

**Abstrac**

**This study was carried out to evaluate changes in chemical composition and nutritional value of Faba bean straw silage treated with formic acid, propionic acid, molasses. For this aim Faba bean straw were harvested and chopped with cutting length about 2 to 4 cm. The chopped common Faba bean straw then were mixed with the molasses (%10), formic acid (%0/6) and propionic acid (%1) ensiled in 5 Kg plastic baskets. The silageas were opened after 60 day and chemical compositions inculuding dry matter (DM), ash, organic matter (OM), ether extract (EE), curde protein (CP), cell well and cell well without hemicelluloses fractions were measured according to the standard procedure (AOAC). Organic matter digestibility, digestibility Organic matter in dry matter and metabolizable energy content and dry matter, digestibility were also determined by gas production (*in vitro*) and nylon bags (*in situ*) methods. Results showed that the addition of molasses caused a significant increased DM, EE, Ash, and CP content and decreased pH, NDF and ADF content respectively ( $p < 0/01$ ). Addition of formic acid caused a significant increased EE, CP, DM and Ash content a sifsignificant decreased pH, OM, NDF and ADF content respectively. Addition of propionic acid increased DM, EE, Ash, and CP and decreased NDF, ADF, pH and OM content respectively. Addition supplements molasses, formic acid and propionic acid, caused a significant different in chemical composition respectively. Results showed that molasses, formic acid and propionic acid caused a sifsignificant increased in dry matter digestibility. In addition Gas production results showed that molasses, formic acid and propionic acid caused a sifsignificant increased gas productions value.**

**Key words: Faba bean straw, Gas production, Degradability**



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Effect of organic acids and molasses on quality of  
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