

The effect of bull age on freeze-quality of beef semen



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Introduction

- Beef bulls received for semen collection at commercial semen freezing facilities vary greatly in age and duration of time bulls are housed prior to production freeze-quality spermatozoa.
- Understanding the optimal age of bulls at time of collection could increase the number of units of freeze-quality spermatozoa and decrease housing costs.

Objective

- The objective of this study was to evaluate the effect of age of beef sire on spermatozoa production in a commercial semen collection facility.

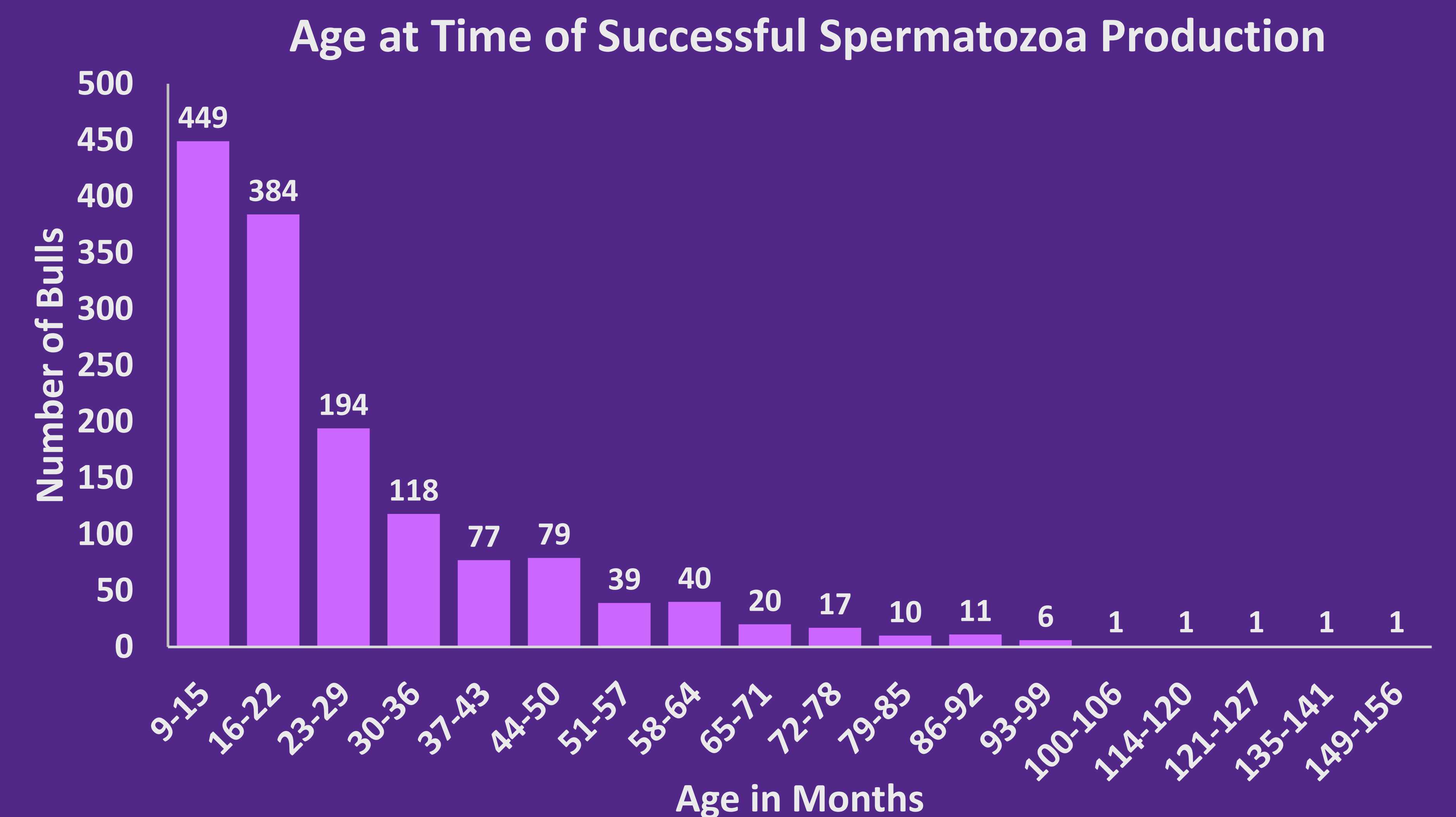
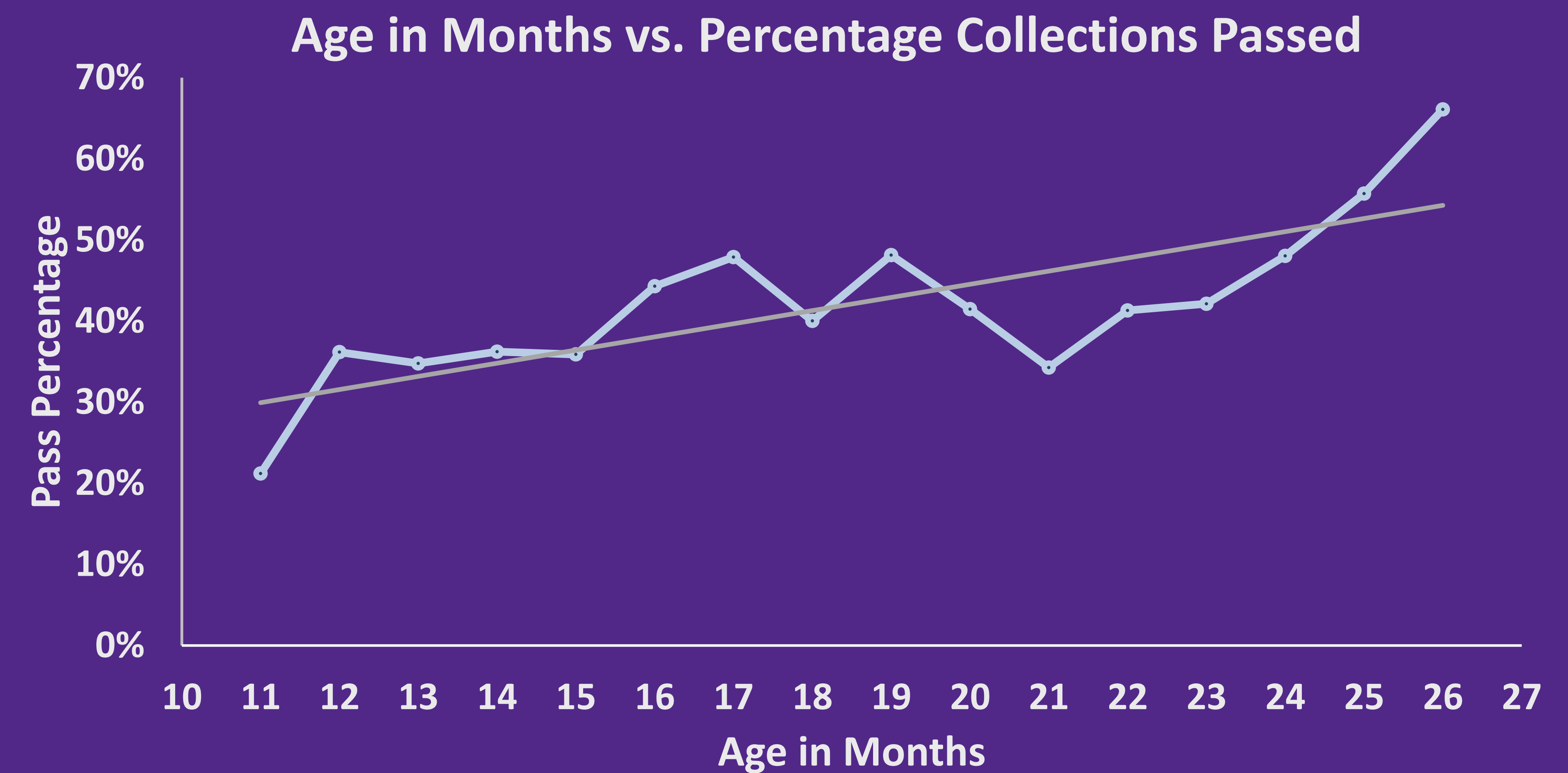
Experimental Procedures

