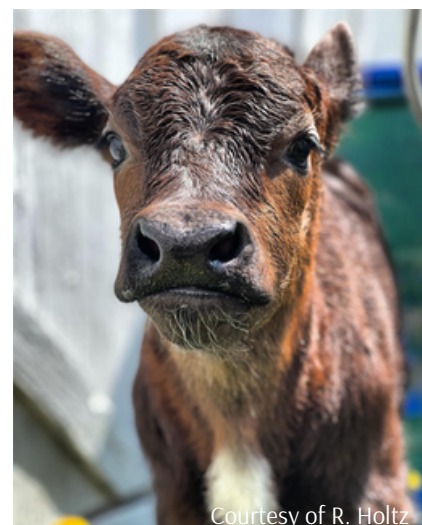


Figure 4. Primary ways that farmers determine the percent of their dairy herd to breed to beef where the X-axis is the number of responses received for each criterion.

Participants were asked to choose all the criteria that they used to determine the percentage of their dairy herd to breed to beef sires. Respondents (n=87) chose at least one criterion, and a total of 194 responses were received. Dairy replacement inventory and reproductive efficiency were the most popular choices. Responses to the "Other" are shown in Figure 4.





Do you use consultants?

A total of 88 participants responded and were allowed to choose more than one answer. A total of 109 responses were recorded with the most popular answer being that dairy farmers did not have a consultant that helps to determine the percentage of animals in their herd to be bred to beef sires/semen (n=47). For those who used a consultant, Bull Stud/AI Company was the most popular choice (n=34), followed by veterinarians (n=15), and nutritionists (n=6). Financial Advisors (n=2), Extension (n=2), other animal health companies (n=1), and “other” consultants (n=2) were also included.



What lactation(s) is/are bred to beef sires/semen?

Out of 88 total participants, 78 said that lactation number was not a criterion considered for breeding a dairy cow to a beef sire, and that any cow could be bred to beef. No farms were only breeding 1st lactation, or only 2nd lactation cows to beef. Seven farms reported only breeding 2nd lactation and greater cows to beef sires, while three reported only breeding cows in their 3rd lactation or greater to beef sires.



How do you decide to breed a cow to a beef sire/semen?

Dairy farmers (n=89) were asked to “choose all that apply”; 176 responses were received:

- “Failure to conceive to dairy sire” (n=57)
- “Milk production data on the cow” (n=38)
- “PTA or parent average (non-genomic)” (n=36)
- “Genomic testing” (n=11)
- “Random decision” (n=10)

Responses in the “Other” category (n= 24) fell within the areas of:

- Age of the cow/lactation number and number of times bred
- The cow’s composition and type
- Pedigree/cow families and how many daughters were on the farm from the cow in question
- Health characteristics of the cow (chronic mastitis, lameness)
- Whether or not they had a cleanup bull
- Switching their herd to beef



Beef Breed Use for Beef x Dairy Sires

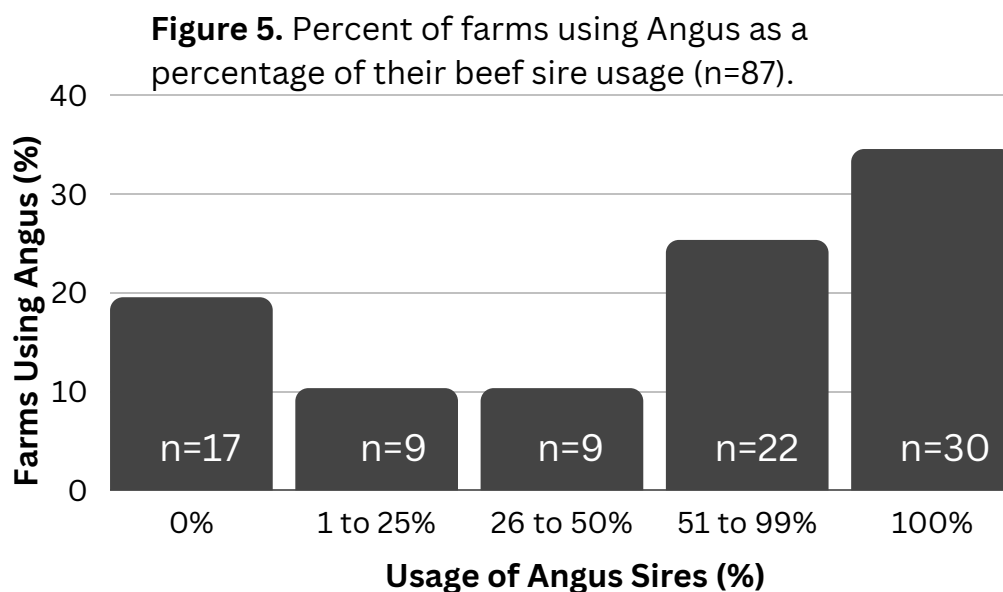
Eighty-seven farmers reported the beef breeds used as sires for BxD, as well as the percentage of use of each breed in their dairy herd. Respondents could indicate other breeds not listed within the question (Table 2).

	Angus n=87	Limousin n=87	Simmental n=86	Limflex n=87	SimAngus n=87	*Other breeds n=87
# Farms using each breed	70	24	10	8	10	22
Mean % Use in Herd	62.13	15.37	3.78	2.93	3.16	11.15
Median % Use in Herd	80	0	0	0	0	0
St. Dev	40.18	31.97	15.97	11.76	11.57	26.79
Min	0	0	0	0	0	0
Max	100	100	100	80	75	100
*Other breeds used (written in) were Hereford (n= 12), Charolais (n=3), Wagyu (n=3), Red angus (n=2), ABS InFocus (n=1), Milking shorthorn (n= 1), and Galloway (n=1).						

Table 2. Beef breed use for Beef x Dairy sires on dairy farms.

ANGUS AS A BxD SIRE

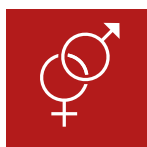
Angus was the most popular beef sire breed selected. Figure 5 shows the breakdown of usage of Angus sires reported by 87 herds. Almost 35% of farmers reported using only Angus as their BxD sire of choice.





RECORD KEEPING

Farmers were asked if they recorded which beef sires they used for each breeding in their dairy herd. Sixty-three farmers responded that they kept track of this with record keeping software (e.g., DairyComp 305, PCDart, BoviSync, etc). Twenty farmers responded that it was written down on paper, and two stated it was recorded another way (i.e., live bull). Seven farmers responded that specific beef sires were not recorded.



