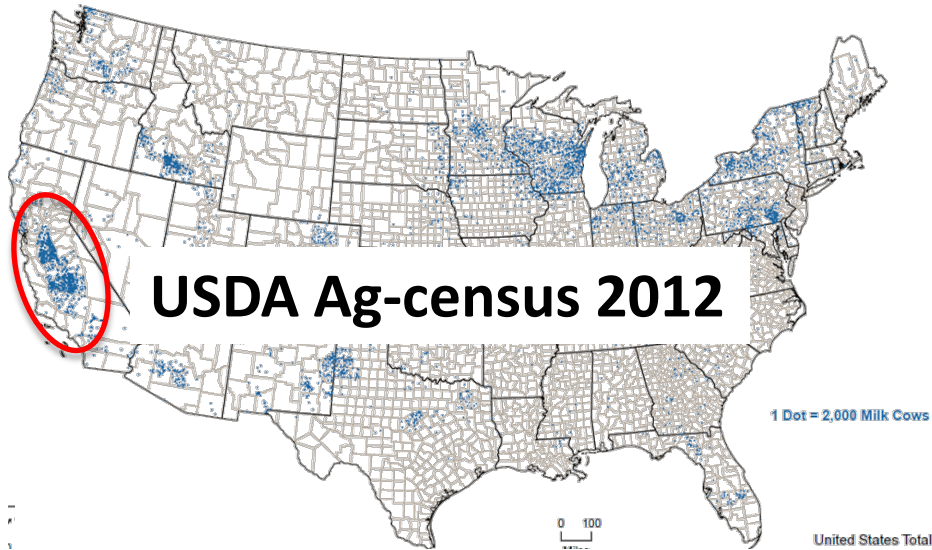


# Benchmarking reproductive efficiency in CA-dairies

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# California-dairies



# Rationale

- ❑ Lack of information available on the topic in CA
- ❑ Reproductive performance in commercial herds by:
  - Season, breed (Holstein vs Jerseys), herd size

