

Herd management, barn design, lameness, and milk production in farms with robotic milking systems

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Research Question: What is the impact of lameness in herds using robotic milking systems and what are the factors associated with lameness prevalence on those farms?

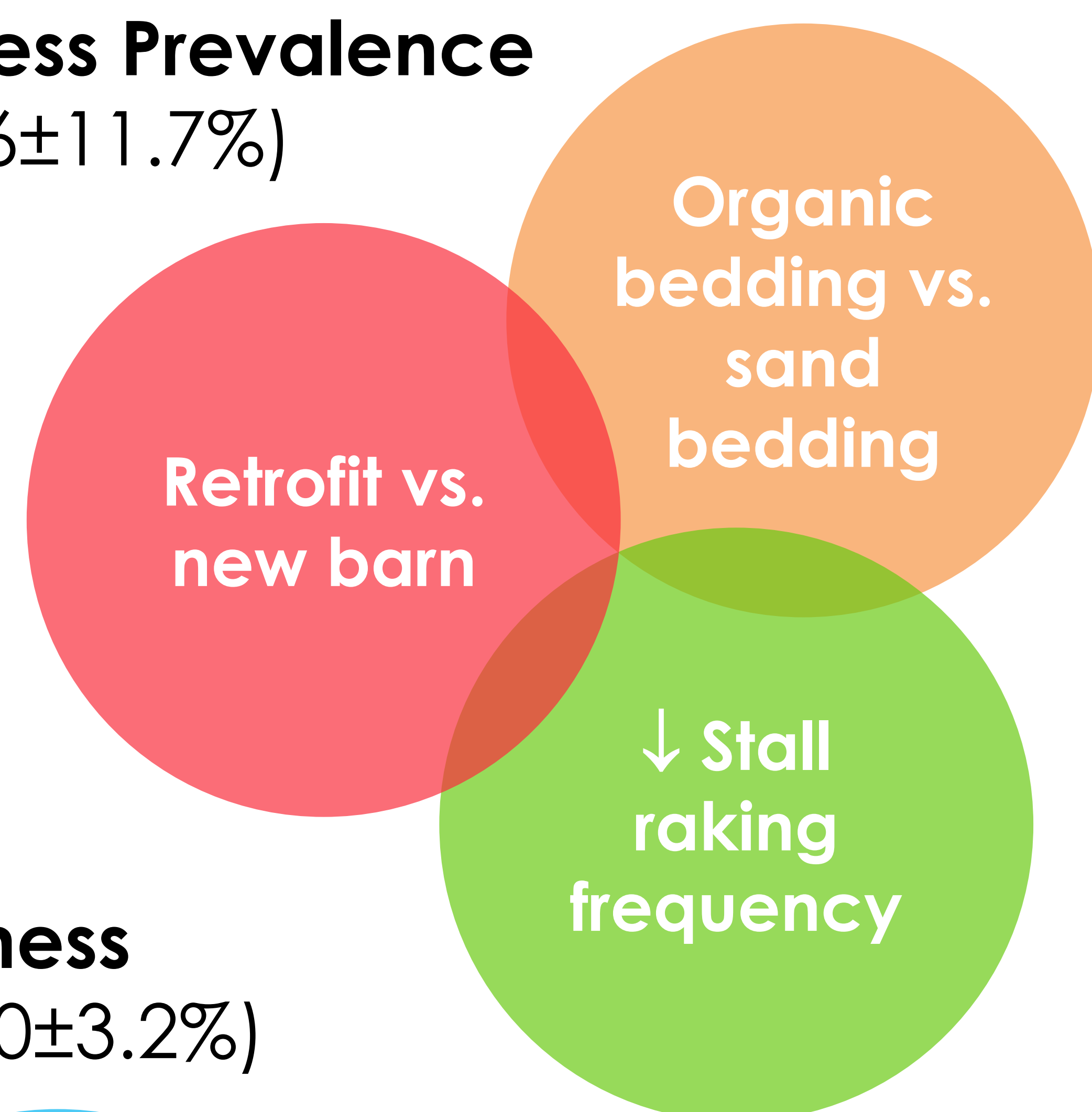
Methods:

- We visited 76 dairy farms in Ontario, surveying producers on management practices and collecting robotic milking system records.
- Farms averaged 99±73 lactating cows, 2.3±1.4 robot units, and 44±9 cows/robot.
- Thirty cows/farm (or 30% for herds >100 cows) were scored for body condition (5-pt scale) and gait (5-pt scale; 1=sound to 5=lame).
- Results below show which factors (in circles) were associated with each bolded outcome variable (mean ± SD).

