

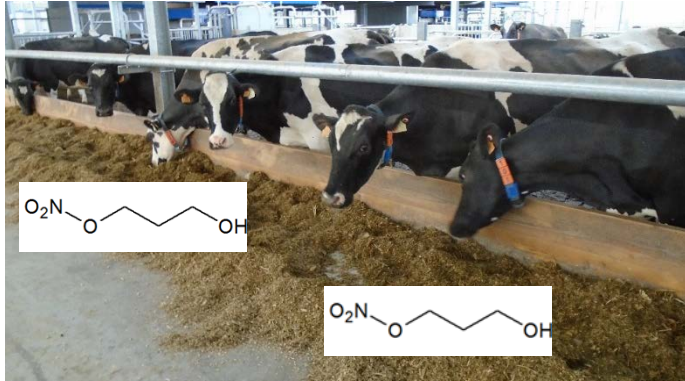
Methane mitigation in dairy cattle with 3-nitrooxypropanol in an on-farm trial

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Introduction



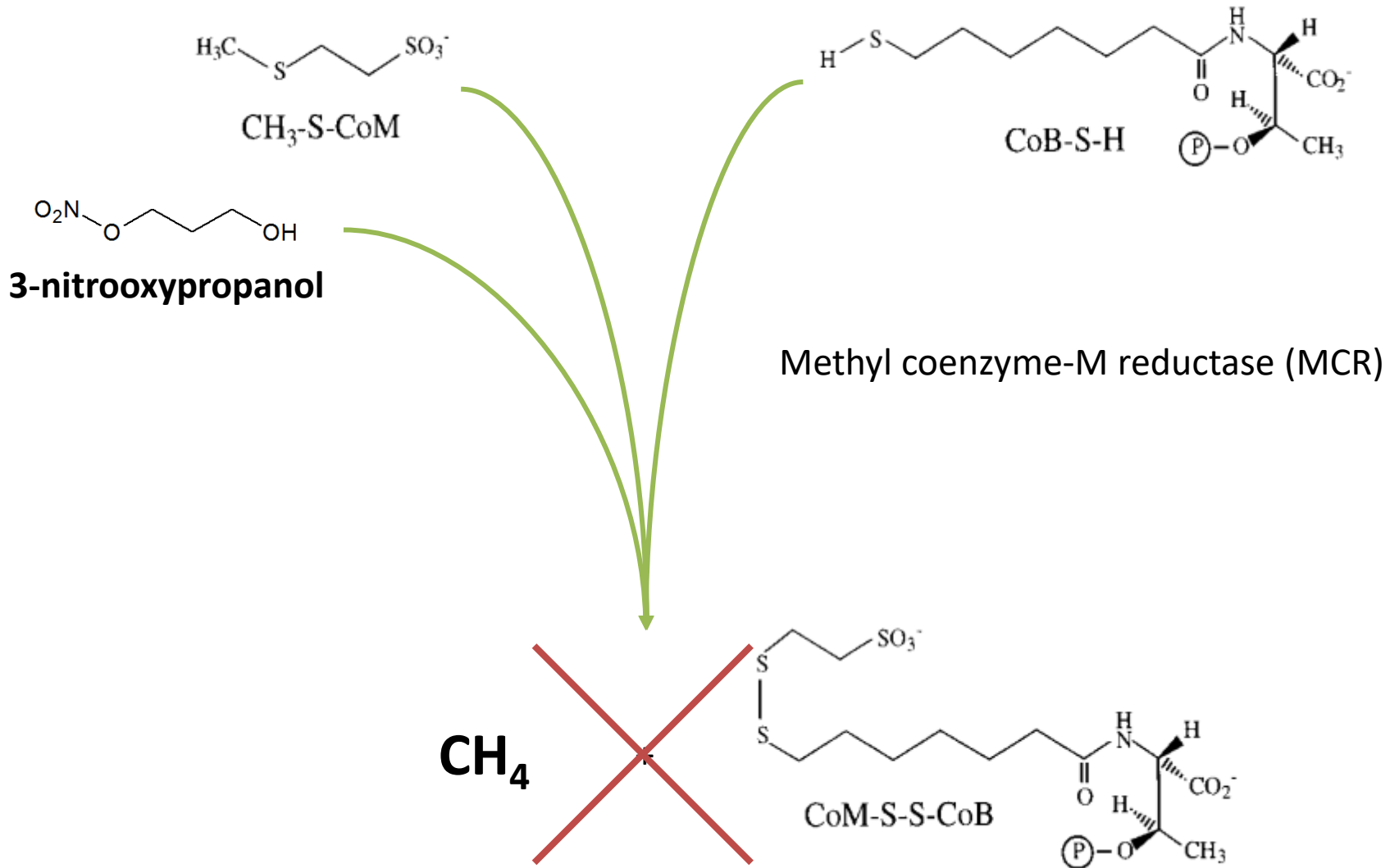
IN = non-edible fiber-rich feeds



OUT =
human-edible
foods, e.g.
milk



Introduction



Material and Methods

Animals

10 Holstein cows

86 ± 31 DIM

34 ± 6 kg milk/day

21 ± 3 kg DMI/day

Diet (on DM basis)