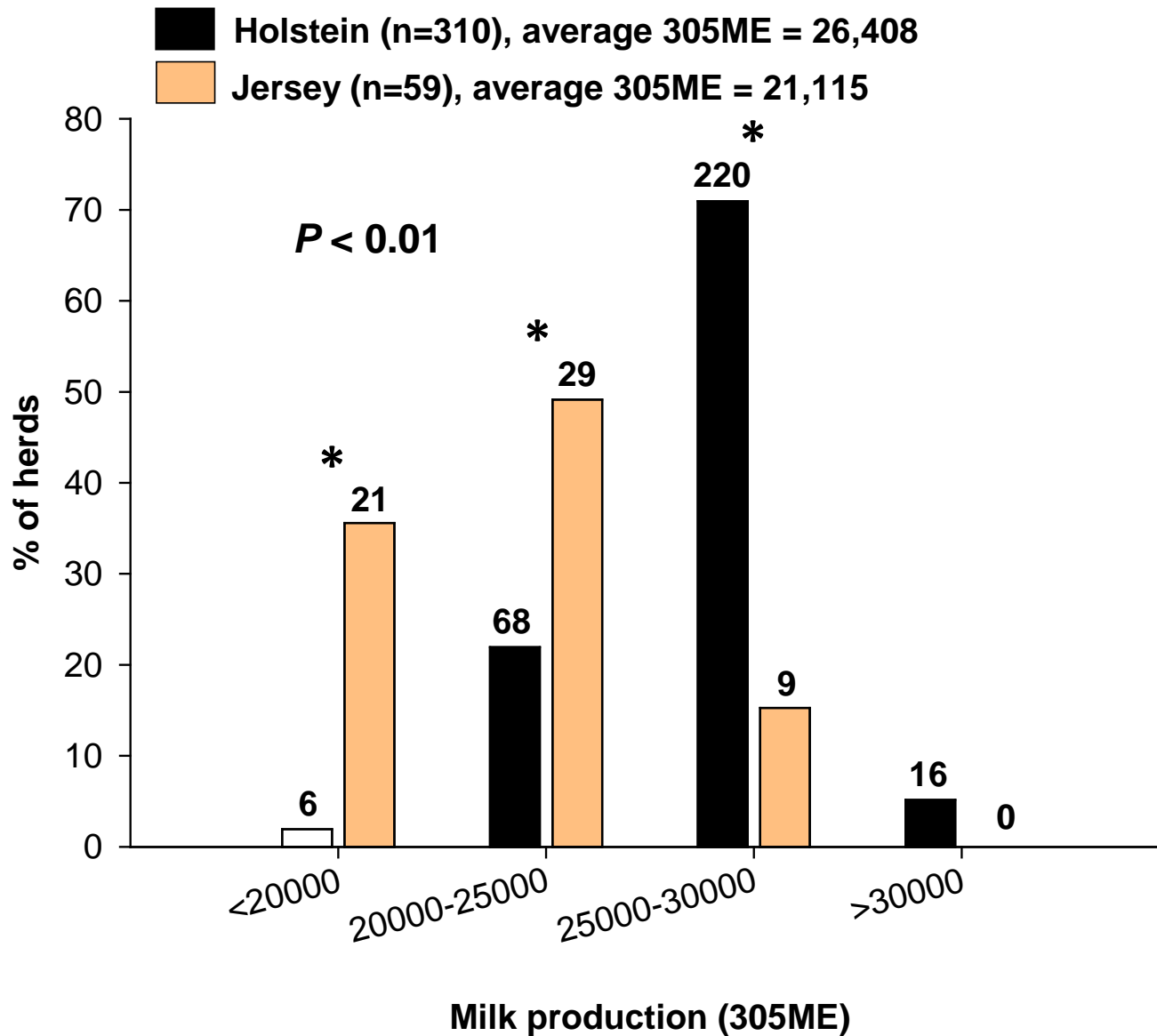
# Objectives

- ❑ To estimate conception (CR) and estrus detection (SR) rates for HO and JE commercial herds
- ❑ Particular interest: effects of heat stress on fertility

# Materials and Methods

- ❑ Only HO-JE herds reporting at least 200 AIs
- ❑ Conception results within 15% to 75%
- ❑ 1,377,729 AIs (1,262,926-HO; 114,803-JE)
- ❑ CR: pregnant/AI
- ❑ SR: average AI interval/21 (Woods index)
- ❑ Only AI intervals within 3 to 90 days
- ❑ Died/sold before preg outcome: disregarded
- ❑ Statistical analysis: Proc HPMIXED of SAS (9.3)

# General herd-level data: milk production



# Outline of results

- Impact of heat stress on fertility
- Breed effects (Holstein – Jersey)
- Efficiency by herd size