BLENDED STRAWS AND SEXED SEMEN USAGE

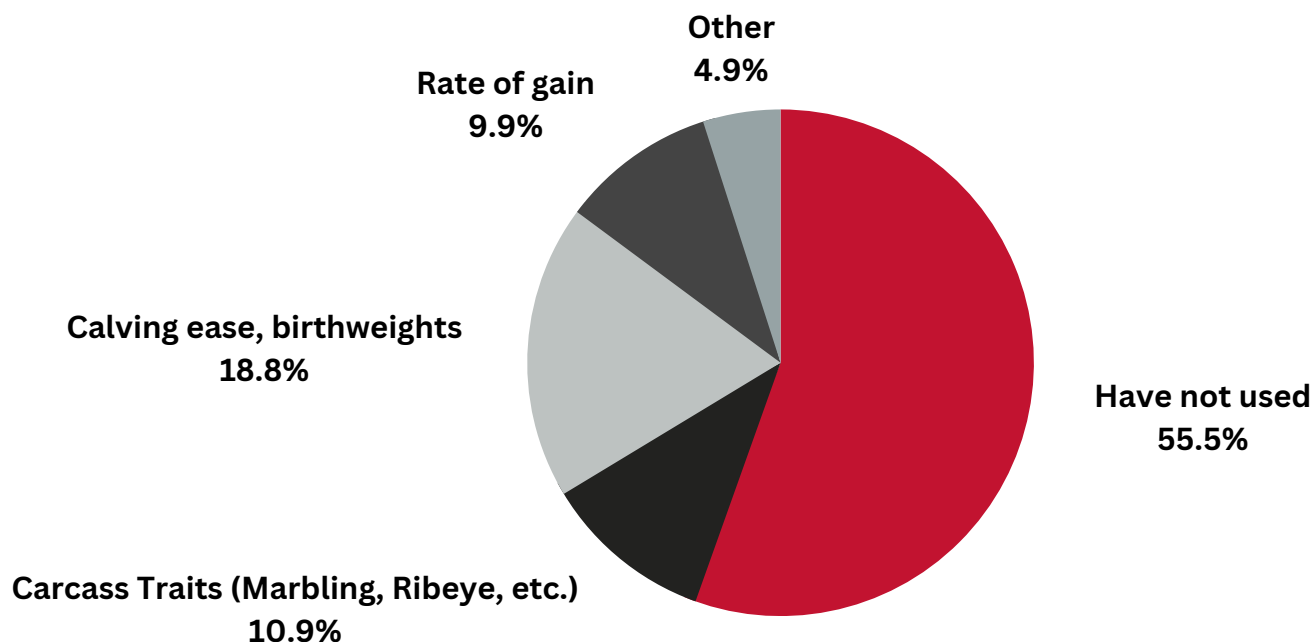
Farms were asked about using blended straws of semen for breedings: 72% of respondents said no (n=63) while 28% said yes (n=24).

In addition, 96.5% of farmers had not used beef semen sexed for male calves on their dairy cows.

EXPECTED PROGENY DIFFERENCE (EPD)

Almost half of all farmers (n=86) responded that they had no understanding of EPDs (47.7%), while the other half had a range of some (23.3%), to basic (15.1%), to intermediate (10.5%), to a high level of understanding (3.5%). For those who used EPDs to select a beef sire (Figure 6), calving ease and birth weights (n= 19) were the most popular followed by carcass traits (marbling, ribeye, etc.) (n=11), rate of gain (n=10), and “other” (n=5).

Figure 6. Percent of farms using Expected Progeny Differences to select a beef sire for dairy cattle.