34% maize silage

27% grass silage

7% pressed beet pulp

32% concentrates

Treatment

1,7 g 3-NOP/cow/day for 8 cows

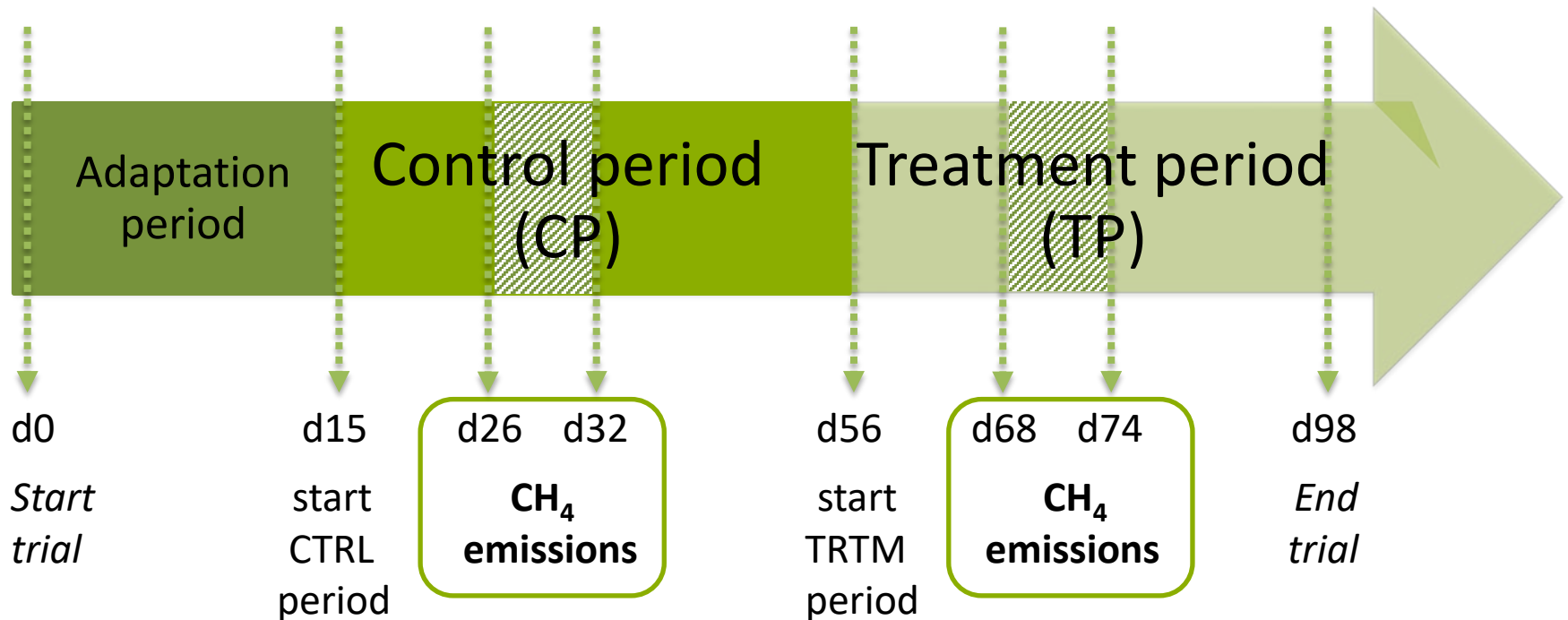
Placebo for 2 reference cows