# Impact of heat stress on fertility

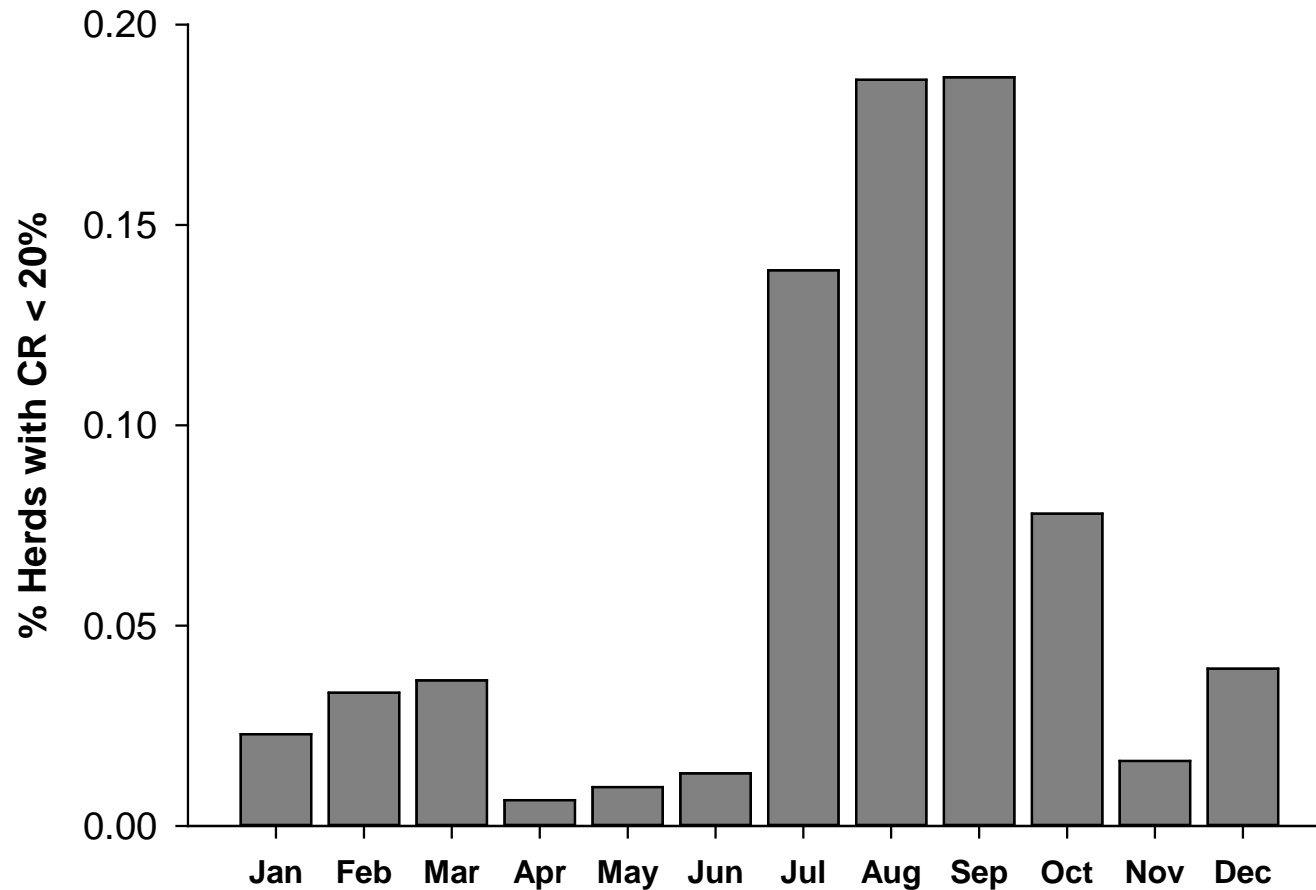
## Conception rate (%)

Year	2011	2011	2011	2011	2011	2011	2011	2011
Month	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CR-JE	45.3%	42.3%	34.5%*	34.0%*	31.2%*	35.6%*	41.0%	43.2%
CR-HO	37.5%	33.2%*	28.2%*	27.6%*	25.9%*	28.7%*	35.0%	38.5%

## Service rate (%)

Year	2011	2011	2011	2011	2011	2011	2011	2011
Month	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SR-JE	65.2%	66.4%	65.0%	65.0%	63.7%	64.1%	67.2%	62.8%
SR-HO	59.3%	59.2%	56.9%	56.7%	58.7%	59.6%	59.9%	57.5%