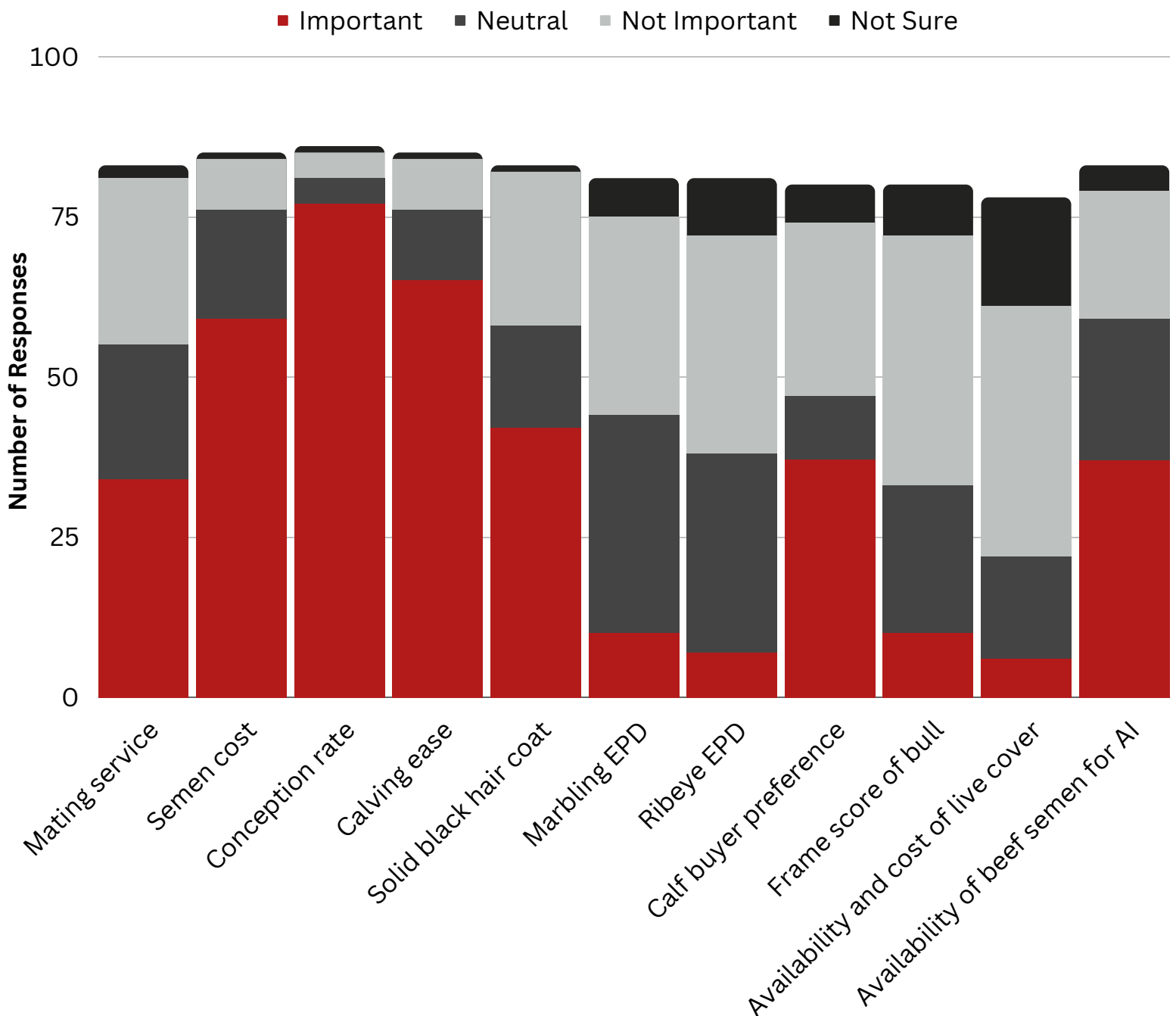




How important are the following criteria when selecting a beef sire/semen for your herd?

When asked about selecting a beef sire/semen for their herd, respondents were asked to rank the importance of criteria. **Figure 7** shows that **conception rate**, **calving ease**, and **semen cost** ranked among the most important, while the **frame score of the bull**, **availability of live cover**, and **marbling and ribeye EPD** were not important.

Figure 7. Importance of criteria when choosing a beef sire for dairy cows.

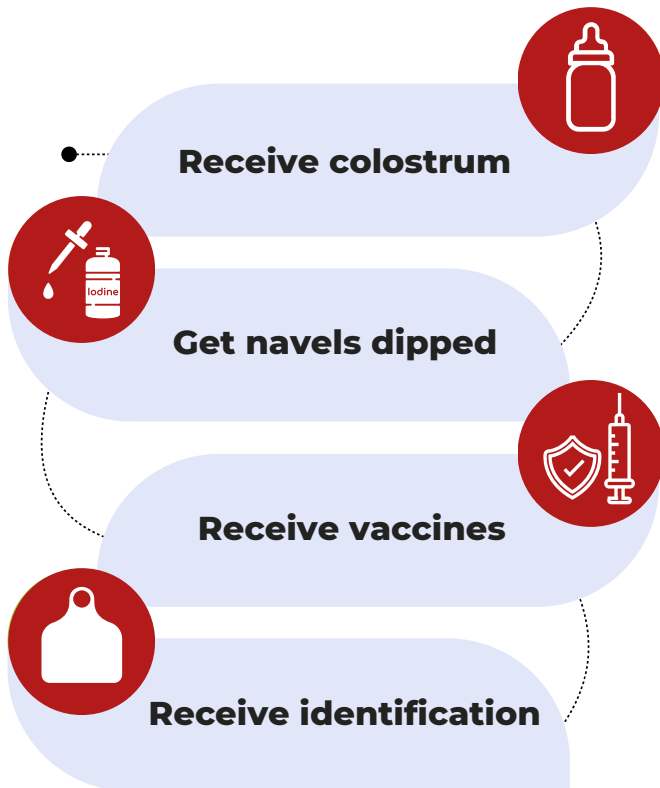


NEWBORN PROTOCOLS

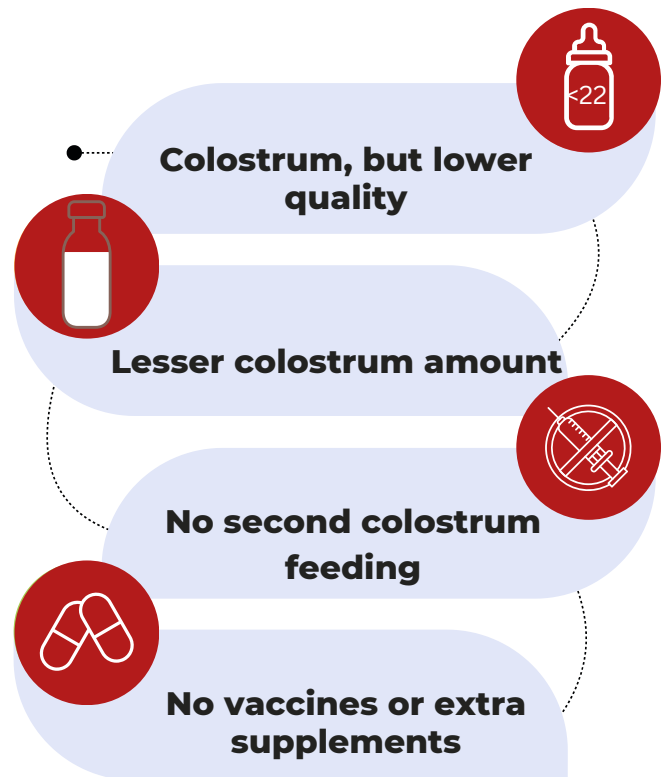
Farmers (n=73) reported how newborn beef x dairy calves were managed on the farm:

- 67% said their protocols are the same as those for their dairy heifer calves
- 26% said they have protocols, but they are different than those from their dairy heifer calves
- 7% said that they do not have protocols

Some protocols for both dairy replacements and BxD calves are the same in that both:



Some protocols differed between dairy replacements and BxD calves in that BxD calves receive:





Do you have vaccination protocols specific to your beef x dairy animals?

When asked if the farm had vaccination protocols specific to the BxD animals, most respondents reported that the animals were vaccinated the same as dairy replacement heifers (n=6), or that the veterinarian (n=5), the buyer (n=1), or the farm (n=1) developed specific protocols for the BxD animals. Four out of the 17 respondents reported not vaccinating BxD animals at all.



Do you track birth weights and/or dystocia of your beef x dairy calves?

Out of 73 responses, more than half of all farmers track dystocia when it comes to their BxD calves, while only 15% of farmers reported that they track birth weights.

Forty-five percent reported neither tracking birth weight nor dystocia case (Figure 8).

If the respondent answered "No", they were prompted to explain.

Some of the responses were:

- "The calves just get sold and/or leave within a week"
- "There haven't been calving issues"
- "Not sure what I would do with the information"
- "They haven't had any problems"
- "Just don't"

**Yes, dystocia
40% (n=29)**

**Yes, both
11% (n=8)**

**Yes, birth weights
4% (n=3)**

**No
45% (n=33)**

Figure 8. Number of farmers (n=73) who reported If they tracked beef x dairy birth weights and/or dystocia.



