



Reproductive Trends & Cryogenic Insights from Guiding Eyes

Clover Williams

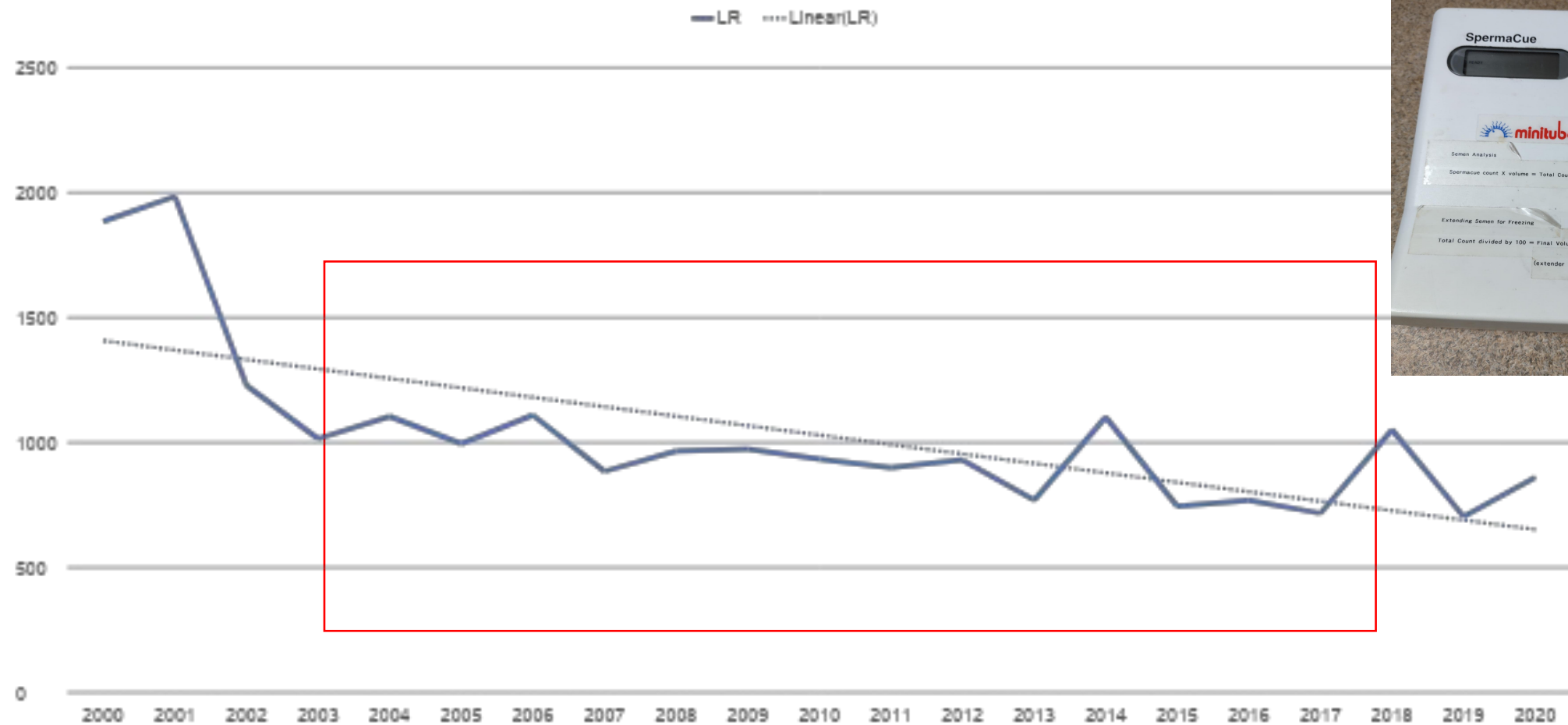
Reproduction & Cryogenics Manager



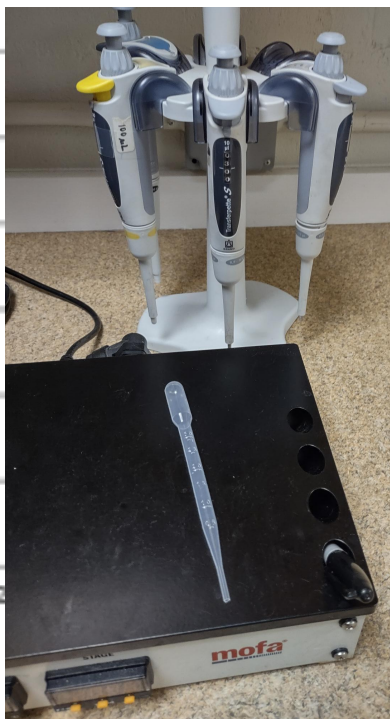
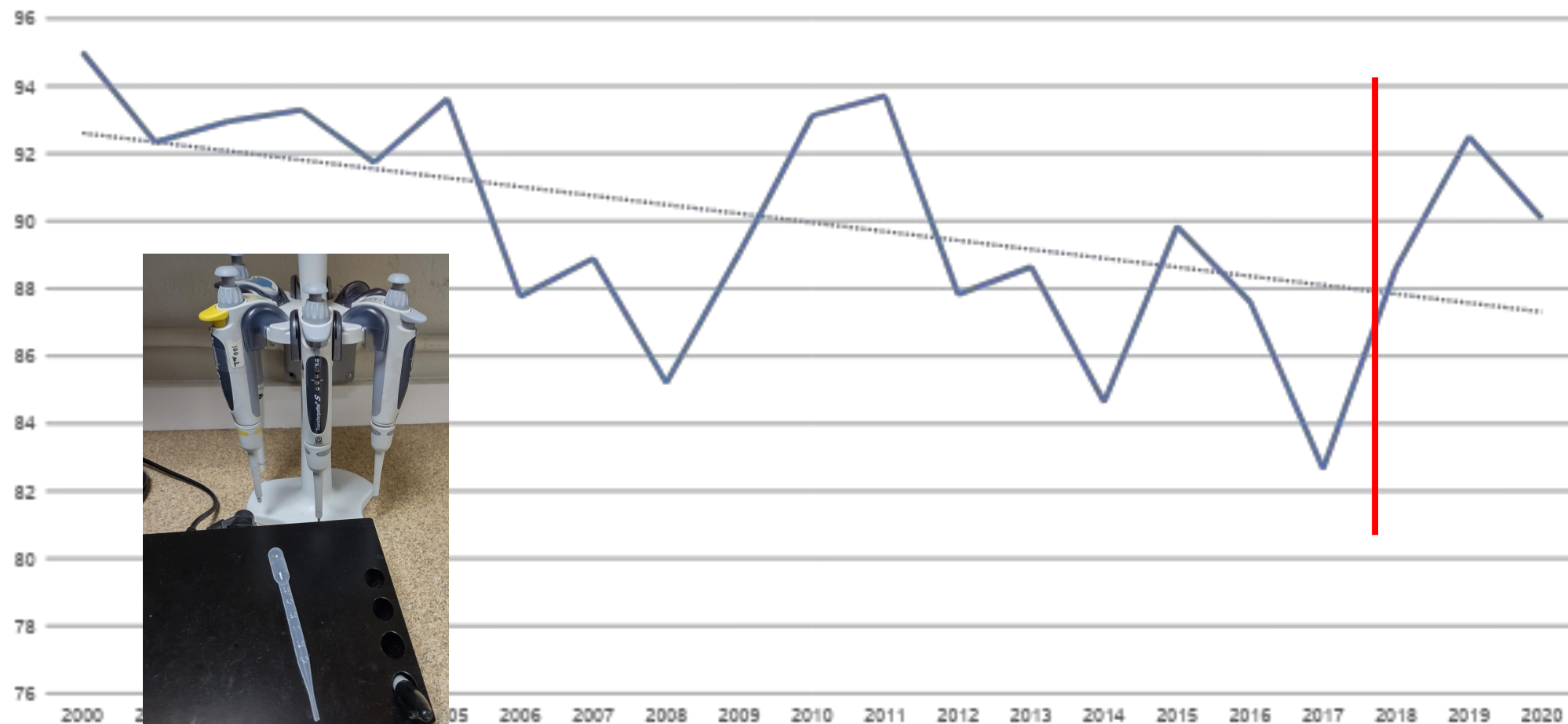