3-NOP and placebo mixed with soybean meal and soybean oil

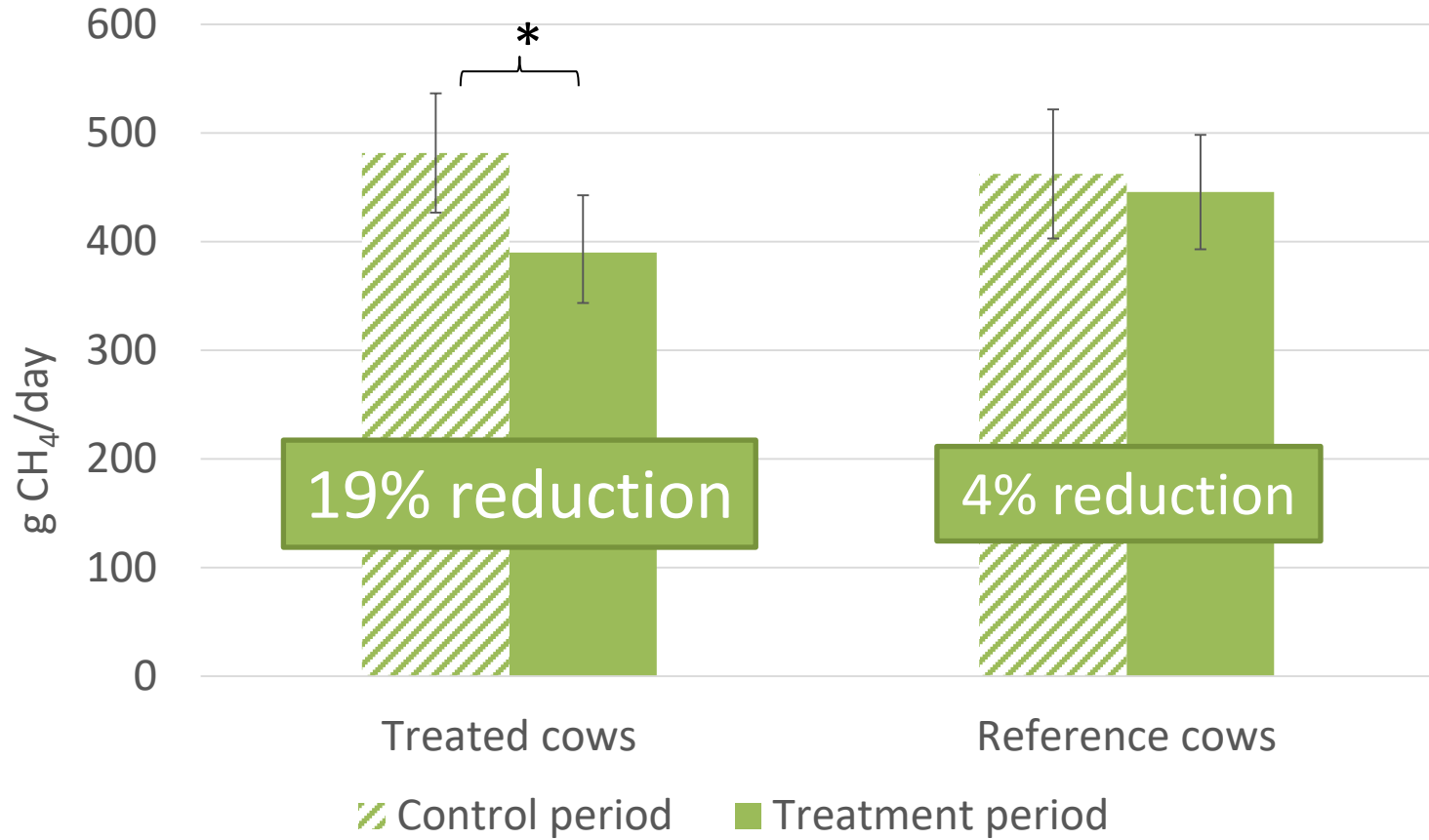
Material and Methods



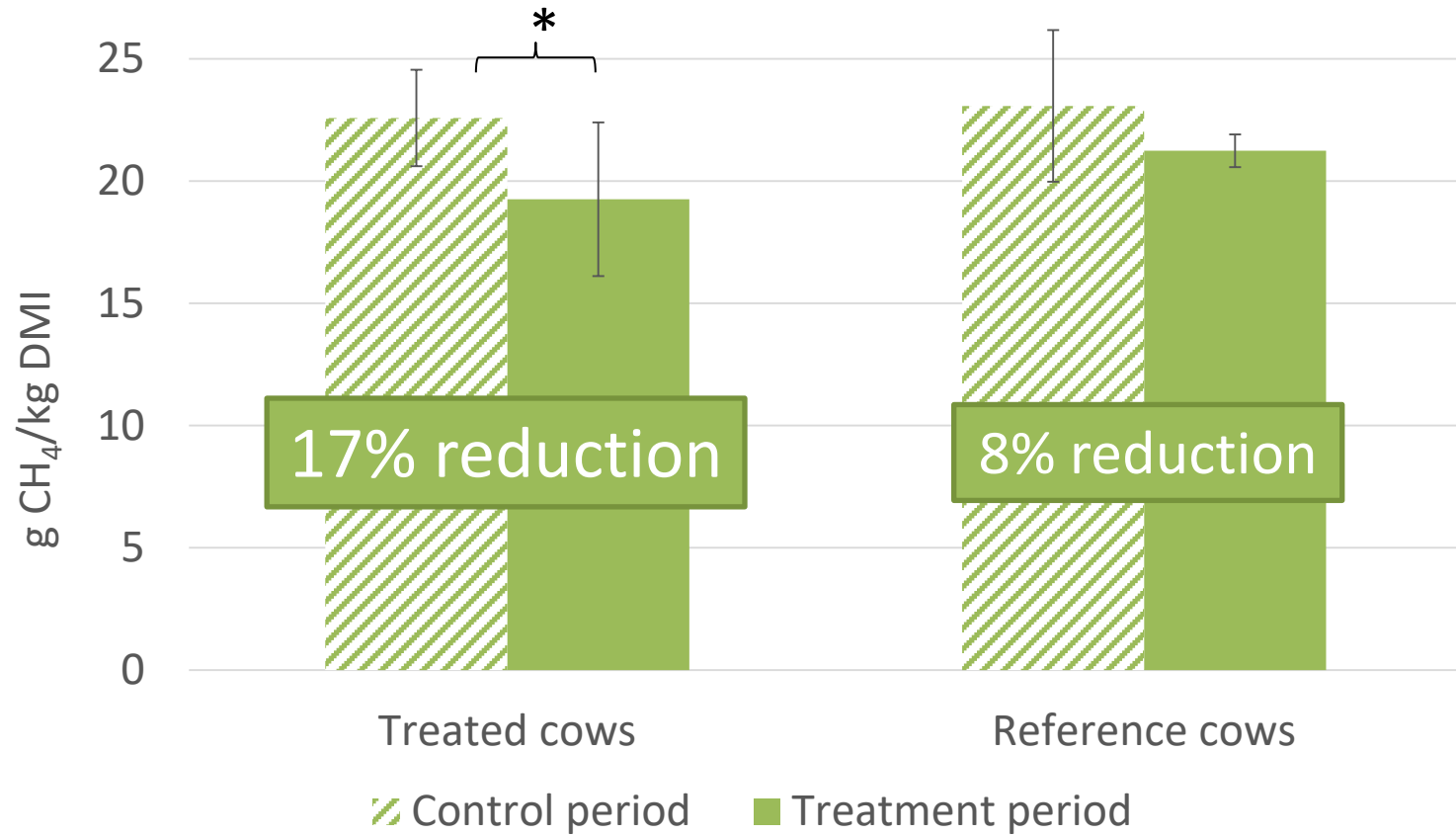
Material and Methods