# Impact of heat stress on fertility

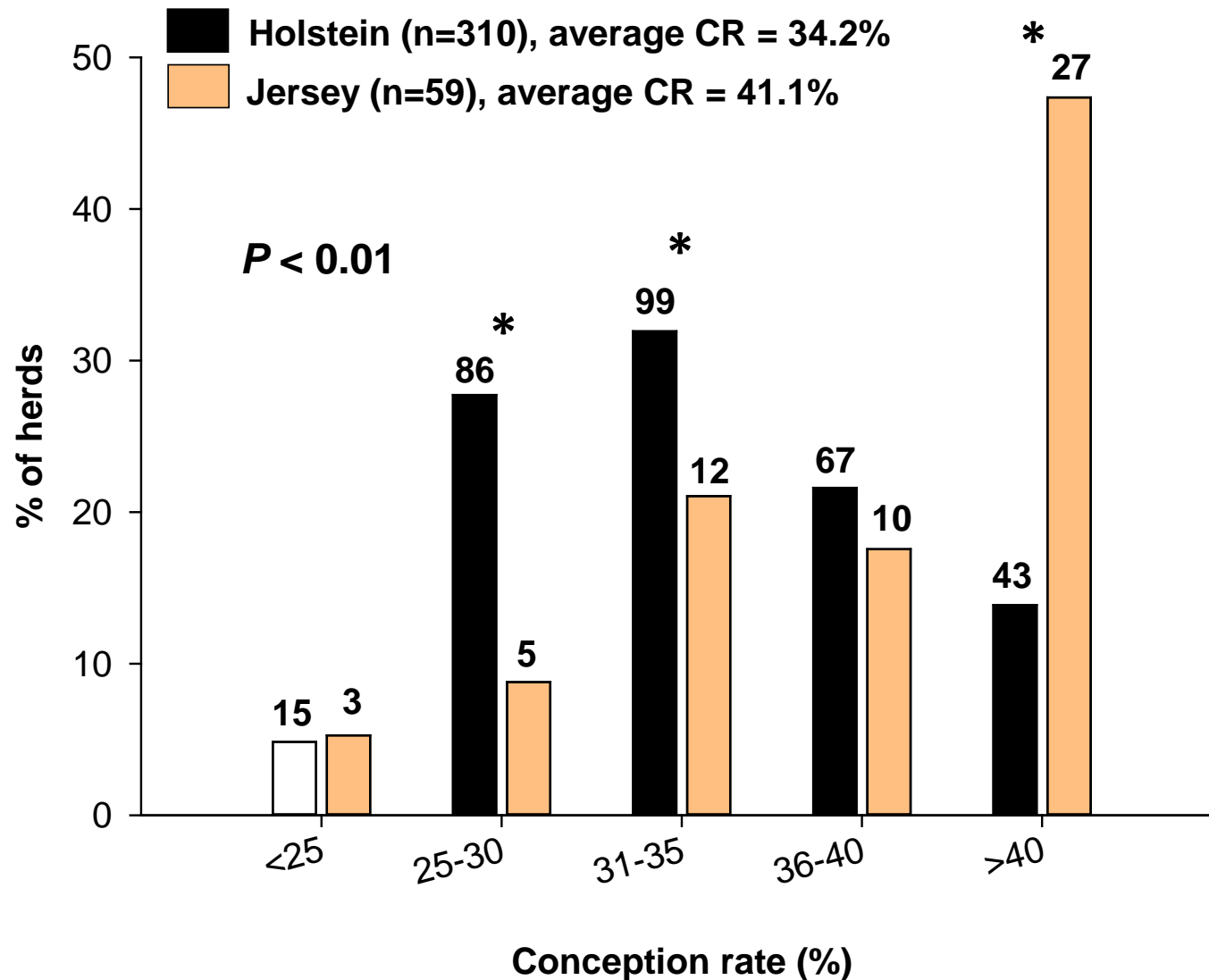




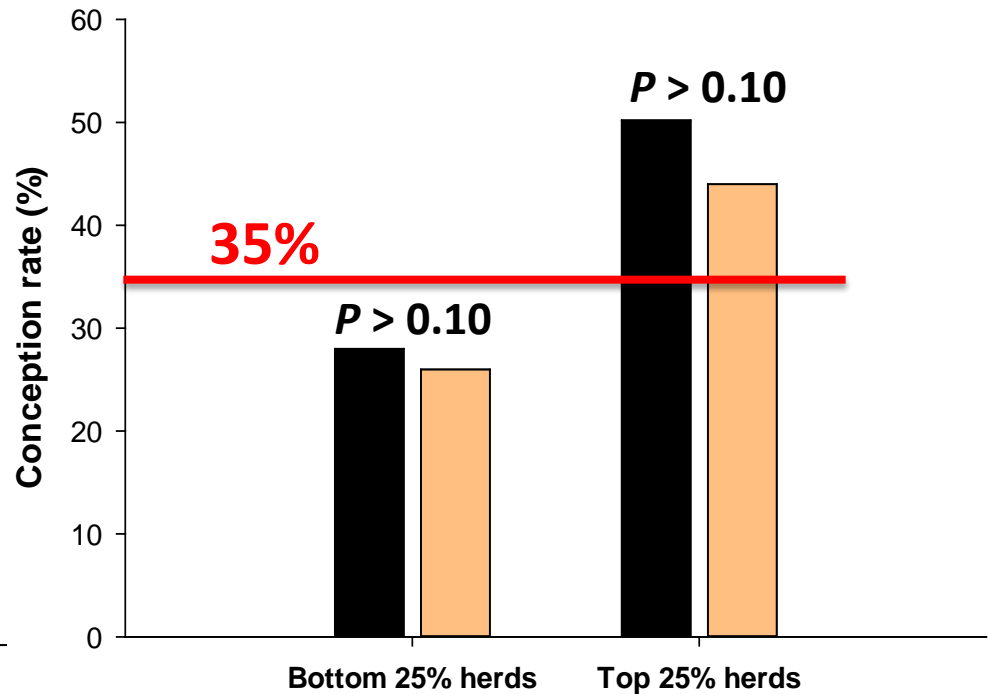