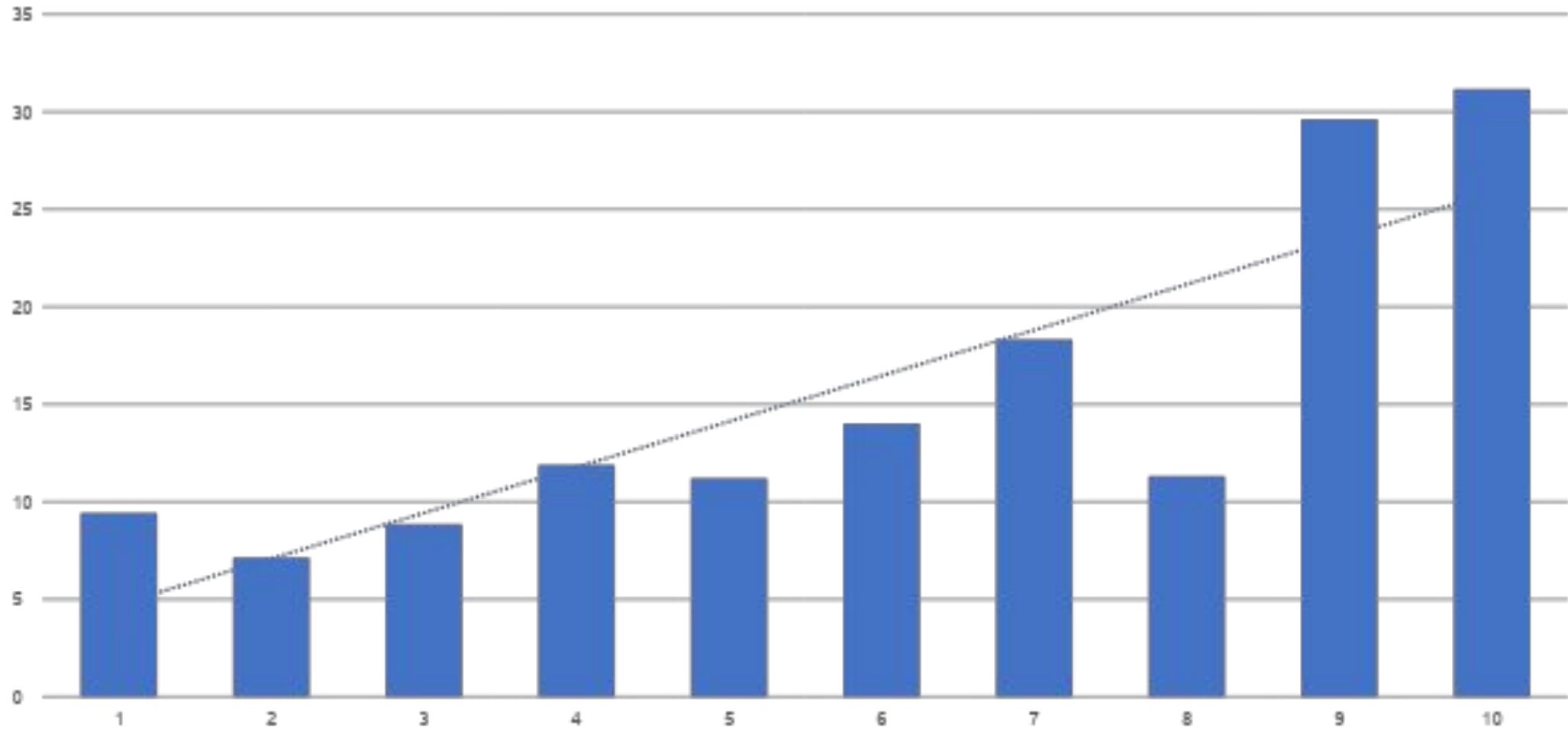
Average Total Semen Count (10^6) at 2 Years of Age



Average % Motility at 2 years of Age by Year Born



Average % Abnormal Semen By Age (Yrs) Evaluated



Semen Parameters

My yellow “take notice” flags on young studs

<70% motility

>20% abnormal sperm

<250 10x6 sperm in the ejaculate

- 1) Good hot, teaser bitch?
- 2) Was he stressed?
- 3) Medical history
- 4) Was his sire problematic?



Azoospermia

After 2-3 collections with good libido/low stress, good teaser bitch

Seminal fluid ALK/PHOS value

>5000 U/L – confirms azoospermia

<5000 U/L – points to incomplete ejaculation, reassess collection/teasing techniques



Semen Quality can change fast...