**GOAL AND SELF-REPORTED AVERAGE OF BEEF X DAIRY CALF
BIRTH WEIGHTS**

Table 3 shows reported numbers for BxD goal birth weight and average birth weight. Two farmers reported not having a goal birth weight and five reported not knowing their average birth weights. Farmers were also asked to report the range of weights they were seeing in their BxD calves. The minimum birth weight reported was 45 lbs, and the maximum was 125 lbs. Some farms had a range of only 10 lbs difference, while others had up to 75 lbs difference. The average range was 36.3 lbs difference, meaning calves in general were not very uniform.

	Goal birth weight for beef x dairy calves (lbs) n=46	Self-reported average birth weight of beef x dairy calves (lbs) n=42
Average	84.4	83.9
Median	85	85
Minimum	50	65
Maximum	125	120

Table 3. Reported numbers for BxD goal birth weight and average birth weight.



It is interesting to note the number of farmers who responded to the questions about average birth weights (n=42) and birth weight ranges (n=36 known; n=5 unknown) because only 11 reported that they record birth weights.



If raising beef x dairy calves during the milk phase, what are they fed?

A total of 40 responses were collected, showing that farmers were feeding a variety of feeds to beef x dairy calves with the most popular items being waste milk and starter grain (Figure 9).

Some farmers were also feeding milk replacer or saleable milk, along with dry hay.

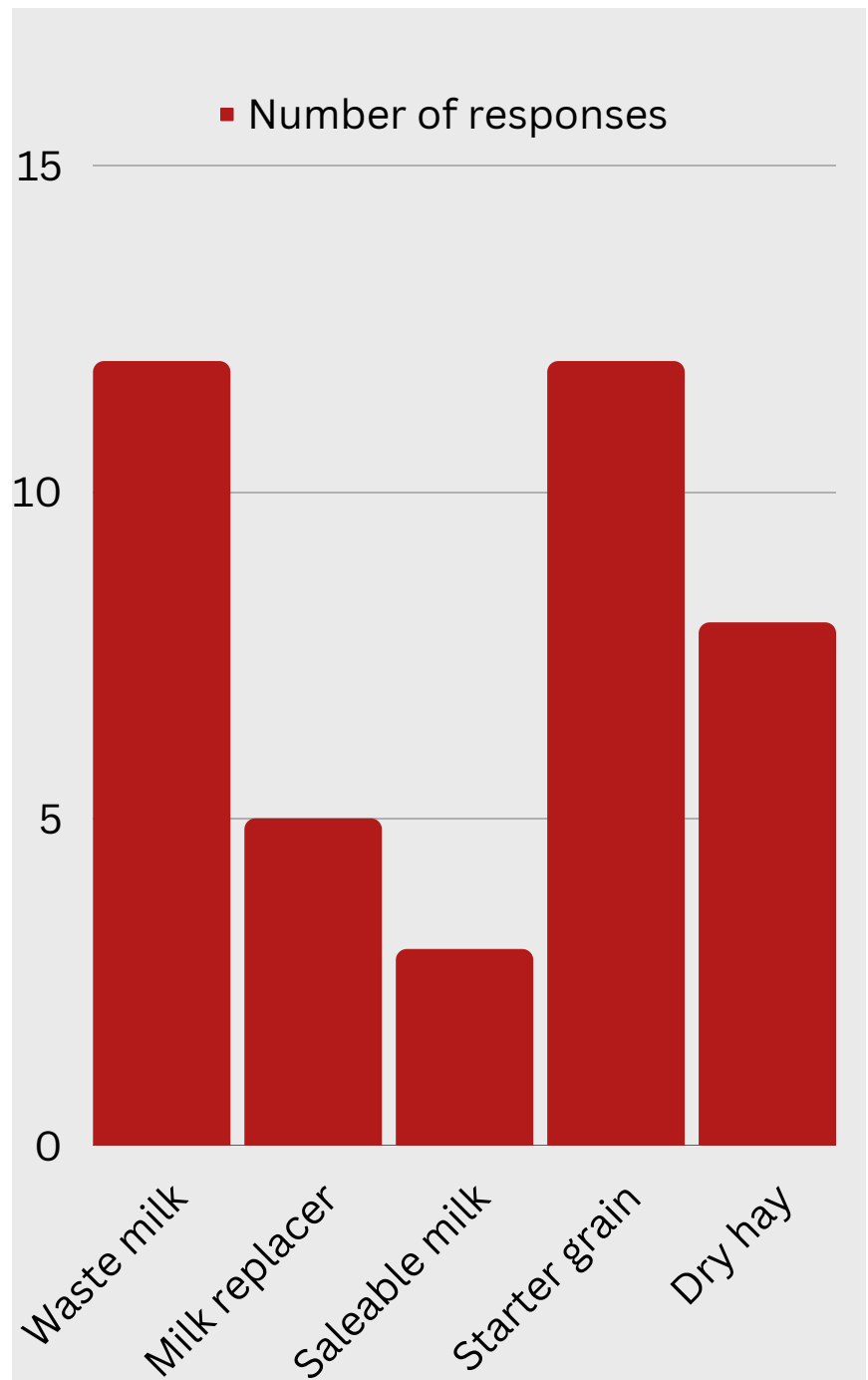


Figure 9. Feed options for BxD calves during the milk phase.