- Individual bulls were evaluated from a single facility over a five-year time period.
- Bulls included in the analysis represent various ages, breeds, and collection dates.
- All semen was evaluated using light microscope analysis by a single technician.
- The threshold for passing was 50% progressive motility, and less than 30% abnormal morphology with no more than 19% being primary abnormalities.
- In the analysis were 1,812 bulls, which represented a total of 36,259 collections.
- On average, bulls were collected twice a week.
- Pearson's Correlation analysis between variables was conducted using Excel.

- On average, bulls were 25.8 months old at time of admission and 27.0 months of age at first collection meeting the quality threshold.
- Bulls stayed for an average of 36.7 collections.
- There was a 0.64 correlation between average units collected and the age of the bulls.
- The average number of collections prior to bulls successfully producing spermatozoa of freezing quality was 9.76.

Average per Sire	
Age at time of admission (months)	25.8
Age at time of successful freeze (months)	27.0
Average Length of Stay (number of collections)	36.7
Average Units of Spermatozoa Collected	1,991.0

Results



Conclusions

- After an average of 10 collections, bulls over 27 months of age are likely to produce freezing quality semen.
- While numerous bulls less than 27 months of age are in high demand for collection, they are less likely to produce spermatozoa meeting the thresholds of freezing quality.

Acknowledgements

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