Pseudo-droplets/ Jumbled Mitochondria



Pleomorphic semen



Scrotal & Penis Measurements

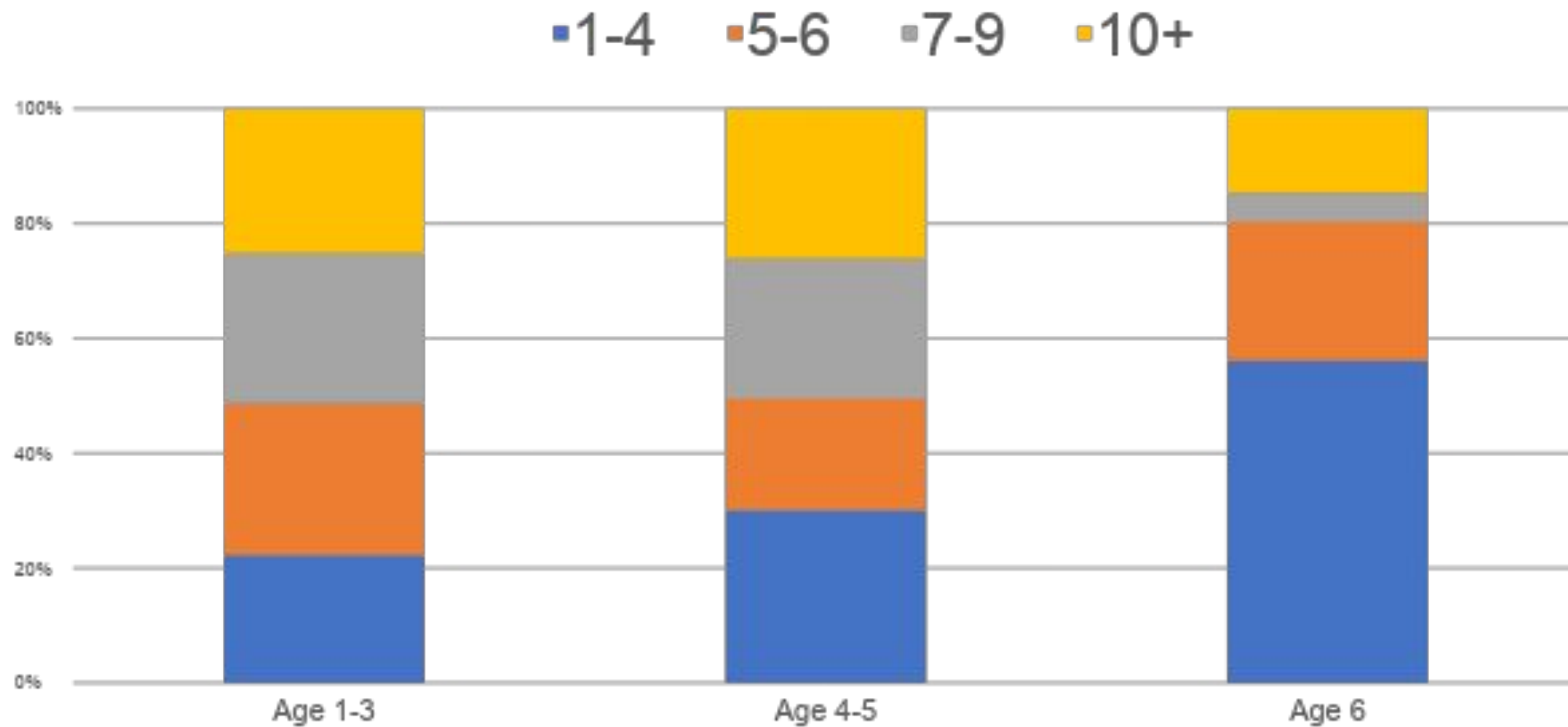
Testes 60 – 70mm across

Bulbus Glandi <55mm can be problematic

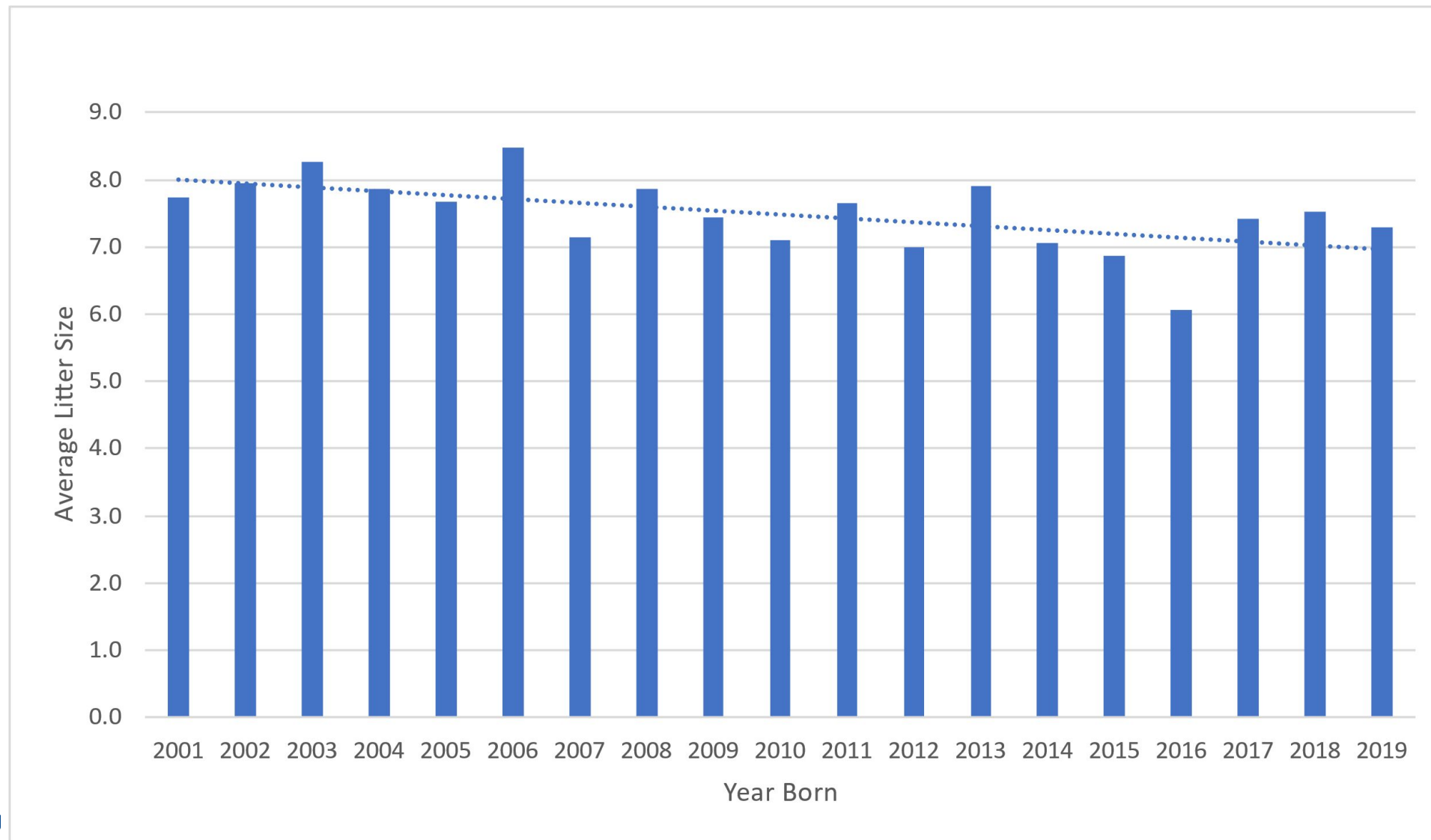
Buzz 50mm 68#/ 30.8kg



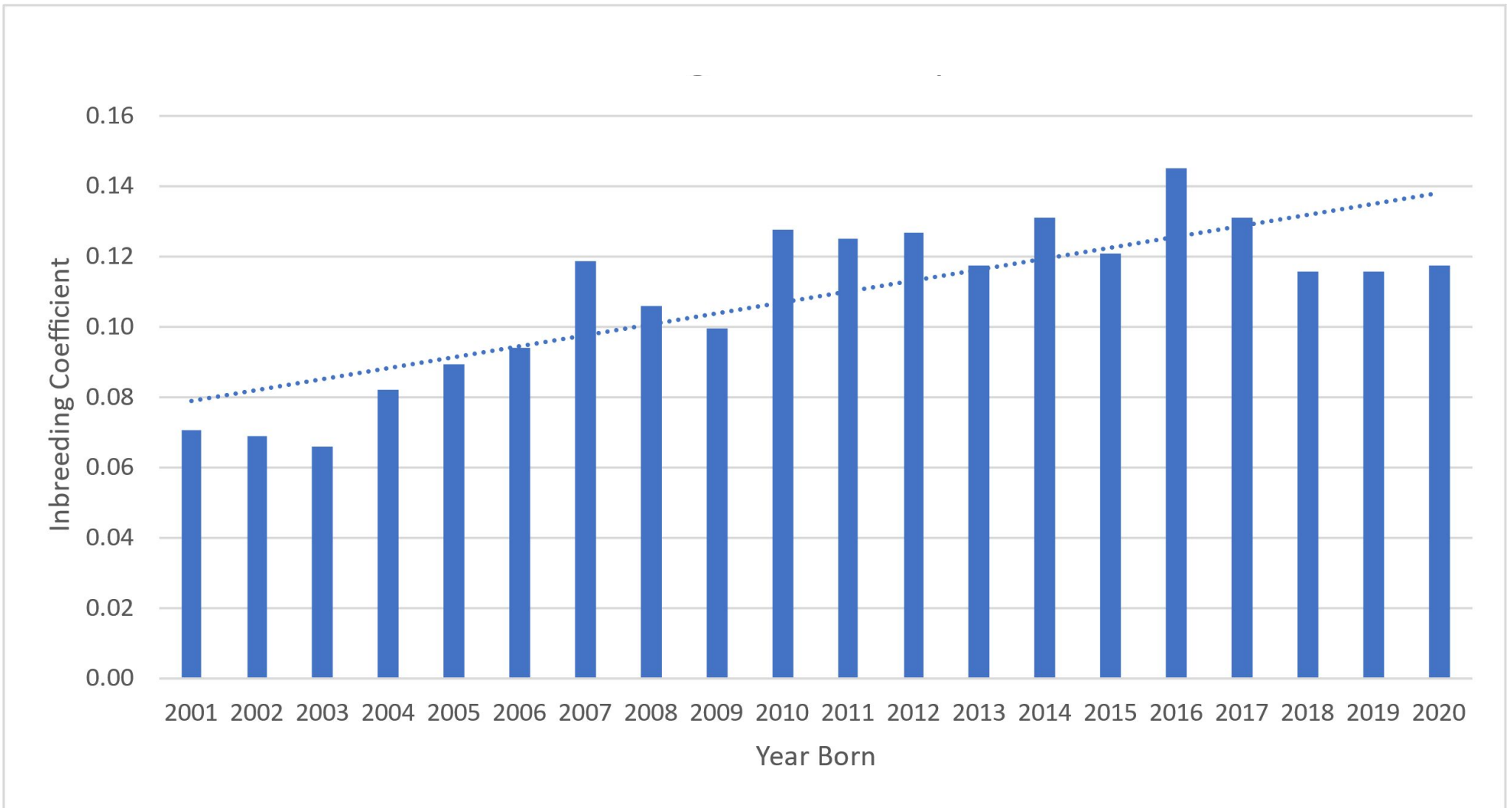
Average Litter Size By Age of Sire At Mating