Clinical Lameness Prevalence

Scores ≥3 (28.6±11.7%)

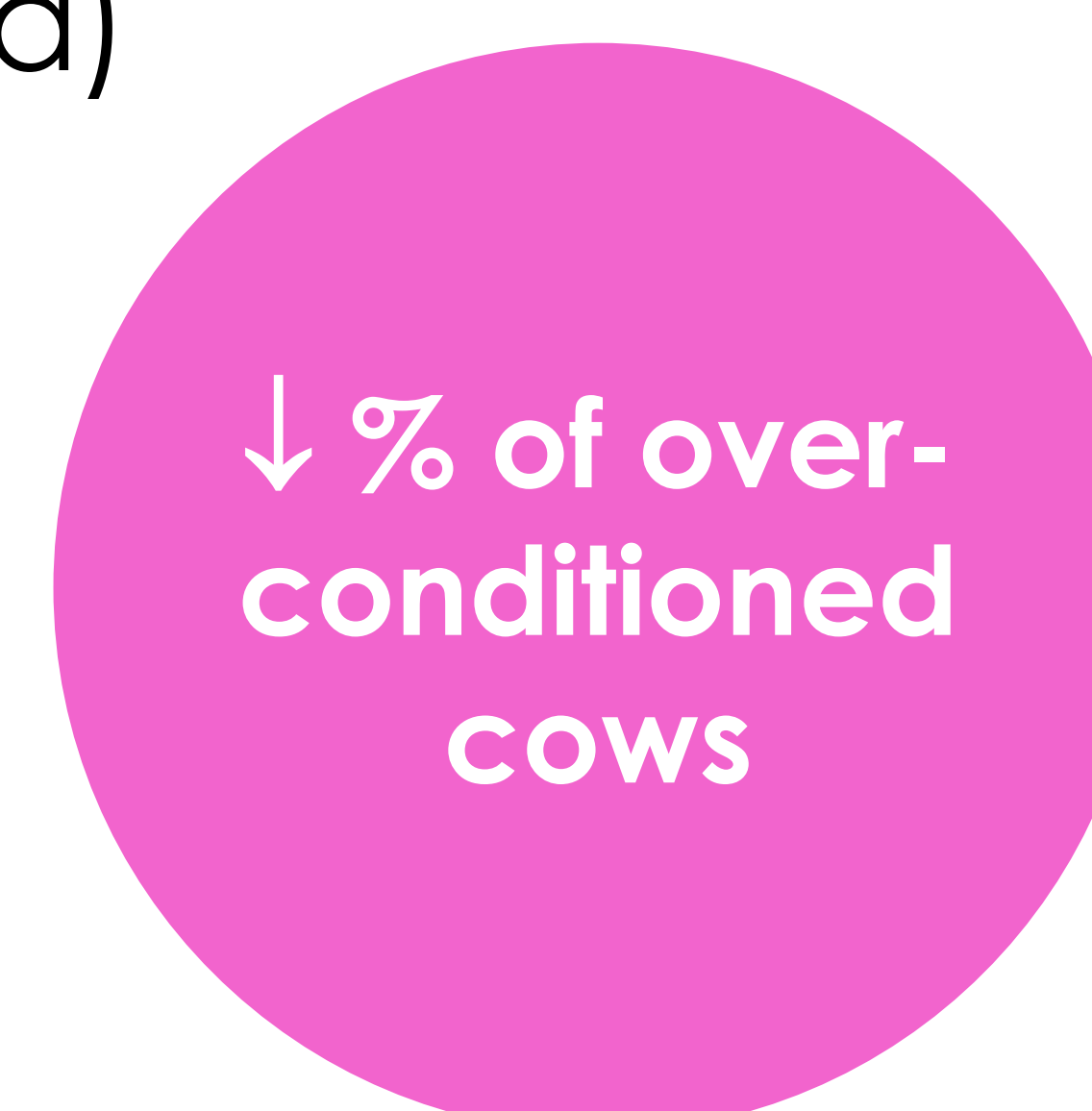
↑ with:



Milking frequency

(3.0±0.4x/d)

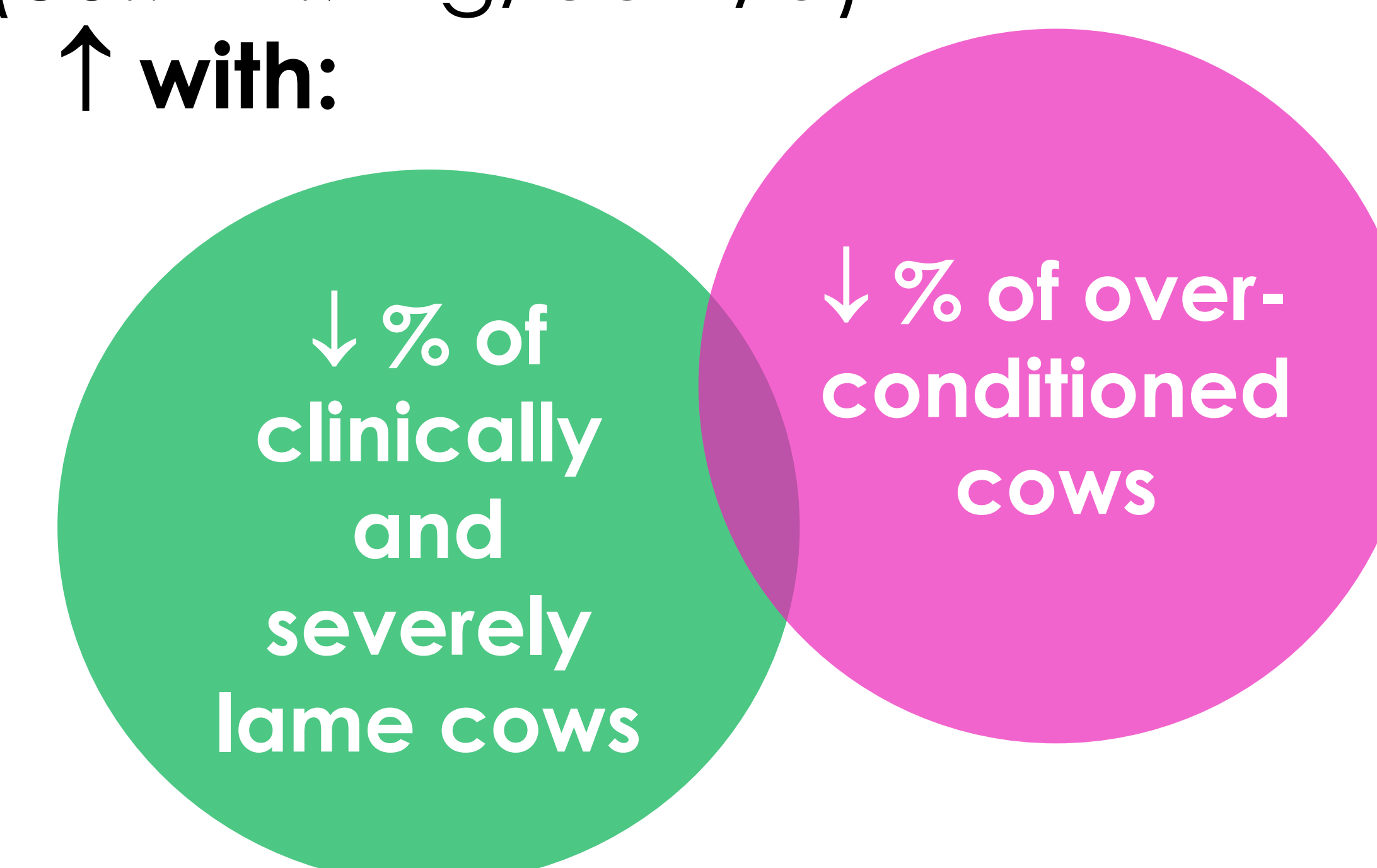
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Milk yield/cow

