# Evidencing of the efficacy of the Egalis<sup>™</sup> Ferment formulation on high dry matter grass-clover mix.

Wambacq, L.; Latre, H. HoGent University, April 2022.





**Objective:** To assess the impact of Egalis Ferment on the fermentation and losses of ensiled, high dry matter grass-clover mix.

Experimental design:

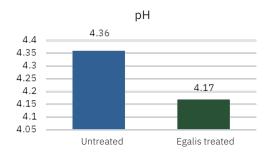
**ental** Third-cut grass-clover (consisting of *Lolium perenne L* and *Trifolium repens L* in a ratio of approximately 50:50 on fresh matter) was mown with a mower conditioner at a stubble height of 6–10 cm, pre-wilted to 49.9% dry matter and chopped. Five micro-silos were filled per treatment at an average silo density of 246 kg DM m<sup>3</sup>. The grass-clover starting material contained 1.00% water-soluble carbohydrate and is, therefore, classed as difficult to ensile, according to the European Food Safety Authority (EFSA).

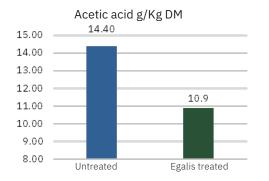
**Treatments:** 



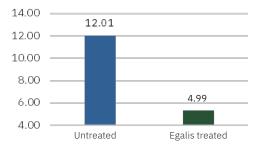


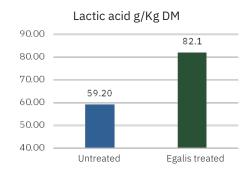
## Post 100-day analysis of grass-clover silage by wet chemistry:

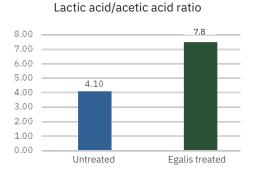




#### Ammonia as a % of total nitrogen







## Ethanol g/Kg DM 16.00 14.09 14.00 12.00 10.82 10.00 8.00 Untreated Egalis treated



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### **Key observations:**

- Both the treated and the untreated forages produced a good lactic fermentation, with all silage being aerobically stable for an excess of nine days.
- Egalis Ferment controlled the fermentation, even under optimal conditions, shifting the fermentation to the more efficiently produced lactic. This resulted in a significantly lower pH and elevated lactic acid while producing lower levels of the unpalatable acetic acid.
- Egalis Ferment increased the speed of the fermentation, even under optimal ensiling conditions. This lead to a more rapid inhibition of the undesirable proteolysis, which is driven by plant enzymes and naturally occurring organisms. This was indicated by reductions of more than 65% in ammonia (protein breakdown) and 20% in yeast activity at ensiling, shown by lower alcohol content. This means more of the originally ensiled protein is protected when presented to the animal.

### **Conclusion:**

This study demonstrates that, even under excellent ensiling conditions, Egalis Ferment enhances the speed of fermentation, protecting more true protein in the final silage and better maintaining the palatability of the silage.