Average Litter Size by Year Born

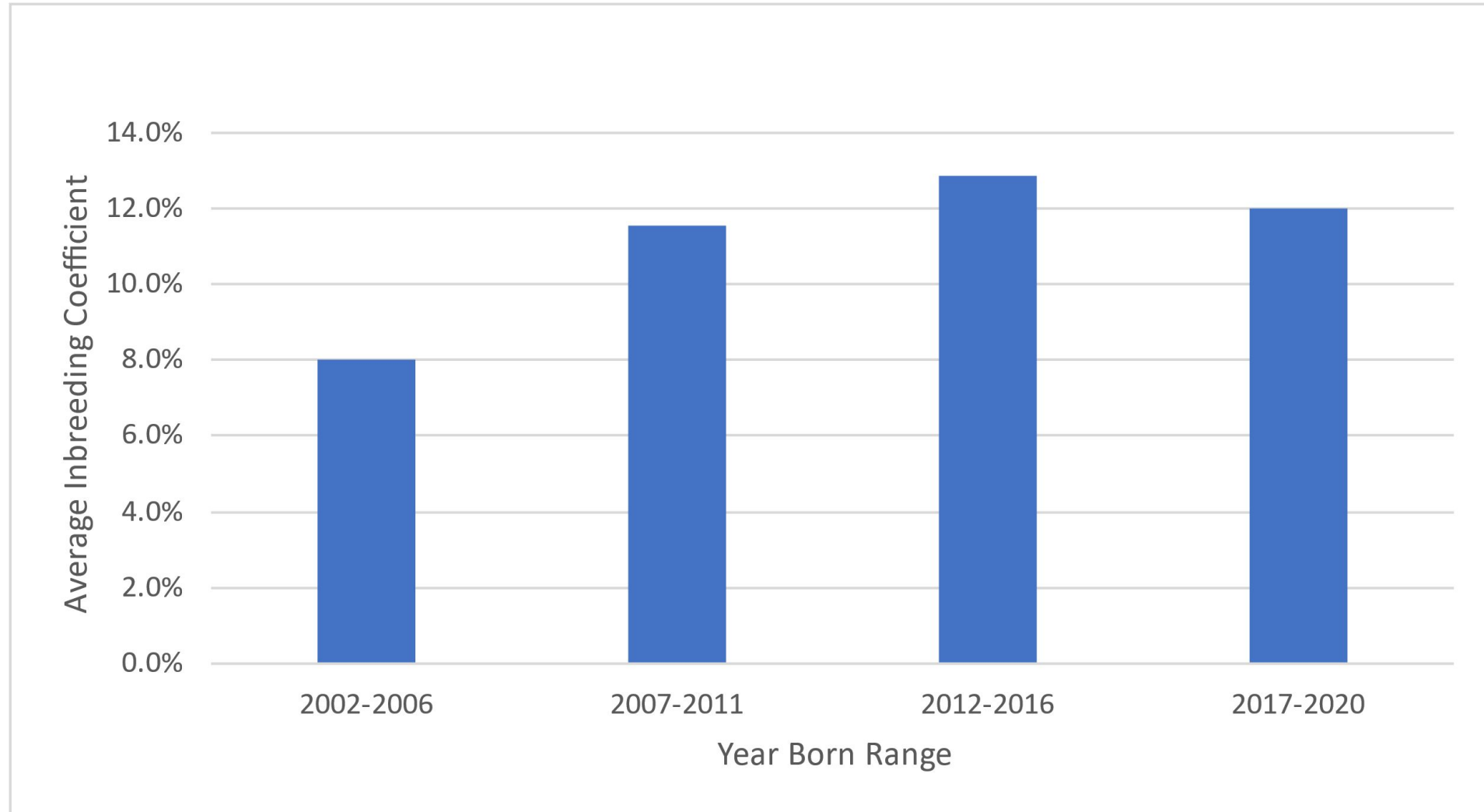


Inbreeding Coefficient by Year Born

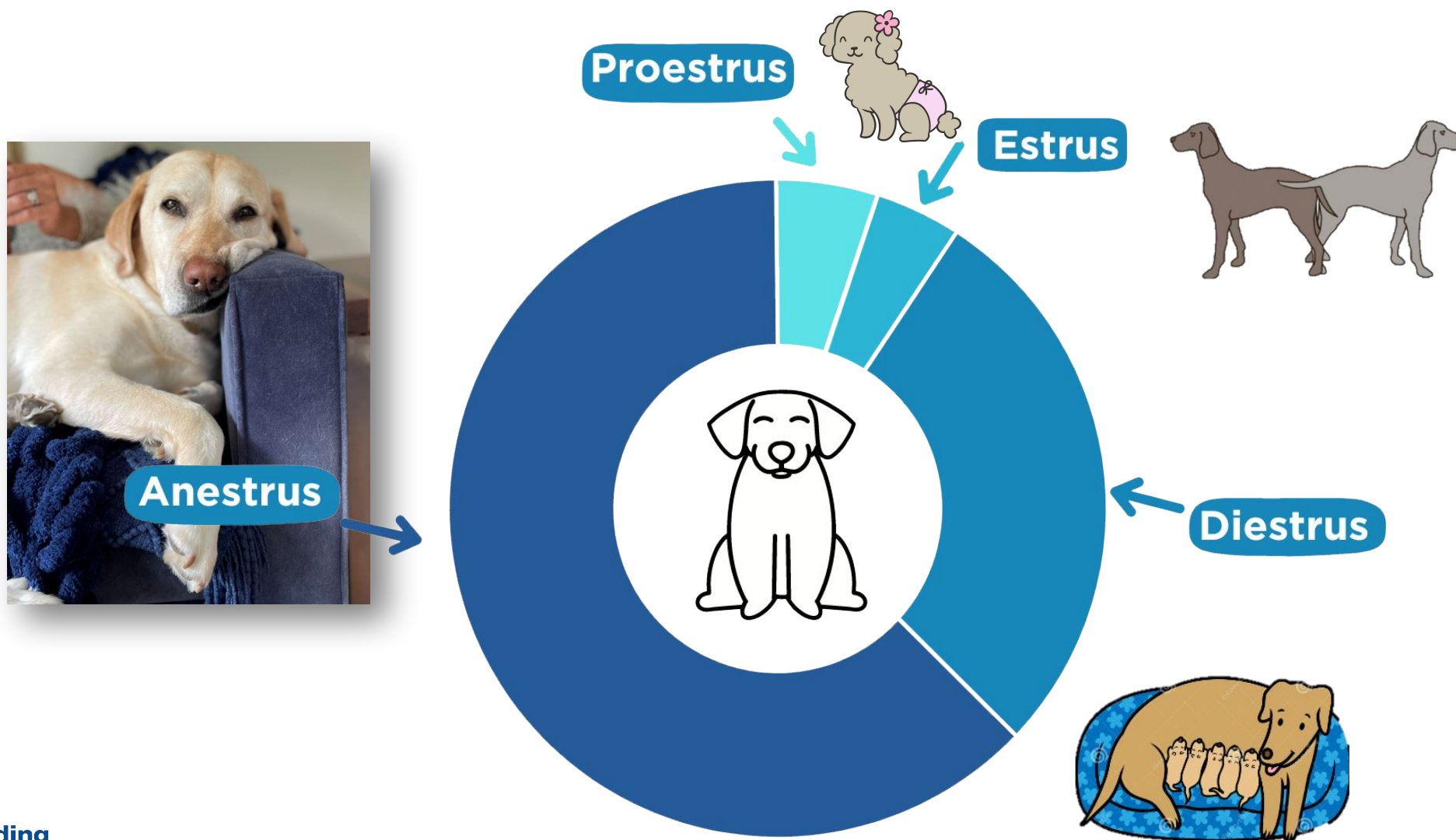


Average Inbreeding Coefficient by Year Born