(36.7±4.7 kg/cow/d)

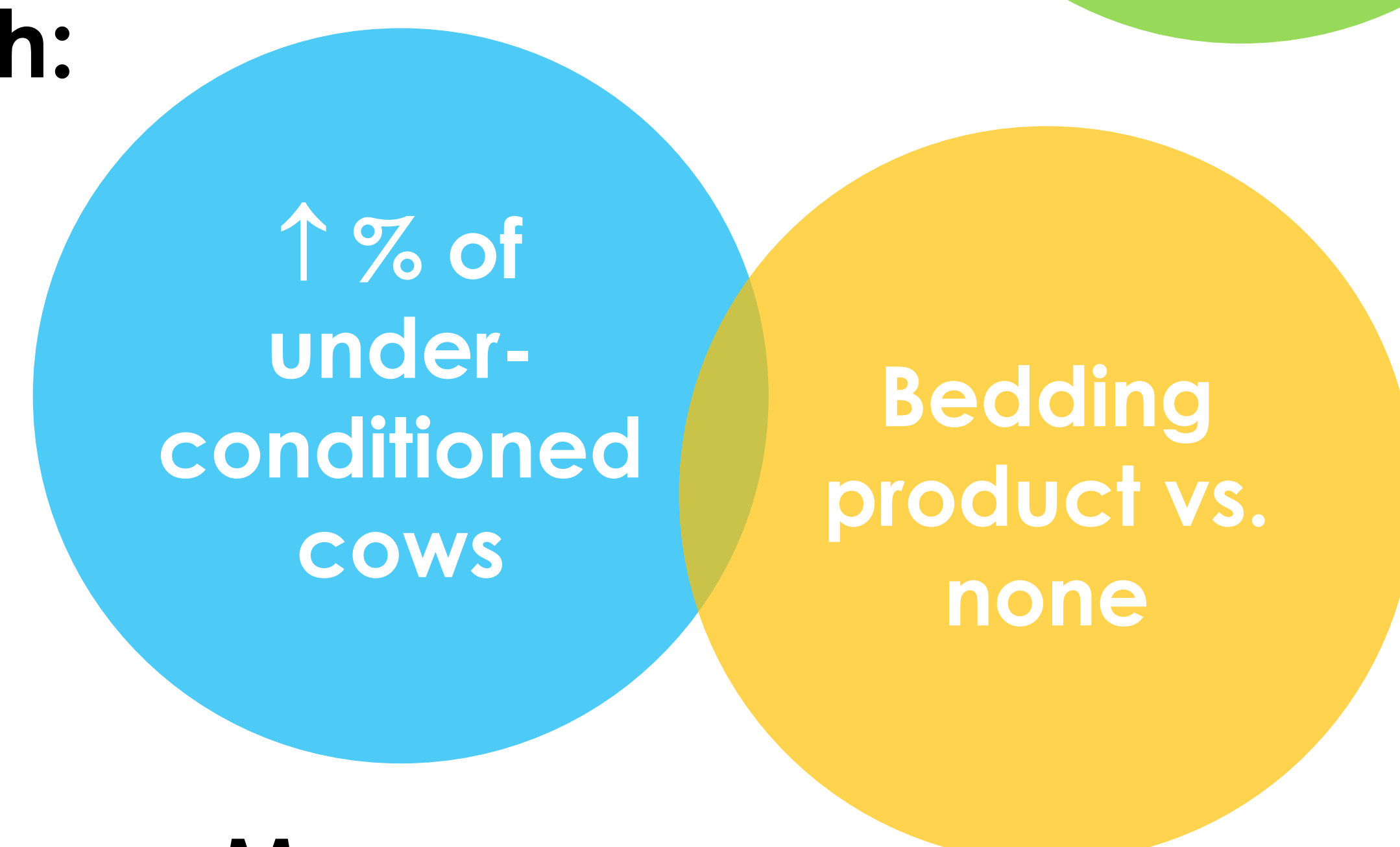
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Severe Lameness