Courtesy of M. Quaassdorff

POST-WEANED BEEF X DAIRY ANIMAL DIETS AND HOUSING

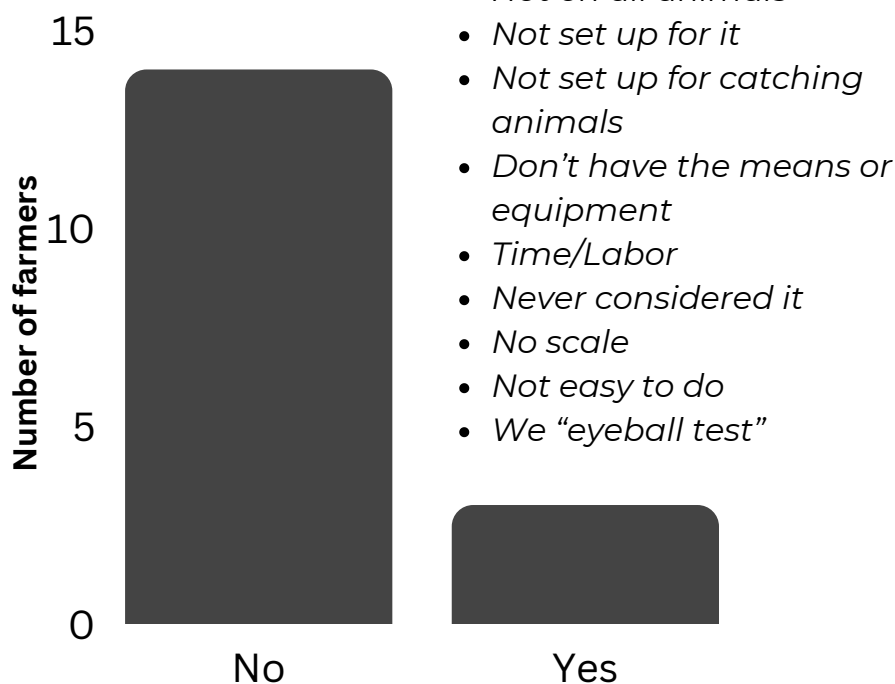
Out of 16 respondents raising post-weaned BxD calves, 14 said that they are fed what the dairy replacement heifers are fed, one said that their nutritionist formulated a diet specifically for the BxD calves, and one reported that they develop a diet specific to these animals at the farm. In addition, when asked about raising practices of BxD calves of any stage, seven out of 16 respondents reported that BxD animals are raised for part of their lives together with dairy heifers, whereas five out of the 16 reported that BxD animals were raised together in the same pens or groups as dairy heifers for their entire lives. Four out of 16 respondents stated that BxD animals are kept separate from the dairy herd.

It is interesting that in some cases, the data can suggest that although housed in separate pens, the BxD cattle are fed the same diets as replacement heifers. This brings about further discussion as to the correct diets and best management practices for raising BxD cattle destined for the beef market, and whether those are different than the common practices for raising dairy replacement heifers.



Courtesy of G. Carpenter


Do you track growth rates of your beef x dairy animals?




If "No", why not?

- No compensation
- Not on all animals
- Not set up for it
- Not set up for catching animals
- Don't have the means or equipment
- Time/Labor
- Never considered it
- No scale
- Not easy to do
- We "eyeball test"

GROWTH RATES AND COSTS AT DIFFERENT LIFE STAGES

 Only three of 17 farmers growing BxD animals said that they tracked growth rates (Figure 10). When asked about growth rates for specific life stages, only one farmer out of 17 provided numbers.

 Only three of 15 farmers reported costs per head or per life stage. Because of the limited data, numbers are not reported.


 Only one out of 15 farmers reported growing BxD feeder calves with the use of hormone implants.

Figure 10. Farmer response to growth rate tracking.

There are some challenges in measuring the outcomes of nutritional programs when weights and growth rates are not measured on beef cattle. Capturing this information and tying it back to input costs is something we think is very important when measuring the success of the management decisions pertaining to especially BxD animals.

Think like a beef producer...

What is your end goal?

What are the inputs? What do they cost?

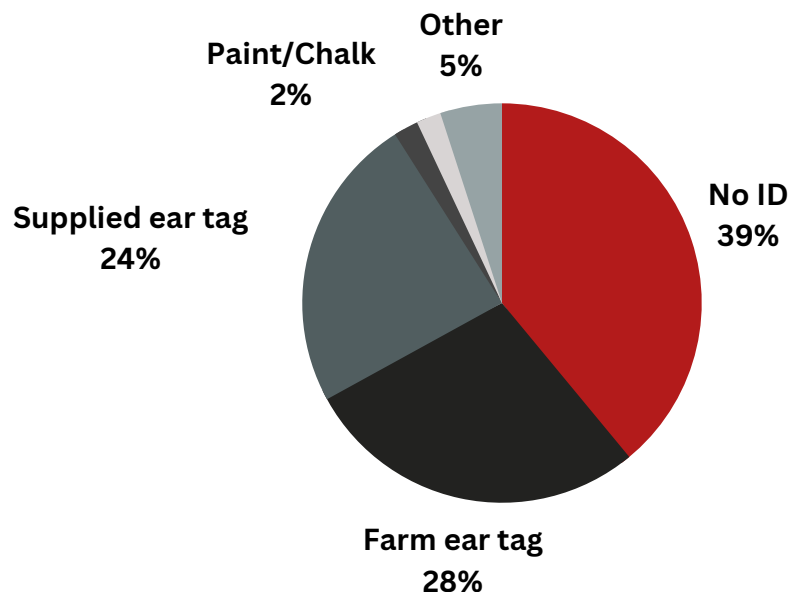
What is your target weight by what age?

How efficient are you in that process?

What is your cost per lb of gain, and how many lbs of gain do you need to put on within a set time frame?



Figure 11. Ways BxD cattle are identified when they leave the farm.



How are beef x dairy calves identified?

Thirty-nine percent of farmers reported that BxD cattle were not identified in any way when they left the farm. Twenty-eight percent were identified with a farm ear tag, while 24% were identified with an ear tag supplied by a bull stud or branded program. Only two percent were identified with an RFID button and another two percent were identified with paint or chalk. Included in the five percent "other" category were "truck driver supplies ear tags" and "Calves no, adults with farm tag" (Figure 11).

AGE AT TIME OF SALE

Eighty-seven farmers reported at what age they typically sell their BxD cattle. Of those most commonly reported, 66 sold calves at less than a week old and 21 farmers reported selling at 1,100 pounds to finished weight. Many farmers reported selling BxD cattle in more than one age category, however of the 66 selling at less than a week old, 51 farmers reported that as the only time frame they sell BxD cattle.

Where do beef x dairy calves go?

Of those 87 farmers, 58 reported not knowing where their cattle went after being sold. Ten reported they knew that they stayed in NY, while 13 stated they knew they traveled to a state in the Midwest. Six reported "other", which included Texas (n=1), local buyers (n=2), or did not give further information.

What time of year do you sell?

Eighty-two of those farmers reported selling BxD cattle year-round. One reported selling in the spring only, one in the winter only, and three selected "other" but did not give further information.



Courtesy of M. Quaassdorff



How are you selling the majority of your beef x dairy animals?

Sixty-two farms reported selling calves less than a week old; most were using the sale barn as an outlet, 15 were selling them privately, and nine had a rolling contract with a marketing partner.