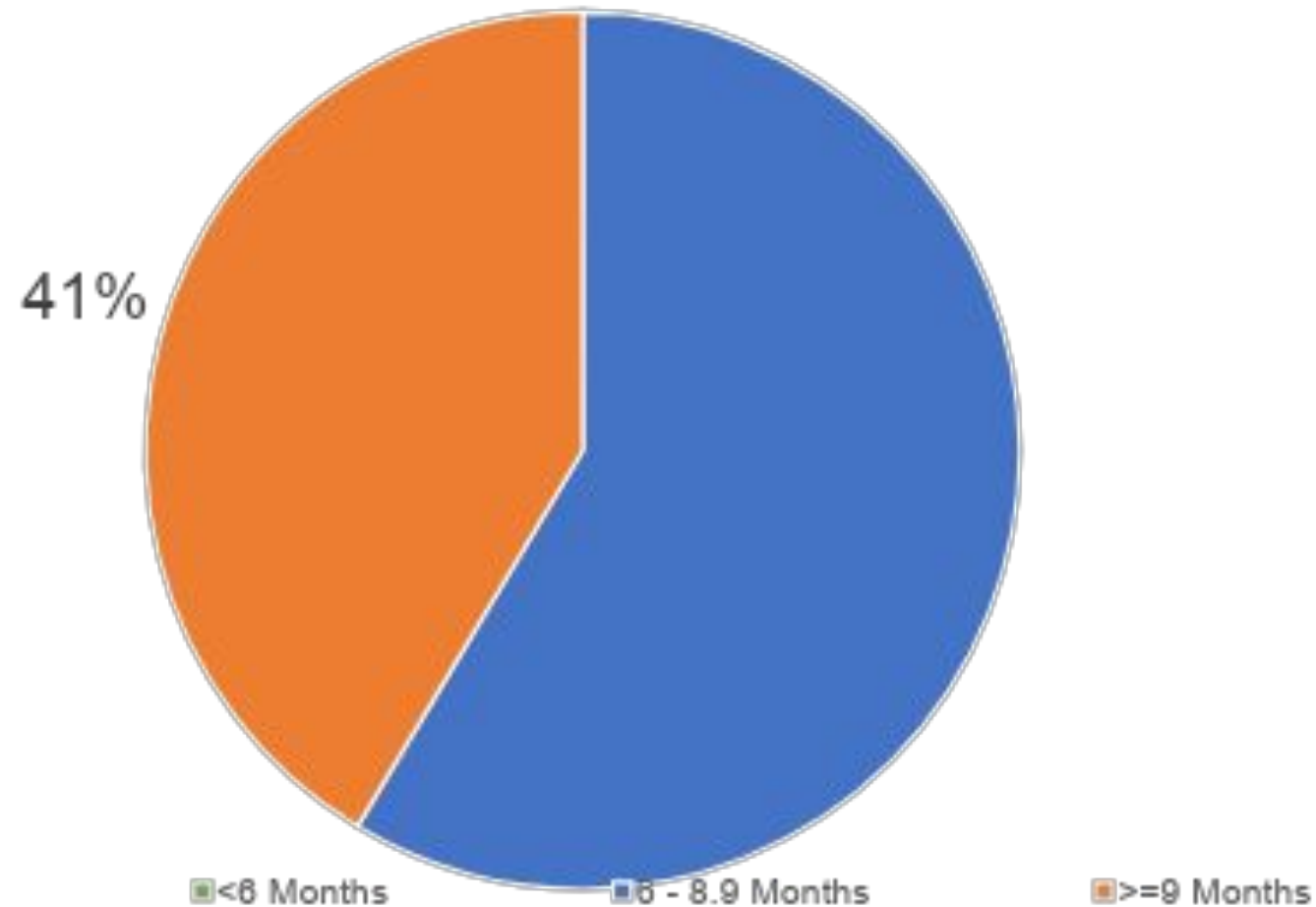
5 Year Range



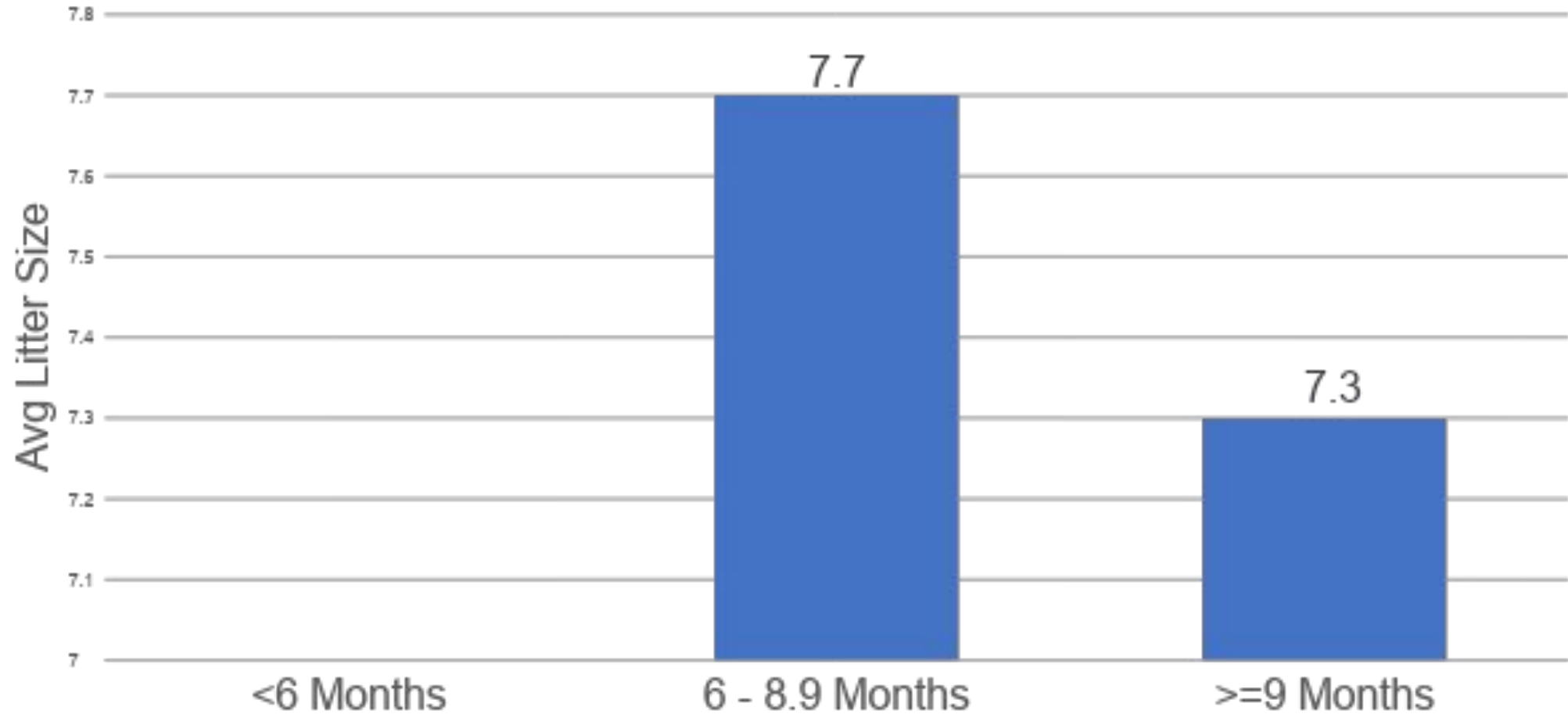
Interestrous interval



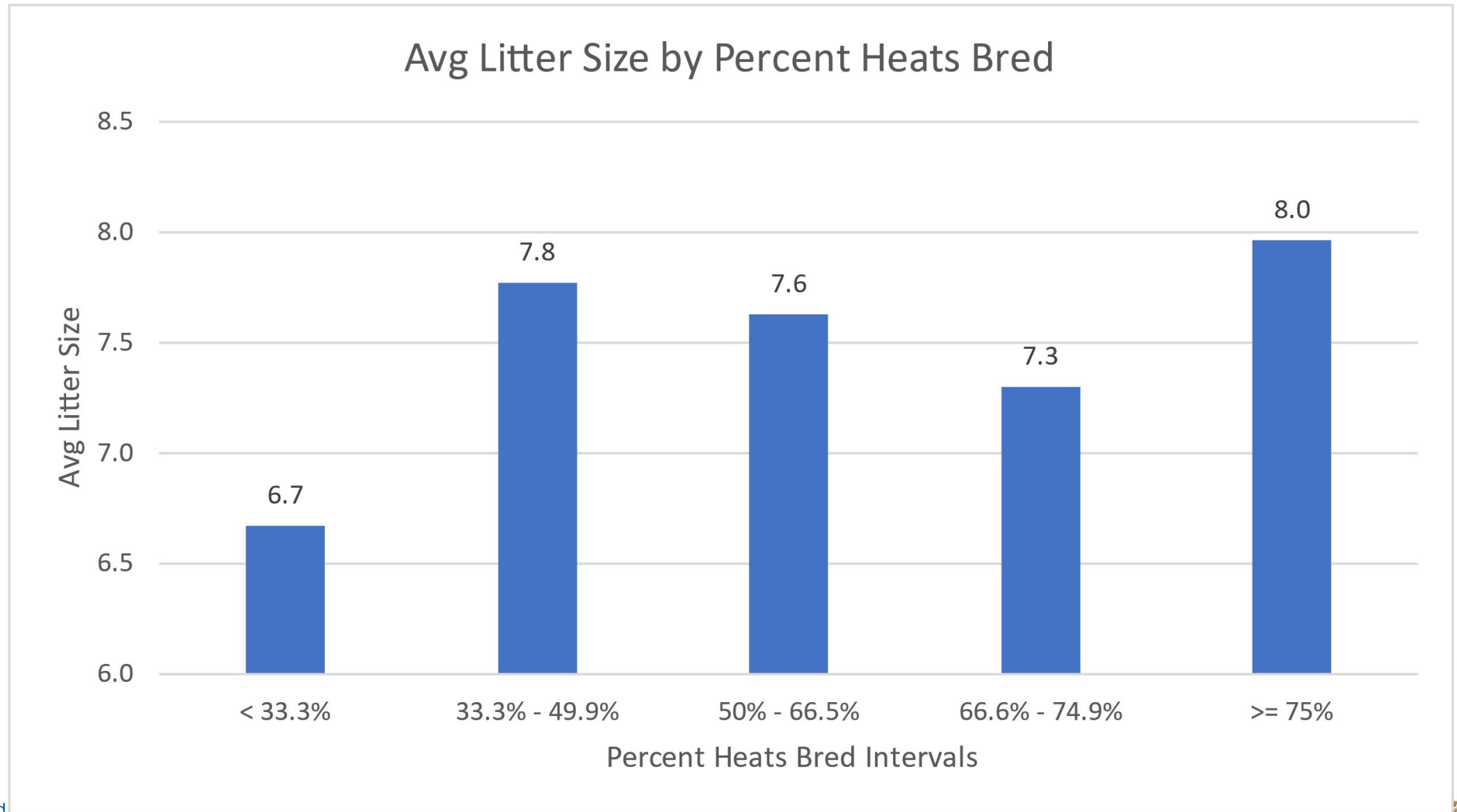
Heat Interval Range: Active Broods Born Before 2020