Scores ≥4 (3.0±3.2%)

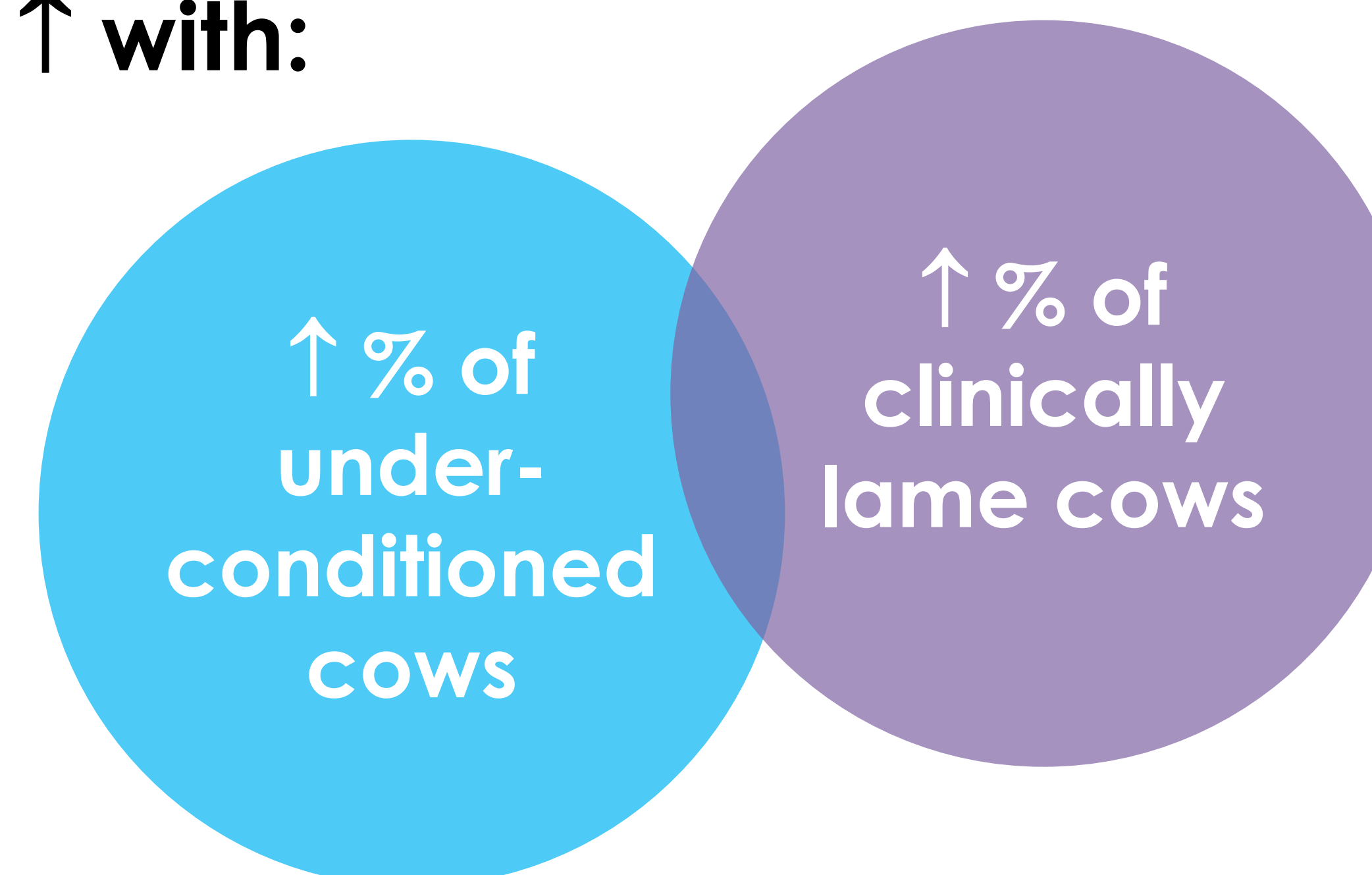
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Milk SCC

(215±88 x1,000 cells/mL)

