

# Effects of 3 type biological additive (Lalsyl, Ecosyl and Sil-All 4×4) on nutritional value and digestibility of clover silages using gas production method

Seyed Amir Pourseidin\*,

**Abstract** This study was performed to evaluate the effect of three types of biological additives (Lalsyl, Akvsayl and Sil-All 4 × 4) the nutritional value and digestibility of silage clover gas production technique. Seven treatments tested completely randomized design with three replications. The experiment consisted of controls (85% clover 15% rice straw), a mixture of 95% 5% Lalsyl, a mixture of 95% 10% Lalsyl, a mixture of 95% 5% Akvsayl, a mixture of 95% 10% Akvsayl, a mixture of 95% 5% Sil-All 4×4, a mixture of 95% 10% Sil-All 4×4. The results showed that the percentage of organic matter, crude protein, ash, crude fiber, crude Prby percent free of nitrogen and percentage were affected by treatments ( $P>0.05$ ). Gas production in clover silages treated with a mixture of 90% - 10% Lalsyl, almost to the other treatments were all the hours of incubation ( $P>0.05$ ). Mixed supplement 95% - 5% Sil-All 4 × 4 with clover silages, easily digestible sections (a), section with its biodegradability (b), the decomposition rate constant (c) and potentially degradable (a b) to be significantly increased compared to the control treatment. The results can be concluded that the addition of add-on biologics (Lalsyl, Akvsayl and Sil-All 4 × 4) to silage, clover, digestibility and nutritional value of the silage clover improves and addition of 90% of Mixed - 10% Lalsyl , the best results.

**Keywords :** Keywords: biological additives, Lalsyl, Akvsayl and Sil-All 4 × 4, nutritional value, digestibility, clover silages

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