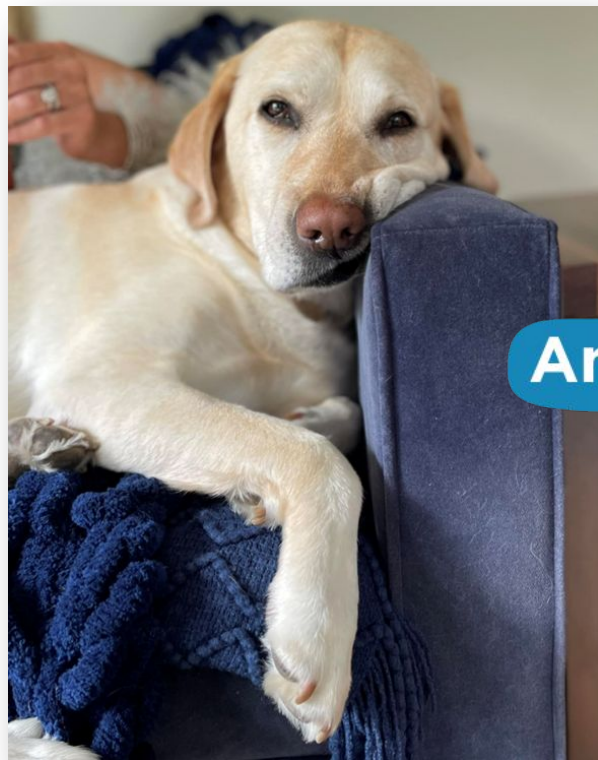
Average Litter Size by Heat Interval Range Active Broods Before 2020



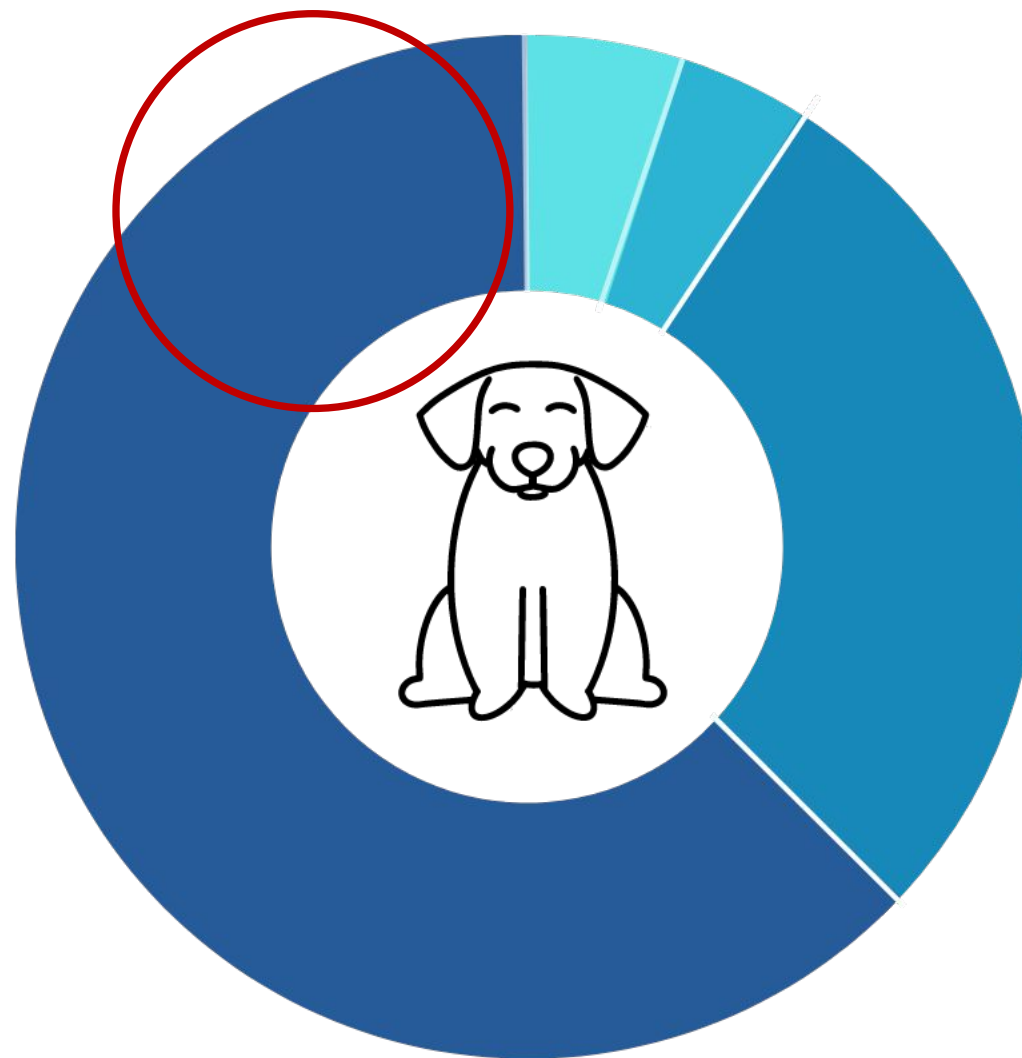
Should we breed on consecutive heats?



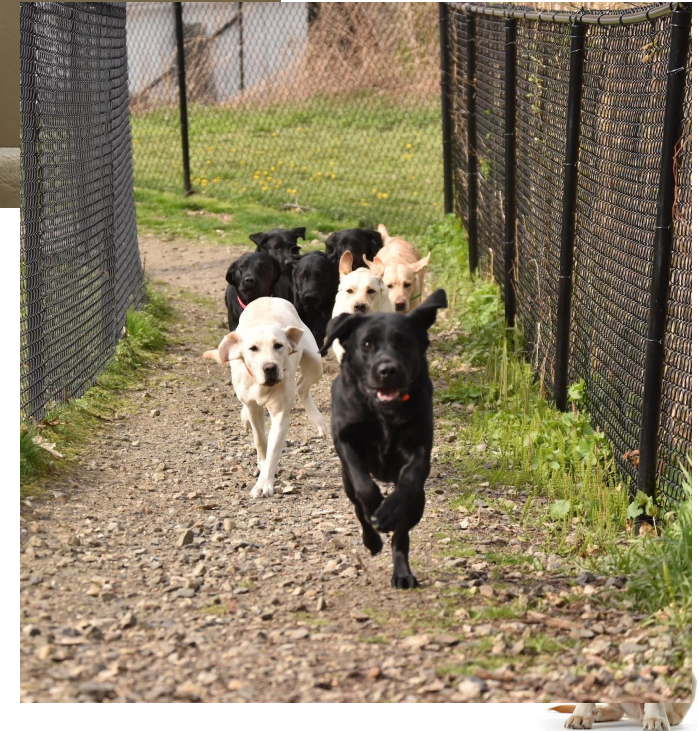
Jumpstarting a Heat



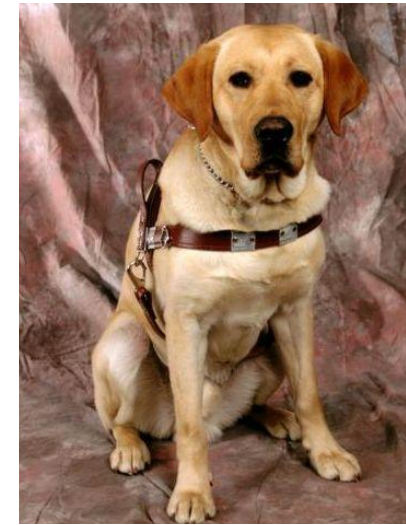
Anestrus



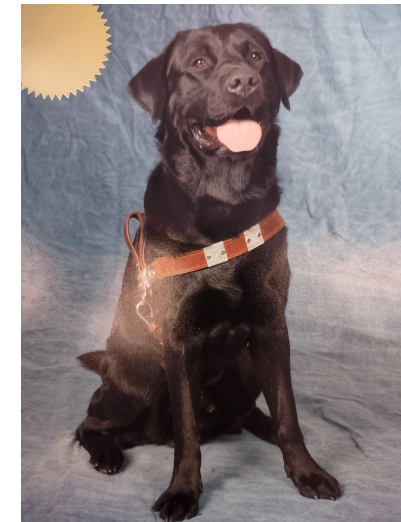
Jumpstarting Heat – How?