Only five farms reported selling the majority of their calves as weaned; three were using the sale barn as an outlet, one sold them privately, and one had a rolling contract with a marketing partner.

Of the 17 farmers selling the majority of their BxD as finished cattle, a difference is seen in that most were direct marketing, several were selling privately, and a few were sending them to the sale barn. The "other" was that they put one in the freezer for themselves every year (Figure 12).

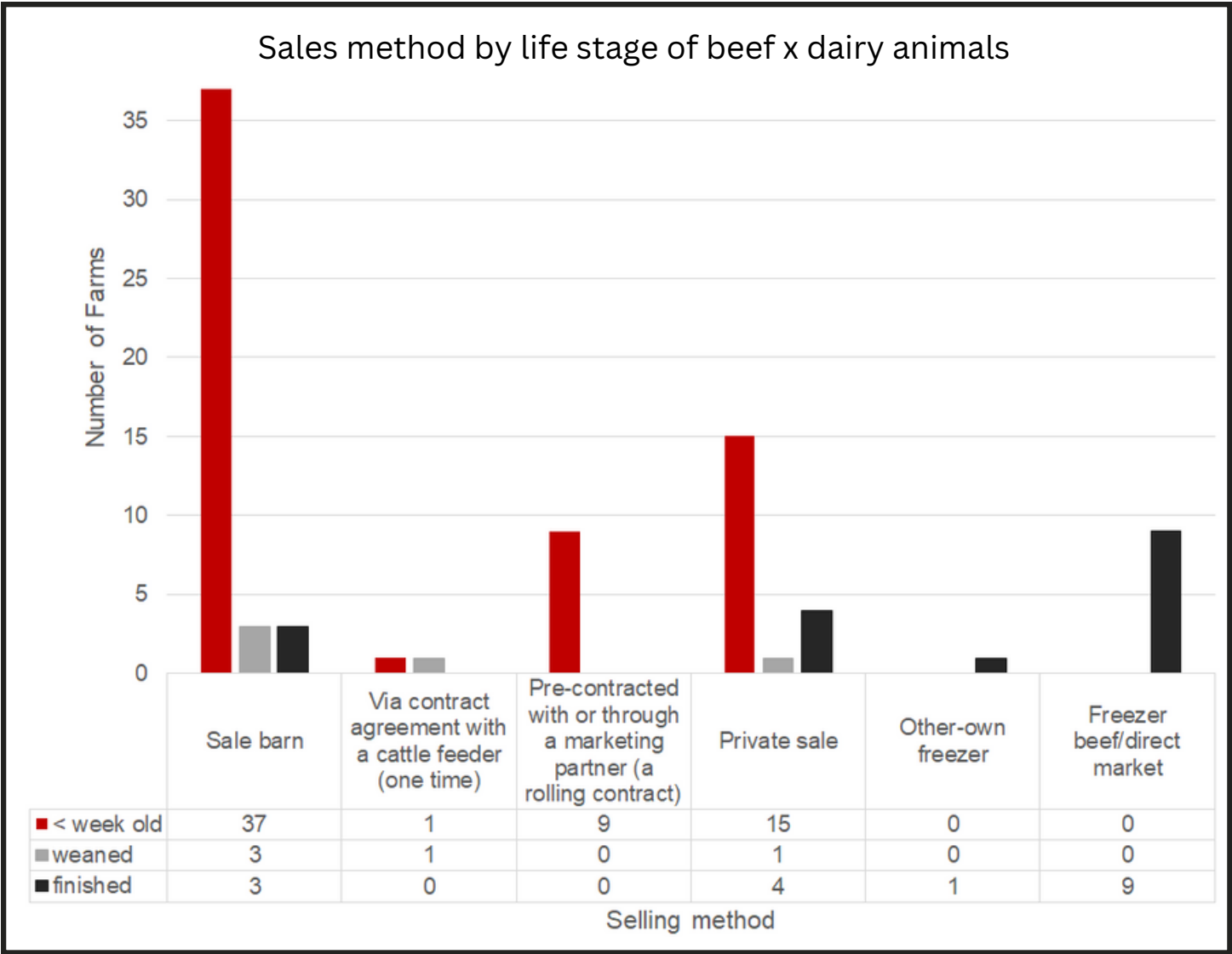



Figure 12. Number of farms reporting sales method by life stage for beef x dairy animals.

BEEF X DAIRY CATTLE SOLD ANNUALLY AND PRICES RECEIVED 2020-2021

Table 4. Number of BxD calves sold per year per farm and price received per head or pound.

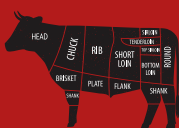
 Number of BxD Calves < 1 week old Sold (PER YEAR)			
Average	Median	Minimum	Maximum
261.4	100	1	2500

\$ Received / Head			
Average	Median	Minimum	Maximum
\$160	\$175	\$25	\$250

\$ Received / lb.			
Average	Median	Minimum	Maximum
\$1.62	\$1.75	\$0.40	\$2.05

45 farms reported numbers for sales of newborn BxD calves. The results are summarized in Table 4.

Table 5. Number of finished BxD animals sold per year per farm and price received per head or pound.

 Number Finished BxD Animals Sold (PER YEAR)			
Average	Median	Minimum	Maximum
20.7	6	2	80

\$ Received / Head			
Average	Median	Minimum	Maximum
\$1,283	\$1,250	\$950	\$1,650

\$ Received / lb.			
Average	Median	Minimum	Maximum
\$1.38	\$1.43	\$0.71	\$2.00

10 farms reported sales of finished BxD animals. The results are summarized in Table 5.

Data collected for sale numbers and prices on weaned through pre-finished BxD animals were limited. The sample size was too small, and the range of animal weights/ages was too large to get an accurate representation, and therefore these numbers are not reported.



DISCOUNTS RECEIVED AT THE SALE BARN

Farmers were asked which discounts they received when marketing their BxD cattle at the sale barn. They could select more than one response, and could include additional responses. A total of 113 responses were collected. One farmer reported a calf being unsold.

Genetic Challenges

- Not solid black hair coat (n=21)
- Underweight (n=21)
- Looked like dairy (n=15)
- Heifer (n=14)

No Discounts or Not Sure

17 farmers reported not receiving any discounts and the same number (n=17) reported not being sure whether or not they received any discounts.

