# Article information:

Modulatory effects of dietary tannins on polyunsaturated fatty acid biohydrogenation in the rumen: A meta-analysis-所有数据库  
<https://www.webofscience.com/wos/alldb/full-record/WOS:000843626700018>

# Article summary:

1. This meta-analysis studied the effects of dietary tannins on rumen biohydrogenation (BH) and fermentation.

2. Results showed that increased tannin levels significantly reduced methane production, decreased the proportion of saturated fatty acids (SFA), and increased the proportions of monounsaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA).

3. There were also negative relationships between dietary tannin levels and BH rates of C18:2 n-6 and C18:3 n-3.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is a meta-analysis of 28 articles related to the effects of tannins on rumen biohydrogenation (BH) and fermentation. The data was analysed using a random effects model and meta-regression for rumen BH, with publication bias assessed using a funnel plot and Egger's test. The results showed that increased tannin levels significantly reduced methane production, decreased the proportion of saturated fatty acids (SFA), and increased the proportions of monounsaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA). There were also negative relationships between dietary tannin levels and BH rates of C18:2 n-6 and C18:3 n-3.

The article appears to be reliable in terms of its methodology, as it uses a meta-analysis approach to analyse data from 28 different studies, which provides a more comprehensive view than any single study could provide. Furthermore, the authors have taken steps to assess publication bias by using a funnel plot and Egger's test, which helps to ensure that any potential biases are identified.

However, there are some potential issues with the trustworthiness of this article that should be noted. Firstly, it is not clear how many studies were excluded from the analysis due to not meeting certain criteria or being deemed irrelevant; this could potentially lead to bias if certain studies were excluded for reasons other than their relevance or quality. Secondly, while the authors have attempted to assess publication bias, they do not appear to have considered other sources of bias such as selection bias or confounding variables; this could potentially lead to inaccurate conclusions being drawn from the analysis. Finally, it is unclear whether all relevant studies were included in the analysis; if certain studies were omitted due to their lack of relevance or quality then this could again lead to inaccurate conclusions being drawn from the analysis.

In conclusion, while this article appears reliable in terms of its methodology, there are some potential issues with its trustworthiness that should be noted before drawing any conclusions from its findings.

# Topics for further research:

* Selection bias in meta-analysis
* Confounding variables in meta-analysis
* Rumen biohydrogenation
* Effects of tannins on rumen fermentation
* Funnel plot for publication bias
* Egger's test for publication bias

# Report location:

<https://www.fullpicture.app/item/e7f92bad2a6d555f0584e7efea8fda38>