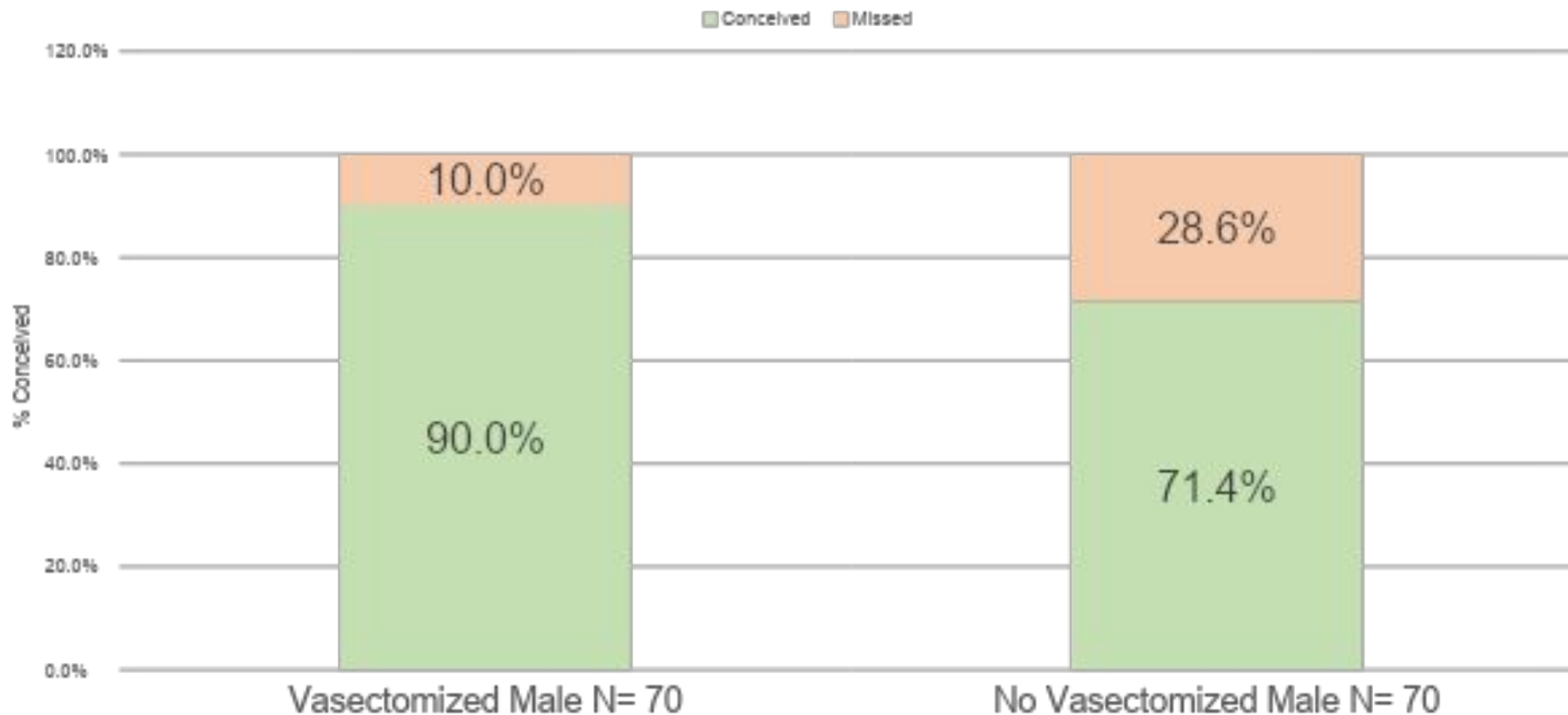
Improved Frozen Semen Success with the Addition of a Mating with a Vasectomized stud