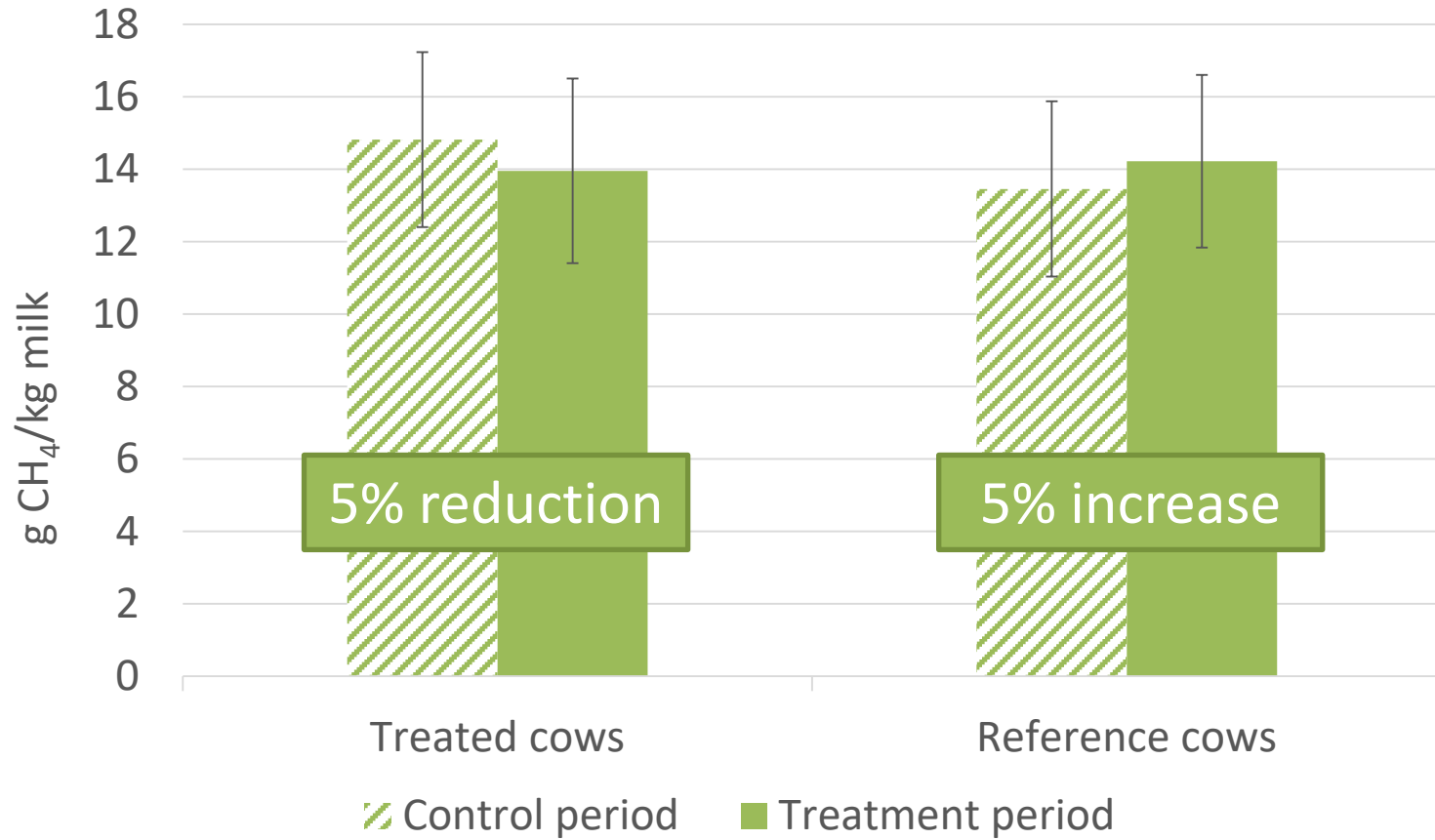
Results



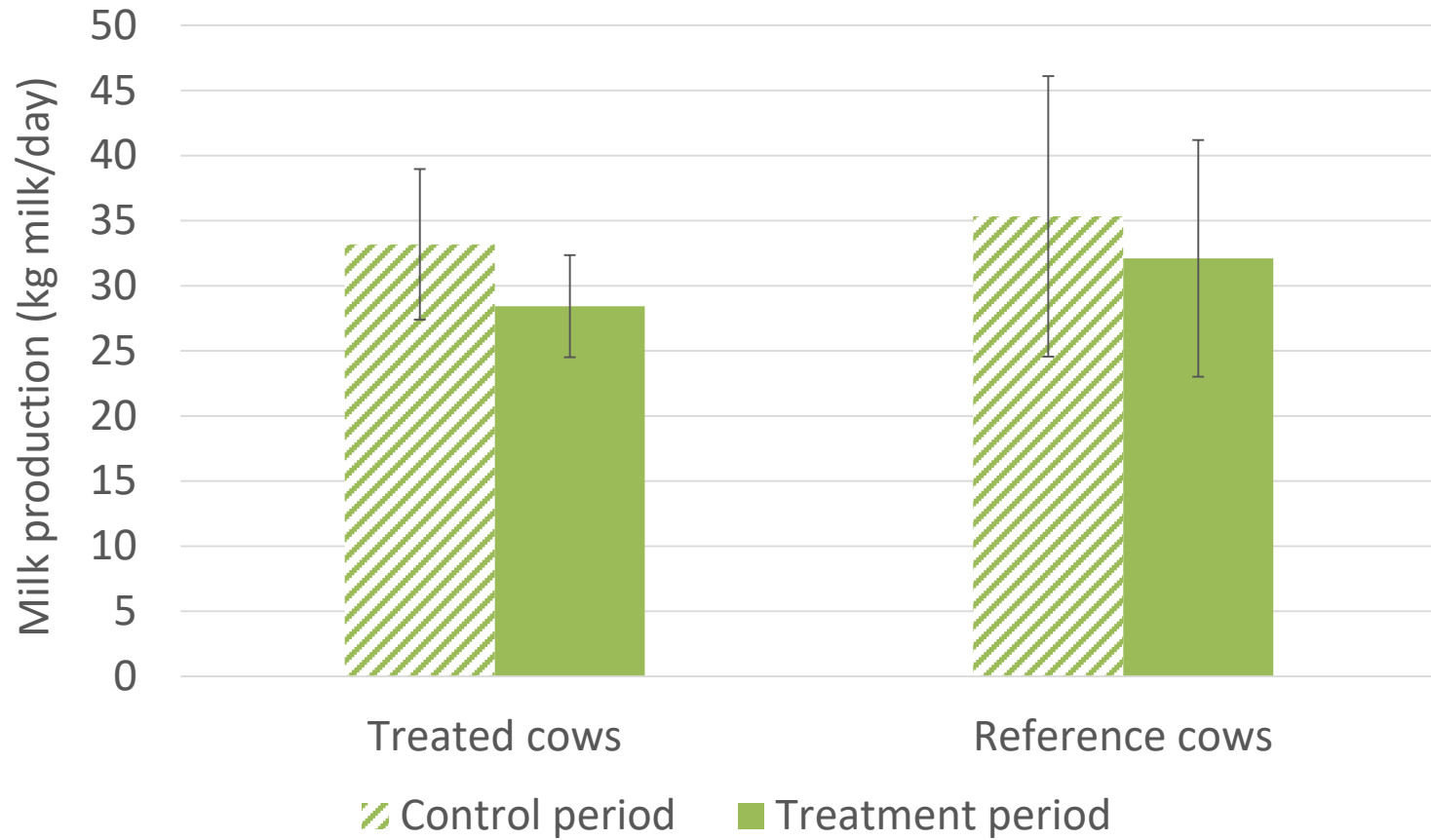
Results



Results



Results



Discussion

- Confirmed potential of **3-NOP** to reduce methane emissions
 - Previous research:
 - 30% reduction (Hristov et al., 2015)
 - 6-10% reduction (Reynolds et al., 2014)
 - Way of administration might be important

Conclusion

- **3-NOP** has great potential to reduce methane emissions
 - Reductions between 15 and 9%
 - -15% for absolute CH₄ emissions
 - -10% for g CH₄/kg milk
 - -9% for g CH₄/kg DMI

Thank you



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