Management Challenges

- Navel not dipped (n=4)
- Presence of horns (n=2)
- Knuckling (n=1)
- Improperly castrated (n=0)

Only 15% of farmers reported receiving no discounts, which is an area for improvement. Another 15% are unsure if they received discounts, which suggests that some farmers are either not receiving the information or do not know where to source it.

Of all the criteria for discounts received at the sale barn, farmers can most directly improve the management of the calf at the farm in an attempt to avoid future discounts. Not sending a calf that is unfit for transport or without its navel dipped are easy improvements to make. Calves that are underweight could be kept and fed longer if the farm deems it profitable. Some challenges may require farmers to focus on genetic selection to create a calf with more desirable traits for the beef sector.



Courtesy of M. Quaassdorff

RESOURCES REQUESTED BY FARMERS

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Figure 13. Resources requested by farmers (n=169).

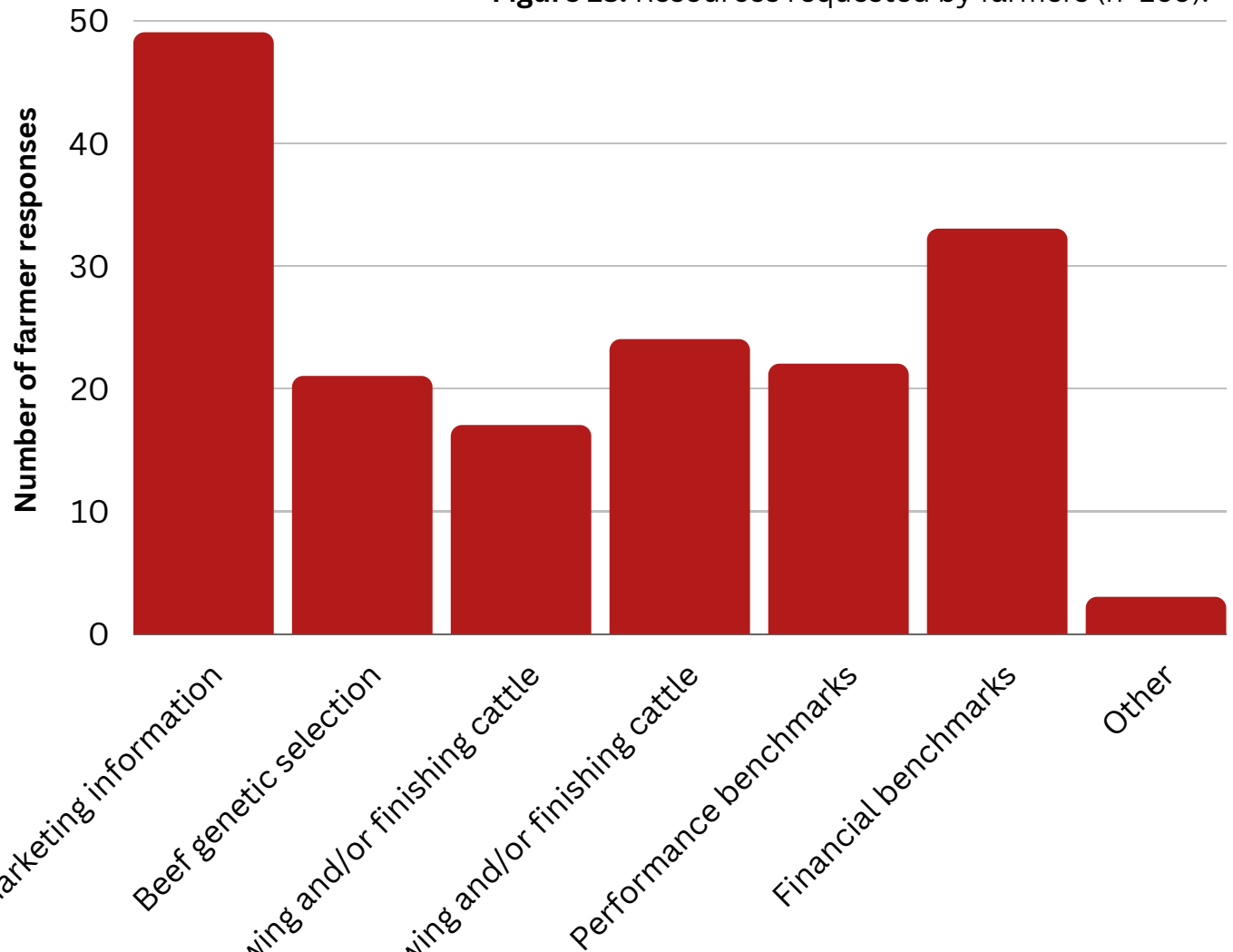


Figure 13 shows which resources farmers indicated would be helpful to them.

The "other" category included:

- List of available butchers
- Direct marketing resources
- Animal capture and containment equipment
- Outbuilding shelter designs/plans

COMMENTS

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Is there anything else you feel is successful about, or that you would like to improve concerning your beef x dairy program?

"We sell the calves to [the buyer] and he says that they are the best beef calves that he gets and has called to see what we are doing to start them and what semen we are using. He says that the buyer prefers limflex calves over Angus cross calves."

"Calving issues and underweight calves are always a result of twins and [we] have a lot of twins."

"At the present time, beef crosses are more valuable than the dairy breeds. It also allows the farm to get another lactation from a cow that otherwise would have been sold. The beef crosses we keep for our own use have all performed very well. I would like to continue using the beef breed in our herd."

"Having jersey's, there is a huge difference in the value of calves based on coat color. Fully Black calves will sell up to \$200, but a similar size calf with a brownish tint may only sell for \$20."

"I can't believe the price for these black calves has stayed so high for so long. Eventually the supply must outrun demand and prices will crash. I'm enjoying it while it lasts."

DAIRY FARMERS



ADDITIONAL COMMENTS

"Getting the most money for our beef crosses."

"I am very happy with our program. Disappointed with the stud companies for sometimes pushing their agendas and not of my dairy. Would like to see a better or more marketing for these beef cross calves."

"Combine pot loads of beef calves between different farms and ship directly out for a better price."

"I quit doing it because I didn't see any added value at the sale barn."

"No more low value dairy bull calves."



Courtesy of R. Holtz

24

RAISERS/GROWERS

ADDITIONAL COMMENTS



"This market too will be flooded soon
Just saying ..."

"We would like to finish them
sooner but in our set up, it may
not be as feasible."

"Establishing a herd to move away from
dairy. Gaining more time in the field to
focus on crops and forage quality. And
seeing a higher return."