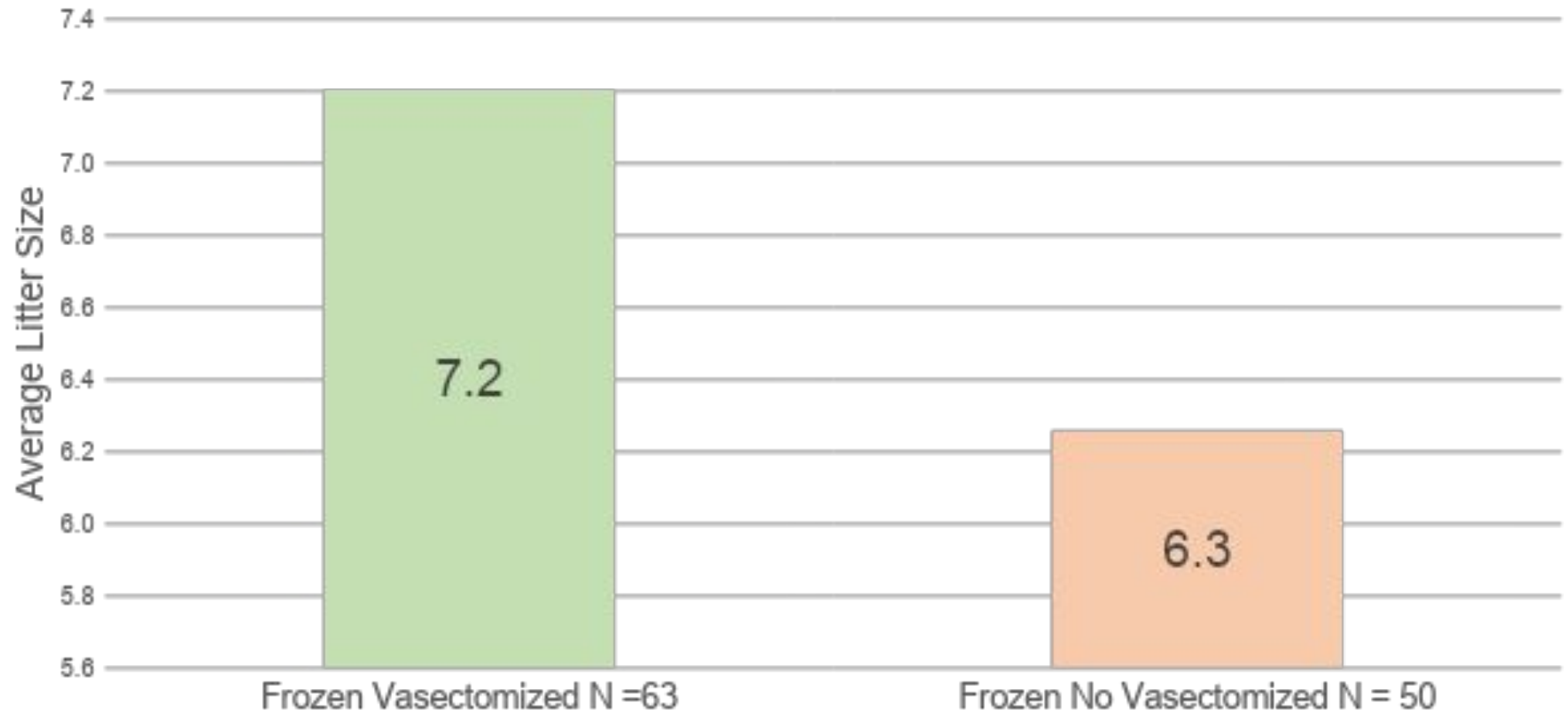
The Dud Studs of Guiding Eyes



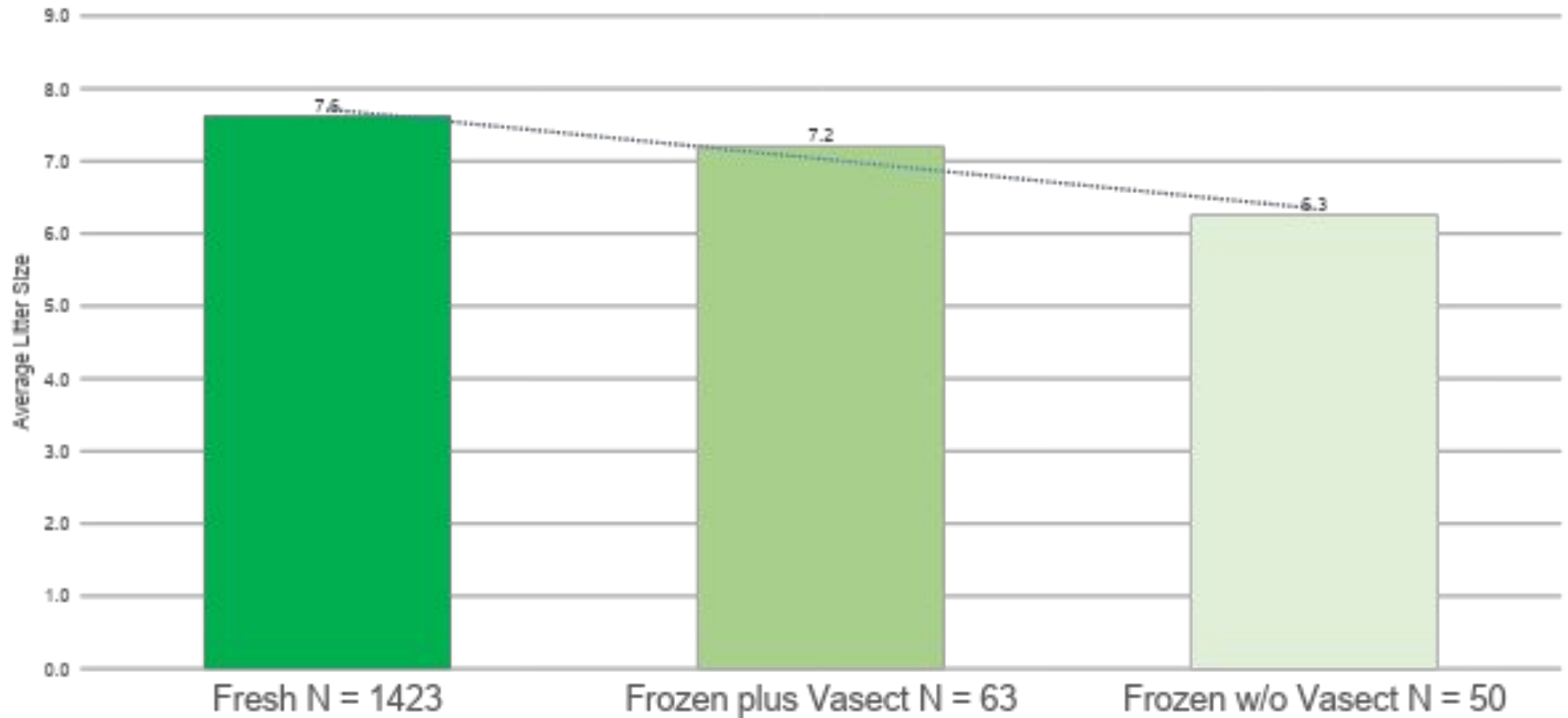
Frozen Semen Conception Rate Comparison Vasectomized Male vs Without



Frozen Semen Average Litter Size Comparison With Vasectomize Male vs Without

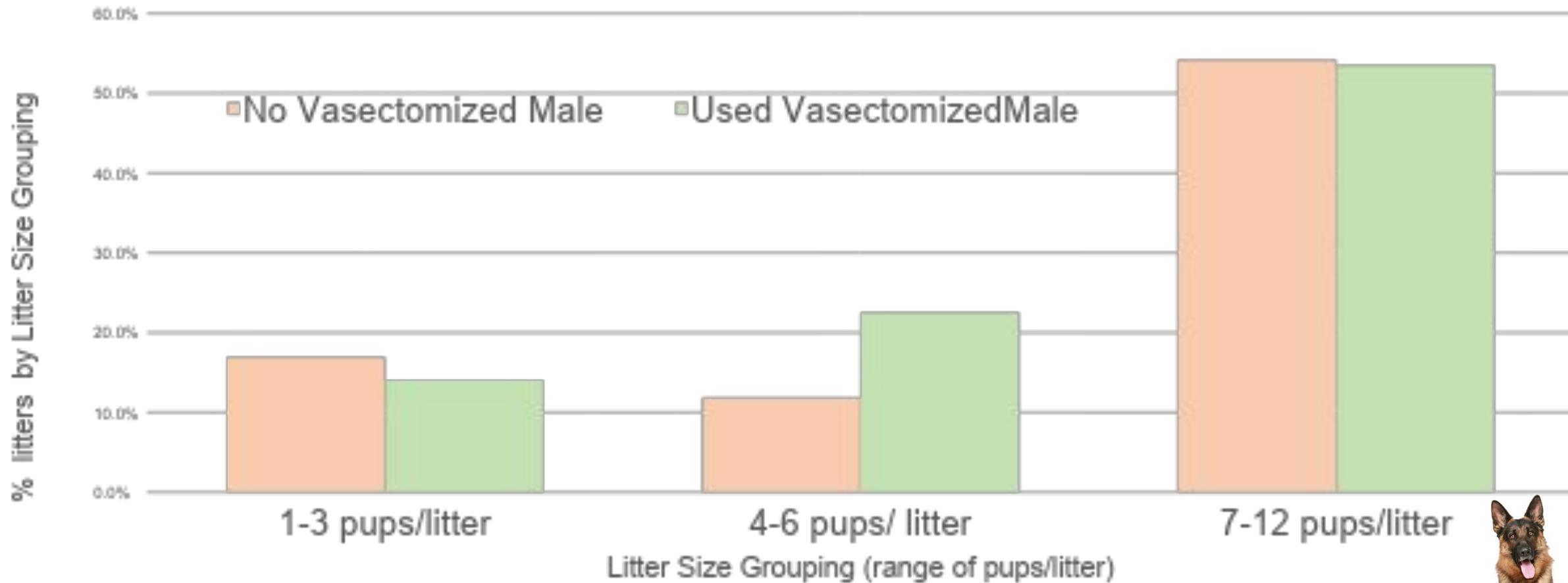


Average Litter Size by Semen Type 1996 - 2023



Frozen Semen Litter Size Groupings

Comparing the Use of Vasectomized Male



Key Factors for Our Success with Frozen Semen

Freeze semen on young males

Consistent Qualitative Progesterone testing for timing

+/- LH Testing

Competence with thawing and insemination technique – Speed

7 days a week commitment

Access to semen - No FedEx or UPS transport delays

Consistency – thaw recommendations, follow them!!!!



Why should an organization freeze semen

- 1) Insurance policy against Loss of Use of the stud dog
- 2) Dual Career
- 3) Sharing with others



Should your organization pursue frozen semen

- 1) Build and Maintain a Cryobank
- 2) Completely outsource to university or reproductive specialty practice
- 3) Receive and store semen from other orgs



Building and Maintaining a Cryobank

Pros:

Everything is on site

Price per dog is reduced

Freeze many

Cons:

High Start up costs

Phase Contrast microscope & Semen counter (iSperm,SDMI1/SpermaCue) \$15,000

CASA \$35,000 - \$60,000

Liquid Nitrogen

Dedicated space

Staffing Training and turnover- bench strength is key

Record keeping and maintenance of tanks

Access to teaser bitches - Prostaglandin F_{2α} (PGF_{2α})



Outsourcing to University or Repro Practice

Pros:

- No Start Up Costs

- No concern about your organization's skill set or staff turnover

Cons: Cost/dog is much higher plus annual storage fees (~\$700-\$1000USD/ dog/freeze)

- Weekend inseminations can be a problem

- Requires transport and scheduling logistics

- Timing with P4



Receive Frozen Semen and Inseminate In-house

Pros:

- Great genetic diversity

- Semen is always available

Cons:

- Surgical or TCI training and competency required

- Access to quality P4 testing

- Thawing semen skills

- Maintenance of your storage tank

- Sourcing the semen



Resources for Cryo & Reproduction Equipment

Minitube www.minitube.com

Phase Microscope \$3000 - \$10,000

CASA (computer assisted semen analyzer) \$30,000- \$65,000

SDM1 Spermacue \$2800

SC 4/3V Vapor shipping container \$1500 +\$500 case

SC 20/20 storage \$1375

Cryo freeze box \$1200

TCI scopes \$10,000-25,000 depending on system

TCI Training Course \$2500/person instruction am/wet lab pm

Straw Labeling machine \$22,000

Straws, Marker rods, cryo pens, misc supplies



IMV www.imv-technologies.com

Semen Assessment

Cryo Tanks

Misc Cryo supplies

iSperm www.breederschoiceonline.com

motility and concentration \$2350 USD



Tosoh- Progesterone analyzer -- Tosoh 360 \$30,000
<https://www.tosoh.com/>