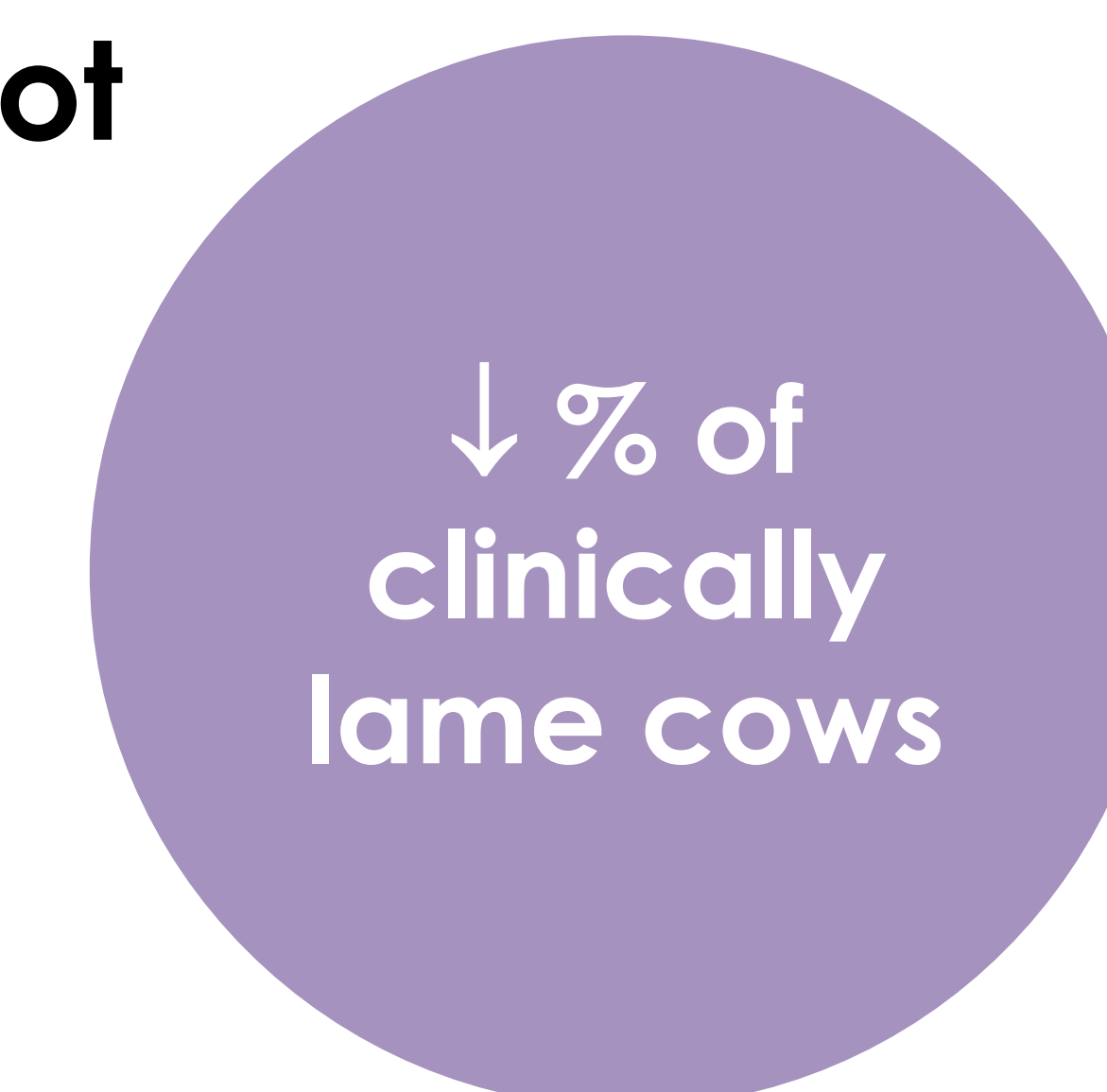
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Milk yield/robot

(1607±343 kg/robot/d)

↑ with:



Take Home Messages:

- Maintaining good hoof health, mobility, and body condition are key factors to optimize productivity and milk quality in robotic herds