البحث السادس

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مشترك مع آخرين بالتخصص ومن خارج التخصص– منشور.	**6**

Title	**Effect of some aromatic plants by products on the in vitro rumen fermentation and buffalo's milk production in early lactation.**
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ABSTRACT

Objectives: Evaluate impact of the marjoram and parsley by-products on rumen fermentation characteristics (*in vitro*) and the productive performance of early lactating buffaloes (*in vivo*) are the main objectives of this study. **Materials and methods:** Two *in vitro* experiments were conducted to evaluate the effect of partial and full substitution of control ration's rice straw by marjoram and parsley by-products on rumen fermentation characteristics. In the *in vivo* study; fifteen lactating buffaloes after 2 weeks of calving were randomly assigned into three groups using complete random design. Buffaloes were fed dry matter according to 3% of their body weight for 60 days. The first animal's group was fed on the control ration (60% CFM and 40% rice straw**).** The second group was fed 60% CFM and 40% parsley by-products (CP100), while the third group was fed 60**%** CFM and 40% marjoram by-products (CM100).**Results:** The full replacement of rice straw by marjoram (CM100) and parsley (CP100) by-products led to 1) significant ($P < 0.05$) increase in *in vitro* degradability (%) of ration's DM, OM, NDF and ADF with improve all ruminal basic parameters (e.g. pH, NH_3-N,TVFA,SCFA and total gas production. 2) significant ($P<0.05$) increase of apparent digestibility of DM, OM, CP and NFE by lactating buffaloes. The buffaloes fed (CP100) ration had higher ($p<0.05$) blood plasma protein, albumin and globulin with higher ($p<0.05$) milk and 4% fat corrected milk (FCM) and all milk component yields. **Conclusion:** Parsley by-products significantly enhance buffalo's milk production with no harmful effects on their health and we recommend it as roughage source especially in the summer.