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# Correction: Transdisciplinary model-based systems engineering in the development of the Ruminant Farm Systems model

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## KEYWORDS

model-based systems engineering, transdisciplinary engineering, sustainability, dairy, manure management, RuFaS

## A Correction on

[Transdisciplinary model-based systems engineering in the development of the Ruminant Farm Systems model](#)

by Hu, H., Whitcomb, C. A., Ploetz, T. E., and Reed, K. F. (2025). *Front. Sustain.* 6:1561453. doi: 10.3389/frsus.2025.1561453

In the original article, **Section 2.3 RuFaS animal and manure modules** cited “an automated approach using a nonlinear programming algorithm (Li J. et al., 2022; Li M. et al., 2022)”. This should cite only Li J. et al. (2022):

“an automated approach using a nonlinear programming algorithm (Li J. et al., 2022).”

In the original article, **Section 2.4 Case study of RuFaS fulfillment of stakeholder use case** cited “Wood’s lactation curve parameters were updated for each region, assuming a milking frequency of three times per day and based on 2016 data (Li J. et al., 2022; Li M. et al., 2022; Wood, 1967)”. This should cite only Li M. et al. (2022) and Wood (1967):

“Wood’s lactation curve parameters were updated for each region, assuming a milking frequency of three times per day and based on 2016 data (Li M. et al., 2022; Wood, 1967).”

In the original article, **Section 3.2.1 Production outcomes** cited “These estimates align with those reported by Li J. et al. (2022) and Li M. et al. (2022)”. This should cite only Li M. et al. (2022):

“These estimates align with those reported by Li M. et al. (2022)”

A citation for Gong et al. (2025) has been added to **Section 3.2.1 Production outcomes**. This previously read: “Production efficiency—the conversion of feed into milk—has major economic implications, while milk production is a driving factor in many environmental outcomes due to its impact on feed intake.” The updated sentence reads:

“Production efficiency—the conversion of feed into milk—has major economic implications, while milk production is a driving factor in many environmental outcomes due to its impact on feed intake (Gong et al., 2025).”

Gong et al. (2025) has been added to the **References**:

Gong, Y., Hu, H., Reed, K. F., and Cabrera, V. E. (2025). Advancing dairy farm simulations: a 2-step approach for tailored lactation curve estimation and its systemic impacts. *J. Dairy Sci.* 108, 9681–9695. doi: 10.3168/jds.2025-26334

A correction has been made to **Section 2.4 Case study of RuFaS fulfillment of stakeholder use case**, 3rd paragraph. This previously read: “Finally, we employed the slurry storage outdoor and anaerobic digestion and lagoon as the treatment methods.” The text now reads:

“Finally, we employed the slurry storage outdoor (SS) and anaerobic digestion and lagoon (ADL) as the treatment methods.”

In the original article, the reference for Hu et al. (2024) was erroneously written as “Hu, H., Briggs, K. R., Fouts, J. Q., Adamchick, J., Gong, Y., Reed, K. F., et al. (2024). Impact of dairy wellness profit dollars (DWP\$) index on lactating cow feed efficiency, nitrogen efficiency, and manure excretions: insights from a RuFaS case study. *J. Dairy Sci.* 107:15. This should be:

“Hu, H., Briggs, K. R., Fouts, J. Q., Adamchick, J., Gong, Y., Reed, K. F., et al. (2024). Impact of Dairy Wellness Profit Dollars (DWP\$) Index on lactating cow feed efficiency, nitrogen efficiency,

and manure excretions: insights from a RuFaS case study. *J. Dairy Sci.* 107(Suppl. 1):15–16.”

The reference for Briggs et al. (2024) was erroneously written as “Briggs, K. R., Fouts, J. Q., Adamchick, J., Hu, H., Gong, Y., Reed, K. F., et al. (2024). Enteric methane production and intensity associated with dairy wellness profit dollars (DWP\$) index ranking. *J. Dairy Sci.* 107:16.” It should be:

Briggs, K. R., Fouts, J. Q., Adamchick, J., Hu, H., Gong, Y., Reed, K. F., et al. (2024). Enteric methane production and intensity associated with Dairy Wellness Profit Dollars (DWP\$) Index ranking. *J. Dairy Sci.* 107(Suppl. 1):16.

The original version of this article has been updated.

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