

Accepted Manuscript

Title: Influences of malic acid isomers and their application levels on fermentation quality and biochemical characteristics of alfalfa silage

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PII: S0377-8401(18)30105-6
DOI: <https://doi.org/10.1016/j.anifeedsci.2018.08.012>
Reference: ANIFEE 14057

To appear in: *Animal Feed Science and Technology*

Received date: 23-1-2018
Revised date: 24-8-2018
Accepted date: 28-8-2018

Please cite this article as: Ke WC, Ding WR, Ding LM, Xu DM, Zhang P, Li FH, Guo XS, Influences of malic acid isomers and their application levels on fermentation quality and biochemical characteristics of alfalfa silage, *Animal Feed Science and Technology* (2018), <https://doi.org/10.1016/j.anifeedsci.2018.08.012>

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**Influences of malic acid isomers and their application levels on
fermentation quality and biochemical characteristics of alfalfa silage**

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Highlights:

- L- and DL-malic acids were more effective in improving silage fermentation than D-malic acid.
- Microbes in silage preferred to use L- or DL-malic acid as a substrate rather than D-Malic acid.
- A decline in lactate was observed when the application level of MA reached 1%.

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