

Injectable Trace Minerals, Strategic Administration Before Fixed-Time Artificial Insemination In Beef Cattle In Brazil

Guadagnini Marcello¹, Teodoro João Victor¹, Prado Julio¹, O'Leary Eithna¹, Franco Gumerindo²

1. Axiota Animal Health, 2809 East Harmony Road 190, Fort Collins, CO, US

2. Universidade Federal de Mato Grosso do Sul, Av. Senador Filinto Müller, 2443, Campo Grande, MS, Brazil

Corresponding author: marcello.guadagnini@multimin.eu

- Trace minerals play an important role in cattle immunity, health and performance.
- Copper, Selenium, Zinc and Manganese deficiencies are known to negatively influence beef cattle reproduction.
- Delivery of supplemental trace minerals using an injectable solution has been demonstrated to be a reliable means of achieving adequate trace-mineral status.

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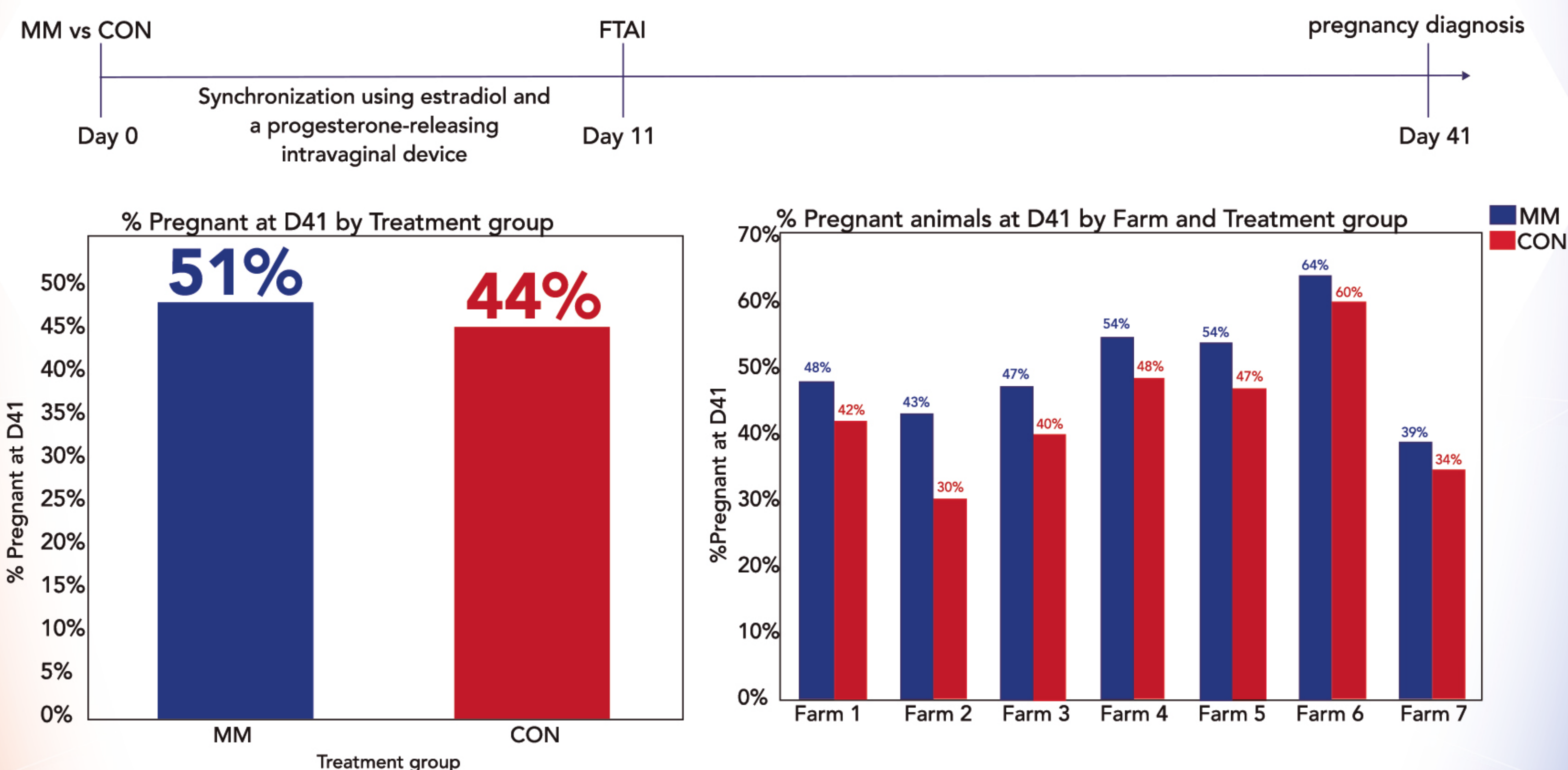
Study aim: summarize fertility results obtained in Brazilian beef cattle injected with a combination trace mineral solution before fixed-time AI, compared with non-treated control animals

Material and Methods

- 7 Farms in Brazil
- 6 farms in Goiás and 1 in Mato Grosso do Sul
- 1643 Nelore cattle (350 nulliparous, 206 primiparous and 1087 multiparous cows)
- Randomized treatment: MM (n=816) vs CON (n=827)
- Period: December 2022 to April 2023
- Parity and BCS did not differ among treatment groups

Treatment (MM)

Zinc: 60 mg/ml
Manganese: 10 mg/ml
Copper: 15 mg/ml
Selenium: 5 mg/ml
[Multimin 90®, Axiota Animal Health]



Accounting for Farm, Parity and BCS, **MM group animals had 1.29 greater odds of pregnancy** compared to CON (OR 1.29 95% C.I. 1.05-1.59).

Treatment by parity and treatment by farm interactions were not significant

In BCS<3 animals the MM group had an OR for a positive diagnosis of 1.19 compared to CON (95% C.I. 0.93-1.53).

In BCS≥3 animals MM group had 1.49 greater odds of pregnancy compared to CON. (95% C.I. 1.02-2.17)

Conclusions

A combination trace mineral injection applied at the beginning of the synchronization protocol can be beneficial for fertility in beef cows. The magnitude of the benefit can be amplified in cows with adequate BCS, where energy might not be a limiting factor for reproduction