"We purchase weaned beef x dairy calves from a local dairy at 12 weeks of age. We have an established vaccination protocol that was set up by our veterinarian. Health issues are minimal and only happen during the transition phase to TMR feed after transport if there are any. Growth rates are good, these calves do well on a "dairy style" TMR feed, we have heard from neighbors that they do not do very well on pasture, although that is in one isolated situation. The nutritionist we work with has told us, "You need to push these cattle to gain weight." We follow his recommendations to a certain extent but convince him to back off the corn in the diet a bit, we have seen very good results. We market finish steers at 1350-1450lbs when they are 14-16 months of age. Very happy with our program so far."



DISCUSSION

An increasing number of beef x dairy calves are born on dairy farms in New York State, accompanied by a rising interest among farmers to grow them. Our survey aimed to better understand farmer thought processes concerning the areas of decision-making on beef usage in dairy herds, sire selection, cow selection for breeding to beef, management of the different life stages of the BxD calf, and marketing strategies for BxD cattle. The results confirmed common utilization strategies of beef sires in dairy herds, but also revealed interesting and important characteristics of the developing industry that farmers, buyers, educators, and researchers should consider.

A survey [2] by Halfman and Sterry (2019) of dairy farmers in the Midwest showed that *semen cost* was the top criterion when choosing beef sires to breed to dairy cows. In contrast, our survey showed that *conception rate* and *calving ease* were the top two most important criteria, followed by *semen cost*. Least important criteria were *frame score of the beef sire* and various *carcass EPDs*. Interestingly, almost half of respondents said that *calf buyer preference* was important when selecting a beef sire, while almost one-third said that it was not important. Ultimately, these factors reveal that when breeding for BxD, many dairy farmers often do not put high value on criteria important to the beef sector (i.e. growth and muscle development, feed efficiency, and carcass yield). However, some dairy farmers have realized that they must provide a calf that buyers prefer in order to capitalize on the market opportunity.

Buyers of BxD calves frequently reference health issues with young calves due to improper management at birth. Our survey data reveal some areas for management improvement, partially indicated by discounts received at the sale barn as well as some farms reporting that they didn't have any protocols for newborn BxD calves. Additionally, one-third of respondents reported that newborn protocols for BxD calves differed from that of the farms' dairy heifers in negative ways such as feeding lower quality colostrum, or colostrum in lesser amounts, or no vaccinations or extra health supplements. Improper newborn calf care can lead to reduced animal welfare, higher death loss and treatment costs, and lower overall profitability of the BxD enterprise.

(continued)



DISCUSSION CONTINUED

Many dairy farmers are marketing BxD calves at less than a week old, however there are still a number of farms raising these cattle to different time points across the state. The lack of data available on growth rates and input costs makes it very difficult to calculate the profitability of any specific farm's BxD enterprise, let alone benchmark a cohort of growers from across the state without a formal research approach. The scarcity of on-farm scales and actual growth measurement data, combined with the various growing strategies of BxD cattle makes it nearly impossible to gauge the "best" way to encourage farmers to incorporate a BxD enterprise into a farm's business strategy.

Together, these factors support the idea that there is room for improvement in the BxD industry in NYS, especially in the areas of sire selection, newborn calf care, management of the growing BxD animal, marketing, and profitability of the BxD enterprise.

CONCLUSION

We believe that there are several keys to ensure that the BxD industry remains viable in NYS. The industry needs to offer sires that contribute consistent traits important to both dairy and beef sectors. Continuing focus on excellent newborn management contributes to healthier calves with improved welfare, higher sale prices, and ultimately ensures a valuable co-product of the dairy industry and asset for beef buyers. Feeding an appropriate diet and achieving efficient growth rates at every life stage is essential for a successful BxD operation. To develop a supportive infrastructure it is crucial to cultivate networks between dairy farmers, growers, sale barn managers, direct buyers, processors, and consumers along with industry experts, researchers, and educators. Creating a benchmark of management and economic factors across the BxD industry in NYS is key to understanding the profitability of this enterprise. Opportunities exist to learn more about these facets and their characteristics, and to facilitate information sharing across the greater industry.

5 Keys for NYS Beef x Dairy INDUSTRY VIABILITY

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1 Proper Sire Selection at the Dairy Level

- Creates a more efficient, better performing animal
- Includes traits important to:
 - **Dairy**- conception rate, gestation length, calving ease
 - **Beef**- growth rates, carcass traits



2 Excellent Newborn Management

- Ensures a valuable co-product of the dairy industry
- Contributes to healthier calves and antibiotic stewardship
- Maintains animal welfare and social license to operate

3 Proper Nutrition and Efficient Growth Rates

- Leads to a healthy, efficient animal desired by the beef sector
- Leads to profitability of the BxD enterprise



4 Networking, Marketing, and Infrastructure Development

- Builds a robust BxD industry
- Creates opportunities for enterprise development
- Connects farmers to consumers

5 Economics and Benchmarking

- Supplies resources necessary to make informed decisions
- Provides a structure for successful business development and evaluation



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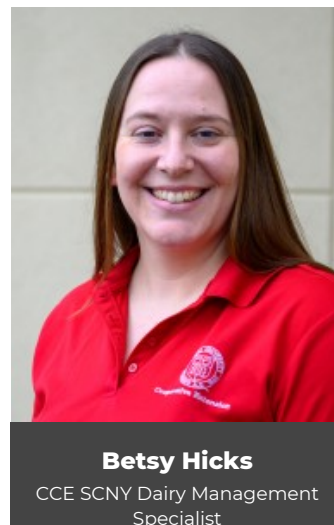
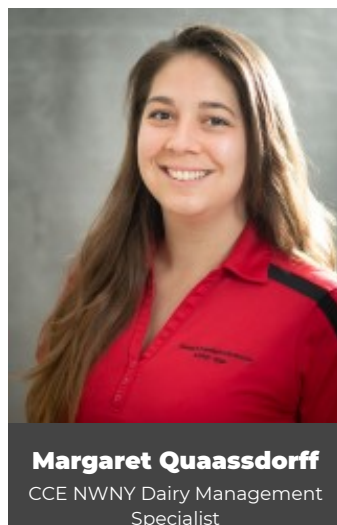
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maq27@cornell.edu
bjh246@cornell.edu



<https://nwnyteam.cce.cornell.edu/>
<https://scnydfc.cce.cornell.edu/>