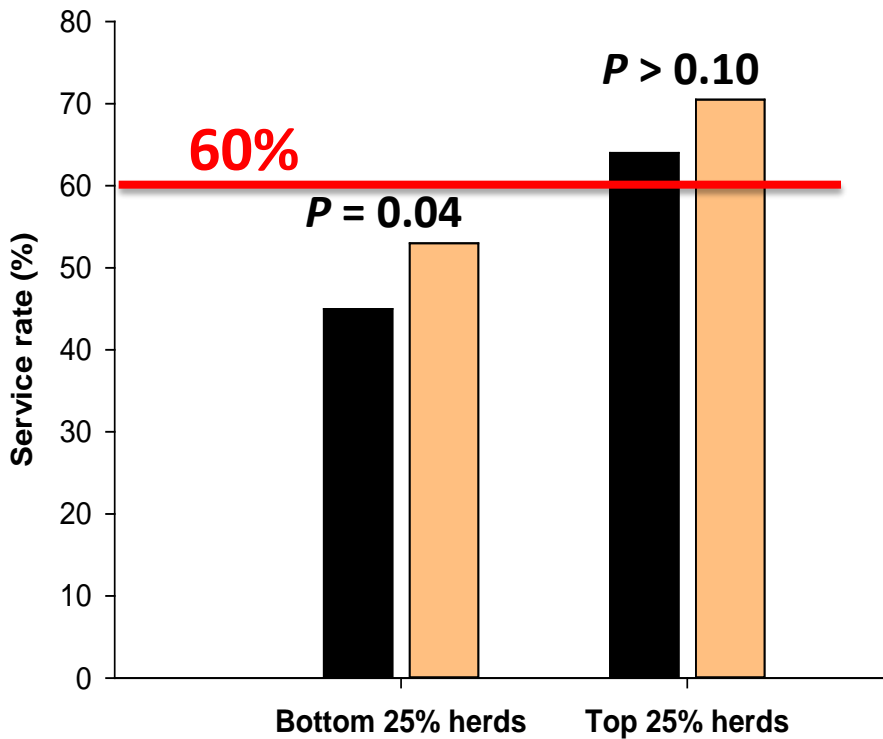
# Outline of results

- Impact of heat stress on fertility
- Breed effects (Holstein – Jersey)
- Efficiency by herd size

# Breed effects (Holstein – Jersey)



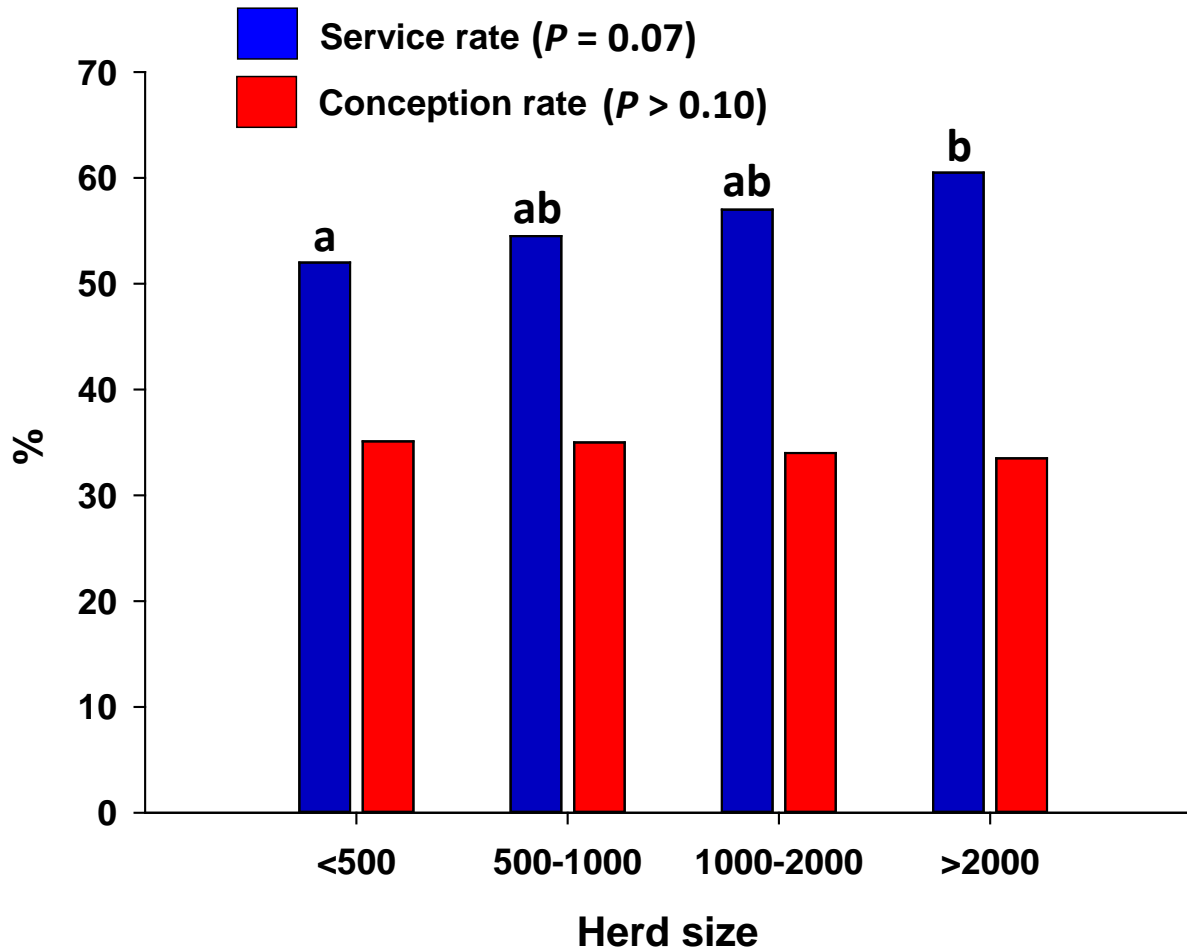
# Breed effects (Holstein – Jersey)



# Outline of results

- Impact of heat stress on fertility
- Breed effects (Holstein – Jersey)
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# Efficiency by herd size



# Summary

- ❑ Heat stress lowers CR in both HO and JE herds at same extent
- ❑ About 1 in 5 herds in CA have very poor (<20%) CR in summer
- ❑ Although JE herds have better in SR/CR, well managed HO herds can achieve outstanding reproductive results
- ❑ Larger herds greater SR, but similar CR to smaller herds
- ❑ Ongoing data collection: understand management strategies in herds able to maintain good repro during summer months

# Thanks!

# Questions?

